



Fourth Primary Education Development Program (PEDP-4)

# Semi-Annual Social Monitoring Report

DEPARTMENT OF PUBLIC HEALTH ENGINEERING

July 2021 - Dec 2021

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



Primary Education Unit, DPHE, Dhaka

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## 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 two-storied wash blocks, installation of safe drinking water points plays a significant role in achieving the sustainable physical learning and congenial environment. Department of Public Health Engineering (DPHE) is solely responsible to provide these facilities in the primary schools of Bangladesh. As per MoU signed in between DPE and DPHE in September 15, 2019, DPHE will install 15,000 new water points and construct 58,000 Wash Blocks in the primary schools of Bangladesh throughout the program tenure of 5 years. Furthermore, DPHE will conduct water quality tests of earlier installed 65,000 water points and major maintenance of wash blocks which were constructed under PEDP-3. From the beginning of the project until December'2021 DPHE installed 527 new water points and constructed 658 Wash Blocks. In this tenure, DPHE conducted major maintenance of 608 wash blocks and conducted arsenic screening in 15,000 water points which were installed in PEDP-3. DPHE officials tried their best to reach the target of maintaining the covid-19 safety issues within the time boundary.

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 July' 21 to December'21. The study is based on the social safeguard screening conducted during pre-construction, construction and post implementation stages. The screening format is prepared after the approved SMF guidelines of DPE 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 in September 15, 2019. 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 15,000 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.
- Major maintenance of wash blocks.
- 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 July'21 to December'21. 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 assure the safety issues for the officials and workers in the construction sites due to COVID'19 pandemic.

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 A 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.

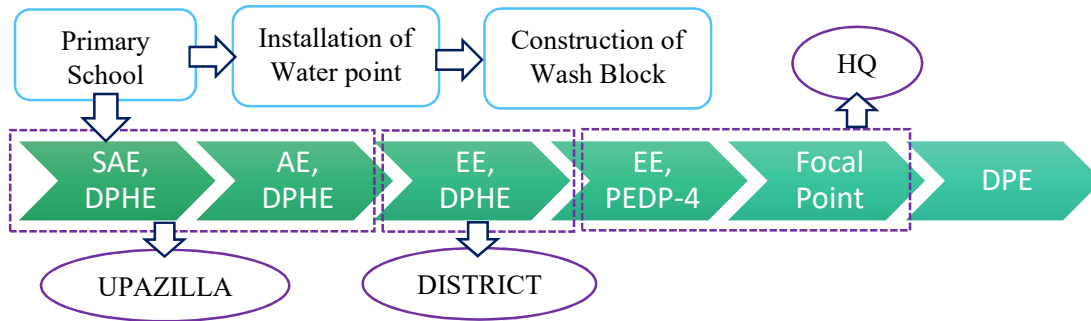


Fig. 1 Method of social safeguard screening

### 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

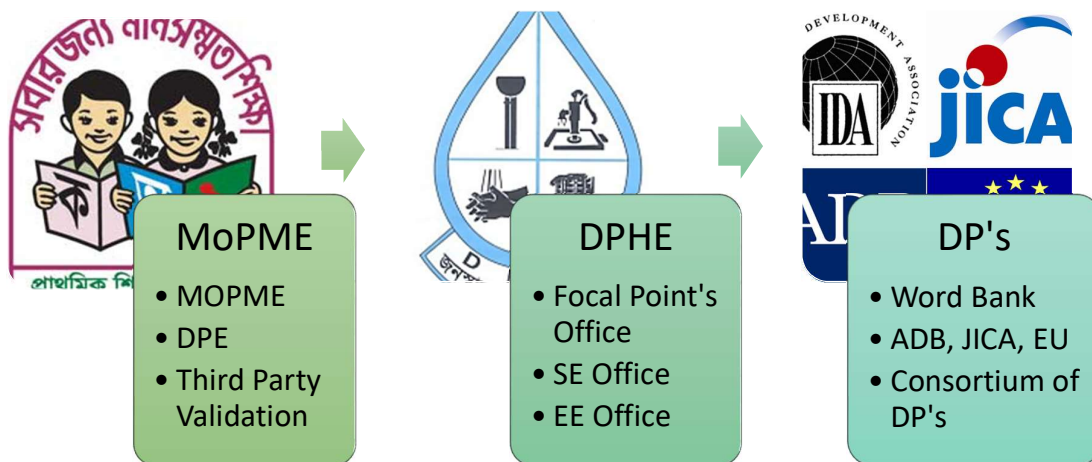


Fig. 2 Monitoring scheme in PEDP-4

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 Rajshahi 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.

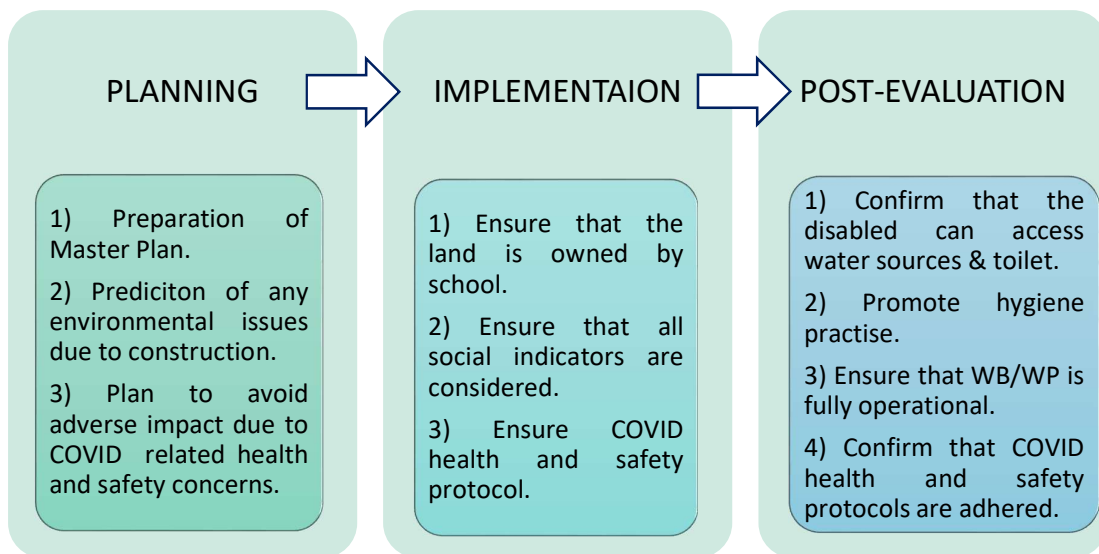


Fig. 3 Role of DPHE in social monitoring



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

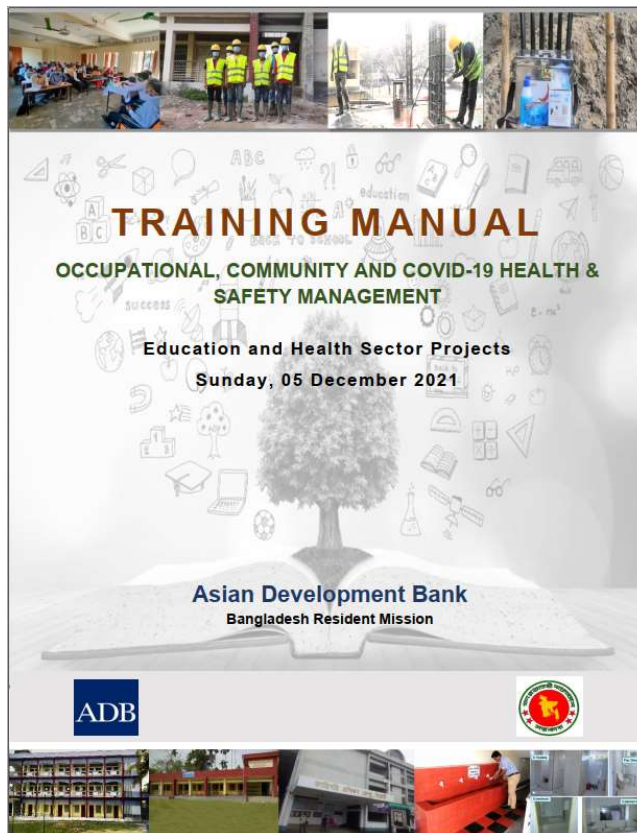


Fig. 5 ADB circulated virtual training manual

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. Recently (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. 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.



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

## 7. Social safeguard screening by DPHE (July'2021 – December'2021)

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 7,418 wash blocks and 5,168 water points till date from the beginning of this project. Among these, a total of 658 wash blocks and 527 water points were installed and handed over during the reporting tenure of July'2021 to Dec'2021. In addition, DPHE monitored 15,000 water points (installed in PEDP3) for arsenic contamination. All these works were monitored based on approved Social Monitoring Framework (SMF) for PEDP-4. Table-1 summarizes the list of DPHE implemented works where screening for social safeguard was carried out.

