

PILOT RURAL DESALINATION PLANT USING RENEWABLE ENERGY AND MEMBRANE TECHNOLOGY AT BETHANIE WATER SUPPLY SCHEME, //KARAS REGION CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

MINUTES OF SITE HANDOVER MEETING

HELD ON 04 MARCH 2021 AT 12:00
AT NAMWATER, WATER SUPPLY SCHEME SITE, BETHANIE

NO	ITEM	ACTION
1.	PRESENT AND APOLOGIES	
1.1	Present	
	R Likando NamWater	NW
	S Hauwanga NamWater (Civil Construction)	NWCC
	J Kazetjikuria NamWater (Civil Construction)	NWCC
	V Sem NamWater	NW
	A Nakale NamWater	NW
	J Kamburona NamWater	NW
	J Keendawala NamWater	NW
	H Rusch CMB (Namibia) (Pty) Ltd	CMB
	P Mutilifa CMB (Namibia) (Pty) Ltd	CMB
	F Kuchling Kuchling Consulting Engineers Inc	KCE
	M Menatzick Bethanie Village Council	BVC
1.2	Apologies	
	J Vorster NamWater	NW
	S Shilongo NamWater	NW
	S Shaanika NamWater	NW
	O Aldrich Desert Research Foundation of Namibia	DRFN
2.	SITE WALK THROUGH	
2.1	The engineer and the representatives of the contractor inspected the pipeline route from the plant to the ponds. The contractor will finalise and set out the route within the road reserve and along NamWater's existing water supply pipeline from the boreholes. Once set out, the route shall be surveyed and the longitudinal section drawing issued to the engineer for finalising the vertical alignment of the pipeline to the ponds.	NWCC / CMB

NO	ITEM	ACTION
2.2	On inspection of the pond site, the contractor inquired about what should be done with the stockpiled material. The engineer replied that the material should be suitable for being used to construct the required platform. The engineer said that a contour survey of the pond site had been done and that this information may be used for the measurement of materials used for the construction of the platform.	
3.	WELCOME AND OPENING	
3.1	Mr H Rusch opened the meeting and welcomed all those present. An attendance list was circulated for all to complete.	
4.	ADDITIONAL ITEMS TO THE AGENDA	
4.1	None.	
5.	PARTIES INVOLVED IN THE CONTRACT AND THEIR REPRESENTATIVES	
5.1	<p>Project Funded by</p> <p>ADAPTATION FUND 1818 H Street NW, Washington DC 20433, USA Website: www.adaptation-fund.org</p>	
5.2	<p>Implementing Entity</p> <p>DESERT RESEARCH FOUNDATION OF NAMIBIA (DRFN) P O Box 20232, Windhoek Represented by Mr O Aldrich Tel: (061) 37 7500 Fax: (061) 23 0172 e-mail: olla@aldrichprojectconsulting.com</p>	
5.3	<p>Executing Entity (Employer)</p> <p>NAMIBIA WATER CORPORATION Private Bag 13389, Windhoek Represented by Mr R Likando Tel: (061) 71 2039 Fax: (061) 71 3801 Cell: 081 734 3184 e-mail: likandor@namwater.com.na</p>	
5.4	<p>Local Government</p> <p>BETHANIE VILLAGE COUNCIL P O Box 74, Bethanie Represented by the CEO, Mr Hendrik Gaobaeb Tel: (063) 283 006 Fax: (063) 283 107 e-mail: gaobaebh@gmail.com</p>	

NO	ITEM	ACTION
5.5	<p>Contractor</p> <p>MAIN CONTRACTOR: NAMWATER CIVIL CONSTRUCTION Private Bag 13389, Windhoek Represented by Mr J Kazetjikuria Tel: (061) 71 2040 Cell: 081 126 4010 e-mail: KazetjikuriaJ@namwater.com.na</p> <p>HDPE LINING SUBCONTRACTOR: Contractor to provide details.</p>	
5.6	<p>Engineers</p> <p>MECHANICAL AND ELECTRICAL ENGINEERS (LEAD): CMB (NAMIBIA) P O Box 3256, Windhoek Represented by Mr H Rusch Tel: (061) 23 7253 / 4 Fax: (061) 23 5514 Cell: 081 300 3697 e-mail: hrusch@cmbnamibia.com</p> <p>CIVIL ENGINEERS: KUCHLING CONSULTING ENGINEERS P O Box 801, Windhoek Represented by Mr F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>	
6.	CONTRACT DETAILS	
6.1	It was agreed by all parties that the contract commencement date shall be two weeks from the site handover date, which is 04 March 2021.	
6.2	Contract Commencement Date: 18 March 2021 Contract Period: Awaiting revised programme Scheduled Contract Completion: Awaiting revised programme Defects Notification Period: 365 days Final Completion Date: Awaiting revised programme	NWCC NWCC NWCC
6.3	The final contract amount is to be provided with the final BoQ submitted by the contractor.	NWCC
7.	CONTRACTOR'S REPORT	
7.1	The contractor did not prepare a contractor's report for the site hand-over meeting. The engineer instructed that the contractor provide a contractor's report seven (7) days prior to each of the contract meetings.	NWCC
7.2	The engineer will include a copy of the report when sending out the minutes of the meeting. The report will be e-mailed to all present at the meeting.	CMB

NO	ITEM	ACTION
7.3	The contractor was instructed to update their current Gantt chart with cost breakdown of each item in the BoQ so the engineer can complete the EVM report. The programme must be updated and submitted to the engineer at / before each contract meeting.	NWCC
7.4	NamWater will communicate with NTA regarding student field attachments and then finalise whether they will have student training programme on this project or not.	NW
8.	ENGINEER'S REPORT	
8.1	Contract Overview	
	Original Contract Period: Awaiting revised programme	NWCC
	Contract Commencement Date: 18 March 2021	
	Extension of Time Granted: None	
	Scheduled Contract Completion: Awaiting revised programme	NWCC
	Defects Notification Period: 365 days	
	Final Completion Date: Awaiting revised programme	NWCC
	Period Elapsed: 0 days (0 %)	
	Remaining Construction: Awaiting revised programme	NWCC
	As noted under item 6.3 above, the final contract amount is to be provided with the final BoQ submitted by the contractor.:	NWCC
	Payments Made to Date:	
	NIL	N\$ 0.00
	Total Payments Made to Date:	N\$ 0.00
8.2	Contractual Obligations and Documentation	
8.2.1	Working Copies of the Contract Document	
	The engineer will extract the scope and the drawings from the original main bid document and provide three set of copies to the contractor.	CMB
8.2.1	Construction Programme	
	The contractor is to provide the engineer with a revised programme as soon as possible.	NWCC
8.2.2	Cash Flow Forecast	
	No cash flow forecast was provided. The contractor is requested to provide a cash flow forecasts on a monthly basis.	NWCC
8.2.3	Training or Knowledge Sharing Plan and Programme	
	When NamWater decides to have students on this project, they will notify the contractor who will then complete the training plan.	NW NWCC
8.2.4	List of Local Labourers	
	The Village council has received a list of labourers that will be required for this project and has thanked NamWater for this. NamWater was requested to forward this list to the engineer.	NWCC

NO	ITEM	ACTION
8.2.5	<p>Quality Assurance Manual / Method Statements NamWater has already approved the Quality Assurance Manual or Method Statements of the contractor. The contractor was requested to forward this to the engineer.</p>	NWCC
8.3	<p>Correspondence</p>	
8.3.1	<p>Correspondence and Requests from Contractor:</p> <ul style="list-style-type: none"> • None 	
8.3.2	<p>Correspondence Send to the Contractor:</p> <ul style="list-style-type: none"> • None 	
8.3.3	<p>Correspondence Received from the Employer:</p> <ul style="list-style-type: none"> • None 	
8.3.4	<p>Correspondence Send to the Employer:</p> <ul style="list-style-type: none"> • None 	
8.4	<p>Construction Supervision and Quality Control</p>	
8.4.1	<p>Drawings Issued to the Contractor:</p> <ul style="list-style-type: none"> • The engineer will issue three sets of original sized (A1, A3) drawings to the contractor in hard copy. • The longitudinal section drawing on the pipeline will be finalised and issued, once the route has been finalised and surveyed. • The contractor was requested to keep one set of the original sized drawings on site and to note “as-built” changes as well as any variations in the existing services on these drawings. These “as-built” drawings are to be submitted to the engineer following the completion of the construction before a Completion Certificate will be issued to the contractor. 	CMB KCE CMB NWCC
8.4.2	<p>Working Drawings Issued to the Engineer for Approval:</p> <ul style="list-style-type: none"> • Any changes on the design that the contractor requires must be discussed with the engineer. 	NWCC
8.4.3	<p>Construction supervision will be done by the engineers.</p>	CMB
8.4.4	<p>Site Instruction Issued to the Contractor:</p> <ul style="list-style-type: none"> • None 	
8.4.5	<p>Variations:</p> <ul style="list-style-type: none"> • None 	
8.4.6	<p>Name Board:</p> <ul style="list-style-type: none"> • The contractor was requested to update the name board with information of this contract and send it for approval. The suitable position for the nameboard is yet to be discussed with the village council. 	NWCC

NO	ITEM	ACTION
8.4.7	<p>Contractor's Camp</p> <ul style="list-style-type: none"> • The engineer indicated that the NamWater site has already been handed over to CSV and it would be discussed with CSV on their willingness to share the site with the contractor. • If it is agreed that the NamWater site is shared the contractor shall obtain their own water and electrical connections. • The engineer gave a reminder that on this contract, no living quarters for the contractor's employees shall be established in the storage yard and depot and the contractor shall make his own arrangements to house his employees off site and to transport them to the site. • NamWater will discuss with the village council after this meeting about the suitable campsite for this contract. • The contractor was requested to provide rates for the establishment of the contractor's camp to the engineer. • With regards to the meeting room, the contractor will discuss with CSV if the contractor can use the CSV meeting room for their monthly meetings. • The village council has offered their boardroom for these contract meetings. • All other facilities to be provided for as stipulated in the bidding document (PS 18). This includes for a copy of all the relevant SANS 1200 standardized specifications, which shall be on site at all times. • The relevant personnel responsible for the NamWater site is Mr A Kok from NamWater and the contractor will contact him if there are any questions. 	<p>NWCC</p> <p>NWCC</p>
8.4.8	<p>Setting Out of the Works:</p> <ul style="list-style-type: none"> • It is the contractor's responsibility to set out the works for the ponds, fencing and pipeline. 	<p>NWCC</p>
8.4.9	<p>Concrete Mix Design, Material and Cube Tests:</p> <ul style="list-style-type: none"> • All relevant tests for material, concrete mix designs, and cubes will be submitted to the engineer for approval. If the contractor is to mix concrete on site, a methodology will be provided. • All relevant tests must be submitted to the engineer throughout the contract. 	<p>NWCC</p> <p>NWCC</p>
8.4.10	<p>Site Instruction Book and Daily Construction Reports:</p> <ul style="list-style-type: none"> • The contractor was requested to ensure that a site instruction book is on site as specified. • The contractor was requested to submit the daily construction report at each contract meeting. 	<p>NWCC</p> <p>NWCC</p>
8.4.11	<p>Tests and Other:</p> <ul style="list-style-type: none"> • The contractor was requested to find out what other tests are required in this contract from the original bid documents. • It is the responsibilities of the contractor to locate suitable borrow pits and have the necessary materials test results approved by the engineers. The Village Council will help the contractor with the allocations. 	

NO	ITEM	ACTION
8.5	Claims	
8.5.1	No claim to date. The contractor was requested to send a monthly claim to the engineer. The engineer will only certify work done.	NWCC
8.6	Measurement and Payment	
8.6.1	Variation Orders: <ul style="list-style-type: none"> • Once there is a variation in quantities, the engineer will consider the re-measurement and complete variation orders accordingly. 	CMB
8.6.2	Dayworks Ordered: <ul style="list-style-type: none"> • None 	
8.6.3	Payments: <ul style="list-style-type: none"> • The contractor shall submit all claims for payment together with the schedules of measurement of works completed to the engineer for verification and certification. The claim for payment shall be recorded in the EVM spread sheet and e-mailed to the engineer. Thereafter the claim and payment valuation will be submitted to NamWater for approval. 	NWCC / CMB / NW
8.7	Schedule Progress versus Plan and Trends	
8.7.1	The contractor to provide the engineer with the percentage completion of each of the tasks on the Gantt chart to complete this comparison.	
8.7.2	Once the percentages have been received by the engineer, he will voice any concerns.	
8.8	Earned Value Management (EVM)	
8.8.1	The contractor is to provide the cost of each of the tasks in the Gantt chart with an associated cost for the engineer to complete the EVM.	NWCC
9.	ENVIRONMENTAL AND SOCIAL MANAGEMENT	
9.1	A copy of the environmental clearance certificate should be provided to the contractor to keep on site.	NW
9.2	Environmental and social considerations are contained in the draft ESMP, details of which were included in the original bid document. The contractor should go through this and see that they comply in every respect and if there are any questions to inform the engineer.	NWCC
9.3	A timely reporting of the environmental compliance is needed by AF at the end of the project. Thus, NamWater need a frequent updates of site pictures.	NWCC
9.4	The updated site pictures requested by NamWater will be attached to the contract report.	NWCC

NO	ITEM	ACTION
10.	MATTERS RAISED BY THE EMPLOYER	
10.1	None	
11.	ANY OTHER MATTERS	
11.1	KCE requested that the contractor have a copy of all relevant SANS 1200 specifications on site at all times.	NWCC
12.	DATES AND VENUES OF FUTURE CONTRACT / SITE MEETINGS	
12.1	It was agreed that future contract meetings will preliminary be scheduled on a monthly basis for the last Thursday of each month. However, the engineer will provide a schedule for the future meetings after confirming with all parties.	CMB
12.2	<p>A preliminary schedule of meetings is therefore as follows:</p> <ul style="list-style-type: none"> • Contract Meeting 1: Wednesday 31 March 2021 • Contract Meeting 2: Thursday 29 April 2021 • Contract Meeting 3: Thursday 27 May 2021 • Contract Meeting 4: Tuesday 29 June 2021 • Contract Meeting 5: Monday 12 July 2021 (Contract Completion for the WTP) 	
12.3	Meetings will commence at 12:00 on site or in Windhoek depending on the work completed on site.	
12.4	Additional meetings will be scheduled if so required.	
13.	CLOSURE	
13.1	The meeting was adjourned at 12:54.	
13.2	It was agreed that distribution of the minutes will be by e-mail only, as per the attendance list and apologies.	

Minutes by



H RUSCH IncEng
CLINKSCALES MAUGHAN-BROWN

14. **APPROVAL**

These minutes and any corrections thereto by hand are herewith approved:

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Employer: NamWater

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Date

.....
Engineer: CMB (Namibia)

.....
Date

.....
Contractor: NamWater (Civil Construction)

.....
Date

Annexure A

EARNED VALUE MANAGEMENT (EVM) REPORT

Project Start date: 18 March 2021

Status Date: 04 March 2021

No graph at this stage (awaiting completion dates and costs of each task from contractor)

EARNED VALUE MANAGEMENT (EVM) REPORT (Continued)

Project Start date: 18 March 2021

Status Date: 04 March 2021

Task No	Task	PV ¹	EV ²	AC ³	SV % ⁴	CV % ⁵	SPI ⁶	CPI ⁷
1	As per Gantt Chart	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC
Project Total		-	-	-	-	-	-	-

1. Planned Value (PV) = the budgeted amount through the current reporting period
2. Earned Value (EV) = total project budget multiplied by the % of project completion
3. Actual Cost (AC) = actual costs to date
4. Schedule Variance % (SV %) = how much ahead or behind the schedule a project is running in terms of percentage. SV % is calculated using the following formula: $SV \% = SV / PV$
5. Cost Variance % (CV %) = how much over - or under-budget the project is in terms of percentage. CV % is calculated using the following formula: $CV \% = CV / EV \times 100$
6. Schedule Performance Index (SPI) = how close actual work is being completed compared to the schedule. SPI is computed by EV / PV . A value of above one means that the project is doing well against the schedule.
7. Cost Performance Index (CPI) = Represents the amount of work being completed on a project for every unit of cost spent. CPI is computed by EV / AC . A value of above 1 means that the project is doing well against the budget.

Annexure B

DRAWING LIST

No official drawings issued to date

Drawing No	Drawing Title	Size	Date of Issue						
			XXXXXX
			-						
	GENERAL								
9044-III/01/G	Drawing Schedule	A1	-						
9044-III/02/G	Site and Locality Plan	A1	-						
9044-III/03/G	General Site Plan	A1	-						
9044-III/04/G	Water Treatment Plant and Hybrid PV/Wind Power Plant Site Plan	A1	-						
9044-III/05/G	Name Board Detail	A1	-						
	CIVIL WORK								
9044-III/01/CE	Lined Brine Evaporation Ponds Site Layout	A1	-						
9044-III/02/CE	Lined Brine Evaporation Ponds Site Layout	A1	-						
9044-III/03/CE	Lined Brine Evaporation Ponds Sections A-A, B-B, C-C and D-D	A1	-						
9044-III/04/CE	Lined Brine Evaporation Ponds Lining and Pipework Details	A1	-						
9044-III/05/CE	Lined Brine Evaporation Ponds Security Fencing Details	A1	-						
9044-III/06/CE	Pipeline Trenching Details	A3	-						

The drawings indicated are drawings issued to the contractor only

Annexure C

CONTRACTOR'S REPORT

No contractor's report to date. First report will be submitted 7 days before the next meeting

PILOT RURAL DESALINATION PLANT USING RENEWABLE ENERGY AND MEMBRANE TECHNOLOGY AT BETHANIE WATER SUPPLY SCHEME, //KARAS REGION CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

SITE / CONTRACT MEETING 1

HELD ON 15 APRIL 2021 AT 10:05
AT CMB OFFICE, 124 ROBERT MUGABE AVENUE

NO	ITEM	ACTION
1.	PRESENT AND APOLOGIES	
1.1	Present	
	R Likando NamWater (via Teams)	NW
	J Sirunda NamWater (via Teams)	NW
	A Nakale NamWater (via Teams)	NW
	J Kamburona NamWater (via Teams)	NW
	J Keendawala NamWater (via Teams)	NW
	S Shilongo NamWater (via Teams)	NW
	S Shaanika NamWater (via Teams)	NW
	S Hauwanga NamWater (Civil Construction) (via Teams)	NWCC
	J Kazetjikuria NamWater (Civil Construction) (via Teams)	NWCC
	S Hauwanga NamWater (Civil Construction) (via Teams)	NWCC
	H Rusch CMB (Namibia) (Pty) Ltd	CMB
	P Mutilifa CMB (Namibia) (Pty) Ltd	CMB
	F Kuchling Kuchling Consulting Engineers Inc	KCE
	O Aldrich Desert Research Foundation of Namibia	DRFN
1.2	Apologies	
	J Vorster NamWater	NW
2.	SITE WALK THROUGH	
2.1	None.	
3.	ADDITIONAL ITEMS	
3.1	None	
4.	APPROVAL OF PREVIOUS MINUTES	
4.1	All parties approved the previous minutes verbally. The minutes of the Site Handover Meeting was only signed by the engineer. The client as well as the contractor still needs to sign the previous minutes.	NW / NWCC

NO	ITEM	ACTION
5.	WELCOME AND OPENING	
5.1	Mr H Rusch opened the meeting and welcomed all those present. An attendance list was circulated for all to complete; however, most attendees were via MS Teams.	
6.	PARTIES INVOLVED IN THE CONTRACT AND THEIR REPRESENTATIVES	
6.1	Project Funded by ADAPTATION FUND 1818 H Street NW, Washington DC 20433, USA Website: www.adaptation-fund.org	
6.2	Implementing Entity DESERT RESEARCH FOUNDATION OF NAMIBIA (DRFN) P O Box 20232, Windhoek Represented by Mr O Aldrich Tel: (061) 37 7500 Fax: (061) 23 0172 e-mail: olla@aldrichprojectconsulting.com	
6.3	Executing Entity (Employer) NAMIBIA WATER CORPORATION Private Bag 13389, Windhoek Represented by Mr R Likando Tel: (061) 71 2039 Fax: (061) 71 3801 Cell: 081 734 3184 e-mail: likandor@namwater.com.na	
6.4	Local Government BETHANIE VILLAGE COUNCIL P O Box 74, Bethanie Represented by the CEO, Mr Hendrik Gaobaeb Tel: (063) 283 006 Fax: (063) 283 107 e-mail: gaobaebh@gmail.com	
6.5	Contractor MAIN CONTRACTOR: NAMWATER CIVIL CONSTRUCTION Private Bag 13389, Windhoek Represented by Mr J Kazetjiguria Tel: (061) 71 2040 Cell: 081 126 4010 e-mail: KazetjiguriaJ@namwater.com.na HDPE LINING SUBCONTRACTOR: No appointment done to date.	NWCC

NO	ITEM	ACTION									
6.6	<p>Engineers</p> <p>MECHANICAL AND ELECTRICAL ENGINEERS (LEAD): CMB (NAMIBIA) P O Box 3256, Windhoek Represented by Mr H Rusch Tel: (061) 23 7253 / 4 Fax: (061) 23 5514 Cell: 081 300 3697 e-mail: hrusch@cmbnamibia.com</p> <p>CIVIL ENGINEERS: KUCHLING CONSULTING ENGINEERS P O Box 801, Windhoek Represented by Mr F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>										
7.	CONTRACT DETAILS										
7.1	Contract Commencement Date: 04 March 2021 Contract Period: 156 Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022										
7.2	Following the arithmetical correction to the contractor's bid the contract amount is as follows: <table data-bbox="256 1200 1126 1335"> <tr> <td>Original Contract Value:</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Less: Contingencies</td> <td><u>N\$</u></td> <td><u>1 050 000.00</u></td> </tr> <tr> <td>Total Contract Amount (as awarded)</td> <td>N\$</td> <td>14 870 365.00</td> </tr> </table> (Excluding 15% VAT)	Original Contract Value:	N\$	15 920 365.00	Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>	Total Contract Amount (as awarded)	N\$	14 870 365.00	
Original Contract Value:	N\$	15 920 365.00									
Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>									
Total Contract Amount (as awarded)	N\$	14 870 365.00									
8.	MATTERS ARISING FROM PREVIOUS MINUTES										
8.1	None.										
9	CONTRACTOR'S REPORT										
9.1	<ul style="list-style-type: none"> The contractor submitted contractor's report 1 to the engineer for approval. This report will be attached to the completed minutes of meeting 1 and will be circulated by the engineer to all parties. 	CMB									
9.2	The contractor gave the following summary: <ul style="list-style-type: none"> The site has been established. Ongoing works include the connection for water, sewer, and electricity. The setting out of the pipeline is in progress. The site clearance of the pond has been completed. The levelling of the platform is in progress. Recruitment of labourers has been completed. Twenty five (25) local workers were appointed. The contractor has given the required protocols for Covid-19 regulations to the local labourers on site. 										

