

Semi-Annual Environmental Monitoring Report

Project number: 42173-013

Period: January – June 2020
Submission Date: November 2020

BAN: Dhaka Environmentally Sustainable Water Supply Project – PART D

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Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	Pieme Racine		
Site:	WTP	Date:	April 29 th 2020

Site Safety Review Attendees:	
Name:	Company / Designation:
Pieme Racine	MDSC, Sr. Resident Eng.

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book	Yes/No Need improvement
Were you given a site induction / daily briefing on arrival at site?	Yes/No
Have all operatives on site had a full HS induction? Are records of their training available?	Yes/No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No
2. Reporting & Records	
How many safety observations have been recorded today?	
Is there a log of safety observations and incidents available on site?	Yes/No
Are approved method statements in place for all work activities?	Yes/No Give details:
Are signed and approved permits in place for high-risk activities?	Yes / No / NA Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? (i.e. safety helmet, safety footwear, hi-vis vest)	Give details: <input checked="" type="radio"/> Yes / No
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task ✓ - Working at height – safety harnesses ✓ - >85dB - Hearing protection <i>N/A</i> - Dust, fumes or toxic gases – respiratory protection ✓ - Other tasks with permit specific PPE (give details) 	Give details: <input checked="" type="radio"/> Yes / No
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	Give details: <input checked="" type="radio"/> Yes / No
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men ✓ - For women ✓ 	Give details: <input checked="" type="radio"/> Yes / No
Are toilet facilities well lit, ventilated, clean and hygienic?	Give details: <input checked="" type="radio"/> Yes / No
Are sufficient hand washing facilities provided including soap and hot water?	Give details: <input checked="" type="radio"/> Yes / No
Are areas for eating provided including provision for keeping chilled food?	Give details: <input checked="" type="radio"/> Yes / No
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	Give details: <input checked="" type="radio"/> Yes / No

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Yes / No Give details: N/A.
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No Give details: Need to be reprinted because of sun damage
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Yes / No Give details: Yes
Are materials and equipment stored correctly and orderly?	Yes / No Give details: Yes
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Yes / No Give details: Yes
Are trained first aiders available on site / nearby?	Yes / No Give details: Yes
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Yes / No Give details: Yes
Are muster points clearly signposted?	Yes / No Give details: Yes
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Yes / No Give details: Yes
Are designated smoking areas provided away from flammable materials?	Yes / No Give details: Yes

Site safety review


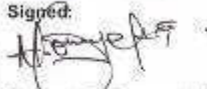
Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	Yes / <input checked="" type="radio"/> No Give details:
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	<input checked="" type="radio"/> Yes / No Give details:
Is adequate parking in a designated area provided for vehicles?	<input checked="" type="radio"/> Yes / No Give details:
9. Excavations	
Is a permit to dig in place?	Yes / <input checked="" type="radio"/> No Give details: no deep excavation yet
Are excavations supported or profiled safely as per the approved method statement?	Yes / No Give details: NA yet.
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Yes / No Give details: N/A yet
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Yes / No Give details: NA yet.
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople.	<input checked="" type="radio"/> Yes / No Give details:
Is a lift plan in place for any lifting operations?	<input checked="" type="radio"/> Yes / No Give details:
Are records available of weekly inspections for cranes including details of the safe working load?	<input checked="" type="radio"/> Yes / No Give details:

Site safety review

Are all tools and equipment in use in good condition?	Yes/No <input checked="" type="radio"/> Yes <input type="radio"/> No
	Give details:

Date(s) / Stages of next Site Safety Review(s), if required: *As required during lock down period*

SSR Approval

Signed:  Engineer's Representative	Signed:  Contractor's Representative	Date of this Safety Review: <i>April. 29th 2020.</i>
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001454
Author:	Munir Rashid.		
Site:	Intake	Date:	07/05/2020

Site Safety Review Attendees:	
Name: MUNIR RASHID YOUSSEF NAJJAR	Company / Designation: MDSC/DRE GWT/Construction Manager

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	<input checked="" type="checkbox"/> Yes / No
Were you given a site induction / daily briefing on arrival at site?	<input checked="" type="checkbox"/> Yes / No
Have all operatives on site had a full HS induction? Are records of their training available?	<input checked="" type="checkbox"/> Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No <input checked="" type="checkbox"/> COVID 19
2. Reporting & Records	
How many safety observations have been recorded today?	One
Is there a log of safety observations and incidents available on site?	<input checked="" type="checkbox"/> Yes / No
Are approved method statements in place for all work activities?	<input checked="" type="checkbox"/> Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	<input checked="" type="checkbox"/> Yes / No / NA Give details: Not now Appl.

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest.	✓ Yes / No Give details:
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details). 	✓ Yes / No Give details:
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	✓ Yes / No Give details:
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men - For women 	✓ Yes / No Give details:
Are toilet facilities well lit, ventilated, clean and hygienic?	✓ Yes / No Give details:
Are sufficient hand washing facilities provided including soap and hot water?	✓ Yes / No Give details:
Are areas for eating provided including provision for keeping chilled food?	✓ Yes / No Give details:
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	✓ Yes / No Give details:

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Yes / No Give details: <i>Yes in General but now N/A.</i>
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No Give details: ✓
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Yes / No Give details: ✓
Are materials and equipment stored correctly and orderly?	Yes / No Give details: <i>Improvement have to be done - Warning barriers around stored materials.</i>
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Yes / No Give details: ✓
Are trained first aiders available on site / nearby?	Yes / No Give details: ✓
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Yes / No Give details: ✓
Are muster points clearly signposted?	Yes / No Give details: ✓
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Yes / No Give details: ✓
Are designated smoking areas provided away from flammable materials?	Yes / No Give details: ✓

Site safety review

Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	Give details: ✓ Yes / No
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	Give details: ✓ Yes / No
Is adequate parking in a designated area provided for vehicles?	Give details: ✓ Yes / No
9. Excavations	
Is a permit to dig in place?	Give details: N/A Yes / No
Are excavations supported or profiled safely as per the approved method statement?	Give details: Yes / No
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Give details: Yes / No
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Give details: Yes / No
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople.	Give details: ✓ Yes / No
Is a lift plan in place for any lifting operations?	Give details: ✓ Yes / No
Are records available of weekly inspections for cranes including details of the safe working load?	Give details: ✓ Yes / No

Site safety review

Are all tools and equipment in use in good condition?	Yes / No
	Give details:
Two belts found damage and removed from site.	

Date(s) / Stages of next Site Safety Review(s), if required:	
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SSR Approval

<p>Signed:</p>  <p>07/05/2020</p> <p>Engineer's Representative:</p>	<p>Signed:</p>  <p>07/05/2020</p> <p>Contractor's Representative:</p>	<p>Date of this Safety Review:</p> <p>07.05.2020</p>
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	SYED EJAZUL KARIM		
Site:	W. T. P.	Date:	May 11 th 2020

Site Safety Review Attendees:	
Name: SYED EJAZUL KARIM	Company / Designation: HDSC, Deputy Resident Engr (LDRE).

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	<input checked="" type="radio"/> Yes / No Improved & pending regularly.
Were you given a site induction / daily briefing on arrival at site?	<input checked="" type="radio"/> Yes / No
Have all operatives on site had a full HS induction? Are records of their training available?	<input checked="" type="radio"/> Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	<input checked="" type="radio"/> Yes / No
2. Reporting & Records	
How many safety observations have been recorded today?	8 NB (5 NB + 3 NB)
Is there a log of safety observations and incidents available on site?	<input checked="" type="radio"/> Yes / No
Are approved method statements in place for all work activities?	<input checked="" type="radio"/> Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	Yes / No / (NA) Give details:

Site safety review

Item	Comments (Enter N/A if not relevant)
3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men - For women 	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Are toilet facilities well lit, ventilated, clean and hygienic?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Are sufficient hand washing facilities provided including soap and hot water?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Are areas for eating provided including provision for keeping chilled food?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No
Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Give details: <input checked="" type="radio"/> Yes / <input type="radio"/> No

Site safety review

Item	Comments (Enter N/A if not relevant)
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No Give details: <i>Improvement in progress</i>
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	<input checked="" type="radio"/> Yes / No Give details:
Are materials and equipment stored correctly and orderly?	<input checked="" type="radio"/> Yes / No Give details:
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	<input checked="" type="radio"/> Yes / No Give details:
Are trained first aiders available on site / nearby?	Yes / No Give details: <i>already in place & plan to increase</i>
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	<input checked="" type="radio"/> Yes / No Give details:
Are muster points clearly signposted?	Yes / No Give details: <i>Big Signboards are in progress.</i>
Are extinguishers in place, clearly marked for type of fire and easily accessible?	<input checked="" type="radio"/> Yes / No Give details:
Are designated smoking areas provided away from flammable materials?	<input checked="" type="radio"/> Yes / No Give details:

Site safety review



Item	Comments (Enter N/A if not relevant)
Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details: Plan to improve existing walkway.
Is adequate parking in a designated area provided for vehicles?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
9. Excavations	
Is a permit to dig in place?	<input type="radio"/> Yes / <input checked="" type="radio"/> No Give details: No deep excavation.
Are excavations supported or profiled safely as per the approved method statement?	<input type="radio"/> Yes / <input checked="" type="radio"/> No Give details: N/A yet.
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	<input type="radio"/> Yes / <input checked="" type="radio"/> No Give details: N/A yet.
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	<input type="radio"/> Yes / <input checked="" type="radio"/> No Give details: N/A yet.
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople,	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Is a lift plan in place for any lifting operations?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:

Site safety review

Item	Comments (Enter N/A if not relevant)
Are records available of weekly inspections for cranes including details of the safe working load?	<input checked="" type="radio"/> Yes <input type="radio"/> No Give details:
Are all tools and equipment in use in good condition?	<input checked="" type="radio"/> Yes <input type="radio"/> No Give details:

Date(s) / Stages of next Site Safety Review(s), if required: *As required during lockdown period.*

SSR Approval

Signed:  Engineer's Representative:	Signed:  11/05/20 Contractor's Representative:	Date of this Safety Review: 11/05/2020
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	MUINUR RASHID		
Site:	INTAKE	Date:	17.05.2020

Site Safety Review Attendees:	
Name: MUINUR RASHID YOUSSEF NAJJAR	Company / Designation: MDSC / DRE GWT/Construction Manager.

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	✓ Yes / No
Were you given a site induction / daily briefing on arrival at site?	✓ Yes / No
Have all operatives on site had a full HS induction? Are records of their training available?	✓ Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	✓ Yes / No ✓ COVID-19
2. Reporting & Records	
How many safety observations have been recorded today?	
Is there a log of safety observations and incidents available on site?	✓ Yes / No
Are approved method statements in place for all work activities?	✓ Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	✓ Yes / No / NA Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest.	✓ Yes / No Give details:
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	✓ Yes / No Give details:
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	✓ Yes / No Give details:
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men <i>Toilets should be improved for</i> - For women <i>workmen. (Rental one of SDWP)</i> 	✓ Yes / No Give details:
Are toilet facilities well lit, ventilated, clean and hygienic?	✓ Yes / No Give details:
Are sufficient hand washing facilities provided including soap and hot water?	✓ Yes / No Give details:
Are areas for eating provided including provision for keeping chilled food?	✓ Yes / No Give details:
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	✓ Yes / No Give details:

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are materials and equipment stored correctly and orderly?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are trained first aiders available on site / nearby?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are muster points clearly signposted?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Are designated smoking areas provided away from flammable materials?	Give details: <input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

Site safety review

Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	Give details: <input checked="" type="checkbox"/> Yes / No
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	Give details: <input checked="" type="checkbox"/> Yes / No
Is adequate parking in a designated area provided for vehicles?	Give details: <input checked="" type="checkbox"/> Yes / No
9. Excavations	
Is a permit to dig in place?	Give details: <input checked="" type="checkbox"/> Yes / No
Are excavations supported or profiled safely as per the approved method statement?	Give details: <input checked="" type="checkbox"/> Yes / No
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Give details: <input checked="" type="checkbox"/> Yes / No
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Give details: <input checked="" type="checkbox"/> Yes / No
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople.	Give details: <input checked="" type="checkbox"/> Yes / No
Is a lift plan in place for any lifting operations?	Give details: <input checked="" type="checkbox"/> Yes / No
Are records available of weekly inspections for cranes including details of the safe working load?	Give details: <input checked="" type="checkbox"/> Yes / No

Site safety review

Are all tools and equipment in use in good condition?	Yes / No Give details:

Date(s) / Stages of next Site Safety Review(s), if required:	
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SSR Approval

Signed:  Engineer's Representative:	Signed:  Contractor's Representative:	Date of this Safety Review: 17.05.2020
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Distribution: Original to project file. Copy to BMS Representative.

Project Team Distribution: Copy to all present at Review Meeting. Copy to site team members not present at review meeting.

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	MUNUR RASHID		
Site:	INTAKE	Date:	31.05.2020

Site Safety Review Attendees:	
Name: MUNUR RASHID YOUSSEF NAJJAR	Company / Designation: MDSC / DRE GWT / Construction Manager.

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	✓ Yes / No
Were you given a site induction / daily briefing on arrival at site?	✓ Yes / No
Have all operatives on site had a full HS induction? Are records of their training available?	✓ Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No ✓ COVID-19
2. Reporting & Records	
How many safety observations have been recorded today?	
Is there a log of safety observations and incidents available on site?	✓ Yes / No
Are approved method statements in place for all work activities?	✓ Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	✓ Yes / No / NA Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest	✓ Yes / No Give details:
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	✓ Yes / No Give details:
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	✓ Yes / No Give details:
Are sufficient toilet facilities available <ul style="list-style-type: none"> - For men <i>Improved for local workers (Rental area of SDWP)</i> - For women 	✓ Yes / No Give details:
Are toilet facilities well lit, ventilated, clean and hygienic?	✓ Yes / No Give details:
Are sufficient hand washing facilities provided including soap and hot water?	✓ Yes / No Give details:
Are areas for eating provided including provision for keeping chilled food?	✓ Yes / No Give details:
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	✓ Yes / No Give details:

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Give details: <input checked="" type="checkbox"/> Yes / No
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Give details: <input checked="" type="checkbox"/> Yes / No
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Give details: <input checked="" type="checkbox"/> Yes / No
Are materials and equipment stored correctly and orderly?	Give details: <input checked="" type="checkbox"/> Yes / No
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Give details: <input checked="" type="checkbox"/> Yes / No
Are trained first aiders available on site / nearby?	Give details: <input checked="" type="checkbox"/> Yes / No
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Give details: <input checked="" type="checkbox"/> Yes / No
Are muster points clearly signposted?	Give details: <input checked="" type="checkbox"/> Yes / No
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Give details: <input checked="" type="checkbox"/> Yes / No
Are designated smoking areas provided away from flammable materials?	Give details: <input checked="" type="checkbox"/> Yes / No

Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	<input checked="" type="checkbox"/> Yes / No Give details:
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	<input checked="" type="checkbox"/> Yes / No Give details:
Is adequate parking in a designated area provided for vehicles?	<input checked="" type="checkbox"/> Yes / No Give details:
9. Excavations	
Is a permit to dig in place?	<input checked="" type="checkbox"/> Yes / No Give details:
Are excavations supported or profiled safely as per the approved method statement?	<input checked="" type="checkbox"/> Yes / No Give details:
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	<input checked="" type="checkbox"/> Yes / No Give details:
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	<input checked="" type="checkbox"/> Yes / No Give details:
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople,	<input checked="" type="checkbox"/> Yes / No Give details:
Is a lift plan in place for any lifting operations?	<input checked="" type="checkbox"/> Yes / No Give details:
Are records available of weekly inspections for cranes including details of the safe working load?	<input checked="" type="checkbox"/> Yes / No Give details:

Site safety review

Are all tools and equipment in use in good condition?	Yes / No
Give details:	

Date(s) / Stages of next Site Safety Review(s), if required:	
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SSR Approval

<p>Signed:</p>  <p>Engineer's Representative:</p>	<p>Signed:</p>  <p>Contractor's Representative:</p>	<p>Date of this Safety Review:</p> <p>31.05.2020</p>
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	SYED FJAZUL KARIM		
Site:	W.T.P.	Date:	JUNE 2, 2020.

