

Initial Environmental Examination

Updated 2

Project Number: 49107- 006

October 2020

**IND: West Bengal Drinking Water Sector
Improvement Project – Water Distribution
Systems for Bhangar II Block, South 24
Parganas (OHR Zones: 4,10,12 13 and 15
Pipe line Zones: 1, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15,16 and 17)**

(Package No: WBDWSIP/DWW/N24P/02B)

CURRENCY EQUIVALENTS

(as of 11 July 2018)

Currency Unit	–	Indian rupee (₹)
₹1.00	–	\$0.014
\$1.00	=	₹68.691

ABBREVIATIONS

ADB	–	Asian Development Bank
DSISC	–	design, supervision and institutional support consultant
EAC	–	expert appraisal committee
EHS	–	environmental health and safety
EIA	–	environmental impact assessment
EMP	–	environmental management plan
GESI	–	gender equality and social inclusion
GRM	–	grievance redress mechanism
GOWB	–	Government of West Bengal
HSGO	–	head, safeguards and gender officer
IEE	–	initial environmental examination
O&M	–	operation and maintenance
OHS	–	occupational health and safety
OHR	–	overhead reservoir
MOEFCC	–	Ministry of Environment, Forest and Climate Change
WBPCB	–	West Bengal Pollution Control Board
NOC	–	No Objection Certificate
PHED	–	Public Health Engineering Department
PIU	–	project implementation unit
PMC	–	Project Management Consultant
PMU	–	Project management unit
PPTA	–	Project preparatory technical assistance
REA	–	Rapid environmental assessment
ROW	–	right-of-way
SEMP	–	site environmental management plan
SGC	–	safeguards and gender cell
SPS	–	Safeguard Policy Statement
WHO	–	World Health Organization
WBDWSIP	–	West Bengal Drinking Water Sector Improvement Project

WEIGHTS AND MEASURES

dia	diameter
C	degree Celsius
g/km	gram per kilometer
g/kmhr	gram per kilometer per hour
kl	kiloliter
km	kilometer
kph	kilometer per hour
lpcd	liter per capita per day
msl	mean sea level
m	meter
mbgl	meter below ground level
$\mu\text{g}/\text{m}^3$	microgram per cubic meter
mg/l	milligrams per liter
mm	millimeter
ppb	parts per billion
ppm	parts per million
km^2	square kilometer

NOTE

In this report, "\$" refers to United States dollars.

Initial Environment Examination covers

OHR Zones: 4,10,12 13 and 15

Pipe line Zones: 1, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15,16 and 17

This initial environmental examination is a document of the borrower and has been updated by including the zones where construction has commenced by 31st August 2020 in the Bhangar-II Block of South 24-Parganas. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

41	No noisy work is conducted in the nights	No might
42	Local people informed of noisy work	No
43	No blasting activity conducted	NA
44	Pneumatic drills or other equipment creating vibration is not used near old/risky building	No
45	Final activity till date on site	No
46	Waste water discharge from site	NA
48	Tree cutting/Trimming	No
49	Solid waste disposal from site under norms	Yes
50		

Note, if any,

- *1. PPE is to be used every time, during construction & drilling operations also PFB should be wear used.
- *2. Safe drinking water is available but not tested. Deep tubewell is used for water. (single pit latrine)
- *3. Very poor sanitation facility. Toilets should be replaced by Bio-Toilet.
- *4. Lack of first-aid information. COVID-19 notice only is not enough. Toolbox talk must be organised.
- *5. Zeme indication should be given properly in Warning Board.

Name _____
Position SAFETY OFFICER

Name Loithwish Kumar Saha.
Position DSISC-Environmental Safeguard

ENVIRONMENTAL SITE INSPECTION REPORT

Project Name: WBOV/SIP
 Contract Number: WBOV/SIP/DWW/INCB/N24P/01 /2017-18

Block: B Morgan DATE: 21/01/20
 Zone: 13 (P&Q)

WEATHER: Clear - Sunny

Project Activity Stage	Survey	
	Design	
	Implementation	✓
	Pre-Commissioning	
	Guarantee Period	

Sr. No.	Monitoring Items	
	Compliance marked as Yes/No/Not Applicable(NA)/Partially Implemented (PI)	
1.	Environment, Health and Safety supervisor appointed by Contractor and available on site	Yes
2.	Construction site management plan (soils, safety, schedule, equipment etc.) prepared	Yes
3.	Traffic Management Plan Prepared	NA
4.	Dust is under control	PI
5.	Excavated soil properly stored within minimum space	PI
6.	Construction area is confined, no traffic/pedestrian entry observed	PI
7.	Surplus soil/debris/waste is disposed without delay	PI
8.	Construction material (sand/gravel/aggregate) brought to site as and when required only	PI
9.	Tarpaulins used to cover sand and other loose material when transported by vehicles	PI
10.	After unloading, wheels and undercarriage of vehicles cleaned prior to leaving the site	PI
11.	No AC pipes disturbed/removed during excavation	NA
12.	No chance finds encountered during excavation	NA
13.	Work is planned in consultation with traffic police	NA
14.	Work is not being conducted during heavy traffic	NA
15.	Work in a stretch is completed within a day (excavation pipe laying and backfilling)	NA
16.	Pipe trenches are not kept open unduly	NA
17.	Road is not completely closed, work is conducted on edge, at least one lane is kept open	NA
18.	Road is closed, alternative route provided and public informed, information board provided	NA
19.	Pedestrian access to facilities not blocked due to pipe laying	NA
20.	Spaces left in between trenches for access	NA
21.	Wooden planks/metal sheets provided across trench for pedestrian	PI
22.	No public/unauthorized entry observed in work site	Yes
23.	Children safety measures (barricades security) in place at works in residential areas	NA
24.	Prior public information provided about the work, schedule and disturbances	PI
25.	Caution/warning board provided on site	NA
26.	Guards with red flag provided during work at busy roads	NA
27.	Workers using appropriate PPE (boots, gloves, helmets, ear muffs etc.)	NA
28.	Workers conducting or near heavy noise work is provided with ear muffs	NA
29.	Contractor is following standard and safe construction practices	NA
30.	Deep excavation is conducted with lead slip/protection measures	NA
31.	First aid facilities are available on site and workers informed	NA
32.	Drinking water provided at the site	PI
33.	Toilet facility provided at the site	PI
34.	Separate toilet facility is provided for women workers	NA

35	Workers camps are are maintain cleanly	PI
36	Adequate toilet and bath facilities provided	PI
37	Contractor employed local workers as far as possible	PI/SC/1
38	Workers camp set up with the permission of PIU	PI
39	Adequate housing provided	PI
40	Sufficient water provided for drinking/washing/bath	PI
41	No noisy work is conducted in the nights	N/A
42	Local people informed of noisy work	N/A
43	No blasting activity conducted	N/A
44	Pneumatic drills or other equipment creating vibration is not used near old/old building	N/A
45	Funeral activity still date on site	N/A
46	Waste water discharge from site	Yes
48	Tree cutting/trimming	N/A
49	Solid waste disposal from site under norms (Stored at site)	PI
50		
Signature <i>by Mafizul Rahman</i>		
Sign off		
<i>by Mafizul Rahman</i>		
Name	<i>by Mafizul Rahman</i>	Name Rohan Kumar
Position	<i>sub-contractor</i>	Position Environmental Safeguard

- No Safety jacket, shoes, helmet seen, during visit.
- JCB papers not present on site.
- Caution tape missing around pile capping process.
- House keeping found very bad around site and labour camp + need to improve.

Noted
Ranabhai

APPENDIX 19: SAMPLE SEMI-ANNUAL ENVIRONMENTAL MONITORING REPORT TEMPLATE

1. Introduction

- Overall project description and objectives
- Environmental category as per ADB Safeguard Policy Statement, 2009
- Environmental category of each subproject as per national laws and regulations
- Project Safeguards Team

Name	Designation/Office	Email Address	Contact Number
1. PMU			
2. PIUs			
3. Consultants			

- Overall project and sub-project progress and status
- Description of subprojects (package-wise) and status of implementation (preliminary, detailed design, on-going construction, completed, and/or O&M stage)

Package Number	Components/ List of Works	Status of Implementation (Preliminary Design/Detailed Design/On-going Construction/Completed/O&M) ^a	Contract Status (specify if under bidding or contract awarded)	If On-going Construction	
				%Physical Progress	Expected Completion Date

^a If on-going construction, include %physical progress and expected date of completion.

2. Compliance Status with National/State/Local Statutory Environmental Requirements

Package No.	Subproject Name	Statutory Environmental Requirements ^b	Status of Compliance ^c	Validity if obtained	Action Required	Specific Conditions that will require environmental monitoring as per Environment Clearance, Consent/Permit to Establish ^d

- With reference to approved EMP/site-specific EMP/construction EMP, complete the table below
- Provide the monitoring results as per the parameters outlined in the approved EMP (or site-specific EMP/construction EMP when applicable).
- In addition to the table on EMP implementation, the main text of the report should discuss in details the following items:
 - (i) **Grievance Redress Mechanism.** Provide information on establishment of grievance redress mechanism and capacity of grievance redress committee to address project-related issues/complaints. Include as appendix Notification of the GRM (town-wise if applicable).
 - (ii) **Complaints Received during the Reporting Period.** Provide information on number, nature, and resolution of complaints received during reporting period. Attach records as per GRM in the approved IEE. Identify safeguards team member/s involved in the GRM process. Attach minutes of meetings (ensure English translation is provided).
 - Confirm if any dust was noted to escape the site boundaries and identify dust suppression techniques followed for site/s.
 - Identify muddy water was escaping site boundaries or muddy tracks were seen on adjacent roads.
 - Identify type of erosion and sediment control measures installed on site/s, condition of erosion and sediment control measures including if these were intact following heavy rain;
 - Identify designated areas for concrete works, chemical storage, construction materials, and refueling. Attach photographs of each area.
 - Confirm spill kits on site and site procedure for handling emergencies.
 - Identify any chemical stored on site and provide information on storage condition. Attach photograph.
 - Describe management of stockpiles (construction materials, excavated soils, spoils, etc.). Provide photographs.
 - Describe management of solid and liquid wastes on-site (quantity generated, transport, storage and disposal). Provide photographs.
 - Provide information on barricades, signages, and on-site boards. Provide photographs.
 - Provide information on Checking if there are any activities being under taken out of working hours and how that is being managed.