NO	ITEM	ACTION																		
	<ul style="list-style-type: none"> • One of the contractor’s loader trucks was vandalised by community members. The report of this incident, together with the report received from the police will be attached to contractor’s report 2. • The NamWater supply pipeline from the boreholes was damaged during excavation and will be repaired as soon as possible. • The excavation is done by hand and once the pipeline is exposed, the machinery will take over. 																			
9.3	A list of local labourers appointed to date was included in the contractor’s report 1.																			
9.4	The contractor only issued their contractor’s report 1 to the engineer on the day of the meeting. The contractor is advised to provide this report seven (7) days prior to each of the contract as previously requested.	NWCC																		
9.5	NamWater has not yet finalised whether they will accommodate a student training programme on this project.																			
9.6	The Gantt chart activities were included in the contractor’s report provided to the engineer. The engineer has requested the contractor to update it with percentages of completion.	CMB																		
9.7	An updated cash flow was included in the contractor’s report. The contractor is instructed to always provide an updated cash flow report with each contractor’s report monthly.	NWCC																		
10.	ENGINEER’S REPORT																			
10.1	<p>Contract Overview</p> <p>Contract Commencement Date: 04 March 2021 Original Contract Period: 156 Calendar days Extension of Time Granted: None Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022</p> <p>Period Elapsed: 42 days (27 %) Remaining Construction: 114 days (73 %)</p> <p>Following the arithmetical correction to the contractor’s bid and including approved Variation Orders, the contract value is as follows:</p> <table data-bbox="268 1646 1125 1926"> <tr> <td>Original Contract Value:</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Approved Variation Orders to date:</td> <td><u>N\$</u></td> <td><u>0.00</u></td> </tr> <tr> <td>Current Contract Amount (Excluding 15% VAT)</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Payments Made to Date:</td> <td></td> <td></td> </tr> <tr> <td>NIL</td> <td><u>N\$</u></td> <td><u>0.00</u></td> </tr> <tr> <td>Total Payments Made to Date:</td> <td>N\$</td> <td>0.00</td> </tr> </table>	Original Contract Value:	N\$	15 920 365.00	Approved Variation Orders to date:	<u>N\$</u>	<u>0.00</u>	Current Contract Amount (Excluding 15% VAT)	N\$	15 920 365.00	Payments Made to Date:			NIL	<u>N\$</u>	<u>0.00</u>	Total Payments Made to Date:	N\$	0.00	
Original Contract Value:	N\$	15 920 365.00																		
Approved Variation Orders to date:	<u>N\$</u>	<u>0.00</u>																		
Current Contract Amount (Excluding 15% VAT)	N\$	15 920 365.00																		
Payments Made to Date:																				
NIL	<u>N\$</u>	<u>0.00</u>																		
Total Payments Made to Date:	N\$	0.00																		

NO	ITEM	ACTION
10.2	Contractual Obligations and Documentation	
10.2.1	Working Copies of the Contract Document The engineer is still extracting the applicable scope from the original main bid document and will provide this document in soft copy to the contractor in due course.	CMB
10.2.2	Construction Programme The engineer has received an updated programme with the progress report and will send the programme out with the minutes. Refer to Annexure C .	NWCC
10.2.3	Cash Flow Forecast The engineer has received the revised cashflow forecast and will send it out with the minutes of the meeting. The contractor is requested to provide a cash flow forecast monthly.	NWCC
10.2.4	Training or Knowledge Sharing Plan and Programme When NamWater decides to have students on this project, they will notify the contractor who will then complete the training plan.	NW NWCC
10.2.5	List of Local Labourers The contractor has hired 25 local labourers and the list of names was included in the contractor's report 1.	
10.2.6	Quality Assurance Manual / Method Statements NamWater has already approved the Quality Assurance Manual or Method Statements of the contractor. The contractor was requested to forward this to the engineer.	NWCC
10.3	Correspondence	
10.3.1	Correspondence and Requests from Contractor: <ul style="list-style-type: none"> • An image file of the previously done topographic survey from the engineer. 	KCE / CMB
10.3.2	Correspondence Send to the Contractor: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.3	Correspondence Received from the Employer: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.4	Correspondence Send to the Employer: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	

NO	ITEM	ACTION
10.4	Construction Supervision and Quality Control	
10.4.1	<p>Drawings Issued to the Contractor:</p> <ul style="list-style-type: none"> • The engineer had issued three sets of original sized (A1, A3) drawings to the contractor in hard copy. The engineer will update the drawing register with drawings numbers, title etc. • The longitudinal section drawing awaits the surveying data. • The contractor was requested to keep one set of the original sized drawings on site and to note “as-built” changes as well as any variations in the existing services on these drawings. These “as-built” drawings are to be submitted to the engineer following the completion of the construction before a Completion Certificate will be issued to the contractor. 	<p>CMB NWCC NWCC</p>
10.4.2	<p>Working Drawings Issued to the Engineer for Approval:</p> <ul style="list-style-type: none"> • The contractor is requested to send a sketch drawing of the new pipeline route on the other side of the road. • Any changes on the design that the contractor requires should be discussed with the engineer. 	<p>NWCC NWCC</p>
10.4.3	<p>Site Instruction Issued to the Contractor:</p> <ul style="list-style-type: none"> • The engineer gave the following instructions to the contractor regarding the setting out of the pipeline route: <ul style="list-style-type: none"> ○ Employ hand labour to see where the conflicting services are at each point and intermediates that leads to the ponds, ○ Choose an actual route where the new pipeline can be constructed, ○ Call the surveyor to set out this route and also to survey the existing visible services (the surveyor should only be called when the contractor has confirmed that the pipes can be laid from the desalination plant to the ponds). • The output of the surveyor should be a complete longitudinal section drawing and should be provided to the engineer in AutoCAD format. • A formal site instruction regarding the pipeline route will be e-mailed to the contractor in due course. • The cost of the hired hand labourers will be covered by the surveyor’s cost in the BoQ. 	
10.4.4	<p>Variations:</p> <ul style="list-style-type: none"> • At this stage it is only the variations due to the new pipeline route. Other variations which may transpire during the course of the contract will be identified and included. 	
10.4.5	<p>Name Board:</p> <ul style="list-style-type: none"> • The drawing of the nameboard was approved. The engineer has requested the contractor to provide a shop drawing from the manufacturer. • The suitable position for the nameboard is yet to be discussed with the village council. 	<p>NWCC NWCC</p>

NO	ITEM	ACTION
10.4.6	<p>Contractor's Camp</p> <ul style="list-style-type: none"> • The contractor awaits NamWater house which will be available to them by the end of this month. • The contractor ensured that they would use the existing NamWater electricity connection. • The contractor is currently using the old municipal building. This building has water, power, toilets, and a hall to accommodate meetings. • The relevant personnel responsible for the NamWater site is Mr Tuhafeni from NamWater and the contractor will contact him with anything related to the site. 	
10.4.7	<p>Setting Out of the Works:</p> <ul style="list-style-type: none"> • The setting out of the points of the pond has been completed. All 4 corners are within the ERF. • The setting out of the fencing will commence once the establishment of the pond's platform is done. • For the setting out of the pipeline, the contractor has indicated that most of the pipelines are not running along the road as indicated on the existing as-built drawings. • The setting out that the contractor did with the surveyor shows that a clash of services is deemed to happen as the existing pipelines are not parallel with each other. • The engineer instructed that the contractor shift the new pipeline to avoid the existing pipeline but should make sure that the new route is within the service corridor of the town council. • The engineer further advised that the new pipeline be constructed on the other side of the road that goes downhill. The contractor should however find out what services are there because if there is a sewer line than that side cannot be used. The contractor has agreed with this option and has requested a site instruction from the engineer. • The engineer has given the requested site instruction during the meeting and will send out an official site instruction via e-mail. • NamWater assumed that the existing services was surveyed together with the surveying of the desalination plant, because of this, the hired surveyor only completed the setting out of work for the ponds. The engineer clarified that the previous surveyor only did the typographic survey. The engineer requested that the contractor hire a surveyor to do a survey on existing services and also to complete the setting out of the new pipeline route. 	
10.4.8	<p>Concrete Mix Design, Material and Cube Tests:</p> <ul style="list-style-type: none"> • A test for the construction material was submitted to the engineer and was approved. • The contractor is currently busy with the methodology regarding the mixing of the concrete on site. This will be issued to the engineer in due course. • There is no cubes test done to date. • All other relevant tests should be submitted to the engineer throughout the contract. 	<p>NWCC</p> <p>NWCC</p>
10.4.9	<p>Site Instruction Book and Daily Construction Reports:</p> <ul style="list-style-type: none"> • The contractor was requested to have a site instruction book on site as specified. This book should be a triplicate type. 	<p>NWCC</p>

NO	ITEM	ACTION
	<ul style="list-style-type: none"> The contractor was requested to submit the daily construction reports at each contract meeting. The engineer requested that the contractor create a WhatsApp group to be used as a platform to share problems on site, working progress, quality of work and for other events on site. 	NWCC
		NWCC
10.4.10	Tests and Other: <ul style="list-style-type: none"> The borrow pits have been allocated and tested. The engineer has received and approved these tests. The lining test for the HDP lining will be done at the later stages when the lining is done. 	
10.5	Claims	
10.5.1	There is no claim done to date. A claim will be forwarded in due course to the engineer for payment valuation.	NWCC
10.5.2	The engineer indicated that the contractor could send their claim any time; however, the claims will only be done monthly.	
10.6	Measurement and Payment	
10.6.1	Variation Orders: <ul style="list-style-type: none"> Upon receiving the surveyor cost from the contractor, the engineer will do a variation order. 	CMB
10.6.2	Dayworks Ordered: <ul style="list-style-type: none"> None 	
10.6.3	Payments: <ul style="list-style-type: none"> No payment made to date. The contractor shall submit a claim for payment together with the schedules of measurement of works completed to the engineer for verification and certification. The claim for payment shall be recorded in the EVM spread sheet and e-mailed to the engineer. Thereafter the claim and payment valuation will be submitted to NamWater for approval. 	NWCC / CMB / NW
10.7	Schedule Progress versus Plan and Trends	
10.7.1	The contractor is requested to provide the engineer with the percentage completion of each of the tasks on the Gantt chart to complete this comparison.	NWCC
10.7.2	Once the percentages have been received by the engineer, he will voice any concerns.	CMB
10.8	Earned Value Management (EVM)	
10.8.1	The contractor is to provide the cost of each of the tasks in the Gantt chart with an associated cost for the engineer to complete the EVM.	NWCC
11.	ENVIRONMENTAL AND SOCIAL MANAGEMENT	
11.1	The environmental clearance certificate is still not on site. NamWater will e-mail this certificate to the contractor as soon as possible.	NW

NO	ITEM	ACTION
11.2	An environmental report including safety and environmental issues was issued to the engineer. NamWater will provide the contractor with a compliance checklist that will help in the compiling of the next environmental report. The engineer will go through this report.	NW CMB
11.3	A timely reporting of the environmental compliance is needed by AF at the end of the project. Thus, NamWater need frequent updates of site pictures.	NWCC
11.4	The updated site pictures requested by NamWater will be attached to the contract's report.	NWCC
12.	MATTERS RAISED BY THE EMPLOYER	
12.1	The contractor showed his concern regarding the procurement of hiring a surveyor to complete the setting out of work for the pipeline route. The engineer ensured that there is an amount allowed for in the provisional sum for the surveyor. This amount is claimable to the contractor, as long as the contractor provides the engineer with the quotation from the surveyor.	CMB / NWCC
13.	ANY OTHER MATTERS	
13.1	<ul style="list-style-type: none"> • The engineer suggested that the brine pipeline be constructed before July, to avoid delaying the desalination plant contractor. • NamWater environmentalist indicated that the brine can be temporary be released to the environment upon getting the permission from the council, however, they will internally discuss this matter and revert to the engineer with the best alternative on how to handle the brine. 	NW
14.	DATES AND VENUES OF FUTURE CONTRACT / SITE MEETINGS	
14.1	It was agreed that future contract meetings will preliminary be scheduled monthly for the last Thursday of each month. However, the engineer will provide a schedule for the future meetings after confirming with all parties.	CMB
14.2	<p>A preliminary schedule of meetings is therefore as follows:</p> <ul style="list-style-type: none"> • Contract Meeting 2: Thursday 03 June 2021 • Contract Meeting 3: Tuesday 29 June 2021 • Contract Meeting 4: Thursday 29 July 2021 • Contract Meeting 5: Thursday 26 August 2021 • Contract Meeting 6: Tuesday 28 September 2021 • Contract Meeting 7: Monday 01 October 2021 (Contract Completion for the Ponds) 	
14.3	Meetings will commence at 12:00 on site or in Windhoek depending on the work completed on site.	
14.4	Additional meetings will be scheduled if so required.	
15.	CLOSURE	
15.1	The meeting was adjourned at 12:10.	

NO	ITEM	ACTION
15.2	It was agreed that distribution of the minutes will be by e-mail only, as per the attendance list and apologies.	

Minutes by



H RUSCH IncEng
CLINKSCALES MAUGHAN-BROWN

16. APPROVAL

These minutes and any corrections thereto by hand are herewith approved:

.....

..... Date

..... Date

..... Date

Annexure A

EARNED VALUE MANAGEMENT (EVM) REPORT

Project Start date: 04 March 2021

Status Date: 15 April 2021

No graph at this stage (awaiting completion percentages and costs of each task from contractor)

EARNED VALUE MANAGEMENT (EVM) REPORT (Continued)

Project Start date: 04 March 2021

Status Date: 15 April 2021

Task No	Task	PV ¹	EV ²	AC ³	SV % ⁴	CV % ⁵	SPI ⁶	CPI ⁷
1	As per Gantt Chart	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC
Project Total		-	-	-	-	-	-	-

1. Planned Value (PV) = the budgeted amount through the current reporting period
2. Earned Value (EV) = total project budget multiplied by the % of project completion
3. Actual Cost (AC) = actual costs to date
4. Schedule Variance % (SV %) = how much ahead or behind the schedule a project is running in terms of percentage. SV % is calculated using the following formula: $SV \% = SV / PV$
5. Cost Variance % (CV %) = how much over - or under-budget the project is in terms of percentage. CV % is calculated using the following formula: $CV \% = CV / EV \times 100$
6. Schedule Performance Index (SPI) = how close actual work is being completed compared to the schedule. SPI is computed by EV / PV . A value of above one means that the project is doing well against the schedule.
7. Cost Performance Index (CPI) = Represents the amount of work being completed on a project for every unit of cost spent. CPI is computed by EV / AC . A value of above 1 means that the project is doing well against the budget.

Annexure B

DRAWING LIST

Drawings issued to date

Drawing No	Drawing Title	Size	Date of Issue					
			07/04/2021					
	GENERAL							
9044-III/01/G	Drawing Schedule	A1	-					
9044-III/02/G	Site and Locality Plan	A1	-					
9044-III/03/G	General Site Plan	A1	-					
9044-III/04/G	Water Treatment Plant and Hybrid PV/Wind Power Plant Site Plan	A1	-					
9044-III/05/G	Name Board Detail	A1	-					
	CIVIL WORK							
9044-III/01/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/02/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/03/CE	Lined Brine Evaporation Ponds Sections A-A, B-B, C-C and D-D	A1	A					
9044-III/04/CE	Lined Brine Evaporation Ponds Lining and Pipework Details	A1	A					
9044-III/05/CE	Lined Brine Evaporation Ponds Security Fencing Details	A1	A					
9044-III/06/CE	Pipeline Trenching Details	A3	A					

The drawings indicated are drawings issued to the contractor only

Annexure C

CONTRACTOR'S REPORT




(See attached document)

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN
//KARAS REGION

REFERENCE NO: C-HGMO315

ANNEXURES OF MONTHLY PROGRESS MEETING NO.1 (15 APRIL 2021)

SUMMARY OF CONTRACTUAL DETAILS

Employer	Civil Engineers	Contractor
<p>NAMIBIA WATER CORPORATION</p>  <p>Namibia Water Corporation Ltd</p> <p>Address: Private Bag 13389, Windhoek</p> <p>Represented by Mr. R Likando</p> <p>Tel: +264 61 2393045 Fax: +264 61 2933039 Cell: +264 81 734 3184 e-mail: likandor@namwater.com.na</p>	<p>KUCHLING CONSULTING ENGINEERS</p>  <p>Address: P O Box 801, Windhoek</p> <p>Represented by Mr. F Kuchling</p> <p>Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>	<p>NAMWATER (CCW) CIVIL CONSTRUCTION DIVISION</p>  <p>Namibia Water Corporation Ltd</p> <p>Address: Private Bag 13389, Windhoek</p> <p>Site Representative: Mr. J. Keendawala E-mail: KeendawalaJ@namwater.com.na Cell: +264 81 382 6949</p>
Payment Details		
<p>Contract Amounts:</p> <p>Amount Certified:</p> <p>Percentage Certified (%):</p> <p>Amount Paid:</p> <p>Percentage Paid (%):</p>		<p>N\$15,113,525.00</p> <p>N\$0.00</p> <p>0.00%</p> <p>N\$0.00</p> <p>0.00%</p>
Contractual Dates Details		
<p>Contract Commencement Date</p> <p>Contract period (Calendar days)</p> <p>Contract Completion Date</p> <p>Extension of time awarded due to abnormal rainfall</p> <p>Extension of time awarded due to other</p> <p>Revised Contract Completion Date</p> <p>Delay Damages (days) and Cost</p>		<p>Thursday, March 4, 2021</p> <p>156</p> <p>Friday, October 1, 2021</p> <p>0</p> <p>0</p> <p>Friday, October 1, 2021</p> <p>-</p>
<p>Provisional date for the proceeding site meeting is on:</p>		<p>15-Apr-21</p>

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN
//KARAS REGION

REFERENCE NO: C-HGMO315

LIST OF ANNEXURES

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 1



DATE: 15-Apr-21

LIST OF ANNEXURES

A	PROGRAMME
B	PROGRESS
C	PLANT
D	PERSONNEL
F	ACCIDENTS
G	SITE INSTRUCTIONS
H	CONTRACTUAL CORRESPONDENCE
I	CONTRACTOR CLAIMS/NOTIFICATIONS
J	EMPLOYER CLAIMS/NOTIFICATIONS
K	DRAWINGS REGISTER
L	PHOTO REPORT
M	PAYMENT CERTIFICATES
N	CASH FLOW PROJECTIONS

LIST OF ANNEXURES

ANNEXURE A: PROGRAMME OF WORKS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 1



DATE: 15 APRIL 2021

PROGRAMME OF WORKS

ANNEXURE B: PROGRESS

REFERENCE NO: C-HGMO315



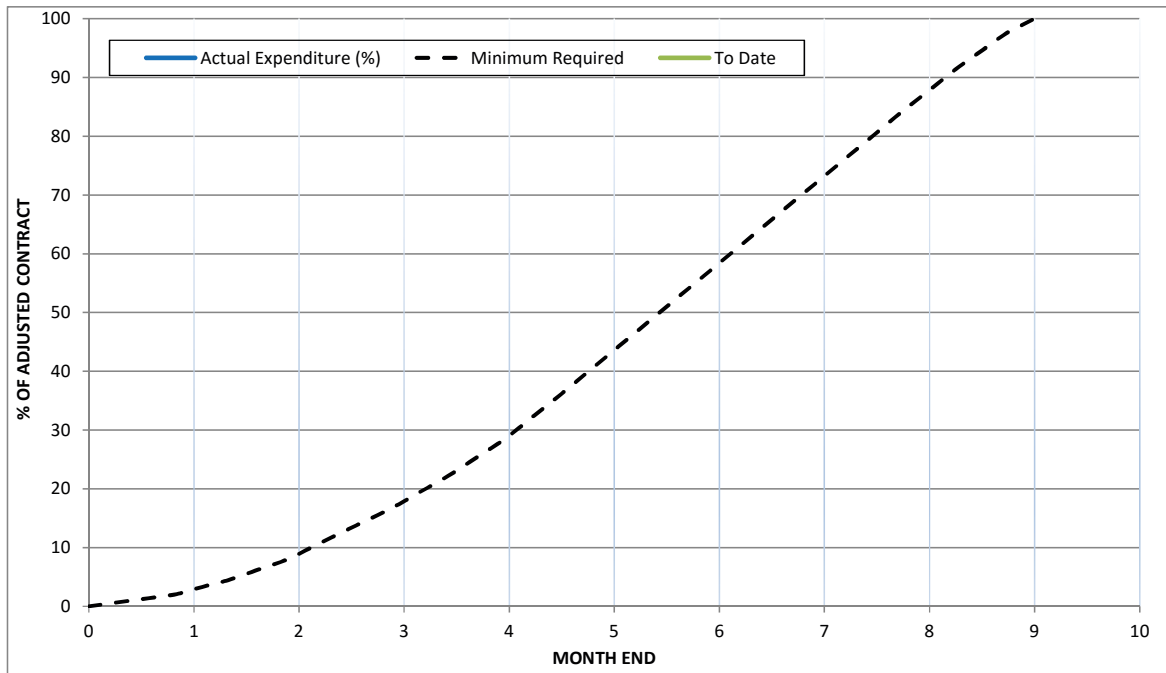
CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

DATE: 15-Apr-21

CUMULATIVE PROGRESS

SUMMARY OF PROGRESS

Schedule	Description	Contract Sum (N\$)	Actual Progress (N\$)	Percentage (%) Completed
Schedule 1	Preliminaries	0.00	0.00	0.00%
Schedule 2	Alterations	0.00	0.00	0.00%
Schedule 3	Earthworks	0.00	0.00	0.00%
Schedule 4	Sewer Pipelines	0.00	0.00	0.00%
Schedule 5	Concrete works	0.00	0.00	0.00%
Schedule 6	Waterproofing Pond lining	0.00	0.00	0.00%
Schedule 7	Security Fencing	0.00	0.00	0.00%
Schedule 8	External Fixtures	0.00	0.00	0.00%
Schedule 13	Clearing and finishing	0.00	0.00	0.00%
Sub-Total (1)		0.00	0.00	0.00%
Nett Construction Cost		0.00	0.00	-
Add 15% Value Added Tax		0.00	0.00	-
Materials on Site		0.00	0.00	-
Add Lining Sub-Contractor		0.00	0.00	-
Total		0.00	0.00	0.00%



ANNEXURE B: PROGRESS

ANNEXURE D: CONSTRUCTION SITE PERSONNEL

REFERENCE NO: C-HGMO315



CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

Position Hierarchy	Designation	Date on Site	2021											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Project Manager	Romeo Likando	Since Beginning of project	Management											
Construction Manager	Joas Kazetjikuria													
Civil Eng. Technician	Sabbat. Hauwanga													
Site Agent	Johannes Keendawala	15-Mar-20		-	1	1								
Civil Foreman	Asser. Iita	6-Apr-21		-	1	1								
SEMI-SKILED														
Admin Clerk	Kambala Perpetya	6-Apr-21		-	-	1								
Handymen - Carpentry	Felix Kanumba	6-Apr-21		-	-	1								
Handymen - Masonry	Mcmanasse Behaboas	6-Apr-21		-	-	1								
Handymen - Plumbing	Sesilia Shikongo	6-Apr-21		-	-	1								
OPERATORS														
Dozer & Excavator	Mathew Kruger & J. Andrias	6-Apr-21		-	-	2								
Loader & Tipper Truck	Hendry Kruger	6-Apr-21		-	-	1								
Grader	Donald Iyambo	6-Apr-21		-	-	1								
Plant Mechanic	T. Fredrich	6-Apr-21		-	-	1								
GENERAL LABOUR														
Workhands	General	6-Apr-21		-	-	18								
Security		6-Apr-21		-	-	1								
Sub-Total (1)			0	0	2	30	0	0	0	0	0	0	0	0

ANNEXUF

**PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN
//KARAS REGION**

REFERENCE NO: C-HGMO315



CONSTRUCTION SITE PERSONNEL

Supervision	Name	Gender	Employee No:	Overall	Boots
Site Agent	Johannes Keendawala	M	5640	28	5
Civil Foreman	Asser. lita	M	3015	46	9
SEMI-SKILED	-				
Admin Clerk	Kambala Perpetya	F	82	40 - 44	6
Artisan - Concrete	Filix Kanuumba	M	1708	40 - 44	8
Handymen - Masonry	Mcmanasse Behaboas	M	5659	28	6
Handymen - Plumbing	Sesilia Shikongo	F	5658	28	5
OPERATORS	-				
Dozer & Excavator	Mathew Kruger	M	5660	28	5
Loader & Tipper Truck	Hendry Kruger	M	5661	44	9
Grader	Simson Tjikambi	M	1926	46	9
GENERAL LABOUR	-			0	8
1	Kruger	M	5642	-	-
2	Andries J	M	5643	28	8
3	Mathew Motinga	M	5644	44	10
4	Hans Manfred	M	5645	28	7
5	Syvenis Fredrick	M	5646	28	6
6	Gereld Samuel	M	5647	28	7
7	Eben Higoam	M	5648	28	8
8	Elmartese April	F	5649	28	4
9	Cornelius B Frederick	M	5650	28	5
10	Fillipus N	M	5651	44	10
11	Kruger Jean Marc	M	5652	28	6
12	Felicity Beauty	F	5653	28	4
13	Renee Vries	F	5654	28	5
14	Oltrich Tboth	M	5655	28	8
15	Gabriel Nghishongwa	M	5656	28	7
16	Johannes E Cloete	M	5657	28	9
17	Topnar E	M	5662	44	7
18					
SECURITY					
	Nathanael Hidishange	M	1798	44	8

Request By

Date

.....
J.S. KEENDAWALA
Site Agent (Technision)
 Cell: +264 81 382 6949

.....