Site Safety Review Attendees:	
Name: Syed Fjazzul Karim	Company / Designation: MDSC, Deputy Resident Engineer. (DRE)

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	<input checked="" type="radio"/> Yes / No Need to maintain log book on daily basis for accessibility in case of Natural disaster.
Were you given a site induction / daily briefing on arrival at site?	<input checked="" type="radio"/> Yes / No
Have all operatives on site had a full HS induction? Are records of their training available?	<input checked="" type="radio"/> Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	<input checked="" type="radio"/> Yes / No
2. Reporting & Records	
How many safety observations have been recorded today?	8 (7 obs + 1 no)
Is there a log of safety observations and incidents available on site?	<input checked="" type="radio"/> Yes / No
Are approved method statements in place for all work activities?	<input checked="" type="radio"/> Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	Yes / No (NA) Give details:

Site safety review



Item	Comments (Enter N/A if not relevant)
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No Give details: All signs are at site but need to install properly. (Frames)
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No
Are materials and equipment stored correctly and orderly?	Yes <input checked="" type="radio"/> No Give details: Mechanical gr. from GAIT are not maintaining good house Keeping & scattered C.S. PITS by dam. Not properly maintaining safety issue.
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No
Are trained first aiders available on site / nearby?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No Planning to bring trainers for training 1st fire fight & emergency.
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No
Are muster points clearly signposted?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No New signs shall be posted within a few weeks of days.
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No
Are designated smoking areas provided away from flammable materials?	Give details: <input checked="" type="radio"/> Yes <input type="radio"/> No

Site safety review

Item	Comments (Enter N/A if not relevant)
Are records available of weekly inspections for cranes including details of the safe working load?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Are all tools and equipment in use in good condition?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:

Date(s) / Stages of next Site Safety Review(s), if required: *On 10th June 2020*

SSR Approval

Signed:  Engineer's Representative:	Signed:  Contractor's Representative:	Date of this Safety Review: <i>2/06/2020</i>
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	MD. MAHMUDUL HASAN RAHAT		
Site:	WTP	Date:	18.06.2020

Site Safety Review Attendees:	
Name: MD. MAHMUDUL HASAN RAHAT Nwokedi Uchechuna	Company / Designation: EMM, Env. Inspector GWTSHC HSE MANAGER

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	Yes / No —
Were you given a site induction / daily briefing on arrival at site?	Yes / No —
Have all operatives on site had a full HS induction? Are records of their training available?	Yes / No —
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No —
2. Reporting & Records	
How many safety observations have been recorded today?	03
Is there a log of safety observations and incidents available on site?	Yes / No —
Are approved method statements in place for all work activities?	Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	Yes / No / NA Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest	Give details: <u>Yes / No</u>
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	Give details: <u>Yes / No</u>
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	Give details: <u>Yes / No</u>
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men - For women 	Give details: <u>Yes / No</u>
Are toilet facilities well lit, ventilated, clean and hygienic?	Give details: <u>Yes / No</u>
Are sufficient hand washing facilities provided including soap and hot water?	Give details: <u>Yes / No</u>
Are areas for eating provided including provision for keeping chilled food?	Give details: <u>Yes / No</u>
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	Give details: <u>Yes / No</u>

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Yes / No <u> </u> Give details: Public area is outside from site
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No <u> </u> Give details:
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Yes / No <u> </u> Give details:
Are materials and equipment stored correctly and orderly?	Yes / No <u> </u> Give details:
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Yes / No <u> </u> Give details:
Are trained first aiders available on site / nearby?	Yes / No <u> </u> Give details:
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Yes / No <u> </u> Give details:
Are muster points clearly signposted?	Yes / No <u> </u> Give details:
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Yes / No <u> </u> Give details:
Are designated smoking areas provided away from flammable materials?	Yes / No <u> </u> Give details:

Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	Yes / No Give details: <u> </u>
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	Yes / No Give details: <u> </u>
Is adequate parking in a designated area provided for vehicles?	Yes / No Give details: <u> </u>
9. Excavations	
Is a permit to dig in place?	Yes / No Give details: <u> </u>
Are excavations supported or profiled safely as per the approved method statement?	Yes / No Give details: <u> </u>
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Yes / No Give details: <u> </u>
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Yes / No Give details: <u> </u>
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople,	Yes / No Give details: <u> </u>
Is a lift plan in place for any lifting operations?	Yes / No Give details: <u> </u>
Are records available of weekly inspections for cranes including details of the safe working load?	Yes / No Give details: <u> </u>

Site safety review

Are all tools and equipment in use in good condition?	Yes / No Give details:

Date(s) / Stages of next Site Safety Review(s), if required:	
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SSR Approval

<p>Signed: </p> <p>Engineer's Representative:</p>	<p>Signed: </p> <p>Contractor's Representative:</p>	<p>Date of this Safety Review: 18/06/2020 Thursday</p>
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	Md. Mahmudul Hasan Rahat		
Site:	INTAKE	Date:	25-June-2020

Site Safety Review Attendees:	
Name: Md. Omar Farouque Md. Mahmudul Hasan Rahat	Company / Designation: GWT SNC / HSE SUPERVISOR MDSL / E.I.

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	<input checked="" type="radio"/> Yes / No
Were you given a site induction / daily briefing on arrival at site?	<input checked="" type="radio"/> Yes / No
Have all operatives on-site had a full HS induction? Are records of their training available?	<input checked="" type="radio"/> Yes / No
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No Covid-19
2. Reporting & Records	
How many safety observations have been recorded today?	GWT SNC HSE observed 3 observation.
Is there a log of safety observations and incidents available on site?	<input checked="" type="radio"/> Yes / No
Are approved method statements in place for all work activities?	<input checked="" type="radio"/> Yes / No Give details:
Are signed and approved permits in place for high-risk activities?	<input checked="" type="radio"/> Yes / No / NA Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details: <i>Missing hand gloves for few workers.</i>
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men - For women 	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Are toilet facilities well lit, ventilated, clean and hygienic?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Are sufficient hand washing facilities provided including soap and hot water?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
Are areas for eating provided including provision for keeping chilled food?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details:
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	<input checked="" type="radio"/> Yes / <input type="radio"/> No Give details: <i>Menard storage area need to clean & tidy.</i>

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Yes / No Give details: N/A
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Give details: <input checked="" type="radio"/> Yes / No
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Give details: <input checked="" type="radio"/> Yes / No
Are materials and equipment stored correctly and orderly?	Give details: <input checked="" type="radio"/> Yes / No
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Give details: <input checked="" type="radio"/> Yes / No
Are trained first aiders available on site / nearby?	Give details: <input checked="" type="radio"/> Yes / No Medical officer available
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Give details: <input checked="" type="radio"/> Yes / No
Are muster points clearly signposted?	Give details: <input checked="" type="radio"/> Yes / No
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Give details: <input checked="" type="radio"/> Yes / No
Are designated smoking areas provided away from flammable materials?	Give details: <input checked="" type="radio"/> Yes / No



Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	<input checked="" type="radio"/> Yes / No Give details:
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	<input checked="" type="radio"/> Yes / No Give details:
Is adequate parking in a designated area provided for vehicles?	<input checked="" type="radio"/> Yes / No Give details:
9. Excavations	
Is a permit to dig in place?	Yes / No Give details: N/A
Are excavations supported or profiled safely as per the approved method statement?	Yes / No Give details: N/A
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Yes / No Give details: N/A
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Yes / No Give details: N/A
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople,	<input checked="" type="radio"/> Yes / No Give details:
Is a lift plan in place for any lifting operations?	<input checked="" type="radio"/> Yes / No Give details:
Are records available of weekly inspections for cranes including details of the safe working load?	<input checked="" type="radio"/> Yes / No Give details:

Site safety review

Are all tools and equipment in use in good condition?	<input checked="" type="radio"/> Yes <input type="radio"/> No Give details:
Proper action to be taken for:	
# Hand gloves to be used properly	
# Need to cut bushes at entry road as they hinder the walk way	
# SWDP camp needs to clear stagnant water at drain.	

Date(s) / Stages of next Site Safety Review(s), if required:	
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SSR Approval

Signed:  Engineer's Representative:	Signed:  Contractor's Representative:	Date of this Safety Review: 25/06/2020 Thursday
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Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting. Copy to site team members not present at review meeting

Site safety review

Project Title:	Dhaka Environmentally Sustainable Water Supply Project	Project No:	MM Proj. No: 346152 GWT Proj. No: 001464
Author:	Md. Mahmudul Hasan Rahat		
Site:	WTP	Date:	25/06/2020

Site Safety Review Attendees:	
Name: Md. Mahmudul Hasan Rahat	Company / Designation: MDSU / E.I.

Item	Comments (Enter N/A if not relevant)
1. Induction & Inspections	
Is there an accurate record of all persons on site? E.g. signing in log book.	Yes / No →
Were you given a site induction / daily briefing on arrival at site?	Yes / No →
Have all operatives on site had a full HS induction? Are records of their training available?	Yes / No →
Has a weekly health and safety briefing been held this week? Is a record available of attendance?	Yes / No → COVID-19, Briefings
2. Reporting & Records	
How many safety observations have been recorded today?	10
Is there a log of safety observations and incidents available on site?	Yes / No →
Are approved method statements in place for all work activities?	Yes / No → Give details:
Are signed and approved permits in place for high-risk activities?	Yes / No / NA → Give details:

3. PPE	
Are all personnel on site wearing minimum mandatory PPE on site? i.e. safety helmet, safety footwear, hi-vis vest	Yes / No Give details: <input type="checkbox"/>
Is the appropriate PPE being worn for the specific tasks: <ul style="list-style-type: none"> - Glasses and gloves as required depending on task - Working at height – safety harnesses - >85dB - Hearing protection - Dust, fumes or toxic gases – respiratory protection - Other tasks with permit specific PPE (give details) 	Yes / No Give details: <input type="checkbox"/>
4. Welfare Facilities	
Is a supply of clean drinking water readily available for everyone on site?	Yes / No Give details: <input type="checkbox"/>
Are sufficient toilet facilities available: <ul style="list-style-type: none"> - For men - For women 	Yes / No Give details: <input type="checkbox"/>
Are toilet facilities well lit, ventilated, clean and hygienic?	Yes / No Give details: <input type="checkbox"/>
Are sufficient hand washing facilities provided including soap and hot water?	Yes / No Give details: <input type="checkbox"/>
Are areas for eating provided including provision for keeping chilled food?	Yes / No Give details: <input type="checkbox"/>
5. Site Security & Housekeeping	
Is the site compound adequately fenced to prevent unauthorised access, with warning and information signs?	Yes / No Give details: <input type="checkbox"/>

Site safety review

Are members of the public, such as people passing by the site, protected e.g. from falling materials, moving machines?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Are appropriate safety signs in place e.g. traffic routes, authorised personnel, PPE?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Is the site tidy and well laid out? E.g. pathways are clear, no rubbish, no tools / equipment lying about.	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details: <i>Menard camp needs to be clear and tidy</i>
Are materials and equipment stored correctly and orderly?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
6. First Aid	
Are First-Aid facilities in place and do workers know where they are?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Are trained first aiders available on site / nearby?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
7. Fire Safety	
Is there an evacuation plan in place and is it understood by all employees?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Are muster points clearly signposted?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Are extinguishers in place, clearly marked for type of fire and easily accessible?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:
Are designated smoking areas provided away from flammable materials?	Yes / No <input type="checkbox"/> Yes / <input checked="" type="checkbox"/> No Give details:

Site safety review

Is smoking confined to designated areas? Answer is no if anyone is seen smoking outside of designated areas.	Yes / No Give details: <i>No one smokes outside</i>
8. Traffic Management	
Are pedestrian and vehicle routes clearly marked?	Yes / No Give details: <u> </u>
Is adequate parking in a designated area provided for vehicles?	Yes / No Give details: <u> </u>
9. Excavations	
Is a permit to dig in place?	Yes / No Give details: <u> </u>
Are excavations supported or profiled safely as per the approved method statement?	Yes / No Give details: <u> </u>
Is a safe means to enter and exit the excavation provided? Ladders should be positioned at a height:base ratio not flatter than 4:1. The upper end should be tied and extend 1m above excavation.	Yes / No Give details: <i>N/A</i>
Are barriers in place to prevent people falling into the excavation and keep materials, plant and equipment away from the edges?	Yes / No Give details: <u> </u>
10. Plant and Equipment	
Are there appropriate safety measures in place for plant operations, e.g. cordoned areas, bankspeople.	Yes / No Give details: <u> </u>
Is a lift plan in place for any lifting operations?	Yes / No Give details: <u> </u>
Are records available of weekly inspections for cranes including details of the safe working load?	Yes / No Give details: <u> </u>

Site safety review

Are all tools and equipment in use in good condition?	Yes / No
	Give details:
a Menard camp need to clean and tidy	
a Rebar binding worker is missing hand gloves while working.	

Date(s) / Stages of next Site Safety Review(s), if required:

SSR Approval

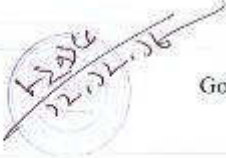
<p>Signed: </p>	<p>Signed: </p>	<p>Date of this Safety Review:</p>
<p>Engineer's Representative:</p>	<p>Contractor's Representative:</p>	

Distribution: Original to project file, Copy to BMS Representative

Project Team Distribution: Copy to all present at Review Meeting, Copy to site team members not present at review meeting

F. Environmental Clearances for DESWSP

Valid upto 10/12/18


Government of the People's Republic of Bangladesh
Department of Environment
Head Office, Paribesh Bhavan
E-16 Agargaon, Dhaka-1207
www.doe.gov.bd

Memo No: 22.02.6700.140.72.138.18. 1149 Date: 11/12/2018


Subject: Environmental Clearance for Dhaka Environmentally Sustainable Water Supply Project under Dhaka WASA.

Ref: Your application dated 30/07/2018 and 28/11/2018.

Dear Sir,

Please refer to your letter of 30th July 2018 and 28th November 2018 on the captioned subject, I have the pleasure to convey the approval of Environmental Clearance in favor of Dhaka Environmentally Sustainable Water Supply Project under Dhaka WASA.

A copy of the said Environmental Clearance Certificate is attached herewith for your kind information and necessary action at your end.


11.12.2018
(Syed Nazmul Ahsan)
Director (Environmental Clearance)
Phone: 8181673

Project Director
Dhaka Environmentally Sustainable Water Supply Project
Dhaka WASA, WASA Bhavan (9th Floor)
98, Kazi Nazrul Islam Avenue, Kawran Bazar
Dhaka-1215.

Copy Forwarded to :

- 1) Private Secretary to the Hon'ble Secretary, Ministry of Environment, Forest and Climate Change, Bangladesh Secretariat, Dhaka.
- 2) Director, Department of Environment, Dhaka Metropolitan/Regional office, Dhaka.
- 3) Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.

Government of the People's Republic of Bangladesh
Department of Environment
Paribesh Bhaban, E-16, Agargaon
Sher-e-Bangla Nagar, Dhaka-1207
www.doe.gov.bd

Environmental Clearance Certificate
Section 12 of the Environment Conservation Act, 1995 (Amended 2002)

Clearance Certificate Number: 1148
File number: 22.02.6700.140.72.138.18.
Clearance Certificate Issue Date: 11, December 2018
Renewal date not later than: 10, November 2018

A. Clearance Certificate Type Environmental Clearance Certificate
B. Clearance Certificate Holder Project Director Dhaka Environmentally Sustainable Water Supply Project Dhaka WASA, WASA Bhaban (9 th Floor) 98, Kazi Nazrul Islam Avenue, Kawran Bazar Dhaka-1215.
C. Premises to which this Clearance Certificate Applies Project Director Dhaka Environmentally Sustainable Water Supply Project Dhaka WASA, WASA Bhaban (9 th Floor) 98, Kazi Nazrul Islam Avenue, Kawran Bazar Dhaka-1215.
D. Activities for which this Clearance Certificate Authorizes and Regulates The following components will be implemented through Dhaka Environmentally Sustainable Water Supply Project under Dhaka WASA - Component 1 : Water Treatment Plant (WTP) (capacity 500MLD) Component 2 : Water Intake Structure (capacity 1050 MLD) Component 3 : 21.7 kilometer Raw Water Transmission Pipeline Component 4 : 13 kilometer Treated Water Transmission Pipeline Component 5 : 23 kilometer Distribution Reinforcement within the existing network Component 6 : 56 kilometer Distribution Reinforcement, small distribution pipe to DMA





Government of the People's Republic of Bangladesh
Department of Environment
Head Office, Paribesh Bhavan
E-16 Agargaon, Dhaka-1207
www.doe.gov.bd

Memo No: 22.02.0000.018.72.124.19-541

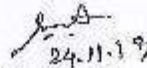
Date: 24/11/2019

Subject: Renewal of Environmental Clearance Certificate for Dhaka Environmentally Sustainable Water Supply Project.

Ref: Your Application dated 28/10/2019.

With reference to the above, the Department of Environment has decided to renew the Environmental Clearance Certificate for Dhaka Environmentally Sustainable Water Supply Project subject to following terms and conditions.