Table 1 Social Management Survey under PEDP-4, DPHE

| Scope of Work                 | July'19 - Dec'19 | Jan'20 - June'20 | July'20- Dec'20 | Jan'21 - June'21 | July'21- Dec'21 | Total  |
|-------------------------------|------------------|------------------|-----------------|------------------|-----------------|--------|
| Construction of Wash Block    | -                | -                | 672             | 6,088            | 658             | 7,418  |
| Installation of Water Sources | 57               | 183              | 2,145           | 2,256            | 527             | 5,168  |
| Maintenance of Wash Block     | 91               | 598              | 3,200           | 810              | 608             | 5,307  |
| Water Quality Monitoring      | -                | -                | -               | -                | 15,000          | 15,000 |

This report focuses on the construction work from the tenure of July'2021 to December'2021. During this period, not only new wash blocks were constructed and water points were installed, major maintenance of 608 wash blocks which were constructed during PEDP-3 were carried out as well. Furthermore, 15,000 water points installed during PEDP-3 were monitored for arsenic contamination. The status of the water points and wash blocks received through the monitoring survey is given in following subsections.

## 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 Sylhet division followed by Rajshahi 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.

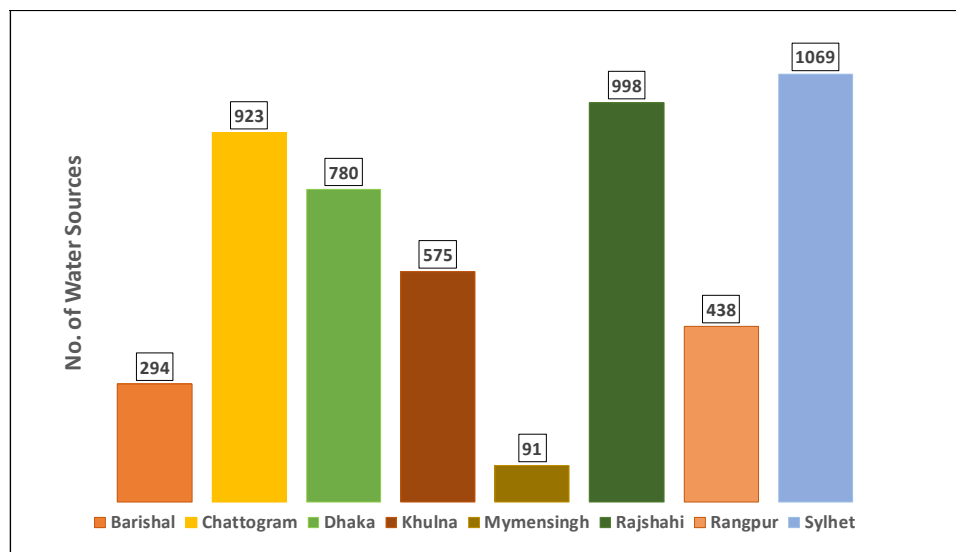


Fig. 7 Countrywide distribution of water points

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 (320) 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.

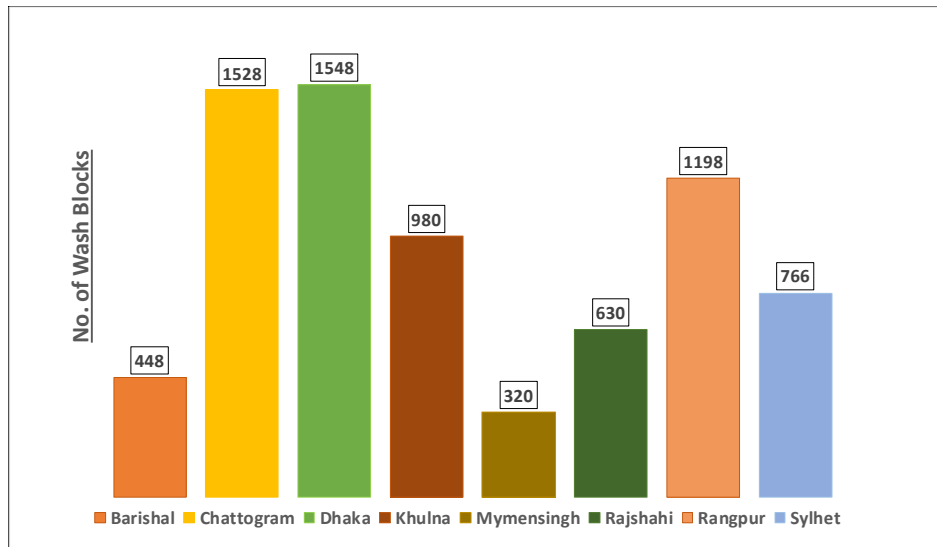


Fig. 8 Countrywide distribution of wash blocks

### 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 population resides in Chattogram division, majorly in Rangamati, Khagrachari, Bandarban districts. In addition, there are indigenous people residing in areas like Rajshahi, Sylhet, Mymensingh. Among the total 658 wash blocks constructed in the report tenure, 12% 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.

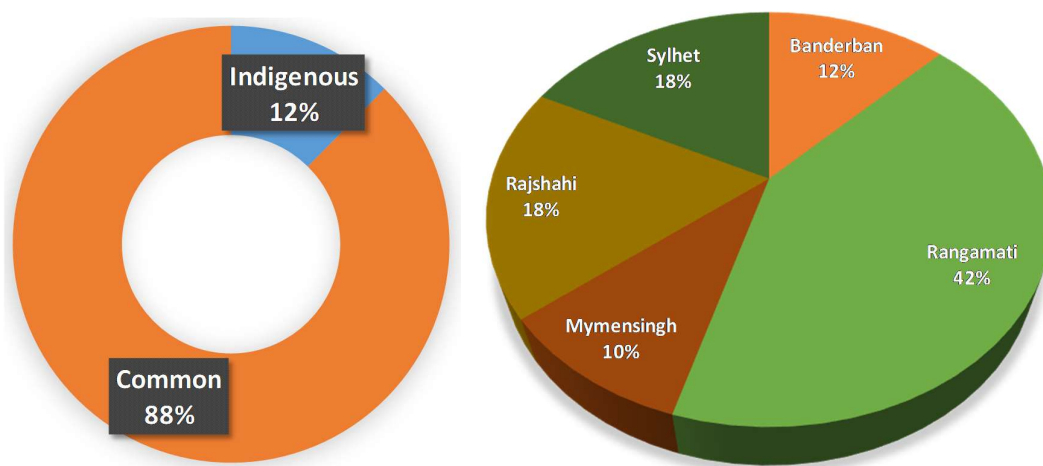


Fig. 9 Distribution of wash blocks in areas of having indigenous community



#### **8.4 Is there displacement of people due to land acquisition?**

Since, DPHE constructed 658 new wash blocks during the reporting tenure, no issues were encountered regarding displacement of people due to land acquisition. 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 527 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?**

Installation of 527 new water points having provision for running water supply brought a positive vibe in surrounding society as children could get easy access to safe drinking water. This ensured reduction of water borne diseases which eventually decreased the rate of absence of students from the school. The screening result confirmed that the installation of water points 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.

#### **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 527 new water points with the provision of running water supply. A real time photo is depicted in Fig. 10. 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. The screening result confirmed that the installation of water points with provision for hand washing basin 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 A glimpse of 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. Fig. 11 depicts a newly constructed zonal laboratory of DPHE at Jhalakathi. These newly established laboratories are equipped with modern machineries so that all relevant water quality parameters can be monitored.



Fig. 11 DPHE Zonal Laboratory at Jhalakathi



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 527 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 527 tube wells, it was found that 29 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 29 unacceptable water sources and suggested alternative option along with retest result is summarized in Table 1 of Appendix-4. Fig. 12 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 29 unacceptable water sources have been presented in Appendix-4. A summary of water quality monitoring report is provided in Table 2.

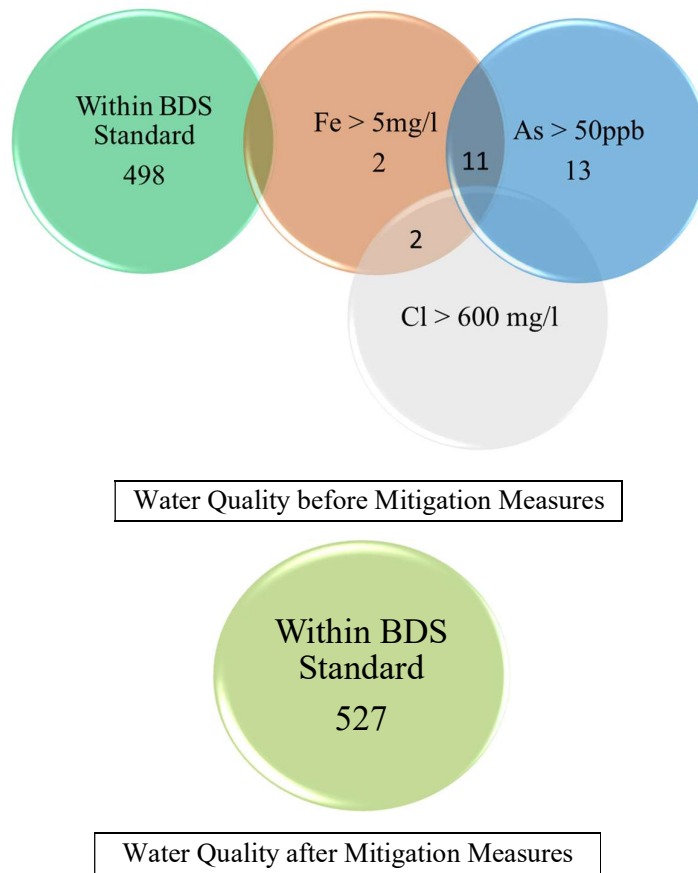


Fig. 12 Water Quality test result at a glance



**Table 2 Summary of Water Quality Monitoring Result**

| Sl. No.        | District   | Water Quality |                  | Remarks   |
|----------------|------------|---------------|------------------|---|
|                |            | Satisfactory  | Not Satisfactory |   |
| 1.             | Chattogram | 35            | -                | List of 'Not Satisfactory' water sources are given in Appendix-6 and Actions taken for the water sources where water quality is not satisfactory are listed in Table 1 of Appendix-6. |
| 2.             | Cumilla    | 101           | 2                |   |
| 3.             | Munshiganj | 18            | -                |   |
| 4.             | Noagoan    | 27            | -                |   |
| 5.             | Rajshahi   | 81            | 9                |   |
| 6.             | Rangpur    | 56            | 2                |   |
| 7.             | Khulna     | 15            | -                |   |
| 8.             | Gaibandha  | 77            | 16               |   |
| 9.             | Narial     | 15            | -                |   |
| 10.            | Luxmipur   | 27            | -                |   |
| 11.            | Sherpur    | 26            | -                |   |
| 12.            | Sunamganj  | 20            | -                |   |
| <b>Total =</b> |            | <b>498</b>    | <b>29</b>        |   |

