Fourth Primary Education Development Program (PEDP-4)

Semi-Annual Social Monitoring Report

DEPARTMENT OF PUBLIC HEALTH ENGINEERING

Jan 2022 - June 2022

[A report on WASH facilities and its social impact under PEDP-4]

Primary Education Unit, DPHE, Dhaka

June' 2022

Contents

ABBREVIATIONS & ACRONYMS

ADB	:	Asian Development Bank
AusAID	:	Australian Agency for International Development
CIDA	:	Canadian International Development Agency
DFID	:	Department for International Development (of the United Kingdom)
DP	:	Development Partner
DPEO	:	District Primary Education Officer
DPE	:	Directorate of Primary Education
DPHE	:	Department of Public Health Engineering
DTW	:	Deep Tube Well
EFA	:	Education for All
EMF	:	Environmental Management Framework
EU	:	European Union
GOB	:	Government of Bangladesh
IDA	:	International Development Association
JARM	:	Joint Annual Review Mission
JCM	:	Joint Consultation Meeting
JICA	:	Japan International Cooperation Agency
LGD	:	Local Government Division
MIS	:	Management Information System
MLGRD&C	:	Ministry of Local Government, Rural Development and Cooperatives
MoPME	:	Ministry of Primary and Mass Education
MOU	:	Memorandum of Understanding
PEDP-4	:	Fourth Primary Education Development Program
SDTW	:	Semi Deep Tube Well
SEC	:	Small Ethnic Community
STW	:	Shallow Tube Well
SIDA	:	Swedish International Development Agency
TSP	:	Tube Well with Submersible Pump
UNICEF	:	United Nations International Children's Emergency Fund
WB	:	World Bank

EXECUTIVE SUMMARY

The prime objective of PEDP-4 is to ensure an efficient, inclusive and equitable primary education system through a child friendly physical learning environment. Infrastructural development in terms of construction of class rooms and wash blocks, installation of safe drinking water points plays an important role in achieving the sustainable physical learning environment as well as ensuring holistic development of children. Department of Public Health Engineering (DPHE) is solely responsible to provide the water supply and sanitation facilities in the primary schools of Bangladesh. As per the approved revised DPP (RDPP) of PEDP-4 DPHE will install 20,000 new water points and construct 58,000 Wash Blocks in the primary schools of Bangladesh throughout the program tenure (July/2018 to June/2025) of 7 years. In addition, DPHE will conduct water quality tests of earlier installed 65,000 water points and undertake major maintenance of wash blocks constructed during PEDP-3. From the beginning of the project until June'2022 DPHE installed a total of 7,668 new water points and constructed 11,482 Wash Blocks. Of them 2,500 water sources and 4,064 wash blocks were constructed during the reporting tenure. In addition, DPHE conducted major maintenance of 1,055 wash blocks. DPHE officials tried their best to reach the target by coping up with the new normal due to the COVID-19 safety issues within the time frame.

The sole purpose of this study is to identify any concern or issue related to the social safeguard due to the installation of water points, major maintenance of existing wash blocks and construction of new two storied wash blocks from January' 22 to June'22. The study is based on the social safeguard screening conducted during pre-construction, construction and post implementation stages. The screening format is prepared based on the MoPME approved SMF guidelines for PEDP-4. The screening included different social safeguard indicators such as displacement of people due to land acquisition, threat on cultural tradition/ way of life, restriction in access to common properties, effect on places/objects of cultural/religious significance, provision of toilet for disabled student, accessibility and easiness of disabled student to toilets, provision of safe drinking water to children etc.

The screening was conducted by DPHE officials at the Upazilla level which was duly verified in district level and compiled in DPHE headquarter. It is the fact that the pandemic COVID-19 situation slowed down the overall construction and implementation progress. However, the social monitoring screening confirmed no significant instances or issues that may hamper or influence the social safety during the reporting tenure. Being an implementing agency, DPHE would like to uphold this status in its ongoing and upcoming works related to infrastructural development.

1. Introduction

Child friendly physical learning environment is the prerequisite of an efficient, inclusive and equitable primary education system. The latter being the prime objective of PEDP-4, it is utmost important to ensure adequate infrastructure as well as improved water supply and sanitation facilities in the primary schools of Bangladesh on the basis of actual needs. This will not only help in improving the physical learning environment but also reduce the dropout rate through a gender friendly inclusive education system. Fourth Primary Education Development Program (PEDP-4) is the continuation of Government's approach in thriving the excellence of children through the fulfillment of several distinct milestones including construction of need-based infrastructures for sanitation and water supply. The program is supported by significant contributions from Government as well as Development Partners (DPs). Department of Public Health Engineering (DPHE) under Local Government Division (LGD) of Ministry of Local Government, Rural Development and Cooperatives (MLGRD&C) is solely responsible to provide the facilities for quality water supply and sanitation in the primary schools of Bangladesh. As per MoU signed in between DPE and DPHE and as per revised DPP (RDPP) of PEDP-4, DPHE will perform the following activities in the next five years with an aim to provide safe drinking water and sanitation services in the primary schools under PEDP-4.

- Install 20,000 new drinking water sources.
- Replace/repair drinking water sources (if necessary).
- Water quality testing of 65,000 water points installed earlier by DPHE.
- Construction of 58,000 new Wash Blocks in 29,000 primary schools.
- Major maintenance of 10,000 wash blocks constructed in PEDP3.
- Installation of water supply and sanitation facilities in the DD, DPEO, URC, PTI.
- Operation and maintenance (O/M) of water points.

2. Purpose of current report

The basic intent of this report is to identify and resolve any anticipated social safeguard issues related to the land use and impacts that may arise during the installation of water sources or construction of Wash Blocks in the primary schools of Bangladesh. This report will encompass and summarize the findings of the social screening conducted during the installation of water points and construction of Wash Blocks in the primary schools of Bangladesh from the tenure of January'22 to June'22. During implementation of the project, social monitoring screening was conducted based on the Social Management Framework (SMF) of PEDP-4.

3. Indicators of social safeguard as per SMF under PEDP-4

This report covers different distinct social monitoring indicators based on the approved SMF of PEDP-4. Followings are some of major indicators (not limited though) which were considered.

- To investigate whether physical facilities in the school causes any adverse impact on indigenous people, as well as private land owners and public land users.
- To identify if the implementation of new infrastructures causes any threats on cultural tradition or way of life.
- To assess whether the access to common property resources and livelihood activities are severely restricted due to the installation of water sources and construction of Wash Blocks.
- To explore whether the places/objects of cultural and religious significance are affected due to the infrastructural development.
- To examine whether the Wash Blocks are accessible to disabled people and imparts separate private access to male teachers & boys and female teachers & girls.
- To ensure that the installed water sources provide safe and adequate water and does not create any social nuisance in terms of drainage congestion.
- To address any grievances originated from the implementation of the project.
- To assure the safety issues for the officials and workers in the construction sites due to COVID'19 pandemics.

A thorough screening on the above indicators were carried out during the reporting tenure.

4. Methodology

With an aim to investigate the impact of infrastructural development on social safeguard, a thorough screening was carried out in the respective primary schools by the concerned sub-assistant engineers of DPHE. The screening results were duly verified by the respective assistant engineers and a database was prepared at Upazilla level. Executive engineers at district level complied the verified database obtained from Upazilla level and sent them to DPHE Head Quarter at the MIS (Management Information System) unit, where the database was finally compiled and report was prepared under the supervision of focal point of PEDP-4.

Data for social safeguard screening during the installation of water sources and maintenance of existing Wash Blocks and construction of new two-storied was blocks have been collected from the schools through DPHE official sources using the structured format (copy enclosed in Appendix 1 of this report). Data collected from grass root level have been entered into 'Master Social Survey Outcome' Spreadsheet by DPHE MIS UNIT and kept structured for database and reporting. A flow diagram of the screening method is depicted in Fig. 1.

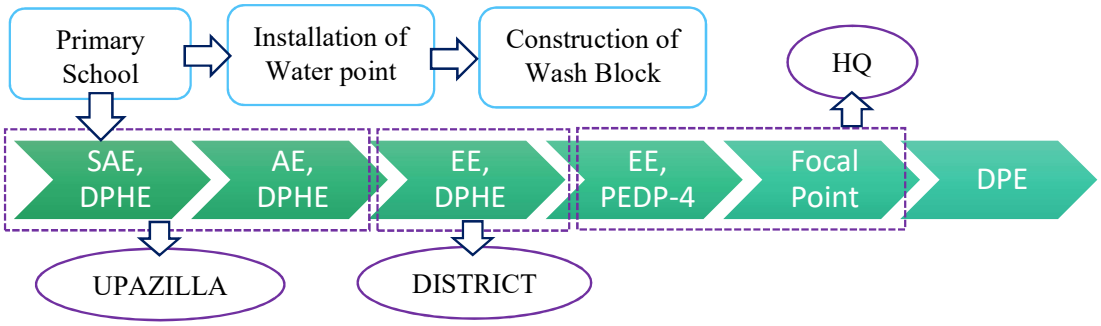


Fig. 1 Method of social safeguard screening

5. Role of DPHE in comprehensive monitoring

The subcomponents (sub component 2.3 and 2.4) of PEDP-4 especially the infrastructural implementation is comprehensively monitored by several parties from commencement to operation. Fig.2 shows the monitoring scheme in PEDP-4 operated by different agencies. Being an implementing agency, DPHE is involved significantly from pre-construction to till post-construction monitoring. Role of DPHE is depicted in Fig.3. It can be noted that the defect liability period for installed water points and constructed wash blocks are 02 years and 01 year, respectively. This implies that contractor is responsible to rectify any sort of defects within this time frame counting from the date of handover of tube well and wash block. According to the order of Chief Engineer, DPHE (memo no. 1066, dated: 16/09/2013), the packages where the defects liability period is over, DPHE will still repair the tube wells within 72 hours of receiving information provided that the concerned school bears the expense of spare parts. In order to get a clear picture of ongoing and completed works, DPHE district office arranges monthly monitoring meeting with all concerned officers and staffs of that district. Executive Engineers thus address the issues of monitoring to the assistant/ sub assistant engineers monthly. Officers of concerned district used to visit the site frequently in order to monitor the ongoing and

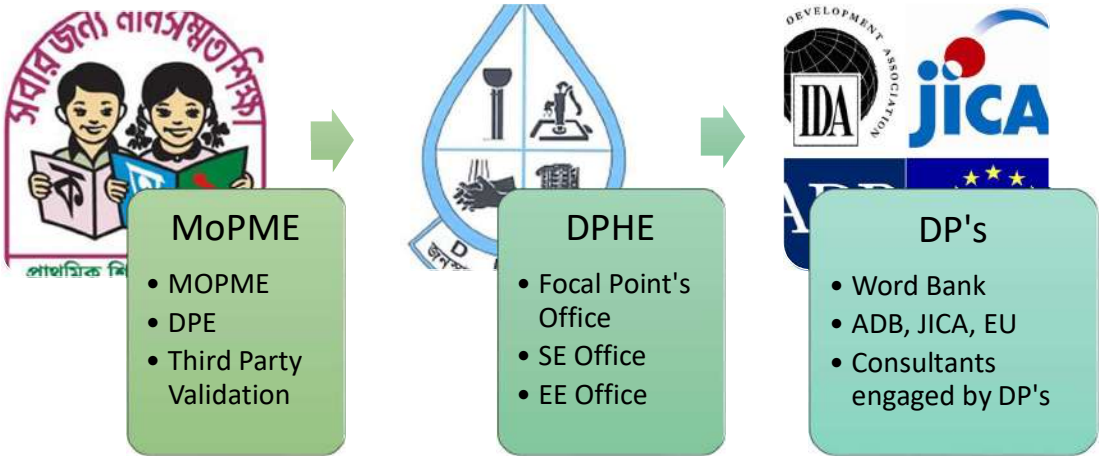


Fig. 2 Monitoring scheme in PEDP-4

completed works and also focus on the social safeguard aspect. Visit from Focal Point's Office and DPHE Head quarter happens frequently.

DPHE district office arranges bi-lateral coordination meeting between DPHE (EE, AE, and SAE) and DPE officials (DPEO, UEO) in every 3 months. A glimpse of the co-ordination meeting is depicted in Fig. 4 which was organized by Executive Engineer, DPHE of Gopalganj district. In this meeting, officers from department of primary education point out the necessity of monitoring of particular school which are immediately addressed by DPHE officials. In addition, mechanics of DPHE upazilla headquarters repair the tube wells in an urgent basis when they are called for doing so from the concerned school in order to ensure that the running water supply are fully operational.

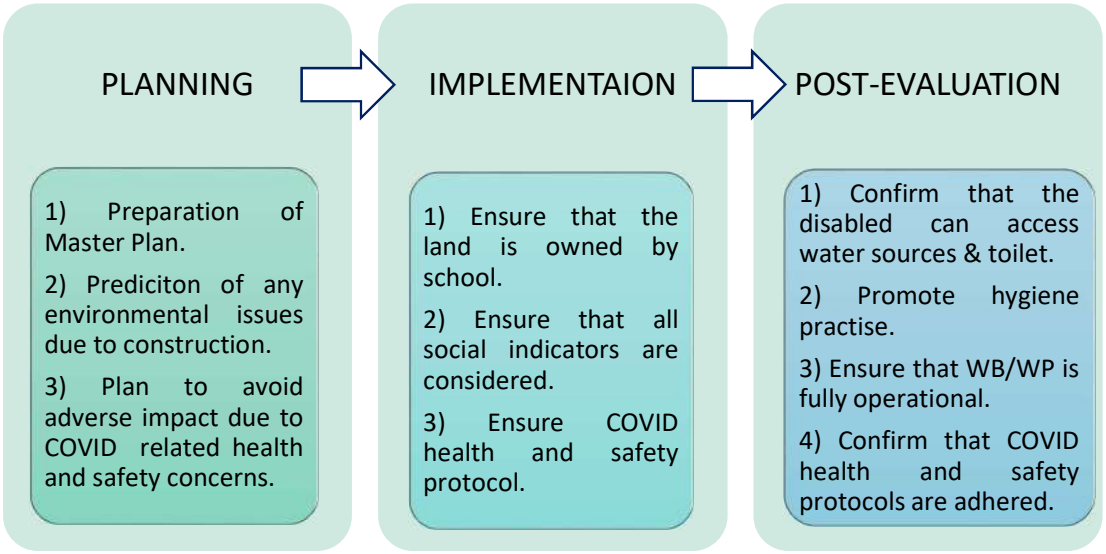


Fig. 3 Role of DPHE in social monitoring

Fig. 4 Co-ordination meeting between DPE & DPHE Officials at Gopalganj district

DPHE arranges caretaker training and provides MoPME approved 'Maintenance Manual' to the concerned schools during the handover of water points and wash blocks which covers post construction issues. Moreover, DPHE looks after the tube wells which have already passed the defect liability period of 02 (two) years. According to the order of Chief Engineer, DPHE (memo no. 1066, dated: 16/09/2013), the packages where the defects liability period is over, DPHE will still repair the tube wells within 72 hours of receiving information provided that the concerned school bears the expense of spare parts.

6. Capacity building

During the implementation of PEDP-3, a ToT (Training of the Trainers) was conducted by the World Bank among DPE, DPHE and LGED officials. The purpose was to introduce the proposed framework for environmental and social safeguard under PEDP-3 along with the importance of conducting rigorous monitoring. In addition, screening method was agreed and confirmed based on targeted outcomes. DPHE officials (Executive Engineers, Senior Assistant Engineers and Assistant Engineers) who received ToT provided trainings to the sub-assistant engineers and mechanics in the district and upazilla level who eventually filled in the environmental screening forms in the grass root level.