- i. The terms and conditions as stated in Environmental Clearance issued on 11/12/2018 vide 22.02.6700.140.72.138.18.1148 shall remain valid for the renewed period.
- ii. This renewal is valid upto 10/12/2020. Application for further renewal along with the renewal fee and Vat on renewal fee in separate Treasury Chalan shall have to be submitted to the Director, Department of Environment, Dhaka Metropolitan Office, Dhaka with a copy to Head Office at least 30 days before the expiry.


24.11.19

(Syed Nazmul Ahsan)
Director (Environmental Clearance)
Phone: 8181673

Project Director
Dhaka Environmentally Sustainable Water Supply Project
Dhaka WASA, WASA Bhavan (9th floor)
98, Kazi Nazrul Islam Avenue
Kawran Bazar, Dhaka.

Copy Forwarded to:

- 1) Private Secretary to the Hon'ble Secretary, Ministry of Environment, Forest and Climate Change, Bangladesh Secretariat, Dhaka.
- 2) Director, Department of Environment, Dhaka Metropolitan Office, Dhaka.
- 3) Assistant Director, Office of the Director General, Department of Environment, Head Office, Dhaka.

2117-1
File No. 2117-1
29/12/19

E. Terms and Conditions for Environmental Clearance Certificate

1. **Limit Condition for Discharges to Air and Water:** The Environmental Clearance Certificate must comply with schedule 2 and 10, rule 12 of the Environment Conservation Rules, 1997.
2. **Noise Limit:** The Environmental Clearance Certificate must comply with the Noise Pollution (Control) Rules, 2006.

In case of non-coverage of ECR 1997 the World Bank Environment, Health and Safety Guideline shall be adhered to.

3. Operating conditions:

- 3.1 Activities must be carried out in a competent manner. This includes:
 - (a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
 - (b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.
- 3.2 All plant and equipment installed at the premises or used in connection with the Environmental Clearance activity:
 - (a) must be maintained in a proper and efficient condition; and
 - (b) must be operated in a proper and efficient manner.
- 3.3 Construction works shall be restricted to day time hours so as to avoid/mitigate the disturbance of local lives as well as implementation schedules of the works shall be notified in advance to nearby residents.
- 3.4 Storage area for soils and other construction materials shall be carefully selected to avoid disturbance of the natural drainage.
- 3.5 This shall be ensured that soil is obtained from nearby areas, which are free of invasive plants. Re-vegetation and replanting shall be undertaken if rehabilitation works involve extensive vegetation clearance.
- 3.6 Vegetation clearance shall be minimizing at the construction phase as to minimize soil erosion. Soils for embankments shall be properly tested and compacted to ensure stability.
- 3.7 Proper construction practices shall be followed that minimize loss of habitats and fish breeding, feeding & nursery sites.
- 3.8 Proper and adequate sanitation facilities shall be ensured in labor camps throughout the proposed project period.
- 3.9 In order to control noise pollution, vehicles & equipment shall be maintained regularly; working during sensitive hours and locating machinery close to sensitive receptor shall be avoided.
- 3.10 No solid waste can be burnt in the project area. An environment friendly solid waste management should be in place during whole the period of the project in the field.
- 3.11 Proper and adequate on-site precautionary measures and safety measures shall be ensured so that no habitat of any flora and fauna would be demolished or destructed.
- 3.12 All the required mitigation measures suggested in the EIA report are to be strictly implemented and kept operative/functioning on a continuous basis.

- 3.13 Any heritage sight, ecological critical area, and other environmentally and/or religious sensitive places shall be avoided during project construction phase.
- 3.14 Resettlement plan should be properly implemented and people should be adequately compensated, where necessary.
- 3.15 Construction material should be properly disposed off after the construction work is over.
- 3.16 The Environmental Management Plan included in the EIA report shall strictly be implemented and kept functioning on a continuous basis.

4.1 Monitoring and Recording conditions:

- 4.1.1 The results of any monitoring required to be conducted by this Clearance Certificate must be recorded.
- 4.1.2 The following records must be kept in respect of any samples required to be collected for the purposes of this Clearance Certificate:
 - (a) the date(s) on which the sample was taken;
 - (b) the time(s) at which the sample was collected;
 - (c) the point at which the sample was taken; and
 - (d) the name of the person who collected the sample.

4.2 Requirement to monitor concentration of pollutants discharged

For each monitoring, the Clearance Certificate holder must monitor (by sampling and obtaining results by analysis) the following parameter: air quality, water quality and Noise.

5. **Reporting Conditions:** Environmental Monitoring Reports shall be made available simultaneously to Head quarters and Dhaka Metropolitan/Regional office of the Department of Environment on a quarterly basis during the whole period of the project.
6. **Notification of environmental harm:** The Clearance Certificate holder or its employees must notify the Department of Environment of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident.

F. Recording of pollution complaints

The certificate holder must keep a legible record of all complaints made to the certificate holder or any employee or agent of the certificate holder in relation to pollution arising from any activity to which this Environmental certificate applies. The record must include details of the following:

- (a) the date and time of the complaint;
- (b) the method by which the complaint was made;
- (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- (d) the nature of the complaint;

Translated copy of WARPO clearance regarding water use of Meghna river,
ENGLISH TRANSLATION OF THE MEMORANDUM OF WARPO PERMISSION

WARPO
Water Resources Planning Organization

Water Resources Planning
Organization
Ministry of Water Resources
Government of the People's Republic
of Bangladesh
WARPO Bhaban
72 Green Road, Dhaka-1215,
Bangladesh
Tel: 44819015, 44819006, Fax:
44819002
E-mail: dg@warpo.gov.bd
Website: www.warpo.gov.bd

Memo No.: 42.02.0000.004.36.001.18-34

Date: 15/01/2019

Managing Director
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, Kazi Nazrul Islam Avenue
Kawran Bazar, Dhaka.

Subject: Regarding issuance of Clearance for proposed "Dhaka Environmentally Sustainable Water Supply"

Reference: Memo No.: 46.113.618.00.00.W-229(Vol-01)/DESWSP/354; dated: 26/11/2018
AD

In regard of the above subject and reference, this clearance is issued after evaluation of the submitted information and DPP for the proposed "Dhaka Environmentally Sustainable Water Supply" subject to the WARPO's comment and compliance with the comments.

Sd/-

(Md. Mahmudul Hasan)

Copy to

1. Secretary, Ministry of Water Resources, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka.
2. Project Director, DESWSP, Dhaka WASA, Dhaka (along with annexure).

WARPO

Water Resources Planning Organization

“WARPO’s clearance matrix on proposed development plan of “Dhaka Environmentally Sustainable Water Supply Project”.

Description of Project Clearance Controller	Ye s	No	Comments
1 Is the project compliant to the National Water Policy?	Ye s		See comment 3.1
2 Is the project compliant with the National Water Management Policy (NWMP)?	Ye s		See comment 3.2
3 Is the project compliant with the Water Resources Management 7 th 5-Year Plan and Sustainable Development Goal (SDG) together with other Poverty-Assisted Activities, Programme/ Goal of Principles/ Objectives?	Ye s		See comment 3.3
4 Is the project compliant with Bangladesh Water Law 2013 and Bangladesh Water Regulation 2018?	Ye s		See comment 3.4
5 Is the project compliant with the Integrated Water Resources Management (IWRM) concept?	Ye s		See comment 3.5
6 Is the project duplicate or repetition to a project under implementation or completed by other Organization, Person/Group or if so, whether synchronized with those Organization, Person/Group?	Ye s		See comment 3.6
7 Is the Environmental Impact Assessment of the Water Sectoral Projects completed?	Ye s		See comment 3.7
8 Is the project prepared giving importance to the important social aspects and women, children, poor and under-developed population?			See comment 3.8
9 Whether during project preparation (Feasibility Study) the project scheduling guide (GPA) was followed?			See comment 3.9

10 Is in preparation of the project suitable and tested process, evaluation, technic and tools used?	Ye s	See comment 3.10
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Comment on Clearance:

Clearance to the proposed project is given subject to the necessary amendment as commented.

Sd/- Principal Scientific Officer/ Superintending Engineer (Water Resources Branch	Sd/- Director (Planning/ Technical)
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WARPO

Water Resources Planning Organization

Comments on the submitted DPP (Part of it) and information for the proposed “Dhaka Environmentally Sustainable Water Supply” for issuance of Water Resources Planning Organization (WARPO) clearance.

Background:

Dhaka Water Supply and Sewerage Authority (Dhaka WASA) is an important organization engaged in supplying potable water to the people of Dhaka City. The Organization, currently, supplying potable water to 15 Million people spreading 400 sq. km. area of the Dhaka City. It is expected that the demand of potable water will increase every day with the increase of the area of the Dhaka City to 600 sq. km. by the year 2020. Presently, water is supplied to the city mainly through extracting ground water using deep tube well. On one hand, more and more water is in extraction from the underground; on the other hand, necessary amount of water recharge is not possible due to continuous urbanization and other human created shortage of open spaces. On top of that due to climatic changes, the rainfall is reducing every day. Due to these the level of the underground water is alarmingly diminishing every year. It necessitates declaring of 40-60 deep tube well abandoned in and around Dhaka City. This is causing failure to supply water through extracting underground water. On the other hand extracting underground water is not sustainable and environment friendly and distribution system is not based on sustainable technology. That is why, it is necessary to arrange supplying potable water according to the demand through treating surface water reducing dependency on extraction of underground water. At present, for a long time, supply of water to North-Western part of Dhaka City, that means, to Uttora, Gulshan, Banani, Nikunjo, Khilkhhet, Badda, whole of Mirpur and adjacent areas is insufficient to the demand. A project for construction of Water Treatment Plant at Gandhabpur in Rupgonj of Narayangonj and its associated works are undertaken aiming to fulfil the increasing demand of 24 hour safe and uninterrupted pressurized water supply by this vast area.

As a first stage, under the project, water will be lifted constructing Intake at Bishnandi in Araihaazar Upozila on the bank of the River Meghna, 30 km East of Narayangonj and will be brought to the proposed Treatment Plant at Gandhabpur, Rupgonj from Golkandail of Dhaka Sylhet road using 2 pipes. Later, this treated water will be brought to the injection point at Baridhara, Dhaka through Madani Avenue crossing the Sitalakhya and the Balu rivers and thereafter that will be supplied to Uttora, Rampura, Mirpur of Dhaka town; and to North-Eastern part of Dhaka. The Feasibility Study of the project is completed.

Project Objective:

The main objective of the project is to ensure water supply to the water crisis areas of Dhaka City collecting surface water and reducing dependency on the underground water.

Physical Works under the Project:

- Construction of Intake on the bank of the river Meghna at Bishnandi of Araihasar Upozila in Narayangong.
- Construction of 22 km Raw Water Transmission Line from Intake point to Treatment Plant.
- Construction of Treatment Plant at Gandharbpur of Rupgonj Upozila in Narayangonj.
- Construction of 14 km Finished Water Transmission Line from Gandharbpur Treatment Plant to Baridhara, Dhaka.

The estimated cost of the project is 5 248.06 Crore according to the DPP.

Project's Financial and Economic Analysis:

	Net Project Value (NPV) (lac taka)	Benefit – Cost Ratio (BCR)	Internal Rate of Return (IRR)
Financial	30129	1.08:1	12.54%
Economic	92274	1.29:1	14.99%

Comments:

3.1 In the National Water Policy-1999 household and municipal use of water is given the highest priority. Concurrent use of underground and surface water, taking steps in limiting use of underground water are mentioned in the Water Policy. Para 4.6 (Ka) of the Water Policy mentioned about government support in collecting rain water and ensuring supply of safe and easily accessible water through various way. Dhaka WASA is an organization engaged in ensuring supply of pure water and sanitation system of Dhaka City. The implementation of the project under discussion will play an important role in ensuring supply of safe water to people. On top of that it will reduce uncontrolled use of underground water. Considering all these the project is aligned with the National Water Policy.

3.2 The National Water Management Plan (NWMP) mentioned programs aiming supply of potable and dependable water for ensuring protection of public health. The project is aligned with the aim-objective and programs as mentioned in MC 002: Dhaka Bulk Water Supply and Distribution System of the National Water Management Plan.

3.3 The 7th 5-Year Plan was formulated targeting Vision 2020 goal. The 7th 5-Year Plan mentioned to ensure safe water in its Nutrition and Services Strategy. It is mentioned in the Plan that the government organizations would continue to work towards providing services to citizens. Dhaka WASA would plan to supply safe water to the city dwellers. Apart from that this project will assist in achieving SDG-6 goal.

3.4 It is mentioned in the National Water Law to ensure safe extraction of underground water. The project will play a role in reducing extraction of underground water to supply water to Dhaka

City. Clause 3 (2) of Water Law considered rights of water use for potable water and cleanliness and sanitation as the highest priority. Apart from that, the priority list of use of water resources of the Clause 18 of the Water Law has given the highest priority to drinking water. The objective of the project is using surface water instead of underground water to contribute in supplying water to Dhaka town that would be environmentally sustainable.

3.5 The National Water Policy (Para 4.5 Ka) suggests to develop water resources projects as much as possible diversified and complete these projects in an integrated and diversified fashion from project planning, implementation to project monitoring. The proposed project will play an important role in supplying safe water to Dhaka City and will help in reducing dependency on underground storage thereby will support to reduce environmental risks.

3.6 To stride for supplying water and development of sanitation system for Dhaka City is the main function of the Dhaka WASA. Water will be supplied from the river Meghna. It is necessary to consider whether within the vicinity of the collection point at Meghna river there is any irrigation or river embankment protection project has been completed or is under implementation by any other organization. It is necessary to show in the index map of the DPP any completed or implementing irrigation or river embankment protection project by any other organization in or near the project area.

3.7 It is compulsory to determine environmental impact for all Water Resources projects according to the para 4.12 of the National Water Law. The Feasibility Study of the proposed project was conducted in 2011. Later, Initial Environmental Examination (IEE) was completed for construction of the Water Treatment Plant under the Dhaka Environmentally Sustainable Water Supply Project and clearance certificate from the Department of Environment was obtained. The Environmental Impact Assessment was conducted further under the Dhaka Environmentally Sustainable Water Supply Project. The report mentioned that there would be no negative impact on the environment implementing the project. It would be necessary to follow the suggested Environmental Management Plan (EMP) that is included in the report. It is necessary to follow the instructions of the report about designing of the Intake Screen considering the fish and other aquatic animals near the Intake point.

3.8 To supply uninterrupted water to increased population of Dhaka City would be possible on completion of the project. The local people and stakeholders were consulted during the Environmental Impact Assessment. Socio-economic impact due to implementation of the project and rehabilitation plan were developed under the project.

3.9 It is necessary, during investing in water sector, to follow all the instructions related to assessment of project or GPA (GPA), people's participation and various other circular issued by the government at time to time during preparation of Feasibility Study Report for all Projects. The Financial and Economic Analysis of the project is completed.

3.10 Feasibility Study of the “Dhaka Environmentally Sustainable Water Supply Project” was completed in 2011. The report considered few locations of Meghna and Sitalakhya rivers for analysis of water quantity and quality and river hydrology and morphology. It is reported that there would be no environmental impact on the river as there would be extraction of 1% of water from the river Meghna during dry season under the project. The report didn't mention whether impact of the environmental change was considered. The Feasibility Study considered that the Water Treatment Plant would be constructed at Khilkhet. Later, it was decided to change to Gandharbpur and further study was conducted. The Feasibility Study reported that the river bank at Bishnandi is stable. But whether there will be any impact due to construction of the Intake or there will be any new possibility of river bank erosion need to be analyzed and necessary measures need to be adopted accordingly. Apart from that the report didn't consider climatic change and whether availability of water at intake point would be influenced by the construction of any obstruction, presently or in future. So, climatic change and availability of water due to construction of any obstruction in the upstream may be considered seriously.