## 8.8 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

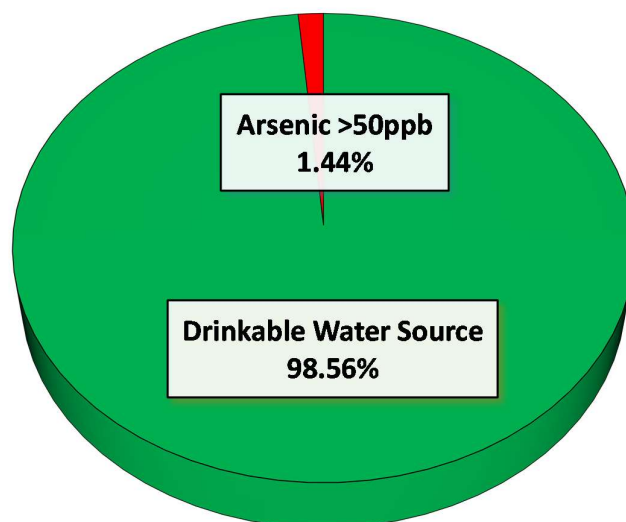


Fig. 13 Water Quality Monitoring result of tested 15,000 Water Points

could not be conducted in the last financial year. 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. Recently, soon after the re-opening of the schools, steps have been taken to conduct water quality screening of 15,000 water points. It can be noted that these 15,000 schools were selected by DPE and tests were conducted during the reporting tenure. Test result as shown in Fig. 13 indicates that 1.44% water points have been found to be newly contaminated due to Arsenic. 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.

Mitigation Measures suggested:

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. 14 shows some of the suggested filtration technologies.



Fig. 14 Different Suggested Improved Filtration Technologies

**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. 15). DPHE constructed 658 new wash blocks in the reporting tenure. Moreover, out of 608 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. 15 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, Responsive Action and School Re-Opening

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



Fig. 16 Executive Engineer, DPHE, Gaibandha inspecting the disinfection process at school



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. Fig. 16 shows a photo of school disinfection being investigated by executive engineer, DPHE. 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 pandemic?**

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 7<sup>th</sup> 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 3 summarizes the COVID response performance at the work sites of all 143 completed contracts during the reporting tenure.

**Table 3 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.  | 143              |     |     |   |
| Engage a full time EHS professional at site  |                  |     | 143 | 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.  | 143              |     |     |   |
| Establish site entrance protocol. Redesign the site safety notices/signboards/protocol according to the ADB guidelines   | 143              |     |     |   |
| 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.   | 143              |     |     |   |
| Provide every personnel working in the site with mask, hand gloves and hard shoes for their personal use.  | 143              |     |     |   |
| Everyone entering the worksite must wear a mask, gloves and hard shoes   | 143              |     |     |   |
| 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. |                  |     | 143 | 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.  |                  |     | 143 | 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.   | 143              |     |     |   |
| Arrange a mandatory site brief on COVID awareness in the morning. The session must be conducted by the EHS/medical professional.   |                  | 143 |     | 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.  | 143              |     |     |   |
| Before sharing common tools/machines at worksite, ensure to disinfect.   |                  | 143 |     | 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.  | 143              |     |     |   |
| Restrict worksite personnel to go outside unnecessarily. Also restrict campsite personnel to go outside without any valid cause.   | 143              |     |     |   |



| COVID-19 Response questions   | No. of Contracts |     |     | Comments  |
|---|------------------|-----|-----|---|
|   | FC               | PC  | N/A |   |
| 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.   |                  |     | 143 | 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. |                  | 143 |     | 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, upazilla level GR committee has been formed which is outlined in Table 4. Office of the Assistant Engineer at upazilla level used to receive any grievance originated regarding the construction activities. Despite of the upazilla GR committee there is a designated GR committee in the central level, the detail of which is accessible from DPHE website. Since, no complain were raised from the concerned community, there was no issue of grievance redressal during the reporting tenure.

**Table 4 Outline of Upazilla GR Committee, DPHE**

| Sl. No. | Designation            | Work Station         | Role     | Contact No.        |
|---------|------------------------|----------------------|----------|--------------------|
| 01.     | Assistant Engineer     | Upazilla Headquarter | Chairman | Concerned Upazilla |
| 02.     | Sub-Assistant Engineer | Concerned Upazilla   | Member   |                    |
| 03.     | Mechanic               | Concerned Upazilla   | Member   |                    |

## 10 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.

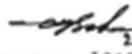


## Appendix-1: Social Screening Format for Wash Block

### Social Screening Format for Wash Block/Water Sources


District: Pirojpur  
 Upazilla: Nesarabad  
 Name of School: Rongakathi Govt. Primary School  
 School ID: 91502060208  
 Type of WASH Block: Attached

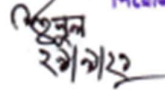
| Screening Questions  | Base Line |    | Impact Without Intervention |   |     | Impact During Implementation |   |     | Impact after Implementation |   |     | Remarks |
|--|-----------|----|-----------------------------|---|-----|------------------------------|---|-----|-----------------------------|---|-----|---------|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

  
 24.08.21  
 Signature of SAE  
 মশি কুমার সাহা  
 উপ-সহকারী প্রকৌশলী  
 সনসাহা প্রকৌশল অধিদপ্তর  
 নেছারাবাদ, পিরোজপুর।

Signature of AE

Signature of Executive Engineer

  
 প্রকৌঃ মোঃ আব্দুল আলীম গাফী  
 নির্বাহী প্রকৌশলী  
 সনসাহা প্রকৌশল অধিদপ্তর  
 পিরোজপুর।

  
 23/8/21



✓  
**Social Screening Format for Wash Block/Water Sources**

District: Lakshimpur  
 Upazilla: Sadar  
 Name of School: Tumsara Govt. Primary School  
 School ID: 91408041701  
 Type of WASH Block/Water Sources: WS

| 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?        |           | N/A |                             |   | ✓   |                              |   | ✓   |                             |   | ✓   |         |
| Are the constructed toilets accessible for disable students? |           | N/A |                             |   | ✓   |                              |   | ✓   |                             |   | ✓   |         |

  
 Signature of SAE

Signature of AE

  
 Signature of Executive Engineer







(Field Test)

