

Tahal Group B.V.

**(5.1) (2e)**

15 July 2013

2013-0046a/LK/fw/amm/mvb

**Approval request for change for “ATMA Rurals Water Supply (South of Kpong) Project” GH/WM07029**

Dear Mr (5.1) (2e),

The request for change that has been submitted by you on 3 September 2012, for which additional information has been submitted on 18 December 2012, 4 February 2013, 4 April 2013 and 26 June 2013, has been reviewed by ORET.nl.

The request for change is the direct consequence of the application of a price-escalation formula (Clause 70.1 in the commercial contract between Tahal Group B.V. (hereinafter: Tahal) and the Ghana Water Company Ltd. (hereinafter: GWCL)), and the following adjustment of the scope of the project. Based on our review I hereby inform you that your request for change has been approved.

Price-escalations are a logical consequence of the Price Escalation Factor (hereinafter: PAF) in Clause 70.1 of the contract. However, it is my belief that the PAF should be applied with care, and with limited damage to the scope of the contract. As such, the actual margin on the contract price will be carefully scrutinised upon the determination of the definite amount of the grant and may not exceed the budgeted margin in the original ORET application.

Considering the time that has elapsed between the first change request and my current approval, I would like to summarise the main components of the change that will be applied to the original project scope:

- Instead of (5.1.1c) standpipes, only (5.1.1c) standpipes will be supplied and installed by Tahal.
- The amount of house connections (yard taps) supplied by Tahal will be increased from (5.1.1c) to (5.1.1c). GWCL will be responsible for the installation of these connections.

- Approximately 190,000 people will have access to water as a result of these (5.1)(1c) house connections. Approximately 36,000 people will have access to water as a result of the installation of (5.1)(2a) standpipes. In total approximately 225,000 people will have access to water as a result.
- Further savings will be the result of a reduced length of transmission pipelines supplied and installed by Tahal (Bill No.2), and of savings on reservoirs (Bill No.3).

To cover the remaining costs of the price escalations under the PAF, I hereby approve the use of the contingencies budget for a maximum amount of € (5.1)(1c). Disbursements for contingencies will be made pro-rata, of which € (5.1)(1c) will be paid out of the Grant and € 5.1.1c out of the Commercial Loan. ORET.nl's final approval will take place upon receipt of the particular invoices.

Considering that in the new situation, GWCL itself will be responsible for the installation of the (5.1)(1c) yard taps, I had requested from GWCL some information on their plans to do so. On 26 June 2012 I have therefore received:

- A map showing where the connections will be installed;
- A plan for installing the house connections, including a timeframe. This timeframe shows that (5.1)(1c) house connections will be installed by GWCL before 1 January 2014;
- Information on the awareness and communication campaign GWCL is hosting, to encourage people to apply for a house connection.

ORET.nl and GWCL have agreed that, as an extra to the regular progress reporting twice a year by Tahal, a report on the progress of the installation of the house connections composed by GWCL is submitted to ORET.nl every three months. The first report is due on 1 September 2013 and should include information on the status of the house connections as well as the awareness campaign. The reporting obligation will remain valid until all house connections ((5.1)(1c)) have been installed. The reports may be sent to ORET.nl through Tahal as an intermediary (for example before the progress report deadline of 1 September as part of the regular ORET.nl progress report from Tahal), or by GWCL itself.

As the house connections have always been and still are considered to be part of the project scope, the definite amount of the grant will not be determined before all house connections have been installed. I trust that Tahal will do everything in its powers to assist GWCL in the installations as to make sure that the installations are made as per the agreed schedule.

I trust to have informed you sufficiently, and I look forward to receiving the first progress report on the awareness campaign and the installation of the house connections by 1 September 2013 together with the regular progress report of Tahal. In case you have any questions concerning the above, please do not hesitate to contact ORET.nl.

The minister for Foreign Trade and Development Cooperation,  
On her behalf:

**(5.1) (2e)**

CC:

- Ghana Water Company Limited, attn. Mr **(5.1) (2e)** (Managing Director)
- Embassy of the Kingdom of The Netherlands, attn. Ms **(5.2) (1e)**

**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Juli – december 2015  
**Aanvrager:** Tahal (afnemer GWCL)

**1. Beoordeling**

De voortgangsrapportage is ingediend door afnemer Ghana Water Company Ltd. (GWCL). Dit is afgesproken, omdat Tahal haar werkzaamheden voor dit project reeds geruime tijd heeft afgerond. Dit werd in een eerdere voortgangsrapportage al door GWCL bevestigd. GWCL is verantwoordelijk voor het verzorgen van de huisaansluitingen.

In de huidige rapportage bericht GWCL dat het helaas niet gelukt is alle huisaansluitingen voor eind 2015 gereed te maken. Er is echter wel voortgang; in de periode oktober – december 2015 zijn er (5.1) (1e) aansluitingen gemaakt. Dit moesten er volgens planning (5.1) (1e) zijn; er resteren dus nog (5.1) (1e) aansluitingen (van de in totaal 5.1.1c). Dit betekent dat per eind 2015 95,5% van de aansluitingen gereed zijn. Het is onduidelijk over er in Q1 2016 meer aansluitingen gemaakt zijn, dit zal uitgevraagd worden.

De Final Payment t.w.v. € (5.1) (1e) is aan Tahal uitbetaald op 4 april 2014 op basis van de 'final certificates of completion' voor de geleverde werken en een bankgarantie. Met de uitbetaling van de Final Payment t.w.v. € (5.1) (1e) op 4 april 2014 zijn alle betalingen vanuit ORET verricht. Op dit moment resteren nog kleine bedragen op de dispositieruimtes voor Progress Payment en Financing Costs. Deze bedragen worden waarschijnlijk niet meer geclaimd.

Het subsidieverleningstijdvak is verlopen op 30 september 2014. Aangezien er geen betalingen meer verwacht worden zal dit tijdvak op dit moment niet verlengd worden. De bankgarantie voor de Final Payment loopt tot 20 september 2016.

*VGR akkoord 1<sup>e</sup> beoordelaar*

*VGR akkoord programmacoördinator ORET*

**Datum:**

**Datum:** 31 maart 2016

**Naam:** (5.1) (2e)

**Naam:** (5.1) (2e)

**Paraaf:** .....

**Paraaf:** .....



**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Januari t/m juni 2013  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)

**Geraadpleegde documenten**

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

Alle bovenstaande documenten zijn geraadpleegd. Daarnaast is de voortgangsrapportage van GWCL over de voortgang van de huisaansluitingen geraadpleegd, die conform de goedkeuring van het wijzigingsverzoek van 15 juli 2013 ieder kwartaal wordt ingediend.

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36.

Artikel 2.5 d van de GA (gelijk aan (Artikel 2a (x)(b) in de beschikking) zegt: "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the Contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl." Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegdpersoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

**1. Inhoudelijke beoordeling**

De VGR is summier ingevuld en ondertekend door **(5.1) (2e)** hij staat bekend als de reguliere contactpersoon. Van 2 tot 7 juni 2013 heeft er een ORET-missie plaatsgevonden naar Ghana waarbij een bezoek is gebracht aan dit project.

Het project loopt goed en vordert gestaag. Alle waterreservoirs zijn gereed en de bouw van de waterzuiveringsinstallatie is een eind gevorderd. Daarnaast is men volop bezig met de uitbreiding van het distributienetwerk, waarvan het grootste deel van de benodigde pijpleidingen inmiddels is aangelegd.

Tijdens het bezoek heeft de delegatie een rondleiding gekregen langs twee reservoirs, waaronder het Tema reservoir dat gerenoveerd wordt (na goedkeuring van een wijziging door ORET.nl) en waar 22 lokale arbeiders werkzaam zijn. Tevens is een bezoek gebracht aan de waterzuivering, die naar verwachting eind 2013 bedrijfsklaar wordt opgeleverd. Aan de bouw van de zuivering werken op dit moment **(5.1) (1c)**

Op 15 juli 2013 is het wijzigingsverzoek van Tahal naar aanleiding van de prijsstijgingen in het project

goedgekeurd. De vertraging in het project in combinatie met de Price Adjustments Factor in het commerciële contract zorgen voor extra kosten t.w.v. (5.1)(1c). De voorgestelde wijziging is in overleg met GWCL opgesteld en zorgt er voor dat de prijsstijging binnen het projectbudget wordt opgelost.

Door de aanpassing van het aantal standpipes en houseconnections worden het aantal personen dat bereikt worden lager dan gepland, maar benaderen wel het oorspronkelijke aantal uit de aanvraag. In de kosten wordt er ongeveer (5.1)(1c) bespaard door het uitbesteden van de installatie van de yard taps aan GWCL. GWCL zal iedere 3 maanden een voortgangsrapportage aanleveren over de voortgang van de aansluitingen, vanaf 1 september 2013.

De rest van de besparingen (nog ca (5.1)(1c)) worden gerealiseerd door slimme besparingen op de distribution mains. Voor het resterende deel heeft ORET akkoord gegeven op gebruik van het volledige budget voor contingencies.

De ingediende voortgangsrapportage over de voortgang van de huisaansluitingen door GWCL is summier ingevuld en de voortgang verloopt gestaag. Sinds juli 2013 heeft GWCL meetings gehad met verschillende leiders om de aanleg te bespreken. Daarnaast is begonnen met de 'Awareness campaign' voor de huisaansluitingen. Deze worden de komende periode geïntensiveerd.

Om de rapportage voor de volgende keer te verduidelijken zal een template worden opgesteld die door GWCL gebruik moet worden.

## 2. Financiële beoordeling

Volgens de VGR heeft Tahal uit de schenking (5.1)(1c) ontvangen. Dit bedrag komt overeen met de ORET betaaladministratie per 1 juni 2013.

Volgens de prognose zal het volledige resterende bedrag van (5.1)(1c) in Q2 2013 worden geclaimd. De verwachte betalingen voor Progress Payments en Contingencies zijn in augustus 2013 betaald, waarmee de dispositieruimtes voor zowel Progress Payments en Contingencies volledig zijn gebruikt. De invoice voor de Final payment t.w.v. (5.1)(1c) is reeds ontvangen, echter kan deze pas worden uitbetaald nadat alle werken zijn verricht, wat naar verwachting eind 2013 zal plaatsvinden.

Het subsidieverleningstijdvak is verlengd tot 31 maart 2013.

☐ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?

☒ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitsbehoefte per kwartaal?

## 3. Acties

- Template voortgangsrapportage opstellen voor GWCL.
- Voortgang van de laatste werken monitoren i.v.m. de Final Payment.

VGR akkoord 1<sup>e</sup> beoordelaar

VGR akkoord coördinator ORET

Datum: .....

Datum: 26 september 2013

Naam: (5.1)(2e)

Naam: (5.1)(2e)

Paraaf: .....

Paraaf: .....

Projectgegevens

**Projectnummer:** GH-WM07029

**Rapportageperiode:** Januari t/m juni 2014

**Aanvrager:** Tatal Group B.V.

**Afnemer:** Ghana Water Company Ltd. (GWCL)

Geraadpleegde documenten

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

Alle bovenstaande documenten zijn geraadpleegd. De voortgangsrapportage is ingediend door GWCL over de voortgang van de huisaansluitingen, die conform de goedkeuring van het wijzigingsverzoek van 15 juli 2013 wordt ingediend.

Voorwaarden Beschikking/Schenkingsovereenkomst

De beschikking en schenkingsovereenkomst vermelden geen specifieke voorwaarden met betrekking tot de voortgangsrapportage.

Toetsing voortgangsrapportage

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegdpersoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

1. Inhoudelijke beoordeling

De VGR is erg summier ingevuld en ondertekend door: **5.1.2e** deputy managing director. Deze persoon is geverifieerd als contactpersoon.

Op 27 maart 2014 is aanspraak gemaakt op de vervolgde uitbetaling van de Final Payment t.w.v. **5.9.09** op basis van de 'final certificates of completion' voor de geleverde werken en een bankgarantie. De Final Payment is uitbetaald op 4 april 2014.

Conform het goedgekeurde wijzigingsverzoek van 15 juli 2013 heeft Tatal het materiaal voor de standpipes en houseconnections geleverd en verold de aansluiting verleid door GWCL. Over de voortgang van het aansluiten van de standpipes en houseconnections wordt conform afspraak door GWCL een voortgangsrapportage ingediend.

In de VGR bevestigt GWCL dat alle materialen door Tatal geleverd zijn. Echter is het aansluiten van de houseconnections nog niet gestart. Dit wordt veroorzaakt doordat een aantal componenten van de water treatment plant, die door andere partijen gefinancierd wordt, nog niet af is. Hierdoor kan er nog geen water stromen naar de huizen. Op dit moment is GWCL druk bezig om de voorwaarden voor het verkrijgen van een houseconnection duidelijk te communiceren aan de inwoners.

Volgens de VGR staan er nog kleine werken open voor de Water Treatment Plant, Tams Service Reservoir en het Distribution Network, terwijl wel al een FCC is afgegeven. Hierover zal contact opgenomen worden met Tatal.

Het project is pas volledig afgerond wanneer alle standpipes en houseconnections gerealiseerd zijn en kan dan pas vastgesteld worden.

## 2. Financiële beoordeling

Met de uitbetaling van de Final Payment (i.w.v. [5.9.15g]) op 4 april 2014 zijn alle betalingen vanuit ORET verricht. Op dit moment reizen nog kleine bedragen op de dispositieruimtes voor Progress Payment en Financing Costs. Deze bedragen worden waarschijnlijk niet meer getoond.

Het subsidieverleningsstadium is verlopen op 30 september 2014. Aangezien er geen betalingen meer verwacht worden zal dit tijdstip op dit moment niet verlengd worden. De bankgarantie voor de Final Payment loopt tot 20 maart 2015.

☒ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?

☐ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitshoeveelheid per kwartaal?

## 3. Acties

- Controleer opnamen Tahal over openstaande werken.

VGR akkoord 1<sup>ste</sup> beoordeelaar

Datum: 18 november 2014

Naam: [5.9.15g]

Paraf: .....

VGR akkoord coördinator ORET

Datum: .....

Naam: [5.9.15g]

Paraf: .....

**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Juli t/m december 2012  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)

**Geraadpleegde documenten**

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

Alle bovenstaande documenten zijn geraadpleegd.

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36.