Sd/- 14/1/19 Sd/- 14/01/209

Md. Jamal Haider Md. Jahid Hossain

Scientific Officer Senior Scientific Officer

Water Resources Planning Organization Water Resources Planning Organization

Ministry of Water Resources Ministry of Water Resources

WARPO
পানি সম্পদ পরিকল্পনা সংস্থা

PD/DESWSR
১২/০১/১৯

Water Resources Planning Organization
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স্মারক নং: ৪২.০২.০০০০.০০৪.৩৬.০০১.১৮-৬৪

তারিখ: ১২/০১/২০১৯

✓ ব্যবস্থাপনা পরিচালক
ঢাকা পানি সরবরাহ ও পয়ঃনিষ্কাশন কর্তৃপক্ষ
ওয়ার্ড ভবন, কাজী নজরুল ইসলাম এভিনিউ,
বাহারান বাহার, ঢাকা।

ক্রমিক	অনুরোধ	অনুগ্রহ
০১	১২/০১/১৯	১২/০১/১৯
০২	১২/০১/১৯	১২/০১/১৯
০৩	১২/০১/১৯	১২/০১/১৯
০৪	১২/০১/১৯	১২/০১/১৯
০৫	১২/০১/১৯	১২/০১/১৯

বিষয়: প্রজ্ঞাপিত "ঢাকা এনভায়রনমেন্টাল সাসটেনেবল ওয়াটার সাপ্লাই" শীর্ষক প্রকল্পের ছাড়পত্র প্রদান প্রসঙ্গে।

সূত্র: স্মারক নং: ৪৬.১১৩.৬১৮.০০.০০.W-229(Vol-01)/DESWSR/354; তারিখ: ২০/১১/২০১৮ খ্রিঃ

উপর্যুক্ত বিষয় ও সূত্রে বর্ণিত পত্রের প্রেক্ষিতে প্রজ্ঞাপিত "ঢাকা এনভায়রনমেন্টাল সাসটেনেবল ওয়াটার সাপ্লাই" শীর্ষক প্রকল্পের উপস্থাপিত তথ্য এবং ডিপিপি (অংশবিশেষ) পর্যালোচনা করে ওয়ারসের মতামত ও উক্ত মতামত প্রতিপালন সাপেক্ষে ছাড়পত্র প্রদান করা হলো।

সংযুক্তি: বর্ণনামতে (০৫ পাতা)।

১২/০১/১৯
১২/০১/১৯

মোঃ মাহমুদুল হাসান
মহাপরিচালক, ওয়ারসে

তনুলিপি:

- ১। সচিব, পানি সম্পদ মন্ত্রণালয়, গণপ্রজাতন্ত্রী বাংলাদেশ সরকার, বাংলাদেশ সচিবালয়, ঢাকা।
(কৃষ্টি আকর্ষণ: যুগ্ম প্রধান, পানি সম্পদ মন্ত্রণালয়, গণপ্রজাতন্ত্রী বাংলাদেশ সরকার, বাংলাদেশ সচিবালয়, ঢাকা)
- ২। প্রকল্প পরিচালক, DESWSR প্রকল্প, ঢাকা ওয়াসা, ঢাকা (সংযুক্তিসহ)।

১২/০১/১৯

TL, MDSC
PL. reply
22/1/19
Engr. Md. Mahmudul Islam
Supervising Engineer &
Project Director
PAU, DESWSR Dhaka WASA

MR. DONALD	
23/01/19	

WARPO

পানি সম্পদ পরিকল্পনা সংস্থা

“ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রকল্প” শীর্ষক উন্নয়ন প্রকল্প প্রস্তাবের উপর ওয়ারপোর ছাড়পত্র নির্ণায়ক ছক/ ম্যাট্রিক্স।

ক্রমিক নং	প্রকল্প ছাড়পত্র নিয়ন্ত্রকের বর্ণনা	হ্যাঁ	না	মন্তব্য
১	প্রকল্পটি জাতীয় পানি নীতি এর সাথে সামঞ্জস্যপূর্ণ কিনা	হ্যাঁ		মন্তব্য ৩.১ হ্রস্ব
২	প্রকল্পটি জাতীয় পানি ব্যবস্থাপনা পরিকল্পনা (এনড্রিউএমপি) এর সহিত সামঞ্জস্যপূর্ণ কিনা	হ্যাঁ		মন্তব্য ৩.২ হ্রস্ব
৩	প্রকল্পটি পানি সম্পদ ব্যবস্থাপনায় ৭ম পঞ্চ বার্ষিকী পরিকল্পনা ও টেকসই উন্নয়ন লক্ষ্যমাত্রা (এসডিজি) সহ অন্যান্য দারিদ্র-সহায়ক কর্মসূচি, কর্মসূচী/নীতিমালায় লক্ষ্য/উদ্দেশ্যের সাথে সামঞ্জস্যপূর্ণ কিনা	হ্যাঁ		মন্তব্য ৩.৩ হ্রস্ব
৪	প্রকল্পটি বাংলাদেশ পানি আইন ২০১৩ এবং বাংলাদেশ পানি বিধিমালা-২০১৬ এর সাথে সামঞ্জস্যপূর্ণ কিনা	হ্যাঁ		মন্তব্য ৩.৪ হ্রস্ব
৫	প্রকল্পটি সমন্বিত পানি সম্পদ ব্যবস্থাপনা (আইডরিডআরএম) ধরনের সাথে সংগতিপূর্ণ কিনা			মন্তব্য ৩.৫ হ্রস্ব
৬	অন্যান্য সংস্থা, ব্যক্তি/গোষ্ঠি কর্তৃত্বপরিচালিত বা সমান্তর প্রকল্পসমূহের সহিত প্রস্তাবিত প্রকল্পটির কোন ঝেঁজতা বা পুনরাবৃত্তি আছে কিনা বা ঝেঁজতে সংস্থা, ব্যক্তি বা গোষ্ঠির সহিত সমন্বয় করা হয়েছে কিনা	হ্যাঁ		মন্তব্য ৩.৬ হ্রস্ব
৭	পানি স্বচ্ছতার প্রকল্পসমূহের পরিবেশগত প্রভাব (ইআইএ) নিরূপণ করা হয়েছে কিনা	হ্যাঁ		মন্তব্য ৩.৭ হ্রস্ব
৮	প্রকল্পটি পুরুষপূর্ণ সামাজিক বিঘ্নাদি এবং নারী, শিশু, দরিদ্র ও জনস্বাস্থ্যের অনশেষীয় প্রতি বিশেষ পুরুষ দিয়ে প্রকল্পটি প্রস্তুত করা হয়েছে কিনা			মন্তব্য ৩.৮ হ্রস্ব
৯	প্রকল্প প্রণয়নের ক্ষেত্রে (সম্ভাব্যতা যাচাই) প্রকল্প নির্ধারিত নির্দেশিকা (ডিপিএ) অনুসরণপূর্বক তৈরী করা হয়েছে কিনা			মন্তব্য ৩.৯ হ্রস্ব
১০	প্রকল্পটি তৈরীতে উপযুক্ত ও পরীক্ষিত বিপ্লোমবি প্রকৃতিয়া, মূল্যায়ন পদ্ধতি, কৌশল ও টেনিস ব্যবহার করা হয়েছে কিনা	হ্যাঁ		মন্তব্য ৩.১০ হ্রস্ব

ছাড়পত্র মন্তব্যঃ

মতামতের আলোকে প্রয়োজনীয় সংশোধন সাপেক্ষে প্রস্তাবিত প্রকল্পটির ছাড়পত্র প্রদান করা হলো।

<p>স্বাক্ষর ১৪/১/১৯</p> <p>মুখ্য বৈজ্ঞানিক কর্মকর্তা/ তত্ত্বাবধায়ক প্রকৌশলী (পানি সম্পদ শাখা)</p>	<p>স্বাক্ষর ১৪/০১/১৯</p> <p>পরিচালক (পরিকল্পনা/কমিউনিটি)</p>
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ছাড়পত্র প্রদানের নিমিত্তে সরবরাহকৃত ডিপিপি (অংশ বিশেষ) ও তথ্যের ভিত্তিতে "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট" শীর্ষক উন্নয়ন প্রকল্প প্রস্তাবের উপর পানি সম্পদ পরিকল্পনা সংস্থা (ওয়ারপো)'র মতামত

পটভূমিঃ

ঢাকা পানি সরবরাহ ও পায় নিষ্কাশন কর্তৃপক্ষ (ঢাকা ওয়াসা) ঢাকা মহানগরীতে জনসাধারণের কাছে সুপেয় পানি সরবরাহের কাজে নিয়োজিত একটি পুরনুত্বপূর্ণ প্রতিষ্ঠান। প্রতিষ্ঠানটি বর্তমানে ৪০০ কর্তি বিঘা বিঘৃত ঢাকা মহানগরী এলাকায় প্রায় ১৫ মিলিয়ন জনসাধারণকে সুপেয় পানি সরবরাহ করে যাচ্ছে। অংশ করা যায় যে, ২০২০ সালের মধ্যে ঢাকা মহানগরীর পরিমি বৃদ্ধি পেয়ে ৬০০ কর্তি বিঘা এ বীড়াবে এক সেই সাথে সুপেয় পানির চাহিদাও দিন দিন বৃদ্ধি পাবে। বর্তমানে নগরীতে পানি সরবরাহ করা হয় মূলত গভীর নলকূপের মাধ্যমে ভূ-গর্ভস্থ পানি উত্তোলন করে। একদিকে সুপেয় পানির চাহিদা মেটানোর জন্য অধিক সংখ্যক ভূ-গর্ভস্থ পানি উত্তোলন করা হচ্ছে, অন্যদিকে উত্তোরণের নগরায়ন ও অন্যান্য মানব সৃষ্ট কারণে প্রয়োজনীয় উৎসৃত জায়গার অভাবে প্রয়োজনীয় পরিমাণ পানি ভূগর্ভে পুনঃভরণ হচ্ছে না। অদুপরি জনবাহু পরিবর্তনের কারণে বৃষ্টিপাতের পরিমাণ ও দিন দিন হ্রাস পাচ্ছে। ফলে প্রতিবছরই ভূ-গর্ভস্থ পানির স্তর আংশিকভাবে হারাতে নিতে নেমে যাচ্ছে। ফলে ঢাকা নগরী ও আশেপাশের ৪০-৬০ টি গভীর নলকূপ মাধ্যমে পরিষ্কার যোগ্য করার প্রয়োজন হচ্ছে। এতে নলকূপের মাধ্যমে ভূ-গর্ভস্থ পানি উত্তোলন ও সরবরাহ ব্যবস্থা অকার্যকর হয়ে পড়ছে। তাছাড়া গভীর নলকূপের মাধ্যমে ভূগর্ভস্থ পানি উত্তোলন টেকসই ও পরিবেশবান্ধব নয় এবং বিতরণ ব্যবস্থাও লাগসই প্রযুক্তি নির্ভর নয়। এ কারণেই চাহিদা মোতাবেক সুপেয় পানি সরবরাহের লক্ষ্যে ভূ-গর্ভস্থ পানি উত্তোলনের উপর নির্ভরশীলতা কমিয়ে ভূ-পরিষ্কৃত পানি শোধন করে তা সরবরাহের ব্যবস্থা করা প্রয়োজন। বর্তমানে ঢাকা মহানগরীর উত্তর পশ্চিমাংশ অর্থাৎ উত্তর, গুলশান, বনানী, নিকুজ, ফিল্ডবেক, বাবু, সমগ্র মিরপুর ও ভবসংলয় এলাকা সমূহে দীর্ঘ দিন ধরে প্রয়োজনের তুলনায় পানি সরবরাহ অপ্রতুল। এই ব্যাপক ধারবান এলাকায় সর্ববর্ধমান পানির চাহিদার পরিপ্রেক্ষিতে ২৪ ঘণ্টা নিরাপদ ও নিরবিচ্ছিন্ন প্রেশারাইজড পানি সরবরাহ নিশ্চিত করার লক্ষ্যে টেকসই পরিকল্পনার অংশ হিসেবে নারায়ণগঞ্জের কুলগঞ্জ উপজেলার গছবপুরে পানি শোধনাগার নির্মাণ ও আনুযায়িক কাজের জন্য প্রকল্পটি নেয়া হয়েছে।

উক্ত প্রকল্পের আওতায় মেঘনা নদীর পাড়ে ঢাকা হতে ৩০ কিঃমিঃ পূর্বে নারায়ণগঞ্জ জেলার আড়াইথার উপজেলার বিশনন্দী এলাকায় ইনটেক স্থাপনের মাধ্যমে পানি উত্তোলন করে প্রথম ধাপে ২ টি পাইপের মাধ্যমে ঢাকা সিটি রোডের পোলকর্ডাইল হতে ব্রুপগঞ্জের গছবপুরে প্রস্তাবিত পানিশোধনাগার এ আনা হবে। পরবর্তীতে এ পরিষ্কৃত পানি শীতলক্ষ্যা ও বাসু নদী অতিক্রম করে মাদানী এভিনিউ হয়ে ঢাকার বারিখারায় ইনজেকশন পয়েন্টে কনা হবে এবং পরবর্তীতে তা ঢাকা শহরের উত্তর, রামপুরা মিরপুর, এবং ঢাকার উত্তর পূর্বাংশে সরবরাহ করা হবে। প্রকল্পটি গ্রহণে কিজিবিপিটি স্ট্যাডি সম্পন্ন করা হয়েছে।

প্রকল্পের উদ্দেশ্যঃ

প্রকল্পের মূল উদ্দেশ্য ভূ-পরিষ্কৃত পানি আহরণের মাধ্যমে ঢাকা মহানগরীতে পানি সংকটপন্ন এলাকায় নিরবিচ্ছিন্ন পানি সরবরাহ নিশ্চিত করা এবং ভূ-গর্ভস্থ পানি উপর নির্ভরশীলতা হ্রাস করা।

প্রকল্পের আওতায় চৌত বাছাই

- মেঘনা নদীর পাড়ে নারায়ণগঞ্জ জেলার আড়াইহাজার উপজেলার বিশনদী এলাকায় ইনটেক নির্মাণ।
- ইনটেক পর্যন্ত হতে পানি শোধনাগার পর্যন্ত ২২ কিঃমিঃ Raw Water Transmission Line নির্মাণ।
- নারায়ণগঞ্জের দুপগঞ্জ উপজেলার গর্ভপুরে পানি শোধনাগার নির্মাণ।
- গর্ভপুরের পানি শোধনাগার হতে ঢাকার বারিধারা পর্যন্ত ১৪ কিঃমিঃ Finished Water Transmission Line নির্মাণ।

ডিপিপি অনুযায়ী প্রকল্পটির প্রাকলিত ব্যয় ৫২৪৮.০৬ কোটি টাকা।

প্রকল্পের আর্থিক ও অর্থনৈতিক বিশ্লেষণঃ

	নেট প্রজেক্ট ভ্যালু (NPV) (লক্ষ টাকাঃ)	বেনিফিট কস্ট রেশিও (BCR)	ইন্টারনাল রেট অব রিটার্ন (IRR)
আর্থিক	৩০১২৯	১.০৮ : ১	১২.৫৪ %
অর্থনৈতিক	৯২২৭৪	১.২৯ : ১	১৪.৯৯ %

মতামতঃ

৩.১ জাতীয় পানি নীতি-১৯৯৯ তে পানির গর্ভস্থ এবং শৌর ব্যবহারকে সর্বাধিক গুরুত্ব প্রদান করা হয়েছে। পানি নীতিতে ভূ-গর্ভস্থ এবং ভূ-পরিষ্ক পানির সংযোজক ব্যবহার, ভূ-গর্ভস্থ পানির ব্যবহার সীমিত পর্যায়ে রাখার পদক্ষেপের কথা উল্লেখ করা হয়েছে। পানি নীতির ৪.৬ (ক) অনুচ্ছেদে ব্যুটির পানি সংরক্ষণসহ বিভিন্ন উপায়ে নিরূপণ সহজ পদ্ধতি ব্যবহার পানির সুষ্ঠু যোগান নিশ্চিতকরণে সরকারের সমর্থনের কথা বলা হয়েছে। ঢাকা ওয়াশা ঢাকা মহানগরীতে বিশুদ্ধ পানি সরবরাহ ও পর্যায়নিষ্কাশন ব্যবস্থা নিশ্চিতকরণের কাঙ্ক্ষা নিয়োজিত প্রতিষ্ঠান। আলোচ্য প্রকল্প বাস্তবায়নে শহরের জনসাধারণের নিকট নিরাপদ পানি সরবরাহ নিশ্চিতকরণে পুরুত্বপূর্ণ ভূমিকা পালন করবে। তদুপরি ভূ-গর্ভস্থ পানির অনিয়ন্ত্রিত ব্যবহার হ্রাস করবে। এসব দিক বিবেচনায় প্রকল্পটি জাতীয় পানি নীতির সাথে সামঞ্জস্যপূর্ণ।

৩.২ জাতীয় পানি ব্যবস্থাপনা পরিকল্পনা (এনডিওইএমপি)তে প্রধান প্রধান শহরে জনস্বাস্থ্যের সুরক্ষা নিশ্চিত করণের লক্ষ্যে সকলের জন্য নিরাপদ ও নির্ভরযোগ্য সুশেয় পানি সরবরাহের উদ্দেশ্যে কর্মসূচীর উল্লেখ রয়েছে। প্রকল্পটি জাতীয় পানি ব্যবস্থাপনা পরিকল্পনা (এনডিওইএমপি)র MC 002: Dhaka Bulk Water Supply and Distribution System প্রোগ্রামে বর্ণিত লক্ষ্য-উদ্দেশ্য এবং উল্লেখিত কর্মসূচীর সাথে সঙ্গতিপূর্ণ।