ANNEXURE E: RECORDED RAINFALL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



RAINFALL RECORDS

Day	2021										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1			0	0							
2			0	0							
3			0	0							
4			0	0							
5			0	0							
6			0	0							
7			0	0							
8			0	0							
9			0	0							
10			0	0							
11			0	0							
12			0	0							
13			0	0							
14			0	0							
15			0								
16			0								
17			0								
18			0								
19			0								
20			0								
21			0								
22			0								
23			0								
24			0								
25			0								
26			0								
27			0								
28			0								
29			0								
30			0								
31	0		0	0	0	0	0	0			
Monthly Total (Rw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days>=10mm(Nw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monthly Ave. (Rn) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ave Days>=10mm(Nn)	5.4	5.4	3.2	1.1	0.0	0.0	0.0	0.0	1.1	3.2	3.2
Ext. of time(V) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext. of Time (Day)	0	0	0	0	0	0	0	0	0	0	0

ANNEXURE E: RECORDED RAINFALL (MARCH 2020)

ANNEXURE L: PHOTO REPORT

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



Contractor's Photo Report



Photo No. 1: Establishment of site



Photo No. 2: Plant mobilization



Photo No. 3: Recruitment of 23 locals together with local council

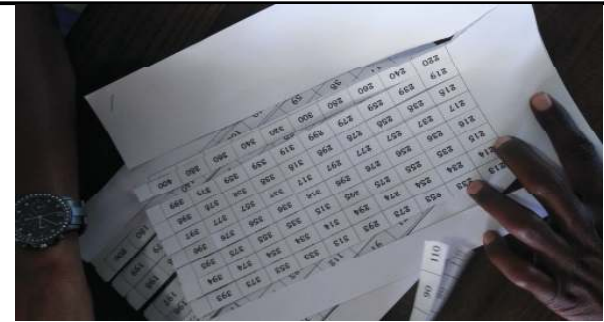


Photo No. 4: Recruitment system used



Photo No. 5: Setting out



Photo No. 6: Site clearance



Photo No. 7: Site clearance



Photo No. 8: Ponds Excavation to platform level.

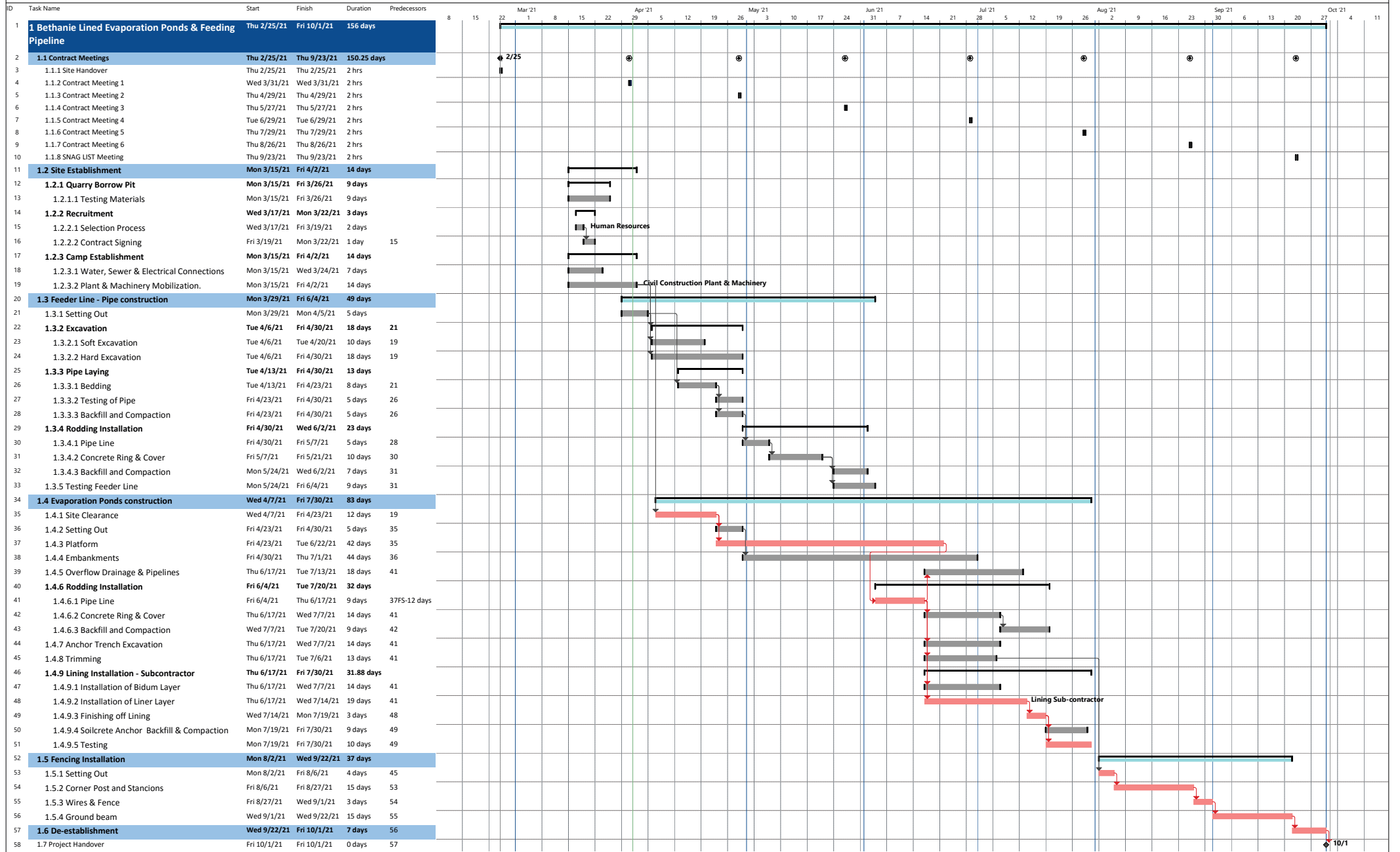
ANNEXURE K: PHOTO REPORT)

CASHFLOW PROJECTIONS : CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	Oct-21 N\$	SUB TOTAL N\$
	Preliminary & Generals Cost	2367 200,00		473 440,00	236 720,00	473 440,00	473 440,00	473 440,00	236 720,00		2367 200,00
	Feeder Line - Pipe construction										
	Excavation										
	Soft Excavation	63 750,00	0,00	31 875,00	31 875,00	0,00					63 750,00
	Hard Excavation	58 500,00	0,00	29 250,00	29 250,00	0,00					58 500,00
	Pipe Laying										
	Bedding	18 900,00	0,00	0,00	9 450,00	9 450,00	0,00	0,00	0,00	0,00	18 900,00
	Testing of Pipe	39 000,00	0,00	0,00	19 500,00	19 500,00	0,00	0,00	0,00	0,00	39 000,00
	Backfill and Compaction	75 000,00	0,00	0,00	0,00	37 500,00	37 500,00	0,00	0,00	0,00	75 000,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.5.3	Concrete Ring & Cover	44 800,00	0,00	0,00	44 800,00	0,00	0,00	0,00	0,00	0,00	44 800,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Testing Feeder Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Evaporation Ponds construction										
4.2.2	Excavate of In-situ Material	1200 000,00	0,00	240 000,00	480 000,00	360 000,00	120 000,00				1200 000,00
4.2.4	Importing of Calcrete	1457 500,00	0,00	291 500,00	583 000,00	437 250,00	145 750,00				1457 500,00
4.2.1	Site Clearance	135 000,00	0,00	101 250,00	33 750,00						135 000,00
4.1	Setting Out & Asbuilt Survey Works	80 000,00	0,00	5 000,00						75 000,00	80 000,00
4.2.3	Platform	1400 000,00	0,00	420 000,00	980 000,00						1400 000,00
4.2.6	Stormwater Channel	14 000,00	0,00	0,00	0,00	4 200,00	9 800,00				14 000,00
4.2.5	Embankments	1325 000,00	0,00	132 500,00	530 000,00	530 000,00	132 500,00				1325 000,00
4.5.1-2	Overflow Drainage & Pipelines	22 400,00	0,00	0,00	0,00	11 200,00	11 200,00	0,00	0,00	0,00	22 400,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Concrete Ring & Cover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.2.7	Anchor Trench Excavation	123 250,00	0,00	0,00	61 625,00	61 625,00	0,00	0,00	0,00	0,00	123 250,00
	Trimming	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.6	Lining Installation - Subcontractor										
4.6.1	Installation of Bidim Layer	2645 000,00	0,00	0,00	793 500,00	793 500,00	793 500,00	264 500,00	0,00	0,00	2645 000,00

CASHFLOW PROJECTIONS : CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	Oct-21 N\$	SUB TOTAL N\$
4.6.2	Installation of Liner Layer	3450 000,00	0,00	0,00	1035 000,00	1035 000,00	1035 000,00	345 000,00	0,00	0,00	3450 000,00
4.6.3	Finishing off Lining	17 600,00	0,00	0,00	0,00	0,00	17 600,00	0,00	0,00	0,00	17 600,00
4.2.7	Soilcrete Anchor Backfill & Compaction	61 625,00	0,00	0,00	0,00	0,00	61 625,00	0,00	0,00	0,00	61 625,00
	Testing	50 000,00	0,00	0,00	0,00	12 500,00	12 500,00	12 500,00	12 500,00	0,00	50 000,00
	Fencing Installation										
	Setting Out	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Corner Post and Stancions	10 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	10 000,00	10 000,00
	Wires & Fence	455 000,00	0,00	273 000,00	0,00	0,00	0,00	0,00	0,00	182 000,00	455 000,00
	Ground beam	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	De-establishment										
	Project Handover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
		15 113 525,00	0,00	1 997 815,00	4 868 470,00	3 785 165,00	2 850 415,00	1 095 440,00	249 220,00	267 000,00	15 113 525,00



Project: BETHANIE_CCV Project

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

PILOT RURAL DESALINATION PLANT USING RENEWABLE ENERGY AND MEMBRANE TECHNOLOGY AT BETHANIE WATER SUPPLY SCHEME, //KARAS REGION CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

SITE / CONTRACT MEETING 2

HELD ON 08 JUNE 2021 AT 09:10
AT CMB OFFICE, 124 ROBERT MUGABE AVENUE

NO	ITEM	ACTION
1.	PRESENT AND APOLOGIES	
1.1	Present	
	R Likando NamWater (via Teams)	NW
	J Sirunda NamWater (via Teams)	NW
	A Nakale NamWater (via Teams)	NW
	J Keendawala NamWater (via Teams)	NW
	S Shilongo NamWater (via Teams)	NW
	S Hauwanga NamWater (Civil Construction) (via Teams)	NWCC
	J Kazetjikuria NamWater (Civil Construction) (via Teams)	NWCC
	S Hauwanga NamWater (Civil Construction) (via Teams)	NWCC
	H Rusch CMB (Namibia) (Pty) Ltd	CMB
	P Mutilifa CMB (Namibia) (Pty) Ltd	CMB
	F Kuchling Kuchling Consulting Engineers Inc	KCE
1.2	Apologies	
	O Aldrich Desert Research Foundation of Namibia	DRFN
	J Vorster NamWater	NW
	S Shaanika NamWater	NW
	J Kamburona NamWater	NW
2.	SITE VISIT	
2.1	The engineer was on site on 27 May 2021. All pictures taken on site were shown during the meeting. Progress on site was good and the contractor was busy excavating the pond's platform. The depth of the pipeline was corrected and the problem regarding the cover of the pipeline and the survey was discussed on site.	
3.	ADDITIONAL ITEMS	
3.1	None	

NO	ITEM	ACTION
4.	APPROVAL OF PREVIOUS MINUTES	
4.1	All parties approved the previous minutes verbally. The minutes of the Site Hand-Over Meeting and of Site Meeting No 1 was only signed by the engineer. The engineer will ensure all sign these minutes.	NW / NWCC / CMB
5.	WELCOME AND OPENING	
5.1	Mr H Rusch opened the meeting and welcomed all those present. An attendance list was circulated for all to complete; however, most attendees were via MS Teams.	
6.	PARTIES INVOLVED IN THE CONTRACT AND THEIR REPRESENTATIVES	
6.1	Project Funded by ADAPTATION FUND 1818 H Street NW, Washington DC 20433, USA Website: www.adaptation-fund.org	
6.2	Implementing Entity DESERT RESEARCH FOUNDATION OF NAMIBIA (DRFN) P O Box 20232, Windhoek Represented by Mr O Aldrich Tel: (061) 37 7500 Fax: (061) 23 0172 e-mail: olla@aldrichprojectconsulting.com	
6.3	Executing Entity (Employer) NAMIBIA WATER CORPORATION Private Bag 13389, Windhoek Represented by Mr R Likando Tel: (061) 71 2039 Fax: (061) 71 3801 Cell: 081 734 3184 e-mail: likandor@namwater.com.na	
6.4	Local Government BETHANIE VILLAGE COUNCIL P O Box 74, Bethanie Represented by the CEO, Mr Hendrik Gaobaeb Tel: (063) 283 006 Fax: (063) 283 107 e-mail: gaobaebh@gmail.com	
6.5	Contractor MAIN CONTRACTOR: NAMWATER CIVIL CONSTRUCTION Private Bag 13389, Windhoek Represented by Mr J Kazetjikuria	

NO	ITEM	ACTION									
	Tel: (061) 71 2040 Cell: 081 126 4010 e-mail: KazetjiguriaJ@namwater.com.na										
	HDPE LINING SUBCONTRACTOR: No appointment done to date.	NWCC									
6.6	Engineers										
	MECHANICAL AND ELECTRICAL ENGINEERS (LEAD): CMB (NAMIBIA) P O Box 3256, Windhoek Represented by Mr H Rusch Tel: (061) 23 7253 / 4 Fax: (061) 23 5514 Cell: 081 300 3697 e-mail: hrusch@cmbnamibia.com										
	CIVIL ENGINEERS: KUCHLING CONSULTING ENGINEERS P O Box 801, Windhoek Represented by Mr F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na										
7.	CONTRACT DETAILS										
7.1	Contract Commencement Date: 04 March 2021 Contract Period: 156 Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022										
7.2	Following the arithmetical correction to the contractor's bid the contract amount is as follows:										
	<table border="0"> <tr> <td>Original Contract Value:</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Less: Contingencies</td> <td><u>N\$</u></td> <td><u>1 050 000.00</u></td> </tr> <tr> <td>Total Contract Amount (as awarded)</td> <td>N\$</td> <td>14 870 365.00</td> </tr> </table> (Excluding 15% VAT)	Original Contract Value:	N\$	15 920 365.00	Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>	Total Contract Amount (as awarded)	N\$	14 870 365.00	
Original Contract Value:	N\$	15 920 365.00									
Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>									
Total Contract Amount (as awarded)	N\$	14 870 365.00									
8.	MATTERS ARISING FROM PREVIOUS MINUTES										
8.1	None.										
9	CONTRACTOR'S REPORT										
9.1	The contractor submitted contractor's report 2 to the engineer for approval. This report will be attached to the completed minutes of meeting 2 and will be circulated by the engineer to all parties.	CMB									
9.2	The contractor gave the following summary: <ul style="list-style-type: none"> • The route of the feeder pipeline has been sorted out, and the setting out will commence in the week of this meeting. • The platform and the embankments are far behind schedule. 										

NO	ITEM	ACTION									
	<ul style="list-style-type: none"> The cutting of the materials for the platform is 90% complete. The amount of time spent on this activity was more than the anticipated period. All the fencing materials have been delivered to site. The appointment of the lining subcontractor will happen in the next two weeks. 										
9.3	The contractor indicated that for every chainage and section laid, he will take pictures and send them to the engineer on WhatsApp. The engineer requested that the contractor report any delays immediately, especially on the pipeline to avoid delaying the contractor for the desalination plant.	NWCC									
9.4	The contractor has chosen Erf 31 for the temporary ponds. This Erf belongs to the village council and will therefore require leasing. NamWater requested the contractor to formally engage with the village council on the client's behalf.	NWCC									
9.5	A list of local labourers appointed to date was included in the contractor's report 1.										
9.6	NamWater has not yet finalised whether they will accommodate a student training programme on this project.										
9.7	The Gantt chart activities were included in the contractor's report provided to the engineer. The engineer has requested the contractor to include the revised percentages of completion.	NWCC									
9.8	An updated cash flow was included in the contractor's report. The contractor is instructed to always provide an updated cash flow report with each contractor's report monthly.	NWCC									
10.	ENGINEER'S REPORT										
10.1	<p>Contract Overview</p> <p>Contract Commencement Date: 04 March 2021 Original Contract Period: 156 Calendar days Extension of Time Granted: None Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022</p> <p>Period Elapsed: 42 days (27 %) Remaining Construction: 114 days (73 %)</p> <p>Following the arithmetical correction to the contractor's bid and including approved Variation Orders, the contract value is as follows:</p> <table border="0"> <tr> <td>Original Contract Value:</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Approved Variation Orders to date:</td> <td><u>N\$</u></td> <td><u>0.00</u></td> </tr> <tr> <td>Current Contract Amount (Excluding 15% VAT)</td> <td>N\$</td> <td>15 920 365.00</td> </tr> </table>	Original Contract Value:	N\$	15 920 365.00	Approved Variation Orders to date:	<u>N\$</u>	<u>0.00</u>	Current Contract Amount (Excluding 15% VAT)	N\$	15 920 365.00	
Original Contract Value:	N\$	15 920 365.00									
Approved Variation Orders to date:	<u>N\$</u>	<u>0.00</u>									
Current Contract Amount (Excluding 15% VAT)	N\$	15 920 365.00									

NO	ITEM	ACTION
	Payments Made to Date: NIL N\$ <u>0.00</u> Total Payments Made to Date: N\$ 0.00	
10.2	Contractual Obligations and Documentation	
10.2.1	Working Copies of the Contract Document The engineer will provide the extracted applicable scope from the original main bid document in soft copy to the contractor in due course.	CMB
10.2.2	Construction Programme The engineer has received an updated programme with the progress report and will send the programme out with the minutes. Refer to Annexure C .	NWCC
10.2.3	Cash Flow Forecast The engineer has received the revised cashflow forecast and will send it out with the minutes of the meeting. The contractor is requested to provide a monthly cash flow forecast before each meeting.	NWCC
10.2.4	Training or Knowledge Sharing Plan and Programme When NamWater decides to have students on this project, they will notify the contractor who will then complete the training plan.	NW NWCC
10.2.5	List of Local Labourers The contractor has updated the current list of local labours in their monthly progress report. The contractor is requested to update the list before each meeting.	NWCC
10.2.6	Quality Assurance Manual / Method Statements The contractor has submitted the Method Statements to the engineer for approval. The engineer will go through these and provide comments, if any.	NWCC
10.3	Correspondence	
10.3.1	Correspondence and Requests from Contractor: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.2	Correspondence Send to the Contractor: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.3	Correspondence Received from the Employer: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.4	Correspondence Send to the Employer: <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.4	Construction Supervision and Quality Control	
10.4.1	Drawings Issued to the Contractor: <ul style="list-style-type: none"> • The engineer has issued three sets of original sized (A1, A3) drawings to the contractor in hard copy. The NamWater drawings numbers are yet to be assigned to the engineer's drawings. • The longitudinal section drawing from the surveyor was issued to the contractor in CAD file format. The contractor has indicated that he can work with the file given. 	NW/ CMB

NO	ITEM	ACTION
	<ul style="list-style-type: none"> The contractor was requested to keep one set of the original sized drawings on site and shall note “as-built” changes as well as any variations in the existing services on these drawings. These “as-built” drawings are to be submitted to the engineer following the completion of the construction before a Completion Certificate will be issued to the contractor. 	NWCC
10.4.2	<p>Working Drawings Issued to the Engineer for Approval:</p> <ul style="list-style-type: none"> The previously requested sketch drawing of the new pipeline route on the other side of the road has been accepted. Any changes on the design that the contractor requires should be discussed with the engineer. 	NWCC
10.4.3	<p>Site Instruction Issued to the Contractor:</p> <ul style="list-style-type: none"> The engineer previously gave the following instructions to the contractor regarding the setting out of the pipeline route: <ul style="list-style-type: none"> Employ hand labour to see where the conflicting services are at each point and intermediates that leads to the ponds. Choose an actual route where the new pipeline can be constructed. Call the surveyor to set out this route and also to survey the existing visible services (the surveyor should only be called when the contractor has confirmed that the pipes can be laid from the desalination plant to the ponds). The output of the surveyor should be a complete longitudinal section drawing and should be provided to the engineer in AutoCAD format. The contractor was given instructions on site based on the revised invert level received from the surveyor. The engineer gave the following new instructions to the contractor: <ul style="list-style-type: none"> Accurately determine the quantities of the material that has been excavated for the platform. Provide rates for the concrete encasement. For the completion of the pipeline, the pipeline must be encased in concrete for about 145 m to 150 m. The contractor can start laying the pipeline until point E and should make an offtake to the temporary ponds. The pipeline from point E can only be done after the construction of the ponds. For the compaction of the bedding, (1) Saturate the sand to achieve a maximum compaction, (2) Compact the bedding around the pipe with the hand stamper, (3) Handstamp the bedding above the pipe lightly with the plate compactor. The roller compactor must be avoided at all costs (It is better to have less compaction than a squashed pipe). 	
10.4.4	<p>Variations:</p> <ul style="list-style-type: none"> At this stage, the identified variations include the nameboard, the potential saving on the excavation and the additional costs from the concrete incasement of the pipeline. Other variations which may transpire during the course of the contract will be identified and included. 	

NO	ITEM	ACTION
	<ul style="list-style-type: none"> The surveying amount will be omitted with a variation and paid according to the actual surveying done on daywork rates. The contractor is requested to provide the engineer with the hourly time spent on the completion of the survey. <i>(This was interpreted incorrectly by the engineer and the contractor will be paid the full amount priced for under Item 2.1 of the BoQ once all survey information is received as per the specifications.)</i> 	NWCC
10.4.5	Name Board: <ul style="list-style-type: none"> The nameboard is ready for collection from the manufacturer. The suitable position has been discussed with the village council. The contractor is requested to provide the quotation from the supplier as well as the erection cost for the engineer to complete the variation. 	NWCC
10.4.6	Contractor's Camp <ul style="list-style-type: none"> The contractor's camp was deemed acceptable to all. 	
10.4.7	Setting Out of the Works: <ul style="list-style-type: none"> The setting out of the works has been completed 	
10.4.8	Concrete Mix Design, Material and Cube Tests: <ul style="list-style-type: none"> The contractor has sent out the material test and is currently waiting for the result. The engineer has requested the contractor to forward the result as soon as they receive them. The contractor is instructed to only cast concrete once the test result has been approved by the engineer. All other relevant tests should be submitted to the engineer throughout the contract. 	
10.4.9	Site Instruction Book and Daily Construction Reports: <ul style="list-style-type: none"> A daily dairy is kept on site. The engineer instructed the contractor to provide a copy of this dairy on a monthly basis. The contractor was requested to submit the daily construction reports at each contract meeting. The engineer requested that the contractor continue sending site updates and pictures on the created WhatsApp group. 	NWCC NWCC NWCC
10.4.10	Tests and Other: <ul style="list-style-type: none"> The borrow pits have been located and tested. The engineer has received and approved these tests. The lining test for the HDP lining will be done at the later stages when the lining is done. 	
10.5	Claims	
10.5.1	The contractor has sent their first payment claim for approval. The contractor his requested to provide pictures of all the materials on site for the engineer to complete the payment valuation.	NWCC
10.6	Measurement and Payment	
10.6.1	Variation Orders: <ul style="list-style-type: none"> The variation will be for the items mentioned above. 	