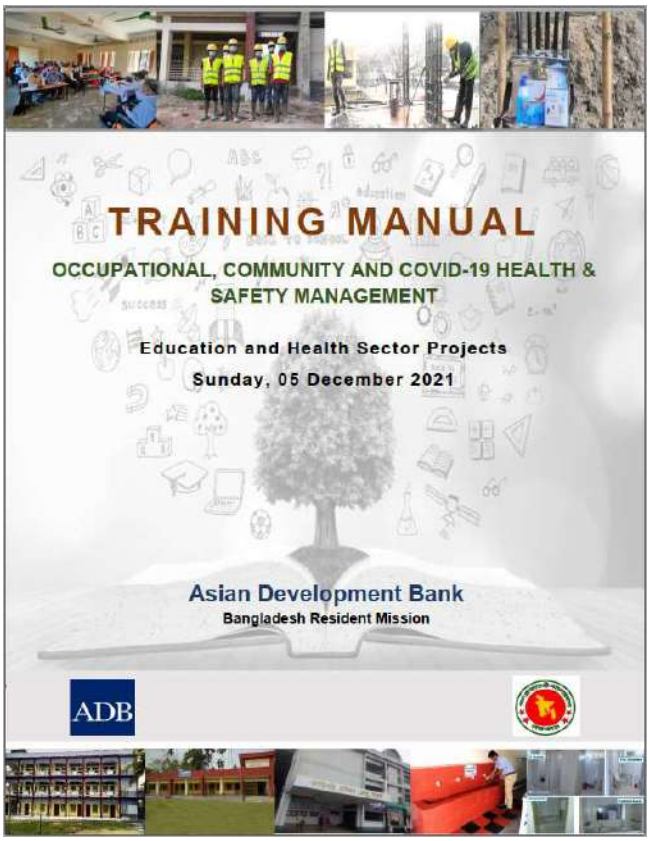


Fig. 5 ADB circulated virtual training manual

In PEDP-4, a revised framework is adopted for both environmental and social safeguard. The basic changes are little but elaborate in comparison to that of PEDP-3. On December 5, 2021 ADB conducted a short virtual training workshop on Occupational, Community and COVID-19 Health and Safety Management at the Construction works. Officials, consultants and contractors of both DPHE and LGED attended the training workshop. Although the duration of the training was short, it was effective and guided the participants with valuable insights related to construction safety and COVID-19 health and safety management at construction site. A training manual was also circulated, glimpse of which is provided in Fig. 5.

During the reporting tenure, DPHE master trainers from Head Quarter and circle Head Quarter (who received ToT during PEDP-3) conducted day long circle level meetings to expedite the works related to the construction of wash blocks and installation of water sources and for the smooth implementation of construction work by adhering the guidelines of both revised EMF and SMF and COVID-19 health and safety protocol. Photo of such circle level meeting from Faridpur is depicted in Fig.6. Thus, the trained engineers try and function as peer educators to educate the site workers and contractors. Thus, the trained engineers try and function as peer educators to educate the site workers and contractors. A summary of training and capacity building activities is tabulated below.

Table 1 Training and capacity building activities during Jan/2022-June/2022

Training Title	Date	Venue	Training Details	No. of Participants	
				Male	Female
Supervision and Construction Quality Control under PEDP4/GPS/NNGPS Project	26/02/2022	DPHE Barishal Auditorium	Training on on-job issues such as Civil / Water Supply / Sanitary / Plumbing related issues in accordance with revised EMF, SMF and COVID-19 New Normal	75	04
	05/03/2022	DPHE Jashore Auditorium		78	7
	12/03/2022	DPHE Rangpur Auditorium		75	04
	28/03/2022	DPHE Sylhet Auditorium		50	-
	31/03/2022	DPHE Central Auditorium, Dhaka		125	10
	02/04/2022	DPHE Rajshahi Auditorium		80	12
	14/05/2022	DPHE Chattogram Auditorium		15	2
	15/05/2022	DPHE Tangail Auditorium		17	1
			Total =	515	40
			Cumulative Number of Training from the beginning of the project till date =	34	

Recently (May 31, 2022), a meeting on the revision of the latest EMF and SMF was held virtually. The meeting was arranged by DPE and presided over by ADG (PEDP4), DPE. Members from DP's consortium and government officials attended the meeting. The meeting came up with several

modification decisions on the existing EMF and SMF which is expected to be included in the revised EMF and SMF.

Fig. 6 CE, DPHE along with Circle SE and other high officials attending co-ordination meeting

In order to identify the key differences of revised EMF and SMF to that of original EMF and SMF of PEDP-3, newly designed training should be carried out by the experts (from both GoB and DP's) who had inputs during the preparation of revised EMF and SMF.

7. Social safeguard screening by DPHE (January'2022 – June'2022)

It cannot be denied that COVID-19 situation slowed down the overall construction and implementation progress. But with restrictions being lessened, DPHE has quickly adapted to the new normal by developing a comprehensive COVID-19 Site Operating Procedure (SOP) alongside several site and task specific risk assessments. DPHE constructed and installed a total of 11,482 wash blocks and 7,668 water points till date from the beginning of this project. Among these, a total of 4,064 wash blocks and 2,500 water points were installed and handed over during the reporting tenure of January'2022 to June'2022. In addition, DPHE finished the monitoring of 15,000 water points (installed in PEDP3) and currently undertaking monitoring of 25,000 water points *(list of schools received from DPE on 03/05/2022)* for arsenic contamination. All these works were monitored based on approved Social Monitoring Framework (SMF) for PEDP-4. Table-2 summarizes the list of DPHE implemented works where screening for social safeguard was carried out.

This report focuses on the construction work from the tenure of January'2022 to June'2022. During this period, not only new wash blocks were constructed and water points were installed, major maintenance of 2,500 wash blocks which were constructed during PEDP-3 were carried out. Furthermore, monitoring of 25,000 water points installed during PEDP-3 were undertaken for arsenic

contamination. The status of the water points and wash blocks received through the monitoring survey is given in following subsections. A list of random monitoring visit from DPHE Head Quarter is listed in Table 3.

Table 2 Progress of Work under PEDP-4, DPHE

Scope of Work	FY 19-20	FY 20-21	July'21-Dec'21	Jan'22-June'22	Total
Construction of Wash Block	-	6,760	658	4,064	11,482
Installation of Water Sources	240	4,401	527	2,500	7,668
Maintenance of Wash Block	689	4,010	608	1,055	6,362
Water Quality Monitoring	-	-	15,000	-	15,000

Table 3 Monitoring visits from DPHE Head Quarter during the reporting period

Sl. No.	Name of subproject	Location	No. of WB/WS	Date of Inspection
1	Construction of Wash Block (WB)	Jamalpur	36	14/02/2022 - 17/02/2022
2	Construction of Wash Block (WB)	Gopalganj	4	28/02/2022
3	Construction of Wash Block (WB)	Pabna	10	12/03/2022 - 13/03/2022
4	Installation of Water Supply (WS)	Gazipur	10	28/03/2022
5	Construction of Wash Block (WB)	Chattogram	10	04/03/2022 – 06/03/2022
6	Construction of Wash Block (WB)	Panchagarh	20	12/05/2022 – 13/05/2022
7	Construction of Wash Block (WB)	Gopalganj	146	18/05/2022 – 21/05/2022

** *In addition, frequent monitoring visit from respective EE Office and AE/SAE offices happen during the reporting tenure.*

8. Outcomes of social safeguard screening

8.1 Influence of type of water point

Planning from the lessons learnt in PEDP-3

It is fact that, DPHE installed water points of different options such as Deep Tube Well (DTW), Shallow Tube Well (STW), Tara Tube well, Ring Well (RW), Pond Sand Filter (PSF), Rain Water Harvesting (RHW) in PEDP-3 based on the variation in geological formation, position of aquifer /water table, saline water intrusion etc. However, all those options have certain advantages as well as multiple drawbacks. The common of which is the ease of availability of water from source and their familiarization and user friendliness to the young users.

In order to mitigate the concerns and to make the water sources more popular and user friendly, DPHE started installing Tube well with Submersible Pump (TSP) in all the primary schools under PEDP-4. This option has special features such as-

- Running water supply with storage facility.
- Multiple users can access at the same time.
- Promote hygiene practice through safe hand washing.

Comment:

Installation of tube well with submersible pump added values to its users especially young users which eventually *increases the easy access to safe drinking water result in health benefit along with improved social safeguard*.

8.2 Is there any discrepancy in the distribution of construction facilities?

Countrywide distribution of tube wells and wash blocks were analyzed and division wise categorization for water source and wash block is depicted in Figs. 7 and 8 respectively. Fig. 7 depicts the equity in distribution of water sources. Among the total installed water points, the highest number was installed in Rajshahi division followed by Sylhet and Chattogram division while the minimum number of water points were installed in Mymensingh division. This is as per need assessment criteria and approved list supplied by DPE based on approved IPG.

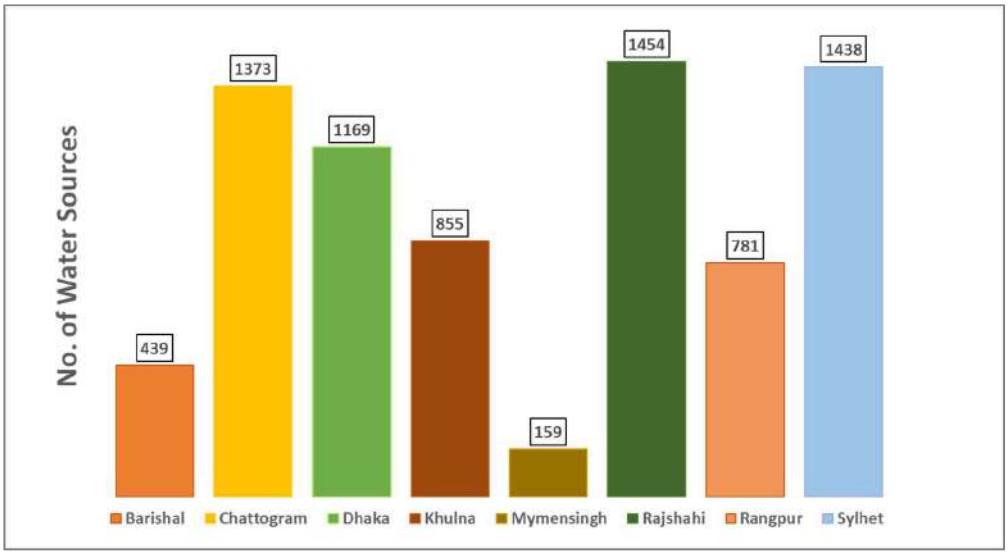


Fig. 7 Countrywide distribution of water points

Fig. 8 reflects the countrywide distribution of wash blocks depending on the number of districts and upazillas in each division. The maximum number of wash blocks were constructed in the Dhaka, Chattogram, Rangpur, Khulna division as these divisions cover maximum districts. The lowest number of wash blocks (536) were constructed in Mymensingh division as it is the smallest division of Bangladesh and thus, equity in distribution is justified.

Wash Block is serving as a unique unit of hygiene practice for the school children as well as for teachers. Its impact on environment is high as it helps to promote hygiene as well as safe and clean school environment. Open defecations and urination practices decreases and confirms better health through improved washing facilities. On the other hand, tube well ensures safe drinking water for the school children as well as for the teachers.

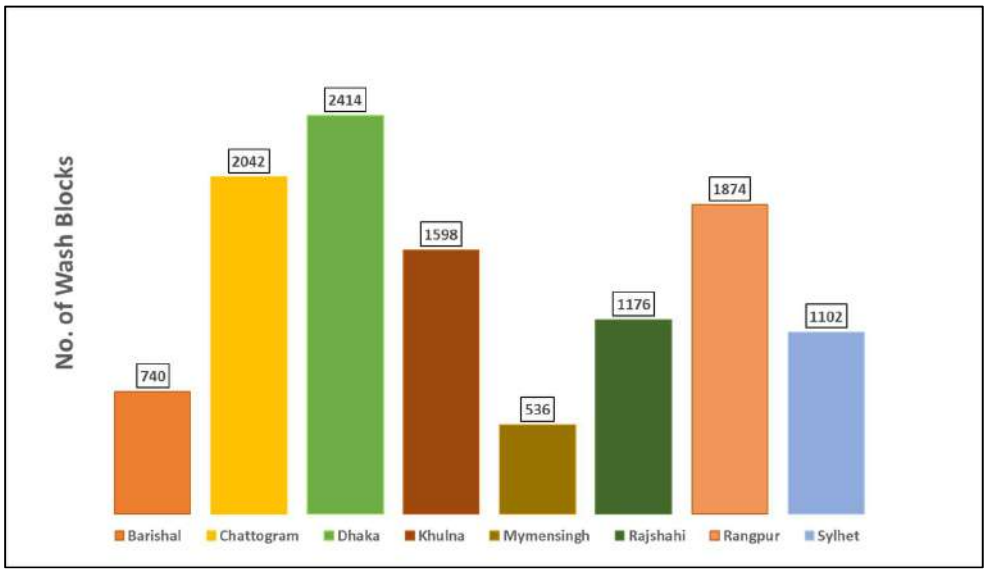


Fig. 8 Countrywide distribution of wash blocks

8.3 Is there any discrimination in the distribution of facilities for ethnic communities?

According to Bangladesh Population and Housing Census, 2011, approximately 1.8 per cent of the population are indigenous 'Adivasis', amounting to around 1.6 million. Of them 4.50-59.76% ethnic

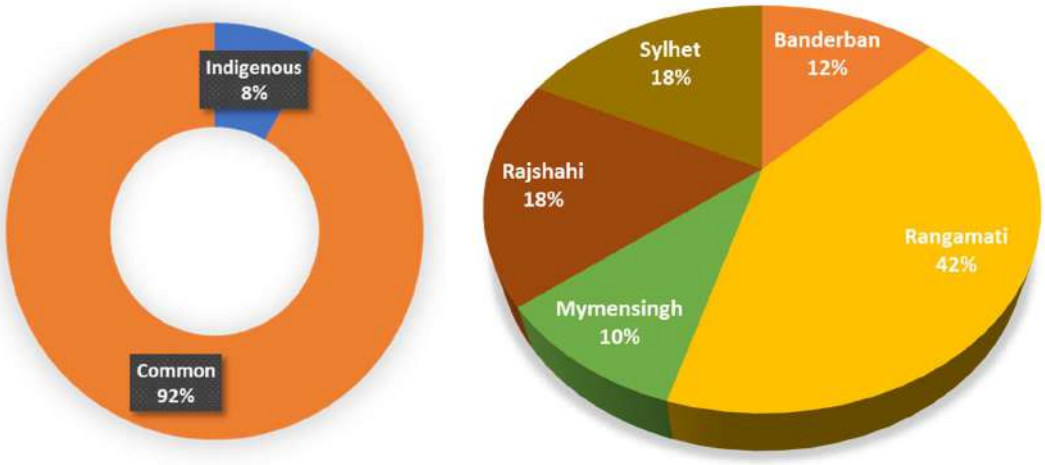


Fig. 9 Distribution of wash blocks in areas of having indigenous community

population resides in Chattogram division, majorly in Rangamati, Khagrachari, Bandarban districts. In addition, there are indigenous people residing in areas like Rajshahi, Sylhet, Mymensigh. Among the total 4064 wash blocks constructed in the report tenure, 8% were in the ethnic community driven areas so that they can be directly benefitted from those facilities. This should minimize the open defecations and urination practices and promote good hygiene practice among children. Therefore, special consideration and priority is given for the under-privileged people instead of discrepancy.