৩.৩ ডিএন-২০১১ এর লক্ষ্যমাত্রা কে সামনে রেখে সপ্তম পঞ্চবার্ষিকী পরিকল্পনা প্রণয়ন করা হয়। সপ্তম পঞ্চবার্ষিকী পরিকল্পনার পুষ্টি ও সেবাতে উন্নয়ন কৌশলে নিরাপদ পানি নিশ্চিতকরণের কথা বলা হয়েছে। পরিকল্পনায় উল্লেখ করা হয়েছে নাগরিক সেবা গৌর্বে দেওয়ার লক্ষ্যে সরকারি সংস্থা সমূহ কাছ করে যাবে।

Handwritten signature

ঢাকা ওয়াশা সকল নগরবাসীর নিকট নিরাপদ পানি সরবরাহের নিমিত্তে কার্যক্রম গ্রহণ করবে। তাছাড়া এসভিজি-৬ এর লক্ষ্যে অর্গনে এই প্রকল্প সহায়ক ভূমিকা পালন করবে।

৩.৪ বাংলাদেশ পানি আইন-২০১৩ এর পঞ্চম অধ্যায়ের ধারা-১৯ এ ভূ-গর্ভস্থ পানির নিরাপদ আহরণ সীমা নিশ্চিত করণের কথা উল্লেখ করা হয়েছে। প্রকল্পটি ঢাকা মহানগরীতে পানি সরবরাহের জন্য ভূ-গর্ভস্থ পানির আহরণ সীমিত করতে ভূমিকা পালন করবে। পানি আইনের ৩ (২) নং ধারায় সুপেয় পানি এবং পরিষ্কৃতা ও পর্যায়নিষ্কাশনের জন্য ব্যবহার্য পানির অধিকারকে সর্বাধিক হিসেবে বিবেচনা করা হয়েছে। তাছাড়া পানি আইনের ১৯ নং ধারায় পানি সম্পদের অগ্রাধিকার ভিত্তিক ব্যবহার এর যে ক্রম উল্লেখ করা হয়েছে সেখানে খাবার পানিকে সর্বোচ্চ অগ্রাধিকার দেওয়া হয়েছে। প্রকল্পটির উদ্দেশ্য হলো ভূ-গর্ভস্থ পানির পরিবর্তে ভূ-পরিষ্কৃ পানি ব্যবহার করে ঢাকা শহরের পানি সরবরাহ ব্যবস্থায় অবরন রাখা যা পরিবেশগতভাবে টেকসই হবে।

৩.৫ জাতীয় পানি নীতি (অনুচ্ছেদ ৪.৫.ক) অনুযায়ী পানি সম্পদ প্রকল্প, যতোটা সম্ভব বহুমুখী প্রকল্প হিসেবে গড়ে তোলা এবং এসব প্রকল্পের পরিকল্পনা ও বাস্তবায়ন থেকে পরিবেশক পর্যন্ত সব কিছুই একটি সমন্বিত বহু বিধকে দুটি ভঙ্গির ভিত্তিতে সম্পন্ন করা। প্রস্তাবিত প্রকল্পটি ঢাকা মহানগরীতে নিরাপদ পানি সরবরাহ নিশ্চিতকরণে গুরুত্বপূর্ণ ভূমিকা পালন করবে এবং ভূ-গর্ভস্থ পানি খরকত্বের উপর নির্ভরশীলতা হ্রাস করে পরিবেশগত ঝুঁকি কমাতে সহায়ক করবে।

৩.৬ ঢাকা মহানগরীতে পানি সরবরাহ এবং পর্যায়নিষ্কাশন ব্যবস্থা গ্রহণে পদক্ষেপ নেওয়া ঢাকা ওয়াশার মূল কার্যক্রমের অংশ। প্রকল্পের অধীনে মেঘনা নদী হতে পানি সরবরাহ করা হবে। মেঘনা নদীর পানি সংগ্রহ এলাকায় কাছাকাছি অন্য কোন সংস্থার কোন সেচ বা নদীর তীর সংরক্ষণ প্রকল্প বা অন্য কোন প্রকল্প বাস্তবায়ন হয়েছে কিনা বা চলমান রয়েছে কিনা তা বিবেচনা করা প্রয়োজন। প্রকল্পের ভিত্তিপিতে ইনডেন্সি মাপে প্রকল্প এলাকায় অথবা কাছাকাছি অন্য সংস্থা কর্তৃক বাস্তবায়িত বা বাস্তবায়নধীন অন্য প্রকল্প সমূহের অবস্থান উল্লেখ করা আবশ্যিক।

৩.৭ জাতীয় পানি নীতি অনুচ্ছেদ ৪.১২ খ অনুযায়ী পানি সম্পদ খাতের সকল প্রকল্পে পরিবেশগত প্রভাব নিরূপণ করা অপরিহার্য। প্রস্তাবিত প্রকল্পে প্রাথমিক ভাবে ২০১১ সালে ফিজিভিলিটি স্টাডি করা হয়। পরবর্তীতে "ঢাকা এনভায়রনমেন্টাল সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট" এর অওতায় পানি শোধনাগার স্থাপনের জন্য Initial Environmental Examination (IEE) সম্পন্ন করা হয় এবং পরিবেশ অধিদপ্তরের হস্তান্তর গ্রহণ করা হয়। "ঢাকা এনভায়রনমেন্টাল সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট" প্রকল্পটির অধীনে পরবর্তীতে পরিবেশগত প্রতিক্রিয়া সমীক্ষা পরিচালনা করা হয়। সমীক্ষায় প্রকল্পের ভৌত কাজ বাস্তবায়নের কালে উল্লেখযোগ্য কোন পরিবেশগত নেতিবাচক প্রভাব পড়বে না বলে উল্লেখ করা হয়েছে। প্রতিবেদনে Environmental Management Plan (EMP) অন্তর্ভুক্ত করা হয়েছে যা ফরাসিভাবে অনুসরণ করা আবশ্যিক। পরিবেশগত সমীক্ষায় মেঘনা নদীর ইনটেক পয়েন্ট বাইপাস অন্যান্য জনস্বার্থ প্রাণীর প্রতি বিবেচনা করে Intake Screen নকশা প্রণয়নের কথা বলা হয়েছে যা গুরুত্বসহকারে বিবেচনা করা প্রয়োজন।

৩.৮ প্রকল্পটি বাস্তবায়িত হলে ঢাকা মহানগরীতে বর্ষিত জনসাধারণের নিকট নিরাপত্তি পানি সরবরাহ করা সম্ভব হবে। পরিবেশগত প্রতিক্রিয়া সমীক্ষা পরিচালনার সময় স্থানীয় জনগণ ও স্টেকহোল্ডারদের সঙ্গে

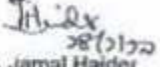
WARPO

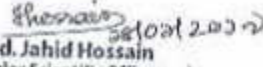
পানি সম্পদ পরিকল্পনা সংস্থা

আলোচনা করা হয়েছে। প্রকল্পের আওতায় প্রকল্প বাস্তবায়নের ফলে আর্থ-সামাজিক প্রভাব এবং পুনর্বাসন পরিকল্পনা প্রণয়ন করা হয়েছে।

৩.৯ পানি ক্ষেত্রে বিনিয়োগের ক্ষেত্রে, সকল প্রকল্পের পরিকল্পনা সম্ভাব্যতঃ সমীক্ষা প্রণয়ন ক্ষেত্রে প্রকল্প মূল্যায়ন সন্তোষ নির্দেশনা বা জিপিএ (GPA), জনগণের অংশগ্রহণের নির্দেশনা এবং সরকার কর্তৃক বিভিন্ন সময়ে জারীকৃত অন্য সকল নির্দেশনা অনুসরণ করা প্রয়োজন। প্রকল্পের আর্থিক ও অর্থনৈতিক বিশ্লেষণ সম্পন্ন করা হয়েছে।

৩.১০ ২০১১ সালে "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সার্ভাই প্রজেক্ট" এর ফিজিবিমিটি স্ট্যাডি সম্পন্ন করা হয়েছে। উক্ত সমীক্ষায় পানি জাহরণের জন্য মেঘনা এবং শীতলক্ষ্যা নদীর কতিপয় স্থান বিবেচনায় নিয়ে পানির পরিমাণ, গুণগতমান ও অন্যান্য বিষয় বিবেচনায় নিয়ে বিশ্লেষণ করা হয় এবং নদীর হাইড্রোলজিক্যাল ও মরফোলজিক্যাল বিষয় বিবেচনা করা হয়েছে। মেঘনা নদী হতে প্রকল্পের আওতায় উভয়নিত পানির পরিমাণ শূন্য মৌসুমে পানি প্রবাহের ১ শতাংশের কম হওয়ায় পানি জাহরণের ফলে নদীতে কোন পরিবেশগত প্রভাব পড়বে না বলে উল্লেখ করা হয়েছে। সমীক্ষায় পরিবেশ পরিবর্তনগত প্রভাব বিবেচনা করা হয়েছে কিনা তা উল্লেখ করা হয়নি। সমীক্ষা প্রতিবেদনে পানি শোধনাগার স্থাপনের বিবেচনা করা হয়েছিল। পরবর্তীতে তা গুরুত্বপূর্ণ স্থানান্তরের বিষয়ে সিদ্ধান্ত হয় এবং পুনরায় স্ট্যাডি করা হয়। ফিজিবিমিটি স্ট্যাডিতে উল্লেখ করা হয়েছে বিশনদী নামক স্থানে নদীর তীর Stable রয়েছে। কিন্তু ইনটেক স্থাপনের ফলে কোন প্রভাব পড়বে কিনা বা নতুন করে তীর ভাঙনের সম্ভাবনা তৈরি হবে কিনা তা বিশ্লেষণ করা প্রয়োজন এবং তদানুযায়ী ব্যবস্থা গ্রহণ করা আবশ্যিক। তাছাড়া সমীক্ষা কার্যক্রমে জলবায়ু পরিবর্তনের বিষয়টি বিবেচনা করা হয়নি এবং ইনটেক পয়েন্টের উজানে বর্তমানে বা ভবিষ্যতে কোন প্রতিবন্ধক নির্মাণ করা হলে ইনটেক পয়েন্টে পানির প্রাপ্যতা প্রভাবিত হবে কিনা তাও বিবেচনা করা হয়নি। তাই জলবায়ু পরিবর্তন ও উজানে প্রতিবন্ধক নির্মাণের ফলে পানির প্রাপ্যতার বিষয়টি গুরুত্বসহকারে বিবেচনা করা যেতে পারে।


Md. Jamal Haider
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Md. Jahid Hossain
Senior Scientific Officer
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ENVIRONMENTAL STATUS AIR QUALITY MONITORING

INTAKE Air Quality Monitoring



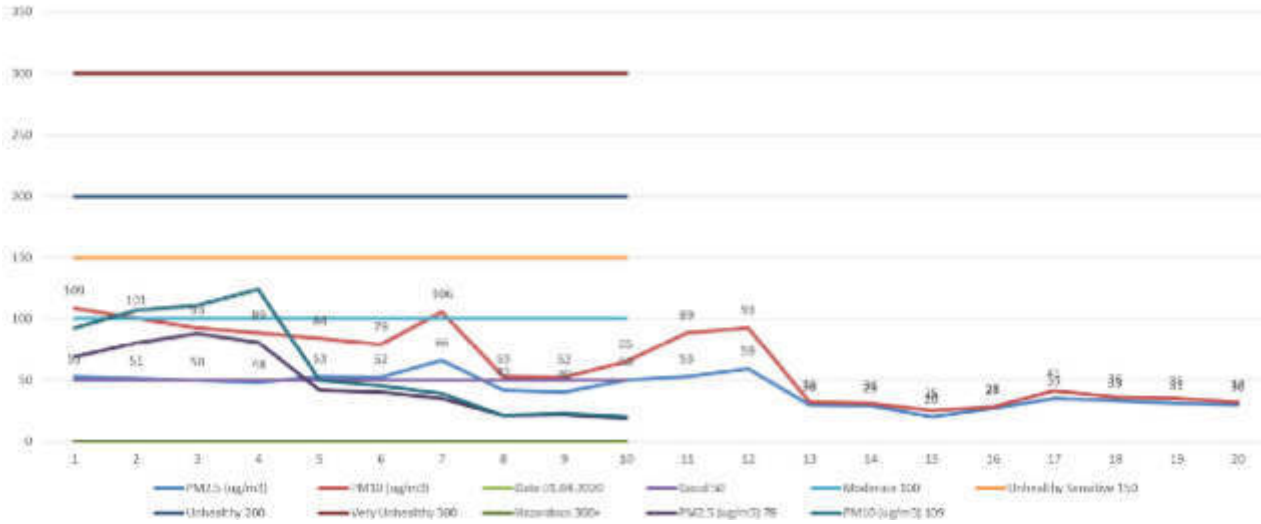
ENVIRONMENTAL STATUS AIR QUALITY MONITORING

SOWP® 山东水建								
Gandharbpur Water Treatment Plant - Intake								
Name Testing device: Environment Air Quality Tester				Model Number: ST8312				
Date	Environment Air Quality Test Report							
	Temp [°C]	Humidity [%]	HCHO (mg/m ³)	TVOC (mg/m ³)	C6H6 (mg/m ³)	PM2.5 (ug/m ³)	PM10 (ug/m ³)	CO2 (ppm)
02.05.2020	24~32	54	0.02	0.37	0.08	53	109	455
03.05.2020	24~32	54	0.04	0.46	0.07	51	101	446
04.05.2020	24~32	56	0.03	0.31	0.07	50	93	453
05.05.2020	24~32	57	0.04	0.34	0.07	48	89	464
06.05.2020	24~32	67	0.06	0.45	0.09	53	84	455
07.05.2020	28~34	59	0.01	0.46	0.1	52	79	463
10.05.2020	28~34	58	0.02	0.45	0.09	66	106	479
12.05.2020	28~34	76	0.02	0.4	0.08	42	53	460
13.05.2020	28~34	67	0.01	0.39	0.08	40	52	462
14.05.2020	28~34	68	0.02	0.36	0.09	50	65	450
16.05.2020	30~32	54	0.02	0.37	0.07	53	89	465
17.05.2020	30~34	69	0.04	0.41	0.08	59	93	469
18.05.2020	30~25	71	0.03	0.39	0.08	30	32	470
19.05.2020	30~34	71	0.04	0.32	0.07	29	31	470
20.05.2020	26~29	80	0.01	0.35	0.07	20	25	458
21.05.2020	30~32	82	0	0.35	0.07	27	28	455
23.05.2020	30~33	75	0	0.38	0.08	35	41	457
24.05.2020	30~33	70	0.01	0.33	0.08	33	36	410
26.05.2020	27~30	69	0.02	0.32	0.07	31	35	418
27.05.2020	26~27	76	0	0.25	0.06	30	32	476

Recorded by	Name Afzal Hossain	Designation HSE Manager	Signature	Date
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ENVIRONMENTAL STATUS AIR QUALITY MONITORING