|   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
|---|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <b>EE, DPHE</b>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <p style="text-align: center;">Government of the People's Republic of Bangladesh<br/>Arsenic Test at School by Field Kit under Water Quality Monitoring of<br/>Fourth Primary Education Development Program (PEDP4)</p>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <b>ARSENIC TEST RESULT BY FIELD KIT</b>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <b>(A) Information of Primary School:</b>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 1. Name of School : <u>pachim Dhemushia Reg: primary school</u>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 2. EMIS Code : <u>4 1 2 0 5 1 2 0 3 0 2</u>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 3. District : <u>Coxbazar</u> 4. Upazilla : <u>chakaria</u>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <b>(B) Information of Drinking Water Source:</b>  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 1. Provision of Water Sources : <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 2. Project : <input checked="" type="checkbox"/> PEDP3 <input type="checkbox"/> GPS-1 <input type="checkbox"/> NNGPS-1 <input type="checkbox"/> PEDP-4 <input type="checkbox"/> Others  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 3. Installed By : <input checked="" type="checkbox"/> DPHE <input type="checkbox"/> Others  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 4. Year of Installation : <u>2017</u>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 5. Type of Tube Well : <input type="checkbox"/> Deep <input checked="" type="checkbox"/> Shallow <input type="checkbox"/> Tara <input type="checkbox"/> Ring Well <input type="checkbox"/> TSP <input type="checkbox"/> Others  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 6. Present Condition : <input checked="" type="checkbox"/> Running <input type="checkbox"/> Temporary Choked up <input type="checkbox"/> Permanently Choked up  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| 7. Platform/Collection Basin Condition : <input checked="" type="checkbox"/> Good <input type="checkbox"/> Bad <input type="checkbox"/> No Platform/Collection Basin.   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <b>(C) Water quality &amp; Present status:</b>  |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <p>Field Observation: (Please ✓)</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">50 ml. 0<br/>0.5 ml. 0</td> <td style="text-align: center;">10</td> <td style="text-align: center;">25<br/>75</td> <td style="text-align: center;">50<br/>175</td> <td style="text-align: center;">100<br/>600</td> <td style="text-align: center;">250<br/>1500</td> <td style="text-align: center;">500<br/>4000</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> | 50 ml. 0<br>0.5 ml. 0  | 10                       | 25<br>75                 | 50<br>175                | 100<br>600               | 250<br>1500              | 500<br>4000 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50 ml. 0<br>0.5 ml. 0   | 10   | 25<br>75                 | 50<br>175                | 100<br>600               | 250<br>1500              | 500<br>4000              |             |                          |                                     |                          |                          |                          |                          |                          |
| <input type="checkbox"/>  | <input checked="" type="checkbox"/>  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |             |                          |                                     |                          |                          |                          |                          |                          |
| Arsenic test Result : <u>..... 10 ..... ppb (approx.)</u>   | TEST KIT<br>HACH<br>EZ Arsenic Test Kit<br>Cat. No. 28228-00   |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| BDS Standard : <u>50 ppb (0.05mg/l)</u>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <b>For School</b>   | <b>For DPHE</b>  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| Signature & Date: <u>[Signature]</u><br>Name: <u>প্রধান শিক্ষক (চ: দা:)</u><br>Designation: <u>পশ্চিম ডেমুশিয়া সরকারি প্রাথমিক বিদ্যালয় চকরিয়া, কক্সবাজার।</u><br>Phone: <u>01814-111299</u>   | Signature & Date: <u>[Signature]</u><br>Name: <u>মোঃ আবু ইউসুফ</u><br>Designation: <u>জিএস-সহকারী প্রকৌশলী জনস্বাস্থ্য প্রকৌশল অধিদপ্তর চকরিয়া, কক্সবাজার।</u><br>Phone: <u>[Blank]</u> |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |
| <p>[ এই পরীক্ষার সাথে বিদ্যালয় কর্তৃপক্ষের কোন আর্থিক সংশ্লেষ নেই। আর্সেনিক পরীক্ষার জন্য সকল খরচ ঠিকাদারী প্রতিষ্ঠান কর্তৃক বহন করা হবে ]</p>   |  |                          |                          |                          |                          |                          |             |                          |                                     |                          |                          |                          |                          |                          |

### 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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শেখ হাসিনার মূলনীতি  
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 সূত্রোক্ত 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 ধার্মাল জ্ঞানারের মাধ্যমে তাদের শরীরের তাপমাত্রা পরীক্ষা করতে হবে;
- ০৩) ট্রাকে করে নির্মাণ সামগ্রী পরিবহন/সরবরাহের সময় ট্রাকের সামনে ব্যানারে জনস্বাস্থ্য প্রকৌশল অধিদপ্তর কর্তৃক বাস্তবায়নাধীন সূনির্দিষ্ট প্রকল্পের নাম উল্লেখ থাকতে হবে;
- ০৪) প্রকল্প কাজ সম্পাদনের জন্য শ্রমিকদের নির্দিষ্ট পোশাক পরিধান করতে হবে এবং প্রযোজ্য ক্ষেত্রে মাস্ক, হ্যান্ডগ্লোভস, 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 দৃষ্টব্য-

*(Handwritten signature)*

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

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 মন্ত্রী 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।

মো: খাইরুল ইসলাম  
যুগ্মসচিব




## Appendix-4: Water Quality Report of Unacceptable Water Sources

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Government of the People's Republic of Bangladesh  
Office of the Senior Chemist  
Department of Public Health Engineering (DPHE)  
Bogra Zonal Lab, Seoigari, Jamtola, Bogra.  
Phone: 051-78295, Fax: , Email: wqmsc\_bograzonalab@yahoo.com



Memo: 46.03.1000.106.16.01.21.220 Date: 07/11/2021

### Physical/Chemical/Bacteriological Analysis of Water Sample

|   |  |
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| Sample ID: BOG2021110101 to BOG2021110115, Total: 15  | District: Gaibandha; Upazila: Sundarganj |
| Sent by: Sub-assistant Engineer, DPHE, Sundarganj, Gaibandha.                                   | Sample Source: STW-Others Pump           |
| Ref. Memo No: 46.03.3291.401.14.001.21-27 & Dated: 30/09/2021<br>PN: TSP-PEDP-4/0350 TID:565261 | Date of Testing: 31/10/2021 & 03/11/2021 |
| Collection date: 25/10/2021 & 26/10/2021  | Receiving date: 27/10/2021               |

### LABORATORY TEST RESULTS:


| Sample ID     | Name Of School        | ID          | Global Position(GPS) |           | Arsenic (mg/L)               |        | Chloride (mg/L)             |             | Iron (mg/L)                 |        |
|---------------|-----------------------|-------------|----------------------|-----------|------------------------------|--------|-----------------------------|-------------|-----------------------------|--------|
|               |                       |             | Latitude             | Longitude | LOQ:0.001, BDS:0.05<br>Conc. | Method | LOQ:1, BDS:150-600<br>Conc. | Method      | LOQ:0.1, BDS:0.3-1<br>Conc. | Method |
| BOG2021110101 | Moodo Shebram GPS     | 99108070201 | 25°33'20"            | 89°28'22" | 0.002                        | AAS    | 32                          | Titrimetric | 3.4                         | AAS    |
| BOG2021110102 | Taiuk Sorbanondo GPS  | 91108071706 | 25°30'00"            | 89°28'44" | 0.021                        | AAS    | 28                          | Titrimetric | 1.6                         | AAS    |
| BOG2021110103 | Kasimat Ohopdanga GPS | 108071307   | 25273'11"            | 89°29'58" | 0.063                        | AAS    | 26                          | Titrimetric | 6.8                         | AAS    |
| BOG2021110104 | Ohopdanga GPS         | 108071304   | 25°27'15"            | 89°30'29" | 0.040                        | AAS    | 32                          | Titrimetric | 3.5                         | AAS    |
| BOG2021110105 | Hata Cowasta GPS      | 99108070801 | 25°28'47"            | 89°30'25" | 0.040                        | AAS    | 36                          | Titrimetric | 23                          | AAS    |
| BOG2021110106 | Char Coritabari GPS   | 99108070400 | 25°34'27"            | 89°28'20" | 0.023                        | AAS    | 30                          | Titrimetric | 10                          | AAS    |
| BOG2021110107 | Gidar Hole GPS        | 91108071414 | 25°27'42"            | 89°36'31" | 0.039                        | AAS    | 24                          | Titrimetric | 3.0                         | AAS    |
| BOG2021110108 | Porcim Sotrijan GPS   | 99108071204 | 25°29'19"            | 89°35'04" | 0.027                        | AAS    | 32                          | Titrimetric | 0.8                         | AAS    |
| BOG2021110109 | Notun Dulal Vorek GPS | 91108070306 | 25°27'19"            | 89°36'36" | 0.039                        | AAS    | 30                          | Titrimetric | 1.7                         | AAS    |
| BOG2021110110 | Bojan GPS             | 91108070207 | 25°26'29"            | 89°37'12" | 0.053                        | AAS    | 30                          | Titrimetric | 12                          | AAS    |
| BOG2021110111 | Charmai GPS           | 99108071303 | 25°25'42"            | 89°36'57" | 0.010                        | AAS    | 34                          | Titrimetric | 0.6                         | AAS    |
| BOG2021110112 | Shes-1 on GPS         | 108070102   | 25°28'32"            | 89°38'06" | 0.045                        | AAS    | 28                          | Titrimetric | 1.5                         | AAS    |
| BOG2021110113 | Chondipur-2 on GPS    | 108071415   | 25°28'54"            | 89°37'54" | 0.043                        | AAS    | 28                          | Titrimetric | 8.3                         | AAS    |
| BOG2021110114 | Chondipur GPS         | 91108070101 | 25°29'37"            | 89°37'53" | 0.062                        | AAS    | 24                          | Titrimetric | 13                          | AAS    |
| BOG2021110115 | Lal camar GPS         | 10807140201 | 25°27'57"            | 89°38'03" | 0.053                        | AAS    | 36                          | Titrimetric | 8.5                         | AAS    |

Note: Sample Collected by Md. Aikul Islam. LOQ-Level On Quantization, BDS: Bangladesh Standard, AAS: Atomic Absorption Spectrophotometer, UVS: Ultra Violet Spectrophotometer. Lab SI: 5642-5656


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| <p><u>Test Performed by:</u></p> <p>1.) Name: Md. Hafizur Rahman<br/>Designation: Sample Analyzer</p> <p>2.) Name:<br/>Designation:</p> | <p><u>Countersigned/Approved by:</u></p> <p>1.) Name: Md. Sohel Rana<br/>Designation: Senior Chemist</p> <p>2.) Name:<br/>Designation:</p> |
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**Government of the People's Republic of Bangladesh**  
Office of the Senior Chemist  
Department of Public Health Engineering (DPHE)  
Bogra Zonal Lab, Seojgari, Jamtola, Bogra.  
Phone: 051-78295, Fax: , Email: wqmsc\_bograzonalab@yahoo.com



Memo: 46.03.1000.106.16.01.21.218 Date: 07/11/2021



**Physical/Chemical/Bacteriological Analysis of Water Sample**

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| Sample ID: BOG2021090561 to BOG2021090570, Total: 10           | District: Gaibandha ; Upazila: Saghata   |
| Sent by: Assistant Engineer, DPHE, Saghata, Gaibandha.         | Sample Source: STW-Others Pump           |
| Ref. Memo No: 46.203.3288.301.16.001.21-20 & Dated: 30/09/2021 | Date of Testing: 31/10/2021 & 03/11/2021 |
| Collection date: 07/10/2021                                    | Receiving date: 10/10/2021               |