8.4 Is there displacement of people due to land acquisition?

During the construction of 4,064 wash blocks in the reporting tenure, no issues were encountered regarding displacement of people due to land acquisition since all those wash blocks were constructed in the school owned land. In addition, major maintenance of previously constructed wash blocks did not cause any dislocation. Furthermore, during planning and implementation of works related to the installation of water points, it was confirmed that all 2,500 water points were installed in the land owned by respective school.

Comment:

The activity related to the installation of water points and construction of new wash block did not require any land acquisition. As such, *no displacement of people as well as no adverse impact on livelihood happen.*

8.5 Is there any threat on cultural tradition?

Construction of 4,064 new wash blocks having provision of running water supply brought a positive vibe in surrounding society as children could get easy access to safe sanitation. In addition, installation of 2,500 safe drinking water sources ensured reduction of water borne diseases which eventually decreased the rate of absence of students from the school. The screening result confirmed that the construction of wash blocks, installation of water sources and major maintenance of wash blocks did not create any obstruction to the places/objects of cultural/religious significance.

Comment:

The activity related to the installation of water points and major maintenance of existing wash blocks and construction of new wash blocks did not create any threat on cultural tradition. In contrary, *the activity improved the way of life as the facilities confirmed access to safe drinking water* and safe sanitation.

8.6 Is there any sign of improvement of way of life?

Along with the installation of tube well with submersible pump, DPHE constructed 5 outlet hand washing basins in all 2,500 new water points with the provision of running water supply. Construction of hand washing basin has a positive impact on the way of life as it improves the habit of hand washing among the children which is an essential part of our everyday life and a learning in the current COVID-19 context. Construction of 4,064 Wash blocks confirmed the access to safe sanitation facilities which in turns improves the way of life. Fig. 10 depicts the constructed wash block and 5 outlet water collection basin. The screening result confirmed that the installation of water points with provision for hand washing basin and construction of wash blocks improved the way of life.

Comment:

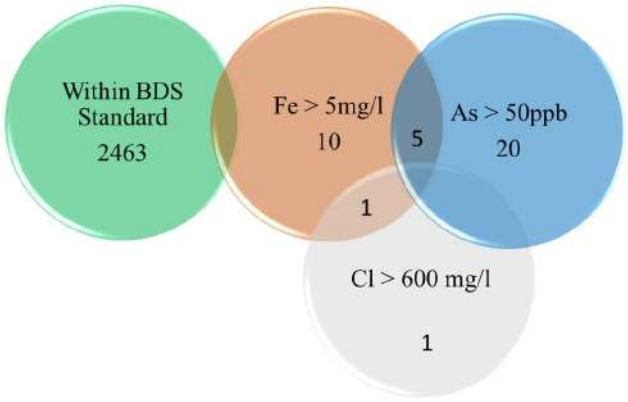
The activity related to the installation of water points with hand washing basin *improved the way of life as the facilities confirmed the access to safe drinking water and promote hygiene.*

Fig. 10 (L): Constructed Wash Block (R): 5 outlet water collection basin

8.7 Do the installed water points provide safe drinking water?

Water testing facilities in DPHE zonal laboratory:

It is fact that DPHE has a permanent set up of 13 laboratory buildings including a central laboratory at Mahakhali, Dhaka. Recently, DPHE completed the set-up of 52 laboratory buildings in 52 districts which confirmed the establishment of zonal laboratories in all districts to expedite the water quality monitoring. These newly established laboratories are equipped with modern machineries so that all relevant water quality parameters can be monitored.



Water Quality before Mitigation Measures

Water Quality after Mitigation Measures

Fig. 11 Water Quality test result at a glance

During installation of water points, suitable water layers are generally selected based on DPHE's experience and geographic location. After installation of new water points in the said 2,500 schools, laboratory tests were conducted to identify potential hazards of Arsenic, Iron and Chloride in water. The tests were done by the laboratory circle of DPHE and the reports are stored in the DPHE MIS database. From the screening of 2,500 tube wells, it was found that 37 of them had the concern of excess arsenic (As) and/or, Iron (Fe) beyond the Bangladesh standard (arsenic, iron and chloride content below 50ppb, 5mg/l and 600mg/l respectively) of safe drinking water. For the rest of the cases arsenic, iron and chloride content were found satisfactory during laboratory tests. Water Quality report of those 37 unacceptable water sources and suggested alternative option along with retest result is summarized in Table 2 of Appendix-5. Fig. 11 shows the diagrammatic presentation of water quality test results. In addition, ample field tests were conducted in those schools during post monitoring phase by DPHE by using field kit which re-confirmed the DPHE laboratory test results. A sample copy of water test result is provided in Appendix-2 and water quality test report for 37 unacceptable water sources have been presented in Appendix-4. A summary of water quality monitoring report is provided in Table 4.

Table 4 Summary of Water Quality Monitoring Result

Sl. No.	District	Water Quality not Satisfactory				Remarks
		Fe > 5mg/L	Cl > 600mg/L	As > 0.05mg/L	Total	
1.	Munshiganj	1	-	-	1	List of 'Not Satisfactory' water sources are given in Appendix-5 and Actions taken for the water sources where water quality is not satisfactory are listed in Table 1 of Appendix-5.
2.	Brahmanbaria	3	1	1	5	
3	Rangpur	2	-	-	2	
4.	Chuadanga	1	-	10	11	
5.	Gaibandha	4	-	9	13	
6.	Dhaka	-	-	2	2	
7.	Narail	1	1	1	3	
8.	Manikganj	4	-	2	6	
Total =		**16**	**2**	**25**	43*	

** 6 water sources out of 43 have contamination of both either Iron and Arsenic or Iron and Chloride; resulting the total no of water sources as = (43-6) = 37 [For details please refer to Appendix 5].*

Mitigation Measures suggested for water sources having unsatisfactory water quality results:

In cases where arsenic/iron/chloride is found beyond allowable BDS standard in installed water sources, DPHE adopts other approved alternate water options. DPHE goes for options like deep tube well of greater depth, ring well, pond sand filter, rain water harvesting, Reverse Osmosis Filter, AIRP, Small box type AIRP etc. whichever is feasible. In some cases, if all the options in hand fails, i.e., boring in greater depth becomes impossible, arsenic is found even in deep tube well and none other

option is feasible, DPHE has started implementing 'SONO Filter' as well. DPHE upazilla offices will arrange and install the said filter in those water sources whichever is feasible, convenient and justified. In addition, water from those sources will be further tested and declared safe if found well below the BDS standard of drinking water. Fig. 12 shows some of the suggested filtration technologies.

It is fact that, in the reporting tenure a total of 37 water sources were found to have water quality concerns with excessive iron, chloride or arsenic. For all the said 37 water points, options like **Reverse Osmosis (RO), AIRP and Pressure Vessel** were installed and filtered water was tested in DPHE zonal Laboratories. The water sources were handed over to the respective schools once the water quality results were found satisfactory. Water quality test results are summarized in Table 1 of Appendix 5.

Fig. 12 Different Suggested Improved Filtration Technologies

8.8 Routine Water Quality Monitoring

As per MoU signed in between DPE and DPHE in September 15, 2019, DPHE will conduct water quality monitoring of 65,000 water points installed earlier in PEDP-3 with an aim to provide arsenic free safe drinking water in the primary schools of Bangladesh. It has been decided that 90% of the tests will be conducted in field by utilizing field test kits for arsenic and the rest 10% will be conducted in DPHE zonal laboratory. Due to COVID-19 pandemic, schools were closed which is why the field tests could not be conducted in the financial year 2020-2021. However, all the test kits were bought and well preserved by DPHE in order to conduct the field tests as soon as the schools re-open.

Soon after the re-opening of the schools, steps were taken to conduct water quality screening of 15,000 water points as selected by DPE. In the previous EMR and SMR [Jul'21-Dec'21] test results of those 15,000 water points were reported which indicated 1.44% arsenic contamination. In addition, it was confirmed that water of 98.56% of 15,000 installed tube wells in PEDP-3 are drinkable. DPHE officials immediately took steps in stopping the water intake from these contaminated water points.

On 3rd May, 2022 DPE issued a list of 25,000 water sources installed in PEDP-3 for routine water quality monitoring. All the received school lists are sent to the concerned EE Office and the routine water quality monitoring program is currently underway.

8.9 Are the constructed toilets accessible for disable people?

The state-of-the-art design of wash block includes the provision for 1(one) toilet for disabled people. This special toilet has high commode along with hand rail facility. In addition, all the wash blocks have ramp provision which facilitates easy access for the disabled people (Fig. 13). DPHE constructed 4,064 new wash blocks in the reporting tenure. Moreover, out of 1,055 wash blocks which were screened for major maintenance, toilet for disabled people in all wash blocks were found to be accessible for disabled student.

Fig. 13 Toilet for disabled teachers and student

Comments:

All *disabled toilets were found to be operational and accessible* during the post monitoring phase.

8.10 COVID-19 Reality, School Re-Opening and New Normal

Countries all over the world are trying new ways of softening or partially lifting COVID-19 related restrictions while keeping the virus progression in check. In this challenging time, the future of education depends on the provision of water, sanitation and hygiene services. So, Hygiene Promotion has been emerged as an issue of particular concern when considering reopening of schools.

In order to confirm adequate hygiene practise, DPHE district and upazilla level officers monthly conduct sessions related to hygiene promotion activities with TEO, ATEO and Primary School Headmasters in the schools or DPHE district offices. All these activities put positive sign to the improvement of total environment. Prior to the re-opening of the schools DPHE district offices and Upazilla offices conducted disinfection of school premises and maintenance of wash blocks and water sources as and where required. Besides these all the construction activities regarding construction of wash blocks, maintenance of wash blocks and installation of water sources are constructed following the guidelines by Ministry of Local Government, Rural Development and Cooperatives (Appendix-3).

8.11 Is there any special safety issue taken during COVID'19 pandemics?

COVID-19 has disrupted day to day operations in construction work but as the time progresses, our understanding of how the virus spreads has also evolved. In these uncertain times, worksite safety and health are more important than ever before. DPHE follows the rules and regulations proclaimed by the Ministry of Local Government, Rural Development and Co-operatives (MLGRD&C). On 7th May'2020, the MLGRD&C provided some instructions on a basis of emergency for the safety considerations during the pandemic situation (Attached in Appandix-3) vide memo No. 1629 on 07/05/2020. Specific COVID-19 safety guidelines which is recommended for construction workers include-

i) The workers in construction sites have to maintain safe distance (i.e., 1m) from each other and have to wear the mask, hand gloves, gumboot, helmet etc. and no worker will be permitted in the project site without these equipment.
ii) There should be a proper arrangement of soap and hand sanitizer in worksite and all the workers must wash hand with antiseptic soap in an interval of 1 hour and also wash their faces and hands before taking meals and after using meals.
iii) The officials from DPHE headquarter should arrange cautionary meetings on covid-19 safety issues at district level and upazilla level with the Executive Engineer, Assistant Engineer, Sub-Assistant Engineer (Fig.11) and collect the updates from the construction sites about precautionary affairs through proper channel.
iv) In addition to the district level, DPHE officials should arrange meeting with School Head Masters at Upazilla level to make them informed about the safety issues for workers in the construction sites of schools as well as the special affairs due to corona pandemic.

DPHE followed the construction safety protocol during COVID-19 pandemic as outlined above. Table 5 summarizes the COVID response performance at the work sites in all the *454 completed contracts (406 for Wash block and 48 for Water Sources) during the reporting tenure*.

Table 5 COVID response performance at worksite

COVID-19 Response questions	No. of Contracts			Comments
	FC	PC	N/A	
Site re-opening and entry protocol				
Locate the closest medical establishment equipped with COVID -19 response facilities.	454			
Engage a full time EHS professional at site			454	Currently there is no fund provision in DPP in favor of DPHE for addressing safeguard. However, it is under consideration.
Purchase thermometer gun, soap, hand sanitizer, disinfectants and PPEs (mask, hand gloves, hard shoes etc.) and keep it at worksite office.	454			
Establish site entrance protocol. Redesign the site safety notices/signboards/protocol according to the ADB guidelines	454			

COVID-19 Response questions	No. of Contracts			Comments
	FC	PC	N/A	
Arrange washbasin, soap and clean water at the entrance of every worksite/campsite. Also keep either a disinfectant tub for shoes or keep disinfectant spray that must be sprayed under the boots/hard shoes of the persons entering worksite.	454			
Provide every personnel working in the site with mask, hand gloves and hard shoes for their personal use.	454			
Everyone entering the worksite must wear a mask, gloves and hard shoes	454			
A designated EHS and medical person should stay all time during work. The EHS/Medical person should also monitor campsite. He/she will be in charge of ensuring physical distances (minimum 1m) among workers, disinfecting surfaces that are commonly used and investigate workers'/site personnel health and safety.			454	Currently there is no fund provision in DPP in favor of DPHE for EHS/medical professional
At the start and end of the day disinfect the total worksite.			454	Workers stay at the worksite in labour shed
Encourage site personnel/camp dwellers to not touch their eyes, mouth or nose if not washed thoroughly with soap recently. Also discourage hand shaking or hugs.	454			
Arrange a mandatory site brief on COVID awareness in the morning. The session must be conducted by the EHS/medical professional.		454		Currently there is no fund provision in DPP in favor of DPHE for EHS/medical professional
While worksites are commonly well ventilated (if not make sure the work sites are well ventilated), ensure that the camp sites including the rooms designated for the camp dwellers are well ventilated and spacious.	454			
Before sharing common tools/machines at worksite, ensure to disinfect.		454		In some instances, it is difficult to avoid situations like use of mixture machine, vibrator machine etc. during construction
Discourage site personnel to gather and gossip at any time, rather encourage physical distance while chatting/discussing.	454			
Restrict worksite personnel to go outside unnecessarily. Also restrict campsite personnel to go outside without any valid cause.	454			
If any person related at worksite/campsite fall victim to COVID-19 or being kept isolated for pre-caution, consider paid leave with no exception allowed.			454	No such event has been identified during the reporting tenure
Train workers on how to properly put on, use/wear, and take off protective clothing and equipment. The on-site EHS/Medical person should be in-charge of these trainings. These trainings must maintain the WHO's social distancing protocol. Make these trainings mandatory at worksites. Provide 10-15 minutes of a workday for such 'training and encouragement' activities.		454		Since, there is no fund provision in DPP in favor of DPHE for EHS/medical professional training was not conducted by EHS/medical professional. However, such training has been conducted by SAE/AE of DPHE.

9 Grievance redressal status

A comprehensive grievance redressal system has been developed to address any issues generated due to the construction of wash blocks and installation of water sources in the primary schools. To address such issues, there is a designated GR committee in the DPHE Headquarter, the detail of which is given in Appendix-4. In addition, DG, DPE issued a letter Vide Memo. 18; dated March 18, 2022 to

follow the instructions as stated in revised SMF. Since, no complain were raised from the concerned community, there was no issue of grievance redressal during the reporting tenure.

10. Compliance Status to ADB Loan Covenants

The compliance status to ADB loan covenants relevant to social safeguards is listed in Table 6.