SDWP



ENVIRONMENTAL STATUS AIR QUALITY MONITORING

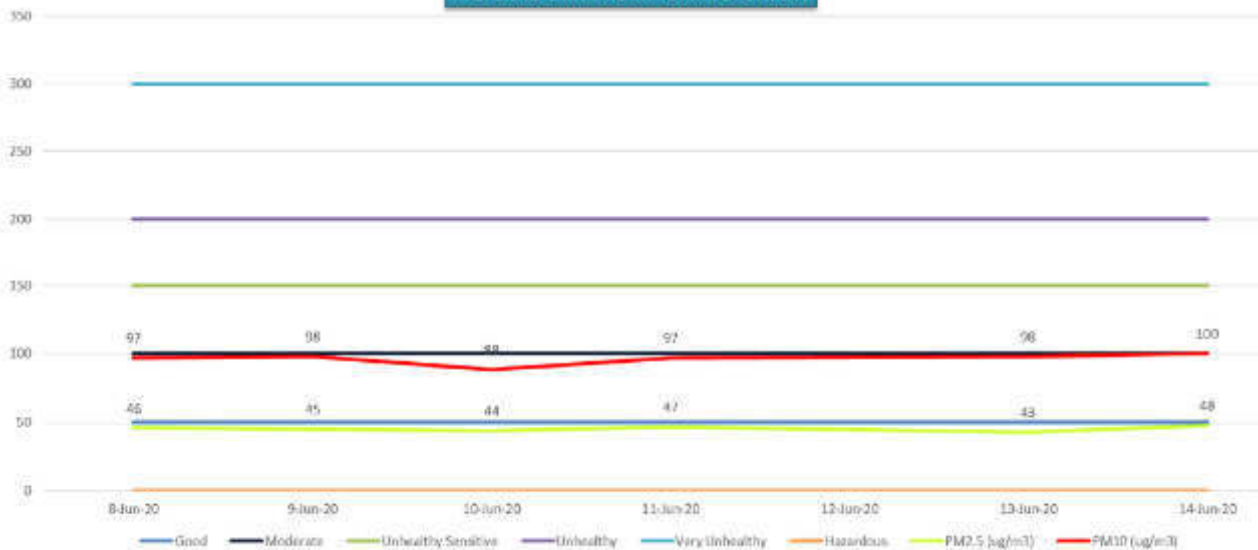
menard		HOME SAFE SAFETY NEVER SLEEPS									
Gandharbpur Water Treatment Plant - GWTP											
Name Testing device: Environment Air Quality Tester						Model Number: Mobile Phone					
Environment Air Quality Test Report											
Date	Time	Location	Temp (°C)	Humidity (%)	HCHO (mg/m3)	TVOC (mg/m3)	C6H6 (mg/m3)	PM2.5 (ug/m3)	PM10 (ug/m3)	CO2 (ppm)	Remarks
11/5/2020	10.00am	WTP	35-23°	51%	0.07	0.46	0.08	140	57	510	
12/5/2020	10.30am	WTP	36-25°	50%	0.08	0.42	0.07	137	58	520	
13/5/2020	10.00am	WTP	39-26°	53%	0.08	0.45	0.06	145	57	520	
14/5/2020	10.30am	WTP	37-27°	40%	0.06	0.43	0.06	135	57	490	
15/5/2020	0	0	0	0	0	0	0	0	0	0	Friday
16/5/2020	10.20am	WTP	38-27°	46%	0.07	0.44	0.08	140	58	500	
17/5/2020	10.15am	WTP	39-28°	46%	0.07	0.45	0.08	135	58	510	
26/5/2020	9.30am	WTP	28-38°C	62%	0.11	0.52	0.09	180	60	550	
27/5/2020	11.30am	WTP	26-33°C	88%	0.08	0.48	0.08	190	65	565	
28/5/2020	11.10am	WTP	24-26°C	62%	0.09	0.51	0.06	170	62	540	

ENVIRONMENTAL STATUS AIR QUALITY MONITORING

Gandharbpur Water Treatment Plant - GWTP											
Name Testing device: Environment Air Quality Tester						Model Number: Mobile Phone					
Environment Air Quality Test Report											
Date	Time	Location	Temp	Humidity	HCHO	TVOC	C6H6	PM2.5	PM10	CO2	Remarks
			(°C)	(%)	(mg/m3)	(mg/m3)	(mg/m3)	(ug/m3)	(ug/m3)	(ppm)	
8-Jun-20	10.30 AM	WTP	26-32°C	81%	0.4	0.5	0.7	46	97	395	
9-Jun-20	11.15 PM	WTP	27-33°C	77%	0.4	0.6	0.6	45	98	389	
10-Jun-20	10.50 AM	WTP	27-34°C	85%	0.3	0.5	0.7	44	88	398	
11-Jun-20	8.05 PM	WTP	29-34°C	78%	0.4	0.4	0.6	47	97	387	
13-Jun-20	06.45 PM	WTP	25-33°C	87%	0.5	0.5	0.7	43	96	390	
14-Jun-20	11.30 AM	WTP	26-35°C	86%	0.4	0.5	0.7	48	100	400	
Recorded By	Name			Designation			Checked By		Signature		
	Abu Nowshad Nahid			Sr. HSE Officer			Waly Mohammad				

ENVIRONMENTAL STATUS AIR QUALITY MONITORING

MENARD AIR MONITORING CHART



ENVIRONMENTAL STATUS

DUST SUPPRESSION

Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet		中工国际工程股份有限公司 CHINA CAMC ENGINEERING CO., LTD.						
S.N.	DATE	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	29-01-2020	G.W.T.P Road	650x5m	SHI	01:05	01:35	Water Tank	Good Condition
2	31	Site office	15x10m	"	01:35	02:00	"	"
3								
4	30-01-2020	G.W.T.P Road	650x5m	SHI	04:28pm	05:15pm	Water tank	Good condition
5	4	office area	30x10m	SHI	05:20pm	05:45pm	"	"
6								
7	01-02-2020	G.W.T.P Road	600x5m	SHI	01:10pm	01:50pm	Water tank	Good Condition
8	11	operator	40x100m	"	02:00pm	02:30pm	"	"
9	4	office "	15x10m	"	02:35pm	03:09pm	"	"
10								
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ENVIRONMENTAL STATUS

DUST SUPPRESSION

Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet		中工国际工程股份有限公司 CHINA CAMC ENGINEERING CO., LTD.						
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	Menzel (20/01/20)	Main Entrance Road	50x60m	Tarvia Hassan	9:00am	10:00am	Deep To be used	Good Condition
2	Menzel (21/01/20)	office yard	40x50m	Tarvia Hassan	10:00am	11:00am	Deep To be used	Good Condition
3	Menzel (21/01/20)	BP area	30x40m	Araf Ahmed	11:10am	12:00pm	Deep To be used	Good Condition
4	Menzel (22/01/20)	Main Entrance Road	40x50m	Tarvia Hassan	8:00am	8:50am	Deep To be used	Good Condition
5	Menzel (22/01/20)	office yard	35x40m	Tarvia Hassan	8:20am	9:20am	Deep To be used	Good Condition
6	Menzel (22/01/20)	BP area	30x35m	Tarvia Hassan	10:00am	10:40am	Deep To be used	Good Condition
7	Menzel (23/01/20)	Main Entrance Road	50x60m	Tarvia Hassan	7:50am	8:50am	Deep To be used	Good Condition
8	Menzel (23/01/20)	office yard	40x40m	Tarvia Hassan	8:00am	8:40am	Deep To be used	Good Condition
9	Menzel (24/01/20)	Main Entrance Road	50x60m	Tarvia Hassan	7:30am	8:20am	Deep To be used	Good Condition
10	Menzel (25/01/20)	BP area	40x45m	Araf Ahmed	8:40am	9:20am	Deep To be used	Good Condition
11	Menzel (26/01/20)	Main Entrance Road	50x55m	Tarvia Hassan	9:20am	10:20am	Deep To be used	Good Condition
12	Menzel (26/01/20)	office yard	45x40m	Tarvia Hassan	10:20am	11:00am	Deep To be used	Good Condition
13	Menzel (27/01/20)	Main Entrance Road	60x60m	Tarvia Hassan	11:00am	12:00pm	Deep To be used	Good Condition
14	Menzel (27/01/20)	office yard	50x55m	Tarvia Hassan	1:10pm	2:20pm	Deep To be used	Good Condition
15	Menzel (28/01/20)	BP area	40x40m	Araf Ahmed	12:00pm	1:00pm	Deep To be used	Good Condition
16	Menzel (28/01/20)	office yard	46x50m	Tarvia Hassan	2:00pm	3:00pm	Deep To be used	Good Condition
17	Menzel (29/01/20)	Main Entrance Road	55x50m	Tarvia Hassan	12:00pm	1:00pm	Deep To be used	Good Condition
18	Menzel (29/01/20)	office yard	40x45m	Araf Ahmed	2:00pm	2:40pm	Deep To be used	Good Condition
19	Menzel (30/01/20)	office yard and main entrance	50x60m	Fahim	8:00am	9:00am	Deep To be used	Good Condition

This document is confidential and shall be used only for the purpose on the Gandharbpur Project

ENVIRONMENTAL STATUS DUST SUPPRESSION

Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet									
S.N.	DATE	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS	
1	20-01-2020	SWTP Area	55x75 m	S.H.F	04:30	05:30	water tank	Good Condition	
2	"	Site office	15x10 m	"	05:30	05:30	"	"	
3									
4	21-01-2020	SWTP Area	55x75 m	S.H.F	01:15	01:30	water tank	Good Condition	
5	"	Site office	15x10 m	"			"	"	
6									
7	27-01-2020	SWTP Area	55x75 m	S.H.F	05:00	05:30	water tank	Good Condition	
8	"								
9									
10	02-02-2020	SWTP Area	55x75 m	S.H.F	01:15	01:30	water tank	Good Condition	
11	"	Site office	15x10 m	"	01:30	01:30	"	"	
12									
13	22-02-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
14	"								
15									
16	26-02-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
17	"								
18									
19	29-02-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
20	"	Site office	15x10 m	"	09:15	09:15	"	"	
21	02-03-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
22	"	Site office	15x10 m	"	09:15	09:15	"	"	

Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet									
S.N.	DATE	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS	
1	29-02-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
2	"	Site office	15x10 m	"	09:15	09:15	"	"	
3									
4	30-02-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
5	"	Site office	15x10 m	"	09:15	09:15	"	"	
6									
7	01-03-2020	SWTP Area	55x75 m	S.H.F	08:30	09:15	water tank	Good Condition	
8	"	Site office	15x10 m	"	09:15	09:15	"	"	
9	"								
10									
11									
12									
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ENVIRONMENTAL STATUS DUST SUPPRESSION

Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet Date/Month-March-2020									
S.N.	Date	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	3/16/2020	Menard	All Access area, facility area, bit production area	70*90 Meter	Mr. Tanvir	2:40 PM	3:20 PM	Deep Borewell	Good Condition
2	3/17/2020	Menard	Office Yard	50*50 Meter	Mr. Tanvir	6:40 AM	8:40 AM	Deep Borewell	Good Condition
3	3/18/2020	Menard	All Access area, facility area, bit production area	50*70 Meter	Mr. Tanvir	6:40 AM	7:40 AM	Deep Borewell	Good Condition
4	3/19/2020	Menard	BP area	50*50 Meter	Mr. Tanvir	7:40 AM	8:40 AM	Deep Borewell	Good Condition
5	3/20/2020	Menard	-	-	-	-	-	-	Friday
6	3/21/2020	Menard	All Access area, facility area, bit production area	50*82 Meter	MD. Arif	6:40 AM	7:40 AM	Deep Borewell	Good Condition
7	3/22/2020	Menard	BP area	100*90 Meter	MD. Arif	7:40 AM	8:40 AM	Deep Borewell	Good Condition
Recorded by	Name			Designation		Checked by		Signature	
	Md Abu Sabar Siddique			S.H.F. Officer		Wahy Mohammad			

ENVIRONMENTAL STATUS DUST SUPPRESSION

Gandharbpur Water Treatment Plant		Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet April 2020					SOWP 山东水务	
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	0800 hrs	0830 hrs	Internal Pump	Dust under control
2	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	0830 hrs	0920 hrs	Internal Pump	Dust under control
3	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	0920 hrs	0950 hrs	Internal Pump	Dust under control
4	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	0950 hrs	1020 hrs	Internal Pump	Dust under control
5	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1020 hrs	1050 hrs	Internal Pump	Dust under control
6	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1050 hrs	1120 hrs	Internal Pump	Dust under control
7	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1120 hrs	1150 hrs	Internal Pump	Dust under control
8	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1150 hrs	1220 hrs	Internal Pump	Dust under control
9	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1220 hrs	1250 hrs	Internal Pump	Dust under control
10	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1250 hrs	1320 hrs	Internal Pump	Dust under control
11	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1320 hrs	1350 hrs	Internal Pump	Dust under control
12	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1350 hrs	1420 hrs	Internal Pump	Dust under control
13	SDWP	Intake site	Internal road and offshore Area	Nitu Mia	1420 hrs	1450 hrs	Internal Pump	Dust under control
14	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
15	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
16	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
17	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
18	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
19	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
20	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
21	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
22	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
23	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
24	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
25	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
26	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain

ENVIRONMENTAL STATUS DUST SUPPRESSION

Gandharbpur Water Treatment Plant		Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet					中国际工程股份有限公司 CHINA CEMC ENGINEERING CO., LTD.	
DATE	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS	
1-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
2-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
3-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
4-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
5-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
6-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
7-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
8-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
9-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
10-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
11-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
12-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
13-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
14-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
15-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
16-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
17-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
18-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
19-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
20-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
21-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
22-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
23-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
24-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	
25-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Good condition	
26-May-20	Roads/Office Zone	overall	Mr. Shi qun	NA	NA	Nature rainfall	Normal	

ENVIRONMENTAL STATUS

DUST SUPPRESSION

Gandharbpur Water Treatment SPC SPECIAL ECONOMIC ZONE		Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet May 2020					SOWP® 山东水建	
Date	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
2	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
3	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
4	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
5	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
6	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
7	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
8	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
9	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
10	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
11	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
12	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
13	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain
14	SDWP	Intake site	Internal road and offshore Area	NA	NA	NA	NA	No dust due to rain

ENVIRONMENTAL STATUS


DUST SUPPRESSION

Gandharbpur Water Treatment SPC SPECIAL ECONOMIC ZONE		Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet Date / Month - March - 2020					MENARD ASIA		SACP	
S.N	Date	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS	
1	26/5/2020	Menard	Menard Office yard	50*50 Meter	Mr Abul Kashem	8:30 AM	9:30 AM	Deep Borewell	Good Condition	
2	27/5/2020	Menard	Menard Weight scale area	55*65 Meter	Mr Abul Kashem	9:10 AM	9:50 AM	Deep Borewell	Good Condition	
3	28/05/2020	Menard	Menard site and Road area	90*100 Meter	Mr Abul Kashem	10:20 AM	11:10 AM	Deep Borewell	Good Condition	
4	29/05/2020	Menard	-	-	-	-	-	-	Friday	
5	30/05/2020	Menard	Menard office Yard	65*70 Meter	Mr Abul Kashem	11:00AM	11:50AM	Deep Borewell	Good Condition	
6	31/05/2020	Menard	Project Road	90*100 Meter	Mr Abul Kashem	9:10 AM	10:05 AM	Deep Borewell	Good Condition	
Recorded By		Name		Designation		Checked By		Signature		
		Md Abu Bakar Siddique		Sr.HSE Officer		Waly Mohammad		/ 31-5-2020 / 31-5-2020		

ENVIRONMENTAL STATUS DUST SUPPRESSION

<small>Gandharbpur Water Treatment Plant</small> Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet Date/Month-March-2020									
S.N	Date	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	1/6/2020	Menard	Menard silo and Road area	60*70 Meter	Mr Abul Kashem	9:20 AM	10:10 AM	Deep Borewell	Good Condition
2	2/6/2020	Menard	Menard Office yard	75*80 Meter	Mr Abul Kashem	8:00 AM	8:50 AM	Deep Borewell	Good Condition
3	3/6/2020	Menard	Menard weight scale & Road area	85*95 Meter	Mr Abul Kashem	9:10 AM	10:00 AM	Deep Borewell	Good Condition
4	4/6/2020	Menard	Menard Main Entrance	70*80 Meter	Mr Abul Kashem	8:05 AM	8:45 AM	Deep Borewell	Good Condition
5	5/6/2020	Menard	-	-	-	-	-	-	Friday
6	6/6/2020	Menard	Menard BP and diesel store area	60*70 Meter	Mr Abul Kashem	8:30 AM	10:05 AM	Deep Borewell	Good Condition
Recorded By	Name		Designation		Checked By		Signature		
	Md Abu Bakar Siddique		Sr.HSE Officer		Waly Mohammad				

ENVIRONMENTAL STATUS DUST SUPPRESSION

<small>Gandharbpur Water Treatment Plant</small> Gandharbpur Water Treatment Register Dust Suppression Monitoring Sheet Date/Month-March-2020									
S.N	Date	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST SUPPRESSION	AREA DUST STATUS
1	26/5/2020	Menard	Menard Office yard	50*60 Meter	Mr Abul Kashem	8:30 AM	9:30 AM	Deep Borewell	Good Condition
2	27/5/2020	Menard	Menard Weight scale area	55*65 Meter	Mr Abul Kashem	9:10 AM	9:50 AM	Deep Borewell	Good Condition
3	28/05/2020	Menard	Menard silo and Road area	90*100 Meter	Mr Abul Kashem	10:20 AM	11:10 AM	Deep Borewell	Good Condition
4	29/05/2020	Menard	-	-	-	-	-	-	Friday
5	30/05/2020	Menard	Menard office Yard	65*70 Meter	Mr Abul Kashem	11:00AM	11:50AM	Deep Borewell	Good Condition
6	31/05/2020	Menard	Project Road	90*100 Meter	Mr Abul Kashem	9:10 AM	10:05 AM	Deep Borewell	Good Condition
Recorded By	Name		Designation		Checked By		Signature		
	Md Abu Bakar Siddique		Sr.HSE Officer		Waly Mohammad				