Artikel 2.5 d van de GA (gelijk aan (Artikel 2a (x)(b) in de beschikking) zegt: "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the Contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl." Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegdpersoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

**1. Inhoudelijke beoordeling**

De VGR is summier ingevuld en ondertekend door (5.1)(2e) Hij is de opvolger van (5.1)(2e) en bij ORET aangemeld als de nieuwe projectmanager. De geldigheid van de ondertekening door de heer (5.1)(2e) is voldoende aangetoond.

Tahal heeft op 15 juni 2012 een wijziging verzoek ingediend om een bestaand reservoir te rehabiliteren ipv de bouw van een nieuw reservoir. Op 22 oktober heeft ORET dit verzoek goedgekeurd. De ontwerpen hiervoor liggen ter goedkeuring bij GWCL.

Eind 2012 is door Tahal aangegeven dat in het commerciële contract een Price Adjustment Factor is opgenomen die als gevolg van de opgelopen vertraging zorgt voor extra kosten t.w.v. (5.1)(1c) In overleg met GWCL hebben zij een aanpassing aan het project voorgesteld om de extra kosten binnen het bestaande projectbudget op te vangen. De belangrijke punten in dit voorstel zijn de verlaging van het aantal Standpipes van (5.1)(1a) naar (5.1)(1b) waarmee € (5.1)(1c) wordt bespaard en het aansluiten van de house-connections door GWCL. Tahal levert alleen de materialen en GWCL zal de oorspronkelijke afgesproken (5.1)(1e) houseconnections realiseren. Met minder standpipes en een gelijk aantal houseconnections worden minder personen bereikt. Na

de laatste call met Tahal van 2 mei 2013 is toegezegd dat binnen het budget nog [...] (5.1) (1e) [...] houseconnections kunnen worden geleverd. Daarnaast heeft Tahal de onderliggende data van de prijsescalatie aangeleverd en deze data lijkt correct te zijn. ORET heeft dit wijzigingsverzoek in beraad en moet nog een akkoord geven.

ORET heeft het project bezocht op 2 juni 2013. Voor de laatste stand van zaken van het project, zie het missieverslag.

## 2. Financiële beoordeling

Volgens de VGR heeft Tahal uit de schenking [...] (5.1) (1e) [...] ontvangen. De geplande betaling voor Q1 is reeds uitbetaald wat het totaal ontvangen bedrag [...] (5.1) (1e) [...] maakt. Dit bedrag komt overeen met de ORET betaaladministratie.

Volgens de prognose zal het resterende bedrag van [...] (5.1) (1e) [...] worden geclaimd in 2013. Op basis van de beoordeling van het wijzigingsverzoek zal blijken of het realistisch is dat de slotbetaling van [...] (5.1) (1e) [...] in 2013 wordt betaald. Afhankelijk van deze beoordeling zal de ORET prognose worden aangepast.

Het subsidieverleningstijdvak loopt af op 31 juli 2013. Deze zal verlengd moeten worden.

- ☐ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?
- ☒ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitsbehoefte per kwartaal?

## 3. Acties

- Afhankelijk van de beoordeling van het wijzigingsverzoek, zal de ORET prognose worden aangepast
- Het subsidieverleningstijdvak verlengen.

*VGR akkoord 1<sup>e</sup> beoordelaar*

*Datum:* 2 juli 2013

*Naam:* [...] (5.1) (2e) [...]

*Paraaf:* .....

*VGR akkoord coördinator ORET*

*Datum:* .....

*Naam:* [...] (5.1) (2e) [...]

*Paraaf:* .....



**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Juli t/m december 2013  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)

**Geraadpleegde documenten**

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

Alle bovenstaande documenten zijn geraadpleegd. Daarnaast is de voortgangsrapportage van GWCL over de voortgang van de huisaansluitingen geraadpleegd, die conform de goedkeuring van het wijzigingsverzoek van 15 juli 2013 ieder kwartaal wordt ingediend.

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36.

Artikel 2.5 d van de GA (gelijk aan (Artikel 2a (x)(b) in de beschikking) zegt: "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the Contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl." Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegdpersoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

**1. Inhoudelijke beoordeling**

De VGR is summier ingevuld en ondertekend door 5.1.2e hij staat bekend als de reguliere contactpersoon.

De werken van het project zijn zo goed als afgerond. De resterende werken bestaan uit het afronden van de New Water Treatment Plant (90%) en het aansluiten van het Dodowa reservoir. Deze resterende werken worden naar verwachting in maart 2014 afgerond. Daarnaast worden conform het goedgekeurde wijzigingsverzoek van 15 juli 2013 de standpipes en houseconnections aangesloten door GWCL. Tahal dient hiervoor de materialen aan te leveren.

Over de voortgang van het aansluiten van de standpipes en houseconnections wordt conform afspraak door GWCL apart een voortgangsrapportage ingediend. Volgens deze voortgangsrapportage blijkt dat tot nu toe 5.1.1c van de 5.1.1e standpipes zijn aangelegd. Daarnaast is GWCL bezig met de 'Awareness campaign' voor de huisaansluitingen.

Opvallend is dat in de VGR gemeld wordt dat de materialen nog niet zijn geleverd door Tahal. Op basis van het ontvangen 'final certificate of completion' van d.d. 27 maart 2014, blijkt dat de materialen uiteindelijk zijn

geleverd door Tahal.

Op 27 maart 2014 is aanspraak gemaakt op de vervroegde uitbetaling van de Final Payment t.w.v. (5.1) (1e) op basis van de 'final certificates of completion' voor de geleverde werken en een bankgarantie. De Final Payment is uitbetaald op 4 april 2014.

Het project is pas volledig afgerond wanneer alle standpipes en houseconnections gerealiseerd zijn en kan dan pas vastgesteld worden.

## 2. Financiële beoordeling

De ingediende liquiditeitsprognose is verouderd en komt overeen met de vorige VGR.

Met de uitbetaling van de Final Payment t.w.v. (5.1) (1e) op 4 april 2014 zijn alle betalingen vanuit ORET verricht. Op dit moment resteren nog kleine bedragen op de dispositieruimtes voor Progress Payment en Financing Costs. Deze bedragen worden niet meer geclaimd en wordt naar alle waarschijnlijkheid vrijval, maar dit zal blijken uit de subsidievestigstelling.

Het subsidieverleningstijdvak is verlengd tot 31 maart 2013. De bankgarantie voor de Final Payment loopt tot 1 januari 2015.

- ☐ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?
- ☐ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitsbehoefte per kwartaal?

## 3. Acties

- Voortgang van het aansluiten van houseconnections en standpipes monitoren

VGR akkoord 1<sup>e</sup> beoordelaar

Datum: 30 juli 2014

Naam: (5.1) (2e)

Paraaf: .....

VGR akkoord coördinator ORET

Datum: .....

Naam: (5.1) (2e)

Paraaf: .....

**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Januari t/m juni 2011  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)

**Geraadpleegde documenten**

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

- Laatste VGR;
- Beschikking;
- Schenkingsovereenkomst;
- Betaaldossier ORET.nl;
- Antwoord van 30-11-2011 op aanvullende vragen n.a.v. de VGR.

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36.

Artikel 2.5 d van de GA (gelijk aan (Artikel 2a (x)(b) in de beschikking) zegt: "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the Contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl." Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegd persoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

**1. Inhoudelijke beoordeling**

De aanvrager is net als in de vorige rapportageperiode bezig geweest met het leggen van pijpen en het verwijderen van obstructies. De obstructies zorgen voor vertragingen in de projectuitvoering. In de rapportageperiode zijn de meeste obstructies inmiddels verwijderd. Tahal is nog wel aan het werk in een gebied waar zich veel schuren, kleine detaillisten en werkplaatsen bevinden. Het leggen van de (5.1)(1c) pijpen wordt hierdoor bemoeilijkt. De afnemer, en voornamelijk juristen van de afnemer (i.v.m. onteigeningen) zullen zich er maximaal voor inzetten om het vrijmaken van het gebied te bespoedigen. Dit is eerder ook, met uiteindelijk goed resultaat, gedaan in het gebied waar (5.1)(1c) is gelegd.

Volgens Tahal zijn de meeste topografische werken nagenoeg afgerond. De afnemer en Tahal zijn een nieuwe locatie voor de waterzuivering overeengekomen. Het is bij ORET.nl bekend dat de afnemer reeds eerder een

alternatieve locatie heeft voorgesteld. Het telkens veranderen van locatie zorgt voor enige vertraging in de projectuitvoering.

Naar aanleiding van de VGR heeft ORET.nl aanvullende vragen gesteld aan Tahal over de lengtes en de diameters van de pijpen die zouden zijn gelegd. Contractueel zou Tahal namelijk (5.1) (1c) leggen. Uit de VGR bleek dat (5.1) (1c) was gelegd. Voor (5.1) (1c) geldt dat contractueel (5.1) (1c) zou worden gelegd. Uit de VGR bleek dat in werkelijkheid (5.1) (1c) was gelegd. Uit de reactie van Tahal bleek dat de werkelijke afstanden per diameter wel degelijk de contractuele afstanden benaderen. Het preliminaire ontwerp in het contract is vertaald naar een gedetailleerd ontwerp. Als gevolg hiervan is de totale geschatte lengte van de pijpen (5.1) (1c). ORET.nl heeft geconcludeerd dat door de marginale afwijking in afstanden het project conform de oorspronkelijke, contractuele scope wordt uitgevoerd.

Op 27 juni 2011 heeft Tahal per brief een verzoek ingediend bij ORET.nl om wijzigingen in de projectuitvoering aan te brengen. ORET.nl heeft besloten niet akkoord te gaan met de voorgestelde wijzigingen, omdat als gevolg van de wijzigingen de projectscope substantieel zou veranderen. Het besluit om niet akkoord te gaan met de wijzigingen is op 30 september aan Tahal verstuurd.

## 2. Financiële beoordeling

De planning van de verschillende betalingen komt niet overeen met eerder gemaakte prognoses. Naar schatting zou in 2011 € (5.1) (1c) aan Tahal worden uitgekeerd. De prognose is aan het begin van het 4<sup>e</sup> kwartaal van 2011 bijgesteld naar (5.1) (1c). In werkelijkheid zal in 2011 naar verwachting (5.1) (1c) aan Tahal worden uitgekeerd uit de schenking.

De prognose voor 2012 bedraagt volgens de VGR (5.1) (1c). Tahal geeft in de VGR tevens aan nog (5.1) (1c) uit de schenking te verwachten in 2012 voor contingencies. In overleg met Tahal is afgesproken deze betalingen niet mee te nemen in de prognose voor 2012, omdat deze betalingen nog onzeker zijn.

De liquiditeit die Tahal in de VGR heeft weergegeven komt grotendeels overeen met de administratie van ORET.nl. Het verschil van (5.1) (1c) zit waarschijnlijk in betalingen die na het indienen van de VGR zijn gedaan uit de schenking.

Het subsidieverleningstijdvak verloopt op 31 juli 2013 (oorspronkelijk verliep het tijdvak op 30 juni 2012, maar als gevolg van de vertragingen in de projectuitvoering is het tijdvak op 4 juli 2011 verlengd).

☒ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?

☒ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitsbehoefte per kwartaal?

## 3. Acties

Geen.

VGR akkoord 1<sup>e</sup> beoordelaar

Naam: (5.1) (2e)

VGR akkoord coördinator Contractering & Monitoring

Datum: .....

Datum: 30 november 2011

Naam: (5.1) (2e)

Paraaf: .....

Paraaf: .....

Projectgegevens

**Projectnummer:** GH-WM07029

**Rapportageperiode:** 1 juli – 31 december 2009

**Aanvrager:** Tuhai Group B.V. (Tuhai)

**Afnemer:** Ghana Water Company Limited (GWCL)

**Land:** Ghana

Geraadpleegde documenten

Correspondentie ORET-mailbox en ORET-postdatabase, VGR nr. 3, Beschikking d.d. 5 oktober 2007 en getekende GA d.d. 18 maart 2008

Voorwaarden Beschikking/Schenkingsovereenkomst

In de Beschikking staat een vaste wisselkoers voor het project vermeld van € 1 = \$ 1,36. Verder vermeldt de Beschikking geen VGR-specifieke voorwaarden. Ook de GA vermeldt geen voorwaarden voor de VGR.

Toetsing voortgangsrapportage

☒ Is voortgangsrapportageformulier voorzien van originele handtekening van tekenningsbevoegdpersoon?  
(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

Bevindingen:

De VGR is ondertekend door [ (5.1) (2e) ] van Tuhai en ondertekenaar van eerdere VGR's. Bij een eerdere VGR was een Power of Attorney voor dhr. [ (5.1) (2e) ] gevoegd, die was ondertekend door een directeur van Tuhai en gecertificeerd door een Nederlandse notaris. Aangenomen mag daarom worden dat hij tekenningsbevoegd is.

**Naam te beoordelaar:** [ (5.1) (2e) ]  
**Datum beoordeling:** 16 april 2010

A. Voortgang projectAl. Voortgang projectConclusie:

Het project is gestart op 15 oktober 2009.

Bevindingen:

De belastingvrijstellingen zijn allemaal geregeld en op 15 oktober 2009 is het project officieel van start gegaan. Tuhai geeft wel aan dat er gebouwen staan die op het gebied staan waarin de pijpleiding moet worden gelegd. Dit zou voor een vertraging kunnen zorgen. GWCL is hierover geïnformeerd en verzoekt om de obstructies weg te halen.

**A2. Bijsturing**

Conclusie:

De noodzaak voor verwijdering van de gebouwen zal extra bijsturing vergen.

Bevindingen:

Talal houdt continue meetings met GWCL. De contacten zijn goed.

De noodzaak voor verwijdering van de gebouwen zal extra bijsturing en frequente monitoring vergen.

**B. Voortgang transactie**

Conclusie:

De transactie is gestart. De meeste topografische werken zijn bijna afgerond en de eerste levering is verricht.

Bevindingen:

Talal heeft de meeste topografische werken op de site bijna afgerond. Tevens zijn detailed designs van de pijplijnen en waterslagstukken aan GWCL opgeleverd en door GWCL goedgekeurd.

De eerste levering van 14 containers is in januari gearriveerd in Ghana.

Doordat het erg lang duurde voordat de belastingvrijstelling was geregeld is er een vertraging opgelopen in het project. Dit heeft Talal ook bevestigd in een mail. Waarschijnlijk zal de vertraging oplopen tot één jaar, waardoor de einddatum van het project verplaatst naar oktober 2012. Dit uit zich ook in de vertraagde levering van het spare parts plan. Deze zou in eerste instantie in juli 2009 worden geleverd, maar dit wordt nu november 2010 (zie mail 28-3).