Summary of Environmental Monitoring Activities (for the Reporting Period)

Impacts (List from IEE)	Mitigation Measures (List from IEE)	Parameters Monitored (As a minimum those identified in the IEE should be monitored)	Method of Monitoring	Location of Monitoring	Date of Monitoring Conducted	Name of Person Who Conducted the Monitoring
Design Phase						
Pre-Construction Phase						
Construction Phase						
Operational Phase						

^a Attach Laboratory Results and Sampling Map/Locations

Overall Compliance with CEMP/ EMP

No.	Sub-Project Name	EMP/ CEMP Part of Contract Documents (Y/N)	CEMP/ EMP Being Implemented (Y/N)	Status of Implementation (Excellent/Satisfactory/ Partially Satisfactory/ Below Satisfactory)	Action Proposed and Additional Measures Required

5. Approach and Methodology for Environmental Monitoring of the Project

- Brief description on the approach and methodology used for environmental monitoring of each sub-project

6. Monitoring of Environmental Impacts on Project Surroundings (Ambient Air, Water Quality and Noise Levels)

- Brief discussion on the basis for monitoring
- Indicate type and location of environmental parameters to be monitored
- Indicate the method of monitoring and equipment to be used
- Provide monitoring results and an analysis of results in relation to baseline data and statutory requirements

As a minimum the results should be presented as per the tables below.

Air Quality Results

Site No.	Date of Testing	Site Location	Parameters (Government Standards)		
			PM10 µg/m3	SO2 µg/m3	NO2 µg/m3

Site No.	Date of Testing	Site Location	Parameters (Monitoring Results)		
			PM10 µg/m3	SO2 µg/m3	NO2 µg/m3

Water Quality Results

Site No.	Date of Sampling	Site Location	Parameters (Government Standards)					
			pH	Conductivity µS/cm	BOD mg/L	TSS mg/L	TN mg/L	TP mg/L

Site No.	Date of Sampling	Site Location	Parameters (Monitoring Results)					
			pH	Conductivity µS/cm	BOD mg/L	TSS mg/L	TN mg/L	TP mg/L

Noise Quality Results

Site No.	Date of Testing	Site Location	LA _{eq} (dBA) (Government Standard)	
			Day Time	Night Time

Site No.	Date of Testing	Site Location	LA _{eq} (dBA) (Monitoring Results)	
			Day Time	Night Time

7. Summary of Key Issues and Remedial Actions

- Summary of follow up time-bound actions to be taken within a set timeframe.

8. Appendixes

- Photos
- Summary of consultations
- Copies of environmental clearances and permits
- Sample of environmental site inspection report
- Other

APPENDIX 20: SAMPLE CHANCE FIND PROTOCOL

Introduction

Project town being a heritage town, there are possibility of any chance finds (artefacts) recovery during excavations. Contractors working at heritage towns must take additional care not to destroy or damage historic features during excavations. There may be many buried historic features in heritage towns such as – idols, toys, wells, ancient drains, remains of buildings, other walls, grain pits, etc. Every care must be made not to destroy these during excavations.

Excavator drivers need to be instructed to be aware of hitting buried features and that they must be investigated before continuing work. When features are encountered during mechanical excavation, work should stop and the PIU/Consultants engineers must be informed immediately so that they can be inspected at the first opportunity.

When historic features such as walls, brick constructions and other features are encountered during excavation the excavation must be stopped immediately and the PIU/Consultants must be informed immediately.

- 1.1 **Contractors' instruction:** As soon as contractor recovers any chance find during any excavation works for pipe laying, they should immediately inform PIU/Consultant present in town about the chance find recovery. Immediately stop the excavation activity near point of recovery. After PIU/consultants engineers come at site, contractor should follow cleaning and photography in supervision of PIU/Consultant engineers.
- 1.2 **Cleaning** - When a feature/chance find is discovered it must be defined by careful cleaning. Roots must be removed and dirt must be carefully cleaned away. The section or trench base should also be cleaned back for a little distance around the feature.
- 1.3 **Record photography** – When the feature is clean good photography should be taken – vertical and face-on shots and a few general shots of the feature, also showing its position in relation to surrounding features, buildings, etc. The photographed should be catalogued (date, location, direction of shot)
- 1.4 **Drawn record** - When features/chance finds are revealed a drawn record should also be made.
 - a. General location record – measuring its position and orientation within the protected site / in relation to surrounding structures
 - b. Record drawings – detail drawings made in plan and section/profile. The extent (edges) of the feature should be drawn and the level of the existing ground surface and the top and base of the feature should be recorded. These levels should be marked on the drawings. The drawings should include detail of the construction of the feature. Perspective sketches could also be made if necessary. Explanatory notes can also be put on the drawings.
- 1.5 **Reporting finds** - When finds are made these should be reported to PIU/Consultants. Photographs and record drawings should be sent.
- 1.6 **Discovery of historic objects** - When clearance and excavation takes place artifacts and historic objects are sometimes found. These should be recovered and kept in a safe place. The place of discovery should be recorded and each find given a number and tag tied to the find with the same number on it. A list of the finds should be kept (with the find No. And place of discovery and date of discovery recorded).
- 1.7 **PIU/Consultants responsibility-** PIU/Consultants should inform in written to the State Archaeological Department at the earliest with photographs and request to Archaeology Department to visit the site and hand over the chance finds to them.

APPENDIX 21: WHO INTERIM GUIDANCE ON WATER, SANITATION, HYGIENE AND WASTE MANAGEMENT FOR THE COVID-19 VIRUS



Water, sanitation, hygiene, and waste management for the COVID-19 virus

Interim guidance
19 March 2020

Background

This interim guidance supplements the infection prevention and control (IPC) documents by summarizing WHO guidance on water, sanitation and health care waste relevant to viruses, including coronaviruses. It is intended for water and sanitation practitioners and providers and health care providers who want to know more about water, sanitation and hygiene (WASH) risks and practices.

The provision of safe water, sanitation, and hygienic conditions is essential to protecting human health during all infectious disease outbreaks, including the COVID-19 outbreak. Ensuring good and consistently applied WASH and waste management practices in communities, homes, schools, marketplaces, and health care facilities will help prevent human-to-human transmission of the COVID-19 virus.

The most important information concerning WASH and the COVID-19 virus is summarized here:

- Frequent and proper hand hygiene is one of the most important measures that can be used to prevent infection with the COVID-19 virus. WASH practitioners should work to enable more frequent and regular hand hygiene by improving facilities and using proven behavior-change techniques.
- WHO guidance on the safe management of drinking-water and sanitation services applies to the COVID-19 outbreak. Extra measures are not needed. Disinfection will facilitate more rapid die-off of the COVID-19 virus.
- Many co-benefits will be realized by safely managing water and sanitation services and applying good hygiene practices.

Currently, there is no evidence about the survival of the COVID-19 virus in drinking-water or sewage. The morphology and chemical structure of the COVID-19 virus are similar to those of other human coronaviruses for which there are data about both survival in the environment and effective inactivation measures. This document draws upon the evidence base and WHO guidance on how to protect against viruses in sewage and drinking-water. This document will be updated as new information becomes available.

1. COVID-19 transmission

There are two main routes of transmission of the COVID-19 virus: respiratory and contact. Respiratory droplets are generated when an infected person coughs or sneezes. Any person who is in close contact with someone who has respiratory symptoms (sneezing, coughing) is at risk of being exposed to potentially infective respiratory droplets.¹ Droplets may also land on surfaces where the virus could remain viable; thus, the immediate environment of an infected individual can serve as a source of transmission (contact transmission).

Approximately 2–10% of cases of confirmed COVID-19 disease present with diarrhoea,^{2,4} and two studies detected COVID-19 viral RNA fragments in the faecal matter of COVID-19 patients.^{5,6} However, only one study has cultured the COVID-19 virus from a single stool specimen.⁶ There have been no reports of faecal–oral transmission of the COVID-19 virus.

2. Persistence of the COVID-19 virus in drinking-water, faeces and sewage and on surfaces.

Although persistence in drinking-water is possible, there is no evidence from surrogate human coronaviruses that they are present in surface or groundwater sources or transmitted through contaminated drinking water. The COVID-19 virus is an enveloped virus, with a fragile outer membrane. Generally, enveloped viruses are less stable in the environment and are more susceptible to oxidants, such as chlorine. While there is no evidence to date about survival of the COVID-19 virus in water or sewage, the virus is likely to become inactivated significantly faster than non-enveloped human enteric viruses with known waterborne transmission (such as adenoviruses, norovirus, rotavirus and hepatitis A). For example, one study found that a surrogate human coronavirus survived only 2 days in dechlorinated tap water and in hospital wastewater at 20°C.⁸ Other studies concur, noting that the human coronavirus immunisable gastroenteritis coronavirus and mouse hepatitis virus demonstrated a 99.9% die-off in from 2 days⁹ at 23°C to 2 weeks¹⁰ at 25°C. Heat, high or low pH, sunlight, and common disinfectants (such as chlorine) all facilitate die off.

It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems likely to behave like other coronaviruses. A recent review of the survival of human

coronaviruses on surfaces found large variability, ranging from 2 hours to 9 days.¹¹ The survival time depends on a number of factors, including the type of surface, temperature, relative humidity, and specific strain of the virus. The same review also found that effective inactivation could be achieved within 1 minute using common disinfectants, such as 70% ethanol or sodium hypochlorite (for details, see Cleaning practices).

3. Keeping water supplies safe

The COVID-19 virus has not been detected in drinking-water supplies, and based on current evidence, the risk to water supplies is low.¹² Laboratory studies of surrogate coronaviruses that took place in well-controlled environments indicated that the virus could remain infectious in water contaminated with faeces for days to weeks.¹³ A number of measures can be taken to improve water safety, starting with protecting the source water, treating water at the point of distribution, collection, or consumption, and ensuring that treated water is safely stored at home in regularly cleaned and covered containers.

Conventional, centralized water treatment methods that use filtration and disinfection should inactivate the COVID-19 virus. Other human coronaviruses have been shown to be sensitive to chlorination and disinfection with ultraviolet (UV) light.¹⁴ As enveloped viruses are surrounded by a lipid host cell membrane, which is not robust, the COVID-19 virus is likely to be more sensitive to chlorine and other oxidant disinfection processes than many other viruses, such as coxsackieviruses, which have a protein coat. For effective centralized disinfection, there should be a residual concentration of free chlorine of ≥ 0.5 mg/L, after at least 30 minutes of contact time at pH ≤ 8 .¹⁵ A chlorine residual should be maintained throughout the distribution system.