**LABORATORY TEST RESULTS:**

| Sample ID     | Name Of School       | ID          | Global Position(GPS) |           | Arsenic (mg/l)<br>LOQ:0.001, BDS:0.05 |        | Chloride (mg/l)<br>LOQ:1, BDS:150-600 |             | Iron (mg/l)<br>LOQ:0.1, BDS:0.3-1 |        |
|---------------|----------------------|-------------|----------------------|-----------|---------------------------------------|--------|---------------------------------------|-------------|-----------------------------------|--------|
|               |                      |             | Latitude             | Longitude | Conc.                                 | Method | Conct.                                | Method      | Conct.                            | Method |
| BOG2021090561 | Gosa GPS             | 91108060204 | 25°12'21"            | 89°34'10" | 0.057                                 | AAS    | 32                                    | Titrimetric | 8.1                               | AAS    |
| BOG2021090562 | Vorekhal GPS         | 91108060203 | 25°11'13"            | 89°34'55" | 0.014                                 | AAS    | 28                                    | Titrimetric | 6.6                               | AAS    |
| BOG2021090563 | Pachpur GPS          | 91108060912 | 25°13'54"            | 89°31'18" | 0.017                                 | AAS    | 30                                    | Titrimetric | 0.4                               | AAS    |
| BOG2021090564 | Shimular GPS         | 99706099004 | 25°09'34"            | 89°31'27" | <LOQ                                  | AAS    | 34                                    | Titrimetric | 2.3                               | AAS    |
| BOG2021090565 | Dhonarua GPS         | 9110806401  | 25°02'35"            | 89°34'02" | 0.021                                 | AAS    | 22                                    | Titrimetric | 1.8                               | AAS    |
| BOG2021090566 | Bonarpara Model GPS  | 91108061001 | 25°10'58"            | 89°31'40" | 0.008                                 | AAS    | 28                                    | Titrimetric | 1.4                               | AAS    |
| BOG2021090567 | Jumarbai GPS         | 91108060801 | 25°13'42"            | 89°33'49" | 0.002                                 | AAS    | 26                                    | Titrimetric | 1.4                               | AAS    |
| BOG2021090568 | Amirpara GPS         | 91108060807 | 25°14'24"            | 89°33'27" | 0.021                                 | AAS    | 30                                    | Titrimetric | 5.5                               | AAS    |
| BOG2021090569 | Saghata GPS          | 91108060301 | 25°06'27"            | 89°35'07" | 0.008                                 | AAS    | 28                                    | Titrimetric | 1.3                               | AAS    |
| BOG2021090570 | Poachim Pobontar GPS | 99108060601 | 25°10'04"            | 89°40'08" | 0.003                                 | AAS    | 32                                    | Titrimetric | 4.9                               | AAS    |

Note: Sample Collected by Md. Shihab Uddin. LOQ-Level On Quantization, BDS: Bangladesh Standard, AAS: Atomic Absorption Spectrophotometer, UVS: Ultra Violet Spectrophotometer. Lab SI: 3077-3085

|   |   |
|---|---|
| <p><u>Test Performed by:</u></p> <p>1.) Name: Md. Hafizur Rahman<br/>Designation: Sample Analyzer</p> <p>2.) Name:<br/>Designation:</p> <div style="text-align: right; margin-top: 10px;"> <br/>                 Md. Hafizur Rahman<br/>Sample Analyzer<br/>Bogra Zonal Laboratory, Bogra             </div> | <p><u>Countersigned/Approved by:</u></p> <p>1.) Name: Md. Sohel Rana<br/>Designation: Senior Chemist</p> <p>2.) Name:<br/>Designation:</p> <div style="text-align: right; margin-top: 10px;"> <br/>                 Md. Sohel Rana<br/>Senior Chemist<br/>DPHE, Zonal Laboratory, Bogra             </div> |
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|  | <p><b>Government of the People's Republic of Bangladesh</b><br/> <b>Office of the Senior Chemist</b><br/> <b>Department of Public Health Engineering (DPHE)</b><br/> <b>Bogra Zonal Lab, Seojari, Jamtola, Bogra.</b><br/>                 Phone: 051-78295, Fax: , Email: wqmsc_bograzonallab@yahoo.com</p> | <p>384</p>  |
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Memo:46.03.1000.106.16.01.21.219

Date:07/11/2021



Physical/Chemical/Bacteriological Analysis of Water Sample

|   |   |
|---|---|
| Sample ID: BOG2021090571 to BOG2021090585, Total: 15          | District: Gaibandha ; Upazila: Polashbari |
| Sent by: Sub-assistant Engineer, DPHE, Polashbari, Gaibandha. | Sample Source: STW-Others Pump            |
| Ref. Memo No: 46.03.3267.401.16.26.18-12 & Dated: 28/09/2021  | Date of Testing: 31/10/2021 & 03/11/2021  |
| Collection date: 25/10/2021 & 28/10/2021                      | Receiving date: 27/10/2021                |

**LABORATORY TEST RESULTS:**

| Sample ID     | Name Of School           | ID          | Global Position(GPS) |           | Arsenic (mg/L)               |        | Chloride (mg/L)              |             | Iron (mg/L)                  |        |
|---------------|--------------------------|-------------|----------------------|-----------|------------------------------|--------|------------------------------|-------------|------------------------------|--------|
|               |                          |             | Latitude             | Longitude | LOQ:0.001, BDS:0.05<br>Conc. | Method | LOQ:1, BDS:150-600<br>Conct. | Method      | LOQ:0.1, BDS:0.3-1<br>Conct. | Method |
| BOG2021090571 | Maiendho GPS             | 109030701   | 25°15'43"            | 89°25'58" | 0.055                        | AAS    | 28                           | Titrimetric | 6.5                          | AAS    |
| BOG2021090572 | Baltamunia Girls GPS     | 708030703   | 25°15'24"            | 89°27'18" | 0.012                        | AAS    | 32                           | Titrimetric | 1.5                          | AAS    |
| BOG2021090573 | Baltamunia Purbopara GPS | 99706039029 | 25°15'23"            | 89°27'17" | 0.037                        | AAS    | 26                           | Titrimetric | 0.4                          | AAS    |
| BOG2021090574 | Hasbari GPS              | 108030208   | 25°13'55"            | 89°21'01" | 0.015                        | AAS    | 22                           | Titrimetric | 2.1                          | AAS    |
| BOG2021090575 | Barshai GPS              | 91908030410 | 25°14'40"            | 89°23'52" | 0.003                        | AAS    | 28                           | Titrimetric | 0.4                          | AAS    |
| BOG2021090576 | Gaopara GPS              | 108030510   | 25°17'19"            | 89°24'53" | 0.001                        | AAS    | 22                           | Titrimetric | 0.1                          | AAS    |
| BOG2021090577 | Borogobindapur GPS       | 108030516   | 25°16'38"            | 89°24'08" | <LOQ                         | AAS    | 26                           | Titrimetric | 0.3                          | AAS    |
| BOG2021090578 | Uttar Sabdin GPS         | 108030404   | 25°15'24"            | 89°24'44" | 0.001                        | AAS    | 30                           | Titrimetric | 3.2                          | AAS    |
| BOG2021090579 | Hornabari Ino GPS        | 108030906   | 25°14'24"            | 89°29'02" | 0.069                        | AAS    | 30                           | Titrimetric | <LOQ                         | AAS    |
| BOG2021090580 | Shimulia GPS             | 108030106   | 25°15'18"            | 89°21'14" | 0.018                        | AAS    | 22                           | Titrimetric | <LOQ                         | AAS    |
| BOG2021090581 | Shimulia 2no GPS         | 108030129   | 25°17'25"            | 89°20'51" | 0.006                        | AAS    | 28                           | Titrimetric | 0.3                          | AAS    |
| BOG2021090582 | Satarpara GPS            | 91108030609 | 25°18'04"            | 89°28'04" | 0.060                        | AAS    | 24                           | Titrimetric | 0.4                          | AAS    |
| BOG2021090583 | Monohorpyr 1no GPS       | 108030807   | 25°16'50"            | 89°29'57" | 0.015                        | AAS    | 26                           | Titrimetric | 1.2                          | AAS    |
| BOG2021090584 | Khamar Batus GPS         | 91108030812 | 25°15'03"            | 89°29'22" | <LOQ                         | AAS    | 32                           | Titrimetric | 1.4                          | AAS    |
| BOG2021090585 | Takul Ghorebanda GPS     | 91108030802 | 25°16'12"            | 89°27'34" | 0.006                        | AAS    | 28                           | Titrimetric | 2.4                          | AAS    |

Note: Sample Collected by Md. Shihab Uddin. LOQ-Level On Quantization, BDS: Bangladesh Standard, AAS: Atomic Absorption Spectrophotometer, UVS: Ultra Violet Spectrophotometer. Lab SI: 3087-3101