Het subsidieverleningsstadium eindigt op 30 juni 2012, er zal dus een probleem ontstaan bij de slotbetaling. Deze periode moet gemonitord worden.

**C. Gedeelde lessen**

Conclusie:

Talal zal in de toekomst eerder druk uitoefenen en proactief handelen om belastingvrijstellingen te realiseren.

Bevindingen:

Talal zal in de toekomst eerder druk uitoefenen en proactief handelen om belastingvrijstellingen te realiseren.

**D. Overige relevante informatie**

Conclusie:

Talal is met GWCL in overleg over de looptijd van het project.

Bevindingen:

Talal is nu in overleg met GWCL over de looptijd van het project. Ze zullen proberen om het tijdschema zoveel mogelijk te laten aansluiten op het origineel. Als ze extra tijd nodig hebben zullen ze bij ORET al een verzoek indienen.

**E. Liquiditeitsprognose**

Conclusie:

De Liquiditeitsprognose komt overeen met onze gegevens.

Bevindingen:

De Liquiditeitsprognose komt overeen met onze gegevens. Wat opvalt is dat de slotbetaling nog gepland staat op 31 juli 2011. Dit zal wellicht later worden gezien de opgelopen vertraging.

**Conclusie**

De VGR geeft voldoende informatie over de voortgang tot op heden.

Het project heeft ongeveer een jaar vertraging opgelopen doordat de belastingvrijstelling lang op zich liet



Wachten. Het project is in oktober 2009 officieel van start gegaan.

Actie

Geen

Eindconclusie

VGR is akkoord.

*VGR akkoord 1<sup>e</sup> beoordeelaar*

*Datum:* 16 april 2010

*Paraf:* .....

*VGR akkoord coördinator  
Contractering & Monitoring*

*Datum:* .....

*Naam:* .....

*Paraf:* .....

**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Juli – december 2010  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)  
**Land:** Ghana

**Geraadpleegde documenten**

- Vorige VGR
- Laatste correspondentie
- Beschikking / Schenkingsovereenkomst.

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36. Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportageformulier voorzien van originele handtekening van tekeningsbevoegdpersoon?  
*(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)*

*Bevindingen:*

De rapportage is ondertekend door 5.1.2e projectmanager bij Tahal en ondertekenaar van de eerdere VGR's. Derhalve akkoord.

**Naam 1e beoordelaar:** (5.1) (2e)

**Datum beoordeling:** 18 mei 2011

**A. Voortgang project**

***A1. Voortgang project***

*Conclusie:*

De aanvrager is in de projectperiode bezig geweest met het leggen van pijpen en het verwijderen van obstructies.

*Bevindingen:*

De aanvrager is in de projectperiode bezig geweest met het leggen van pijpen. Er wordt nog steeds gestuit op obstructies die het leggen van de pijpen verhinderen, maar deze zijn in de periode tot december 2010 nagenoeg allemaal verwijderd.

***A2. Bijsturing***

*Conclusie:*

De aanvrager probeert met de afnemer een moeilijk gebied te bezoeken om de situatie in kaart te brengen en te onderhandelen over het verwijderen van obstructies. Op overige plaatsen wordt bijna dagelijks gemonitord en gestuurd met betrekking tot de obstructies.

*Bevindingen:*

Binnenkort wordt een moeilijk gebied bereikt voor het leggen van de pijpen vanwege de vele gebouwen e.d. die op de grond staan waar de pijpen moeten komen te liggen. De aanvrager probeert met de afnemer het gebied te bezoeken om de situatie in kaart te brengen en te onderhandelen over het verwijderen van deze obstructies. Op

overige plaatsen wordt bijna dagelijks gemonitord en gestuurd met betrekking tot de obstructies, om ervoor te zorgen dat de route die de pijpen moeten gaan lopen, vrij is voordat de pijpen en de installaties gelegd en gebouwd zullen worden.

#### **B. Voortgang transactie**

##### *Conclusie:*

De topografische werkzaamheden zijn afgerond, met uitzondering van de PVC waterpijplijnen. Het leggen van de pijpen is goed gevorderd, evenals het bouwen en testen van waterreservoirs. De aanvrager geeft aan dat de uitvoering van het project met ongeveer 12 maanden vertraagd is. Er wordt verwacht dat het project in oktober 2012 afgerond zal worden.

##### *Bevindingen:*

De topografische werkzaamheden zijn afgerond afgezien van de PVC waterpijplijnen. 95% van de benodigde HDPE-pijpen is ingevoerd.

De bouwwerkzaamheden zijn als volgt gevorderd:

- Service reservoir Kpong naar Tema – 80% compleet en voorbereidingen treffende om verder af te ronden, en kruising Kpong naar Akawele – 70% compleet en voorbereidingen treffende om verder af te ronden. In totaal is er 5.1.1c meter van 5.1.1c pijp gelegd tot het einde van deze projectperiode.
- In Dodowa is de bouw van het waterreservoir (5.1.1c) voor 75% compleet, in Akawele is de bouw van het waterreservoir (5.1.1c) voor 80% compleet (bij beide moeten nog de pijpverbindingen gemaakt worden en moet er getest worden), in Adukrom is m.b.t. de bouw van het waterreservoir het geotechnisch onderzoek afgerond en is er begonnen met het klaarmaken van het terrein. Het bestaande Tema services reservoir (5.1.1c) is getest en door de ingenieur van de klant akkoord bevonden.

De aanvrager wacht voor het installeren van de PVC waterpijpen tot de afnemer de exacte locaties heeft afgebakend.

De afnemer heeft gevraagd de locatie van de nieuwe water treatment plant te wijzigen. Hiermee is akkoord gegaan door de aanvrager. Er wordt door de aanvrager echter ook aangegeven dat er geen grote wijzigingen zijn ten opzichte van wat in het contract is overeengekomen.

De aanvrager geeft aan dat de uitvoering van het project met ongeveer 12 maanden vertraagd is. Er wordt verwacht dat het project in oktober 2012 afgerond zal worden. Dit komt overeen met de verwachting die in de vorige VGR is uitgesproken.

#### **C. Geleerde lessen**

##### *Conclusie:*

In de toekomst zouden de procedures omtrent belastingvrijstelling eerder gestart moeten worden door alle partijen.

##### *Bevindingen:*

De aanvrager geeft aan dat de langdurige parlementsverkiezingen onvoorzien zijn geweest. In de toekomst zouden de procedures omtrent belastingvrijstelling eerder gestart moeten worden door alle partijen.

#### **D. Overige relevante informatie**

##### *Conclusie:*

De aanvrager voorziet de noodzaak tot het verlengen van de disbursement date.

##### *Bevindingen:*

De aanvrager meldt hier weer dat de vertraging in de opstart heeft geleid tot een vertraging van het project. Er wordt aangegeven dat disbursement periode daarom ook twaalf maanden verlengd moet worden. De aanvrager zal het initiatief nemen tot een formeel verzoek worden hiertoe. Daarom, en gezien het feit dat de disbursement date 30 juni 2012 is, wordt hier vanuit ORET.nl nog geen actie op ondernomen.

Uit correspondentie blijkt dat de aanvrager met ORET.nl in gesprek is over een wijziging van de scope van het project. Er is nog geen officiële toestemming hiervoor gegeven, wel is aangegeven dat ORET.nl hier in principe positief tegenover staat.

#### **E. Liquiditeitsprognose**

##### *Conclusie:*

De liquiditeitsprognose is akkoord.

### Bevindingen:

De liquiditeitsprognose van de aanvrager geeft aan dat er een bedrag van € **5.1.1c** openstaat voor betaling vanuit de schenking. Dit bedrag bestaat uit remaining installments, de final payment en de contingencies. Dit komt overeen met de gegevens zoals deze eind december 2011 bij ORET.nl bekend waren. Uit de liquiditeitsprognose is niet op te maken wanneer de komende betaalverzoeken verwacht kunnen worden. De aanvrager geeft desgevraagd aan dat dit lastig is te schatten, mede omdat op dit moment een wijziging in de scope van het project en een verlenging van het verleningstijdvak besproken worden. Er zal zo snel mogelijk een nieuwe liquiditeitsprognose met een schatting van bedragen en data naar ORET.nl gezonden worden. Het team Betalingen is hiervan op de hoogte gesteld.

### Conclusie

De aanvrager is in de projectperiode bezig geweest met het leggen van pijpen en het verwijderen van obstructies. De aanvrager probeert met de afnemer een moeilijk gebied te bezoeken om de situatie in kaart te brengen en te onderhandelen over het verwijderen van obstructies. Op overige plaatsen wordt bijna dagelijks gemonitord en gestuurd met betrekking tot de obstructies. De topografische werkzaamheden zijn afgerond, met uitzondering van de PVC waterpijplijnen. Het leggen van de pijpen is goed gevorderd, evenals het bouwen en testen van waterreservoirs. De afnemer heeft gevraagd de locatie van de nieuwe water treatment plant te wijzigen. Hiermee is akkoord gegaan door de aanvrager. De aanvrager geeft aan dat de uitvoering van het project met ongeveer 12 maanden vertraagd is. Er wordt verwacht dat het project in oktober 2012 afgerond zal worden. Een geleerde les is dat in de toekomst de procedures omtrent belastingvrijstelling eerder gestart zouden moeten worden door alle partijen. De aanvrager voorziet de noodzaak tot het verlengen van de disbursement date. De liquiditeitsprognose is akkoord.

### Actie

Geen.

### Eindconclusie

VGR akkoord.

*VGR akkoord 1<sup>e</sup> beoordelaar*

*Datum:* .....

*VGR akkoord coördinator Contractering & Monitoring*

*Datum:* .....

*Naam:* (5.1) (2e)

*Paraaf:* .....

*Paraaf:* .....

**Projectgegevens**

**Projectnummer:** GH/WM07029  
**Rapportageperiode:** Juli t/m december 2011  
**Aanvrager:** Tahal Group B.V.  
**Afnemer:** Ghana Water Company Ltd. (GWCL)

**Geraadpleegde documenten**

Bij de beoordeling dien je in ieder geval de vorige VGR's (inclusief actiepunten), Beschikking, Schenkingsovereenkomst en correspondentie te raadplegen.

- Laatste VGR;
- Beschikking;
- Schenkingsovereenkomst;
- Betaaldossier ORET.nl;

**Voorwaarden Beschikking/Schenkingsovereenkomst**

In de beschikking staat een vaste wisselkoers voor het project vermeld van € 1 is \$ 1,36.

Artikel 2.5 d van de GA (gelijk aan (Artikel 2a (x)(b) in de beschikking) zegt: "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the Contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl." Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Verder vermelden de beschikking en schenkingsovereenkomst geen specifieke voorwaarden.

**Toetsing voortgangsrapportage**

☒ Is voortgangsrapportage voorzien van originele handtekening van tekeningsbevoegdpersoon, of is anderszins de authenticiteit en geldigheid van de voortgangsrapportage duidelijk aangetoond?

(Indien originele handtekening ontbreekt, aanvrager verzoeken het formulier ondertekend te verzenden)

**1. Inhoudelijke beoordeling**

De VGR is getekend door (5.1) (2e), in afwezigheid van (5.1) (2e) (5.1) (2e). De heer (5.1) (2e) heeft nog niet eerder een VGR ondertekend. Op LinkedIn wordt bevestigd dat de heer (5.1) (2e) voor Tahal is in Ghana. De VGR is in eerste instantie per e-mail aan ORET.nl verstuurd door de heer 5.1.2e de vaste contactpersoon voor dit project. De geldigheid van de ondertekening door de heer (5.1) (2e) is hiermee voldoende aangetoond.

Tahal heeft op verzoek van de afnemer in juni 2011 een verzoek bij ORET.nl ingediend om een aantal wijzigingen in het project te mogen doorvoeren. In het kort kwamen de voorgestelde wijzigingen erop neer dat de ORET-transactie voornamelijk zou worden ingezet voor de grotere infrastructuur (primaire netwerk van grotere pijpleidingen), en niet meer voor tertiair netwerk en huisaansluitingen. ORET.nl is met deze voorgestelde wijziging niet akkoord gegaan. Ofschoon hiervan geen melding wordt gemaakt in de VGR heeft ORET.nl van Tahal vernomen dat deze beslissing door de afnemer is geaccepteerd, en dat het project conform

de oorspronkelijke scope wordt uitgevoerd. Wel heeft het wijzigingsverzoek voor vertraging gezorgd in de projectuitvoering. Tahal heeft de werkzaamheden, in afwachting van een akkoord op de wijzigingen, voor een deel tijdelijk stilgelegd.

Uit de VGR blijkt dat het project redelijk tot goed verloopt. De pijpleidingen zijn volgens Tahal vrijwel allemaal gelegd. De meeste obstructies die het werk eerder nog ophielden zijn verwijderd. Uit de lijst met bouwwerkzaamheden blijkt dat het project grotendeels conform de oorspronkelijke scope wordt uitgevoerd. Wel maakt de aanvrager melding van (weer een) voorgenomen wijziging in de rehabilitatie van een van de waterreservoirs. De voorgenomen wijzigingen moeten volgens Tahal nog door ORET.nl en door de afnemer worden geaccepteerd. Bij Tahal zal ORET.nl erop toezien dat vroegtijdig een wijzigingsverzoek wordt ingediend.

Tevens geeft Tahal aan dat tussen Akawe Junction en Michael Camp (5.1) (1c) is gelegd. Dit is hetzelfde als dat de aanvrager in de vorige VGR aangaf. Dit lijkt echter niet overeen te komen met de afstand volgens het detailed design (5.1) (1c). Hierover heeft ORET.nl bij de vorige VGR ook een vraag gesteld aan Tahal. De reactie was destijds, dat de daadwerkelijke lengte (5.1) (1c) was. Dat Tahal nu weer rapporteert dat niet (5.1) (1c) is gelegd is op zijn zachtst gezegd vreemd. Hierover heeft ORET.nl met Tahal contact opgenomen. De reactie van Tahal is, dat abusievelijk weer het oude formulier (met de eerder gemaakte fouten) is gebruikt. Op 8 mei heeft ORET.nl de definitieve versie van de rapportage ontvangen, met de bevestiging van de correcte afstanden.

ORET.nl zal tijdens het aanstaande bezoek aan het project in juni 2011 nauwkeurig toezien op de uitvoering van het project conform de oorspronkelijke scope.