NO	ITEM	ACTION
10.6.2	Dayworks Ordered: <ul style="list-style-type: none"> Survey of the pipeline (<i>Again, this was interpreted incorrectly by the engineer and the contractor will be paid the full amount priced for under Item 2.1 of the BoQ once all survey information is received as per the specifications.</i>) 	
10.6.3	Payments: <ul style="list-style-type: none"> Payment Claim 1 has been issued to the engineer for approval. The engineer will complete the payment valuation and send it to the contractor for their approval. The engineer will then send the approved valuation to NamWater for the completion of the payment certificate. 	CMB / NW
10.7	Schedule Progress versus Plan and Trends	
10.7.1	To complete this comparison, the contractor is requested to provide the engineer with the current percentage completion of each task together with the percentage of where each task should have been.	NWCC
10.8	Earned Value Management (EVM)	
10.8.1	<ul style="list-style-type: none"> The contractor is instructed to update the current EVM chart with the addition of a expenditure curve. For the engineer to complete the EVM, the contractor is requested to provide the cost of each of the tasks in the Gantt chart with an associated cost for the engineer to complete the EVM. 	NWCC
11.	ENVIRONMENTAL AND SOCIAL MANAGEMENT	
11.1	The environmental clearance certificate is still not on site. NamWater will forward this certificate to the contractor as soon as possible.	NW
11.2	The contractor is requested to provide a monthly environmental report.	NWCC
11.3	A timely reporting of the environmental compliance is needed by AF at the end of the project. Thus, NamWater need frequent updates of site pictures.	NWCC
12.	MATTERS RAISED BY THE EMPLOYER	
12.1	The contractor is requested to provide feedback regarding the usage of Erf 31 for the temporary ponds.	NWCC
13.	ANY OTHER MATTERS	
13.1	The engineer instructed the contractor to be careful with the roller compactor as it may damage the pipeline.	
13.3	The contractor has indicated that CSV has accepted the brine pipeline as it is installed on the water treatment plant site. CSV will complete the installation of the tank connection and will include a rodding eye.	

NO	ITEM	ACTION
14.	DATES AND VENUES OF FUTURE CONTRACT / SITE MEETINGS	
14.1	It was agreed that future contract meetings will preliminary be scheduled monthly for the last Thursday of each month. However, the engineer will provide a schedule for the future meetings after confirming with all parties.	CMB
14.2	A preliminary schedule of meetings is therefore as follows: <ul style="list-style-type: none"> • Contract Meeting 3: Tuesday 29 June 2021 • Contract Meeting 4: Thursday 29 July 2021 • Contract Meeting 5: Thursday 26 August 2021 • Contract Meeting 6: Tuesday 28 September 2021 • Contract Meeting 7: Monday 01 October 2021 (Contract Completion for the Ponds) 	
14.3	Meetings will commence at 12:00 on site or in Windhoek depending on the work completed on site.	
14.4	Additional meetings will be scheduled if so required.	
15.	CLOSURE	
15.1	The meeting was adjourned at 12:10.	
15.2	It was agreed that distribution of the minutes will be by e-mail only, as per the attendance list and apologies.	

Minutes by



H RUSCH IncEng
CLINKSCALES MAUGHAN-BROWN

16. APPROVAL

These minutes and any corrections thereto by hand are herewith approved:

.....

.....
 Employer: NamWater

.....
 Date

.....
 Engineer: CMB (Namibia)

.....
 Date

.....
 Contractor: NamWater (Civil Construction)

.....
 Date

Annexure A

EARNED VALUE MANAGEMENT (EVM) REPORT

Project Start date: 04 March 2021

Status Date: 31 May 2021

No graph at this stage (awaiting completion percentages and costs of each task from contractor)

EARNED VALUE MANAGEMENT (EVM) REPORT (Continued)

Project Start date: 04 March 2021

Status Date: 31 May 2021

Task No	Task	PV ¹	EV ²	AC ³	SV % ⁴	CV % ⁵	SPI ⁶	CPI ⁷
1	As per Gantt Chart	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC
Project Total		-	-	-	-	-	-	-

1. Planned Value (PV) = the budgeted amount through the current reporting period
2. Earned Value (EV) = total project budget multiplied by the % of project completion
3. Actual Cost (AC) = actual costs to date
4. Schedule Variance % (SV %) = how much ahead or behind the schedule a project is running in terms of percentage. SV % is calculated using the following formula: $SV \% = SV / PV$
5. Cost Variance % (CV %) = how much over - or under-budget the project is in terms of percentage. CV % is calculated using the following formula: $CV \% = CV / EV \times 100$
6. Schedule Performance Index (SPI) = how close actual work is being completed compared to the schedule. SPI is computed by EV / PV . A value of above one means that the project is doing well against the schedule.
7. Cost Performance Index (CPI) = Represents the amount of work being completed on a project for every unit of cost spent. CPI is computed by EV / AC . A value of above 1 means that the project is doing well against the budget.

Annexure B

DRAWING LIST

Drawings issued to date




Drawing No	Drawing Title	Size	Date of Issue					
			07/04/2021					
	GENERAL							
9044-III/01/G	Drawing Schedule	A1	-					
9044-III/02/G	Site and Locality Plan	A1	-					
9044-III/03/G	General Site Plan	A1	-					
9044-III/04/G	Water Treatment Plant and Hybrid PV/Wind Power Plant Site Plan	A1	-					
9044-III/05/G	Name Board Detail	A1	-					
	CIVIL WORK							
9044-III/01/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/02/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/03/CE	Lined Brine Evaporation Ponds Sections A-A, B-B, C-C and D-D	A1	A					
9044-III/04/CE	Lined Brine Evaporation Ponds Lining and Pipework Details	A1	A					
9044-III/05/CE	Lined Brine Evaporation Ponds Security Fencing Details	A1	A					
9044-III/06/CE	Pipeline Trenching Details	A3	A					

The drawings indicated are drawings issued to the contractor only

Annexure C

CONTRACTOR'S REPORT

(See attached document)

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION		
REFERENCE NO: C-HGMO315		
ANNEXURES OF MONTHLY PROGRESS MEETING NO.2 (31 MAY 2021)		
SUMMARY OF CONTRACTUAL DETAILS		
Employer	Civil Engineers	Contractor
<p>NAMIBIA WATER CORPORATION</p>  <p>Address: Private Bag 13389, Windhoek Represented by Mr. R Likando Tel: +264 61 2393045 Fax: +264 61 2933039 Cell: +264 81 734 3184 e-mail: likandor@namwater.com.na</p>	<p>KUCHLING CONSULTING ENGINEERS</p>  <p>Address: P O Box 801, Windhoek Represented by Mr. F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>	<p>NAMWATER (CCW) CIVIL CONSTRUCTION DIVISION</p>  <p>Address: Private Bag 13389, Windhoek Site Representative: Mr. J. Keendawala E-mail: KeendawalaJ@namwater.com.na Cell: +264 81 382 6949</p>
Payment Details		
Contract Amounts:		N\$15 155 365,00
Amount Certified:		N\$0,00
Percentage Certified (%):		0,00%
Amount Paid:		N\$0,00
Percentage Paid (%):		0,00%
Contractual Dates Details		
Contract Commencement Date		Thursday, 04 March 2021
Contract period (Calendar days)		156
Contract Completion Date		Friday, 01 October 2021
Extension of time awarded due to abnormal rainfall		0
Extension of time awarded due to other		0
Revised Contract Completion Date		Friday, 01 October 2021
Delay Damages (days) and Cost		-
Provisional date for the proceeding site meeting is on:		27-May-21

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION

REFERENCE NO: C-HGMO315

LIST OF ANNEXURES

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 2



DATE: 31-May-21

LIST OF ANNEXURES

A	PROGRAMME
B	PROGRESS
C	PLANT
D	PERSONNEL
E	RECORDED RAINFALL
F	ACCIDENTS
G	SITE INSTRUCTIONS
H	CONTRACTUAL CORRESPONDENCE
I	CONTRACTOR CLAIMS/NOTIFICATIONS
J	DRAWINGS REGISTER
K	PHOTO REPORT
L	PAYMENT CERTIFICATES
M	CASH FLOW PROJECTIONS

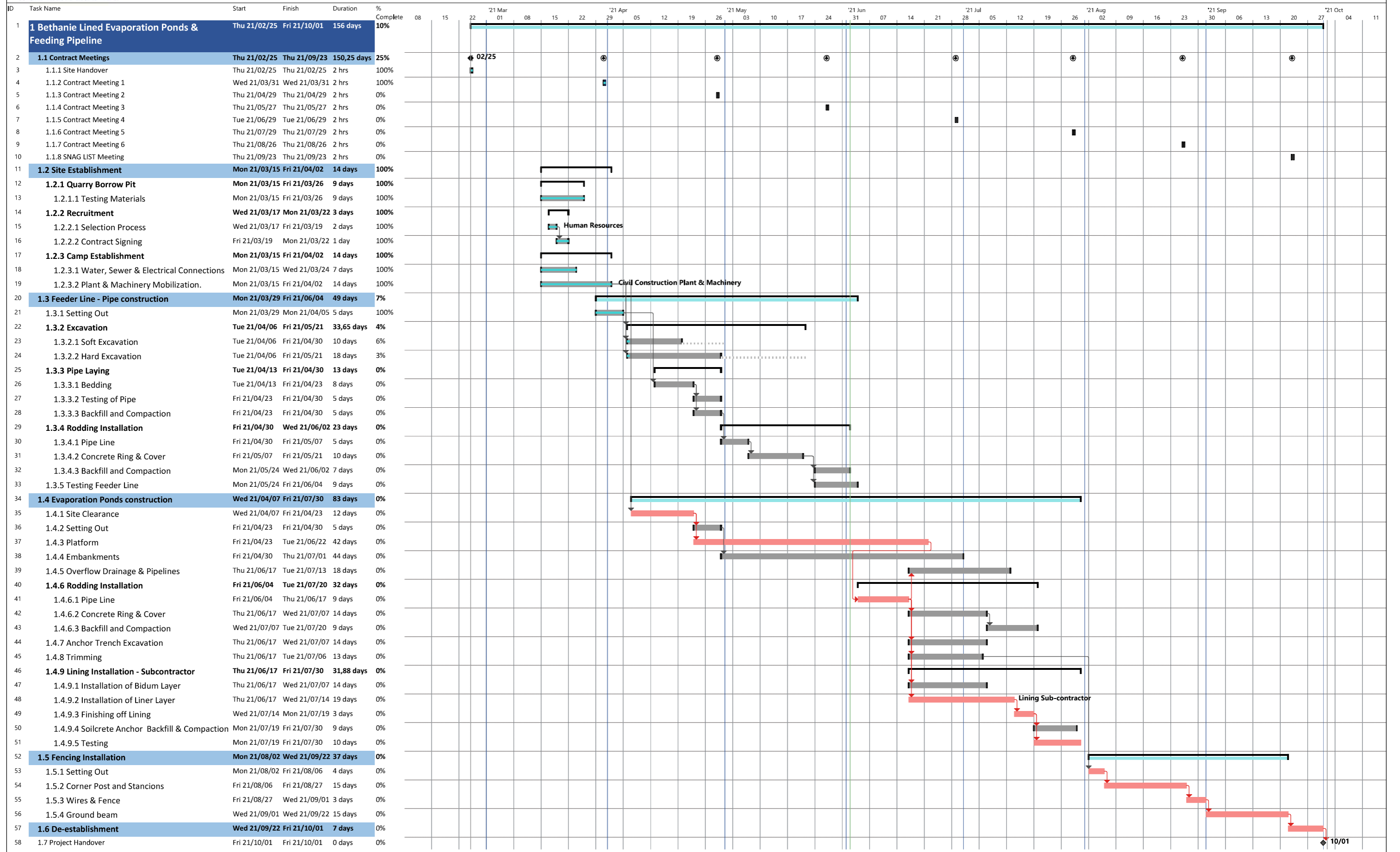
LIST OF ANNEXURES

ANNEXURE A: PROGRAMME OF WORKS
REFERENCE NO: C-HGMO315
CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)
MONTHLY PROGRESS SITE MEETING NO.: 2



DATE: 31 MAY 2021

PROGRAMME OF WORKS



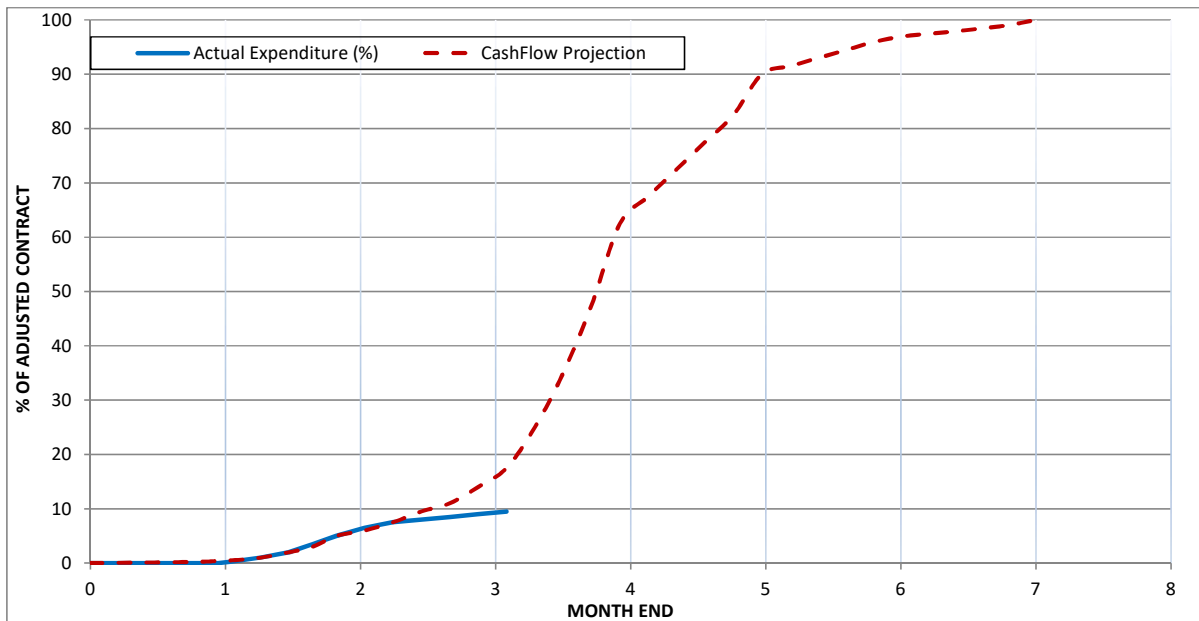
Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

ANNEXURE B: PROGRESS
REFERENCE NO: C-HGMO315
CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)
CUMULATIVE PROGRESS



DATE: **31-May-21**

Schedule	Description	Contract Sum (N\$)	Actual Progress (N\$)	Percentage (%) Completed
Schedule 1	Preliminaries	2 367 200,00	400 280,00	16,91%
Schedule 2	Earthworks	5 927 500,00	867 375,00	14,63%
Schedule 3	Feeder Pipeline	168 365,00	49 993,60	29,69%
Schedule 4	Concrete works	67 200,00	0,00	0,00%
Schedule 5	Geomemrane Pond lining	6 118 600,00	0,00	0,00%
Schedule 6	Security Fencing	465 000,00	0,00	0,00%
Schedule 7	Clearing and finishing	41 500,00	0,00	0,00%
Schedule 8	Variations and External Works	0,00	0,00	0,00
Sub-Total (1)		15 155 365,00	1 317 648,60	8,69%
Nett Construction Cost		0,00	0,00	-
Add 15% Value Added Tax		2 273 304,75	197 647,29	-
Materials on Site		0,00	102 976,02	-
Add Lining Sub-Contractor		0,00	0,00	-
Total (Incl. VAT)		17 428 669,75	1 618 271,91	9,29%



ANNEXURE B: PROGRESS

ANNEXURE D: CONSTRUCTION PERSONNEL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



DATE: 31-May-21

Position Hierarchy	Designation	Date on Site	2021										
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Construction Manager	Joas Kazetjuria	Project Inception	Management/ Head Office										
Design & Procurement	Janine Vorster												
Civil Eng. Technician	Sabbat. Hauwanga												
Site Agent	Johannes Keendawala	15-Mar-20		-	1	1	1						
Civil Foreman	Asser. lita	06-Apr-21		-	1	1	1						
SEMI-SKILED													
Admin Clerk	Kambala Perpertya	06-Apr-21		-	-	1	1						
Handymen - Carpentry	Felix Kanuumba	06-Apr-21		-	-	1	1						
Handymen - Masonry	Mcmanasse Behaboas	06-Apr-21		-	-	1	1						
Handymen - Plumbing	Sesilia Shikongo	06-Apr-21		-	-	1	1						
OPERATORS													
Dozer & Excavator	Mathew Kruger & J. Andrias	06-Apr-21		-	-	2	2						
Loader & Tipper Truck	Hendry Kruger	06-Apr-21		-	-	1	1						
Grader	Donald Iyambo	06-Apr-21		-	-	1	1						
Plant Mechanic	T. Fredrich	06-Apr-21		-	-	1	1						
GENERAL LABOUR													
Workhands	General	06-Apr-21		-	-	16	16						
Security		06-Apr-21		-	-	1	1						
Sub-Total (1)			0	0	2	28	28	0	0	0	0	0	0

ANNEXURE D: CONSTRUCTION PERSONNEL

ANNEXURE E: RECORDED RAINFALL
REFERENCE NO: C-HGMO315
CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)
RAINFALL RECORDS



DATE: 31-May-21

Day	2021										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1			0	0	0						
2			0	0	0						
3			0	0	0						
4			0	0	0						
5			0	0	0						
6			0	0	0						
7			0	0	0						
8			0	0	0						
9			0	0	0						
10			0	0	0						
11			0	0	0						
12			0	0	0						
13			0	0	0						
14			0	0	0						
15			0	0	0						
16			0	0	0						
17			0	0	0						
18			0	0	0						
19			0	0	0						
20			0	0	0						
21			0	0	0						
22			0	0	0						
23			0	0	0						
24			0	0	0						
25			0	0	0						
26			0	0	0						
27			0	0	0						
28			0	0	0						
29			0	0	0						
30			0	0	0						
31	0		0	0	0	0	0	0			
Monthly Total (Rw)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Days>=10mm(Nw)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Monthly Ave. (Rn) =	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Ave Days>=10mm(Nn)	5,4	5,4	3,2	1,1	0,0	0,0	0,0	0,0	1,1	3,2	3,2
Ext. of time(V) =	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Ext. of Time (Day)	0	0	0	0	0	0	0	0	0	0	0

ANNEXURE E: RECORDED RAINFALL

Contractor's Photo Report



Photo No. 1: Exposing all existing services



Photo No. 2: Feeder line trench excavation



Photo No. 3: Exposing hard rock for Excavation



Photo No. 4: Hard rock Excavations



Photo No. 5: Trimming and preparing trench for bedding



Photo No. 6: Leveling of trench



Photo No. 7: Trench bedding



Photo No. 8: Ponds Excavation & Stock piling all insitu material.

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	Oct-21 N\$	SUB TOTAL N\$
	Preliminary & Generals Cost	2367 200,00		473 440,00	236 720,00	473 440,00	473 440,00	473 440,00	236 720,00		2367 200,00
	Feeder Line - Pipe construction										
	Excavation										
	Soft Excavation	63 750,00	0,00	31 875,00	31 875,00	0,00					63 750,00
	Hard Excavation	58 500,00	0,00	29 250,00	29 250,00	0,00					58 500,00
	Pipe Laying										
	Bedding	18 900,00	0,00	0,00	9 450,00	9 450,00	0,00	0,00	0,00	0,00	18 900,00
	Testing of Pipe	39 000,00	0,00	0,00	19 500,00	19 500,00	0,00	0,00	0,00	0,00	39 000,00
	Backfill and Compaction	75 000,00	0,00	0,00	0,00	37 500,00	37 500,00	0,00	0,00	0,00	75 000,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.5.3	Concrete Ring & Cover	44 800,00	0,00	0,00	44 800,00	0,00	0,00	0,00	0,00	0,00	44 800,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Testing Feeder Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Evaporation Ponds construction										
4.2.2	Excavate of In-situ Material	1200 000,00	0,00	0,00	720 000,00	360 000,00	120 000,00				1200 000,00
4.2.4	Importing of Calcrete	1457 500,00	0,00	0,00	145 750,00	728 750,00	583 000,00				1457 500,00
4.2.1	Site Clearance	135 000,00	0,00	101 250,00	33 750,00						135 000,00
4.1	Setting Out & Asbuilt Survey Works	80 000,00	0,00	5 000,00						75 000,00	80 000,00
4.2.3	Platform	1400 000,00	0,00	0,00	420 000,00	980 000,00					1400 000,00
4.2.6	Stormwater Channel	14 000,00	0,00	0,00	0,00	4 200,00	9 800,00				14 000,00
4.2.5	Embankments	1325 000,00	0,00	0,00	0,00	530 000,00	795 000,00				1325 000,00
4.5.1-2	Overflow Drainage & Pipelines	22 400,00	0,00	0,00	0,00	11 200,00	11 200,00	0,00	0,00	0,00	22 400,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Concrete Ring & Cover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.2.7	Anchor Trench Excavation	123 250,00	0,00	0,00	0,00	61 625,00	61 625,00	0,00	0,00	0,00	246 500,00
	Trimming	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.6	Lining Installation - Subcontractor										
4.6.1	Installation of Bidim Layer	2645 000,00	0,00	0,00	0,00	1587 000,00	793 500,00	264 500,00	0,00	0,00	2645 000,00

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	Oct-21 N\$	SUB TOTAL N\$
4.6.2	Installation of Liner Layer	3450 000,00	0,00	0,00	0,00	2070 000,00	1035 000,00	345 000,00	0,00	0,00	3450 000,00
4.6.3	Finishing off Lining	17 600,00	0,00	0,00	0,00	0,00	17 600,00	0,00	0,00	0,00	17 600,00
4.2.7	Soilcrete Anchor Backfill & Compaction	61 625,00	0,00	0,00	0,00	0,00	61 625,00	0,00	0,00	0,00	61 625,00
	Testing	50 000,00	0,00	0,00	0,00	12 500,00	12 500,00	12 500,00	12 500,00	0,00	50 000,00
	Fencing Installation										
	Setting Out	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Corner Post and Stancions	10 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	10 000,00	10 000,00
	Wires & Fence	455 000,00	0,00	273 000,00	0,00	0,00	0,00	0,00	0,00	182 000,00	455 000,00
	Ground beam	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	De-establishment										
	Project Handover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Total	15 113 525,00	0,00	913 815,00	1 691 095,00	6 885 165,00	4 011 790,00	1 095 440,00	249 220,00	267 000,00	15 113 525,00
	Cum Total		0,00	913 815,00	2 604 910,00	9 490 075,00	13 501 865,00	14 597 305,00	14 846 525,00	15 113 525,00	15 113 525,00
	Percentages %		0,0%	6,0%	17,2%	62,8%	89,3%	96,6%	98,2%	100,0%	
	End Month		0	1	2	3	4	5	6	7	
			Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	

PILOT RURAL DESALINATION PLANT USING RENEWABLE ENERGY AND MEMBRANE TECHNOLOGY AT BETHANIE WATER SUPPLY SCHEME, //KARAS REGION CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