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| <p><u>Test Performed by:</u></p> <p>1.) Name: Md. Hafizur Rahman<br/>Designation: Sample Analyzer</p> <p>2.) Name:<br/>Designation:</p> | <p style="text-align: center;"><u>Signature</u></p>  <p style="text-align: center;">Md. Hafizur Rahman<br/>Sample Analyzer<br/>BZLS, Zonal Laboratory, Bogra.</p> | <p><u>Countersigned/Approved by:</u></p> <p>1.) Name: Md. Sohel Rana<br/>Designation: Senior Chemist</p> <p>2.) Name:<br/>Designation:</p> | <p style="text-align: center;"><u>Signature</u></p>  <p style="text-align: center;">Md. Sohel Rana<br/>Senior Chemist<br/>BZLS, Zonal Laboratory, Bogra.</p> |
|---|--|--|---|



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|  | <p><b>Government of the People's Republic of Bangladesh</b><br/> <b>Office of the Senior Chemist</b><br/> <b>Department of Public Health Engineering (DPHE)</b><br/> <b>Bogra Zonal Lab, Seojgari, Jamtola, Bogra.</b><br/>                 Phone: 051-78295, Fax: , Email: wqmsc_bograzonalab@yahoo.com</p> |  |
|--|--|--|

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<br>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)            |        | Chloride (mg/L)          |             | Iron (mg/L)              |        |
|---------------|---------------------|-------------|----------------------|-----------|---------------------------|--------|--------------------------|-------------|--------------------------|--------|
|               |                     |             | Latitude             | Longitude | LOQ:0.001, BDS:0.05 Conc. | Method | LOQ:1, BDS:150-600 Conc. | Method      | LOQ:0.1, BDS:0.3-1 Conc. | Method |
| BOG2021110116 | Beurgram GPS        | 91106020403 | 25°07'01"            | 89°15'10" | 0.040                     | AAS    | 50                       | Titrimetric | 2.3                      | AAS    |
| BOG2021110117 | Puyagari GPS        | 106020103   | 25°11'44"            | 89°12'21" | 0.020                     | AAS    | 34                       | Titrimetric | 2.7                      | AAS    |
| BOG2021110118 | Karizla GPS         | 106021203   | 25°07'14"            | 89°20'09" | 0.023                     | AAS    | 28                       | Titrimetric | 4.1                      | AAS    |
| BOG2021110119 | Maladhori GPS       | 91106021103 | 25°10'12"            | 89°35'17" | 0.052                     | AAS    | 28                       | Titrimetric | 4.5                      | AAS    |
| BOG2021110120 | Bogulagari GPS      | 106020013   | 25°11'35"            | 89°18'57" | 0.025                     | AAS    | 36                       | Titrimetric | 1.7                      | AAS    |
| BOG2021110121 | Shakpala GPS        | 91106021102 | 25°09'45"            | 89°22'39" | 0.224                     | AAS    | 28                       | Titrimetric | 8.4                      | AAS    |
| BOG2021110122 | Chadpur Singa GPS   | 706026003   | 25°09'51"            | 89°26'06" | 0.042                     | AAS    | 32                       | Titrimetric | 0.7                      | AAS    |
| BOG2021110123 | Potatbari GPS       | 106021006   | 25°08'39"            | 89°25'47" | 0.057                     | AAS    | 30                       | Titrimetric | 2.9                      | AAS    |
| BOG2021110124 | Khirbari GPS        | 106021502   | 25°06'29"            | 89°26'24" | 0.061                     | AAS    | 32                       | Titrimetric | 0.9                      | AAS    |
| BOG2021110125 | Thikana Shohdol GPS | 106021202   | 25°08'11"            | 89°18'12" | 0.017                     | AAS    | 28                       | Titrimetric | 1.1                      | AAS    |
| BOG2021110126 | Hosenpur GPS        | 106020601   | 25°14'24"            | 89°21'52" | 0.036                     | AAS    | 28                       | Titrimetric | 0.8                      | AAS    |
| BOG2021110127 | Uttar Poggol GPS    | 106020608   | 25°12'40"            | 89°26'39" | 0.295                     | AAS    | 34                       | Titrimetric | 4.2                      | AAS    |
| BOG2021110128 | Bondhonkuthi GPS    | 106021104   | 25°07'48"            | 89°25'56" | 0.066                     | AAS    | 30                       | Titrimetric | 1.3                      | AAS    |
| BOG2021110129 | Shaimara GPS        | 91106021702 | 25°04'06"            | 89°29'28" | 0.074                     | AAS    | 28                       | Titrimetric | 0.8                      | AAS    |
| BOG2021110130 | Taluk kanapur GPS   | 91106020701 | 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 SI: 5657-5671

|  |  |
|--|--|
| <p><b>Test Performed by:</b></p> <p>Name: Md. Alauddin Al Faruque<br/>                 Designation: Junior Chemist</p> <p>Name: Md. Hafizur Rahman<br/>                 Designation: Sample Analyzer</p> | <p><b>Countersigned/Approved by:</b></p> <p>1.) Name: Md. Sohel Rana<br/>                 Designation: Senior Chemist</p> <p>2.) Name:<br/>                 Designation:</p> |
|--|--|





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 Project

| 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     | Cumilla  | Debidwar | Sultanpur | Sultanpur | 4066031405 | PEDP-4      | Sultanpur GPS  | 23°30'32"<br>90°59'06" | N             | Y     | 0.003     | 34.59     | 665       |
| 2     | Cumilla  | Debidwar | Borkamta  | Borkamta  | 4066090506 | PEDP-4      | Borkamta GPS   | 23°29'57"<br>91°11'80" | N             | Y     | 0.011     | 3.12      | 48        |

Samples were collected by Borhan Uddin, Lab Assistant, DPHE Zonal Lab Cumilla.

*[Signature]*  
**SACHINDRA DAS**  
 Sample Manager  
 Director of Technical Division (DPHE)  
 Zonal Laboratory, Cumilla.

*[Signature]*  
**SHARMIN-SULTANA**  
 Junior Chemist  
 DPHE Zonal Lab Cumilla.  
 15/11/21

*[Signature]*  
**KANAI LAL DAS**  
 Junior Chemist  
 DPHE Zonal Lab, Cumilla.  
 15/11/2021



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 NNGPS Project

| 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     | Cumilla  | Debidwar | Dakkhin Gunajibor | Goneshpur | 406039202 | NNGPS       | Goneshpur GPS       | 23°53'59"<br>90°58'41" | N             | Y     | 0.003     | 19.14     | 665       |
| 2     | Cumilla  | Debidwar | Saltanpur         | Sarpur    | 406090302 | NNGPS       | Sarpur GPS          | 23°50'22"<br>90°58'01" | N             | Y     | 0.002     | 4.29      | 532       |
| 3     | Cumilla  | Debidwar | Eusufpur          | Juktagram | 406080801 | NNGPS       | Juktagram GPS       | 23°59'13"<br>91°02'34" | N             | Y     | 0.003     | 2.44      | 38        |
| 4     | Cumilla  | Debidwar | Molkeopur         | Baura     | 406039203 | NNGPS       | Baura GPS           | 23°52'21"<br>91°01'40" | N             | Y     | 0.003     | 0.90      | 209       |
| 5     | Cumilla  | Debidwar | Fatehabad         | Kamarchor | 406090305 | NNGPS       | Kamarchor GPS       | 23°56'43"<br>91°01'50" | N             | Y     | 0.004     | 2.50      | 162       |
| 6     | Cumilla  | Debidwar | Debidwar          | Vosona    | 406030501 | NNGPS       | Vosona A.R.Khan GPS | 23°27'49"<br>91°14'25" | N             | Y     | 0.001     | 4.28      | 409       |

Samples were collected by Borhan Uddin, Lab Assistant, DPHE Zonal Lab Cumilla.

*[Signature]*  
**SANJIB DAS**  
 Senior Chemist  
 Zonal Laboratory, Cumilla.

*[Signature]*  
**SHARMIN SULTANA**  
 Junior Chemist  
 DPHE Zonal Lab, Cumilla.

*[Signature]*  
**KANAI LAL DAS**  
 Junior Chemist  
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**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 | Secd | Clear         | As (mg/l) | Fe (mg/l) | CF (mg/l) | Re |   |
| 1      | Rangpur  | Mithrapukur | Urnadpur Taloha | 99105071707 | 01             | TSP         | -         | Urnadpur Taloha GPS | 25°31'14"                       | 89°24'23" | 01   | 01            | -         | -         | 6.5       | -  | - |
| 2      | Rangpur  | Mithrapukur | Jagoda Nandipur | 99705079013 | 01             | TSP         | -         | Jagoda Nandipur GPS | 25°16'59"                       | 89°21'38" | 01   | 01            | -         | -         | 6.0       | -  | - |

BUS: Bangladesh Drinking Standard (F=0.3+0.07p) LAB ID: 105, Work Order: 1087, Tanker ID: 517007, Package no: TSP/PEDP-4/14, Sample Collected by: Md. Humayun Kabir, Sample Analyzer

*A.K.M. Md. Humayun Kabir*  
 29.09.21  
 Md. Humayun Kabir  
 Sample Analyzer  
 DPHE, Zonal Lab, Rangpur.

*A.K.M. Md. Abdul Jabbar*  
 29.9.21  
 Md. Abdul Jabbar  
 Senior Chemist  
 DPHE, Zonal Lab, Rangpur.