ENVIRONMENTAL STATUS

DUST SUPPRESSION

 M M Gandharbpur Water Treatment SMC GWP MBW DWA GWP MBW DWA		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)					 中工國際工程股份有限公司 CHINA CIVIL ENGINEERING CO., LTD.	
		DUST CONTROL RECORD					0-001464-GWT-HS-GWT-PH-06622 Date: 20 Jan 2020 Page: 08	
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST CONTROL	AREA DUST STATUS
1	CAME-20200604	Roads/Office Zone	overall	NA	12:30 PM	NA	Natural Rainfall	Good condition
2	CAME-20200605	Office Zone	200*6m	SH Qin	1:30 PM	NA	Water Truck	Normal
3	CAME-20200606	Roads/Office Zone	overall	NA	4:00 PM	NA	Natural Rainfall	Good condition
4	CAME-20200607	Roads/Office Zone	overall	NA	2:00 PM	2:00 PM	Natural Rainfall	Good condition
5	CAME-20200608	Office Zone	200*6m	SH Qin	10:00 AM	10:30 AM	Water Truck	Good condition
6	CAME-20200609	Roads/Office Zone	overall	NA	NA	NA	Natural Rainfall	Normal
7	CAME-20200610	Roads/Office Zone	overall	NA	8:00 AM	5:00 AM	Natural Rainfall	Good condition

Recorded By: Yang Xiaojun
 Designation: CAME HSE Manager

Signature:
 Date: 10-Jan-2020

ENVIRONMENTAL STATUS

DUST SUPPRESSION

 M M Gandharbpur Water Treatment SMC GWP MBW DWA GWP MBW DWA		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)					 中工國際工程股份有限公司 CHINA CIVIL ENGINEERING CO., LTD.	
		DUST CONTROL RECORD					0-001464-GWT-HS-GW1-MP-0009C Date: 10 Jan 2020 Page: 08	
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST CONTROL	AREA DUST STATUS
1	CAME-20200611	Roads/Office Zone	overall	NA	8:20 PM	4:20 PM	Natural Rain-fall	Good condition
2	CAME-20200612	Roads/Office Zone	200*6m	NA	11:30 AM	2:40 PM	Natural Rain-fall	Good condition
3	CAME-20200613	Roads/Office Zone	overall	NA	08:00 AM	07:00 PM	Natural Rain-fall	Good condition
4	CAME-20200614	Office Zone	200*6m	SH Qin	1:30 PM	2:00 PM	Deep Tube well	Good condition
5	CAME-20200615	Office Zone	200*6m	SH Qin	10:30 AM 12:40 PM	11:00 AM 03:00 PM	Deep Tube well	Normal
6	CAME-20200616	Office Zone	200*6m	SH Qin	09:45 AM 12:30 PM	10:30 AM 03:00 PM	Deep Tube well	Good condition
7	CAME-20200617	Roads/Office Zone	overall	NA	6:50 AM	Absent Full Day	Natural Rain-fall	Good condition

Recorded By: Yang Xiaojun
 Designation: CAME HSE Manager

Signature:
 Date: 17-Jan-2020

ENVIRONMENTAL STATUS

DUST SUPPRESSION

 M M Limited Gandharbpur Water Treatment SMC 5082 DIV VINDIA		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWP)					 中国市政工程西南有限公司 CHINA CIVIL ENGINEERING SW CO., LTD.		
		DUST CONTROL RECORD					340104-027-10-007-PPH0001 Date: 26-06-2023 Rev: 03		
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST CONTROL	AREA DUST STATUS	
1	CAPCE-20200027	Roads/Office Zone	overall	NA	2:00 AM	NA	Natural Rainfall	Good condition	
2	CAPCE-20200028	Office Zone	200*6m	SH Qun	1:30 PM	2:30 PM	Water Truck	Normal	
3	CAPCE-20200029	Roads/Office Zone	overall	NA	5:00 PM	NA	Natural Rainfall	Good condition	
4	CAPCE-20200030	Roads/Office Zone	overall	SH Qun	7:00 AM	NA	Natural Rainfall	Good condition	
5	CAPCE-20200031	Office Zone	200*6m	SH Qun	1:30 PM	2:00 PM	Water Truck	Good condition	
6	CAPCE-20200001	Roads/Office Zone	overall	NA	8:00 PM	NA	Natural Rainfall	Good condition	
7	CAPCE-20200002	/	/	/	/	/	/	Normal	
8	CAPCE-20200003	Roads/Office Zone	overall	NA	4:00 PM	6:00 PM	Natural Rainfall	Good condition	

Recorded by: Toni Stambur Signature: [Signature]
 Desl: CAPCE HSE Manager Date: 26 June 2023

ENVIRONMENTAL STATUS

DUST SUPPRESSION

 M M Limited Gandharbpur Water Treatment SMC 5082 DIV VINDIA		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWP)					 中国市政工程西南有限公司 CHINA CIVIL ENGINEERING SW CO., LTD.		
		DUST CONTROL RECORD					340104-027-10-007-PPH0001 Date: 24-June-2023 Rev: 03		
S.N.	COMPANY	LOCATION OF DUST CONTROL	DIMENSION OF AREA CONTROLLED	DUST CONTROL RESPONSIBLE PERSON	START TIME	END TIME	SOURCE OF WATER FOR DUST CONTROL	AREA DUST STATUS	
1	CAPCE-20200018	CAPCE construction team camp area & Office Zone	overall	SH Qun	09:50 AM 02:30 PM	10:30 AM 03:00 PM	Deep Tube-well	Good condition	
2	CAPCE-20200019	BP Site Yard & CAPCE Office Zone	200*6m	SH Qun	09:45 AM 10:30 PM	10:30 AM 11:00 AM	Deep Tube-well	Good condition	
3	CAPCE-20200020	Roads/Office Zone	overall	NA	12:15 PM	7:30 PM	Natural Rainfall	Good condition	
4	CAPCE-20200021	Roads/Office Zone	overall	NA	7:10 AM	7:45 AM	Natural Rainfall	Normal	
5	CAPCE-20200022	BP Site Yard & CAPCE Office Zone	overall	NA	12:30 PM	12:40 PM	Natural Rainfall	Normal	
6	CAPCE-20200023	CAPCE construction team camp area & Office Zone	200*6m	SH Qun	10:00 AM 02:30 PM	10:30 AM 03:00 PM	Deep Tube-well	Good condition	
7	CAPCE-20200024	Roads/Office Zone	200*6m	SH Qun	10:30 AM 01:30 PM	11:00 AM 02:10 PM	Deep Tube-well	Good condition	

Recorded By: Anwar Hossain Signature: [Signature]
 Designation: CAPCE HSE Engineer Date: 24-June-2023

ENVIRONMENTAL STATUS

DUST SUPPRESSION



ENVIRONMENTAL STATUS

DUST SUPPRESSION



H. Noise & Vibration

ENVIRONMENTAL STATUS NOISE MONITORING



Gandharbpur Water Treatment Plant Noise Monitoring Register						
Date of monitoring: 22-02-2020						
Weather conditions: Wind Speed: 2.3 km/h, Temperature: 18°C, Humidity: 51%, Cloud Coverage: 27%						
Equipment Summary: Sound level meter: ARB24, Serial No: ARB24, Calibrator: SDWP-01, NA						
Monitoring Summary						
Monitoring No.	Monitoring Location	LAeq	LAMax	LAmin	LAmin	LAmin
01	05 minutes	58.4	60.3	56.5		
02	02 minutes	62.95	69.8	56.1		
03	04 minutes	61.5	63.5	59.5		
04	03 minutes	64.2	66.6	61.8		
05	04 minutes	59.45	60	58.9		
06	02 minutes	63.6	65.6	61.6		
07	04 minutes	70.3	72.7	67.9		
08	02 minutes	66	67.1	64.9		
09	03 minutes	63.35	63.9	62.8		
10	04 minutes	63.5	66.4	60.6		
11	03 minutes	64.4	67.3	61.5		
12	03 minutes	62.3	63.1	61.5		
13	03 minutes	67.35	72.7	62		
14	02 minutes	64.65	67.9	61.4		
15	03 minutes	59.65	60.3	59		
16	03 minutes	57.35	59.2	55.5		
17	03 minutes	63.2	63.9	62.5		
18	03 minutes	63.5	66.4	60.6		
19	04 minutes	64.4	67.3	61.5		
20	03 minutes	66.55	70	63.1		

Gandharbpur Water Treatment Plant Noise Monitoring Register						
Date of monitoring: 23-02-2020						
Weather conditions: Wind Speed: 2.5 km/h, Temperature: 18°C, Humidity: 48%, Cloud Coverage: 27%						
Equipment Summary: Sound level meter: ARB24, Serial No: ARB24, Calibrator: SDWP-01, NA						
Monitoring Summary						
Monitoring No.	Monitoring Location	LAeq	LAMax	LAmin	LAmin	LAmin
01	04 minutes	68.4	73.4	64.4		
02	03 minutes	50.4	55.4	47.4		
03	04 minutes	81.4	88.4	74.4		
04	03 minutes	68.4	74.4	64.4		



ENVIRONMENTAL STATUS NOISE MONITORING

Gandharbpur Water Treatment Plant Noise Monitoring Register					
Equipment Summary		Name of sound meter	**	Serial Number	Calibrator S/N
		Digital Sound Level Meter	ARB24	SDWP-01	NA
Monitoring Summary					
Date	Monitoring No	Duration (t)	LAeq	LAMax	LAMin
22.02.2020	1	3 Min	58.4	60.3	56.5
	2	2 Min	62.95	69.8	56.1
	3	4 Min	61.5	63.5	59.5
	4	3 Min	64.2	66.6	61.8
23.02.2020	1	4 Min	59.45	60	58.9
	2	2 Min	63.6	65.6	61.6
	3	4 Min	70.3	72.7	67.9
	4	2 Min	66	67.1	64.9
24.02.2020	1	3 Min	63.35	63.9	62.8
	2	4 Min	63.5	66.4	60.6
	3	4 Min	64.4	67.3	61.5
	4	3 Min	62.3	63.1	61.5
25.02.2020	1	3 Min	67.35	72.7	62
	2	2 Min	64.65	67.9	61.4
	3	3 Min	59.65	60.3	59
	4	3 Min	57.35	59.2	55.5
26.02.2020	1	3 Min	63.2	63.9	62.5
	2	3 Min	63.5	66.4	60.6
	3	4 Min	64.4	67.3	61.5
	4	3 Min	66.55	70	63.1
Recorded by		Name	Designation		
		Mr Obidur	HSE Supervisor		
Checked by		Name	Designation		
		Asif Memon	HSE Manager		



ENVIRONMENTAL STATUS NOISE MONITORING

	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)									
NOISE MONITORING RECORD		S-001-464-GWT-HS-GWT-MH Date: 30 Jan 2020 Rev: 005								
Conditions Summary										
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage					
3/21/2020	8 km/h	N/A	33°C	41%	SUNNY					
Equipment Summary										
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number		Calibrator: Serial Number				
Digital SOUND Level Meter										
Monitoring Summary										
Date	Monitoring Number	Monitoring Duration	Time	Location	L _{A10}	L _{A90}	L _{Aeq}	L _{Amax}	L _{Amin}	
3/21/2020	1	03:13 min	9:59 AM	Contractor facility office	N/A	N/A	50 db	76.3 db	44 db	
	2	02:14 min	10:10 AM	Southern Main gate G.House	N/A	N/A	53 db	70.1 db	43 db	
3/21/2020	3	02:04 min	10:20 AM	Reservoir area	N/A	N/A	51 db	62.4 db	47 db	
	4	02:06 min	10:44 AM	East middle fence area	N/A	N/A	59 db	73.5 db	44 db	
3/21/2020	5	02:48 min	10:54 AM	Answer Camp Gate	N/A	N/A	50 db	71.6 db	43 db	
	6	03:03 min	11:05 AM	Chiness Dormitory	N/A	N/A	46 db	63.7 db	39 db	
3/21/2020	7	02:39 min	11:17 AM	B.plant open area	N/A	N/A	48 db	72.3 db	42 db	
	8	02:12 min	11:25 AM	CAMCE Workshop	N/A	N/A	46 db	61.3 db	38 db	
3/21/2020	9	02:15 min	2:02 PM	CAMCE Office area	N/A	N/A	46 db	62.7 db	40 db	
	10	02:12 min	2:30 PM	GWT SNC Warehouse area	N/A	N/A	49 db	69.7 db	45 db	
Recorded By:	Name Anwar	Designation HSF Eng.	Signature		Date					
Checked By:	Tong Nameng	HSE Manager			3/21/2020		21/03/2020			

ENVIRONMENTAL STATUS NOISE MONITORING



	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)									
NOISE MONITORING RECORD		S-001-464-GWT-HS-GWT-MH Date: 30 Jan 2020 Rev: 005								
Conditions Summary										
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage	Rain				
14.03.2020	2~3	To east	22~30	67	Sky Clear	No				
15.03.2020	2~3	To east	22~30	46	Sky Clear	No				
16.03.2020	2~3	To east	22~31	54	Sky Clear	No				
18.03.2020	2~3	To east	26~31	59	Sky Clear	No				
Equipment Summary										
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number		Calibrator: Serial Number				
Digital SOUND Level Meter		SOWP-01								
Monitoring Summary										
Date	Monitoring Number	Monitoring Duration	Time	Location	L _{A10}	L _{A90}	L _{Aeq}	L _{Amax}	L _{Amin}	
14.03.2020	1	2 Minutes	1710 hrs	Main gate			57.15	58.3	56	
	2	2 Minutes	1714 hrs	Entrance of project (Near Public road)			56.05	63.8	48.3	
15.03.2020	3	2 Minutes	1612 hrs	Offshore north boundary			63.65	64.9	62.4	
	4	2 Minutes	1720 hrs	Heap/pond area			58.95	60.5	57.4	
16.03.2020	5	2 Minutes	1652 hrs	Intake north boundary			65.55	67.6	63.5	
	6	2 Minutes	16 hrs	jetty area			59.95	60.2	59.7	
18.03.2020	7	2 Minutes	1724 hrs	Internal road			59.35	61	57.7	
	8	2 Minutes	1727 hrs	Entrance of SUEZ Dormitory			50.95	51.8	50.1	
Recorded By:	Name Aral Hossain	Designation HSE Manager	Signature		Date					
					18/03/2020					

ENVIRONMENTAL STATUS NOISE MONITORING

	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWP)	 <small>6-001402-007-06-007-001-001.7 Date: 15-Jun-2020 Revision:</small>							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
11.05.2020	6 km/h	23.71°ne	28-23°C	51%	Sunny				
12.05.2020	5 km/h	22.60°ne	26-25°C	50%	Sunny				
13.05.2020	6 km/h	23.71°ne	28-23°C	53%	Sunny				
14.05.2020	5 km/h	23.65°ne	27-26°C	49%	Sunny				
15.05.2020	6 km/h	25.85°ne	28-25°C	54%	Sunny				
16.05.2020	7 km/h	23.65°ne	26-26°C	53%	Sunny				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number					
Digital SOUND Level Meter		94001402		Monda Phone					
				Calibrator: Serial Number					
				Monda Phone					
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
11/5/2020	1	2.00 minutes	15.48pm	Fencing area	NA	NA	58.7DB	70 DB	40.02 DB
	2	2.00 minutes	15.50pm	Production area	NA	NA	75.5DB	85.0 DB	65.04 DB
12/5/2020	3	3.00 minutes	16.57pm	Manard Working platform	NA	NA	53.5DB	75.4DB	38.05 DB
	4	2.00 minutes	16.58pm	BP Area	NA	NA	48.0DB	78.5DB	35.05 DB
13/05/2020	5	3.00 minutes	14.37pm	Rig Machine (Production area)	NA	NA	72.2DB	84.7 DB	44.03 DB
	6	3.00 minutes	14.28pm	Weight Scale area	NA	NA	60.00DB	78.7DB	40.00 DB
14.05.2020	7	2.00 minutes	15.27pm	Rig Machine (Production area)	NA	NA	92.0DB	100.10DB	85.05 DB
	8	2.00 minutes	15.29pm	Fencing area	NA	NA	72.00DB	95.0 DB	70.00 DB
15.05.2020	9	3.00 minutes	15.26pm	BP Area	NA	NA	73.09DB	94.5DB	55.05 DB
	10	2.00 minutes	17.14pm	BP Area	NA	NA	71.05DB	96.4 DB	55.07 DB
16.05.2020	11	2.00 minutes	17.16pm	Suez Camp Area	NA	NA	55.05DB	85.5 DB	48.05 DB