In places where centralized water treatment and safe piped water supplies are not available, a number of household water treatment technologies are effective in removing or destroying viruses, including boiling or using high-performing ultrafiltration or nanomembrane filters, solar irradiation and, in non-turbid waters, UV irradiation and appropriately dosed free chlorine.

4. Safely managing wastewater and faecal waste

There is no evidence that the COVID-19 virus has been transmitted via sewerage systems with or without wastewater treatment. Further, there is no evidence that sewage or wastewater treatment workers contracted the severe acute respiratory syndrome (SARS), which is caused by another type of coronavirus that caused a large outbreak of acute respiratory illness in 2003. As part of an integrated public health policy, wastewater carried in sewerage systems should be treated in well-designed and well-managed centralized wastewater treatment works. Each stage of treatment (as well as retention time and dilution) results in a further reduction of the potential risk. A waste stabilization pond (an oxidation pond or lagoon) is generally considered a practical and simple wastewater treatment technology particularly well suited to destroying pathogens, as relatively long retention times (20 days or longer) combined with sunlight, elevated pH levels, biological activity, and other factors serve to accelerate pathogen destruction. A final disinfection step may be considered if existing wastewater treatment plants are not optimized to remove viruses. Best practices for protecting the health of workers at sanitation treatment facilities should

be followed. Workers should wear appropriate personal protective equipment (PPE), which includes protective outerwear, gloves, boots, goggles or a face shield, and a mask; they should perform hand hygiene frequently, and they should avoid touching eyes, nose, and mouth with unwashed hands.

WASH in health care settings

Existing recommendations for water, sanitation and hygiene measures in health care settings are important for providing adequate care for patients and protecting patients, staff, and caregivers from infection risks.¹⁶ The following actions are particularly important: (i) managing excreta (faeces and urine) safely, including ensuring that no one comes into contact with it and that it is treated and disposed of correctly; (ii) engaging in frequent hand hygiene using appropriate techniques; (iii) implementing regular cleaning and disinfection practices; and (iv) safely managing health care waste. Other important measures include providing sufficient safe drinking-water to staff, caregivers, and patients; ensuring that personal hygiene can be maintained, including hand hygiene, for patients, staff and caregivers; regularly laundering bedsheets and patients' clothing; providing adequate and accessible toilets (including separate facilities for confirmed and suspected cases of COVID-19 infection); and segregating and safely disposing of health care waste. For details on these recommendations, please refer to Essential environmental health standards in health care.¹⁶

1. Hand hygiene practices

Hand hygiene is extremely important. Cleaning hands with soap and water or an alcohol-based hand rub should be performed according to the instructions known as "My 5 moments for hand hygiene".¹⁷ If hands are not visibly dirty, the preferred method is to perform hand hygiene with an alcohol-based hand rub for 20–30 seconds using the appropriate technique.¹⁸ When hands are visibly dirty, they should be washed with soap and water for 40–60 seconds using the appropriate technique.¹⁷ Hand hygiene should be performed at all five moments, including before putting on PPE and after removing it, when changing gloves, after any contact with a patient with suspected or confirmed COVID-19 infection or their waste, after contact with any respiratory secretions, before eating, and after using the toilet.¹⁸ If an alcohol-based hand rub and soap are not available, then using chlorinated water (0.05%) for handwashing is an option, but it is not ideal because frequent use may lead to dermatitis, which could increase the risk of infection and asthma and because prepared dilutions might be inaccurate.¹⁹ However, if other options are not available or feasible, using chlorinated water for handwashing is an option.

Functional hand hygiene facilities should be present for all health care workers at all points of care and in areas where PPE is put on or taken off. In addition, functional hand hygiene facilities should be available for all patients, family members, and visitors, and should be available within 5 m of toilets, as well as in waiting and dining rooms and other public areas.

2. Sanitation and plumbing

People with suspected or confirmed COVID-19 disease should be provided with their own flush toilet or latrine that has a door that closes to separate it from the patient's room. Flush toilets should operate properly and have functioning drain traps. When possible, the toilet should be flushed with the lid down to prevent droplet splatter and aerosol clouds. If it is not possible to provide separate toilets, the toilet should be cleaned and disinfected at least twice daily by a trained cleaner wearing PPE (gown, gloves, boots, mask, and a face shield or goggles). Further, and consistent with existing guidance, staff and health care workers should have toilet facilities that are separate from those used by all patients.

WHO recommends the use of standard, well-maintained plumbing, such as sealed bathroom drains, and backflow valves on sprayers and faucets to prevent aerosolized faecal matter from entering the plumbing or ventilation system,¹⁰ together with standard wastewater treatment.¹¹ Facility plumbing and a poorly designed air ventilation system were implicated as contributing factors to the spread of the aerosolized SARS coronavirus in a high-rise apartment building in Hong Kong in 2003.¹² Similar concerns have been raised about the spread of the COVID-19 virus from faulty toilets in high-rise apartment buildings.¹³ If health care facilities are connected to sewers, a risk assessment should be conducted to confirm that wastewater is contained within the system (that is, the system does not leak) before its arrival at a functioning treatment or disposal site, or both. Risks pertaining to the adequacy of the collection system or to treatment and disposal methods should be assessed following a safety planning approach,¹⁴ with critical control points prioritized for mitigation.

For smaller health care facilities in low-resource settings, if space and local conditions allow, pit latrines may be the preferred option. Standard precautions should be taken to prevent contamination of the environment by excreta. These precautions include ensuring that at least 1.5 m exists between the bottom of the pit and the groundwater table (more space should be allowed in coarse sands, gravels, and fissured formations) and that the latrines are located at least 30 m horizontally from any groundwater source (including both shallow wells and boreholes).¹⁵ If there is a high groundwater table or a lack of space to dig pits, excreta should be retained in impermeable storage containers and left for as long as feasible to allow for a reduction in virus levels before moving it off-site for additional treatment or safe disposal, or both. A two-tank system with parallel tanks would help facilitate inactivation by maximizing retention times, as one tank could be used until full, then allowed to sit while the next tank is being filled. Particular care should be taken to avoid splashing and the release of droplets while cleaning or emptying tanks.

3. Toilets and the handling of faeces

It is critical to control hand hygiene when there is suspected or direct contact with faeces (if hands are dirty, then soap and water are preferred to the use of an alcohol-based hand rub). If the patient is unable to use a latrine, excreta should be collected in either a diaper or a clean bedpan and immediately and carefully disposed of into a separate toilet or latrine used only by suspected or confirmed cases of COVID-19. In all health care settings, including those with suspected or confirmed COVID-19 cases, faeces must be treated as a biohazard and handled as little as possible. Zeyone handling,

faeces should follow WHO contact and droplet precautions,¹⁶ and use PPE to prevent exposure, including long-sleeved gowns, gloves, boots, masks, and goggles or a face shield. If diapers are used, they should be disposed of as infectious waste as they would be in all situations. Workers should be properly trained in how to put on, use, and remove PPE so that these protective barriers are not breached.¹⁷ If PPE is not available or the supply is limited, hand hygiene should be regularly practiced, and workers should keep at least 1 m distance from any suspected or confirmed cases.

If a bedpan is used, after disposing of excreta from it, the bedpan should be cleaned with a neutral detergent and water, disinfected with a 0.5% chlorine solution, and then rinsed with clean water; the rinse water should be disposed of in a drain or a toilet or latrine. Other effective disinfectants include commercially available quaternary ammonium compounds, such as cetylpyridinium chloride, used according to manufacturer's instructions, and peracetic or peroxyacetic acid at concentrations of 500–2000 mg/L.¹⁸

Chlorine is ineffective for disinfecting media containing large amounts of solid and dissolved organic matter. Therefore, there is limited benefit to adding chlorine solution to fresh excreta and it is possible that this may introduce risks associated with splashing.

4. Emptying latrines and holding tanks, and transporting excreta off-site

There is no reason to empty latrines and holding tanks of excreta from suspected or confirmed COVID-19 cases unless they are at capacity. In general, the best practices for safely managing excreta should be followed. Latrines or holding tanks should be designed to meet patient demand, considering potential sudden increases in cases, and there should be a regular schedule for emptying them based on the wastewater volumes generated. PPE (long-sleeved gown, gloves, boots, masks, and goggles or a face shield) should be worn at all times when handling or transporting excreta off-site, and great care should be taken to avoid splashing. For crews, this includes pumping out tanks or unloading pump-out trucks. After handling the waste and once there is no risk of further exposure, individuals should safely remove their PPE and perform hand hygiene before entering the transport vehicle. Soiled PPE should be put in a sealed bag for later safe laundering (see Cleaning practices). Where there is no off-site treatment, on-site treatment can be done using lime. Such treatment involves using a 10% lime slurry added at 1-part lime slurry per 10 parts of waste.

5. Cleaning practices

Recommended cleaning and disinfection procedures for health care facilities should be followed consistently and correctly.¹⁹ Laundry should be done and surfaces in all environments in which COVID-19 patients receive care (treatment units, community care centres) should be cleaned at least once a day and when a patient is discharged.²⁰ Many disinfectants are active against enveloped viruses, such as the COVID-19 virus, including commonly used hospital disinfectants. Currently, WHO recommends using

- 70% ethyl alcohol to disinfect small areas between uses, such as reusable dedicated equipment (for example, thermometers).
- sodium hypochlorite at 0.5% (equivalent to 5000 ppm) for disinfecting surfaces.

All individuals dealing with soiled bedding, towels, and clothes from patients with COVID-19 infection should wear appropriate PPE before touching soiled items, including heavy-duty gloves, a mask, eye protection (goggles or a face shield), a long-sleeved gown, an apron if the gown is not fluid resistant, and boots or closed shoes. They should perform hand hygiene after exposure to blood or body fluids and after removing PPE. Soiled linen should be placed in clearly labelled, leak-proof bags or containers, after carefully removing any solid excrement and putting it in a covered bucket to be disposed of in a toilet or latrine. Machine washing with warm water at 60–90°C (140–194°F) with laundry detergent is recommended. The laundry can then be dried according to routine procedures. If machine washing is not possible, linens can be soaked in hot water and soap in a large drum using a stick to stir and being careful to avoid splashing. The drum should then be emptied, and the linens soaked in 0.05% chlorine for approximately 30 minutes. Finally, the laundry should be rinsed with clean water and the linens allowed to dry fully in sunlight.