Memo: 46.03.8500.106.16.004.21.164  
 CC:

Date: 29 / 09 / 2021

- 01. Project Director & Focal Point, PEDP-4, DPHE, Dhaka.
- 02. Executive Engineer, DPHE, Rangpur Division, Rangpur.
- 03. Sub-Assl. Engineer, DPHE, Mithrapukur, Rangpur Ref. Office Memo: 46.03.8538.401.14.078.18-22, Date: 29.09.2021

*A.K.M. Md. Abdul Jabbar*  
 29.9.21  
 Md. Abdul Jabbar  
 Senior Chemist  
 DPHE, Zonal Lab, Rangpur



| Sl. No | District | Upazila | Name of School                    | BMS CODE    | Package Number | No of TSP in a Package | Date of contract sign (dd/mm/yy) | Name of contractor | Contract amount (tk) | Physical Progress (%) | Bill Paid Amount (tk) | Completion Due Date (dd/mm/yy) | Actual Completion Date (dd/mm/yy) | Water Quality |     |    |
|--------|----------|---------|-----------------------------------|-------------|----------------|------------------------|----------------------------------|--------------------|----------------------|-----------------------|-----------------------|--------------------------------|-----------------------------------|---------------|-----|----|
|        |          |         |                                   |             |                |                        |                                  |                    |                      |                       |                       |                                |                                   | AS            | Fe  | Cl |
| 1      | Rajshahi | BAGMARA | ALONGKOR DANIGAMARA RPS           | 99113071406 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 8/1/2020                          | 0.007         | 0.6 | 10 |
| 2      | Rajshahi | BAGMARA | BARUNPARA RPS                     | 99113071401 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/8/2020                          | 0.003         | 0.5 | 10 |
| 3      | Rajshahi | BAGMARA | BALAI PARA                        | 91113071509 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/11/2020                         | 0.003         | 0.4 | 15 |
| 4      | Rajshahi | BAGMARA | BALA Govt. Primary School         | 91113071002 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/21/2020                         | 0.003         | 0.4 | 15 |
| 5      | Rajshahi | BAGMARA | BARUATI RPS                       | 99113071502 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/15/2020                         | 0.021         | 1   | 20 |
| 6      | Rajshahi | BAGMARA | BARU PARA-1 GOVERNMENT PRIMARY    | 91113071206 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/14/2020                         | 0.002         | 1.9 | 44 |
| 7      | Rajshahi | BAGMARA | BOHODIPARA RPS                    | 99113071201 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/14/2020                         | 0.006         | 0.4 | 20 |
| 8      | Rajshahi | BAGMARA | BRABAN GONI                       | 91113070903 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 9/3/2020                          | 0.021         | 1   | 20 |
| 9      | Rajshahi | BAGMARA | BRAGNADI                          | 91113071501 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/28/2020                         | 0.021         | 2   | 10 |
| 10     | Rajshahi | BAGMARA | BRATGONPARA RPS                   | 99113071503 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/27/2020                         | 0.003         | 2.8 | 40 |
| 11     | Rajshahi | BAGMARA | BR KUTSHA                         | 91113071507 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/21/2020                         | 0.005         | 1   | 25 |
| 12     | Rajshahi | BAGMARA | Bapura                            | 118070106   | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/9/2020                          | 0.066         | 5.3 | 30 |
| 13     | Rajshahi | BAGMARA | BISHU PARA                        | 91113070606 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 6/07/20                           | 0.014         | 3.4 | 32 |
| 14     | Rajshahi | BAGMARA | BOKURI RPS                        | 99113070903 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/13/2020                         | 0.002         | 1.1 | 20 |
| 15     | Rajshahi | BAGMARA | BOJ GHAM                          | 91113071503 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/17/2020                         | 0.012         | 0.4 | 35 |
| 16     | Rajshahi | BAGMARA | CHAI PARA                         | 91113070608 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/29/2020                         | 0.074         | 2.6 | 18 |
| 17     | Rajshahi | BAGMARA | CHAKSARA NON-GOVT. PRIMARY SCHOOL | 99113070202 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/5/2020                          | 0.101         | 1.8 | 16 |
| 18     | Rajshahi | BAGMARA | CHAMPARA NON-GOVT. PRIMARY SCHOOL | 99113070201 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/20/2020                         | 0.002         | 1.2 | 20 |
| 19     | Rajshahi | BAGMARA | CHEN BHUI                         | 91113071101 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/13/2020                         | 0.004         | 0.4 | 12 |
| 20     | Rajshahi | BAGMARA | DEWULA                            | 91113070702 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/17/2020                         | 0.001         | 0.7 | 20 |
| 21     | Rajshahi | BAGMARA | DONGOPARA RPS                     | 99113070504 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/1/2020                          | 0.001         | 0.5 | 16 |
| 22     | Rajshahi | BAGMARA | GOLE SPAK                         | 91113070204 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/27/2020                         | 0.001         | 0.2 | 20 |
| 23     | Rajshahi | BAGMARA | HATIRUM GOVT. PRIMARY SCHOOL      | 99113070103 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/8/2020                          | 0.087         | 5.4 | 15 |
| 24     | Rajshahi | BAGMARA | JAMAL PUR                         | 91113071107 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/16/2020                         | 0.001         | 0.3 | 68 |
| 25     | Rajshahi | BAGMARA | KALUKA PUR                        | 91113070901 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/12/2020                         | 0.001         | 1.9 | 16 |
| 26     | Rajshahi | BAGMARA | KANO PARA                         | 91113071306 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 24/07/2020                        | 0.002         | 0.4 | 25 |
| 27     | Rajshahi | BAGMARA | KANTHAL BARI                      | 91113071003 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/29/2020                         | 0.004         | 2.3 | 50 |
| 28     | Rajshahi | BAGMARA | KASAI KOLUPARA RPS                | 99113070802 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/10/2020                         | 0.002         | 1.9 | 22 |
| 29     | Rajshahi | BAGMARA | KASIA RPS                         | 99113070806 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/11/2020                         | 0.009         | 6.5 | 10 |
| 30     | Rajshahi | BAGMARA | KASIA SADIPUR RPS                 | 99113070805 | TW-0111        | 50                     | 18/05/2020                       | Sha Almgir         | 1.66                 | 80%                   | 1.28                  | 30-11-2020                     | 7/28/2020                         | 0.003         | 0   | 20 |

Date :06/06/2021



|    |          |         |                  |             |         |    |            |             |      |     |      |            |           |       |     |    |
|----|----------|---------|------------------|-------------|---------|----|------------|-------------|------|-----|------|------------|-----------|-------|-----|----|
| 31 | Rajshahi | BAGMARA | KASTIA NANGIA    | 91113070206 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/12/2020 | 0.001 | 2.1 | 18 |
| 32 | Rajshahi | BAGMARA | KATIJA           | 91113071506 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/11/2020 | 0.001 | 0.7 | 15 |
| 33 | Rajshahi | BAGMARA | KHALIMPUR RPS    | 99113071112 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/25/2020 | 0.017 | 0.1 | 10 |
| 34 | Rajshahi | BAGMARA | KHAPUR RPS       | 99113071403 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/17/2020 | 0.002 | 4.5 | 10 |
| 35 | Rajshahi | BAGMARA | KHAYERA          | 91113070707 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/5/2020  | 0.001 | 0.1 | 22 |
| 36 | Rajshahi | BAGMARA | KHONARA RPS      | 99113070110 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/27/2020 | 0.021 | 1.1 | 30 |
| 37 | Rajshahi | BAGMARA | KONABARA (S) RPS | 99113071404 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/24/2020 | 0.012 | 2   | 15 |
| 38 | Rajshahi | BAGMARA | KULU BARI        | 91113070402 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/29/2020 | 0.003 | 2.6 | 45 |
| 39 | Rajshahi | BAGMARA | LARIJARA RPS     | 99113079005 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/22/2020 | 0.016 | 3.2 | 35 |
| 40 | Rajshahi | BAGMARA | MENDI PARA       | 91113070605 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/19/2022 | 0.004 | 0.1 | 12 |
| 41 | Rajshahi | BAGMARA | MOHAMMAD PUR     | 91113070708 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/15/2020 | 0.002 | 2.6 | 30 |
| 42 | Rajshahi | BAGMARA | MADPARA          | 91113071581 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/27/2020 | 0.001 | 0.8 | 40 |
| 43 | Rajshahi | BAGMARA | NAZIRPUR RPS     | 99113070801 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/5/2020  | 0.042 | 0.6 | 15 |
| 44 | Rajshahi | BAGMARA | NECHUKATULIA RPS | 99113071506 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/5/2020  | 0.005 | 0.7 | 22 |
| 45 | Rajshahi | BAGMARA | NOHRO PARA       | 91113071505 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/16/2020 | 0.008 | 0.6 | 50 |
| 46 | Rajshahi | BAGMARA | NORDASH          | 91113070201 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/29/2020 | 0.099 | 2.2 | 16 |
| 47 | Rajshahi | BAGMARA | RAM BAMA         | 91113071304 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/9/2020  | 0.001 | 0.4 | 16 |
| 48 | Rajshahi | BAGMARA | SENCPARA RPS     | 99113079006 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/18/2020 | 0.002 | 0.4 | 25 |
| 49 | Rajshahi | BAGMARA | RAMON KHOLA      | 91113071005 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/9/2020  | 0.008 | 1.2 | 25 |
| 50 | Rajshahi | BAGMARA | BOISHINDO        | 91113071001 | TW-0111 | 50 | 18/05/2020 | Shu Alangir | 1.66 | 80% | 1.28 | 30-11-2020 | 7/18/2020 | 0.002 | 1.1 | 20 |