Table 6 Compliance with ADB Loan Covenants

Serial no. as per Loan Agreement		Program Specific Covenants	Compliance Status	Remarks
Schedule 4 Schedule 4	10	To ensure that all program actions in the area of environmental and social safeguards are implemented in a timely and efficient manner	Complied	Semi-Annual environmental and social safeguards are implemented based on revised EMF/SMF.
	12	To ensure that the program does not involve any resettlement risks.	Complied	No resettlement risks were involved since the construction of wash blocks and water sources were conducted in the location owned by the primary schools as described in section 8.4.
	13	To ensure that the program does not involve any negative risks or impacts on tribes or minor races, ethnic sects and communities.	Complied	No negative risks or impacts on tribes or minor races, ethnic sects and communities were reported through the comprehensive social safeguard screening as reported in section 8.5.

11. Implementation Status of CAP recommended in aide memoire

The implementation status of CAP recommended in comprehensive aide memoire is listed in Table 7.

Table 7 Implementation Status of CAP recommended in aide memoire

Sl. No.	Recommended Corrective Action Measures	Implementation Status
1	All tube wells that have been built for more than one year are to be screened annually by DPHE for water quality and physical status of tube wells to ensure fixture damaged/choked up tube wells and where water quality parameters	DPHE completed the screening of 15,000 water points by Dec/2021 and currently undertaking the screening of another 25,000 water points, the list of which is made available on May 3rd, 2022 by DPE. Please refer to section 8.8 for details.
2	The mission advised DPHE to take initiative for water treatment if deep tube wells are found contaminated with arsenic.	As mentioned in Table 4 of section 8.7, 25 water sources were found to have arsenic contamination during the reporting tenure. It can be seen from Table 1 of Appendix 5 that water treatment facilities were provided in those arsenic contaminated water sources.

12 Conclusions

This study investigates the social safeguard concerns during the implementation of water points and construction of wash blocks based on the approved SMF guidelines for PEDP-4. The social monitoring screening confirmed no significant instances or issues that may hamper or influence the social safety during the reporting tenure. Being an implementing agency, DPHE would like to uphold this status in its ongoing and upcoming works related to infrastructure development.

Appendix-1: Social Screening Format for Wash Block

Social Screening Format for Wash Block/Water Sources

District: Chandpur
Upazilla: Chandpur Sadar
Name of School: RAILWAY SECVENGERS
School ID: 91407010113
Type of WASH Block/Water Sources: Combind Footing

Screening Questions	Base Line		Impact Without Intervention			Impact During Implementation	
	Yes	No	+	-	N/A	+	-
Is the land owned by school? If not, Put remarks.	Yes	-	+		-	+	
Any loss of Agricultural Land?	-	No				+	
Are the types of Water Points satisfactory?	Yes	-	+		-	+	
Is there displacement of people due to land acquisition?	-	No			N/A	+	
Is there any threat on cultural tradition/way of life?	-	No			N/A	+	
Are the Water Points installed?	Yes	-			N/A	+	
Was the Water quality tested?	-	No			N/A	+	
Do the installed water points provide safe drinking water?	-	No			N/A	+	
Is there any conflict with Water Supply right?	-	No			N/A	+	
Are there provisions of toilet for disabled students?	Yes	-	+			+	
Are the constructed toilets accessible for disable students?	Yes	-	+			+	

২৩/০৫/২২
মোঃ জাহিদুল ইসলাম
উপ-সহকারী প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
চাঁদপুর সদর উপজেলা চাঁদপুর

২৩/০৫/২২
আবু মুসা মোহাম্মদ ফয়সাল
নির্বাহী প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
চাঁদপুর জেলা, চাঁদপুর।

Social Screening Format for Wash Block/Water Sources

District: Natore
Upazilla: Bagatipara.
Name of School: Dumrai hijli govt. primary
School ID: 911140404
Type ~~of WASH Block~~/Water Sources: water sources

Screening Questions	Base Line		Impact Without Intervention			Impact During Implementation			Impact after Implementation			Remarks
	Yes	No	+	-	N/A	+	-	N/A	+	-	N/A	
Is the land owned by school? If not, Put remarks.	✓				✓			✓	✓			
Any loss of Agricultural Land?		✓			✓			✓	✓			
Are the types of Water Points satisfactory?		✓			✓			✓	✓			
Is there displacement of people due to land acquisition?		✓			✓			✓	✓			
Is there any threat on cultural tradition/way of life?		✓			✓			✓	✓			
Are the Water Points installed?		✓			✓			✓	✓			
Was the Water quality tested?		✓			✓			✓	✓			
Do the installed water points provide safe drinking water?		✓			✓			✓	✓			
Is there any conflict with Water Supply right?	✓				✓			✓	✓			
Are there provisions of toilet for disabled students?		✓			✓			✓	✓			
Are the constructed toilets accessible for disable students?												

Signature of SAE

Signature of AE

Signature of Executive Engineer
14/06/22

Appendix-2: Sample Water Quality Test Report

(Laboratory)

Water Quality Test Report
Name of Project: PEDP-4
District: Naogaon
Package No. PKG-268

Sl No	District	Upazilla	Village	ID	Type of School	Water Point		Name of School	GPS		Water Quality				
						Type	Depth (ft)		N	E	Sand	Clear	Fe (mg/L)	As (mg/L)	Cl (mg/L)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Naogaon	Raninagar	Sarboraam pur	1111002O7	1	Pump		Saboraam pur GPS	24°42'41"	88°55'56"	1	1	1.5	0.003	19
2	Naogaon	Raninagar	Raninagar Model	911111001O1	1	Pump		Raninagar Model GPS	24°44'28"	88°58'02"	1	1	0.8	0.002	32
3	Naogaon	Raninagar	Khagra	1111001O5	1	Pump		Khagra GPS	24°44'16"	88°00'15"	1	1	1.4	0.003	48
4	Naogaon	Raninagar	Arji Bishnupur	1111004O4	1	Pump		Arji Bishnupur GPS	24°44'48"	88°05'08"	1	1	2.1	0.025	14
5	Naogaon	Raninagar	Chatar Dighi	1111006O2	1	Pump		Chatar Dighi GPS	24°43'55"	88°41'80"	1	1	1.5	0.002	18
6	Naogaon	Raninagar	Sofikpur	1111005O4	1	Pump		Sofikpur GPS	24°39'13"	89°02'52"	1	1	2.3	0.002	20
7	Naogaon	Raninagar	Pouata Para	9911109203	1	Pump		Pouata Para GPS	24°40'32"	88°59'32"	1	1	1.3	0.002	18
8	Naogaon	Atrai	Lakbari	1111010204	1	Pump		Lakbari GPS	24°38'14"	88°00'27"	1	1	0.1	0.002	19
9	Naogaon	Atrai	Bohula	9911019006	1	Pump		Bohula GPS	24°41'08"	88°58'05"	1	1	0.7	0.002	22
10	Naogaon	Atrai	Bilbari	9911010704	1	Pump		Bilbari GPS	24°38'47"	88°52'39"	1	1	0.4	0.002	24
11	Naogaon	Atrai	Goalbari	9911019017	1	Pump		Goalbari GPS	24°38'49"	88°53'38"	1	1	0.9	0.002	21
12	Naogaon	Atrai	Dariagathi	1111019001	1	Pump		Dariagathi GPS	24°35'57"	88°57'09"	1	1	1.6	0.017	19
13	Naogaon	Atrai	Tejnandi	1111011581	1	Pump		Tejnandi GPS	24°34'06"	88°02'38"	1	1	0.1	0.002	10
14	Naogaon	Atrai	Paharpur	1111019005	1	Pump		Paharpur GPS	24°39'42"	88°51'00"	1	1	1.1	0.004	20
15	Naogaon	Atrai	Kalikapur Purbapara	1111010706	1	Pump		Kalikapur Purba Para GPS	24°41'34"	88°53'58"	1	1	1.6	0.001	48
16	Naogaon	Atrai	Berahason	9911101902З	1	Pump		Berahason GPS	24°40'13"	88°59'05"	1	1	0.2	0.002	18
17	Naogaon	Dhamoirhat	Badal	1111020705	1	Pump		Badal Asokia GPS	25°05'19"	88°54'15"	1	1	1.9	0.005	10
18	Naogaon	Dhamoirhat	Beniduar	1111020106	1	Pump		Beniduar GPS	25°08'55"	88°53'15"	1	1	0.4	0.001	15
19	Naogaon	Dhamoirhat	Koigram	1111020403	1	Pump		Koigram GPS	25°09'44"	88°48'57"	1	1	3.3	0.003	10
20	Naogaon	Dhamoirhat	Malahar	1111020405	1	Pump		Malahar GPS	25°09'24"	88°50'30"	1	1	5.4	0.015	11
21	Naogaon	Dhamoirhat	Arji Ara Nagar	1111020523	1	Pump		Maulana Gias Uddin GPS	25°05'20"	88°51'50"	1	1	2.3	0.004	11
22	Naogaon	Dhamoirhat	Morloi	1111020802	1	Pump		Morloi GPS	25°09'19"	88°43'09"	1	1	3.2	0.002	12
23	Naogaon	Dhamoirhat	Neuta	1111020105	1	Pump		Neuta GPS	25°08'55"	88°50'56"	1	1	1.4	0.002	10
24	Naogaon	Dhamoirhat	Purba Raghunathpur	1111020103	1	Pump		Purba Raghunathpur GPS	25°08'49"	88°54'39"	1	1	1.5	0.005	12
25	Naogaon	Dhamoirhat	Ramram Pur	1111020106	1	Pump		Ramram Pur GPS	25°07'18"	88°53'07"	1	1	0.8	0.001	20
26	Naogaon	Dhamoirhat	Jogot Nagar	1111020124	1	Pump		Sheikh Rasel GPS	25°09'24"	88°52'58"	1	1	1.6	0.002	16

Sample Analyzer

10.03.22

Md. Abdul Jabbar
Sample Analyzer
DPHE, Zonal Laboratory
Rajshahi.

Senior Chemist

10.03.22

Md. Shafiqul Islam
Senior Chemist
DPHE, Zonal Laboratory
Rajshahi.

(Field Test)

EE, DPHE

Government of the People's Republic of Bangladesh
Arsenic Test at School by Field Kit under Water Quality Monitoring of Fourth Primary Education Development Program (PEDP4)

ARSENIC TEST RESULT BY FIELD KIT

(A) Information of Primary School:

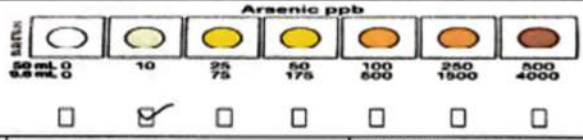
1. Name of School	:	pachim Dhemushia Reg: primary School										
2. EMIS Code	:	4	1	2	0	5	1	2	0	3	0	2
3. District	:	Coxbazar					4. Upazilla :		chakaria			

(B) Information of Drinking Water Source:

1. Provision of Water Sources	:	☑ Yes ☐ No
2. Project	:	☑ PEDP3 ☐ GPS-1 ☐ NNGPS-1 ☐ PEDP-4 ☐ Others
3. Installed By	:	☑ DPHE ☐ Others
4. Year of Installation	:	2017
5. Type of Tube Well	:	☐ Deep ☑ Shallow ☐ Tara ☐ Ring Well ☐ TSP ☐ Others
6. Present Condition	:	☑ Running ☐ Temporary Choked up ☐ Permanently Choked up
7. Platform/Collection Basin Condition	:	☑ Good ☐ Bad ☐ No Platform/Collection Basin.

(C) Water quality & Present status:

Field Observation: (Please √)



☐ ☑ ☐ ☐ ☐ ☐ ☐

Arsenic test Result	:	..... 10 .....ppb (approx.)	TEST KIT HACH EZ Arsenic Test Kit Cat. No. 28228-00
BDS Standard	:	50 ppb (0.05mg/l)	

For School	For DPHE
Signature & Date:	Signature & Date: 26-12-21
Name: মোঃ ইদ্রিস প্রধান শিক্ষক (চ: দা:)	Name: মোঃ আবু ইউসুফ
Designation: পশ্চিম ঢেমুশিয়া সরঃ প্রাঃ বিদ্যালয় চকরিয়া, কক্সবাজার।	Designation: উপ-সহকারী প্রকৌশলী জনস্বাস্থ্য প্রকৌশল অধিদপ্তর চকরিয়া, কক্সবাজার।
Phone: 01814-111299	Phone:

যোগাযোগকারী আলম
মেকানিক
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
চকরিয়া, কক্সবাজার।

[এই পরীক্ষার সাথে বিদ্যালয় কর্তৃপক্ষের কোন আর্থিক সংশ্রেষ নেই। আর্সেনিক পরীক্ষার জন্য সকল খরচ ঠিকাদারী প্রতিষ্ঠান কর্তৃক বহন করা হবে]

Appendix-3: Safety Issue guidelines due to Covid'19

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
স্থানীয় সরকার, পল্লী উন্নয়ন ও সমবায় মন্ত্রণালয়
স্থানীয় সরকার বিভাগ
পাস-১ অধিশাখা।
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গ্রাম শহরের উন্নতি

স্মারক নং-৪৬.০০.০০০০.০৮৩.১২.০০২.১৭(অংশ-১)-১৬২৯

তারিখঃ ২৪ বৈশাখ ১৪২৭ / ০৭ মে ২০২০

বিষয়ঃ জনস্বাস্থ্য প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন প্রকল্পের কাজ সম্পাদনের জন্য অনুসরণীয় নির্দেশনা।

সূত্রঃ জনপ্রশাসন মন্ত্রণালয়ের প্রজ্ঞাপন নং- ০৫.০০.০০০০.১৭৩.০৮.০১৪.০৭-১৩৫, তারিখ: ০৪ মে ২০২০।

উপর্যুক্ত বিষয় ও সূত্রোস্থ পত্রের প্রেক্ষিতে নির্দেশক্রমে জানানো যাচ্ছে যে, জনস্বাস্থ্য প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন প্রকল্পের কাজ সম্পাদনের জন্য নিম্নবর্ণিত নির্দেশনা অনুসরণ করতে হবেঃ

০১) প্রকল্প এলাকায় করোনা ভাইরাস (কভিড-১৯) বিষয়ক স্বাস্থ্য ও পরিবার কল্যাণ মন্ত্রণালয় কর্তৃক জারিকৃত নির্দেশনা সম্বলিত সাইনবোর্ড স্থাপন করতে হবে;

০২) স্বাস্থ্য বিধি আনুসরণ ও সামাজিক দূরত্ব রক্ষা করে প্রকল্পের কাজ সম্পাদন করতে হবে। প্রকল্প কাজে যে সকল শ্রমিক কাজ করবে তারা শারীরিকভাবে সুস্থ কি-না তা নির্ণয়ের জন্য থার্মাল স্ক্যানারের মাধ্যমে তাদের শরীরের তাপমাত্রা পরীক্ষা করতে হবে;

০৩) ট্রাকে করে নির্মাণ সামগ্রী পরিবহন/সরবরাহের সময় ট্রাকের সামনে ব্যানারে জনস্বাস্থ্য প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন সুনির্দিষ্ট প্রকল্পের নাম উল্লেখ থাকতে হবে;

০৪) প্রকল্প কাজ সম্পাদনের জন্য শ্রমিকদের নির্দিষ্ট পোশাক পরিধান করতে হবে এবং প্রযোজ্য ক্ষেত্রে মাস্ক, হ্যান্ডগ্লোভস্, গামবুট, হেলমেট ব্যবহার করতে হবে;