If excreta are on surfaces (such as linens or the floor), the excreta should be carefully removed with towels and immediately safely disposed of in a toilet or latrine. If the towels are single use, they should be treated as infectious waste; if they are reusable, they should be treated as soiled linens. The area should then be cleaned and disinfected (with, for example, 0.5% free chlorine solution), following published guidance on cleaning and disinfection procedures for spilled body fluids.¹⁷

6. Safely disposing of greywater or water from washing PPE, surfaces and floors.

Current WHO recommendations are to clean utility gloves or heavy-duty, reusable plastic aprons with soap and water and then decontaminate them with 0.5% sodium hypochlorite solution after each use. Single-use gloves (nitrile or latex) and gowns should be discarded after each use and not reused; hand hygiene should be performed after PPE is removed. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again. However, it is important that such water is disposed of or drains connected to a septic system or sewer or in a soakaway pit. If greywater is disposed of in a soakaway pit, the pit should be fenced off within the health facility grounds to prevent tampering and to avoid possible exposure in the case of overflow.

7. Safe management of health care waste

Best practices for safely managing health care waste should be followed, including assigning responsibility and sufficient human and material resources to dispose of such waste safely. There is no evidence that direct, unprotected human contact during the handling of health care waste has resulted in the transmission of the COVID-19 virus. All health care waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated, and then safely disposed of or treated, or both, preferably on-site. If waste is moved off-site, it is critical to understand where and how it will be treated and destroyed. All who handle health care waste should wear appropriate PPE (boots, apron, long-sleeved gown, thick gloves, mask, and goggles or a face shield) and perform hand hygiene after removing it. For more information refer to the WHO guidance, *Safe management of wastes from health-care activities*.¹⁸

Considerations for WASH practices in homes and communities

Upholding best WASH practices in the home and community is also important for preventing the spread of COVID-19 and when caring for patients at home. Regular and correct hand hygiene is of particular importance.

1. Hand hygiene

Hand hygiene in non-health care settings is one of the most important measures that can prevent COVID-19 infection. In homes, schools and crowded public spaces – such as markets, places of worship, and train or bus stations – regular handwashing should occur before preparing food, before and after eating, after using the toilet or changing a child's diaper, and after touching animals. Functioning handwashing facilities with water and soap should be available within 5 m of toilets.

2. Treatment and handling requirements for excreta

Best WASH practices, particularly handwashing with soap and clean water, should be strictly applied and maintained because these provide an important additional barrier to COVID-19 transmission and to the transmission of infectious diseases in general.¹⁷ Consideration should be given to safely managing human excreta throughout the entire sanitation chain, starting with ensuring access to regularly cleaned, accessible, and functioning toilets or latrines and to the safe containment, conveyance, treatment, and eventual disposal of sewage.

When there are suspected or confirmed cases of COVID-19 in the home setting, immediate action must be taken to protect caregivers and other family members from the risk of contact with respiratory secretions and excreta that may contain the COVID-19 virus. Frequently touched surfaces throughout the patient's care area should be cleaned regularly, such as bedside tables, bed frames and other bedroom furniture. Bathrooms should be cleaned and disinfected at least once a day. Regular household soap or detergent should be used for cleaning first and then, after rinsing, regular household disinfectant containing 0.5% sodium hypochlorite (that is, equivalent to 5000 ppm or 1-part household bleach with 5% sodium hypochlorite to 9 parts water) should be applied. PPE should be worn while cleaning, including mask, goggles, a fluid-resistant apron, and gloves,¹⁹ and hand hygiene with an alcohol-based hand rub or soap and water should be performed after removing PPE.

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WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance document will expire 2 years after the date of publication.

Contributors

This interim guidance was written by staff from WHO and UNICEF. In addition, a number of experts and WASH practitioners contributed. They include Matt Arduna,

APPENDIX 22: STANDARD OPERATING PROCEDURE FOR PREVENTION AND RISK MINIMIZATION OF CORONA VIRUS DISEASE (COVID-19)



Standard Operating Procedure for Prevention and Risk Minimization of Corona Virus Disease (COVID-19) at the Facilities and Work Sites of
WEST BENGAL DRINKING WATER SECTOR IMPROVEMENT PROJECT (WBDWSIP)

Version 2 - 1 June 2020

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I. SCOPE AND OBJECTIVE

1. The purpose of this Standard Operating Procedure (SOP) is to guide all staff, consultants/ service providers, and contractors engaged under the West Bengal Drinking Water Sector Improvement Project (WBDWSIP or the project) to prevent, minimize, and manage risks to workers and public at large at all project facilities and work sites, which could arise from exposure to Corona virus disease (COVID-19) when restarting/resuming projects and site activities post COVID-19 lockdown.

2. The requirements, restrictions, and guidance contained in this SOP are provided to enable all associated, including staff, consultants and contractors on effective planning and execution of pandemic-specific action and responses and minimize risks, and to comply with the National Directives & Local Authority guidelines on COVID-19.

3. Based on these SOPs, government requirements, and best practice references available, each contractor and service provider will prepare their own site specific risk assessment and based on that, a site-specific health and safety management plan (H&S plan), for COVID-19 affected period and submit to the Project Director for approval at the Project Management Unit (PMU) of the WBDWSIP prior to re-commencement of works and services under the project post COVID-19. The PMU approved H&S Plan will be accepted by the contractor/ service provider and the PMU for implementation throughout the COVID-19 affected period as part of the earlier approved environmental management plan (EMP) or contract of each service and works provider.

4. All contractors, service providers, and consultants must conduct detailed site-specific risk assessment for identification of risks and their evaluation/categorization as acceptable/ unacceptable risks based on which suitable mitigation measures need to be planned. While the overall risk categorization will be guided by the government issued present zone-wise model adopted by the Government (red zone, orange zone, green zone) during the lock-down period, stakeholders should carry out risk assessment based on the approach of scale/severity/probability/duration of potential impacts, which will be commensurate to the potential hazards associated with the activities at sites, and suitable mitigation measures shall be developed and planned around the different levels of risks anticipated during construction / operation phases. The contractors and service providers should keep in mind that once lockdown restrictions are lifted, the “green” zones in rural areas with weak healthcare systems could also change quickly. Migrant workers could offer potential pathways for the spread of the disease from high risk zones to low risk zones and PMUs need to ensure that their workplaces do not become hotspots for the spread. The contractors/ service providers, with approval from PMU, shall update:

- The H&S plan as needed adopting a risk-based approach. For the work packages where maintenance of international good practices in COVID 19 aren't feasible, the outcome of the risk assessment shall determine re-organization, postponement, or cancellation.
- Assignment roles in Annex 3, as informed by the outcome of the risk assessment process for each specific work package.

5. The contractors, service providers, and staff, should also expand on risks in their site-specific H&S plan of any actions taken to address the risks “outside” their worksite, and include their protocols for (i) reporting to the government/health department if there are suspected cases, (ii) ambulance/transport service protocols if a worker needs to be brought to a health/quarantine facility, and (iii) communications with surrounding communities. Contractors and service providers with support from PMU and project implementation units (PIUs) should liaise with local health centers including primary healthcare facilities as part of the site wide health and safety management plans including emergency situation management plan. These should also be identified and detailed in the site-specific H&S Plan.

6. Staff, contractors and consultants working under the project and using this SOP should in addition consult the Occupational Safety and Health Act (OSHA) guidelines relating to COVID-19 and guidelines as specified by credible international organizations such as the World Health Organization (WHO), to draw best practices and applicable lessons from other reference documents listed below:

- a. WHO Guidelines (https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6);
- b. World Health Organization. 2020. Considerations for public health and social measures in the workplace in the context of COVID-19. Geneva. Available here: <https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19>⁹;
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- e. Indian Council of Medical Research (ICMR), Government of India;
- f. The Ministry of Home Affairs (MHA), Government of India;;
- g. OSHA guidance on preparing workplaces for COVID 19;
- h. Guideline Department of Health & Family Welfare and Labour Department, Government of India;
- i. Guideline for prevention of COVID 19 Pandemic by Government of West Bengal;
- j. U.S. Department of Labor Occupational Safety and Health Administration; and
- k. The Epidemic Diseases (Amendment) Ordinance,2020 (amends the Epidemic Disease Act, 1897)

7. All parties should note that these SOPs will be updated based on the changing government requirements and information/knowledge on COVID-19. For the latest updated copy of the SOP, the Contractors, service providers, consultants, staff and all stakeholders should refer to the project website, <https://wbdwsip.org/>, under Manuals and Guidelines, for the latest updated SOP, or email the Project Director at pd.pmu.adb@wbphed.gov.in, or visit the PMU's office at WBDWSIP Project, Utility Building, 1st Floor, (Premises No. 09/1-0024), AA-IA (Tank No. 3), New Town, North 24 Parganas, West Bengal, Pin – 700156.

II. INTRODUCTION

Project Background

8. Public Health Engineering Department (PHED), Government of West Bengal through its Project Management Unit and Project Implementing Unit is implementing the “West Bengal Drinking Water Improvement Project”. The Loan for WBDWSIP (ADB Loan 3696-IND) was signed between Government of India and the Asian Development Bank (ADB).

9. The project will provide safe, sustainable and inclusive drinking water as per the standards set by the Government of India in the arsenic, fluoride, and salinity affected selected areas of Bankura, North & South 24 Parganas, and Purba Medinipur districts of West Bengal (project districts). Project Director (PD) is the main authority of the project and PMU operates centrally from New Town, office under the guidance of PD and project management consultant (PMC) is there to support PMU.

10. All the three districts have individual PIU office headed by SE, PIU located at each district, which reports to PMU. Under each PIU, separate Design Construction Supervision and project Implementation Support Consultants (DSISC) team is available to support PIU in project implementation. Apart from there are NGOs in each district to take care different activities allotted to them.

⁹ This guidance contains some risk factors and an approach to undertaking the risk assessment at workplaces.

11. It is pertinent to mention that all the districts under this project has basic components like water intake system, raw water rising main, Water Treatment plant, clear water rising main, pumping stations, overhead reservoirs (OHR), ground level storage reservoir (GLSR), distribution system, house metering connection and related electro-mechanical and SCADA system.