| Sl. No | District | Upazila | Name of School                      | EMIS CODE   | Package Number | No of Type In a Package | Date of contract sign (dd/mm/Yy) | Name of contractor | Contract amount (Lak) | Physical Progress (%) | Bill Paid Amount (Lak) | Completion Due Date (dd/mm/Yy) | Water Quality |     |    |
|--------|----------|---------|-------------------------------------|-------------|----------------|-------------------------|----------------------------------|--------------------|-----------------------|-----------------------|------------------------|--------------------------------|---------------|-----|----|
|        |          |         |                                     |             |                |                         |                                  |                    |                       |                       |                        |                                | AS            | Fe  | Cl |
| 1      | Rajshahi | Bagha   | Bajubagha Govt primary School       | 91113080504 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.004         | 0.1 | 20 |
| 2      | Rajshahi | Bagha   | BEL GAC/CH DHAKA CHANROD            | 91113080505 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.006         | 0.1 | 15 |
| 3      | Rajshahi | Bagha   | Chandipur Govt Primary School       | 91113080506 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.005         | 0.1 | 12 |
| 4      | Rajshahi | Bagha   | Bagha Model Govt Primary School     | 91113080513 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.002         | 0.1 | 40 |
| 5      | Rajshahi | Bagha   | Jotezagrob Alauddin                 | 91113080507 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.013         | 3.3 | 15 |
| 6      | Rajshahi | Bagha   | Bug Shasta Govt Primary School      | 91113080508 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.001         | 0.1 | 12 |
| 7      | Rajshahi | Bagha   | Saton Govt Primary School           | 91113080503 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.003         | 0.1 | 10 |
| 8      | Rajshahi | Bagha   | Balhar Govt Primary School          | 91113080506 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.004         | 0.1 | 15 |
| 9      | Rajshahi | Bagha   | Bana Khasia RPS                     | 99113080102 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.002         | 0.1 | 10 |
| 10     | Rajshahi | Bagha   | Navetka Govt Primary School         | 99113080103 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.001         | 0.2 | 15 |
| 11     | Rajshahi | Bagha   | Hazra Sha Akbar Govt Primary School | 99113080107 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.018         | 0.1 | 15 |
| 12     | Rajshahi | Bagha   | Tegurburja RPS                      | 99113080903 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.045         | 5   | 15 |
| 13     | Rajshahi | Bagha   | Dudpur Govt Primary School          | 91113080201 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.003         | 0.1 | 10 |
| 14     | Rajshahi | Bagha   | Chandipur RPS                       | 91113080202 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.004         | 1.4 | 20 |
| 15     | Rajshahi | Bagha   | Soltanpur RPS                       | 99113080204 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.001         | 0.1 | 17 |
| 16     | Rajshahi | Bagha   | Chak Enker GFS                      | 99113080205 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.041         | 1.2 | 16 |
| 17     | Rajshahi | Bagha   | Kharabot RPS                        | 99113080201 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.021         | 1.9 | 40 |
| 18     | Rajshahi | Bagha   | Alapur RPS                          | 99113080302 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.003         | 0.1 | 15 |
| 19     | Rajshahi | Bagha   | Jomashi RPS                         | 91113080304 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.005         | 0.2 | 15 |
| 20     | Rajshahi | Bagha   | Keshobpur Govt Primary School       | 91113080307 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.018         | 0.1 | 50 |
| 21     | Rajshahi | Bagha   | Haldipur RPS                        | 99113080401 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.002         | 0.1 | 22 |
| 22     | Rajshahi | Bagha   | Mahodipur RPS                       | 99113080402 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.002         | 0.1 | 20 |
| 23     | Rajshahi | Bagha   | Hatranpur GFS                       | 91113080602 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.019         | 0.4 | 20 |
| 24     | Rajshahi | Bagha   | Borodpur GFS                        | 91113080603 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.018         | 0.4 | 30 |
| 25     | Rajshahi | Bagha   | Halsahpur GFS                       | 91113080604 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.004         | 0.1 | 30 |
| 26     | Rajshahi | Bagha   | Aghor GFS                           | 91113080607 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.013         | 0.1 | 35 |
| 27     | Rajshahi | Bagha   | Moolgram GFS                        | 91113080605 | TW-0110        | 50                      | 17/05/2020                       | Sha Alamgir        | 166                   | 80%                   | 116                    | 30-11-2020                     | 0.002         | 0.1 | 27 |

Date :06/06/2021



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

| SL No | District Name | Upazila Name | Name Of School        | School ID   | Test Result |      |     | Remark         | Suggested Option | After intervention |      |      |
|-------|---------------|--------------|-----------------------|-------------|-------------|------|-----|----------------|------------------|--------------------|------|------|
|       |               |              |                       |             | As          | Fe   | Cl  |                |                  | As                 | Fe   | Cl   |
| 1     | Gaibandha     | Sundarganj   | Nesamot Dhondanga GPS | 108071307   | 0.063       | 6.8  | 26  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 2     | Gaibandha     | Sundarganj   | Boljan GPS            | 91108070207 | 0.053       | 12   | 30  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 3     | Gaibandha     | Sundarganj   | Chondipur GPS         | 91108070101 | 0.062       | 13   | 24  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 4     | Gaibandha     | Sundarganj   | Lal Camar GPS         | 10807140201 | 0.05        | 36   | 8.5 | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 5     | Gaibandha     | Saghata      | Gotia GPS             | 91108060204 | 0.057       | 8.1  | 32  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 6     | Gaibandha     | Polashbari   | Melendoho GPS         | 108030701   | 0.055       | 6.5  | 28  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 7     | Gaibandha     | Polashbari   | Horinabari Ino GPS    | 108030906   | 0.069       | 0    | 30  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 8     | Gaibandha     | Polashbari   | Satarpara GPS         | 91108030609 | 0.060       | 0.04 | 24  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 9     | Gaibandha     | Gobindaganj  | Maladhori GPS         | 91108021103 | 0.052       | 4.5  | 28  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 10    | Gaibandha     | Gobindaganj  | Shakpala GPS          | 91108021102 | 0.224       | 8.4  | 26  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 11    | Gaibandha     | Gobindaganj  | Polashbari GPS        | 108021006   | 0.057       | 2.9  | 30  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 12    | Gaibandha     | Gobindaganj  | Khiriabari GPS        | 108021502   | 0.061       | 0.9  | 32  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 13    | Gaibandha     | Gobindaganj  | Uttar Popgoil GPS     | 108020806   | 0.295       | 4.2  | 34  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 14    | Gaibandha     | Gobindaganj  | Bordhonkuthi GPS      | 108021104   | 0.066       | 1.3  | 30  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 15    | Gaibandha     | Gobindaganj  | Shalmara GPS          | 91108021702 | 0.074       | 0.8  | 28  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 16    | Gaibandha     | Gobindaganj  | Taluk Kanupur         | 91108020701 | 0.234       | 2.1  | 32  | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 17    | Cumilla       | Devidwar     | Sultanpur GPS         | 406031405   | 0.003       | 34.6 | 665 | not acceptable | RO Filter        | <0.001             | 4.20 | <LOQ |
| 18    | Cumilla       | Debidwar     | Goneshpur             | 406039202   | 0.003       | 19.1 | 665 | not acceptable | RO Filter        | <0.001             | 3.20 | <LOQ |
| 19    | Rangpur       | Mithapukur   | Imadpur Taltola GPS   | 99105071707 | 0           | 6.5  | 0   | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |
| 20    | Rangpur       | Mithapukur   | Jogoda Nandapur GPS   | 99705079013 | 0           | 6.0  | 0   | not acceptable | AIRP             | <0.001             | <LOQ | <LOQ |



| SL No | District Name | Upazila Name | Name Of School            | School ID   | Test Result |      |    | Remark         | Suggested Option | After intervention |      |      |
|-------|---------------|--------------|---------------------------|-------------|-------------|------|----|----------------|------------------|--------------------|------|------|
|       |               |              |                           |             | As          | Fe   | Cl |                |                  | As                 | Fe   | Cl   |
| 21    | Rajshahi      | Bagmar       | Jiapara GPS               | 113070106   | 0.066       | 5.3  | 30 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 22    | Rajshahi      | Bagmar       | Chai Para GPS             | 91113070608 | 0.074       | 2.6  | 18 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 23    | Rajshahi      | Bagmar       | Chanpara Non-Govt Primary | 99113079202 | 0.101       | 1.8  | 16 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 24    | Rajshahi      | Bagmar       | Hatrum GPS                | 99113070103 | 0.087       | 5.4  | 15 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 25    | Rajshahi      | Bagmar       | Nordash GPS               | 91113070201 | 0.099       | 2.2  | 16 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 26    | Rajshahi      | Bagha        | Tapurkuria GPS            | 99103089003 | 0.045       | 5    | 15 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 27    | Rajshahi      | Bagha        | Berarbari GPS             | 99113080602 | 0.065       | 0.1  | 17 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 28    | Rajshahi      | Bagha        | Boalia GPS                | 91113070104 | 0.99        | 7.77 | 12 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |
| 29    | Rajshahi      | Bagha        | Saljur GPS                | 91113070803 | 0.061       | 0.1  | 15 | not acceptable | RO Filter        | <0.001             | <LOQ | <LOQ |