০৫) প্রকল্প এলাকায় নির্মাণ শ্রমিকদের জন্য সাবান পানি দিয়ে হাত ধোয়ার ব্যবস্থা থাকতে হবে। প্রয়োজনে হ্যান্ড স্যানিটাইজার সরবরাহ করতে হবে;

০৬) চলমান প্রকল্প এলাকায় কার্যক্রম চলাকালীন কাজের বিবরণ সম্বলিত সাইনবোর্ড স্থাপন করতে হবে;

০৭) প্রকল্প কাজে নির্মাণ সংশ্লিষ্ট যন্ত্রপাতি ব্যবহারের ক্ষেত্রে স্বাস্থ্য সুরক্ষার বিষয়টি নিশ্চিত করতে হবে;

০৮) প্রকল্প কাজে নিয়োজিত নির্মাণ শ্রমিকদের স্বাস্থ্য বিধি অনুসরণপূর্বক সামাজিক দূরত্ব বজায় রেখে নির্ধারিত নির্মাণ শেডে অবস্থান করতে হবে;

০৯) পাথর, সিমেন্ট বা অন্যান্য নির্মাণ সামগ্রী এক জেলা হতে অন্য জেলায় পরিবহনের প্রয়োজন হলে সংশ্লিষ্ট জেলা প্রশাসকগণকে অবহিত করতে হবে;

১০) প্রযোজ্য ক্ষেত্রে প্রকল্পের কাজ চালানোর জন্য সংশ্লিষ্ট জেলা প্রশাসক/উপজেলা নির্বাহী অফিসারের অনুমতি গ্রহণ করতে হবে;

অপর পৃষ্ঠায় দ্রষ্টব্য-

-০২-

১১) উল্লিখিত নির্দেশনা যথাযথভাবে অনুসরণ করা হচ্ছে কিনা তা মাঠ পর্যায়ে তদারকির জন্য জনস্বাস্থ্য প্রকৌশল অধিদপ্তর একটি কমিটি গঠন করবে। কমিটি প্রতি মাসে স্থানীয় সরকার বিভাগ বরাবর প্রতিবেদন দাখিল করবে।

১২) ঈদ-উল-ফিতরের সরকারি ছুটিতে সকল কর্মকর্তা-কর্মচারীকে তার স্ব-স্ব কর্মস্থলে অবস্থান করতে হবে।

০৭/০৫/২০২০

মো: খাইরুল ইসলাম
যুগ্মসচিব
ফোন: ৯৫৭৫৫৬২

প্রধান প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
কাকরাইল, ঢাকা।

স্মারক নং-৪৬.০০.০০০০.০৮৩.১২.০০২.১৭(অংশ-১)- ১৬২৯/০১(০৮) তারিখঃ ২৪ বৈশাখ ১৪২৭ / ০৭ মে ২০২০

অনুলিপিঃ (সদয় অবগতির জন্য)

১. অতিরিক্ত সচিব (পাস), স্থানীয় সরকার বিভাগ।
২. বিভাগীয় কমিশনার (সকল), ... বিভাগ।
৩. মাননীয় মন্ত্রীর একান্ত সচিব, স্থানীয় সরকার পল্লী উন্নয়ন ও সমবায় মন্ত্রণালয়।
৪. জেলা প্রশাসক (সকল), ... জেলা।
৫. উপসচিব, বিধি-৪ শাখা, জনপ্রশাসন মন্ত্রণালয়, বাংলাদেশ সচিবালয়, ঢাকা।
৬. সিনিয়র সচিবের একান্ত সচিব, স্থানীয় সরকার বিভাগ।
৭. কম্পিউটার প্রোগ্রামার, স্থানীয় সরকার বিভাগ।
৮. অফিস কপি।

০৭/০৫/২০২০

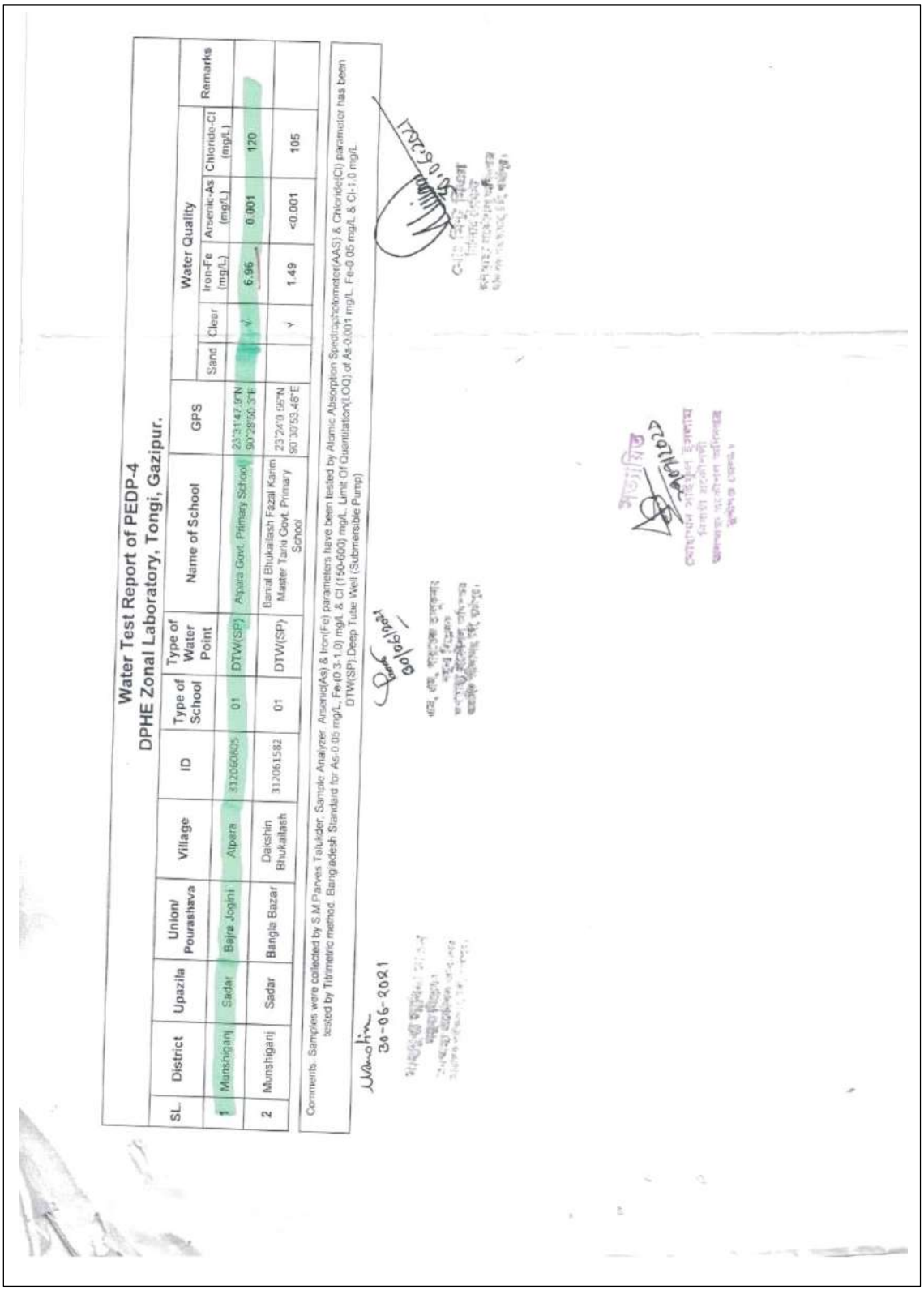
মো: খাইরুল ইসলাম
যুগ্মসচিব

Appendix-4: Grievance Redressal Committee of DPHE

অনিক ও আপিল কর্মকর্তা

নাম : মো: শামছুল আলম পদবী: প্রকল্প পরিচালক, পানি সংরক্ষণ ও নিরাপদ পানি সরবরাহের লক্ষ্যে জেলা পরিষদের পুকুর /দিঘি/ জলাশয় সমূহ পুনঃখনন/সংস্কার প্রকল্প। জনস্বাস্থ্য প্রকৌশল অধিদপ্তর, ঢাকা। ফোনঃ +৮৮ ০২ ৫৫১৩০৫৩০ মোবাইল :+৮৮ ০১৭১১২৭৬৯২৩ ইমেইলঃ pd.prp@dphe.gov.bd	অভিযোগ নিস্পত্তি কর্মকর্তা (অনিক)
নাম: মীর আবদুস সাহিদ পদবী: প্রকল্প পরিচালক, বাংলাদেশের ৩০ টি পৌরসভায় পানি সরবরাহ প্রকল্প, ঢাকা ফোনঃ +৮৮ ০২ ৫৫১৩০১৯ মোবাইল :+৮৮ ০১৫৫৮৩০৯০৬৩ ইমেইলঃ pdbmwssp@dphe.gov.bd	বিকল্প অভিযোগ নিস্পত্তি কর্মকর্তা (বিকল্প অনিক)
নামঃ নুমেরী জামান পদবিঃ যুগ্মসচিব (পলিসি সার্পোট অধিশাখা) ই-মেইলঃ psbr@lgd.gov.bd মোবাইলঃ ০১৮৪৬৫২০২৬৪ ফোন (অফিস) ০২৯৫৫৮২২৯	আপিল কর্মকর্তা

Appendix-5: Water Quality Report of Unacceptable Water Sources



Water Test Report of PEDP-4
DPHE Zonal Laboratory, Tongi, Gazipur.

SL.	District	Upazila	Union/ Pourashava	Village	ID	Type of School	Type of Water Point	Name of School	GPS	Water Quality				Remarks
										Sand	Clear	Iron-Fe (mg/L)	Arsenic-As (mg/L)	Chloride-Cl (mg/L)	
1	Munshiganj	Sadar	Bajra Jogini	Alpara	312060805	01	DTW(SP)	Alpara Govt. Primary School	23°31'47.9"N 90°28'50.3"E		√	6.96	0.001	120	
2	Munshiganj	Sadar	Bangla Bazar	Dakshin Bhukailash	312061582	01	DTW(SP)	Banial Bhukailash Fazal Karim Master Tarla Govt. Primary School	23°24'0.56"N 90°30'53.46"E		√	1.49	<0.001	105	

Comments: Samples were collected by S.M.Parvez Talukder, Samsic Analyzer. Arsenic(As) & Iron(Fe) parameters have been tested by Atomic Absorption Spectrophotometer(AAS) & Chloride(Cl) parameter has been tested by Titrimetric method. Bangladesh Standard for As-0.05 mg/L, Fe-(0.3-1.0) mg/L & Cl (150-600) mg/L. Limit Of Quantitation(LOQ) of As-0.001 mg/L, Fe-0.05 mg/L & Cl-1.0 mg/L
DTW(SP)-Deep Tube Well (Submersible Pump)

Government of the People's Republic of Bangladesh
Department of Public Health Engineering (DPHE)
Office of the Senior Chemist
Zonal Laboratory, Comilla
Water Testing Results of PEDP-4

Sl No	District	Upazilla	Union	Village	School ID	School Type	Name of school	GPS Reading	Water Quality				
									Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)
1	Brahmanbaria	Ashugonj	Araishidha	Araishidha	405011202	PEDP-4	Araishidha (South) GPS	24°05020' 91°03670'	N	Y	0.004	5.33	27

Sample was collected by Golam Mostafa, Mechanic and sent by AE, DPHE, Ashugonj via EE, DPHE Brahmanbaria.

SHILPI NAG
Sample Analyzer
Department of Public Health Engineering (DPHE)
Zonal Laboratory, Cumilla.

SACHCHIDANANDA DAS
Sample Analyzer
Department of Public Health Engineering (DPHE)
Zonal Laboratory, Cumilla.

11/01/'22
SHARMIN SULTANA
Junior Chemist
DPHE Zonal Lab Cumilla.

KANAI LAL DAS
11/01/2022
Junior Chemist
DPHE Zonal Lab, Comilla.

Government of the People's Republic of Bangladesh
Department of Public Health Engineering (DPHE)
Office of the Senior Chemist
Zonal Laboratory, Cumilla
Water Testing Results of PEDP-4 Samples

Sl No	District	Upazilla	Union	Village	School ID	School Type	Name of school	GPS Reading	Water Quality				
									Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)
1	Brahmanbaria	Bijoynagar	Budhonti	Satborgo	405012604	PEDP-4	Satborgo GPS	24°05'30" 91°16'59"	N	Y	0.001	3.99	44
2	Brahmanbaria	Bijoynagar	Budhonti	Beerpasa	405012606	PEDP-4	Beerpasa GPS	24°04'39" 91°16'21"	N	Y	0.001	4.69	94
3	Brahmanbaria	Bijoynagar	Paharpur	Khatinga	405011901	PEDP-4	Khatinga GPS	23°59'13" 91°16'22"	N	Y	0.007	6.86	625
4	Brahmanbaria	Ashugonj	Chorchartola	Chorchartola	405011204	PEDP-4	Chorchartola Model GPS	24°01'49" 90°59'50"	N	Y	0.003	1.73	142
5	Brahmanbaria	Ashugonj	Durgapur	Bogoir	405011004	PEDP-4	Bogoir Uttor GPS	24°03'22" 91°03'46"	N	Y	0.002	4.83	425
6	Brahmanbaria	Ashugonj	Chorchartola	Chorchartola	405011205	PEDP-4	Chorchartola Dokkhin GPS	24°01'12" 90°59'34"	N	Y	0.002	4.19	133
7	Brahmanbaria	Ashugonj	Durgapur	Khoriala	405012503	PEDP-4	Khoriala GPS	24°02'58" 91°03'32"	N	Y	0.001	7.31	284
8	Brahmanbaria	Ashugonj	Talsahar	Kamaura	405011806	PEDP-4	Kamaura GPS	24°02'21" 91°02'48"	N	Y	0.001	4.72	71
9	Brahmanbaria	Ashugonj	Araisidha	Araisidha	405011202	PEDP-4	Araisidha GPS	24°03'60" 91°02'01"	N	Y	0.101	3.62	97
10	Brahmanbaria	Nasirnagar	Purbobhag	Bhuban	405071101	PEDP-4	Bhuban GPS	24°08'90" 91°13'12"	N	Y	0.002	3.52	89
11	Brahmanbaria	Nasirnagar	Kunda	Moslondapur	405070301	PEDP-4	Moslondapur GPS	24°10'60" 91°02'3.7"	N	Y	0.001	8.66	71
12	Brahmanbaria	Nasirnagar	Nasirnagar	Nasirnagar	405070504	PEDP-4	Nasirnagar Girls GPS	24°11'40" 91°11'60"	N	Y	0.001	3.28	70
13	Brahmanbaria	Sarail	Sahabajpur	Rajabari Kandi GPS	91405041001	PEDP-4	Rajabari Kandi GPS	24°02'80" 91°16'60"	N	Y	0.002	4.43	62
14	Brahmanbaria	Sarail	Pakiswar	Teeghor	91405040501	PEDP-4	Teerghor GPS	24°04'60" 91°05'80"	N	Y	0.003	3.81	426
15	Brahmanbaria	Sarail	Noagaon	Terokandia	91405040306	PEDP-4	Terokanda GPS	24°04'90" 91°09'50"	N	Y	0.004	4.08	248

Samples were collected by Sorhan Uddin Lab Assistant, DPHE Zonal Lab, Comilla.

SHILPI NAG
Sample Analyzer
Department of Public Health Engineering (DPHE)

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Office of the Senior Chemist
Department of Public Health Engineering (DPHE)
Zonal Laboratory, Rangpur.