Een probleem die men lokaal ondervindt is vandalisme door herders, die hun vee van water willen voorzien. De afnemer heeft maatregelen genomen om de pijpleidingen te beveiligen. De sites worden door de aanvrager en de afnemer vrijwel dagelijks geïnspecteerd, om problemen tijdig te signaleren en te kunnen oplossen.

De aanvrager verwacht de constructiewerkzaamheden eind 2012 af te ronden. Naar verwachting is deze inschatting ambitieus.

## 2. Financiële beoordeling

Volgens de VGR heeft Tahal uit de schenking (5.1) (1c) Tahal lijkt echter de laatste 4 betalingen niet te hebben meegerekend. Volgens de administratie van ORET.nl is uit de schenking reeds (5.1) (1c) uitgekeerd. De laatste betaling in maart 2012 niet meegerekend heeft de aanvrager uit de schenking (5.1) (1c) ontvangen. ORET.nl heeft de aanvrager gewezen op dit substantiële verschil. De aanvrager heeft op 30 april 2012 per e-mail bevestigd dat de administratie van de betalingen van ORET.nl juist is. Op 8 mei is van Tahal een nieuwe rapportage ontvangen, met de juiste prognose.

De prognose voor 2012 bedraagt volgens de VGR (5.1) (1c). Dit komt overeen met de vorige VGR en de prognose van ORET.nl voor 2012.

Tahal geeft in de VGR tevens aan nog (5.1) (1c) uit de schenking te verwachten in 2012 voor contingencies. In overleg met Tahal is afgesproken deze betalingen niet mee te nemen in de prognose voor 2012, omdat deze betalingen nog onzeker zijn.

Het subsidieverleningstijdvak verloopt op 31 juli 2013.

☒ Is de liquiditeitsprognose in overeenstemming met de ORET-administratie?

☒ Geeft de liquiditeitsprognose duidelijk inzicht in de verwachte liquiditeitsbehoefte per kwartaal?

**3. Acties**

- Tahal instrueren tijdig een wijzigingsverzoek voor de voorgenomen wijziging aan het reservoir in te dienen.
- In het aanstaande projectbezoek (juni 2012) nauwkeurig toezien op de uitvoering van het project conform de oorspronkelijke scope (gezien de vele wijzigingsverzoeken, en gezien de verwarring in de afstanden die per diameter pijplijn moeten worden gelegd).

*VGR akkoord 1<sup>e</sup> beoordelaar*

*Naam:* (5.1) (2e)

*VGR akkoord coördinator Contractering & Monitoring*

*Datum:* .....

*Datum:* 9 mei 2012

*Naam:* (5.1) (2e)

*Paraaf:* .....

*Paraaf:* .....



## Memo

Aan  
Van  
Datum  
Betreft

**(5.1)(2e)**

17 oktober 2012  
Beoordeling wijziging project

I Inleiding / aanleiding / begeleiding (in te vullen door ORET Projectbureau)	
I.1. Algemene gegevens	
Projectnummer	GH/WM07029
Project naam	Distribution Network – ATMA Rurals South of Kpong Project
Aanvrager	Tahal Group BV
Project fase	Uitvoering
Datum ontvangst rapport	15 juni 2012
Achtergrond	<p>Onderdeel van het ORET-project is de bouw van een aantal waterreservoirs. Tahal en GWCL stellen nu voor om één van de reservoirs <b>(5.1)(1c)</b> niet meer te bouwen, en in plaats daarvan een bestaand reservoir <b>(5.1)(1c)</b> te renoveren.</p> <p>ORET.nl dient te beoordelen of deze wijziging wenselijk is, en of de kosten voor de renovatie passend zijn.</p> <p>Op 11 juni 2012 heeft een delegatie van ORET.nl het betreffende, bestaande reservoir bezocht. De indruk was toen, dat de renovatie van het veel grotere reservoir een verbetering van het project zou zijn. Immers, voor hetzelfde budget ontvangt de afnemer een groter reservoir, in nieuwstaat. Het is wel van belang dat de renovatie niet meer kost dan de bouw van het nieuwe reservoir. Vooralsnog blijkt uit het wijzigingsverzoek dat dit wel het geval is. Gekeken moet worden in hoeverre dit gepast is, of dat de prijs naar beneden moet worden aangepast.</p>
Meegestuurde documenten	- Wijzigingsverzoek Tahal
Contactpersoon ORET	<b>(5.1)(2e)</b>
I.2. Achtergrond informatie voor de beoordeling	
Artikel uit de beschikking / Prelim / GA	
Datum beschikking / prelim / GA	Beschikking d.d. 5 oktober 2007 GA d.d. 18 maart 2008
Wie stelt de brief samen	
Taal van de beoordeling / brief	
Overige belangrijke	

prepare the area for the works. This takes away the concerns related to the possible pollution of drinking water and the poor degradability of herbicides.

Tahal has also confirmed that the total charge for the rehabilitation plan will be aligned to the budget of the original scope – i.e. will not exceed Euro **(5.1)(1c)**

With the answers and confirmations of Tahal, the request to rehabilitate the existing reservoir instead of building a new reservoir can be approved.

GWCL (as per the letter of **(5.1)(2e)** which ORET.nl has received on 8 May 2012) has confirmed that they agree to the change in scope, to refurbish and existing, rather than to build a new reservoir.

Voor akkoord: —

**(5.1)(2e)**

18-10-2012



RE: Ghana - ATMA SoK

Respected Sir,

Co: (5.1) (2e)

18-12-2012 15:02

Dear (5.1) (2e)

Thank you very much for your mail. Following please find our responses and clarification to the issues raised:

- 1. Timing of Presenting/Charging for Price Adjustments** - The Price Adjustment Factor ("PAF") was calculated alongside the development of the project throughout its implementation. Towards the conclusion, or shortly thereafter, of the first physical part/Bill of the Project - Bill No. 2 "Transmission Mains" it was conveyed to the Client. As the PAF is not budgeted as part of each and every Bill of the Contract but jointly as a "basket" for all bills, it was intended by the project management to charge it immediately thereafter. We fully understand your position and frustration that this was presented pretty late in the implementation of the Project. From most aspects, this was not wise and not for the benefit of all concerning parties of the project. For example, in this referred Bill - on one side there are savings of about Euro (5.1) (1c) (details in item no. 4 hereunder) and on the other, apparently justification for PAF charging that has not been addressed. For sake of order, the non-debated portion of the PAF, at the amount of approx. Euro (5.1) (1c) was charged very early 2012.
- 2. Reduction of Stand-Pipes to be installed** - From our long discussions with GWCL senior management, with the Project management and the Project Engineers (CPG), as well as what we have learnt from the local communities leaders, the basic rational which was the ground for the planning of the stand pipes is no longer as strong and clear as it was when the Project was initiated. The basic perception and thought which was the basis for the original plan to implement relatively many Stand-pipes was that they will serve few households or public-uses that can't be connected directly, is now das in question. The main reason is that it is very difficult to establish a charging mechanism for the water to be utilized from the stand-pipes and this can cause an irresponsible usage of the water. Nominating someone within the community who will take responsibility for it is also in question, especially if one should assume the charging risk. We understand that because of it, GWCL are reluctant to implement Stand-Pipes and are intending to do it only in one community where these issues are less of a concern. The reduction in the number of Stand-pipes is of course is not on the account of the pipes of the distribution system (which will be implemented in full and even with higher diameters than covered in the contract). Further savings on the Transmission Mains will not be able to address your concern, as this is less of a monetary issue, rather than physical demand policy.
- 3. GWCL commitment for House-Connections** - we understand and appreciate your position with respect to this issue and your need for strong commitment by GWCL for the completion of the House-Connections. We would like to reiterate that all required supplies for the House-Connections will be fully supplied by TAHAL. Accordingly, as we understand from GWCL, they are planning to conclude the House-Connections with their in-house resources with no need for external resources or a supplement budget. We would like to suggest that in order address Oret's concern on this issue, GWCL will issue a direct letter of

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commitment to Oret, undertaking to assume this responsibility if full and by the date stated. TAHAL will continue reporting the progress of this task until the end of 2013. If acceptable, please let us know if you prefer that we will ask GWCL to issue you such letter or that you will approach them directly.

4. **Scope VS. Saving in Bills No. 2.2 & 2.3** - the saving in these two referred sub-Bills was gained because of the fortunate situation where the required tasks were concluded through shorter lines. As the Project nature is Bills of Quantities, TAHAL charged only for what was actually constructed (Euro (b)(1)(c) executed vs. Euro (b)(1)(c) budgeted, resulted in savings of about Euro (b)(1)(c) for Bills 2.2 & 2.3):

- \* In Sub-Bill No. 2.2 - actual approx. (b)(1)(c) of (b)(1)(c) compare to (b)(1)(c)

planned/budgeted, resulting a saving of approx. Euro (b)(1)(c)

- \* In Sub-Bill No. 2.3 - actual approx. (b)(1)(c) of (b)(1)(c) pipes compare to (b)(1)(c) budgeted, resulting a saving of approx. Euro (b)(1)(c)

Accordingly there is no effect on the areas to be served by the Project.

5. **Escalations and Effect on Profitability** - we clearly understand the issue. The PAF/escalations are resulting from higher costs, and will compensate us for such, and won't increase our profitability. Therefore, our profitability will not exceed the original anticipated amount.

From our last call I understand that you are about to be reassigned to another position and will no longer cover this project. As we very much appreciate your support during the long process, this is of course unfortunate for us and for me personally. Accordingly, although we are aware that Oret is having its site visits for all supported projects during the second quarter of the Fiscal year. Due to the anticipated changes we would like to suggest hosting the person from Oret's team who will take over the Project for a site visit during the second week of January, while Mr. (b)(1)(c) Operations TAHAL Ghana will be visiting Ghana, and maybe myself too.

Should you have question or need for elaborations, please don't hesitate to contact us.

Best regards,

(b)(1)(2e)

From: (b)(1)(2e)

Sent: Friday, December 14, 2012 5:46 PM

To: (b)(1)(2e)

(b)(1)(2e)

Subject: RE: Ghana - ATMA SoK

Dear (b)(1)(2e)

We have received the minutes of the meeting between representatives of Tahal and GWCL on 5 December 2012, and we welcome the joint statement on the final scope of the budget for the project to complete the works. Before we, on behalf of ORET.nl can decide on the final scope, we would like to ask you to go into further detail on the following questions.

Could you please explain, why the Price Adjustment Factor (PAF, clause 70.1

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of the commercial contract) has come into force this late in the project? The contract has been effective since December 2007, and since recently there have never been any discussions on the unfortunate circumstance that the contract price has to be increased by approximately 6[redacted] initially, and by 6[redacted] as per the final scope of budgeting. Moreover, apart from certain delays with regard to tax exemptions and expropriation, in the bi-annual progress reports we have received the PAF has never been mentioned. Also during the two project visits of an ORET delegation in 2011 and 2012, the necessity to call upon the PAF has never been discussed. It appears to us that Tahal has waited until the last moment to initiate the discussions on price adjustments, when there is limited time and efforts remaining to complete the project and to discuss the PAF.

2. In the minutes it is mentioned, that "as per the current need and policy of GWCL, the number of Stand-Pipes is being reduced from [redacted] (5.1)(1c) Bill 5.3)". This reduction will generate savings in the amount of [redacted] (5.1)(1c). However, the stand-pipes are an exceptionally important part of the project, as transmission mains only do not deliver water to the people of Ghana. Could you therefore explain why the 'current need' for stand-pipes is lower? And could you explain GWCL's current policies on stand-pipes, and why these result in the need for less stand-pipes? We know from experience, that GWCL intends to greatly extend the distribution network of water in Ghana in the coming years, and that the need for house connections and stand-pipes is sometimes underestimated. We would rather propose to still install [redacted] (5.1)(1c) and increase the savings on the main transmissions. Please elaborate on this suggestion.

3. For the house connections to be installed by GWCL, we will need from GWCL a separate confirmation that GWCL will take up this responsibility. And we will need a planning and a confirmed budget for GWCL (confirmed through an L/C or a separate loan) to install the house connections themselves by December 2013, for the approval of ORET.nl. Consequently, Tahal will have to include the progress of the house connections in the bi-annual progress reports to ORET.nl, up until the completion of all the works under the original project scope (including house connections, stand-pipes etc.).

4. Could you furthermore explain what the effects are of the savings on Bills 2.2 and 2.3? Are these smart savings, which will not negatively impact the original project's scope? Or do these savings have impact on the original scope, resulting in a smaller area that is served by the project? Please elaborate on this.

5. As you will understand, the price escalations are a very unfortunate development, which may only by a minor part be covered by the contingencies budget. However, the escalations surpass the budget for contingencies. We would therefore like to stress, that upon accountability of the expenses after the project has been completed, the total amount of the escalations will (under the condition that the escalations will be approved by us) have to be accounted for separately. The auditor who will audit the transaction will have to include a separate statement on the escalations. Moreover, the budgeted profit for Tahal (approximately 6[redacted] (5.1)(1c) as per the original application) may not be exceeded by the amount of the price escalations that are now enforced upon GWCL.

We look forward to your elaborations on these questions, and to receiving them preferably by the end of next week.

Please do not hesitate to contact us in case you have any additional questions. As I

have explained to you, I will be (5.1)(2e) from 2 January 2013, for a period of 4 months. Starting next week, your contact for the project on behalf of ORET.nl will therefore be my colleague (5.1)(2e) who I have copied into this message. I will return to ORET.nl in May 2013.

With kind regards,

(5.1)(2e)

(5.1)(2e)

PwC | Senior Advisor Consulting

Tel: (5.1)(2e)

E-mail: (5.1)(2e)

PricewaterhouseCoopers Advisory N.V. (KvK 34180287)

Prinses Margrietplantsoen 46 | 2595 BR | Postbus 30715 | 2500 GS | Den Haag

**(5.1)(2e)**

Date: 06-12-2012 15:50

Subject: RE: Ghana - ATMA SoK

Dear (5.1)(2e)

I am pleased to inform you that we concluded two days of meetings with GWCL with understanding on all open issues of the Project, subject of course to Oret approval and consent.

The mutual understandings are summarized in the enclosed Minutes of Meetings.

As discussed the next step would be all-hand face-to-face meeting at Oret's premises. We would like to suggest Tuesday, December 18<sup>th</sup> for such meetings.

GWCL are expecting invitation from Oret for such meeting so they can make all necessary arrangements. GWCL representative for the meeting will be:

1. Mr. (5.1)(2e)

2. Mr. (5.1)(2e)

Tahai representative for the meeting will be:

1. Mr. (5.1) (2e)

2. Mr. (5.1) (2e)

3. The undersigned

I would appreciate your acknowledgement of this mail, your confirmation of the proposed or alternative dates for the meetings, and issuance of invitation letter to GWCL with copy to us.