12. The project locations, package name and brief project's components is mentioned below:

District name	Inputs (Package No.)	Brief Project Components
North 24 Parganas	DWW/N24P/01	Design, Construction and Operation of Water Treatment-Plant, Transmission Main, Boosting Pumping Stations & Ground level reservoirs work in Haroa, Rajarhat, and Bhangar II.
	DWW/N24P/02A	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Haroa Block.
	DWW/N24P/02B	Design and Construction of Overhead Reservoir including design, supply and laying of Water Supply Distribution Network in Bhangar II Block.
Bankura	DWW/BK/01	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Reservoir, Transmission Main for Indpur and Taldangra block in Bankura.
	DWW/BK/02A	Design and Construction of Intermediate Pumping Station, ground level reservoirs, overhead reservoirs, water distribution network and metering works in Indpur block including secondary transmission mains to Indpur block. transmission mains to Indpur block.
	DWW/BK/02B	Design and Construction of Intermediate Pumping Station, Secondary transmission mains, overhead reservoirs including water distribution network and metering works in Taldangra Block.
	DWW/BK/03	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Mejhia and Gangajalghati Block in Bankura.
	DWW/BK/04	Design and Construction of Overhead Reservoir including Water Supply Distribution Network and Metering Works in Mejhia and Gangajalghati Blocks including Rehabilitation of Existing Scheme.
East Midnapore	DWW/EM/01	Design, Construction and Operation-Maintenance of Raw Water Intake Well, Water Treatment Plant, Raw and Clear Water Transmission Main for Nandakumar, Chandpur, Nandigram-I and II blocks in East Medinipur.
	DWW/EM/02	Construction of Intermediate Pumping Station, Secondary transmission mains, overhead tanks including water distribution network and metering works in Nandigram-I and Nandigram-II block in East Medinipur

13. There are following major offices and project sites are available where suitable remedial measures to be taken as per protocol indicated in this guideline.

Under Office category:

- a. PMU and PMC
- b. Three number PIU and DSISC offices
- c. NGO offices
- d. All site offices and camps of Contractors

Under work components:

- a. Intake locations included pump house and substations
- b. WTP locations
- c. Ground Level Storage Reservoirs (GSLRs) cum pump house
- d. Overhead reservoirs (OHRs)
- e. Pipelines: Raw water rising main, clear water rising main and distribution network system

Coronavirus Disease 2019 (COVID-19)

14. Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. It was spread in many countries around the World. Depending on the severity of COVID-19's international impacts, outbreak conditions—including those rising to the level of a pandemic—can affect all aspects of daily life, including travel, trade, tourism, food supplies, and financial markets.

15. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers, and the public, it is important for all employers to plan now for COVID-19.

The virus is thought to spread mainly from person to-person, including:

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs or sneezes. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

16. It may be possible that a person can get COVID-19 by touching a surface or object that has SARS-CoV-2 on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the primary way the virus spreads.

17. The people most at risk of COVID-19 infection are those who are in close contact with a suspect/confirmed COVID-19 patient and those who care for such patients.

18. This document gives advice on:

- general instruction to follow to prevent the spread or slow transmission of COVID-19 in workplace;
- detail procedure to getting the workplace and office ready under COVID-19 situation;
- worksite prevention practice;
- precaution taken at workmen habitat/camp;
- control measures taken for deploying new workmen at site;
- resources requirement;
- relevant induction and training;
- communication and advancement – COVID Update; and
- declaration – Medical fitness and Filling up work starting Checklist

III. COVID 19 INFECTION SYMPTOMS

a. Most common symptoms:

- fever
- dry cough
- tiredness

b. Less common symptoms:

- aches and pains
- sore throat
- diarrhoea

- conjunctivitis
 - headache
 - loss of taste or smell
 - a rash on skin, or discolouration of fingers or toes
- c.** Serious symptoms:
- difficulty breathing or shortness of breath
 - chest pain or pressure
 - loss of speech or movement
- d.** All concerned should be well briefed to seek immediate medical attention, and where they could go as per the H&S Plan, if they have serious symptoms. They could also call before visiting their doctor or health facility for information at Central help lines at 011 23978046, or West Bengal state helpline number at 1800313444222, 033 23412600, 1070.
- e.** People with mild symptoms like fever, dry cough, sore throat who are otherwise healthy should manage their symptoms at home. They should isolate themselves from other members at home and stay at separate room.
- f.** On average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days.

IV. GENERAL PREVENTION OF INFECTION AND TRANSMISSION OF COVID-19

- Preliminary medical checking of body temperature, symptoms of cold, cough, difficulty in breathing will be done before worker's entry in the project. Format for daily checking template is attached as **Annexure 2**. Pandemic plan Site acknowledgement form is attached as **Annexure 1**.
- Workers with underlying health conditions such as diabetes, respiratory illness, etc. will be screened before start of work, as part of pre-employment screening tests as specified under Section 10 of this SOP. Contractors and service providers should clearly outline if such health screenings will be undertaken on site through questioning. As needed for cases deemed to be found necessary for further testing, contractors and service providers should seek PMU's support to liaise with local health centers to facilitate these screening and even testing for COVID-19.
- Non-essential physical work that requires close contact between workers should not be carried out
- Work requiring skin to skin contact should not be carried out
- Plan all other work to minimize contact between workers
- Wash hands often with soap for at least 20 seconds¹⁰
- Brief and remind staff regularly to cover mouth and nose when coughing or sneezing¹¹
- Use hand sanitizer (alcohol based as per norms) at office, workplace. Preferably use of contactless, sensor-based/ pedal operated sanitizer to avoid minimum touching
- Regular filling of sanitizers container should be carefully monitored
- Avoid biometric system and head count practice to be followed - Contact less attendance system shall be used.
- Regular thermal screening to be carried out without contact through thermal scanner. Logbook to be maintained mentioning temperature of the staff. In case temperature is found above 100°F, staff should be advised to go home and consult doctor and take suitable measures accordingly.¹²
- No person should enter the work site other than the authorized persons mentioned by supervisor during start of work

¹⁰ Please refer to effective handwashing techniques should be demonstrated to workers and visual postings on site.

¹¹ Use of mask should be mandatory in line with local government guidance and international good practice

¹² Please refer to international best practice on use of thermal scanners in the shared referenced WHO Guidance.

- All must implement social/physical distancing by maintaining a minimum distance of 6-feet from others¹³ at all times to eliminate the potential of cross contamination.
- Avoid face to face meetings – critical situations requiring in-person discussion must follow social distancing
- Conduct all meetings via conference calls, if possible. Do not convene meetings of more than 7 people. Recommend use of cell phones, texting, web meeting sites and conference calls for project discussion
- All individual work group meetings/ talks should follow social distancing.
- At each job briefing/toolbox talk, employees are asked if they are experiencing any symptoms, and are sent home.
- Each worksite should have laminated COVID-19 safety guidelines, responsibility and contact list, and hand washing instructions displayed at multiple locations and clearly visible for all, in line with international good practice.¹⁴
- All restroom/toilet facilities should be cleaned¹⁵, and hand washing facility must be provided with soap, hand sanitizer and paper towels
- All surfaces should be regularly cleaned, including tabletops /surfaces, door handles, laptops, printers, records, etc.
- All common areas and meeting areas are to be regularly cleaned and disinfected at least once a day but preferably twice a day
- Provide for or ask workers to bring their own water bottle, and not share.
- Adequate toilets with required facilities should be provided at offices and work sites
- To avoid external contamination, recommend everyone to bring food from home or provide safe food options at site following protocols.
- Maintain Social Distancing separation during breaks and lunch.
- Cover coughing or sneezing with a tissue, then throw the tissue in the trash and wash hands, if no tissue is available then cough /sneeze into your upper sleeves or elbow. Do not cough or sneeze into your hands.
- Brief and remind adequately and regularly on cleaning hands after coughing or sneezing thoroughly by using soap and water (minimum for 20 seconds), and use adequate soap and good quality water or hand sanitizer. The Contractor shall ensure adequate quantities of sanitizer and soap are made available at all locations including site offices, meeting rooms, corridors, washrooms /toilets, etc. as appropriate.
- Brief and regularly remind to avoid touching eyes, nose, and mouth with hands.
- To avoid sharing germs, brief and remind staff to clean up after themselves, and DO NOT make others responsible for moving, unpacking and packing up their personal belongings
- If worker or family member is feeling ill, advise to stay home¹⁶
- Brief workers to refrain from smoking and other activities that weaken the lungs.
- In worst case scenario if any workers found to be COVID 19 positive, project manager/ employer need to report authority and take appropriate measures as per Government procedure. Tentative format for Roles & Responsibilities Matrix for Managing COVID 19 risks and contact number etc. will be filled up by contractors is appended in **Annexure 3**.

V. DISINFECTION AND MANAGING RISKS AT OFFICE AND WORK SITE¹⁷

a. General

¹³ Social distancing may not be practical for undertaking certain specific activities within the workplace. It is therefore important to review the work method statements for these types of activities to assess impact and how to find safe ways of doing in line with best available guidance.

¹⁴ Please check free downloadable copies at the WHO webpages.

¹⁵ Check the international good practice methods for disinfecting such frequently used places at the workplace.

¹⁶ The workers with no sick-leave would be supported with additional leave while affected by COVID-19 by the Contractor.

¹⁷ Refer to International good practice within the referenced guidance documents.

19. All areas in the premises shall be disinfected, or fumigated completely using user friendly disinfectant mediums for all locations viz. Entrance, Meeting room, Conference halls, Cubicles, Cabins, Seating Area, Reception, Entrance Gate of Site, Pota Cabins, Building, Equipment, Washroom, Toilet, Sink, Walls, Open areas available, all other surfaces. Please note that fumigation of humans should not be carried out at any point in any premises.

20. For Disinfection 1% sodium hypochlorite or phenolic disinfectants is generally used. For metallic surfaces like doorknobs, handles, security locks, keys etc. 70% alcohol can be used to wipe down surfaces where the use of bleach is not suitable.