Water Test Report of PEDP-4 Project

Sl. No	District	Upazila	Village	School ID	Type of School	Water point		Name of School	Global Positioning System (GPS)		Water Quality			
						Type	Depth (m)		Latitude	Longitude	Sand	Iron	As (mg/L)	Fe (mg/L)	Cl (mg/L)	Remarks
1	Rangpur	Mithapukur	Ezmalpur Taltola	99105071707	01	TSP	-	Ezmalpur Taltola GPS	25°34'14"	89°29'38"	01	01	-	6.5	-	
2	Rangpur	Mithapukur	Joypala Nandapur	99704079013	01	TSP	-	Joypala Nandapur GPS	25°36'59"	89°31'38"	01	01	-	6.0	-	

BDS Bangladesh Drinking Standard (Fe=0.3-1.0 mg/L) LAB ID: 105 Work Order 1087, Tender ID: 517693, Package no: LQS-1/DW-114 Sample Collected by Md. Humayun Kabir, Sample Analyst

29.09.21
Md. Hidmayth Kabir
Sample Analyst
DPHE, Zonal Lab Rangpur

29.9.21
Md. Abdul Jabbar
Senior Chemist
DPHE, Zonal Lab Rangpur

Memo: 46.03.8500.106.16.004.21.164 **Date: 29 / 09 / 2021**

CC:

01 Project Director & Focal Point PEDP-4, DPHE, Dhaka.
02. Executive Engineer, DPHE, Rangpur Division, Rangpur.
03. Sub-Asst. Engineer, DPHE, Mithapukur, Rangpur. Ref: Office Memo: 46.03.8558.401.14.078.18-22, Date:29/08/2021

29.9.21
Md. Abdul Jabbar
Senior Chemist
DPHE, Zonal Lab Rangpur

Government of the People's Republic of Bangladesh
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Department of Public Health Engineering (DPHE)
Zonal Laboratory, Shahid Masiur Rahman Road,Jhenaidah.
Phone: 0451-61416, Fax:, Email: wqmsc_jhenaidahzonallab@yahoo.com

Water Test Report of PEDP-04 Project

Work order No. 46.03.1800.061.14.004.15-205; date : 20/08/2020 Package No. : ..... Contactor : Md. Shah Alamgir, Chapainawabgonj.

Sl. No.	District	Upazilla	Village/Ward	ID	Type of School	Water Point		Name Of School	GPS Reading	Water Quality				Remarks
						Type	Depth (M)			Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Chuadanga	Chuadanga Sadar	Gabargara	203040201	1	DTW (Sub-Mer.)	108.23	Gabargara Govt. Primary School	N: 23°31'27.10'' E: 88°54'59.69''	Free	Clear	0.145	5.38	20	
2	Chuadanga	Chuadanga Sadar	Horishpur	203040302	1	DTW (Sub-Mer.)	108.23	Horishpur Govt. Primary School	N: 23°31'8.10'' E: 88°50'48.60''	Free	Clear	0.053	2.57	15	
3	Chuadanga	Chuadanga Sadar	Nobinnagar	203040503	1	DTW (Sub-Mer.)	106.71	Nobinnagar Govt. Primary School	N: 23°34'29.50'' E: 88°56'42.30''	Free	Clear	0.030	2.49	15	
4	Chuadanga	Chuadanga Sadar	Begumpur	203040601	1	DTW (Sub-Mer.)	109.76	Begumpur Govt. Primary School	N: 23°31'33.88'' E: 88°52'15.47''	Free	Clear	0.053	2.44	25	
5	Chuadanga	Chuadanga Sadar	Kotali	203040604	1	DTW (Sub-Mer.)	111.28	Kotali Govt. Primary School	N: 23°31'43.64'' E: 88°51'05.44''	Free	Clear	0.093	4.88	20	
6	Chuadanga	Chuadanga Sadar	Sharabaria	203040703	1	DTW (Sub-Mer.)	109.76	Sharabaria Govt. Primary School	N: 23°30'09.44'' E: 88°55'10.63''	Free	Clear	0.027	2.32	10	
7	Chuadanga	Chuadanga Sadar	Kedargonj	203040103	1	DTW (Sub-Mer.)	106.71	Kedargonj Govt. Primary School	N: 23°38'19.39'' E: 88°50'06.90''	Free	Clear	0.114	1.97	15	
8	Chuadanga	Chuadanga Sadar	Nehalpur	203040607	1	DTW (Sub-Mer.)	103.66	Nehalpur Govt. Primary School	N: 23°34'18.01'' E: 88°51'22.69''	Free	Clear	0.082	2.67	10	
9	Chuadanga	Chuadanga Sadar	Ward No.-09	203040112	1	DTW (Sub-Mer.)	106.71	Rejia Khatun Provati Govt. Primary School	N: 23°38'14.80'' E: 88°50'50.80''	Free	Clear	0.021	0.43	40	
10	Chuadanga	Chuadanga Sadar	Sarajgonj	203040501	1	DTW (Sub-Mer.)	108.23	Sarajgonj Govt. Primary School	N: 23°35'25.10'' E: 88°56'16.60''	Free	Clear	0.084	2.62	15	

Sample Collected by:
Md. Nazrul Islam
Junior Chemist
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:
Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:
Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

Countersigned/Approved by:
Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

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Phone: 0451-61416, Fax:, Email: wqmsc_jhenaidahzonallab@yahoo.com

Water Test Report of PEDP-04 Project

Work order No. 46.03.1800.061.14.004.15-205; date : 20/08/2020 Package No. : ..... Contactor : Md. Shah Alamgir, Chapainawabgonj.

Sl. No.	District	Upazilla	Village/Ward	ID	Type of School	Water Point		Name Of School	GPS Reading	Water Quality				Remarks
						Type	Depth (M)			Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Chuadanga	Chuadanga Sadar	Gabargara	203040201	1	DTW (Sub-Mer.)	108.23	Gabargara Govt. Primary School	N: 23°31'27.10'' E: 88°54'59.69''	Free	Clear	0.145	5.38	20	
2	Chuadanga	Chuadanga Sadar	Horishpur	203040302	1	DTW (Sub-Mer.)	108.23	Horishpur Govt. Primary School	N: 23°31'8.10'' E: 88°50'48.60''	Free	Clear	0.053	2.57	15	
3	Chuadanga	Chuadanga Sadar	Nobinnagar	203040503	1	DTW (Sub-Mer.)	106.71	Nobinnagar Govt. Primary School	N: 23°34'29.50'' E: 88°56'42.30''	Free	Clear	0.030	2.49	15	
4	Chuadanga	Chuadanga Sadar	Begumpur	203040601	1	DTW (Sub-Mer.)	109.76	Begumpur Govt. Primary School	N: 23°31'33.88'' E: 88°52'15.47''	Free	Clear	0.053	2.44	25	
5	Chuadanga	Chuadanga Sadar	Kotali	203040604	1	DTW (Sub-Mer.)	111.28	Kotali Govt. Primary School	N: 23°31'43.64'' E: 88°51'05.44''	Free	Clear	0.093	4.88	20	
6	Chuadanga	Chuadanga Sadar	Sharabaria	203040703	1	DTW (Sub-Mer.)	109.76	Sharabaria Govt. Primary School	N: 23°30'09.44'' E: 88°55'10.63''	Free	Clear	0.027	2.32	10	
7	Chuadanga	Chuadanga Sadar	Kedargonj	203040103	1	DTW (Sub-Mer.)	106.71	Kedargonj Govt. Primary School	N: 23°38'19.39'' E: 88°50'06.90''	Free	Clear	0.114	1.97	15	
8	Chuadanga	Chuadanga Sadar	Nehalpur	203040607	1	DTW (Sub-Mer.)	103.66	Nehalpur Govt. Primary School	N: 23°34'18.01'' E: 88°51'22.69''	Free	Clear	0.082	2.67	10	
9	Chuadanga	Chuadanga Sadar	Ward No.-09	203040112	1	DTW (Sub-Mer.)	106.71	Rejia Khatun Provati Govt. Primary School	N: 23°38'14.80'' E: 88°50'50.80''	Free	Clear	0.021	0.43	40	
10	Chuadanga	Chuadanga Sadar	Sarajgonj	203040501	1	DTW (Sub-Mer.)	108.23	Sarajgonj Govt. Primary School	N: 23°35'25.10'' E: 88°56'16.60''	Free	Clear	0.084	2.62	15	

Sample Collected by:
Md. Nazrul Islam
Junior Chemist
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:
Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:
Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

Countersigned/Approved by:
Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

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Water Test Report of PEDP-4 Project

Work order No. 46.03.1800.061.14.004.15-205; date : 20/08/2020 Package No: ; ..... Contactor : Md. Shah Alamgir, Chapainawabgonj.

Sl. No.	District	Upazila	Village/Ward	ID	Type of School	Water Point		Name Of School	GPS Reading	Water Quality				Remarks
						Type	Depth (M)			Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Chuadanga	Alamdanga	Baiddonathpur	203010211	1	DTW (Sub-Mer.)	106.71	Baiddonathpur Hardi Govt. Primary School	N: 23°48'30.51'' E : 88°52'22.0''	Free	Clear	0.008	0.08	15	
2	Chuadanga	Alamdanga	Ramnagar	203010501	1	DTW (Sub-Mer.)	106.71	Ramnagar Govt. Primary School	N: 23°44'58.7'' E : 88°51'05.6''	Free	Clear	0.010	0.02	40	
3	Chuadanga	Alamdanga	Hogladari	203019013	1	DTW (Sub-Mer.)	91.46	Hogladari Govt. Primary School	N: 23°43'10.5'' E : 88°59'55.6''	Free	Clear	0.007	0.03	20	
4	Chuadanga	Alamdanga	Sonatonpur	203011581	1	DTW (Sub-Mer.)	91.46	Ishak Ali Mondal Sonatonpur Govt. Primary School	N: 23°39'40.2'' E : 88°54'49.2''	Free	Clear	0.168	0.89	15	
5	Chuadanga	Alamdanga	Ward No. - 07	203012306	1	DTW (Sub-Mer.)	92.99	Alamdanga Poura Bus Terminal Govt. Primary School	N: 23°45'25.7'' E : 88°56'07.7''	Free	Clear	0.001	1.89	20	
6	Chuadanga	Alamdanga	Gopalnagar	203019010	1	DTW (Sub-Mer.)	108.23	Gopalnagar Adarsha Govt. Primary School	N: 23°44'02.21'' E : 88°53'29.30''	Free	Clear	0.003	0.02	15	
7	Chuadanga	Alamdanga	Anupnagar	203019022	1	DTW (Sub-Mer.)	108.23	Anupnagar Govt. Primary School	N: 23°45'09.5'' E : 88°51'35.4''	Free	Clear	0.006	0.02	10	
8	Chuadanga	Alamdanga	Goalbari	203010404	1	DTW (Sub-Mer.)	109.76	Goalbari Govt. Primary School	N: 23°43'04.1'' E : 88°52'36.2''	Free	Clear	0.025	1.91	20	
9	Chuadanga	Alamdanga	Batiapara	203010611	1	DTW (Sub-Mer.)	108.23	Batiapara Shaheed A.G. Girls' Govt. Primary School	N: 23°41'11.5'' E : 88°50'38.1''	Free	Clear	0.052	2.47	15	
10	Chuadanga	Alamdanga	Jugirhuda	203011524	1	DTW (Sub-Mer.)	108.23	Rangpur Jugirhuda Govt. Primary School	N: 23°43'14.61'' E : 88°52'01.10''	Free	Clear	0.017	2.13	15	

Sample Collected by

Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Collected by

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Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:

Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

Countersigned/Approved by:

Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

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Water Test Report of PEDP-4 Project

Work order No. 46.03.1800.061.14.004.15-205; date : 20/08/2020 Package No: ; ..... Contactor : Md. Shah Alamgir, Chapainawabgonj.

Sl. No.	District	Upazila	Village/Ward	ID	Water Point		Name Of School	GPS Reading	Water Quality				Remarks
					Type of School	Type	Depth (M)			Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Chuadanga	Alamdanga	Baiddonathpur	20301021	1	DTW (Sub-Mer.)	106.71	Baiddonathpur Hardi Govt. Primary School	N: 23°48'30.51'' E : 88°52'22.0''	Free	Clear	0.008	0.08	15	
2	Chuadanga	Alamdanga	Ramnagar	20301050I	1	DTW (Sub-Mer.)	106.71	Ramnagar Govt. Primary School	N: 23°44'58.7'' E : 88°51'05.6''	Free	Clear	0.010	0.02	40	
3	Chuadanga	Alamdanga	Hogladari	20301901З	1	DTW (Sub-Mer.)	91.46	Hogladari Govt. Primary School	N: 23°43'10.5'' E : 88°59'55.6''	Free	Clear	0.007	0.03	20	
4	Chuadanga	Alamdanga	Sreeatonpur	20301158I	1	DTW (Sub-Mer.)	91.46	Ishak Ali Mondal Sreatonpur Govt. Primary School	N: 23°39'40.2'' E : 88°54'49.2''	Free	Clear	0.168	0.89	15	
5	Chuadanga	Alamdanga	Ward No. - 07	20301230б	1	DTW (Sub-Mer.)	92.99	Alamdanga Poura Bus Terminal Govt. Primary School	N: 23°45'25.7'' E : 88°56'07.7''	Free	Clear	0.001	1.89	20	
6	Chuadanga	Alamdanga	Gopalnagar	20301901О	1	DTW (Sub-Mer.)	108.23	Gopalnagar Adarsha Govt. Primary School	N: 23°44'02.21'' E : 88°53'29.30''	Free	Clear	0.003	0.02	15	
7	Chuadanga	Alamdanga	Anupnagar	20301902З	1	DTW (Sub-Mer.)	108.23	Anupnagar Govt. Primary School	N: 23°45'09.5'' E : 88°51'35.4''	Free	Clear	0.006	0.02	10	
8	Chuadanga	Alamdanga	Goalbari	20301040І	1	DTW (Sub-Mer.)	109.76	Goalbari Govt. Primary School	N: 23°43'04.1'' E : 88°52'36.2''	Free	Clear	0.025	1.91	20	
9	Chuadanga	Alamdanga	Batiapara	20301061І	1	DTW (Sub-Mer.)	108.23	Batiapara Shaheed A.G. Girls' Govt. Primary School	N: 23°41'11.5'' E : 88°50'38.1''	Free	Clear	0.052	2.47	15	
10	Chuadanga	Alamdanga	Jugirhuda	20301152І	1	DTW (Sub-Mer.)	108.23	Rangpur Jugirhuda Govt. Primary School	N: 23°43'14.61'' E : 88°52'01.10''	Free	Clear	0.017	2.13	15	

Sample Collected by

Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:

Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Countersigned/Approved by:

Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

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Water Test Report of PEDP-4 Project

Work order No. 46.03.1800.061.14.004.15-205; date : 20/08/2020 — Package No: ; ..... — Contactor : Md. Shah Alamgir, Chapainawabgonj.