Should you have any further questions please don't hesitate to contact me.

Kind regards,

(5.1) (2e)

**(5.1) (2e)**

Subject: RE: Ghana - ATMA SoK

Very good news (5.1) (2e) thank you for informing me. Good luck next week, I look forward to hearing about the outcomes.

With kind regards,

(5.1) (2e)

(5.1) (2e)

PwC | Senior Advisor Consulting

**(5.1) (2e)**

PricewaterhouseCoopers Advisory N.V. (KvK 34180287)

Prinses Margrietplantsoen 46 | 2595 BR | Postbus 30715 | 2500 GS | Den Haag

From:

To:

Cc:

Date:

Subject:

**(5.1) (2e)**

RE:Ghana - ATMA SoK



(5.1) (2e)

Further to our call of Monday I would like to inform you that Mr (5.1) (2e)  
(5.1) (2e) is back in office.

We are planned to meet him next week, probably Wednesday.

I'll keep you update towards/after the meeting.

Many thanks for the continuance support.

Best regards,

(5.1) (2e)

(5.1) (2e)

**Subject:** RE: Expression of willingness to consider budget changes as a result of price adjustments

Hi,

I will available, call confirmed.

Best regards,

(5.1) (2e)

(5.1) (2e)

**Subject:** RE: Expression of willingness to consider budget changes as a result of price adjustments

Hi (5.1) (2e)

This news certainly is unfortunate, I was hoping for a positive outcome. Let's plan a call early next week to discuss the way forward, and what we can do from our side to assist. Are you available on monday, say 2 pm CET?

With kind regards,

(5.1) (2e)

(5.1) (2e)

PwC | Senior Advisor Consulting

Tel: (5.1) (2e)

E-mail: (5.1) (2e)

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From: (5.1) (2e)  
To:  
Date:  
Subject: RE: Expression of willingness to consider budget changes as a result of price adjustments

(5.1) (2e)

Further to our exchange earlier this week I would like to inform you that we have continued trying promoting the open issues with GWCL and CPG, the engineer.

Unfortunately GWCL are going through unstable time. It isn't clear if its current senior management will stay in office or will leave, triggering a transition period for the company at which no significant decision are expected to be taken.

We had no further substance meetings and we were not able to achieve progress.

We are continuing the accelerated implementation of the project, especially the distribution network.

We will continue the follow up on the matter, both directly with GWCL and through CPG.

No doubt that if the current senior management will continue, it probably will be easier and sooner to reach mutual understanding. Otherwise, it will require the new management to learn the relevant issues thoroughly and only thereafter they will find the time to meet us in order to resume the discussions, or to initiate, depends from what point they will decide to pick it.

I'll keep you updated.

Kind regards

(5.1) (2e)

From: (5.1) (2e)  
Sent: Monday, November 19, 2012 9:45 PM  
To: (5.1) (2e)  
Subject: RE: Expression of willingness to consider budget changes as a result of price adjustments

(5.1) (2e)

Many many thanks, much appreciated.

We will meet GWCL on Wednesday and I will update thereafter.

Best regards,

(5.1) (2e)

## (5.1) (2e)

**Subject:** Expression of willingness to consider budget changes as a result of price adjustments

Dear: (5.1) (2e)

As per the request of Tahal, attached you will find a letter of ORET.nl to confirm our willingness to consider changes to the budget for ATMA, as to find a solution for the price adjustments at hand.

I trust to have informed you sufficiently, but please do not hesitate to contact me in case you have any questions.

Good luck with the meeting and kind regards,

(5.1) (2e)

ORET.nl | ☎ Tel : +31 (0)88 792 94 56 | ✉ Fax : +31 (0)88 792 94 50  
[visit our website](#) | [info@oret.nl](mailto:info@oret.nl)

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Mail

ORET

(5.1) (2e)

00-01-2013 09:05

To:

(5.1) (2e)

cc:

bcc:

Subject: RE: Ghana - ATMA SoK

Dear (5.1) (2e),

We received your answers to our questions in good order. Thank you for that. Although your answers provide explanations for some of our questions, we would like to receive the following to provide a more solid basis for the requested adjustment:

1. To be able to continue our appraisal process for point 1 we would like to receive "official existing documents" which provide evidence for the mentioned information. For question no. 1 this could for example be some "minutes of meeting" where it is stated in the previous years that price adjustments would be charged and what the impact of these adjustments would be on the budget and the original scope (if applicable).
2. The same applies to point no. 2. We would like to receive policy documents from GWCL, examples of other projects where a similar stand-pipes policy has been implemented and possible other issues and examples that would form a thorough base for your arguments. As far as we know from earlier ORET projects (which are many in the past 10 to 15 years), the standpipe policy of GWCL with chiefs who are responsible for supplying the drinking water to customers during the day and to get paid for it (including their own fee for their labor) is common practice in Ghana.
3. Furthermore we would like to know what the impact will be of the price adjustment on the amount of people that has access to potable water. As you might understand we want to ensure that the initial foreseen impact is not drastically diminished. This for example applies to the diminishing of the number of stand-pipes. Could you please indicate the impact in terms of 'impact foreseen during ORET application' and 'changed impact foreseen when approval is received for the price adjustment'? And if less stand-pipes will be installed: does this mean that GWCL will increase significantly the number of yard and house connections? Can all people afford to pay for such connection and also for the increasing volume of water per capita?

I am looking forward to your answers.

Feel free to contact me in case of questions.

Kind regards,

(5.1) (2e)

ORET.nl | Tel: +31 (0)88 762 94 56 | Fax: +31 (0)88 762 94 50  
visit our website | info@oret.nl

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pwc

Fr. Ghana - ATMA SoK

(5.1) (2e)

19-02-2013 09:15

This message has been replied to.

3 attachments

ATMA Project - Fluctuation support by GWCL - 31.01.13 001.tif interim cer. 24.pdf cpg jen.pdf

Hq (5.1) (2e)

(5.1) (2e) Daarom stuur ik je onderstaande graag even door. Het kan namelijk niet veel langer onbeantwoord blijven. Tahal heeft een poging gedaan om onze vragen te beantwoorden. Volgens mij is het hiermee nog lang niet voldoende beantwoord en krijgen we nog meer info van ze. Zou jij dat kunnen bekijken en naar Tahal willen communiceren wat we van ze verwachten?

In mijn postvakje zit ook een Tahal wijzigingsverzoeksonderwerp. Handig om erbij te pakken.

(5.1) (2e)

(5.1) (2e)

Onderwerp: RE: Ghana - ATMA SoK

Dear (5.1) (2e)

Further to our previous exchange, parallel to gathering relevant documentations from our ongoing process with GWCL and the client and the project Engineer, CPG, we have forwarded your request to GWCL and asked them for supporting documents.

GWCL sent us the enclosed letter sign by its MD.

I am also attaching the documents which are referred in GWCL's letter.

We hope that this addresses your queries and satisfactory for you.

Nonetheless, should you have further question or need of information, please don't hesitate to contact me.

Will appreciate your acknowledgement if this mail and will be awaiting your reply.

Best regards,

(5.1) (2e)

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**(5.1) (2e)**

Subject: RE: Ghana - ATMA SoK

Dear (5.1) (2e)

Good to know. Thank you for your confirmation.

We look forward to your response.

Kind regards,

(5.1) (2e)

PwC | Senior Advisor Consulting

(5.1) (2e)

(5.1) (2e)

PricewaterhouseCoopers Advisory N.V. (KvK 34180287)

Prinses Margrietplantsoen 46 | 2595 BR | P.O. Box 30715 | 2500 GS | The Hague,  
The Netherlands

**(5.1) (2e)**

Subject: RE: Ghana - ATMA SoK

Dear (5.1) (2e)

I wanted to confirm that we received your mail. We are working on the supporting documents that you have asked and hope to conclude and to provide you with them shortly.

Best regards,

(5.1) (2e)

**(5.1) (2e)**

Sent: Wednesday, January 09, 2013 10:05 AM

To: (5.1) (2e)

Subject: RE: Ghana - ATMA SoK

Dear (5.1) (2e)

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We received your answers to our questions in good order. Thank you for that. Although your answers provide explanations for some of our questions, we would like to receive the following to provide a more solid basis for the requested adjustment:

1. To be able to continue our appraisal process for point 1 we would like to receive 'official existing documents' which provide evidence for the mentioned information. For question no. 1 this could for example be some "minutes of meeting" where it is stated in the previous years that price adjustments would be charged and what the impact of these adjustments would be on the budget and the original scope (if applicable).

2. The same applies to point no. 2. We would like to receive policy documents from GWCL, examples of other projects where a similar stand-pipes policy has been implemented and possible other issues and examples that would form a thorough base for your arguments. As far as we know from earlier ORET projects (which are many in the past 10 to 15 years), the standpipe policy of GWCL with chiefs who are responsible for supplying the drinking water to customers during the day and to get paid for it (including their own fee for their labor) is common practice in Ghana.

3. Furthermore we would like to know what the impact will be of the price adjustment on the amount of people that has access to potable water. As you might understand we want to ensure that the initial foreseen impact is not drastically diminished. This for example applies to the diminishing of the number of stand-pipes. Could you please indicate the impact in terms of 'impact foreseen during ORET application' and 'changed impact foreseen when approval is received for the price adjustment'? And if less stand-pipes will be installed: does this mean that GWCL will increase significantly the number of yard and house connections? Can all people afford to pay for such connection and also for the increasing volume of water per capita?

I am looking forward to your answers.

Feel free to contact me in case of questions.

Kind regards,

(5.1) (2e)

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Dear (5.1) (2e)

First of all I would like to apologize for our late response. The designated ORET team members were out of the office and as your e-mail was only received at [info@oret.nl](mailto:info@oret.nl)'s mail address, our regular team back up system could not answer you earlier. I would like to advise you to send e-mails and to call to our below mentioned contact details in future.

Anyway, it is good to see Tahal is working together with GWCL to come to a final conclusion of the price escalation/scope adjustment. We do find it rather unfortunate that the price escalation was not agreed upon with ORET, [info@oret.nl](mailto:info@oret.nl) and GWCL at an earlier stage. According to the letter of the 31st of January 2013 by Mr. (5.1) (2e), GWCL was informed about the price escalations on 25 of January 2012. If GWCL and ORET [info@oret.nl](mailto:info@oret.nl) had known about the adjustment at an earlier stage, we could have made adjustments to the project that would have better matched with the needs of all parties involved. Diminishing the scope of works is of course not something we are enthusiastic about. We are however still willing to consider an adjustment. Most importantly we feel that notwithstanding such an adjustment the end result of the project remains in line with the outcomes as they were anticipated at the start of the project. Our previous clarifying questions were related to these aspects.

We still have a couple of points that we want to have more information on:

1. Access to water/project outcomes

According to the letter of GWCL the number of people with access to water when the amount of standpipes is decreased to [info@oret.nl](mailto:info@oret.nl) (and the amount of house-connections is increased) is the same as the original plan of [info@oret.nl](mailto:info@oret.nl) standpipes. According to our calculations a decrease of [info@oret.nl](mailto:info@oret.nl) standpipes equals a decrease of [info@oret.nl](mailto:info@oret.nl) (5.1) (2e) people who have access to water and now have to be connected by house-connections. The additional house-connections are however not mentioned in the BoQ of the minutes of meeting of December 2012 or in other documents related to this issue. And your e-mail of 18 December 2012 implies (as point 3) that additional house-connections are not applicable. As the additional house-connections will be an essential element to ensure that the project results (=access to water), as they were aimed for at the start of the project, are reached, we would like to know which activities will be performed to ensure that these extra house-connections will be installed. That is: number of house-connections to be installed within ORET project, number of additional house-connections in the project area paid with other funding, number of people reached with ORET connections versus number of people reached with additional connections. We would also like to know which part of these additional cost will be financed by GWCL and what part by the households themselves? In case of GWCL financing, who are the donors?

2. Price escalation formula

The price escalations are mentioned in a formula in the contract. Maybe you did already discussed this with Friso but we would like to receive the formula with all the rates and numbers filled, so we can see what the adjustment factor is. Can you send us the formula with all the rates and numbers in it?

We are looking forward to your answers and would like to ask you to send all your communication to [info@oret.nl](mailto:info@oret.nl).

Kind regards,

(5.1) (2e)



(5.1) (2e)

04-04-2013 17:38

To

(5.1) (2e)

cc

bcc

Subject: RE: GH/W/M07029

History:

This message has been replied to.

3 attachments



ATMA Ruralis - Standpipes.pdf | Projected Fluctuation-SOK - Local.pdf | Projected Fluctuation-SOK - Foreign.pdf

Dear (5.1) (2e)

Further to my previous mail, attached please find:

1. House Connection VS. Stand-Pipes - A letter from GWCL's Acting Managing director which is addressing the issues of Stand-pipes, House Connection and served population. As stated by the client, the number of persons who will benefit from water connections is not significantly lower, if at all, from the original plan.
2. Price Adjustment Factor ("PAF") / Fluctuation - attached please find the fully detailed excel sheet that is the basis for the fluctuation request. Please note that the total amount, which is calculated and presented in the schedule and was thoroughly assessed and confirmed by the Project Engineer, is about Euros (5.1) (1c). As a compromise, and a concession in order to accelerate the conclusion of this on-going issue, TAHAL was willing to settle for only Euros (5.1) (1c).

I hope that this is addressing your request for additional information and will allow Oret to take a final conclusion.

Should you have any question, please don't hesitate to contact me.

Best regards,

(5.1) (2e)

From: (5.1) (2e)

Sent: Friday, March 29, 2013 5:56 PM

To: 'oret@nl.pwc.com'

Subject: RE: GH/W/M07029

Dear (5.1) (2e)

Well received. We are working on the response in order to reply your queries in full and bring this matter to its end.

00012

1073151

We just received further information from GWCL which we are reviewing.

We will reply shortly.

Best regards,

(5.1) (2e)

(5.1) (2e)

**Subject:** Re: GH/WM07029

Dear (5.1) (2e)

Did you receive the email below? We would like to know the status of the requested information regarding the price escalation/scope adjustment.

Thanks in advance.