21. Disinfection should be done one to two times in a day and for meeting room it should be done before and after the meetings.

b. Preparedness prior to work resumption

- Reconfiguration of offices to ensure physical/social distancing. Workstations or tables should be segregated at least 6 ft. apart;
- Contractors to ensure provision of safe and potable drinking water;
- Cleaning of all water coolers and testing the water quality (at outlet) for at least bacteriological contaminant should be ensured and reports should be recorded for reference;
- Heating, ventilation, and air conditioning (HVAC) system cleaning or changing of AC filters, Chillers / cooling water plants to be addressed;
- Entire office premises should have at least one round of pesticide control activity before resuming the office;
- Availability of hand sanitizers in strategic locations and stock of hand sanitizer liquids for refilling them. Preferably contactless, sensor-based/ pedal operated sanitizers to avoid minimum touching;
- The chemical having quaternary ammonium, sodium hypochlorite or hydrogen peroxide as active ingredient should be used for area disinfection;
- Disinfection of the whole work sites and offices before opening.
- Clean visibility dirty surfaces with soap and water prior to disinfection. Areas unoccupied for 7 or more days need only routine cleaning. Maintain existing cleaning practices for outdoor areas;
- Details of disinfection discussed below in section 5.3 and 8
Guidance provided by CDC in disinfecting areas based on how long these were unoccupied to be followed (https://www.cdc.gov/coronavirus/2019-ncov/community/pdf/ReOpening_America_Cleaning_Disinfection_Decision_Tool.pdf)
- Disinfection should be continued throughout the implementation of the project;
- Appropriate PPE like Face covers, Masks, Goggles, Gloves, Coats / Aprons, Shoes and appropriate disinfecting gadgets like sprayer, brush, etc. shall be made available at work site;
- Face Mask - Face Mask 3 layered IS16289 standard or equivalent;
- Gloves - Glove length should be 240 mm, Cuff should be beaded, Finger Thickness should be at least 5.7mil. AQL (Acceptable Quality Level) should be 1.5 ASTM D6319- 10 / EN 455, EN 374 & EN 388;
- Shoe Cover- Premium quality Disposable Shoe Covers. These shoe covers are used in Protected Areas (EPA) to prevent the dust on the shoes from contamination
- PPEs need to be washed and disinfected on regular basis.
- In case any COVID 19 symptoms arise for workers, used PPEs will be disposed as per biomedical waste disposal rule of Government of India and relevant international good practice guidance. PPEs disposed off in a bio-hazard bag (yellow bag). Inside would be sprayed with Sodium Hypochlorite (1%) and after

tying the exterior will also be sprayed with the same. It would be disposed off at destination hospital. This shall again be followed by hand washing.

- Display board regarding the procedure of disinfection shall be displayed in local language with pictorial demonstration at entrances / prominent places.

c. Disinfection at workplaces and site offices

- Maintain regular housekeeping practices, including routine cleaning and disinfecting of surfaces, equipment, and other elements of the work environment.
- Disinfection of entire office – Before start of office and after end of office walls – weekly once
- Disinfection of toilet – At least 3 times within work period with regular interval
- Disinfecting of surfaces (e.g desktop, laptop, desk, printer, chair, table, door, window, file rack) – Twice in a day - before and after use
- Disinfecting of door knobs, handles, locks – 2 times in a day
- Disinfection of hand tools – 2 times in a day
- When choosing cleaning chemicals for disinfection, projects shall consult with local authorities or *subject matter expert* for appropriate disinfectant against emerging viral pathogens of COVID19. The chemical having quaternary ammonium, sodium hypochlorite or hydrogen peroxide as active ingredient should be used for area disinfection.
- Follow the manufacturer's instructions for use of all cleaning and disinfection products (e.g., concentration, application method and contact time, PPE).
- Focusing disinfection efforts on frequently touched surfaces such as handrails, door handles, etc.
- Conference rooms shall be disinfected before and after the meeting.
- Site offices shall be disinfected on daily basis and social distancing shall be followed at the projects
- Dining area shall be disinfected before and after the dining hours.

d. Managing risks During Meetings

i. Before Meeting

- Consider whether a face-to-face meeting or event is needed, plan for an online meeting using MS teams, skype, or other mediums, or simply conference call.
- If the above step is not feasible, restrict the number participants with important and relevant people.
- Ensure sufficient supplies and materials, including tissues and hand sanitizer for all participants. Have surgical masks available to offer anyone who develops respiratory symptoms.
- Maintaining social distancing of 6 ft to be mandatorily followed.
- Meeting room should be spacious (not cramped at all) and number of persons should be restricted accordingly so that social distancing can be maintained
- Advise participants in advance that if they have any COVID 19 symptoms like coughing, sneezing, breathening or feel unwell, they should not attend.

ii. During and after the meeting

- Briefly explain the participants on the actions being taken to prevent COVID- 19
- Avoid handshake and practice ways to say hello without touching
- Sanitizer should be placed strategically so that it easily accessible to all participants. Preferably contactless, sensor-based/ pedal operated sanitizer to be placed to avoid minimum touching
- Mandatory use of masks by all meeting participants at all times for the entire duration of meetings, except when eating or drinking. During breaktimes like snack or meal times, maintain strict social distancing as well.

- Meeting should be specific and short duration time
- Encourage regular handwashing or use of an alcohol rub by all participants at the meeting
- Encourage participants to cover their face with the bend of their elbow or a tissue if they cough or sneeze. Supply tissues and closed bins to dispose of them.
- Display dispensers of alcohol-based hand rub prominently around the venue.
- If there is space, arrange seats so that participants are at least one meter apart.
- Open windows and doors whenever possible to make sure the venue is well ventilated.
- Soon after the meeting, the area shall be disinfected and dust bins shall be cleared.

VI. PRECAUTION DURING AND AFTER TRAVEL TO/FROM WORKSITE

a. Before traveling

- Make sure your organization and its employees have the latest information on areas where COVID-19 is spreading. Government mobile App – 'Aarogya Setu' or any other form of mobile tracking to be used by all for securing such information
- Based on the latest information, your organization should assess the benefits and risks related to upcoming travel plans at project site
- Avoid sending employees who may be at higher risk of serious illness (e.g. aged employees and those with medical conditions such as diabetes, heart and lung disease) to areas where COVID-19 is spreading.
- Make sure all persons travelling to locations reporting COVID-19 are briefed by a qualified professional (e.g. staff health services, health care provider or local health partner)
- Consider issuing employees who are about to travel with small bottles (under 100 ml) of alcohol-based hand rub. This can facilitate regular handwashing.

b. While traveling

- Encourage employees to wash their hands regularly and stay at least one meter away from people who are coughing or sneezing
- Ensure employees know what to do and who to contact if they feel ill while traveling.
- Ensure that your employees comply with instructions from local authorities where they are traveling. If, for example, they are told by local authorities not to go somewhere they should comply with this. Employees should comply with any local restrictions on travel, movement or large gatherings.

c. Return from traveling

- Travel may be prioritized based on risk categories e.g. No travel in containment zone; Restricted travel to Red Zone etc.
- Employees who have returned from an area where COVID-19 is spreading should monitor themselves for symptoms for 14 days and take their temperature twice a day.
- If they develop even a mild cough or low-grade fever (i.e. a temperature of 37.3°C or more) they should stay at home and self-isolate. This means avoiding close contact (one meter or nearer) with other people, including family members. They should also telephone their healthcare provider or the local health department/ local hospital, giving them details of their recent travel and symptoms.

VII. WORK SITE PREVENTION¹⁸

a. Controlled access inside the project

i. Offices, camps

- Prior to entry, a mandatory orientation be provided to the worker/ staff or personnel on the proper use, handling and disposal of disposable PPEs, particularly face masks.
- Mandatory requirement of wearing masks upon entry and maintained at all times
- Unauthorized entry is strictly prohibited. All the persons should report office/ camp follow the protocol of COVID 19 and if it is found in order then only, he/she will be allowed to join.
- Adopting queue system while entry to buildings, workplaces, passenger hoist, bus, etc.,
- Avoiding entry of new staff/ workmen from known hotspots of COVID 19
- Allocating separate isolation rooms for Staff and workers.
- Ensuring availability of registered medical practitioner as per tied up between contractors/ offices and local hospital/ health facility
- Ensuring doctor from a government approved dispensary / hospital / COVID19 testing centers
- Contactless thermal scanning. Recording of temperature of each staff/ workers
- Contactless attendance system

ii. Intake, WTP, Reservoir, Pumping stations – fixed location

- Prior to entry, at work site a mandatory orientation be provided to the worker or personnel on the proper use, handling and disposal of disposable PPEs, particularly face masks.
- Mandatory requirement of wearing masks upon entry and maintained at all times while at work sites.
- Pre-approval for deployment of new workmen from Project Manager (PM).
- Unauthorized entry is strictly prohibited. All the persons should report office/ PM follow the protocol of COVID 19 and if it is found in order then only, he/she will be allowed to join.
- Adopting queue system while entry to workplaces, bus, etc.,
- Avoiding entry of new workmen from known hotspots of COVID 19
- To obtain “Self-Declaration Form” from all workmen during screening to identify the COVID-19 risk level of workmen.
- Contactless thermal scanning
- Contactless attendance system

iii. Pipe laying locations - Linear project sites

- Prior to start of work, a mandatory orientation be provided to the worker or personnel on the proper use, handling and disposal of disposable PPEs, particularly face masks.
- Mandatory requirement of wearing masks upon entry and maintained at all times while at work sites.
- Pre-approval for deployment of new workmen from Project Manager (PM).
- Unauthorized entry is strictly prohibited. All the persons should report office/ PM follow the protocol of COVID 19 and if it is found in order then only, he/she will be allowed to join.
- Avoiding entry of new workmen from known hotspots of COVID 19
- To obtain “Self-Declaration Form” from all workmen during screening to identify the COVID-19 risk level of workmen.
- Contactless thermal scanning
- Contactless attendance system

b. Managing the social distancing while on deployment and working

a. Offices, camps

¹⁸ Job specific Analysis (JSA) is critical for all the works under this section in line with the recommendations in footnote 1 of this SOP (see page 6) to inform the level of scope changes/sequencing to work schedules and re-engineering.