Sl. No.	District	Upazila	Village/Ward	ID	Water Point: Type of School	Water Point: Type	Water Point: Depth (M)	Name Of School	GPS Reading	Water Quality: Sand	Water Quality: Clear	Water Quality: As (mg/L)	Water Quality: Fe (mg/L)	Water Quality: Cl (mg/L)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Chuadanga	Alamdanga	Baiddonathpur	203010211	1	DTW (Sub-Mer.)	106.71	Baiddonathpur Hardi Govt. Primary School	N: 23°48'30.51'' E : 88°52'22.0''	Free	Clear	0.008	0.08	15	
2	Chuadanga	Alamdanga	Ramnagar	203010501	1	DTW (Sub-Mer.)	106.71	Ramnagar Govt. Primary School	N: 23°44'58.7'' E : 88°51'05.6''	Free	Clear	0.010	0.02	40	
3	Chuadanga	Alamdanga	Hogladari	203019013	1	DTW (Sub-Mer.)	91.46	Hogladari Govt. Primary School	N: 23°43'10.5'' E : 88°59'55.6''	Free	Clear	0.007	0.03	20	
4	Chuadanga	Alamdanga	Soeatonpur	203011581	1	DTW (Sub-Mer.)	91.46	Ishak Ali Mondal Soeatonpur Govt. Primary School	N: 23°39'40.2'' E : 88°54'49.2''	Free	Clear	0.168	0.89	15	
5	Chuadanga	Alamdanga	Ward No. - 07	203012306	1	DTW (Sub-Mer.)	92.99	Alamdanga Poura Bus Terminal Govt. Primary School	N: 23°45'25.7'' E : 88°56'07.7''	Free	Clear	0.001	1.89	20	
6	Chuadanga	Alamdanga	Gopalnagar	203019010	1	DTW (Sub-Mer.)	108.23	Gopalnagar Adarsha Govt. Primary School	N: 23°44'02.21'' E : 88°53'29.30''	Free	Clear	0.003	0.02	15	
7	Chuadanga	Alamdanga	Anupnagar	203019022	1	DTW (Sub-Mer.)	108.23	Anupnagar Govt. Primary School	N: 23°45'09.5'' E : 88°51'35.4''	Free	Clear	0.006	0.02	10	
8	Chuadanga	Alamdanga	Goalbari	203010404	1	DTW (Sub-Mer.)	109.76	Goalbari Govt. Primary School	N: 23°43'04.1'' E : 88°52'36.2''	Free	Clear	0.025	1.91	20	
9	Chuadanga	Alamdanga	Batiapara	203010611	1	DTW (Sub-Mer.)	108.23	Batiapara Shaheed A.G. Girls' Govt. Primary School	N: 23°41'11.5'' E : 88°50'38.1''	Free	Clear	0.052	2.47	15	
10	Chuadanga	Alamdanga	Jugirhuda	203011524	1	DTW (Sub-Mer.)	108.23	Rangpur Jugirhuda Govt. Primary School	N: 23°43'14.61'' E : 88°52'01.10''	Free	Clear	0.017	2.13	15	

Sample Collected by:
Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Sample Analyzed by:
Md. Moniruzzaman
Sample Analyzer
DPHE , Zonal Lab, Jhenaidah.

Countersigned/Approved by:
Md. Nazrul Islam
Junior Chemist
DPHE, Zonal Lab, Jhenaidah.

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Memo:46.03.1000.106.16.01.21.230 Date:10/11/2021

Physical/Chemical/Bacteriological Analysis of Water Sample

Sample ID: BOG2021110116 to BOG2021110130, Total: 15	District: Gaibandha; Upazila: Gobindaganj
Sent by: Sub-assistant Engineer, DPHE, Gobindaganj, Gaibandha.	Sample Source: STW-Others Pump
Ref. Memo No: 46.03.3230.401.14.014.21-289 & Dated: 28/09/2021 PN: TSP-PEDP-4/0349 TID:565264	Date of Testing: 09/11/2021 & 10/11/2021
Collection date: 06/11/2021 & 08/11/2021	Receiving date: 09/11/2021

LABORATORY TEST RESULTS:

Sample ID	Name Of School	ID	Global Position(GPS)		Arsenic (mg/L) LOQ:0.001, BDS:0.05		Chloride (mg/L) LOQ:1, BDS:150-600		Iron (mg/L) LOQ:0.1, BDS:0.3-1	
			Latitude	Longitude	Conc.	Method	Concl.	Method	Concl.	Method
BOG2021110116	Beurgram GPS	91108020403	25°07'01"	89°15'10"	0.040	AAS	30	Titrimetric	2.3	AAS
BOG2021110117	Puyagari GPS	108020103	25°11'44"	89°12'21"	0.020	AAS	34	Titrimetric	2.7	AAS
BOG2021110118	Kaitola GPS	108021203	25°07'14"	89°20'09"	0.023	AAS	28	Titrimetric	4.1	AAS
BOG2021110119	Maladhor GPS	91108021103	25°10'12"	89°25'17"	0.052	AAS	28	Titrimetric	4.5	AAS
BOG2021110120	Bogulagari GPS	108020613	25°11'35"	89°18'57"	0.025	AAS	36	Titrimetric	1.7	AAS
BOG2021110121	Sharpala GPS	91108021102	25°09'45"	89°12'34"	0.32	AAS	20	Titrimetric	8.4	AAS
BOG2021110122	Chadpur Singa GPS	108029603	25°09'51"	89°26'06"	0.042	AAS	32	Titrimetric	0.7	AAS
BOG2021110123	Polashbari GPS	108021008	25°08'39"	89°25'47"	0.057	AAS	30	Titrimetric	2.9	AAS
BOG2021110124	Khirbari GPS	108021502	25°06'23"	89°20'24"	0.051	AAS	32	Titrimetric	0.8	AAS
BOG2021110125	Thikana Sholoddol GPS	108021202	25°09'13"	89°18'12"	0.017	AAS	28	Titrimetric	1.1	AAS
BOG2021110126	Hosenpur GPS	108020901	25°14'24"	89°21'52"	0.035	AAS	28	Titrimetric	0.8	AAS
BOG2021110127	Uttar Poppdil GPS	108020806	25°12'40"	89°19'32"	0.285	AAS	34	Titrimetric	4.2	AAS
BOG2021110128	Bordhonkuthi GPS	108021104	25°07'48"	89°25'50"	0.068	AAS	30	Titrimetric	1.3	AAS
BOG2021110129	Shalmara GPS	91108021702	25°04'06"	89°23'28"	0.071	AAS	28	Titrimetric	0.8	AAS
BOG2021110130	Teruk kanupur GPS	91108020701	25°12'17"	89°24'11"	0.234	AAS	32	Titrimetric	2.1	AAS

Note: Sample Collected by Md. Shihab Uddin. LOQ-Level On Quantization, BDS: Bangladesh Standard, AAS: Atomic Absorption Spectrophotometer, UVS: Ultra Violet Spectrophotometer. Lab Sl: 5657-5671

Test Performed by:	Signature	Countersigned/Approved by:	Signature
Name: Md. Alauddin Al Faruque Designation: Junior Chemist	10+11+2021	1.) Name: Md. Sohel Rana Designation: Senior Chemist	10.11.2021
Name: Md. Hafizur Rahman Designation: Sample Analyzer		2.) Name: Designation:	

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Memo:46.03.1000.106.16.01.21.301

Date:14/12/2021

Physical/Chemical/Bacteriological Analysis of Water Sample

Sample ID: BOG2021120279 to BOG2021120288 Total 10	District: Gaibandha
Sent by: Sub-assistant Engineer, DPHE Gaibandha Sadar, Gaibandha	Sample Source: STW-Others Pump
Ref. Memo No: 46.203.3224.401.15.001.20-131 & Dated: 18/11/2021 PN: TSP-PEDP-4 TID: 565264	Date of Testing: 13/12/2021 & 14/12/2021
Collection date: 07/12/2021 & 08/12/2021	Receiving date: 09/12/2021

LABORATORY TEST RESULTS:

Sample ID	Caretaker Name	ID	Union/ Paurashava	Upazila/ City Corp.	Global Position(GPS)		Arsenic (mg/L) LOQ:0.001, BDS:0.05		Iron (mg/L) LOQ:0.1, BDS:0.3-1	
					Latitude	Longitude	Conc.	Method	Conc.	Method
BOG2021120279	Narayonpur Sukhnogor RNGPS	99103010815	Gaibandha Pourashava	Gaibandha Sadar	25°19'50"	89°31'27"	0.041	AAS	0.2	AAS
BOG2021120280	Boro Vobanipur GPS	99108010606	Ramchandra pur	Gaibandha Sadar	25°19'51"	89°27'54"	0.031	AAS	0.1	AAS
BOG2021120281	Goysitan GPS	99108011007	Badiakhali	Gaibandha Sadar	25°14'37"	89°30'57"	0.014	AAS	8.8	AAS
[illegible]	[illegible] GPS	[illegible]	[illegible]	Gaibandha Sadar	[illegible]	[illegible]	0.070	AAS	4.3	AAS
[illegible]	[illegible] GPS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.050	AAS	20	AAS
BOG2021120284	Bridge Road GPS	99103010306	Gaibandha Pourashava	Gaibandha Sadar	25°20'[illegible]"	89°32'[illegible]"	0.020	AAS	17	AAS
BOG2021120285	Purbo Gobindapur GPS	99103010315	Gaibandha Pourashava	Gaibandha Sadar	25°18'[illegible]"	89°[illegible]	0.034	AAS	21	AAS
BOG2021120286	Tindoho GPS	99108010406	Ramchandra pur	Gaibandha Sadar	25°16'35"	89°21'40"	0.060	AAS	0.1	AAS
BOG2021120287	Khsar Awalhedia GPS	99108010610	Malibari	Gaibandha Sadar	25°25'08"	89°35'51"	0.039	AAS	2.1	AAS
BOG2021120288	[illegible] GPS	[illegible]	[illegible]	Gaibandha Sadar	[illegible]	[illegible]	0.074	AAS	7.4	AAS

Note: Sample Collected by Md. Shihab Uddin. LOQ-Level On Quantification, BDS: Bangladesh Standard, AAS: Atomic Absorption Spectrophotometer, UVS: Ultra Violet Spectrophotometer. Lab Sl: 7216-7225

Test Performed by:	Signature	Countersigned/Approved by:	Signature
1.) Name: Md. Alauddin Al Faruque Designation: Junior Chemist	19.12.2021	1.) Name: Md. Sohel Rana Designation: Senior Chemist	14.12.2021
2.) Name: Md. Hafizur Rahman Designation: Sample Analyzer	14/12/2021	2.) Name: Designation:	

মোহাম্মদ রেজওয়ান হোসেন
নির্বাহী প্রকৌশলী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
গাইবান্ধা জেলা, গাইবান্ধা।

Water Test Report of PEDP-4
DPHE Zonal Laboratory, Tongi, Gazipur.

SL.	District	Upazila	Union/ Pourashava	Village	ID	Type of School	Type of Water Point	Name of School	GPS	Water Quality				Remarks
										Sand	Clear	Iron-Fe (mg/L)	Arsenic-As (mg/L)	Chloride-Cl (mg/L)	
1	Dhaka	Dhamrai	Sanora	Chandukhali	310150802	GPS	DTW(SP)	Chandukhali Govt. Primary School	23°42'42.5"N 90°02'31.9"E		√	3.33	0.002	10	
2	Dhaka	Dhamrai	Chauhat	Nkla	310150502	GPS	DTW(SP)	02 No. Nikla Govt. Primary School	24°00'45.2"N 90°02'07.6"E		√	0.58	0.107	15	

Comments: Samples were collected by S.M. Parves Talukder,Sample Analyzer. Arsenic(As) & Iron(Fe) parameters have been tested by Atomic Absorption Spectrophotometer(AAS) & Chloride(Cl) parameter has been tested by Titrimetric method. Bangladesh Standard for As-0.05 mg/L, Fe-(0.3-1.0) mg/L & Cl (150-600) mg/L. Limit Of Quantitation(LOQ) of As-0.001 mg/L, Fe-0.05 mg/L & Cl-1.0 mg/L.
DTW(SP):Deep Tube Well(Submersible Pump).

10-02-2022

মাহাবুবা আফরিন শরিফ
নির্বাহী প্রকৌশলী
আঞ্চলিক পরীক্ষাগার, টঙ্গী, গাজীপুর

10/02/2022

মোঃ শামছুল আলম
উপজেলা প্রকৌশলী
ধামরাই, ঢাকা।

মোঃ শামছুল আলম
উপজেলা প্রকৌশলী
উপজেলা প্রকৌশলীর কার্যালয়
ধামরাই পৌরসভা, ঢাকা, ধামরাই।

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Water Test Report of PEDP-4
DPHE Zonal Laboratory, Tongi, Gazipur.

SL.	District	Upazila	Union/ Pourashava	Village	ID	Type of School	Type of Water Point	Name of School	GPS	Water Quality					Remarks
										Sand	Clear	Iron-Fe (mg/L)	Arsenic-As (mg/L)	Chloride-Cl (mg/L)	
1	Dhaka	Nawabganj	Sholla	Patijhap	300160512	GPS	DTW(SP)	Purbo Patijhap Govt. Primary School	23°42'25.1"N 90°02'19.2"E		√	2.20	0.002	130	
2	Dhaka	Nawabganj	Churain	Kamarkhola	310169203	GPS	DTW(SP)	88 No Kamarkhola Govt. Primary School	23°40'02.7"N 90°10'15.4"E		√	0.58	0.005	60	
3	Dhaka	Nawabganj	Agla	Charchora	300161102	GPS	DTW(SP)	BC Charchora Govt. Primary School	23°37'56.5"N 90°14'23.7"E		√	4.90	0.077	120	
4	Dhaka	Nawabganj	Bairah	Kahur	310161203	GPS	DTW(SP)	Kahur Govt. Primary School	23°40'02.3"N 90°10'15.3"E		√	1.42	0.001	100	
5	Dhaka	Nawabganj	Jantrail	Bara Nabagram	310150101	GPS	DTW(SP)	Bara Nabagram Govt. Primary School	23°40'27.1"N 90°08'11.0"E		√	1.18	0.001	60	
6	Dhaka	Nawabganj	Kailail	Paragram	310150607	GPS	DTW(SP)	Paragram Govt. Primary School	23°42'35.4"N 90°14'28.4"E		√	0.98	0.006	70	

Comments: Samples were collected by Md. Touhidur Rahman, Sample Collector. Arsenic(As) & Iron(Fe) parameters have been tested by Atomic Absorption Spectrophotometer(AAS) & Chloride(Cl) parameter has been tested by Titrimetric method. Bangladesh Standard for As-0.05 mg/L, Fe-(0.3-1.0) mg/L & Cl (150-600) mg/L. Limit Of Quantitation(LOQ) of As-0.001 mg/L, Fe-0.05 mg/L & Cl-1.0 mg/L.
DTW(SP)-Deep Tube Well(Submersible Pump).

24-12-2020
মোঃ তৌহিদুর রহমান

24/12/2020

24-12-2020
মোঃ মিন্টু মিঞা

Government of the People's Republic of Bangladesh
Office of the Senior Chemist,
Department of Public Health Engineering
Khan Jahan Ali Road,Rupsha,Khulna.
Phone : 041-721348, Fax: e-mail : wqmsc_khulnazonallab@yahoo.com

Water Test Report of PEDP-4 Project

Executive Engineer Memo No-46.03.6500.061.16.201.19-724, Date: 24/08/2021

Name of Contractor: M/S Monalisa, Rampura, Dhaka ,Package No: -, Work Order No: 805, Date: 26/10/2020

SL No.	District	Upazila	Village	School ID	Type of School	Water Point		Name of School	GPS	Water Quality					Remarks
						Type	Depth (m)			Sand	Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Narail	Lohagara	Mondolbhag	207030306	1	-	-	Mondolbhag Govt. Primary School	N: 23°16'34" E: 89°38'59"	Free	Clear	0.002	3.9	305	
2	Narail	Lohagara	Naora	207030501	1	-	-	113 No. Naora Govt. Primary School	N: 23°10'26" E: 89°37'14"	Free	Clear	0.008	1.68	400	

Collected by

Md. Jafar Iqbal
Sample Collector DPHE
Zonal Laboratory, Khulna

Analysis by

(Rajashree Bhattacherjee)
Sample Analyzer, DPHE
Zonal Laboratory, Khulna.