Kind regards,

(5.1) (2e)

ORET.nl | ☎ Tel : +31 (0)88 792 94 56 | – Fax : +31 (0)88 792 94 50

[visit our website](#) | [info@oret.nl](mailto:info@oret.nl)

ORET

Sent by: (5.1) (2e)

Schuring/NL/CFR/PwC

05-03-2013 17:16

(5.1) (2e)

Subj:GH/WM07029 Link  
ect

Dear (5.1) (2e)

First of all I would like to apologize for our late response. The designated ORET team members were out of the office and as your e-mail was only received at 0:00:00's mail address, our regular team back up system could not answer you earlier. I would like to advise you to send e-mails and to call to our below mentioned contact details in future.

Anyway, it is good to see Tahal is working together with GWCL to come to a final conclusion of the price escalation/scope adjustment. We do find it rather unfortunate that the price escalation was not agreed upon with ORET.nl and GWCL at an earlier stage. According to the letter of the 31th of January 2013 by Mr. (5.1) (2e) GWCL was

informed about the price escalations on 25 of January 2012. If GWCL and ORET.nl had known about the adjustment at an earlier stage, we could have made adjustments to the project that would have better matched with the needs of all parties involved. Diminishing the scope of works is of course not something we are enthusiastic about. We are however still willing to consider an adjustment. Most importantly we feel that notwithstanding such an adjustment the end result of the project remains in line with the outcomes as they were anticipated at the start of the project. Our previous clarifying questions were related to these aspects.

We still have a couple of points that we want to have more information on :

1. Access to water/project outcomes

According to the letter of GWCL the number of people with access to water when the amount of standpipes is decreased to 5000 and the amount of house-connections is increased) is the same as the original plan of 5000 standpipes. According to our calculations a decrease of 5000 standpipes equals a decrease of (5.1) (1e) (5.1) (1e) people who have access to water and now have to be connected by house-connections. The additional house-connections are however not mentioned in the BoQ of the minutes of meeting of December 2012 or in other documents related to this issue. And your e-mail of 18 December 2012 implies (as point 3) that additional house-connections are not applicable. As the additional house-connections will be an essential element to ensure that the project results (=access to water), as they were aimed for at the start of the project, are reached, we would like to know which activities will be performed to ensure that these extra house-connections will be installed. That is: number of house-connections to be installed within ORET project, number of additional house-connections in the project, are paid with other funding, number of people reached with ORET connections versus number of people reached with additional connections. We would also like to know which part of these additional cost will be financed by GWCL and what part by the households themselves? In case of GWCL financing, who are the donors?

2. Price escalation formula

The price escalations are mentioned in a formula in the contract. Maybe you did already discussed this with (5.1) (2e) but we would like to receive the formula with all the rates and numbers filled, so we can see what the adjustment factor is. Can you send us the formula with all the rates and numbers in it?

We are looking forward to your answers and would like to ask you to sent all your communication to [info@oret.nl](mailto:info@oret.nl).

Kind regards,

**(5.1) (2e)**

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Mail ORET  
Sent by: (5.1) (2e)  
(5.1) (2e) NL/CFR/PwC  
24-04-2013 15:32

To: (5.1) (2e)  
cc:  
bcc:  
Subject: Call 2 May GH/WM07029

Dear (5.1) (2e),

Can you please confirm the call for 11.00 (dutch time) on 2 May 2013?

As preparation for the call we would like to have more information on the price adjustments and the house connections. Can you please provide us with the following information?

#### House connections

On the issue of the house connections we would like to state that it is important for ORET that the initial goals of the project are reached, so the same amount of people have to be served in the project area.

- In the letter by GWCL they mention to reach <sup>xxxx</sup> persons per house-connection, this is for a house connection not a realistic amount. For a yard connection this is more realistic. Can GWCL confirm they will provide Yardtaps and not house-connections? If GWCL actually means to have a mix of Yardtaps and house-connections, then we want to receive the correct numbers and the calculation how many people they will serve.

#### Price adjustments

Regarding the price adjustments we would like to stress again, that the budgeted profit for Tahal (C (5.1) (1c)) as per the original application) may not be exceeded by the amount of the price escalations that are now enforced upon GWCL, which you confirmed in the email dated 12 December 2012.

- Looking at the numbers you provided on the price adjustments we see a large escalation for the (5.1) (1c) and an increase of wages. We think it is unlikely that these issues are not covered in your subcontracts for a longer period and that the price escalation is needed to cover your subcontracted expenses on a monthly basis. But to assess these numbers we need to have the data (sources) on which the indices are based. Can you please provide us with these data, published on original data sources (so for example a website extract)?

Kind regards,

(5.1) (2e)

ORET.nl | Tel: +31 (0)88 782 04 56 | Fax: +31 (0)88 782 04 50  
visit our website | info@oret.nl

ORET ORET 22-04-2013 16:24:13

Mail ORET  
Sent by: (5.1) (2e)  
(5.1) (2e) NL/CFR/PwC  
22-04-2013 16:24

To: (5.1) (2e)  
cc:  
Subject: RE: GH/WM07029

Dear (5.1) (2e),

The proposed time of 12.00 is not suitable for us. We can facilitate the call in de morning and 11.00

00012

1073151

(Dutch time) is the latest possible. Is this time possible for you, please confirm?

We will coordinate a call with GWCL ourselves, thank you for the offer of facilitating.

Kind regards,

(5.1) (2e)

ORET.nl | Tel: +31 (0)86 792 94 66 | Fax: +31 (0)86 792 94 50  
visit our website | info@oret.nl

(5.1) (2e)

18-04-2013 12:31:58



(5.1) (2e)

To: ORET@EMEA-NL

cc

18-04-2013 12:31

Subject: RE: GH/WM07029

Dear (5.1) (2e)

Thanks for the prompt reply. We confirm 2<sup>nd</sup> of May, can we make it 12:00 (Dutch time)?

The contact person at GWCL:

Mr. (5.1) (2e)

(5.1) (2e)

Will you coordinate GWCL or would you like us to facilitate?

Best regards,

(5.1) (2e)

(5.1) (2e)

Subject: RE: GH/WM07029

Dear (5.1) (2e)

The 2nd of May is the first possibility for the call. We also try to have the call as soon as possible but it is not possible to have the call earlier, due to the availability of the ORET people involved.

Can you please confirm the call the 2<sup>nd</sup> of May at 11.00 (Dutch time)?

11712013

## Memo

Aan: Hoofd C&M  
 Van: ORET.nl afdeling beoordelingen  
 Datum: 2 juli 2013  
 Betreft: Beoordeling afwijking contract

I Inleiding / aanleiding / begeleiding (in te vullen door ORET Projectbureau)	
1.1. Algemene gegevens	
Projectnummer	GHWM07029
Project naam	ATMA Rural Water Supply System South of Kpong, Ghana
Aanvrager	TAHAL Group B.V
Project fase	Afsluiting
Datum ontvangst laatste rapport	26 juni 2013
Achtergrond	<p>Op 3 september 2012 heeft ORET van Tahal een brief ontvangen, waarin Tahal aankondigt voornemens te zijn gebruik te maken van een prijsescalatie-clausule in het contract met de afnemer. Het commerciële contract tussen TAHAL en GWCL bevat een zogenaamde Price Adjustment Factor (PAF). Deze clausule (70.1) heeft tot gevolg dat Tahal onder voorwaarden aanspraak maakt op een stijging van de contractprijs.</p> <p>Als gevolg van de PAF ziet Tahal zich genooddakt de afnemer bijna € [(5.1)(1c)] meer te rekenen voor de contractueel overeengekomen BoQ. Tahal heeft echter voorgesteld de escalatie te maximaliseren op € [(5.1)(1c)].</p> <p>Op 19 november 2012 heeft ORET.nl een brief gestuurd aan GWCL, met als boodschap dat ORET.nl bereid is de prijswijziging in overweging te nemen. De PAF is immers contractueel overeengekomen, ORET.nl kan hieraan niets veranderen.</p> <p>Na overleg met GWCL hebben Tahal en GWCL op 6 december 2012 een aanpassing aan het project voorgesteld, om zodoende de extra kosten binnen het projectbudget te kunnen houden. Er is immers vanuit ORET.nl geen extra geld beschikbaar, en de afnemer is evenmin in staat extra geld voor het project te betalen.</p> <p>De belangrijkste aanpassingen zijn:</p> <ul style="list-style-type: none"> <li>- De verlaging van het aantal Standpijpen, [(5.1)(1c)] besparing van [(5.1)(1c)]</li> <li>- De besparing op huisaansluitingen; [(5.1)(1c)] Tahal levert in deze constructie alleen de materialen, GWCL draagt zorg voor het maken van de aansluitingen;</li> <li>- Aanwenden van het volledige budget voor onvoorziene</li> </ul>

00013

1073152



	documenten	- Brief aan Tahal
	(output)	
<b>III Beoordeling (in te vullen door beoordelaar)</b>		
III.1	Resultaten beoordeling	
1.	<p>Kan ORET.nl akkoord gaan met de verlaging van het aantal standpijpen van (5.1) (1c)</p> <p>Tijdens het bezoek van ORET.nl aan Ghana in juni 2013 werd door GWCL aangegeven, dat er minder behoefte is aan standpijpen dan ten tijde van de aanvraag was voorzien. Dit komt vooral door toegenomen urbanisatie rondom Accra. De geplande (5.1) (1c) standpijpen zijn daarom geen reële doelstelling meer, en kunnen worden verlaagd tot (5.1) (1c). Het geplande aantal huisaansluitingen wordt verhoogd van (5.1) (1c) aansluitingen. Door GWCL wordt ervan uitgegaan dat het feitelijk yard taps zijn, waarbij per yard tap in potentie (5.1) (1c) huishoudens kunnen worden bediend dan wel (5.1) (1c) met meerdere appartementen.</p> <p>In het oorspronkelijke budget werd ervan uitgegaan (zie o.a. ORET appraisal document 10-00-07) dat er (5.1) (1c) huisaansluitingen en (5.1) (1c) standpijpen in het project zouden worden gerealiseerd, waarbij deze huisaansluitingen (5.1) (1c) personen van water zouden voorzien (op basis van ca. (5.1) (1c) personen per aansluiting) en nog eens (5.1) (1c) personen met behulp van standpijpen (op basis van ca. (5.1) (1c) personen per standpijp). In totaal komt dit neer op (5.1) (1c) personen die door dit project extra van drinkwater worden voorzien.</p> <p>GWCL gaat tegenwoordig in haar berekeningen uit van een maximum van (5.1) (1c) personen die met één standpijp worden bereikt (in plaats van de in de ORET appraisal veronderstelde (5.1) (1c) personen). Dit is een hoge schatting, maar daarmee niet ondenkbaar. Daarnaast gaat GWCL ervan uit dat nagenoeg alle nieuwe huisaansluitingen zijn, die yard taps zijn, hetgeen inhoudt dat meerdere huishoudens per yard tap van water worden voorzien (in plaats van één huishouden zoals in de ORET appraisal is verondersteld). In haar berekeningen gaat GWCL nu uit van minimaal (5.1) (1c) personen per yard tap oplopend tot (5.1) (1c) personen. Bij gemiddeld drie huishoudens betekent dit ca. (5.1) (1c) personen die van water kunnen worden voorzien. Dit getal kan nog hoger zijn als er in een aantal gevallen sprake is van meerdere appartementen waarbij (5.1) (1c) tot (5.1) (1c) personen van 1 yard tap gebruik maken. Uitgaande van (5.1) (1c) yard taps, kunnen (5.1) (1c) huishoudens gebruik maken van een huisaansluiting. De gemiddelde grootte van één huishouden bedraagt ca. (5.1) (1c) personen. Dit betekent dat met (5.1) (1c) yard taps in potentie dus minimaal (5.1) (1c) mensen bereikt worden. Daarnaast worden (5.1) (1c) standpijpen geïnstalleerd, waarbij 1 standpijp (5.1) (1c) personen van water kan voorzien; Dit betekent dat nog eens ca. (5.1) (1c) personen van water worden voorzien.</p> <p>Dit brengt het totaal aan personen dat bereikt wordt op ((5.1) (1c)) = (5.1) (1c). Dit benadert het oorspronkelijke aantal uit de aanvraag, en is daarmee acceptabel.</p>	
2.	<p>Kan ORET.nl akkoord gaan met het maken van de huisaansluitingen door GWCL (Tahal levert dan alleen de materialen)?</p> <p>De huisaansluitingen worden door GWCL geplaatst op de hoofdaansluitingen, die door Tahal zijn geplaatst. Het materiaal voor deze aansluitingen is door Tahal geleverd (conform contract). De aansluitingen worden door GWCL zelf gemaakt op aanvraag van de huishoudens (een vraag gedreven proces). Het voordeel voor de ns is, dat alleen voor de installatie moet worden betaald, en niet voor het</p>	

	bijsturen en reageren. Tahai wordt mede-verantwoordelijk gemaakt voor de indiening van de rapportages en zal door ORET.nl ook op de voortgang aangesproken worden zodat zij voldoende betrokken blijven bij de voortgang van het project.
III.3	Op te nemen in een brief voor de aanvrager
	Zie brief

*Afgevoerd  
NV  
11/7/13*

Datum: 2 mei 2013

Deelnemers:

(5.1) (2e)

Onderwerp: Bespreken van de prijsescalatie en de wijzigingen in het project omtrent het aantal huusaansluitingen en standpipes.

#### Prijsescalatie

In het contract tussen Tahal en GWCL is een price adjustment formule opgenomen. Door de stijging van de prijs in grondstoffen en arbeid zorgt deze formule voor een stijging van de projectkosten voor een bedrag van (5.1) (2e). ORET heeft aangegeven meer informatie te willen over de manier van implementeren en de gehanteerde prijsstijgingen voor Arbeid en Staal. Daarbij is nogmaals benadrukt dat de winst niet hoger mag uitvallen dan de (5.1) (2e) dat origineel is afgesproken.

- Betreffende de implementatie van de formule geeft Tahal aan dat de formule onafhankelijk van de subcontractors is doorgevoerd.
- Tahal bevestigt dat er niet meer winst zal worden gemaakt dan de afgesproken (5.1) (1c). De verwachting is volgens hen dat er veel minder overblijft.
- Tahal zal het cijfermateriaal waarop de prijsstijging is gebaseerd opsturen naar ORET.