- At office, camp wherever feasible to ensure social distancing.
- Marking shall be made available to facilitate social distancing of 6 ft.
- Working in shifts to minimize crowding in one place wherever possible
- Discourage staff/ workers from using other staffs/ workers' phones, clothes, wallets, things or other work tools and equipment, as far as possible. These items should be disinfected before and after use
- All the trips in bus/ car should be planned in such a way that norms of travelling should be maintained
- Social distancing will be maintained while travelling in bus, car. Seating arrangement (at least one seat apart) will be depending on configuration of bus and car.
- Sanitize conveyance vehicle / bus of staff and workmen prior to start of each trip

b. WTP, Intake, Reservoir, Pumping stations – fixed location & pipe laying locations
- Linear project sites

- Developing a strategy by contractor for workmen deployment at sites considering the social distancing requirements and COVID 19 risks which may include:
- Sequence of work - ensure the planning of work as per sequence of work with optimum number of workmen.
- Deploy workmen in different locations, wherever feasible to ensure social distancing.
- Marking shall be made available to facilitate social distancing of 6 ft.
- Staggered deployment of workmen in case of congested work locations
- Working in shifts to minimize crowding of workmen in one place wherever possible
- Plan for working during late shifts / late hours to minimize disruption to traffic / people contact in congested areas
- Discourage workers from using other workers' phones, clothes, wallets, things or other work tools and equipment, as far as possible. These items should be disinfected before and after use
- Clean the phones, clothes and other daily work tools on daily basis. Common property tools at the work sites should be disinfected before and after it is used by a particular worker.
- Identifying multiples access and egress pathways
- Before restarting Identifying multiple rest areas within the site premises considering number of workmen at the project
- All the trips in bus/ car should be planned in such a way that norms of travelling should be maintained
- Restricting the number of users in passenger hoist, bus, etc., Social distancing will be maintained while travelling in bus, car. Seating arrangement (at least one seat apart) will be depending on configuration of bus and car.
- Sanitize conveyance vehicle / bus of staff and workmen prior to start of each trip
- In addition to the regular PPE, nose masks and hand gloves for teams who are screening workmen, conducting medical checkup & disinfection and others those who need to work in proximity to a greater number of people.
- Masks (homemade¹⁹ can be thought of) to be provided to all the persons/labourers on the worksite. The procedures to be followed for maximum precaution to protect all persons/labourers at all times.

1. All types of PPE must be:

- Properly fitted and periodically refitted, as applicable (e.g., respirators).
- Consistently and properly worn when required.
- Regularly inspected, maintained, and replaced, as necessary.
- Properly removed, cleaned, and stored or disposed of, as applicable.
- Re-usable PPE should be thoroughly cleaned after use and not shared between workers

¹⁹ Advisory on use of Homemade Protective Cover for Face & Mouth by Govt. of India

c. Prevention at Workspace

- Make sure workplace clean and hygienic; all surface and worksite properly sanitized (*For office and all work sites*)
- Adequate provision of safe water should be made available for all staff and contact less water tap should be preferable (*For office and all work sites*)
- First day, before resuming the work on site post lockdown period, mandatory medical check-up for preliminary symptoms will be arranged for all workers. Only medically fit workers will be deployed at site and medical assistance will be arranged for unfit workers. Medical check-up camp also covering COVID 19 pool test should be arranged every month. (*For all work sites*)
- At the start of each shift, confirm with all employees that they are healthy and inform all workers / staffs of reusable and disposable PPE (*For office and all work sites*)
- Use of face masks at all times is mandatory, except when eating or drinking (*For office and all work sites*)
- Outside person should be strictly prohibited at office, camp and worksite (*For office and all work sites*)
- All construction workers will be required to wear cut-resistant gloves or the equivalent.
- Use of eye protection (reusable safety goggles/face shields) is recommended. The supply of eye protection equipment to the workers is considered as a standard part of PPE during construction works. (*For all work sites*)
- In work conditions where required social distancing is impossible to achieve, such employees shall be supplied with standard face mask, gloves, and eye protection. (*For office, camp and all work sites*)
- All employees shall drive to work site in a single occupant vehicle. Staff shall not ride together in the same vehicle (*For office and all work sites*)
- When entering in equipment or vehicle which not sure were the last person to enter, make sure that you wipe down the interior and door handles with disinfectant (with 1% sodium hypochlorite solution daily) prior to entry. Adequate quantity of the disinfectant shall be provided by the Contractor at all such site-specific locations. (*For office and all work sites*)
- Workers should maintain separation of 6 ft from each other. (*For office, camp and all work sites*)
- Multi person activities will be limited where feasible (two persons lifting activities) (*For all work sites*)
- Gathering places on the site such as sheds and/or break areas will be eliminated, and instead small break areas will be used with seating limited to ensure social distancing. (*For all work sites*)
- Contact the cleaning person of the worksite/ office/ camp and ensure proper COVID-19 sanitation processes. Increase cleaning/disinfection visits to at least 2 times a day. Cleaning person(s) to be provided with gloves, gown and face mask for each cycle of cleaning. The Contractor shall make available adequate supply of PPE and chemicals while the threat of COVID-19 continues. (*For office, camp and all work sites*)
- Clean all high contact surfaces a minimum of twice a day in order to minimize the spread of germs in areas that people touch frequently. This includes but is not limited to desks, laptops, key board, printer etc. and vehicles (*For office*)
- Maintain your good health by getting adequate sleep; eating a balanced, healthy diet, avoid alcohol; and consume plenty of fluids. (*For office and camp*)
- Continuation of works in construction project with workers available on site and no workers to be brought in from outside (*For all work sites*)
- The site offices shall have adequate ventilation. The air conditioning or ventilation systems installed at the site offices would have high-efficiency air filters to reduce the risk of infection. The frequency of air changes may be increased for areas where close personal proximity cannot be fully prevented such as control rooms, elevators, waiting rooms, etc. (*For office and camp*)

- The Contractor shall carry out contactless temperature checks for the workers prior to site entrance, during working hours and after site works to identify persons showing signs of being unwell with the COVID-19 symptoms. (*For all work sites*).
- d. Washing Facility**
- i. Offices, camps, work sites**
- All worksites should have access to toilet and hand washing facility.
 - Providing hand cleaning facilities at entrances and exits. This should be soap and water wherever possible or hand sanitizer if water is not available
 - Preferably contactless, sensor-based/ pedal operated sanitizer to be placed to avoid minimum touching
 - Washing facility with hot water, and soap at fire hydrants or other water sources to be used for frequent handwashing for all onsite employees
 - All onsite workers must help to maintain and keep work sites clean
 - If a worker notices soap or towels are running low or out, immediately notify supervisors
 - Garbage bins will be placed next to the hand wash facility for discarding of used tissues/towels with regular removal and disposal facility (end of each day).
- e. Cleaning Procedures**
- Increase cleaning/disinfection visits to at least 2 times a day. Cleaning person(s) to be provided with gloves, gown and face mask for each cycle of cleaning.
 - Each worksite should have enhanced cleaning and disinfection procedures that are posted and shared including sheds, gates, equipment, vehicles, etc. and shall be posted at all entry points to the sites, and throughout the project site. These include common areas and high touch points like
 - Taps and washing facilities (*office, camp and fixed work sites*)
 - Toilet flush and seats (*office, camp and fixed work sites*)
 - Door handles and push plates (*office, camp*)
 - Handrails on staircases and corridors (*office*)
 - Lift and hoist controls (*office*)
 - Machinery and equipment controls (*work sites*)
 - Food preparation and eating surfaces(*camps*)
 - Telephone equipment / mobiles, Keyboards, printer, photocopiers and other office equipment (*office*).

VIII. MANAGING COVID 19 RISKS in WORK-CAMPS

- a. Cooking**
- Daily thermal screening and health check of the cooks and helpers at the guest houses and camps
 - Cooking staff should be prohibited from reporting to work if they experience COVID 19 symptoms
 - Cleaning and disinfection on daily basis once the cooking is over
 - The cooks and helpers shall wear masks and hand gloves while preparation, serving food to the staffs and workmen
 - Adequate provision of safe water should be made available for all staff and contact less water tap should be preferable
 - After cooking food items should be covered
- b. Dining**
- Staggered Timings shall be adopted to limit the no of workmen using the hall to maintain social distance
 - Increase the Space of dining facility where possible
 - Hand cleaning facilities or hand sanitizer should be available at the entrance of any room where people eat and should be used by workers when entering and

leaving the area. Preferably contactless, sensor-based/ pedal operated sanitizer to be placed to avoid minimum touching

- Workers should sit 2 m apart from each other whilst eating and avoid all contact
- Hygiene conditions shall be ensured during serving of foods in Guest houses / Messes / Workmen Stay Places, so that common serving spoons etc. are not touched by all the staff/workmen taking food
- Only Persons serving food shall be allowed to handle the serving spoons, common utensils, etc.
- Tables should be cleaned between each use and sanitized
- All rubbish should be put straight in the bin and not left for someone else to clear up; only covered pedal operated bins should be used and the bins should be cleared and cleaned regularly, with strict adherence to safety protocols for disposal and hygiene maintenance
- All areas used for eating must be thoroughly cleaned and sanitized at the end of each break and shift, including chairs, door handles, etc.
- Regular inspection of the kitchen/ dining area to be conducted by the Admin/ EHS Officer personnel.

c. Usage of common facilities

- Areas or places of high risk for transmission of virus such as doorknobs, handles, latches, handrails in common facilities shall be cleaned and disinfected at regular intervals

d. Disinfection

- Disinfection of the workmen habitat in all the places shall be carried out on a periodical basis and closely monitored by camp in-charge and verified by health & safety officers.

e. Toilet Facility

- Restrict the number of people using toilet facility at any one time
- Sufficient toilets with facility need to be provided, separate for men and women
- Wash hands before and after using the facilities
- Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush
- Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

f. Changing Facilities, Showers and Drying Areas

- Introduce staggered start and finish times to reduce congestion and contact at all times
- Introduce enhanced cleaning of all facilities throughout the day and at the end of each day
- Consider increasing the number or size of facilities available on camp if possible
- Provide suitable and sufficient garbage bins in these areas with regular removal and disposal.

g. Separate Staying arrangement for new workmen/women

- New workmen shall not be accommodated in the same rooms as the existing workmen Dwelling units / rooms shall be suitably organized to ensure the avoidance of proximity of the workmen groups

h. Resources at workmen/women habitat

- Limiting the number of workmen/women in dwelling units
- Contractor to arrange all daily need items and grocery at site itself and no worker is allowed to go to shops for daily need items.

- i.* Hand washing facilities
 - Dedicated hand washing facilities with soap shall be kept at conspicuous locations in the workmen habitat with sign boards for DO's and DON'T's in hand washing
- j.* Promoting self-hygiene and cleanliness
 - Pictorial posters in local language shall be placed across the workmen habitat to create awareness on maintaining self – hygiene and respiratory hygiene
 - Masks (homemade²⁰ can be thought of) to be provided to all the persons/labourers for use at the camp site as well as at the worksite. Increase cleaning/disinfection visits to at least 2 times a day. Cleaning person(s) to be provided with disposable gloves, gown and face mask for each cycle of cleaning.
- k.* Quarantine and isolation rooms
 - Adequate number of rooms shall be identified and reserved to accommodate symptomatic workmen
 - Facilities required within the Isolation rooms to be ensured in co-ordination with the local health facility.
 - The types of PPEs shall be specified for Caregivers, Isolated person etc.