Recorded By:	<u>Name</u> <i>Mr. Abu Bakur Atique</i>	<u>Designation</u> <i>Asst. HSE Officer</i>	<u>Signature</u> <i>[Signature]</i>	<u>Date</u> <i>17/05/2020</i>
Checked By:	<u>Name</u> <i>Mohammad Golif</i>	<u>Designation</u> <i>HSE Manager</i>	<u>Signature</u> <i>[Signature]</i>	<u>Date</u> <i>17/05/2020</i>

ENVIRONMENTAL STATUS NOISE MONITORING



	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWP)	 <small>6-001402-007-06-007-001-001.7 Date: 10-Jun-2020 Revision:</small>							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
03-Jun-20	12-19Kmph	NA	28-26°C	56%	Sery				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number					
Digital SOUND Level Meter									
				Calibrator: Serial Number					
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
10 June 2020	1	60 seconds	3:01 PM	CANCE New Office Complex	NA	NA	50	60	55
	2	60 seconds	3:04 PM	W64# Workshop	NA	NA	50	60	55
10 June 2020	3	60 seconds	3:07 PM	Contractor facility office	NA	NA	60	70	65
	4	60 seconds	3:09 PM	Graveyard	NA	NA	70	80	75
10 June 2020	5	60 seconds	3:11 PM	3# Crane Tower	NA	NA	70	76	73
	6	60 seconds	3:15 PM	2# Crane Tower	NA	NA	70	76	73
10 June 2020	7	60 seconds	3:21 PM	Chinese construction team camp	NA	NA	55	65	60
	8	60 seconds	3:23 PM	Batching Plant	NA	NA	60	70	65
10 June 2020	9	60 seconds	3:26 PM	2# Generator	NA	NA	60	65	63
	10	60 seconds	3:31 PM	Batching Plant Stockyard	NA	NA	55	65	60

Recorded By:	<u>Name</u> <i>Tomu Xiaoting</i>	<u>Designation</u> <i>HSE Manager</i>	<u>Signature</u> <i>[Signature]</i>	<u>Date</u> <i>10 June 2020</i>
Checked By:	<u>Name</u> <i>Tomu Xiaoting</i>	<u>Designation</u> <i>HSE Manager</i>	<u>Signature</u> <i>[Signature]</i>	<u>Date</u> <i>10 June 2020</i>

ENVIRONMENTAL STATUS NOISE MONITORING

		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)				 E-00164-GWT-18-GWT-184-0012 Date: 20-June-2020 Rev: 001			
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
2020/6/24	14 km/h	N/A	33°C	67%	Sunny				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number		Calibrator: Serial Number			
Digital SOUND Level Meter									
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
24 June 2020	1	60 seconds	8:25 AM	WS4# Workshop	NA	NA	57	62	49
	2	60 seconds	8:33 AM	Contractor facility office	NA	NA	71	76	63
24 June 2020	3	60 seconds	8:48 AM	Graveyard	NA	NA	61	63	58
	4	60 seconds	8:56 AM	Tower Crane 3#	NA	NA	72	79	66
24 June 2020	5	60 seconds	9:09 AM	Middle East Fence	NA	NA	78	82	75
	6	60 seconds	9:19 AM	North Gate	NA	NA	70	76	67
24 June 2020	7	60 seconds	9:24 AM	Chinese construction team camp	NA	NA	63	68	60
	8	60 seconds	9:56 AM	Batching Plant	NA	NA	56	57	53
24 June 2020	9	60 seconds	10:24 AM	Generator 2#	NA	NA	68	73	57
	10	60 seconds	10:29 AM	CAMCE New Office Complex	NA	NA	81	85	76
Recorded By:	Name: <u>Anwar Hossain</u>		Designation: <u>ISE Engineer</u>		Signature: <u>[Signature]</u>		Date: <u>24 June 2020</u>		
Checked By:	Name: <u>Tong Xiaomeng</u>		Designation: <u>ISE Manager</u>		Signature: <u>[Signature]</u>		Date: <u>24 June 2020</u>		

ENVIRONMENTAL STATUS NOISE MONITORING

		DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)				 E-00164-GWT-18-GWT-184-0012 Date: 20-June-2020 Rev: 001			
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
2020/6/17	18 km/h	N/A	27° - 30°	86%	Rain				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number		Calibrator: Model Number		Calibrator: Serial Number			
Digital SOUND Level Meter									
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
17 June 2020	1	60 seconds	4:01 PM	CAMCE New Office Complex	NA	NA	53	56	48
	2	60 seconds	4:04 PM	WS4# Workshop	NA	NA	62	67	56
17 June 2020	3	60 seconds	4:07 PM	Contractor facility office	NA	NA	61	62	57
	4	60 seconds	4:09 PM	Graveyard	NA	NA	64	66	60
17 June 2020	5	60 seconds	4:11 PM	3# Crane Tower	NA	NA	75	76	65
	6	60 seconds	4:15 PM	North Gate	NA	NA	66	69	62
17 June 2020	7	60 seconds	4:21 PM	Chinese construction team camp	NA	NA	61	63	49
	8	60 seconds	4:23 PM	Batching Plant	NA	NA	62	65	53
17 June 2020	9	60 seconds	4:26 PM	2# Generator	NA	NA	73	81	61
	10	60 seconds	4:31 PM	Welder Workshop	NA	NA	76	82	65
Recorded By:	Name: <u>Tong Xiaomeng</u>		Designation: <u>ISE Manager</u>		Signature: <u>[Signature]</u>		Date: <u>17 June 2020</u>		
Checked By:	Name: <u>Tong Xiaomeng</u>		Designation: <u>ISE Manager</u>		Signature: <u>[Signature]</u>		Date: <u>17 June 2020</u>		

ENVIRONMENTAL STATUS NOISE MONITORING

M M MGT. CONSULTANTS Gandharbapur Water Treatment SMC 5002 CIV. VEOLIA	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)	MENARD ASIA 8-001-494-0071-110-0071-110-0012 Date: 14/6/2020 Rev: 001							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
09.06.2020	09 km/h	33%	26-30°C	82%	Sky & Clouds				
09.06.2020	12 km/h	34%	26-31°C	70%	Sky & Clouds				
10.06.2020	10 km/h	34%	26-34°C	92%	Sky & Clouds				
11.06.2020	18 km/h	38%	26-30°C	83%	Sky & Clouds				
13.06.2020	21 km/h	36%	27-31°C	89%	Clouds				
14.06.2020	8 km/h	32%	27-31°C	70%	Clouds				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number	Collector: Model Number	Collector: Serial Number	Collector: Mobile Phone				
Digital SOUND Level Meter		94081405	Mobile Phone						
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	L A10	L A90	L Aeq	L AMax	L AMin
3/6/2020	1	3 minutes	09.05 pm	Production Area, Nerest rig area	NA	NA	78.07 DB	90.08 DB	68.08 DB
	2	4.00 minutes	09.16 pm	Beside Production area, Nerest Public Road	NA	NA	75.02 DB	85.08 DB	67.00 DB
5/6/2020	3	6.00 minutes	15.32	Near Fencing area	NA	NA	72.05 DB	87.04 DB	65.08 DB
	4	2.00 minutes	15.31	Facility & Mechanical work shop area	NA	NA	92.02 DB	106.04 DB	84.09 DB
10/6/2020	5	3.00 minutes	14.56	Beside Production area, Nerest Public Road	NA	NA	72.04 DB	85.07 DB	57.03 DB
	6	2.00 minutes	14.55	Facility & Mechanical work shop area	NA	NA	78.00 DB	83.08 DB	47.08 DB
11/6/2020	7	4.00 minutes	14.57	BP area	NA	NA	72.08 DB	85.08 DB	61.00 DB
	8	3.00 minutes	02.28 AM	Rig Machine at Working platform	NA	NA	92.03 DB	106.08 DB	82.07 DB
12/6/2020	9	4.00 minutes	15.51	Rubber Work beside office facility area	NA	NA	72.06 DB	89.02 DB	60.02 DB
	10	5.00 minutes	15.30	Pending area near by public road	NA	NA	74.09 DB	81.01 DB	67.08 DB
14/6/2020	11	2.00 minutes	02.33 AM	Site area on road	NA	NA	61.00 DB	76.03 DB	43.08 DB
	12	6.00 minutes	02.32 AM	BP Area	NA	NA	62.04 DB	77.07 DB	43.04 DB
Name		Designation		Signature	Date				
Recorded By: Abu Nowshad Nahid		(Sr.HSE Officer)			14/6/2020				
Checked By: Md Waly Mohammad		(HSE Manager)			14/6/2020				

ENVIRONMENTAL STATUS NOISE MONITORING

M M MGT. CONSULTANTS Gandharbapur Water Treatment SMC 5002 CIV. VEOLIA	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)	MENARD ASIA 8-001-494-0071-110-0071-110-0012 Date: 14/6/2020 Rev: 001							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
01.06.2020	08 km/h	37%	27-31°C	79%	Sky & Clouds				
02.06.2020	09 km/h	35%	26-30°C	82%	Sky & Clouds				
03.06.2020	06 km/h	34%	27-30°C	87%	Sky & Clouds				
04.06.2020	18 km/h	36%	27-29°C	82%	Sky & Clouds				
07.06.2020	06 km/h	36%	29-32°C	86%	Clouds				
Equipment Summary									
Sound level Meter: Make / Model		Sound level Meter: Serial Number	Collector: Model Number	Collector: Serial Number	Collector: Mobile Phone				
Digital SOUND Level Meter		94081405	Mobile Phone						
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	L A10	L A90	L Aeq	L AMax	L AMin
1/6/2020	1	2.00 minutes	15.30pm	Rig Machine at Working platform	NA	NA	92.07 DB	110.00 DB	85.09 DB
	2	4.00 minutes	15.45pm	BP Area	NA	NA	66.08 DB	85.05 DB	50.00 DB
2/6/2020	3	5.00 minutes	16.50pm	Pending area	NA	NA	73.03 DB	90.03 DB	55.00 DB
	4	3.00 minutes	16.56pm	Rig Machine at Working platform	NA	NA	91.09 DB	110.03 DB	85.09 DB
3/6/2020	5	3.00 minutes	14.00pm	Mechanical work shop	NA	NA	52.03 DB	75.00 DB	45.00 DB
	6	4.00 minutes	13.59pm	Rig Machine at Working platform	NA	NA	57.00 DB	63.03 DB	40.00 DB
4/6/2020	7	4.00 minutes	15.18pm	Fencing area	NA	NA	58.05 DB	79.00 DB	45.00 DB
	8	4.00 minutes	15.14pm	Rig Machine at Working platform	NA	NA	72.03 DB	92.08 DB	58.09 DB
7/6/2020	9	2.00 minutes	14.16pm	Menard Office yard	NA	NA	56.07 DB	75.03 DB	42.03 DB
	10	5.00 minutes	14.10pm	Rig Machine at Working platform	NA	NA	76.01 DB	90.09 DB	65.00 DB
Name		Designation		Signature	Date				
Recorded By: Md Abu Bakar Siddique		(Sr.HSE Officer)			7/6/2020				
Checked By: Md Waly Mohammad		(HSE Manager)			7/6/2020				

ENVIRONMENTAL STATUS NOISE MONITORING

M M M M Gandharbpur Water Treatment ENC SURE QTV VEROLIA	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)	MENARD ASIA P-001-064-QWT-110-QWT-104-D12 Date: 30 Jan 2023 Rev: 001							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
15.05.2020	10 km/h	35°w	27-34°C	79%	Sky & Clouds				
16.05.2020	09 km/h	34°w	27-33°C	70%	Sky & Clouds				
17.05.2020	12 km/h	38°w	26-31°C	80%	Cloudy				
18.05.2020	12 km/h	33°w	27-31°C	73%	Mostly Clouds				
19.05.2020	—	—	—	—	—				
20.05.2021	12 km/h	32°w	27-33°C	65%	Mostly Clouds				
21.05.2020	—	—	—	—	—				
Equipment Summary									
Sound level Meter: Make / Model	Sound level Meter: Serial Number	Calibrator: Model Number	Calibrator: Serial Number						
Digital SOUND Level Meter	94031405	Public Phone	Public Phone						
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
15/5/2020	1	3 minutes	10:14 pm	Near by steel fencing area	NA	NA	87.02 DB	89.02 DB	83.02 DB
	2	2 minutes	10:16 pm	BP area	NA	NA	81.05 DB	79.04 DB	70.06 DB
16/5/2020	3	4 minutes	15:49	Rig Machine area at Working platform	NA	NA	82.05 DB	93.04 DB	70.06 DB
	4	3 minutes	15:54	BP area	NA	NA	60.03 DB	74.06 DB	51.07 DB
17/5/2020	5	5 minutes	16:53	Nearst Public Road Fencing area	NA	NA	79.03 DB	83.06 DB	62.04 DB
	6	4 minutes	16:24	BP area	NA	NA	62.03 DB	93.03 DB	69.09 DB
18/5/2020	7	3 minutes	15:40	Rebar cage making area	NA	NA	72.03 DB	83.06 DB	60.09 DB
	8	3 minutes	15:42	Rig Machine area at Working platform	NA	NA	91.03 DB	103.07 DB	80.03 DB
19/5/2020 Friday	9	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—
20/5/2020	11	4.00 minutes	20:19	Rig Machine area at Working platform	NA	NA	79.07 DB	89.04 DB	62.06 DB
	12	3.00 minutes	20:46	Rig Machine area at Working platform	NA	NA	60.04 DB	83.05 DB	69.07 DB
21/5/2020	13	—	—	—	—	—	—	—	—
	14	—	—	—	—	—	—	—	—
Recorded By:	Name	Designation	Signature	Date					
Checked By:	Name	Designation	Signature	Date					
	Abu Nawshad Nihal	(Sr. HSE Officer)		21/5/2020					
	Md Waly Mohammad	(HSE Manager)		21/5/2020					

ENVIRONMENTAL STATUS NOISE MONITORING

M M M M Gandharbpur Water Treatment ENC SURE QTV VEROLIA	DESIGN AND BUILD OF INTAKE, RAW WATER PIPELINE, AND 500 MLD WATER TREATMENT PLANT AT GANDHARBPUR UNDER DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT (DESWSP)	MENARD ASIA P-001-064-QWT-110-QWT-104-D12 Date: 30 Jan 2023 Rev: 001							
NOISE MONITORING RECORD									
Conditions Summary									
Date	Wind speed (MPH)	Wind Direction	Temperature	Humidity	Cloud Coverage				
26.05.2020	14 km/h	22°sw	28-36°C	61%	Cloudy				
27.05.2020	16 km/h	24°sw	28-33°C	69%	Cloudy				
28.05.2020	11 km/h	33°sw	24-26°C	62%	Cloudy				
30.05.2020	11 km/h	36°w	23-29°C	54%	Cloudy				
31.05.2020	11 km/h	34°w	25-30°C	60%	Cloudy				
Equipment Summary									
Sound level Meter: Make / Model	Sound level Meter: Serial Number	Calibrator: Model Number	Calibrator: Serial Number						
Digital SOUND Level Meter	94031405	Public Phone	Public Phone						
Monitoring Summary									
Date	Monitoring Number	Monitoring Duration	Time	Location	LA10	LA90	LAeq	LAMax	LAMin
26/5/2020	1	3.00 minutes	13:42pm	BP Area	NA	NA	73.02 DB	93.02 DB	67.02 DB
	2	4.00 minutes	15:28pm	Rig Machine at Working platform	NA	NA	92.03 DB	105.00 DB	95.00 DB
27/5/2020	3	3.00 minutes	14:41pm	Rig Machine at Working platform	NA	NA	91.05 DB	100.00 DB	90.04 DB
	4	5.00 minutes	14:31pm	Fencing area	NA	NA	78.06 DB	90.00 DB	65.04 DB
28/05/2020	5	4.00 minutes	14:13pm	Menard Office Main Entrance	NA	NA	62.00 DB	90.05 DB	58.05 DB
	6	4.00 minutes	14:07pm	Fencing area	NA	NA	81.04 DB	96.08 DB	65.02 DB
30.05.2020	7	2.00 minutes	15:45pm	BP Area	NA	NA	76.05 DB	95.02 DB	68.05 DB
	8	5.00 minutes	15:46pm	BP Area	NA	NA	57.04 DB	77.02 DB	50.05 DB
Recorded By:	Name	Designation	Signature	Date					
Checked By:	Name	Designation	Signature	Date					
	Md. Md. Saikat Ghosh	HSE Officer		31/05/2020					
	Md. Waly Mohammad	HSE Manager		31/05/2020					