#### Aanpassingen project

Om deze kosten door de prijsescalatie te beperken heeft Tahal in overleg met GWCL een aantal aanpassingen voorgesteld:

- 1) Gebruik van het contingencies budget om een deel van de kostenstijging te financieren.
  - 2) Verlaging van het aantal pipes in de Bill of Quantity;
  - 3) Aanpassingen in het distributiesysteem: Tahal levert het materiaal voor het maken van het oorspronkelijke aantal houseconnections en GWCL zal de connections aanleggen. Naast het argument van kostenreductie, kan GWCL op dit moment niet aangegeven waar de connecties gemaakt moeten worden. Daarnaast zal een verlaging van het aantal standpipes plaatsvinden van (5.1) (1c). Het beleid van GWCL is om minder gebruik te maken van standpipes en meer van houseconnections. Volgens GWCL zijn (5.1) (1c) nodig op dit moment, maar worden er (5.1) (1c) aangelegd.
- Volgens Tahal is GWCL in staat om de houseconnections aan te leggen.
  - Opvallend bij dit voorstel is dat het aantal standpipes wordt verlaagd terwijl het aantal houseconnections gelijk blijft aan het oorspronkelijke aantal. Zo worden minder mensen bereikt dan oorspronkelijk bedoeld is. De exacte aantallen moeten door GWCL worden bevestigd.

- Op de vraag of de bevolking de watersaansluitingen kunnen betalen kon Tahal geen antwoord geven. Dit zal worden nagevraagd bij GWCL.
- Tahal heeft toegezegd om aanvullend houseconnections aan te leggen, zolang dit binnen het budget past.

#### Projectvoortgang

Naar verwachting zal het project voor het eind van het subsidieverleningstijdvak worden afgerond. Eind juni 2013 zullen de laatste werkzaamheden worden afgerond. De aanleg van GWCL zal op korte termijn kunnen plaatsvinden.

Op dit moment ligt een invoice voor het bedrag van 2,5 miljoen ter goedkeuring bij GWCL.

#### Afspraken

- Tahal levert het cijformateriaal waarop de prijsstijging is gebaseerd binnen 10 werkdagen aan. ORET heeft dan een week om hierop te reageren.
- Tahal zal het aantal houseconnections vergroten binnen het bestaande budget.
- ORET vraagt bij GWCL op of de bevolking de houseconnections kunnen betalen
- ORET vraagt ook bij GWCL naar de exacte aantallen die bereikt worden met de houseconnections.

## Memo

Aan: Hoofd C&M  
 Van: (5.1)(2e)  
 Datum: 6 september 2011  
 Betreft: Beoordeling wijziging project GHWM07029

<b>I Inleiding / aanleiding / begeleiding (in te vullen door ORET Projectbureau)</b>	
<b>I.1. Algemene gegevens</b>	
Projectnummer	GHWM07029
Project naam	Distribution Network – ATMA Rurals South of Kpong Project
Aanvrager	Tahal Group BV
Project fase	Uitvoering
Datum ontvangst rapport	27 juni 2011
Achtergrond	Volgens de aanvrager is door toegenomen populatie de vraag naar drinkwater in het doelgebied aanzienlijk gestegen. Om alle gebieden van voldoende water te voorzien stelt de aanvrager voor om binnen het budget de initiële (5.1)(1c) leidingen te vervangen door (5.1)(1c) leidingen. Dit voorstel behelst een wijziging in de initiële project scope.  ORET.nl dient te beoordelen of de wijzigingen logischerwijs passen binnen het project en derhalve nuttig en noodzakelijk zijn voor de realisatie van de projectdoelstellingen. Hierbij dient ook gekeken te worden of de wijzigingen financieel en inhoudelijk acceptabel zijn.
Meegestuurd documenten	<ul style="list-style-type: none"> <li>- Appraisal Document d.d. 18 september 2007</li> <li>- Wijzigingsverzoek GVVCL d.d. 15 april 2011</li> <li>- Onderbouwing Tahal d.d. 27 juni 2011</li> <li>- Original BoQ d.d. 27 juni 2011</li> <li>- Gewijzigde d.d. BoQ 27 juni 2011</li> <li>- Detailed design, goedgekeurd door ORET.nl op 7 januari 2011</li> </ul>
Contactpersoon ORET	(5.1)(2e)
<b>I.2 Achtergrond informatie voor de beoordeling</b>	
Artikel uit de beschikking / Prelim / GA	
Datum beschikking / prelim / GA	Beschikking d.d. 5 oktober 2007 GA d.d. 18 maart 2008
Wie stelt de brief samen	(5.1)(2e)
Taal van de beoordeling / brief	Engels
Overige belangrijke informatie	Tijdens de missie naar Ghana in 2011 bleek reeds dat er mogelijk wijzigingen zouden worden doorgevoerd. Deze zouden budgetneutraal zijn en niet zo ingrijpend als nu wordt voorgesteld. Er was destijds sprake van een aanpassing in een aantal diameters, van (5.1)(1c) naar (5.1)(1c). Nu is er sprake van een veel serieuzere aanpassing, (5.1)(1c) naar (5.1)(1c) pijpleidingen.

<b>II Uitvoering van het verzoek (in te vullen door beoordelaar)</b>																																													
<b>II.1 Feiten over de beoordeling</b>																																													
Naam beoordelaar	(b.1)(2a)																																												
Start datum	Juni 2011																																												
Eind datum	25 augustus 2011																																												
Opgeleverde documenten (output)	Inhoudelijke beoordeling en vragenbrief																																												
<b>III Beoordeling (in te vullen door beoordelaar)</b>																																													
<b>III.1 Resultaten beoordeling</b>																																													
<p>The request is mainly dealing with replacing small distribution pipelines with sizes of (b.1)(1a) diameter, into larger sizes of (b.1)(1a) and (b.1)(1a). Although in February 2011, GWCL informed the ORET mission team that only a (secondary) pipeline of (b.1)(1a) has to be replaced by one with (b.1)(1a) with a total length of about [redacted] kilometres, the request is now covering substantial changes in various areas (see table 1). Moreover, in the letter from TAHAL dated 27 June, one of the pipe sizes has been changed again from (b.1)(1a) to (b.1)(1a).</p> <p>Table 1: Details of areas to be catered for under the distribution network of the ATMA Rural South of Kpong Project (in order of priority)</p> <table border="1"> <thead> <tr> <th></th> <th>Area</th> <th>Size of pipe</th> <th>Length of pipe</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Kpone – Katamanso – Michel Camp</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>2</td> <td>Afropoku – Frankadu pipeline</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>3</td> <td>Gbetile – Michel Camp</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>4</td> <td>Dashenya Junction – Tema Community 25</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> </tbody> </table> <p>* In letter from TAHAL Group dated 27<sup>th</sup> of June 2011, the size of (b.1)(1a) changed into a (b.1)(1a) pipeline</p> <p>However, in the original scope of the ORET application the distribution system consisted of the following pipelines including a substantial number of new household connections and standpipes (see table 2).</p> <p>Table 2: Water Distribution network (with various sizes of pipes) in the project area including (b.1)(1a) additional household connections and (b.1)(1a) additional standpipes</p> <table border="1"> <thead> <tr> <th></th> <th>Area</th> <th>Size of pipe</th> <th>Length of pipe</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Bill No 6.1.1 (in project area)</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>2</td> <td>Bill No 6.1.2 (in project area)</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>3</td> <td>Bill No 6.1.3 (in project area)</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>4</td> <td>Bill No 6.2 (in project area)</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> <tr> <td>5</td> <td>Bill No 6.3 (in project area)</td> <td>(b.1)(1a)</td> <td>(b.1)(1a)</td> </tr> </tbody> </table> <p>It should be noted that the above mentioned distribution network (see table 2) is the main core of the expansion networks, besides the construction of a new treatment plant with a capacity of (b.1)(1a) m<sup>3</sup>/day and the construction of (b.1)(1a) concrete ground level reservoirs. The overall objective of the project is to meet growing demand due to the expected continued population growth in the project area and to supply clean drinking water to the consumers (mainly households) through (b.1)(1a) additional new household connections and (b.1)(1a) additional new standpipes. If all activities have been implemented approximately (b.1)(1a) additional people will be supplied with drinking water in 2022.</p>			Area	Size of pipe	Length of pipe	1	Kpone – Katamanso – Michel Camp	(b.1)(1a)	(b.1)(1a)	2	Afropoku – Frankadu pipeline	(b.1)(1a)	(b.1)(1a)	3	Gbetile – Michel Camp	(b.1)(1a)	(b.1)(1a)	4	Dashenya Junction – Tema Community 25	(b.1)(1a)	(b.1)(1a)		Area	Size of pipe	Length of pipe	1	Bill No 6.1.1 (in project area)	(b.1)(1a)	(b.1)(1a)	2	Bill No 6.1.2 (in project area)	(b.1)(1a)	(b.1)(1a)	3	Bill No 6.1.3 (in project area)	(b.1)(1a)	(b.1)(1a)	4	Bill No 6.2 (in project area)	(b.1)(1a)	(b.1)(1a)	5	Bill No 6.3 (in project area)	(b.1)(1a)	(b.1)(1a)
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5	Bill No 6.3 (in project area)	(b.1)(1a)	(b.1)(1a)																																										

In order to be able to assess the request as stated above and to finally decide on its approval, a number of questions for clarification had to be answered. A letter was sent to Tahal dated 17 July 2011. The main questions were:

1. Please, provide a map in which the original project area has been drawn, including the distribution system (existing and new) in the five districts located around the cities of Accra and Tema.
2. Please, outline and clarify in the map mentioned in point 1 all the changes in the distribution system as proposed in your request, including its consequences for the distribution system as proposed in the original proposal of the project.
3. Will the proposed changes in the distribution system also affect the original project area? If yes, please explain in what way.
4. In the letter from TAHAL Group (dated 27th of June 2011) on page 2 the table is indicating the proposed changes including the amounts in Euros. From this table ORET.nl do understand that the activities mentioned on the right side of the table (Bill no 5.1.1; 5.1.2; 5.1.3; 5.2 and 5.3) summing up to (5.1)(1c) Euro will not be carried out under this ORET project anymore. These activities are completely replaced by the activities proposed on the left side of this table (Bill no 2, 3, 4, 5 and 6) summing up to (5.1)(1c) Euro.
  - a. Is our view on what you have proposed correct? If no, please explain?
  - b. If yes, please explain and elaborate on what will happen with the original activities 5.1.1 up to 5.3. Will these activities be carried out later on? When (provide time schedule), by whom, and how is its financing arranged (by which financier/donor, already agreed upon and contracts signed)?
5. By implementing the proposed changes in the distribution system (to reach new areas) in our view the supply of clean drinking water to consumers in the new areas is still not solved and/or guaranteed. Additional investments are definitely required to connect new households to the system and to install new standpipes. How do you deal with those investments? Is financing already available? If yes, who is the financier? What is the timing of implementing these additional investments? Please, elaborate and explain?
6. Please, taking into account the above, elaborate and explain if and how the overall objective of the original project approved by ORET still will be met?

On 17 August 2011 ORET.nl has received the response from Tahal. Based on the response, ORET.nl continued its assessment of the change request. The result of the assessment is, that the proposed changes are not acceptable to ORET.nl, for the following reasons.

The proposed changes cause the original scope of the project to be changed drastically. The ORET grant will alternatively be used for different ends than they were originally proposed by Tahal and GWCL. Moreover, the new scope of the project would perhaps not have resulted in an approval of the grant application, considering the data on which ORET.nl has based the various calculations during the assessment of the application become completely different.

In addition to the change in project scope, it remains highly uncertain to ORET.nl if and when the project will in effect be taken over by the Government of Ghana and GWCL through additional financing arrangements of some other kind. Whereas the existing project in its original scope has a beginning and an end, the project becomes an open ended project as a result of the proposed changes. As a consequence, the sustainability of the project becomes highly uncertain as a result of the proposed changes.

III.2	Conclusie
	<p>Considering the objections with regard to the substantial change in original project scope, the uncertainty with regard to the financing of the changes and the potential lack of sustainability of the project as a result of the proposed changes, the changes cannot be approved.</p> <p>Considering the objections of ORET.nl to the changes Tahal and GWCL are proposing, ORET.nl proposes to keep the scope of the project that is partly financed by ORET.nl similar to the original scope. It is suggested that the Government of Ghana and GWCL take on the additional investments to reach new areas, instead of turning the investments around and incorporate them into the ORET-project.</p>

Voor akkoord:

(5.1)(2e)

(5.1)(2e)

Datum:

6/9/2011



Tahal Group B.V.

**(5.1)(2e)**

7 September 2011

2011-0000 **(5.1)(2e)**

**Decision to turn down the request for changes in the distribution network of ORET Project "ATMA Rural Water Supply System South of Kpong" (GH/WM07029)**

Dear Mr. **(5.1)(2e)**

On 17 August 2011 ORET.nl has received your response to our letter dated 15 July 2011, in which ORET.nl had raised questions with regard to your change request. I have decided not to approve of these changes and to turn down your request. In this letter I will explain my motivation for this decision.

The motivation for my decision to turn down your request to make changes to the project is the substantial effect the changes have on the original scope of the project. The original project scope encompasses the rehabilitation and expansion of the Accra Tema Metropolitan Area (ATMA) Rural Water Supply Scheme, South of Kpong and includes treatment, transmission and distribution of potable water to communities in five districts located around the cities of Accra and Tema. According to your change request, it is now proposed to substantially change this scope, by focusing on increasing the water production capacity first. As part of your change request, the distribution pipelines (except for the standpipes) to the end users will no longer be part of the ORET financing agreement, but these will be financed by the Government of Ghana and GWCL themselves at a later stage.

This new arrangement is not acceptable to ORET.nl, as it poses a substantial change to the original scope of the project. The ORET grant as you propose it, will be used for different ends than they were originally proposed by Tahal and GWCL. Moreover, the new scope of the project would perhaps not have resulted in an approval of the grant application, considering the data on which ORET.nl has based the various calculations during the assessment of the application become completely different.

In addition to the change in project scope, it remains highly uncertain to ORET.nl if and when the initial scope of the project will in effect be taken over by the Government of Ghana and GWCL through additional financing arrangements of some other kind.

Whereas the existing project in its original scope has a beginning and an end, the project becomes an open ended project as a result of the proposed changes. As a consequence, the sustainability of the project becomes highly uncertain as a result of the proposed changes.

Considering my objections to the changes you are proposing, ORET.nl proposes to keep the scope of the project that is partly financed by ORET.nl similar to the original scope. I suggest that the Government of Ghana and GWCL take on the additional investments to increase the water capacity outside of the ORET project, instead of turning the investments around and incorporate them into the ORET-project.

I trust to have informed you sufficiently. Please contact ORET.nl in case you have any questions concerning the above.