SITE / CONTRACT MEETING 3

HELD ON 05 AUGUST 2021 AT 09:00
AT CMB OFFICE, 124 ROBERT MUGABE AVENUE

NO	ITEM	ACTION
1.	PRESENT AND APOLOGIES	
1.1	Present	
	R Likando NamWater (via Teams)	NW
	J Kamburona NamWater (via Teams)	NW
	J Keendawala NamWater (via Teams)	NW
	S Shilongo NamWater (via Teams)	NW
	J Keendawala NamWater (Civil Construction) (via Teams)	NWCC
	J Kazetjikuria NamWater (Civil Construction) (via Teams)	NWCC
	S Hauwanga NamWater (Civil Construction) (via Teams)	NWCC
	H Rusch CMB (Namibia) (Pty) Ltd	CMB
	P Mutilifa CMB (Namibia) (Pty) Ltd	CMB
	F Kuchling Kuchling Consulting Engineers Inc	KCE
1.2	Apologies	
	O Aldrich Desert Research Foundation of Namibia	DRFN
	J Sirunda NamWater	NW
	S Shaanika NamWater	NW
	J Vorster NamWater	NW
	A Nakale NamWater	NW
2.	SITE VISIT	
2.1	The engineer was on site on 22 and 23 July 2021. All pictures taken on site were shown during the meeting. Progress on site was good, the pipeline from the WTP to the temporary pond has been completed and the pond is currently in use. The pipeline to the ponds will be installed in a straight line, as indicated on the engineer's drawings, and no additional bend will be required. The final floor level of the ponds has been set out and the contractor was busy with compaction of the final layer. The contractor will construct a road curb by means of rocks to protect the rodding eye at the bend of the road. The engineer will provide a hand sketch of the road curb.	KCE

NO	ITEM	ACTION
3.	ADDITIONAL ITEMS	
3.1	None	
4.	APPROVAL OF PREVIOUS MINUTES	
4.1	The minutes of the Site Handover Meeting and of Site Meetings No 1 were approved by all parties. Site Meeting No 2 was not approved and the engineer will ensure that all sign Site Meeting No 2.	CMB / NW / NWCC
5.	WELCOME AND OPENING	
5.1	Mr H Rusch opened the meeting and welcomed all those present. An attendance list was circulated for all to complete; however, most attendees were via MS Teams.	
6.	PARTIES INVOLVED IN THE CONTRACT AND THEIR REPRESENTATIVES	
6.1	Project Funded by ADAPTATION FUND 1818 H Street NW, Washington DC 20433, USA Website: www.adaptation-fund.org	
6.2	Implementing Entity DESERT RESEARCH FOUNDATION OF NAMIBIA (DRFN) P O Box 20232, Windhoek Represented by Mr O Aldrich Tel: (061) 37 7500 Fax: (061) 23 0172 e-mail: olla@aldrichprojectconsulting.com	
6.3	Executing Entity (Employer) NAMIBIA WATER CORPORATION Private Bag 13389, Windhoek Represented by Mr R Likando Tel: (061) 71 2039 Fax: (061) 71 3801 Cell: 081 734 3184 e-mail: likandor@namwater.com.na	
6.4	Local Government BETHANIE VILLAGE COUNCIL P O Box 74, Bethanie Represented by the CEO, Mr Hendrik Gaobaeb Tel: (063) 283 006 Fax: (063) 283 107 e-mail: gaobaebh@gmail.com	

NO	ITEM	ACTION									
6.5	<p>Contractor</p> <p>MAIN CONTRACTOR: NAMWATER CIVIL CONSTRUCTION Private Bag 13389, Windhoek Represented by Mr J Kazetjikuria Tel: (061) 71 2040 Cell: 081 126 4010 e-mail: KazetjikuriaJ@namwater.com.na</p> <p>HDPE LINING SUBCONTRACTOR: ODJOVE TRADING & CONSTRUCTION CC JV ROYAL P O Box 6, Windhoek Represented by Mr E J Simon Tel: (061) 22 0224 Cell: 081 165 9575 e-mail: js@royalcontractors.com.n</p>										
6.6	<p>Engineers</p> <p>MECHANICAL AND ELECTRICAL ENGINEERS (LEAD): CMB (NAMIBIA) P O Box 3256, Windhoek Represented by Mr H Rusch Tel: (061) 23 7253 / 4 Fax: (061) 23 5514 Cell: 081 300 3697 e-mail: hrusch@cmbnamibia.com</p> <p>CIVIL ENGINEERS: KUCHLING CONSULTING ENGINEERS P O Box 801, Windhoek Represented by Mr F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>										
7.	<p>CONTRACT DETAILS</p>										
7.1	<p>Contract Commencement Date: 04 March 2021 Contract Period: 156 Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022</p>										
7.2	<p>Following the arithmetical correction to the contractor's bid the contract amount is as follows:</p> <table data-bbox="256 1776 1121 1910"> <tr> <td>Original Contract Value:</td> <td>N\$</td> <td>15 920 365.00</td> </tr> <tr> <td>Less: Contingencies</td> <td><u>N\$</u></td> <td><u>1 050 000.00</u></td> </tr> <tr> <td>Total Contract Amount (as awarded)</td> <td>N\$</td> <td>14 870 365.00</td> </tr> </table> <p>(Excluding 15% VAT)</p>	Original Contract Value:	N\$	15 920 365.00	Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>	Total Contract Amount (as awarded)	N\$	14 870 365.00	
Original Contract Value:	N\$	15 920 365.00									
Less: Contingencies	<u>N\$</u>	<u>1 050 000.00</u>									
Total Contract Amount (as awarded)	N\$	14 870 365.00									
8.	<p>MATTERS ARISING FROM PREVIOUS MINUTES</p>										
8.1	<p>None.</p>										

NO	ITEM	ACTION
9	CONTRACTOR'S REPORT	
9.1	The contractor submitted contractor's report 3 to the engineer for approval. This report will be attached to the completed minutes of meeting 3 and will be circulated by the engineer to all parties.	CMB
9.2	The amount certified should be corrected by the contractor.	NWCC
9.3	<p>The contractor gave the following summary:</p> <ul style="list-style-type: none"> • The work is 29.68% complete. • The nameboard has been erected. The contractor was instructed to forward a photo to the client. • The temporary pond has been constructed and the brine water is being used for the construction of the evaporation ponds. 	NWCC
9.4	The contractor indicated that for every chainage and section laid, he will take pictures and send them to the engineer on WhatsApp. The engineer requested that the contractor report any delays immediately.	NWCC
9.5	A list of local labourers appointed to date was included in the contractor's report 3.	
9.6	The Gantt chart activities were included in the contractor's report provided to the engineer. The engineer has requested the contractor to assign costs to each task in the Gantt chart. An example was shown to the contractor and the contractor will revise the report.	NWCC
9.7	An updated cash flow was included in the contractor's report. The contractor is instructed to always provide an updated cash flow report with each contractor's report monthly.	NWCC
9.8	The contractor is currently behind schedule and should revise the programme accordingly to indicate the revised completion date. The late appointment of the lining subcontractor is also of concern and once the subcontractor has been appointed and provided a programme this should be incorporated in the revised main programme. The contractor should also provide information on why they are currently behind.	NWCC
9.9	The contractor should also provide a notice of time delay due to the late appointment of the lining subcontractor.	NWCC
10.	ENGINEER'S REPORT	
10.1	<p>Contract Overview</p> <p>Contract Commencement Date: 04 March 2021 Original Contract Period: 211 Calendar days Extension of Time Granted: None Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022</p> <p>Period Elapsed: 154 days (73 %) Remaining Construction: 7 days (27 %)</p>	

NO	ITEM	ACTION														
	<p>Following the arithmetical correction to the contractor's bid and including approved Variation Orders, the contract value is as follows:</p> <table border="0"> <tr> <td>Original Contract Value:</td> <td style="text-align: right;">N\$ 14 870 365.00</td> </tr> <tr> <td>Approved Variation Orders to date:</td> <td style="text-align: right;"><u>N\$ (463 450.00)</u></td> </tr> <tr> <td>Current Contract Amount (Excluding 15% VAT)</td> <td style="text-align: right;"><u>N\$ 14 406 915.00</u></td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Payments Made to Date:</td> <td></td> </tr> <tr> <td>Payment certificate 1</td> <td style="text-align: right;"><u>N\$ 1 278 562.15</u></td> </tr> <tr> <td>Total Payments Made to Date:</td> <td style="text-align: right;"><u>N\$ 1 278 562.15</u></td> </tr> </table>	Original Contract Value:	N\$ 14 870 365.00	Approved Variation Orders to date:	<u>N\$ (463 450.00)</u>	Current Contract Amount (Excluding 15% VAT)	<u>N\$ 14 406 915.00</u>	 		Payments Made to Date:		Payment certificate 1	<u>N\$ 1 278 562.15</u>	Total Payments Made to Date:	<u>N\$ 1 278 562.15</u>	
Original Contract Value:	N\$ 14 870 365.00															
Approved Variation Orders to date:	<u>N\$ (463 450.00)</u>															
Current Contract Amount (Excluding 15% VAT)	<u>N\$ 14 406 915.00</u>															
Payments Made to Date:																
Payment certificate 1	<u>N\$ 1 278 562.15</u>															
Total Payments Made to Date:	<u>N\$ 1 278 562.15</u>															
10.2	Contractual Obligations and Documentation															
10.2.1	<p>Working Copies of the Contract Document The engineer has provided the extracted applicable scope from the original main bid document in soft copy to the contractor.</p>															
10.2.2	<p>Construction Programme The engineer has received an updated programme with the progress report and will send the programme out with the minutes. Refer to Annexure C. The contractor was instructed to revise the programme to indicate the delay.</p>	CMB NWCC														
10.2.3	<p>Cash Flow Forecast The engineer has received the revised cashflow forecast and will send it out with the minutes of the meeting. The contractor is requested to provide a monthly cash flow forecast before each meeting.</p>	NWCC														
10.2.4	<p>Training or Knowledge Sharing Plan and Programme None.</p>															
10.2.5	<p>List of Local Labourers The contractor has updated the current list of local labours in their monthly progress report. The contractor is requested to update the list before each meeting.</p>	NWCC														
10.2.6	<p>Quality Assurance Manual / Method Statements The contractor's Method Statements have been approved by the engineer.</p>															
10.3	Correspondence															
10.3.1	<p>Correspondence and Requests from Contractor:</p> <ul style="list-style-type: none"> No major item/s to date that is not listed elsewhere in the minutes. 															
10.3.2	<p>Correspondence Send to the Contractor:</p> <ul style="list-style-type: none"> No major item/s to date that is not listed elsewhere in the minutes. 															
10.3.3	<p>Correspondence Received from the Employer:</p> <ul style="list-style-type: none"> No major item/s to date that is not listed elsewhere in the minutes. 															
10.3.4	<p>Correspondence Send to the Employer:</p> <ul style="list-style-type: none"> No major item/s to date that is not listed elsewhere in the minutes. 															

NO	ITEM	ACTION
10.4	Construction Supervision and Quality Control	
10.4.1	Drawings Issued to the Contractor: <ul style="list-style-type: none"> • The engineer has issued all the drawings to the contractor. The only outstanding information is the sketch for the row of stones next to the rodding eye installation next to the road. 	KCE
10.4.2	Working Drawings Issued to the Engineer for Approval: <ul style="list-style-type: none"> • There are no outstanding working drawings from the contractor. 	
10.4.3	Site Instruction Issued to the Contractor: <ul style="list-style-type: none"> • The engineer previously gave the contractor instructions regarding the setting out of the pipeline, the concrete encasement of the pipeline, and the compaction of the bedding. • The new instruction includes the packing of about 10 m row of stones next to the rodding eye installation to prevent vehicle from driving over the installation. A formal site instruction (with a sketch) will be e-mailed to the contractor in due course. 	KCE
10.4.4	Variations: <ul style="list-style-type: none"> • Variation VO1 was approved and included the following: <ul style="list-style-type: none"> ○ The omission of provisional sums and daywork costs. ○ Nameboard. • Variation VO2 was approved and included the following: <ul style="list-style-type: none"> ○ The intermediate rock excavation. ○ The concrete encasing of the feeder pipeline. • Variation VO3 will include the temporary ponds and other variations which may transpire during the course of the contract. The client will then make the final decision to include the temporary ponds as a variation. • The contractor is requested to provide the pricing for the temporary pond. 	NW NWCC
10.4.5	Name Board: <ul style="list-style-type: none"> • The name board has been erected. NamWater requested the contractor to forward the nameboard pictures. 	NWCC
10.4.6	Contractor's Camp <ul style="list-style-type: none"> • The contractor's camp was deemed acceptable to all. 	
10.4.7	Setting Out of the Works: <ul style="list-style-type: none"> • The setting out of the works has been completed. 	
10.4.8	Concrete Mix Design, Material and Cube Tests: <ul style="list-style-type: none"> • The engineer has approved the material test results. • The contractor is instructed to resubmit their concrete mix design. • The contractor is currently busy curing the concrete cube and will send them to the laboratory for testing. The contractor is instructed to only cast concrete once the test result has been approved by the engineer. • The contractor indicated that the compaction test results will be sent immediately after the meeting. • All other relevant tests should be submitted to the engineer throughout the contract. 	NWCC NWCC NWCC

NO	ITEM	ACTION
10.4.9	Site Instruction Book and Daily Construction Reports: <ul style="list-style-type: none"> • A daily dairy is kept on site. To date, the engineer has not received any dairy copies. The contractor has been instructed to provide copies of daily construction short reports prior to each meeting. • The engineer requested that the contractor continue sending site updates and pictures on the created WhatsApp group. 	 NWCC NWCC
10.4.10	Tests and Other: <ul style="list-style-type: none"> • The lining test for the HDPE lining will be done at the later stages when the lining is done. 	
10.5	Claims	
10.5.1	The contractor has sent their second payment claim for approval and the engineer is currently going through it and will complete the payment valuation in due course.	
10.5.2	No advance payment claim will be approved. Claims will be approved as per the GCC.	
10.5.3	The engineer instructed the contractor to submit a notice of time claim as soon as possible.	NWCC
10.6	Measurement and Payment	
10.6.1	Variation Orders: <ul style="list-style-type: none"> • The variation will be for the items mentioned above. 	
10.6.2	Dayworks Ordered: <ul style="list-style-type: none"> • The survey of the pipeline has been included as a BoQ item and will not be done under dayworks. 	
10.6.3	Payments: <ul style="list-style-type: none"> • The client will discuss Payment 1 with the contractor after the meeting. 	NW
10.7	Schedule Progress versus Plan and Trends	
10.7.1	To complete this comparison, the contractor is requested to provide the engineer with the costs to each task in the Gantt chart.	NWCC
10.8	Earned Value Management (EVM)	
10.8.1	To complete this comparison, the contractor is requested to provide the engineer with the costs to each task in the Gantt chart.	NWCC
11.	ENVIRONMENTAL AND SOCIAL MANAGEMENT	
11.1	The environmental clearance certificate is on site.	
11.2	The contractor has submitted their ESMP Compliance report No.3. The contractor is requested to provide a monthly environmental report.	NWCC
11.3	A timely reporting of the environmental compliance is needed by AF at the end of the project. Thus, NamWater need frequent updates of site pictures.	NWCC

NO	ITEM	ACTION
12.	MATTERS RAISED BY THE EMPLOYER	
12.1	The previously raised issue concerning the use of Erf 31 for temporary ponds has been resolved.	
13.	ANY OTHER MATTERS	
13.1	The engineer had previously advised the contractor to be cautious with the roller compactor because it could damage the pipeline. There has been no detection of a pipe leak to date.	
13.2	The bend that was discussed on site has been sorted out. The engineer has approved the shifting of the last point of the feedline so that there is a straight line to the evaporation ponds.	
13.3	The contractor has requested the engineer to forward SANS 10409 and SANS 1526 with regards to the lining works of the evaporation ponds. The engineer has agreed to do so if he has these standards.	KCE
14.	DATES AND VENUES OF FUTURE CONTRACT / SITE MEETINGS	
14.1	It was agreed that future contract meetings will preliminary be scheduled monthly for the last Thursday of each month. However, the engineer will provide a schedule for the future meetings after confirming with all parties.	CMB
14.2	<p>A preliminary schedule of meetings is therefore as follows:</p> <ul style="list-style-type: none"> • Site Visit: Tuesday 07 September 2021 • Site Visit: Tuesday 26 and 27 October 2021 • Contract Meeting 4: Tuesday 02 November 2021 • Site Visit: Tuesday 20 November 2021 • Contract Meeting 5 / Site Visit: Thursday 16 December 2021 (Revised Contract Completion for the Ponds) 	
14.3	Meetings will commence at 12:00 on site or in Windhoek depending on the work completed on site.	
14.4	Additional meetings will be scheduled if so required.	
15.	CLOSURE	
15.1	The meeting was adjourned at 09:58	
15.2	It was agreed that distribution of the minutes will be by e-mail only, as per the attendance list and apologies.	

Minutes by



H RUSCH IncEng
CLINKSCALES MAUGHAN-BROWN

16. **APPROVAL**

These minutes and any corrections thereto by hand are herewith approved:

.....
.....

.....
Employer: NamWater

.....
Date

.....
Engineer: CMB (Namibia)

.....
Date

.....
Contractor: NamWater (Civil Construction)

.....
Date

Annexure A

EARNED VALUE MANAGEMENT (EVM) REPORT

Project Start date: 04 March 2021

Status Date: 31 July 2021

No graph at this stage (awaiting costs of each task from contractor)

EARNED VALUE MANAGEMENT (EVM) REPORT (Continued)

Project Start date: 04 March 2021

Status Date: 31 July 2021

Task No	Task	PV ¹	EV ²	AC ³	SV % ⁴	CV % ⁵	SPI ⁶	CPI ⁷
1	As per Gantt Chart	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC	Awaiting Data from NWCC
Project Total		-	-	-	-	-	-	-

1. Planned Value (PV) = the budgeted amount through the current reporting period
2. Earned Value (EV) = total project budget multiplied by the % of project completion
3. Actual Cost (AC) = actual costs to date
4. Schedule Variance % (SV %) = how much ahead or behind the schedule a project is running in terms of percentage. SV % is calculated using the following formula: $SV \% = SV / PV$
5. Cost Variance % (CV %) = how much over - or under-budget the project is in terms of percentage. CV % is calculated using the following formula: $CV \% = CV / EV \times 100$
6. Schedule Performance Index (SPI) = how close actual work is being completed compared to the schedule. SPI is computed by EV / PV . A value of above one means that the project is doing well against the schedule.
7. Cost Performance Index (CPI) = Represents the amount of work being completed on a project for every unit of cost spent. CPI is computed by EV / AC . A value of above 1 means that the project is doing well against the budget.

Annexure B

DRAWING LIST

Drawings issued to date




Drawing No	Drawing Title	Size	Date of Issue					
			07/04/2021					
	GENERAL							
9044-III/01/G	Drawing Schedule	A1	-					
9044-III/02/G	Site and Locality Plan	A1	-					
9044-III/03/G	General Site Plan	A1	-					
9044-III/04/G	Water Treatment Plant and Hybrid PV/Wind Power Plant Site Plan	A1	-					
9044-III/05/G	Name Board Detail	A1	-					
	CIVIL WORK							
9044-III/01/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/02/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/03/CE	Lined Brine Evaporation Ponds Sections A-A, B-B, C-C and D-D	A1	A					
9044-III/04/CE	Lined Brine Evaporation Ponds Lining and Pipework Details	A1	A					
9044-III/05/CE	Lined Brine Evaporation Ponds Security Fencing Details	A1	A					
9044-III/06/CE	Pipeline Trenching Details	A3	A					

The drawings indicated are drawings issued to the contractor only

Annexure C

CONTRACTOR'S REPORT

(See attached document)

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION		
REFERENCE NO: C-HGMO315		
ANNEXURES OF MONTHLY PROGRESS MEETING NO.3 (5 August 2021)		
SUMMARY OF CONTRACTUAL DETAILS		
Employer	Civil Engineers	Contractor
<p>NAMIBIA WATER CORPORATION</p>  <p>Address: Private Bag 13389, Windhoek</p> <p>Represented by Mr. R Likando</p> <p>Tel: +264 61 2393045</p> <p>Fax: +264 61 2933039</p> <p>Cell: +264 81 734 3184</p> <p>e-mail: likandor@namwater.com.na</p>	<p>KUCHLING CONSULTING ENGINEERS</p>  <p>Address: P O Box 801, Windhoek</p> <p>Represented by Mr. F Kuchling</p> <p>Tel: (061) 30 5420</p> <p>Fax: (061) 30 5418</p> <p>Cell: 081 129 8895</p> <p>e-mail: fkuchling@iway.na</p>	<p>NAMWATER (CCW)</p> <p>CIVIL CONSTRUCTION DIVISION</p>  <p>Address: Private Bag 13389, Windhoek</p> <p>Site Representative: Mr. J. Keendawala</p> <p>E-mail:Keendawalaj@namwater.com.na</p> <p>Cell: +264 81 382 6949</p>
Payment Details		
Contract Amounts:		N\$14,870,365.00
Amount Certified:		N\$4,318,504.62
Percentage Certified (%):		29.04%
Amount Paid:		N\$1,470,346.48
Percentage Paid (%):		9.89%
Contractual Dates Details		
Contract Commencement Date		Thursday, March 4, 2021
Contract period (Calendar days)		156
Contract Completion Date		Friday, October 1, 2021
Extension of time awarded due to abnormal rainfall		0
Extension of time awarded due to other		0
Revised Contract Completion Date		Friday, October 1, 2021
Delay Damages (days) and Cost		-
Provisional date for the proceeding site meeting is on:		5-Aug-21

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION

REFERENCE NO: C-HGMO315

LIST OF ANNEXURES

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 3



DATE: 5-Aug-21

LIST OF ANNEXURES

A	PROGRAMME
B	PROGRESS
C	PLANT
D	PERSONNEL
E	RECORDED RAINFALL
F	ACCIDENTS
G	SITE INSTRUCTIONS
H	CONTRACTUAL CORRESPONDENCE
I	CONTRACTOR CLAIMS/NOTIFICATIONS
J	DRAWINGS REGISTER
K	PHOTO REPORT
L	PAYMENT CERTIFICATES
M	CASH FLOW PROJECTIONS

LIST OF ANNEXURES

ANNEXURE A: PROGRAMME OF WORKS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 3



DATE: 5-Aug-21

PROGRAMME OF WORKS

ANNEXURE B: PROGRESS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

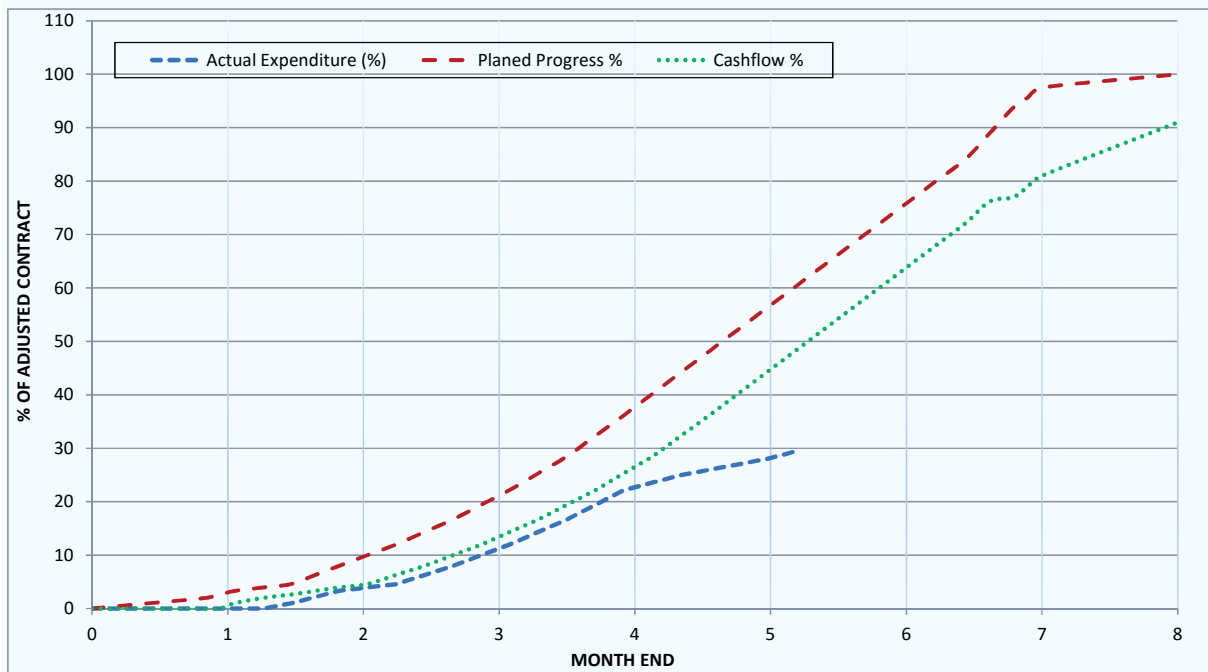


CUMULATIVE PROGRESS

DATE:

5-Aug-21

Schedule	Description	Contract Sum (N\$)	Planned Progress (N\$)	Actual Progress (N\$)	Percentage (%) Completed
Schedule 1	Preliminaries	2,082,200.00	1,050,000.00	1,022,520.00	49.11%
Schedule 2	Earthworks	5,927,500.00	3,010,000.00	3,038,400.00	51.26%
Schedule 3	Feeder Pipeline	168,365.00	150,585.00	154,608.60	91.83%
Schedule 4	Concrete works	67,200.00	10,200.00	0.00	0.00%
Schedule 5	Geomembrane Pond lining	6,118,600.00	0.00	0.00	0.00%
Schedule 6	Security Fencing	465,000.00	102,976.02	102,976.02	22.15%
Schedule 7	Clearing and finishing	41,500.00	0.00	0.00	0.00%
Schedule 8	Variations and External Works	0.00	0.00	0.00	0.00%
Sub-Total (1)		14,870,365.00	4,323,761.02	4,318,504.62	29.04%
Nett Construction Cost		0.00	0.00	0.00	-
Add 15% Value Added Tax		2,230,554.75	648,564.15	647,775.69	-
Materials on Site		0.00	102,976.02	102,976.02	-
Add Lining Sub-Contractor		0.00	0.00	0.00	-
Total (Incl. VAT)		17,100,919.75	5,075,301.19	5,069,256.33	29.68%



ANNEXURE D: CONSTRUCTION PERSONNEL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



DATE: 5-Aug-21

Position Hierarchy	Designation	Date on Site	2021											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Construction Manager	Joas Kazetjikuria	Project Inception	Management/ Head Office											
Design & Procurement	Janine Vorster													
Civil Eng. Technician	Sabbat. Hauwanga													
Site Agent	Johannes Keendawala	15-Mar-20		-	1	1	1	1	1					
Civil Foreman	Asser. Iita	6-Apr-21		-	1	1	1	1	1					
SEMI-SKILED														
Admin Clerk	Kambala Perpetya	6-Apr-21		-	-	1	1	1	1					
Handymen - Carpentry	Felix Kanuumba	6-Apr-21		-	-	1	1	1	1					
Handymen - Masonry	Mcmanasse Behaboas	6-Apr-21		-	-	1	1	1	1					
Handymen - Plumbing	Sesilia Shikongo	6-Apr-21		-	-	1	1	1	1					
OPERATORS														
Dozer & Excavator	Mathew Kruger & J. Andrias	6-Apr-21		-	-	2	2	2	2					
Loader & Tipper Truck	Hendry Kruger	6-Apr-21		-	-	1	1	2	2					
Grader	Donald Iyambo	6-Apr-21		-	-	1	1	2	2					
Plant Mechanic	T. Fredrich	6-Apr-21		-	-	1	1	1	1					
GENERAL LABOUR														
Workhands	General	6-Apr-21		-	-	16	16	16	16					
Security		6-Apr-21		-	-	1	1	1	1					
Sub-Total (1)			0	0	2	28	28	30	30	0	0	0	0	

ANNEXURE D: CONSTRUCTION PERSONNEL

ANNEXURE E: RECORDED RAINFALL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

RAINFALL RECORDS



DATE: 5-Aug-21

Day	2021										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1			0	0	0	0	0				
2			0	0	0	0	0				
3			0	0	0	0	0				
4			0	0	0	0	0				
5			0	0	0	0	0				
6			0	0	0	0	0				
7			0	0	0	0	0				
8			0	0	0	0	0				
9			0	0	0	0	0				
10			0	0	0	0	0				
11			0	0	0	0	0				
12			0	0	0	0	0				
13			0	0	0	0	0				
14			0	0	0	0	0				
15			0	0	0	0	0				
16			0	0	0	0	0				
17			0	0	0	0	0				
18			0	0	0	0	0				
19			0	0	0	0	0				
20			0	0	0	0	0				
21			0	0	0	0	0				
22			0	0	0	0	0				
23			0	0	0	0	0				
24			0	0	0	0	0				
25			0	0	0	0	0				
26			0	0	0	0	0				
27			0	0	0	0	0				
28			0	0	0	0	0				
29			0	0	0	0	0				
30			0	0	0	0	0				
31	0		0	0	0	0	0	0			
Monthly Total (Rw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days>=10mm(Nw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monthly Ave. (Rn) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ave Days>=10mm(Nn)	5.4	5.4	3.2	1.1	0.0	0.0	0.0	0.0	1.1	3.2	3.2
Ext. of time(V) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext. of Time (Day)	0	0	0	0	0	0	0	0	0	0	0

ANNEXURE E: RECORDED RAINFALL

ANNEXURE G: SUMMARY OF SITE INSTRUCTIONS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

LIST OF SITE INSTRUCTIONS



DATE: 5-Aug-21

SI No.	Date	Summary of Instructions Issued	Status
-	15-Apr-21	No site instruction so far.	nothing to report
	21-Apr-21	Dear Contractor, We need to correct the below statement in that the undersigned can only finalize the vertical alignment of the pipeline once we have received the longitudinal section drawing from the Surveyor. You need to employ this Surveyor. <u>You shall only commence with the trench excavation once you have received the final longitudinal section drawing with the vertical alignment of the pipeline from the undersigned.</u> Kind regards Felix Friedrich Kuchling Pr. Eng.	
	21-Apr-21	Dear Contractor, We made a mistake below and would like to correct as follows: 1. <u>Johannes will now draw in AUTOCAD the revised PI F and indicate the locations and depth below NGL of all conflicting services.</u> 2. We have sufficient data from our Surveyor to generate the longitudinal section and finalize the vertical alignment of the pipeline given above outstanding information. We apologies for the inconvenience caused. Kind regards Felix Friedrich Kuchling Pr. Eng.	
	28-Apr-21	Dear Johannes Thank you for the surveyed levels. <u>You are herewith instructed to lay the pipeline as per the invert levels given in below table. The slope of the pipe invert shall be even between the given chainages.</u> Attached is the long section of the pipeline only in electronic format. Good Luck Kind regards Felix Friedrich Kuchling Pr. Eng.	
	2-Jun-21	Dear Johannes Thank you for the re-surveyed levels. You are herewith instructed to strictly lay the pipeline as per the invert levels given in below table. (Attached to Email) The slope of the pipe invert shall be even between the given chainages. Attached is the longitudinal section drawing of the pipeline only in electronic format. We propose to encase the pipeline in 25MPa/19mm mass concrete between chainages 125.00 m and -20.00 m where the cover to pipe is less than 400 mm. Between chainage 0.0 m and -20.00 m the pipeline crosses the road. The encasing shall be 500 mm wide and 500 mm high and centred around the pipe and shall be continuous over all pipe joints, i.e. no interruptions other than construction joints within the concrete at suitable intervals to be determined by the Contractor's method of work. The pipe needs to be adequately secured against any movement, since it can become buoyant within the fresh concrete whilst it is being compacted by vibration. Kindly submit to us as soon as possible your rate for encasing the pipeline per metre of length (estimated total length of 145.0 m), which shall include for the supply of all materials, plant and labour, formwork, securing the pipe, compaction and wood floated surface finish. Refer to Clauses 5.4 and 8.2.12 of SANS 1200 L. The encasing shall only be carried out with approval of the rate by the Employer. Kind regards Felix Friedrich Kuchling Pr. Eng.	

ANNEXURE G: SUMMARY OF SITE INSTRUCTIONS

ANNEXURE L: PHOTO REPORT

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



Contractor's Photo Report



Photo No. 1: Erecting of Project Nameboard



Photo No. 2: Leveling and demarcating of feeder pipeline



Photo No. 3: Temporary testing pond.



Photo No. 4: Fencing off tempory pond to meet Safety and environmental standards



Photo No. 5: Levelling of pond Platform layers.



Photo No. 6: Water and preparation of pond bed.



Photo No. 7: Procecing of platform layers.



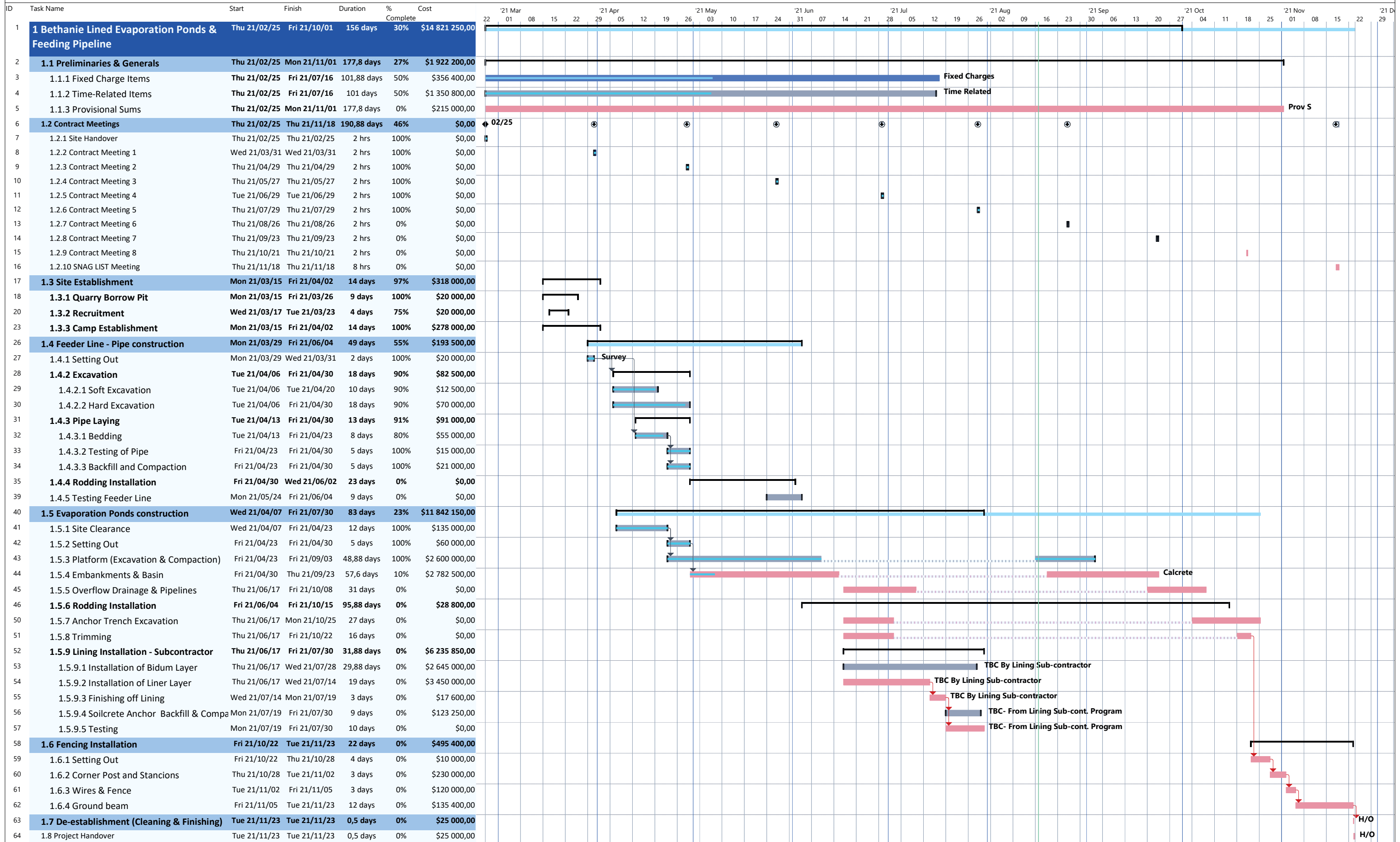
Photo No. 8: Roll and compact platform layers

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	SUB TOTAL N\$
	Preliminary & Generals Cost	2082 200.00		0.00	0.00	416 440.00	1041 100.00	416 440.00	208 220.00	2082 200.00
	Feeder Line - Pipe construction									
	Clear and grub pipelines routes	7 500.00	0.00	0.00	0.00	7 125.00	375.00	0.00	0.00	7 500.00
	Excavation									
	Soft Excavation	63 750.00	0.00	0.00	0.00	0.00	63 750.00	0.00	0.00	63 750.00
	Hard Excavation	58 500.00	0.00	0.00	0.00	0.00	58 500.00	0.00	0.00	58 500.00
	Pipe Laying									
	Bedding	18 900.00	0.00	0.00	0.00	0.00	18 900.00	0.00	0.00	18 900.00
	Testing of Pipe	39 000.00	0.00	0.00	0.00	0.00	19 500.00	19 500.00	0.00	39 000.00
	Backfill and Compaction	75 000.00	0.00	0.00	0.00	0.00	63 750.00	11 250.00	0.00	75 000.00
	Rodding Installation									
	Pipe Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.5.3	Concrete Ring & Cover	44 800.00	0.00	0.00	0.00	0.00	0.00	44 800.00	0.00	44 800.00
	Backfill and Compaction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Testing Feeder Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Evaporation Ponds construction									
4.2.2	Excavate of In-situ Material	1200 000.00	0.00	0.00	0.00	720 000.00	240 000.00	0.00	0.00	960 000.00
4.2.4	Importing of Calcrete	1457 500.00	0.00	0.00	0.00	0.00	583 000.00	728 750.00	145 750.00	1457 500.00
4.2.1	Site Clearance	135 000.00	0.00	0.00	0.00	128 250.00	6 750.00	0.00	0.00	135 000.00
4.1	Setting Out & Asbuilt Survey Works	80 000.00	0.00	0.00	0.00	12 000.00	0.00	40 000.00	28 000.00	80 000.00
4.2.3	Platform	1400 000.00	0.00	0.00	0.00	0.00	1120 000.00	0.00	0.00	1120 000.00
4.2.6	Stormwater Channel	14 000.00	0.00	0.00	0.00	0.00	0.00	0.00	14 000.00	14 000.00
4.2.5	Embankments	1325 000.00	0.00	0.00	0.00	0.00	66 250.00	596 250.00	662 500.00	1325 000.00
4.5.1-2	Overflow Drainage & Pipelines	22 400.00	0.00	0.00	0.00	0.00	0.00	0.00	22 400.00	22 400.00
	Rodding Installation									
	Pipe Line	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Concrete Ring & Cover	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Backfill and Compaction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.2.7	Anchor Trench Excavation	123 250.00	0.00	0.00	0.00	0.00	0.00	0.00	123 250.00	123 250.00
	Trimming	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.6	Lining Installation - Subcontractor									
4.6.1	Installation of Bidim Layer	2645 000.00	0.00	0.00	0.00	0.00	0.00	1587 000.00	1058 000.00	2645 000.00

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ N\$	Mar-21 N\$	Apr-21 N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	SUB TOTAL N\$
4.6.2	Installation of Liner Layer	3450 000.00	0.00	0.00	0.00	0.00	0.00	2070 000.00	1380 000.00	3450 000.00
4.6.3	Finishing off Lining	17 600.00	0.00	0.00	0.00	0.00	0.00	0.00	17 600.00	17 600.00
4.2.7	Soilcrete Anchor Backfill & Compaction	61 625.00	0.00	0.00	0.00	0.00	0.00	0.00	61 625.00	61 625.00
	Testing	50 000.00	0.00	0.00	0.00	0.00	12 500.00	25 000.00	12 500.00	50 000.00
	Fencing Installation									
	Setting Out	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Corner Post and Stancions	10 000.00	0.00	0.00	0.00	0.00	0.00	0.00	10 000.00	10 000.00
	Wires & Fence	455 000.00	0.00	0.00	0.00	113 750.00	0.00	0.00	341 250.00	455 000.00
	Ground beam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	De-establishment									
	Cleaning Pond Site	25 000.00	0.00	0.00	0.00	0.00	0.00	0.00	25 000.00	25 000.00
	Cleaning Pipeline Route	16 500.00	0.00	0.00	0.00	0.00	0.00	0.00	16 500.00	16 500.00
	Project Handover	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	14 877 525.00	0.00	0.00	0.00	1 397 565.00	3 294 375.00	5 538 990.00	4 126 595.00	14 357 525.00
	Cum Total		0.00	0.00	0.00	1 397 565.00	4 691 940.00	10 230 930.00	14 357 525.00	14 357 525.00
	Percentages %		0.0%	0.0%	0.0%	9.4%	31.5%	68.8%	96.5%	
	End Month		0 Mar-21	1 Apr-21	2 May-21	3 Jun-21	4 Jul-21	5 Aug-21	6 Sep-21	
	Payment Claim					PC 1	PC 2	PC 3	PC 4	



Project: BETHANIE_CCW Projec
Date: Tue 21/08/17

Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

PILOT RURAL DESALINATION PLANT USING RENEWABLE ENERGY AND MEMBRANE TECHNOLOGY AT BETHANIE WATER SUPPLY SCHEME, //KARAS REGION CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES

SITE / CONTRACT MEETING 4

HELD ON 02 NOVEMBER 2021 AT 14:30
AT CMB OFFICE, 124 ROBERT MUGABE AVENUE

NO	ITEM	ACTION
1.	PRESENT AND APOLOGIES	
1.1	Present	
	R Likando NamWater (via Teams)	NW
	S Shilongo NamWater (via Teams)	NW
	J Keendawala NamWater (Civil Construction) (via Teams)	NWCC
	J Kazetjikuria NamWater (Civil Construction) (via Teams)	NWCC
	S Erastus Odjove Trading and Construction CC JV Royal	OTC
	H Rusch CMB (Namibia) (Pty) Ltd	CMB
	A Rusch CMB (Namibia) (Pty) Ltd	CMB
	F Kuchling Kuchling Consulting Engineers Inc	KCE
1.2	Apologies	
	O Aldrich Desert Research Foundation of Namibia	DRFN
	J Sirunda NamWater	NW
2.	SITE VISIT	
2.1	The engineer was on site on 26 and 27 October 2021. The engineer met with Mr J Keendawala on site and the contractor went through the progress on site. All pictures taken on site were shown during the meeting. The contractor was busy with the cut to complete the embankments of the ponds. The contractor has completed the feeder pipe until the first pond and the pipe has been installed underneath the road. The contractor was also busy with the road construction around the ponds. The excavated material is still stockpiled all around the ponds and will be flattened out to allow for additional protection against storm water during the rainy season. The contractor is using all the brine water from the WTP flowing into the temporary pond for construction of the new evaporation ponds. Progress on site was good, and the contractor was busy with the final cut of the embankments. The contractor now has to complete the compaction to ensure the final finish is correct and acceptable to the lining subcontractor. The contractor was still confident to complete the work by 16 December 2021. The contractor had no additional questions and was just completing the work.	

NO	ITEM	ACTION
2.2	Mr J Kazetjikuria enquired on the in-situ material which was excavated and currently stockpiled around the ponds. The engineer indicated that the contractor on site indicated that this will be flattened out and used to provide additional protection of rain runoff water after the road has been constructed. No additional embankments will be constructed and the material will just be flattened out.	NWCC
3.	ADDITIONAL ITEMS	
3.1	None	
4.	APPROVAL OF PREVIOUS MINUTES	
4.1	The minutes of the Site Handover Meeting and of Site Meetings No 1 were approved by all parties. Site Meeting No 2 and 3 was not approved and the engineer will ensure that all signs Site Meeting No 2 and 3.	CMB / NW / NWCC
5.	WELCOME AND OPENING	
5.1	Mr H Rusch opened the meeting and welcomed all those present. An attendance list was circulated for all to complete; however, most attendees were via MS Teams.	
6.	PARTIES INVOLVED IN THE CONTRACT AND THEIR REPRESENTATIVES	
6.1	<p>Project Funded by</p> <p>ADAPTATION FUND 1818 H Street NW, Washington DC 20433, USA Website: www.adaptation-fund.org</p>	
6.2	<p>Implementing Entity</p> <p>DESERT RESEARCH FOUNDATION OF NAMIBIA (DRFN) P O Box 20232, Windhoek Represented by Mr O Aldrich Tel: (061) 37 7500 Fax: (061) 23 0172 e-mail: olla@aldrichprojectconsulting.com</p>	
6.3	<p>Executing Entity (Employer)</p> <p>NAMIBIA WATER CORPORATION Private Bag 13389, Windhoek Represented by Mr R Likando Tel: (061) 71 2039 Fax: (061) 71 3801 Cell: 081 734 3184 e-mail: likandor@namwater.com.na</p>	

NO	ITEM	ACTION
6.4	<p>Local Government</p> <p>BETHANIE VILLAGE COUNCIL P O Box 74, Bethanie Represented by the CEO, Mr Hendrik Gaobaeb Tel: (063) 283 006 Fax: (063) 283 107 e-mail: gaobaebh@gmail.com</p>	
6.5	<p>Contractor</p> <p>MAIN CONTRACTOR: NAMWATER CIVIL CONSTRUCTION Private Bag 13389, Windhoek Represented by Mr J Kazetjiguria Tel: (061) 71 2040 Cell: 081 126 4010 e-mail: KazetjiguriaJ@namwater.com.na</p> <p>HDPE LINING SUBCONTRACTOR: ODJOVE TRADING & CONSTRUCTION CC JV ROYAL P O Box 6, Windhoek Represented by Mr E J Simon Tel: (061) 22 0224 Cell: 081 165 9575 e-mail: js@royalcontractors.com.n</p>	
6.6	<p>Engineers</p> <p>MECHANICAL AND ELECTRICAL ENGINEERS (LEAD): CMB (NAMIBIA) P O Box 3256, Windhoek Represented by Mr H Rusch Tel: (061) 23 7253 / 4 Fax: (061) 23 5514 Cell: 081 300 3697 e-mail: hrusch@cmbnamibia.com</p> <p>CIVIL ENGINEERS: KUCHLING CONSULTING ENGINEERS P O Box 801, Windhoek Represented by Mr F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>	
7.	<p>CONTRACT DETAILS</p>	
7.1	<p>Contract Commencement Date: 04 March 2021 Contract Period: 156 (working days) / 211 (calendar days) Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days Final Completion Date: 01 October 2022</p>	
7.2	<p>Following the arithmetical correction to the contractor's bid the contract amount is as follows:</p>	

NO	ITEM	ACTION
	Original Contract Value: N\$ 15 920 365.00 Less: Contingencies N\$ 1 050 000.00 Total Contract Amount (as awarded) N\$ 14 870 365.00 (Excluding 15% VAT)	
8.	MATTERS ARISING FROM PREVIOUS MINUTES	
8.1	None.	
9	CONTRACTOR'S REPORT	
9.1	The contractor submitted contractor's report 4 on the 30 September 2021 which the contractor indicated would be sufficient for this meeting. This report will be attached to the completed minutes of meeting 4 and will be circulated by the engineer to all parties.	CMB
9.2	The contractor went through the report.	
9.3	The contractor gave the following summary: <ul style="list-style-type: none"> • The embankments were complete, cut, shaped, compacted and at the correct height. • The centre feeder pipeline between the ponds was not laid at this stage. • The contractor will finalise the compaction test report and forward these to the engineer for approval. Once the results have been studied by the engineer the engineer may instruct for additional tests depending on the results. • The contractor will take finals levels on all the embankments and the invert (floor) of the embankment. The contractor will provide this information by 08 November 2021. • The levels will be taken at each corner, in between corners and in the centre of the pond. The levels will be indicated on the drawing so that the engineer knows where the levels were taken (8 levels on top of the embankment, 8 levels at the floor of the embankment, and 8 in the ponds and one in the centre for each pond. • The contractor has verified the dimensions of the ponds. • The tolerances were given to the contractor and are specified on the drawings. This will be discussed again once the final levels have been forwarded to the engineer. The final top level of the embankments must be close to 997.65 m as per the drawing. • The contractor is still not sure what to do with the brine from the WTP once the construction is complete. One thought is to transport the backwash from the filters to the town's oxidation ponds. However, this will depend on the completion date of the first pond's lining installation. • The lining will be anchored with sandbags. 	NWCC NWCC NWCC CMB / NWCC
10.	ENGINEER'S REPORT	
10.1	Contract Overview Contract Commencement Date: 04 March 2021 Original Contract Period: 211 Calendar days Extension of Time Granted: None Scheduled Contract Completion: 01 October 2021 Defects Notification Period: 365 days	