IX. RESOURCE REQUIREMENT

22. Resources required specifically managing the COVID 19 risk shall be identified, planned, procured, and made available at site in adequate quantities. The resources which are required to manage COVID 19 risks may include:

- Thermal scanners. All persons at the worksite should have their temperature screened with Infrared Thermometer (handheld non-contact).
- Contactless attendance system.
- Liquid Soap & Hand washing arrangement at site in workmen habitat
- Contactless, sensor-based/ pedal operated sanitizer
- Team for cleaning & disinfection.
- Nose/ face masks for teams who are screening workmen, conducting medical checkup & disinfection.
- Hand gloves for teams who are screening workmen, conducting medical checkup & disinfection.
- Quarantine Facilities for accommodating symptomatic workmen.
- Additional rest areas at sites and dining spaces in Workmen habitat
- Ensure availability (even tie-up) of Ambulance equipped with all necessary items like nose masks, first aid kits, aprons, disinfect solutions etc.
- First aid kits with hand sanitizers and hand wash liquids shall be mandatory available in all the vehicle without any lapses.
- Regular notification by state government, district authority should be adhered and all the staff should be compulsorily made aware of that
- Job protection of workers during crisis period of COVID 19 pandemic needs to be ensured.

X. INDUCTION AND TRAINING

- a.* Medical Check-up by Doctor
 - All workmen shall be subjected to stringent medical check-up by the medical practitioner before allowing for EHS Induction.
 - The doctor shall consider the additional information provided by the workmen in the screening, while checking the workmen.

²⁰ Advisory on use of Homemade Protective Cover for Face & Mouth by GOI

- b.** EHS Induction
 - Number of workmen participating in EHS Induction shall be restricted so as to maintain the social distance during training. EHS induction shall be reviewed at each project to include COVID 19 controls & Risk as per H&S Plan (Number of programs may be required to be increased in case more workmen and social distancing during induction).
 - In addition to the regular EHS induction, workmen will be trained on COVID 19 risks and the precautionary measures, covering the following topics,
 - Symptoms of COVID 19
 - How virus spreads
 - System and management of symptoms for the cases detected
 - Importance of maintaining social distancing
 - Importance and DO's and DON'T's of hand washing
 - Overview of the precautionary measure taken at site for COVID 19
 - Roles & Responsibility of workmen specific to the precautions towards COVID 19
 - Reporting in case of symptoms similar to Flu
- c.** Importance and DO's and DON'T's of hand washing
 - Overview of the precautionary measure taken at site for COVID 19
 - Roles & Responsibility of workmen specific to the precautions towards COVID 19
 - Reporting in case of symptoms similar to Flu
- d.** Training & Awareness
 - All the staff members, Emergency Response Team (ERT) Members, Supervisor & all workmen shall be trained specific to COVID 19 risks and controls measures through regular interval CWT (contractor workmen training), Site specific Trainings & daily Tool box talks.
 - PMU and PIU to ensure all workers get training on above requirements before start of any construction activity
 - During construction period frequent visual and verbal reminders to workers can improve compliance with hand hygiene practices and thus reduce rates of infection. Handwashing posters should also be displayed at work site and labour camps
- e.** Emergency Contact
 - Provide emergency contact number at work site and labour camp for reporting COVID-19 symptoms.

XI. COMMUNICATION AND ADVANCEMENT: COVID-19 UPDATE

23. The Contractor shall be in touch with the Department of Health & Family Welfare and Labour Department to identify any potential worksite exposures relating to COVID-19, including:

- Strictly follow the guidelines issues by Ministry of health
- Contractor strictly follow the instruction of PMU/ PMC and PIU relating to COVID 19 pandemic
- Other workers, vendors, inspectors, or visitors to the worksite with close contact to the individual
- Labour Camps / Work areas such as designated workstations or rooms /sheds
- Work tools and equipment
- Common areas such as break rooms, tables and sanitary facilities.

a. Screening:

Apart from the regular information collected during the screening process, additional self-declaration form shall be obtained to identify the COVID-19 risk level of workmen. This information shall include:

- Place of his latest stay (to identify whether, it is a hotspot)
- Contact with any confirmed or suspected COVID 19 individual
- Contact with persons who have a travel history to hot spots
- Whether they have any symptoms for COVID 19

b. Daily Safety checks for Resuming of work after Lockdown

- Monitor the workmen body temperature.
- Analyze the COVID symptoms.

- Before starting of work Hand sanitizer to be use by all.
- PEP Talk/Toolbox Talk conduct for all workmen before starting of work & covered the COVID precaution measures & site work safety.
- During Work Social distancing should be minimized.
- Regular interval Health check-up conduct for all workmen.
- Health hygiene should be ensured for all.

XII. DOCUMENTATION BY CONTRACTOR

24. In addition to the approved H&S Plan, the contractor for each package under WBDWSIP must keep the following documents ready before re-starting of work:

- Roles, responsibilities and accountability matrix for each site, developed under the H&S Plan, clearly published or visibly shown at all sites for managing COVID 19 risks, including contact number of responsible persons. This should be included as part of their approved H & S plan (Template in Annexure 3).
- Filling up format for Medical Fitness on resuming the duty
- On-line Self-Declaration to be filled by employee resuming duties
- Self-attestation by persons/labour prior to work

25. Prior to starting a work, each labour /worker will self-attest to the supervisor:

- No signs of COVID-19 symptoms within the past 24 hours.
- No contact with an individual diagnosed with COVID-19. (contact means living with a positive person, being within 6 ft of positive person or sharing things of positive person)
- Not undergone quarantine or isolation (in case of any labourer /worker who has been quarantined or isolated previously, the engagement shall be only after obtaining the requisite clearance from trained and registered medical practitioner)

26. The engagement of workers falling in the high-risk category such as workers over the age of 55 years, with underlying medical conditions or health issues, etc. should be done only after obtaining the requisite clearance from trained and registered medical practitioners.²¹

27. The self-attestation would be verified in collaboration with trained and registered medical practitioners deployed at site through discussions with laborers /workers and/or preliminary checks such as temperature checks, etc. prior to their engagement at site.

28. In addition, the contractor shall mandatorily follow all medical test requirements for the workers prior to their engagement and/or mobilization at site as per the guidelines issued by the Central and State government agencies and WHO from time to time.

29. Persons/Labourers showing COVID-19 symptoms or not providing self-attestation shall be directed to leave the work site and report to the fever clinic/quarantine centre immediately. Labourers should be asked to not return to the work site until cleared by fever clinic/ quarantine centre.

30. Contractors must identify personnel for and report every month the following:

- Filling up Checklist for Post lockdown work resumption compliances at Project Site;
- Filling of Daily Safety checks for resuming of work after Lockdown; and
- Initial submission of and conformation of prominent display on a monthly basis pf IEC poster and responsibility matrix with contact details for display at each site.

²¹ Caution is needed to avoid exclusion from workplace on grounds of one's age. Although there could be a direct correlation of age and underlying health conditions, the emphasis should be on those with underlying health conditions and not necessarily on age.

Annexure 1 Pandemic Plan Site XXXXX Acknowledgement Form

Project Name:		Location	
Date:		Client Name:	
S. No.	Description	Yes (✓) NO	Remarks
1.	Temperature (Fever)		
2.	Cold		
3.	Cough		
4.	Difficulty in Breathing		
5.	Are you having any medical illness? (BP, Sugar, Cardiovascular, lung, obesity, kidney etc.)		
6.	Is any of your family members are suffering from above symptoms.		
7.	Have you met any confirmed COVID -19 person?		
8.	Is any of your neighbors are confirmed with Covid-19?		
9.	Is your locality falls in covid-19 containment / Red zone area?		
10.	Have you done hand sanitization before entering		
11.	Did you travel beyond your state boundaries earlier (holidays/weekly off)		
12.	Any history of international travel		
13.	Have you received - Nose mask & Hand sanitizer		
14.	Mode of travel used to reach site.		
15.	Whether social distancing (Min-6feet) maintained in case of public transport, site related activities and		
16.	Are you aware about Resilience plan, MHA (Ministry of Home Affairs) updates, and National Directives, State Govt order, Local authority order		

Declaration by Employee

I _____ declare that the information given by me above is true and correct to the best of my knowledge.

Signature of Staff with Date: _____
Appropriate

Medical Professional at site Signature of
authority or any nearby assigned government
approved dispensary/hospital

Signature of Admin. with Date:

Signature of PM/TL with Date: _____

Signature with Date

Annexure 2: Regular Health Monitoring Template at Site XXX

Project Name:		Location	
Name:		Client Name:	
S. No.	Description	Yes (✓) NO	Remarks
1.	Temperature (Fever)		Logbook to be maintained
2.	Cold		
3.	Cough		
4.	Difficulty in Breathing		
5.	Have you done hand sanitization before entering site?		
6.	Has the person wearing mask		
<p>Signature of Staff with Date: _____</p> <p>Signature of Admin. with Date: _____</p>			

Annexure 3: Roles & Responsibilities Matrix for Managing COVID 19 risks* at Site XXXXX

Process	TL/ DTL /PM	Accts & Admin	Office Manager/ Section Inch charge	All staff	EHSO	ERT Team	CM/ Super-visor	Workmen
Conducting Meeting regarding this H&S PLAN before restarting the Works								
Preparing a site-specific action plan								
Screening of workmen								
EHS Induction								
Access Control measures								
Training on COVID 19 response								
Disinfection								
Risk Control in Workmen Camp								
Social distancing in site office & facilities								
Pre startup checks location / area wise								
Promoting Self Hygiene & Respiratory Hygiene								
Display of posters for COVID 19 Response								
Organizing resources for COVID 19 response								
Maintaining social distance								
Monitoring of compliance								
Reporting in case of symptoms								
Checks for COVID during safe to start of activities								
Periodical review								
Emergency Response								

(* Note- To be submitted by contractor of each package)

A - Accountability

R – Responsibility

EHSO- Environment, Health and Safety Officer, ERT – Emergency Response Team, PM- Project Manager,

CM- Construction Manager

**Individual/s in Charge and Responsible for the Activity at Site XXXXX
(COVID-19 Resource Team Members)**

SN	Name	Occupation / Designation	Contact no	Company	Roles & Responsibility
1					
2					
3					
4					
5					
6					
7					
8					