(Md. Ayenul Haque)
Junior Chemist DPHE
Zonal Laboratory, Khulna.

Approved by

(Md. Ayenul Haque)
Junior Chemist DPHE
Zonal Laboratory, Khulna.

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Government of the People's Republic of Bangladesh
Office of the Senior Chemist

Water Test Report of PEDP-4 Project

Executive Engineer Memo No-46.03.6500.061.16.201.19-596, Date: 27/06/2021

Name of Contractor: M/S Monalisa, Rampura, Dhaka ,Package No: -, Work Order No: 805(5), Date: 26/10/2020

Sl No	District	Upazila	Village	School ID	Type of School	Water Point Type	Water Point Depth (m)	Name of School	GPS	Water Quality Sand	Water Quality Clear	As (mg/L)	Fe (mg/L)	Cl (mg/L)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Narail	Lohagara	[illegible]	[illegible]	1	-	-	58 No. [illegible] Govt. Primary School		Free	Clear	0.007	1.12	315	
2	Narail	Lohagara	Baladanga	[illegible]	1	-	-	118 No. Baladanga Govt. Primary School		Free	Clear	0.002	0.81	135	
3	Narail	Lohagara	Kalinagar	[illegible]	1	-	-	162 No. Kalinagar Govt. Primary School		Free	Clear	0.001	0.26	125	
4	Narail	Lohagara	Mathbari	207031205	1	-	-	152 No. Mathbari Govt. Primary School		Free	Clear	0.002	0.25	440	
5	Narail	Lohagara	Batasi	207030309	1	-	-	27 No. Batasi Govt. Primary School		Free	Clear	0.001	0.33	115	
6	Narail	Lohagara	Kamargram	207030211	1	-	-	08 No. Kamargram Govt. Primary School		Free	Clear	0.001	0.23	105	
7	Narail	Lohagara	Lahuria	91207030207	1	-	-	Attach Lahuria High School Govt. Primary School		Free	Clear	0.001	0.21	70	
8	Narail	Lohagara	Joypur	207030701	1	-	-	46 No. Joypur Govt. Primary School		Free	Clear	0.004	0.56	510	
9	Narail	Lohagara	Narandia	207030702	1	-	-	47 No. Narandia Govt. Primary School		Free	Clear	0.002	0.32	260	
10	Narail	Lohagara	Noagram	207030308	1	-	-	29 No. [illegible] Govt. Primary School		Free	Clear	0.001	0.51	555	

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(এম, এম, আবু সালেহ)
নির্বাহী প্রকৌশলী (চঃ দাঃ)
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
নড়াইল জেলা, নড়াইল।

Water Test Report of PEDP-4 Project

Sl No.	District	Upazila	Village	ID	Type of School	Water Point Type	Water Point Depth (m)	Name of School	GPS	Water Quality Sand	Water Quality Clear	Water Quality As (mg/L)	Water Quality Fe (mg/L)	Water Quality Cl (mg/L)	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
11	Narail	Lohagara	Debi	207030401	1			32 No. Debi Sultia Govt. Primary School		Free	Clear	0.005	2.51	850	
12	Narail	Lohagara	Char Baghjuri	207030702	1	-	-	106 No. Char Baghjuri Govt. Primary School		Free	Clear	0.01	2.3	90	
13	Narail	Lohagara	Batikabari	207030801	1	-	-	116 No. Batikabari Govt. Primary School		Free	Clear	0.018	2.47	365	
14	Narail	Lohagara	Dikrir Char	207031101	1	-	-	102 No. Dikrir Char Govt. Primary School		Free	Clear	0.009	0.38	145	
15	Narail	Lohagara	Par Ichhakhali	20703583	1	-	-	164 No. Par Ichhakhali Govt. Primary School		Free	Clear	0.003	0.46	220	
16	Narail	Lohagara	Sonadaha	207031001	1	-	-	Sonadaha Govt. Primary School		Free	Clear	0.007	1.01	245	
17	Narail	Lohagara	Ula	207030502	1	-	-	Ula Govt. Primary School		Free	Clear	0.002	0.51	460	
18	Narail	Lohagara	Parchali Ghat	207031304	1	-	-	Parchali Ghat Govt. Primary School		Free	Clear	0.001	0.4	425	

সত্যায়িত

(এম. এম. আবু সালেহ)

Analysis by
30.06.21
(Dipanker Bhattacherjee)
Sample Analyzer, DPHE
Zonal Laboratory, Khulna.

Approved by
30.06.2021
(Md. Aynal Haque)
Junior Chemist, DPHE
Zonal Laboratory, Khulna.

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Water Test Report of PEDP-4
DPHE Zonal Laboratory, Tongi, Gazipur.

Sl.	District	Upazila	Union/ Pourashava	Village	ID	Type of School	Type of Water Point	Name of School	GPS	Water Quality				Remarks
										Sand	Clear	Iron-Fe (mg/L)	Arsenic-As (mg/L)	Chloride-Cl (mg/L)	
1	Manikganj	Daulatpur	Jonjoir	Uttar Ara Jonjoir	308070405	GPS	6DTW	68 Dakshin Khanda Chak Bhalanga Govt. Primary School	23°57'09.1"N 89°42'43.7"E			7.28	0.010	8.0	

Comments: Sample was collected by Md. Touhidur Rahman, Sample Collector. Arsenic(As) & Iron(Fe) parameters have been tested by Atomic Absorption Spectrophotometer(AAS) & Chloride(Cl) parameter has been tested by Titrimetric method. Bangladesh Standard for As-0.05 mg/L, Fe-(0.3-1.0) mg/L & Cl-(150-600) mg/L. Limit Of Quantitation(LOQ) of As-0.001 mg/L, Fe-0.05 mg/L & Cl-1.0 mg/L.
6DTW-06 No. Deep Tube Well.

10-11-2020

10/11/2020

10-11-2020

Water Test Report of PEDP-4
DPHE Zonal Laboratory, Tongi, Gazipur.

SL.	District	Upazila	Union/ Pourashava	Village	ID	Type of School	Type of Water Point	Name of School	GPS	Water Quality				Remarks
										Sand	Clear	Iron-Fe (mg/L)	Arsenic-As (mg/L)	Chloride-Cl (mg/L)	
1	Manikganj	Daulatpur	Kolia	Kolia	309070712	GPS	DTW(SP)	19 No. Kolia Govt. Primary School	23°57'58.9"N 89°55'07.0"E		√	0.97	0.013	60	
2	Manikganj	Daulatpur	Jiyonpur	Uttar Ara	309070403	GPS	DTW(SP)	09 No. Uttar Ara Govt. Primary School	23°57'09.1"N 89°46'53.7"E		√	4.21	0.008	105	
3	Manikganj	Daulatpur	Jiyonpur	Lautara	309070702	GPS	DTW(SP)	08 No. Lautara Govt. Primary School	23°57'37.1"N 89°47'32.5"E		√	10.23	0.005	85	
4	Manikganj	Daulatpur	Chak Mirpur	Mandarta	309010606	GPS	DTW(SP)	41 No. Mandarta Govt. Primary School	23°56'39.7"N 89°50'53.1"E		√	10.07	0.068	125	
5	Manikganj	Singair	Singair	Niyadangi	309031583	GPS	DTW(SP)	Niyadangi Govt. Primary School	23°47'51.9"N 90°10'23.1"E		√	0.20	0.060	12	
6	Manikganj	Singair	Chandahar	Wisenagar	309031582	GPS	DTW(SP)	94 No. Wisenagar Shohag Govt. Primary School	23°44'59.7"N 90°11'03.1"E		√	0.25	0.019	45	
7	Manikganj	Singair	Dhalla	Khasher Char	309030903	GPS	DTW(SP)	57 No. Char Durgapur Govt. Primary School	23°49'22.2"N 90°12'23.3"E		√	3.76	0.003	10	
8	Manikganj	Shibalaya	Shimulia	Bezpara	309090509	GPS	DTW(SP)	Bezpara Govt. Primary School	23°49'06.7"N 89°54'49.2"E		√	8.20	0.018	65	
9	Manikganj	Harirampur	Chala	Sotti	309051305	GPS	DTW(SP)	Sotti Govt. Primary School	23°45'57.7"N 89°59'32.4"E		√	0.96	0.005	110	

Comments: Samples were collected by Md. Touhidur Rahman, Sample Collector. Arsenic(As) & Iron(Fe) parameters have been tested by Atomic Absorption Spectrophotometer(AAS) & Chloride(Cl) parameter has been tested by Titrimetric method. Bangladesh Standard for As-0.05 mg/L, Fe-(0.3-1.0) mg/L & Cl (150-600) mg/L. Limit Of Quantification(LOQ) of As-0.001 mg/L, Fe-0.05 mg/L & Cl-1.0 mg/L.
DTW(SP) Deep Tube Well(Submersible Pump)

মোঃ তৌহিদুর রহমান
নমুনা সংগ্রহকারী
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
আঞ্চলিক পরীক্ষাগার, টঙ্গী, গাজীপুর।

মোঃ মিন্টু মিয়া
সিনিয়র কেমিস্ট
জনস্বাস্থ্য প্রকৌশল অধিদপ্তর
আঞ্চলিক পরীক্ষাগার, টঙ্গী, গাজীপুর।

21.06.2020

Table 1 - List of Unacceptable Water Sources where mitigation measures were considered

SL No	District	Name of School	EMIS Code	Test Result			Remark	Suggested Option	After intervention		
				As	Fe	Cl			As	Fe	Cl
1	Munshiganj	Atpara GPS	312060805	0.001	6.96	120	not acceptable	RO Filter	<LOQ	<LOQ	<LOQ
2	Brahmanbaria	Khatinga GPS	405011901	0.003	6.86	625	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
3	Brahmanbaria	Araisidha GPS	405011202	0.101	3.6	97	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
4	Brahmanbaria	Araishidha (south) GPS	405011202	0.004	5.33	27	not acceptable	RO Filter	<LOQ	<LOQ	<LOQ
5	Brahmanbaria	Mslondapur GPS	405070404	0.001	8.66	71	not acceptable	RO Filter	<0.001	1.85	<LOQ
6	Rangpur	Imadpur Taltola GPS	99105071707	<LOQ	6.5	<LOQ	not acceptable	AIRP	<LOQ	<LOQ	<LOQ
7	Rangpur	Jogoda Nandapur GPS	99705079013	<LOQ	6.0	<LOQ	not acceptable	AIRP	<LOQ	<LOQ	<LOQ
8	Chuadanga	Gabargara GPS	203040201	.0145	5.38	20	not acceptable	RO Filter	0.04	2.50	<LOQ
9	Chuadanga	Kotali GPS	203040604	0.091	4.88	28	not acceptable	RO Filter	<LOQ	<LOQ	<LOQ
10	Chuadanga	Kedargonj GPS	203040103	0.114	1.97	15	not acceptable	RO Filter	<0.03	<LOQ	<LOQ
11	Chuadanga	Nehalpur GPS	203040607	0.082	2.67	10	not acceptable	RO Filter	<0.02	<LOQ	<LOQ
12	Chuadanga	Sarajgonj GPS	203040501	0.084	2.62	15	not acceptable	RO Filter	<0.02	<LOQ	<LOQ
13	Chuadanga	Rajapur GPS	203040114	0.078	4.28	35	not acceptable	RO Filter	<0.01	<LOQ	<LOQ
14	Chuadanga	Jhajri GPS	203040303	0.078	2.74	15	not acceptable	RO Filter	<0.01	<LOQ	<LOQ
15	Chuadanga	Shisukallan GPS	203040809	0.085	2.02	10	not acceptable	RO Filter	<0.02	<LOQ	<LOQ
16	Chuadanga	Ishak Ali Mondal Sonatonpur GPS	203011581	0.168	0.89	15	not acceptable	RO Filter	<0.04	<LOQ	<LOQ
17	Chuadanga	Puraton Panchila GPS	203010905	0.83	3.28	20	not acceptable	RO Filter	<0.02	<LOQ	<LOQ
18	Gaibandha	Ghagoya	99108010903	0.076	4.3	<LOQ	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
19	Gaibandha	Kuptoia	99108010102	0.080	20	0	not acceptable	RO Filter	<LOQ	<LOQ	<LOQ
20	Gaibandha	Baoyali	99108010505	0.074	7.4	0	not acceptable	RO Filter	<0.004	<LOQ	<LOQ

SL No	District	Name of School	EMIS Code	Test Result			Remark	Suggested Option	After intervention		
				As	Fe	Cl			As	Fe	Cl
21	Gaibandha	Shakpala GPS	91108021102	0.22	8.4	26	not acceptable	RO Filter	<0.03	<2.40	<LOQ
22	Gaibandha	Polashbari GPS	108021006	0.057	2.9	32	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
23	Gaibandha	Khiribari GPS	108021502	0.061	0.9	32	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
24	Gaibandha	Uttar popgoil GPS	108020806	0.295	4.2	34	not acceptable	RO Filter	<0.003	<LOQ	<LOQ
25	Gaibandha	Bordhonkuthi GPS	108021104	0.065	1.3	30	not acceptable	RO Filter	<0.001	<LOQ	<LOQ
26	Gaibandha	Shalmara GPS	91108021702	0.071	0.8	32	not acceptable	RO Filter	<0.002	<LOQ	<LOQ
27	Gaibandha	Taluk Kanupur GPS	91108020701	0.234	2.1	32	not acceptable	RO Filter	<0.003	<LOQ	<LOQ
28	Dhaka	02 No. Nikla GPS	31050502	0.107	0.58	15	not acceptable	RO Filter	<0.003	<LOQ	<LOQ
29	Dhaka	BG Charchona GPS	300161102	0.077	4.90	120	not acceptable	RO Filter	<0.002	<LOQ	<LOQ
30	Narail	Mondolbhag GPS	207030306	0.002	5.9	305	not acceptable	RO Filter	<LOQ	<1.45	<LOQ
31	Narail	98 No. Bhatudaha GPS	207030102	0.067	1.32	215	not acceptable	RO Filter	<0.002	<LOQ	<LOQ
32	Narail	Debi Sultia GPS	207030404	0.005	2.51	850	not acceptable	RO Filter	<LOQ	<1.45	<LOQ
33	Manikganj	08 No. Lautara GPS	309070702	0.005	10.23	85	not acceptable	RO Filter	<LOQ	<4.45	<LOQ
34	Manikganj	41 No. Mandarta GPS	309070606	0.068	10.07	125	not acceptable	RO Filter	<LOQ	<LOQ	<4.45
35	Manikganj	Noyadangi GPS	309031583	0.06	0.20	12	not acceptable	RO Filter	<LOQ	<LOQ	<0.002
36	Manikganj	Bezpara GPS	309060509	0.018	8.20	65	not acceptable	RO Filter	<LOQ	<4.45	<LOQ
37	Manikganj	68 Dakkhin Khando Char Bharenga GPS	309070403	0.01	7.28	8.00	not acceptable	AIRP	<LOQ	<LOQ	<LOQ