NO	ITEM	ACTION														
	<p>Final Completion Date: 01 October 2022</p> <p>Period Elapsed: 243 days (115.17 %)</p> <p>Remaining Construction: 0 days (0 %)</p> <p>(The contractor has provided an extension of time claim for 81 days, which is currently under review)</p> <p>Following the arithmetical correction to the contractor's bid and including approved Variation Orders, the contract value is as follows:</p> <table border="0"> <tr> <td>Original Contract Value:</td> <td>N\$ 14 870 365.00</td> </tr> <tr> <td>Approved Variation Orders to date:</td> <td><u>N\$ (463 450.00)</u></td> </tr> <tr> <td>Current Contract Amount</td> <td><u>N\$ 14 406 915.00</u></td> </tr> <tr> <td colspan="2">(Excluding 15% VAT)</td> </tr> </table> <table border="0"> <tr> <td>Payments Made to Date:</td> <td></td> </tr> <tr> <td>Payment certificate 1</td> <td><u>N\$ 1 278 562.15</u></td> </tr> <tr> <td>Total Payments Made to Date:</td> <td><u>N\$ 1 278 562.15</u></td> </tr> </table>	Original Contract Value:	N\$ 14 870 365.00	Approved Variation Orders to date:	<u>N\$ (463 450.00)</u>	Current Contract Amount	<u>N\$ 14 406 915.00</u>	(Excluding 15% VAT)		Payments Made to Date:		Payment certificate 1	<u>N\$ 1 278 562.15</u>	Total Payments Made to Date:	<u>N\$ 1 278 562.15</u>	
Original Contract Value:	N\$ 14 870 365.00															
Approved Variation Orders to date:	<u>N\$ (463 450.00)</u>															
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(Excluding 15% VAT)																
Payments Made to Date:																
Payment certificate 1	<u>N\$ 1 278 562.15</u>															
Total Payments Made to Date:	<u>N\$ 1 278 562.15</u>															
10.2	Contractual Obligations and Documentation															
10.2.1	Working Copies of the Contract Document No outstanding items.															
10.2.2	Construction Programme The engineer has received an updated programme on 02 November 2021 which includes for the extension of time (completion date 16 December 2021) and will send the programme out with the minutes. Refer to Annexure C . The engineer has some concerns with regards to the lining subcontractor which had to be on site already. Currently the contractor is a week behind on the revised programme. The subcontractor indicated that they will start with the trenching/excavation in the coming days and that the material would arrive in two weeks time. The actual installation will take about a week according to the lining subcontractor. The liner and the concrete work will be done concurrent. The only concern was the rain, as no welding can take place when it rains. The subcontractor was there for confident that they will be able to complete the liner within the allocated time provided in the revised programme. The subcontractor just requested that the overflow pipes and all the civil work of the evaporation ponds be completed by 15 November 2021 for them to complete on time.	CMB NWCC														
10.2.3	Cash Flow Forecast The engineer has received the revised cash flow forecast and will send it out with the minutes of the meeting. The contractor is requested to provide a monthly cash flow forecast before each meeting.	NWCC														
10.2.4	Training or Knowledge Sharing Plan and Programme None.															
10.2.5	List of Local Labourers The contractor has updated the current list of local labours in their monthly progress report. The contractor is requested to update the list before each meeting. This should include the labourers of the subcontractor.	NWCC														

NO	ITEM	ACTION
10.2.6	<p>Quality Assurance Manual / Method Statements The subcontractor's Method Statements for the HDPE lining have been approved by the engineer.</p>	
10.3	<p>Correspondence</p>	
10.3.1	<p>Correspondence and Requests from Contractor:</p> <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.2	<p>Correspondence Send to the Contractor:</p> <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.3	<p>Correspondence Received from the Employer:</p> <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.3.4	<p>Correspondence Send to the Employer:</p> <ul style="list-style-type: none"> • No major item/s to date that is not listed elsewhere in the minutes. 	
10.4	<p>Construction Supervision and Quality Control</p>	
10.4.1	<p>Drawings Issued to the Contractor:</p> <ul style="list-style-type: none"> • The engineer has issued all the drawings to the contractor. The sketch for the row of stones next to the rodding eye installation next to the road was issued; however, the contractor still needs to complete this. 	NWCC
10.4.2	<p>Working Drawings Issued to the Engineer for Approval:</p> <ul style="list-style-type: none"> • The subcontractor and contractor will indicate on a drawing the sequence on how the liner will be installed. The date of completion will also be indicated on the drawing. 	OTC / NWCC
10.4.3	<p>HDPE Lining Installation</p> <ul style="list-style-type: none"> • The subcontractor inquired if the Top-hat/Boot skirt around pond inlet pipe should be six as per their BoQ or eight. The engineer verified that this should be eight (8) as per the drawing. • The subcontractor has been on site and has completed site establishment and has communicated with the main contractor while on site. The subcontractor was on site 16 October 2021. • The contractor requested the engineer to forward SANS 10409 and SANS 1526 with regards to the lining works of the evaporation ponds. The engineer has forwarded the standards. • The engineer will come and inspect the final finish of the ponds before the lining subcontractor start with their installation, if so required by the contractor. The contractor will let the engineer know when to come; however, it is foreseen that the engineer will visit the site at the end of November 2021. 	NWCC / CMB
10.4.4	<p>Site Instruction Issued to the Contractor:</p> <ul style="list-style-type: none"> • The engineer previously gave the contractor instructions regarding the setting out of the pipeline, the concrete encasement of the pipeline, and the compaction of the bedding. • The new instruction includes the packing of about 10 m row of stones next to the rodding eye installation to prevent vehicles from driving over the installation. A formal site instruction (with a sketch) will be e-mailed to the contractor in due course. 	KCE

NO	ITEM	ACTION
10.4.5	<p>Variations:</p> <ul style="list-style-type: none"> • Variation VO1 was approved and included the following: <ul style="list-style-type: none"> ○ The omission of provisional sums and daywork costs. ○ Nameboard. • Variation VO2 was approved and included the following: <ul style="list-style-type: none"> ○ The intermediate rock excavation. ○ The concrete encasing of the feeder pipeline. • Variation VO3 will include the temporary pond and other variations which may transpire during the course of the contract. The client will then make the final decision to include the temporary pond as a variation. • Also to be included is the omission of the original bid amount of the contractor of N\$ 6 113 600.00 (excluding VAT) and the addition of the appointed lining subcontract amount of is N\$ 3 875 377.72 (excluding VAT). However, this will be done once all costs have been finalised. 	NW
10.4.6	<p>Name Board:</p> <ul style="list-style-type: none"> • The name board has been erected. NamWater received the photos of the name board. 	
10.4.7	<p>Contractor's Camp</p> <ul style="list-style-type: none"> • The contractor's camp was deemed acceptable to all. 	
10.4.8	<p>Concrete Mix Design, Material and Cube Tests:</p> <ul style="list-style-type: none"> • The engineer has approved the material test results. • The contractor submitted their concrete mix design and it was approved. • The concrete cube tests (7 and 24 days) for the rodding eyes will be sent to the engineer for approval. • The contractor issued the first compaction test results on 11 August 2021. This was approved; however, the consultant instructed the contractor to test the compaction on the circumference of the platform as well as the parts of the embankment not covered by the pond lining • The contractor will finalise the new compaction test report and forward this to the engineer for approval. Once the results have been studied by the engineer the engineer may instruct for additional tests depending on the results. • All other relevant tests should be submitted to the engineer throughout the contract. 	NWCC
10.4.9	<p>Site Instruction Book and Daily Construction Reports:</p> <ul style="list-style-type: none"> • A daily dairy is kept on site. The contractor did submit all the daily reports with the last progress report. The contractor has again been instructed to provide copies of daily construction short reports prior to each meeting. • The engineer requested that the contractor continue sending site updates and pictures on the created WhatsApp group. 	NWCC NWCC
10.4.10	<p>Tests and Other:</p> <ul style="list-style-type: none"> • The lining test method statement was issued and approved by the engineer. • The lining tests will be completed as per method statement and all results will be handed over to NamWater for record keeping. 	OTC / NW

NO	ITEM	ACTION
10.5	Claims	
10.5.1	The contractor has provided an extension of time (EOT 1) claim as mentioned before. EOT 1 claim is to extend the final date to 16 December 2021. The claim is currently under review. The engineer will discuss this with the client in more detail in a separate meeting. The extension of time will bear no cost, as discussed with the contractor.	CMB / NW
10.5.2	The contractor has sent their third payment claim for approval and the engineer is currently going through it and will complete the payment valuation in due course. The contractor indicated that they did not want to revise the claim and it can stay as is.	CMB
10.5.3	No advance payment claim will be approved. Claims will be approved as per the GCC.	
10.5.4	The engineer instructed the contractor to submit a notice of time claim as soon as possible.	NWCC
10.6	Measurement and Payment	
10.6.1	Variation Orders: <ul style="list-style-type: none"> • The variation will be for the items mentioned above. 	
10.6.2	Dayworks Ordered: <ul style="list-style-type: none"> • No dayworks ordered. 	
10.6.3	Payments: <ul style="list-style-type: none"> • The client will discuss payments with the contractor internally. 	NW
10.7	Schedule Progress versus Plan and Trends	
10.7.1	The costs to each task in the Gantt chart have been provided to the engineer and table in Annexure A summarises the progress.	
10.8	Earned Value Management (EVM)	
10.8.1	The overall Schedule Variance (SV) is 2.27 % and therefore of little concern.	
10.8.2	The Cost Variance (CV) is large and this is due to the contractor that has not claimed for all work done to date. The contractor is underpaid, and this is due to the work not claimed to date.	
10.8.3	For EVM graph and all EVM values refer to Annexure A. Status date 30 October 2021.	
11.	ENVIRONMENTAL AND SOCIAL MANAGEMENT	
11.1	The contractor has submitted their ESMP Compliance report No.4. The contractor is requested to provide a monthly environmental report. NamWater will provide feedback, if any, on the report.	NWCC

NO	ITEM	ACTION
12.	MATTERS RAISED BY THE EMPLOYER	
12.1	None	
13.	ANY OTHER MATTERS	
13.1	None	
14.	DATES AND VENUES OF FUTURE CONTRACT / SITE MEETINGS	
14.1	It was agreed that future contract meetings will preliminary be scheduled monthly for the last Thursday of each month. However, the engineer will provide a schedule for the future meetings after confirming with all parties.	CMB
14.2	A preliminary schedule of meetings is therefore as follows: <ul style="list-style-type: none"> • Site Visit: Tuesday 30 November 2021 • Contract Meeting 5 / Site Visit: Thursday 16 December 2021 (Revised Contract Completion for the Ponds) 	
14.3	Meetings will commence at 12:00 on site or in Windhoek depending on the work completed on site.	
14.4	Additional meetings will be scheduled if so required.	
15.	CLOSURE	
15.1	The meeting was adjourned at 15:40	
15.2	It was agreed that distribution of the minutes will be by e-mail only, as per the attendance list and apologies.	

Minutes by



H RUSCH IncEng

CLINKSCALES MAUGHAN-BROWN

16. **APPROVAL**

These minutes and any corrections thereto by hand are herewith approved:

.....
.....

.....
Employer: NamWater

.....
Date

.....
Engineer: CMB (Namibia)

.....
Date

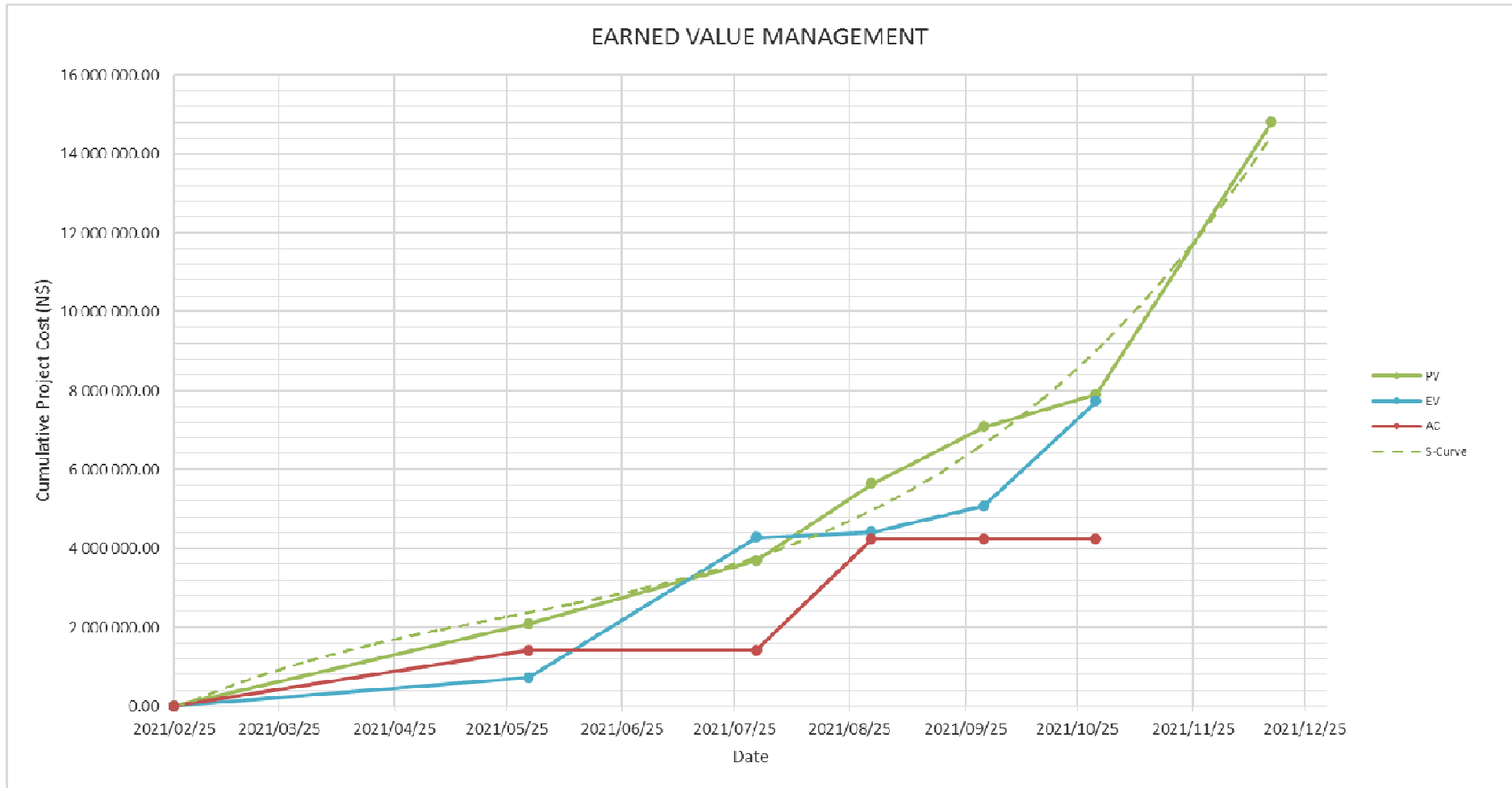
.....
Contractor: NamWater (Civil Construction)

.....
Date

Annexure A

EARNED VALUE MANAGEMENT (EVM) REPORT

Project Start date: 04 March 2021
 Status Date: 30 October 2021



EARNED VALUE MANAGEMENT (EVM) REPORT (Continued)

Project Start date: 04 March 2021

Status Date: 31 July 2021

Task No	Task	PV ¹	EV ²	AC ³	SV % ⁴	CV % ⁵	SPI ⁶	CPI ⁷
1.1	Preliminaries & Generals							
1.1.1	Fixed Charge Items	306 727.53	302 940.00	Not Known ⁸	-1%	NK ⁸	0.99	NK ⁸
1.1.2	Time-Related Items	1 162 535.19	1 148 180.00	Not Known ⁸	-1%	NK ⁸	0.99	NK ⁸
1.1.3	Provisional Sums	185 034.84	182 750.00	Not Known ⁸	-1%	NK ⁸	0.99	NK ⁸
1.2	Contract Meetings	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.3	Site Establishment	318 000.00	318 000.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.4	Feeder Line - Pipe construction							
1.4.1	Setting Out	20 000.00	20 000.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.4.2	Excavation	82 500.00	82 500.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.4.3	Pipe Laying	91 000.00	90 090.00	Not Known ⁸	-1%	NK ⁸	0.99	NK ⁸
1.4.4	Rodding Installation	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5	Evaporation Ponds construction							
1.5.1	Site Clearance	135 000.00	135 000.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.5.2	Setting Out	60 000.00	60 000.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.5.3	Platform (Excavation & Compaction)	2 600 000.00	2 600 000.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.5.4	Embankments & Basin	2 782 500.00	2 782 500.00	Not Known ⁸	0%	NK ⁸	1.00	NK ⁸
1.5.5	Overflow Drainage & Pipelines	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.6	Rodding Pipeline Installation & Manholes	28 800.00	0.00	Not Known ⁸	-100%	NK ⁸	0.00	NK ⁸
1.5.7	Trimming	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.8	Lining Installation							
1.5.8.1	Anchor Trench Excavation	61 625.00	0.00	Not Known ⁸	-100%	NK ⁸	0.00	NK ⁸
1.5.8.2	Installation of A5 Bidim	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.8.3	Installation of HDPE Liner	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.8.4	Pipe Boot Make-Of	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.8.5	Concrete Anchor Backfill	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.5.8.6	Testing & Commissioning	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.6	Fencing Installation							
1.6.1	Setting Out	10 000.00	0.00	Not Known ⁸	-100%	NK ⁸	0.00	NK ⁸
1.6.2	Corner Post and Stacions	57 500.00	0.00	Not Known ⁸	-100%	NK ⁸	0.00	NK ⁸
1.6.3	Wires & Fence	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.6.4	Ground beam	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.7	De-establishment (Finishing)	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
1.8	Project Handover	0.00	0.00	Not Known ⁸	-	NK ⁸	-	NK ⁸
	Project Total	7 901 222.56	7 721 960.00	4 245 995.02	-2.27%	-45.01%	0.98	1.82

1. Planned Value (PV) = the budgeted amount through the current reporting period
2. Earned Value (EV) = total project budget multiplied by the % of project completion
3. Actual Cost (AC) = actual costs to date
4. Schedule Variance % (SV %) = how much ahead or behind the schedule a project is running in terms of percentage. SV % is calculated using the following formula: $SV \% = SV / PV$
5. Cost Variance % (CV %) = how much over - or under-budget the project is in terms of percentage. CV % is calculated using the following formula: $CV \% = CV / EV \times 100$
6. Schedule Performance Index (SPI) = how close actual work is being completed compared to the schedule. SPI is computed by EV / PV . A value of above one means that the project is doing well against the schedule.
7. Cost Performance Index (CPI) = Represents the amount of work being completed on a project for every unit of cost spent. CPI is computed by EV / AC . A value of above 1 means that the project is doing well against the budget.
8. Since the PV amount received from the contractor did not indicate where the amount came from the itemised BoQ it is not possible to calculate this and only the total can be shown.

Annexure B

DRAWING LIST

Drawings issued to date

Drawing No	Drawing Title	Size	Date of Issue					
			07/04/2021					
	GENERAL							
9044-III/01/G	Drawing Schedule	A1	-					
9044-III/02/G	Site and Locality Plan	A1	-					
9044-III/03/G	General Site Plan	A1	-					
9044-III/04/G	Water Treatment Plant and Hybrid PV/Wind Power Plant Site Plan	A1	-					
9044-III/05/G	Name Board Detail	A1	-					
	CIVIL WORK							
9044-III/01/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/02/CE	Lined Brine Evaporation Ponds Site Layout	A1	A					
9044-III/03/CE	Lined Brine Evaporation Ponds Sections A-A, B-B, C-C and D-D	A1	A					
9044-III/04/CE	Lined Brine Evaporation Ponds Lining and Pipework Details	A1	A					
9044-III/05/CE	Lined Brine Evaporation Ponds Security Fencing Details	A1	A					
9044-III/06/CE	Pipeline Trenching Details	A3	A					

The drawings indicated are drawings issued to the contractor only

Annexure C

CONTRACTOR'S REPORT

(See attached document)

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION		
REFERENCE NO: C-HGMO315		
ANNEXURES OF MONTHLY PROGRESS MEETING NO.4 (30 September 2021)		
SUMMARY OF CONTRACTUAL DETAILS		
Employer	Civil Engineers	Contractor
<p>NAMIBIA WATER CORPORATION</p>  <p>Address: Private Bag 13389, Windhoek Represented by Mr. R Likando Tel: +264 61 2393045 Fax: +264 61 2933039 Cell: +264 81 734 3184 e-mail: likandor@namwater.com.na</p>	<p>KUCHLING CONSULTING ENGINEERS</p>  <p>Address: P O Box 801, Windhoek Represented by Mr. F Kuchling Tel: (061) 30 5420 Fax: (061) 30 5418 Cell: 081 129 8895 e-mail: fkuchling@iway.na</p>	<p>NAMWATER (CCW) CIVIL CONSTRUCTION DIVISION</p>  <p>Address: Private Bag 13389, Windhoek Site Representative: Mr. J. Keendawala E-mail:Keendawalaj@namwater.com.na Cell: +264 81 382 6949</p>
Payment Details		
Contract Amounts:		N\$14,870,365.00
Amount Certified:		N\$6,203,446.02
Percentage Certified (%):		41.72%
Amount Paid:		N\$4,394,604.84
Percentage Paid (%):		29.55%
Contractual Dates Details		
Contract Commencement Date		Thursday, March 4, 2021
Contract period (Calendar days)		156
Contract Completion Date		Friday, October 1, 2021
Extension of time awarded due to abnormal rainfall		0
Extension of time awarded due to other		76
Revised Contract Completion Date		Thursday, December 16, 2021
Delay Damages (days) and Cost		-
Provisional date for the proceeding site meeting is on:		21-Oct-21

PILOT RURAL DESAL PLANT WITH RENEWABLE ENERGY FOR BETHANIE IN //KARAS REGION

REFERENCE NO: C-HGMO315

LIST OF ANNEXURES

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 4



DATE: 30-Sep-21

LIST OF ANNEXURES

A	PROGRAMME
B	PROGRESS
C	PLANT
D	PERSONNEL
E	RECORDED RAINFALL
F	ACCIDENTS
G	SITE INSTRUCTIONS
H	CONTRACTUAL CORRESPONDENCE
I	CONTRACTOR CLAIMS/NOTIFICATIONS
J	DRAWINGS REGISTER
K	PHOTO REPORT
L	PAYMENT CERTIFICATES
M	CASH FLOW PROJECTIONS

LIST OF ANNEXURES

ANNEXURE A: PROGRAMME OF WORKS

REFERENCE NO: C-HGMO315

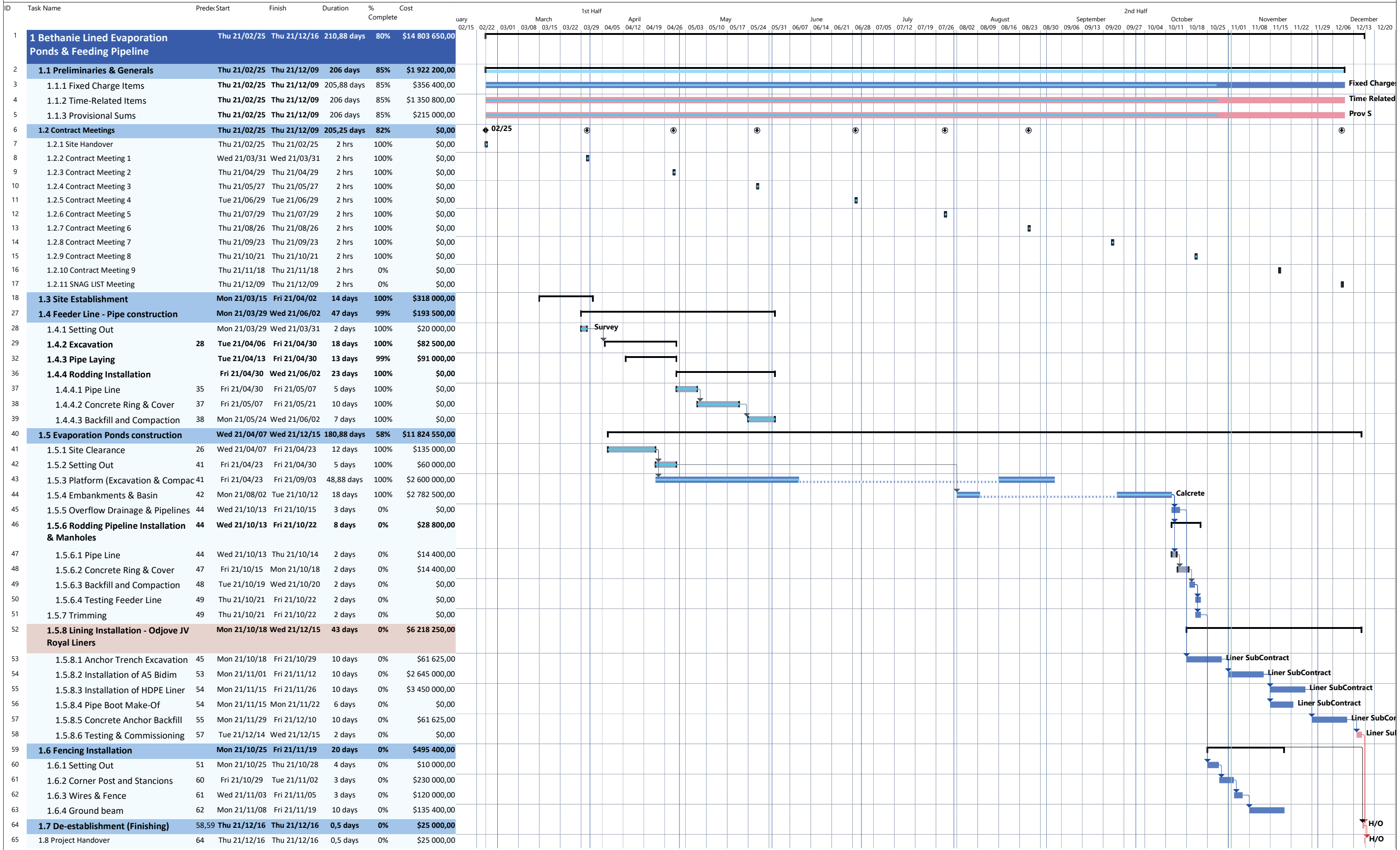
CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

MONTHLY PROGRESS SITE MEETING NO.: 4



DATE: 30-Sep-21

PROGRAMME OF WORKS



Project: BETHANIE_CCW Projec	Task	Summary	Inactive Milestone	Duration-only	Start-only	External Milestone	Critical Split
Date: Tue 21/11/02	Split	Project Summary	Inactive Summary	Manual Summary Rollup	Finish-only	Deadline	Progress
	Milestone	Inactive Task	Manual Task	Manual Summary	External Tasks	Critical	Manual Progress

ANNEXURE B: PROGRESS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

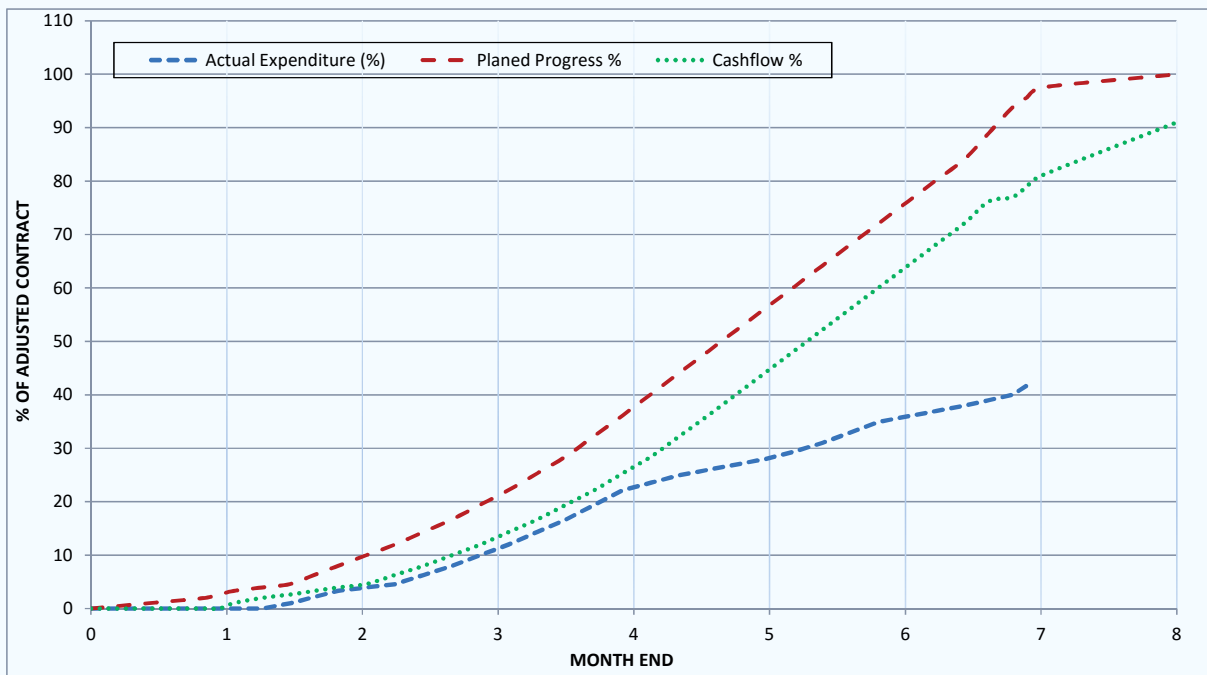


CUMULATIVE PROGRESS

DATE:

30-Sep-21

Schedule	Description	Contract Sum (N\$)	Planned Progress (N\$)	Actual Progress (N\$)	Percentage (%) Completed
Schedule 1	Preliminaries	2,082,200.00	1,500,052.00	1,315,220.00	62.86%
Schedule 2	Earthworks	5,927,500.00	5,509,595.00	4,602,200.00	77.64%
Schedule 3	Feeder Pipeline	168,365.00	116,096.00	116,096.00	68.95%
Schedule 4	Concrete works	67,200.00	40,354.00	31,808.00	47.33%
Schedule 5	Geomembrane Pond lining	6,118,600.00	0.00	0.00	0.00%
Schedule 6	Security Fencing	465,000.00	102,976.00	102,976.02	22.15%
Schedule 7	Clearing and finishing	41,500.00	0.00	0.00	0.00%
Schedule 8	Variations and External Works	0.00	0.00	0.00	0.00%
Sub-Total (1)		14,870,365.00	7,269,073.00	6,203,446.02	41.72%
Nett Construction Cost		0.00	0.00	0.00	-
Add 15% Value Added Tax		2,230,554.75	1,090,360.95	930,516.90	-
Materials on Site		0.00	102,976.02	102,976.02	-
Add Lining Sub-Contractor		0.00	0.00	0.00	-
Total (Incl. VAT)		17,100,919.75	8,462,409.97	7,236,938.94	41.72%



ANNEXURE D: CONSTRUCTION PERSONNEL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



DATE: 30-Sep-21

Position Hierarchy	Designation	Date on Site	2021											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Construction Manager	Joas Kazetjikuria	Project Inception	Management/ Head Office											
Design & Procurement	Janine Vorster													
Civil Eng. Technician	Sabbat. Hauwanga													
Site Agent	Johannes Keendawala	15-Mar-20		-	1	1	1	1	1	1	1	1		
Civil Foreman	Asser. Iita	6-Apr-21		-	1	1	1	1	1	1	1	1		
SEMI-SKILED														
Admin Clerk	Kambala Perpetya	6-Apr-21		-	-	1	1	1	1	1	1	1		
Handymen - Carpentry	Felix Kanuumba	6-Apr-21		-	-	1	1	1	1	1	1	1		
Handymen - Masonry	Mcmanasse Behaboas	6-Apr-21		-	-	1	1	1	1	1	1	1		
Handymen - Plumbing	Sesilia Shikongo	6-Apr-21		-	-	1	1	1	1	1	1	1		
OPERATORS														
Dozer & Excavator	Mathew Kruger & Daniel E	6-Apr-21		-	-	2	2	2	2	2	2	2		
Loader & Tipper Truck	Henok A. & Berger V	6-Apr-21		-	-	1	1	2	2	2	2	2		
Grader	Thomas K. & Simson T	6-Apr-21		-	-	1	1	2	2	2	2	2		
Plant Mechanic	T. Fredrich	6-Apr-21		-	-	1	1	1	1	1	1	1		
GENERAL LABOUR														
Workhands	General	6-Apr-21		-	-	16	16	16	16	5	5			
Security		6-Apr-21		-	-	1	1	1	1	1	1	1		
Sub-Total (1)			0	0	2	28	28	30	30	19	19	0	0	

ANNEXURE D: CONSTRUCTION PERSONNEL

ANNEXURE E: RECORDED RAINFALL

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

RAINFALL RECORDS



DATE: 30-Sep-21

Day	2021										
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1			0	0	0	0	0	0	0		
2			0	0	0	0	0	0	0		
3			0	0	0	0	0	0	0		
4			0	0	0	0	0	0	0		
5			0	0	0	0	0	0	0		
6			0	0	0	0	0	0	0		
7			0	0	0	0	0	0	0		
8			0	0	0	0	0	0	0		
9			0	0	0	0	0	0	0		
10			0	0	0	0	0	0	0		
11			0	0	0	0	0	0	0		
12			0	0	0	0	0	0	0		
13			0	0	0	0	0	0	0		
14			0	0	0	0	0	0	0		
15			0	0	0	0	0	0	0		
16			0	0	0	0	0	0	0		
17			0	0	0	0	0	0	0		
18			0	0	0	0	0	0	0		
19			0	0	0	0	0	0	0		
20			0	0	0	0	0	0	0		
21			0	0	0	0	0	0	0		
22			0	0	0	0	0	0	0		
23			0	0	0	0	0	0	0		
24			0	0	0	0	0	0	0		
25			0	0	0	0	0	0	0		
26			0	0	0	0	0	0	0		
27			0	0	0	0	0	0	0		
28			0	0	0	0	0	0	0		
29			0	0	0	0	0	0	0		
30			0	0	0	0	0	0	0		
31	0		0	0	0	0	0	0	0		
Monthly Total (Rw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Days>=10mm(Nw)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monthly Ave. (Rn) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ave Days>=10mm(Nn)	5.4	5.4	3.2	1.1	0.0	0.0	0.0	0.0	1.1	3.2	3.2
Ext. of time(V) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ext. of Time (Day)	0	0	0	0	0	0	0	0	0	0	0

ANNEXURE E: RECORDED RAINFALL

ANNEXURE G: SUMMARY OF SITE INSTRUCTIONS

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

LIST OF SITE INSTRUCTIONS

DATE: 30-Sep-21

SI No.	Date	Summary of Instructions Issued	Status
SI1	15-Apr-21	No site instruction so far.	nothing to report
SI2	21-Apr-21	<p>Dear Contractor,</p> <p>We need to correct the below statement in that the undersigned can only finalize the vertical alignment of the pipeline once we have received the longitudinal section drawing from the Surveyor. You need to employ this Surveyor.</p> <p><u>You shall only commence with the trench excavation once you have received the final longitudinal section drawing with the vertical alignment of the pipeline from the undersigned.</u></p> <p>Kind regards</p> <p>Felix Friedrich Kuchling Pr. Eng.</p>	
SI3	21-Apr-21	<p>Dear Contractor,</p> <p>We made a mistake below and would like to correct as follows:</p> <p>1. <u>Johannes will now draw in AUTOCAD the revised PIF and indicate the locations and depth below NGL of all conflicting services.</u></p> <p>2. We have sufficient data from our Surveyor to generate the longitudinal section and finalize the vertical alignment of the pipeline given above outstanding information.</p> <p>We apologies for the inconvenience caused.</p> <p>Kind regards</p> <p>Felix Friedrich Kuchling Pr. Eng.</p>	
SI4	28-Apr-21	<p>Dear Johannes</p> <p>Thank you for the surveyed levels.</p> <p><u>You are herewith instructed to lay the pipeline as per the invert levels given in below table. The slope of the pipe invert shall be even between the given chainages.</u></p> <p>Attached is the long section of the pipeline only in electronic format.</p> <p>Good Luck</p> <p>Kind regards</p> <p>Felix Friedrich Kuchling Pr. Eng.</p>	
SI5	2-Jun-21	<p>Dear Johannes</p> <p>Thank you for the re-surveyed levels.</p> <p>You are herewith instructed to strictly lay the pipeline as per the invert levels given in below table. (Attached to Email)</p> <p>The slope of the pipe invert shall be even between the given chainages.</p> <p>Attached is the longitudinal section drawing of the pipeline only in electronic format.</p> <p>We propose to encase the pipeline in 25MPa/19mm mass concrete between chainages 125.00 m and -20.00 m where the cover to pipe is less than 400 mm. Between chainage 0.0 m and -20.00 m the pipeline crosses the road.</p> <p>The encasing shall be 500 mm wide and 500 mm high and centred around the pipe and shall be continuous over all pipe joints, i.e. no interruptions other than construction joints within the concrete at suitable intervals to be determined by the Contractor's method of work.</p> <p>The pipe needs to be adequately secured against any movement, since it can become buoyant within the fresh concrete whilst it is being compacted by vibration.</p> <p>Kindly submit to us as soon as possible your rate for encasing the pipeline per metre of length (estimated total length of 145.0 m), which shall include for the supply of all materials, plant and labour, formwork, securing the pipe, compaction and wood floated surface finish.</p> <p>Refer to Clauses 5.4 and 8.2.12 of SANS 1200 L. The encasing shall only be carried out with approval of the rate by the Employer.</p> <p>Kind regards</p> <p>Felix Friedrich Kuchling Pr. Eng.</p>	

	1-Aug-21	<p>Dear Johannes,</p> <p>Thank you for the well documented compaction test report. We approve the 1:1 mixing of the insitu with the imported material and its application for the platform and embankments. Sufficient compaction on the platform is necessary everywhere, but most importantly on the outer circumference not covered by the pond lining and prone to erosion.</p> <p>Therefore kindly also test the compaction on the circumference of the platform as well as the parts of the embankment not covered by the pond lining. The focus should lie on future protection against corrosion, not so much for any settlements.</p> <p>Averaging the results is not approved. Each test must pass the threshold, if not, re-compaction is required until the tests pass on the affected area.</p> <p>Kind regards</p> <p>Felix Friedrich Kuchling Pr. Eng. Director</p>	
	1-Sep-21	Nothing to report	

ANNEXURE H: CONTRACTUAL CORRESPONDENCE

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)

COMMUNICATIONS



DATE: 30-Sep-21

No.	Description	Contractor		Engineer		Remarks
		Reference	Date	Reference	Date	
	<i>Correspondence</i>					
1	Site Handover (BETHANIE)	PBSI0821-01-	4-Mar-21			
2	Program of Works (Ver. 1 17-03-2021)	PBSI0821-02-	17-Mar-21			
3	Material Grading Test Report	PBSI0821-03-	8-Apr-21			
4	Health & Safety Report No. 1 (13-04-2021) Summary	PBSI0821-04-	15-Apr-21			
5	Monthly Progress Report No. 1 (13-04-2021) Contractor	PBSI0821-05-	15-Apr-21			
6	Cash flow (Ver. 2 13-04-2021)	PBSI0821-06-	15-Apr-21			
7	Monthly Progress Report No. 2 (31-05-2021) Contractor	PBSI0821-07-	31-May-21			
8	NAMWATER PBSI0821- 08- Road Cut Permission	PBSI0821- 08-	14-Jun-21			
9	NAMWATER PBSI0821- 09- Proposal for Temporal pond.	PBSI0821- 09-	15-Jun-21			
10	NAMWATER PBSI0821- 12 - ESMP Compliance Report	PBSI0821- 12 -	19-Jul-21			
11	NAMWATER PBSI0821- 11- Concrete Mix Design	PBSI0821- 11-	27-Jul-21			
12	Cash flow (Ver. 3 30-07-2021)	PBSI0821-12-	30-Jul-21			
13	Monthly Progress Report No. 3 (02-08-2021) Contractor	PBSI0821-14-	2-Aug-21			
14	NAMWATER - 25 MPa Concrete cube test	PBSI0821- 15-	16-Aug-21			
15	PBSI0821- 16-Platform Compaction Density Test Report	PBSI0821- 16-	16-Aug-21			
16	Request For Extension of Time - Bethanie Desal Plant	PBSI0821-19-	27-Sep-21			
17	Monthly Progress Report No. 4 (30-09-2021) Contractor	PBSI0821-20-	30-Sep-21			

ANNEXURE H: CONTRACTUAL CORRESPONDENCE

ANNEXURE L: PHOTO REPORT

REFERENCE NO: C-HGMO315

CONTRACTOR: NAMWATER CIVIL CONSTRUCTION (CCW)



Contractor's Photo Report



Photo No. 1: Toolbox talk - Health and safety awareness, including Covid 19



Photo No. 2: Wetting and processing of 150mm Blanket layer



Photo No. 3: Sorting out larger boulders



Photo No. 4: Preparation of embankments floors.



Photo No. 5: Maintenance of hauling route from borrow pit.



Photo No. 6: clearing of section of hauling at road crossing section.



Photo No. 7: Processing of blanket layer and hauling of Embankments material



Photo No. 8: Process roll and compact 150mm platform layer.

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ N\$	May-21 N\$	Jun-21 N\$	Jul-21 N\$	Aug-21 N\$	Sep-21 N\$	Oct-21 N\$	Nov-21 N\$	Dec-21 N\$	SUB TOTAL N\$
	Preliminary & Generals Cost	2082 200,00		416 440,00	0,00	520 550,00	0,00	520 550,00	416 440,00	208 220,00	2082 200,00
	Variation Orders										
	Nameboard		0,00	0,00	0,00	10 000,00	0,00	0,00	0,00	0,00	10 000,00
	Encasing of Feeder line		0,00	0,00	0,00	180 000,00	0,00	0,00	0,00	0,00	180 000,00
	Temporary Ponds		0,00	0,00	0,00		0,00	78 183,60	0,00	0,00	78 183,60
	Feeder Line - Pipe construction										
	Clear and grub pipelines routes	7 500,00	0,00	7 125,00	0,00	375,00	0,00	0,00	0,00	0,00	7 500,00
	Excavation										
	Soft Excavation	63 750,00	0,00	0,00	0,00	63 750,00	0,00	0,00	0,00	0,00	63 750,00
	Intermediate Excavation	12 500,00	0,00	0,00	0,00	12 500,00	0,00	0,00	0,00	0,00	12 500,00
	Hard Excavation	70 000,00	0,00	0,00	0,00	70 000,00	0,00	0,00	0,00	0,00	70 000,00
	Pipe Laying										
	Bedding	24 600,00	0,00	0,00	0,00	24 600,00	0,00	0,00	0,00	0,00	24 600,00
	Pipe Line	75 000,00	0,00	35 400,00	0,00	28 350,00	0,00	0,00	11 250,00	0,00	75 000,00
	Pipe Line Fittings	26 640,00	0,00	15 984,00	0,00	2 664,00	0,00	0,00	7 992,00	0,00	26 640,00
	Testing of Pipe	39 000,00	0,00	0,00	0,00	3 900,00	0,00	0,00	35 100,00	0,00	39 000,00
	Backfill and Compaction	7 125,00	0,00	0,00	0,00	5 343,75	0,00	1 781,25		0,00	7 125,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.5.3	Concrete Ring & Cover	44 800,00	0,00	0,00	0,00	0,00	0,00	0,00	35 840,00	8 960,00	44 800,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Testing Feeder Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Evaporation Ponds construction										
4.2.2	Excavate of In-situ Material	1200 000,00	0,00	720 000,00	0,00	236 100,00	0,00	0,00	0,00	0,00	956 100,00
4.2.4	Importing of Calcrete	1457 500,00	0,00	0,00	0,00	583 000,00	0,00	583 000,00	291 500,00	0,00	1457 500,00
4.2.1	Site Clearance	135 000,00	0,00	121 500,00	0,00	13 500,00	0,00	0,00	0,00	0,00	135 000,00
4.1	Setting Out & Asbuilt Survey Works	80 000,00	0,00	12 000,00	0,00	0,00	0,00	0,00	40 000,00	28 000,00	80 000,00
4.2.3	Platform	1400 000,00	0,00	0,00	0,00	1050 000,00	0,00	65 450,00			1115 450,00
4.2.6	Stormwater Channel	14 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	14 000,00	14 000,00
4.2.5	Embankments	1325 000,00	0,00	0,00	0,00	530 000,00	0,00	530 000,00	265 000,00	0,00	1325 000,00
4.5.1-2	Overflow Drainage & Pipelines	22 400,00	0,00	0,00	0,00	0,00	0,00	0,00	22 400,00	0,00	22 400,00
	Rodding Installation										
	Pipe Line	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Concrete Ring & Cover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Backfill and Compaction	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Trimming	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
4.6	Lining Installation - Subcontractor			0,00							

CONSTRUCTION OF LINED BRINE EVAPORATION PONDS AND FEEDER PIPELINES IN BETHANIE

ID	TASK NAME	BOQ NS	May-21 NS	Jun-21 NS	Jul-21 NS	Aug-21 NS	Sep-21 NS	Oct-21 NS	Nov-21 NS	Dec-21 NS	SUB TOTAL NS
4.6.1	Installation of Bidim Layer	2645 000,00	0,00	0,00	0,00	0,00	0,00	0,00	2116 000,00	529 000,00	2645 000,00
4.6.2	Installation of Liner Layer	3450 000,00	0,00	0,00	0,00	0,00	0,00	0,00	2760 000,00	690 000,00	3450 000,00
4.6.3	Top-hat/Boot skirt	17 600,00	0,00	0,00	0,00	0,00	0,00	0,00	15 840,00	1 760,00	17 600,00
4.2.7	Anchor Excavation & Backfill	123 250,00	0,00	0,00	0,00	0,00	0,00	0,00	110 925,00	12 325,00	123 250,00
	Aluminium Ladder	6 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	6 000,00	6 000,00
	Fencing Installation										
	Setting Out	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Double Leaf Gate	10 000,00	0,00	2 500,00	0,00	0,00	0,00	0,00	6 500,00	1 000,00	10 000,00
	Security Fence	455 000,00	0,00	113 750,00	0,00	0,00	0,00	0,00	295 750,00	45 500,00	455 000,00
	Ground beam	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	De-establishment										
	Cleaning Pond Site	25 000,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	25 000,00	25 000,00
	Cleaning Pipeline Route	16 500,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	16 500,00	16 500,00
	Project Handover	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	Total Projected	14 835 365,00	0,00	1 444 699,00	0,00	3 334 632,75	0,00	1 778 964,85	6 430 537,00	1 586 265,00	14 575 098,60
	Cum Total - Projected		0,00	1 444 699,00	1 444 699,00	4 779 331,75	4 779 331,75	6 558 296,60	12 988 833,60	14 575 098,60	14 575 098,60
	Planned Percentages %		0,0%	9,7%	9,7%	32,2%	32,2%	44,2%	87,6%	98,2%	98,2%
	End Month		2	3	4	5	6	7	8	9	
			May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	
	Payment Claim No.			PC 1		PC 2		PC 3	PC 4	PC 5	
	Total Actual Claimed		0,00	1 278 562,15	0,00	2 542 833,36	0,00	2 478 033,36			
	Cum Total - Actual Claimed			1 278 562,15	1 278 562,15	3 821 395,51	3 821 395,51	6 299 428,87			
	Actual Claimed Percentages %		0,0%	8,6%	8,6%	25,8%	25,8%	42,5%			