The minister for European Affairs and International Cooperation,

On his behalf:

(5.1)(2e)



ATMA SoK - TEMA reservoir - rehabilitation VS building new

(S.1)(2e)

16-10-2012 15:10

History

This message has been forwarded.

Dear (S.1)(2e)

Further to our earlier conversation on various aspects of the above captioned project, with respect to the TEMA reservoir - rehabilitation of the existing reservoir instead of building new reservoir (Item 3.1 of the Contract), we would like to confirm that:

1. We would not use (S.1)(1c) but instead we will be use (S.1)(1c)
2. The total charge for the rehabilitation plan will be aligned to the budget of the original scope - i.e. will not exceed Euro (S.1)(1c)

Should this be acceptable to sufficient to you, please confirm your acceptance and provide your approval for this change.

We will appreciate receipt of a copy from your approval, should it be given.

Best regards,

(S.1)(2e)

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RE: Ghana meeting on 11 June 2012

(5.1)(2e)

15-07-2012 16:33

Cc:

(5.1)(2e)

1 attachment



GWLC Letter re Reservoir Change.pdf

(5.1)(2e)

Enclosed please find our reply to your queries adjacent to the original, in text body. I hope it addresses the issues you raised in your mail.

Sorry for the delay in replying due to the project manager traveling.

Should you have any further questions, please don't hesitate to contact us.

Best regards,

(5.1)(2e)

From: (5.1)(2e)

Sent: Monday, July 09, 2012 6:49 PM

To:

(5.1)(2e)

Cc:

Subject: RE: Ghana meeting on 11 June 2012

Dear (5.1)(2e),

We acknowledge receipt of your mail and will revert to with our replies you within few days.

Best regards,

(5.1)(2e)

From: (5.1)(2e) pwc.com

Sent: Friday, July 06, 2012 5:29 PM

To:

(5.1)(2e)

Cc:

pwc.com

Subject: RE: Ghana meeting on 11 June 2012

Dear (5.1)(2e),

With regard to the request to change part of the project in Ghana (to rehabilitate the existing Tema service reservoir of (5.1)(1c)) instead of building a new Tema service reservoir of (5.1)(1c), after our assessment of the request we would like to ask you some additional questions:

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1. You propose [ (5.1)(1c) ] (item 7.1). This solution is not preferred, since the use of [ (5.1)(1c) ] near drinking water facilities can pollute the drinking water directly and in the future. Can you propose an alternative solution?

The work under this item refers to the erosion control surrounding the concrete structure and the down-roads. These are distant from the reservoir, so use of [ (5.1)(1c) ] shouldn't jeopardize it.

2. Can you explain why the clearing of the top of the reservoir costs [ (5.1)(1c) ]? [ (5.1)(1c) ] appears to be a very large area to clear, much larger than the area of the reservoir itself. Is this really necessary?

The area to be cleared and grassed, at the size of [ (5.1)(1c) ] is of the reservoir as well as concrete structure area, therefore is larger than the net size of the reservoir itself.

3. The cleaning of the external surface by sand blasting is cheaper than the clearing of the top (item 5.3) [ (5.1)(1c) ]. Can you clarify this?

The used term of [ (5.1)(1c) ] is misleading as such aggressive cleaning method is likely to damage the relatively sensitive surface of the concrete. The guiding description is "or any other required method." We concluded that [ (5.1)(1c) ] is the one to be implemented. This is the estimation for it.

4. Clearing of the access road (item 1.2) is cheap compared to the clearing of the top [ (5.1)(1c) ]. Can you clarify this?

The method to be used for this item is not the one under item 2 above but cheaper. This is the price estimation for it.

5. Clearing of the pipe track (item 6.1.2) is cheap compared to the clearing of the top [ (5.1)(1c) ]. Can you clarify this?

The method and cost to be used for the bush cleaning under this item is not the one under item 2 above, but cheaper. This is the price estimation for it.

6. The budget for the new reservoir amounts to [ (5.1)(1c) ]. The budget for the refurbishment however amounts to [ (5.1)(1c) ]. How is the extra budget of [ (5.1)(1c) ] paid for?

The issue of the over budget of [ (5.1)(1c) ] should be addressed together with the other costs/budget issues that were brought up. Tahal is willing to be creative and flexible in the discussion how to address these specific over budgeted item.

7. Have you received a notice of [ (5.1)(2e) ] of GWCL, that he agrees to the change?

GWCL are agreeing and supporting such change, as expressed in the attached letter which we understood that was sent to you.

One other thing I would like to follow up on, is the issue of the Dutch content. With regard to the request to purchase [ (5.1)(1c) ] pipes locally, is there any news in this respect?

We are expecting GWCL written response to this issue, after that they expressed their support verbally. The time saving that can be gained due to the local purchasing is very important and beneficial for them. The required Dutch content will of course be met.

I am looking forward to hearing from you soon.

Thank you and kind regards,

# GHANA WATER COMPANY LIMITED

Main Bankers: Social Security Bank  
National Investment Bank



Head Office:

(5.1) (1c)

NY Ref. No. ....

Our Ref. No. ....

12 April, 2012.

STICHTING ORET  
PRINSES MARGRIETPLANTSOEN 46  
2595 BR THE HAGUE  
P.O. BOX 38715  
2500 GS THE HAGUE

RECEIVED  
29 APR 2012  
(5.1)(2e)

Dear Sir,

## ATMA RURALS WATER SUPPLY (SOUTH OF KPONG) PROJECT

### Status of the Tema Service Reservoir (5.1) (1c)

A new Tema Service Reservoir (5.1)(1c) ground level concrete storage reservoir is proposed under the above captioned project. This new reservoir is situated in close proximity to an existing Tema service reservoir, (5.1)(1c).

Preliminary inspection carried out in May, 2011 on the existing Tema service reservoir by Messrs Tahal Group BV indicate that it is in good condition. GWCL instructed Tahal Group to conduct a condition survey and provide bill of quantities for a proposed rehabilitation of the existing Tema Service Reservoir.

We propose that the funds meant for the New Tema Service Reservoir (5.1)(1c) be deployed for the rehabilitation of the existing Tema service reservoir (5.1)(1c) since this will serve the same purpose and also guarantee a larger water storage capacity.

We write to seek for your approval on the above request as the benefits of the rehabilitated (5.1)(1c) Reservoir will far outweigh that of constructing a new (5.1)(1c) ground level reservoir.

Yours faithfully,

(5.1) (2e)

Cc:

(5.1)(2e)

(5.1) (2e)

5.1.1c

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## ATMA Rural Water Supply System (LOT 9A)

SOUTH OF KPONG

## BILL No. 3: CONSTRUCTION OF GROUND LEVEL RESERVOIRS

Item No.	Description	Unit	Qty	Unit Rate Euro	Amount Euro
	BILL 3.1 New Tema Service Reservoir - 2,000 cu.m.				
1	Site clearing				
2	Excavation for site formation				
3	Compacted soil for site formation				
4	Excavation in rock				
5	Site development, access road fence, double leaf gate				
6	Concrete class 15-G-10 50 mm thick				
7	Concrete class 30-E-20 in walls and roof				
8	Concrete class 30-E-10 in floor				
9	Supply, cut, bend and fix in position mild steel reinforce				
10	Supply and construction joints				
11	Supply of all pipe work, water level indicator, valves, fit and accessories including valve chamber				
12	Installation of all above accessories				
13	Leakage test for reservoir and pipework				
	Sub-Total Bill				

(5.1) (1c)

(5.1)(1c)

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ITEM	DESCRIPTION	UNIT	QTY	UNIT COST (€)	TOTAL COST (€)
	<u>General repair works</u>				
1.0	Site Clearing				
1.2	Clearing of the access roads to the reservoir site.				
2.0	Earth Works				
2.1	Filling and compaction of all ditches around the reservoir by an approved material under Technical specification.				
2.2	Filling and compaction on the access road with an approved material under Technical specification.				
2.3	Generation of an approved slope to all erosion prone areas according to an approved erosion check mechanism.				
2.4	Extra over for rock excavation				
3.0	Site Development				
3.2	Construction of Drains along the access road.				
3.3	Desilting of the existing Drains around the reservoir.				
4.0	Installation of Reservoir Accessories				
4.1	Supply, fabrication and installation of metal covers.				
4.3.1	Brushing all metal works on the reservoir accessories such as ventilation pipes, ladders and other pipes with a metal brush or any suitable instrument.				
4.3.2	Re-coating all metal works on the reservoir accessories such as ventilation pipes, ladders and other pipes with an approved paint.				
4.4	Supply and installation of Anti-Insect grills on the ventilation pipes.				
5.0	Reservoir Cleaning				
5.1	Cleaning, sealing, chlorination of the reservoir by an appropriate mechanism according to technical specification.				
5.1.1	Cleaning of internal surfaces of reservoir by sandblasting or any other required method, making out of all visible cracks, thoroughly cleaning and drying up of marked out areas				
5.1.2	Injecting sealant material (ultra low viscosity polyurethane material) or any other required method by a seal boss gun, for fast application, into the cracked space.				

(5.1) (1c)

TAHAL GROUP B.V.

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(5.1)(1c)

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ITEM	DESCRIPTION	UNIT	QTY	UNIT COST (€)	TOTAL COST (€)
5.1.3	Painting the internal surfaces of reservoir with vandex				
5.1.4	Chlorination of the reservoir				
5.2	Provision and implementation of an appropriate mechanism for sealing and supporting all cracks of the retaining walls, wing wall and damaged structures.				
5.2.1	Cleaning of external surfaces of reservoir by sandblasting or any other required method, marking out of all visible cracks, thoroughly cleaning and drying up of marked out areas				
5.2.2	Injecting sealant material (ultra low viscosity polyurethane material) or any other required method by a seal boss gun, for fast application, into the cracked space.				
5.2.3	Clearing top of reservoir of all vegetation and grassing of area.				
5.2.4	Demolishing wing wall at Northward direction and disposal of demolished material 50m from site				
5.2.5	Reinstatement of wing wall at Northward direction				
5.3	Clearing site of all vegetation and grassing of sloping areas of reservoir.				
6.0	Leakage Test for Reservoir and Pipe works				
6.1	Water proof test for the reservoir.				
6.1.1	Supply and delivery of HDPE pipes dia. 200mm to Tema reservoir				
6.1.2	Bush clearing (6m wide)				
6.1.3	Laying of pipes				
6.1.4	Removing pipe line				
	General repair works carried to summary				

(5.1) (1c)

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST (€)	TOTAL COST (€)
	<u>Erosion control</u>				
7.0	Site Clearing				
7.1	Grubbing of area around the reservoir with herbicide.				
7.2	Removal of top soil 20cm thick				
8.0	Earth Works				
8.1	Manual excavation in clay soil				
8.2	Rock excavation				
8.3	Filling with selected fill material and compaction as per instructions in the drawing.				
8.4	Removal of surplus materials				
8.5	Compaction of sub-grade				
9.0	Gabion Placement Works				
9.1	Supply of Gabions with basket size 1.0m x 1.0m x 1.0m arranged in stretcher bond as per drawing				
9.2	Rockfill to gabion, 5cm-15cm rock size				
9.3	Supply and installation of Geotextile				
9.4	Provision of scour check, kusa wood 7.5cmx7.5cmx50cm long				
9.5	Stone pitching of slopes according to drawing				
9.6	Rock rip-rap with rock size 25cm - 50cm according to drawing				
10.0	Fencing				
10.1	Provision of fencing with 2" diameter metal post 2.5m apart, wrapped with barbed wire 0.3m apart as per drawing.				
10.2	Two double leave gate				
	Erosion check control carried to summary				

(5.1) (1c)

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST (€)	TOTAL COST (€)
<b>(5.1) (1c)</b>					

ITEM	DESCRIPTION	UNIT	QTY	UNIT COST (€)	TOTAL COST (€)
11.3	Fabrication, load transport and unload at construction site and installation of water level indicator as per specifications	Unit			
	Mechanical works carried to summary				
	<u>Grand summary</u>				
	General repair works				
	Erosion control				
	Mechanical works				
	Add 10% for contingency				
	Total value of works				
	TAHAL GR				
	P. C. BO				
	ACORA - C				

(5.1) (1c)

3 September 2012

Stichting ORET  
Prinses Margrietplantsoen 46  
2595 BR The Hague  
P.O. Box 30715  
2500 GS The Hague

Dear Sir,

ORET Project number GH/WM07029

ATMA Rural Water Supply System South of Kpona, Ghana - Price Adjustment

Following our previous correspondence and exchanges, we would like to address to your attention the issue of Price Adjustments.

According to the Commercial Contract signed between GWCL and TAHAL B.V., (5.1) (1c) Adjustment Factor (PAF), Tahal is entitled for certain predefined price adjustments.

Based on our estimations, that we are currently reassessing, the Price Adjustments is totaling approximately Euro (5.1) (1c). To our understanding, this should be covered by the Price and Physical Contingencies item in the Project Costing. This can be allocated for that purpose only subject to Oret approval and totaling Euro (5.1) (1c), out of which Euro (5.1) (1c).

Presuming Oret consent for the usage of the Price and Physical Contingencies to that purpose, this still leave a deficiency of about Euro (5.1) (1c).

We would like to meet you early in the week starting September 10 in order to present you with our calculation and to discuss possibilities of addressing this deficiency.

We will appreciate your acknowledgement of this letter and propose dates for the suggested meeting/s.

We trust your full cooperation and support of the project so we can jointly continue its implementation and bring it to successful completion.

**(5.1) (2e)**

Cc:  
GWCL  
ING Bank

16-07  
0839i

August 15, 2007

Mr. (5.1) (2e)  
ORET Desk  
PricewaterhouseCoopers  
Prinses Margrietplantsoen 46  
2595 BR Den Haag  
P.O. Box 30715  
2500 GS Den Haag

Dear Sir,

**Re: Questionnaire concerning ORET Application GHWM07029**  
(2007-0328/WM/nt and 2007-0386/WM/evb)

Following receipt of your questionnaire for the project of **Rehabilitation/Expansion of the ATMA Rurals Water Supply Project – South of Kpong** enclosed please find our reply. We trust this reply will be to your full satisfaction.

Kindly do not hesitate to contact me for any further clarifications.

This reply is presented in digital form, along with a spreadsheet of our revised calculations. A hardcopy of the same will be sent to you via post next week.

Sincerely yours

**(5.1) (2e)**

Enclosed: Reply to questionnaire

cc:

Mr.

Ms.

Mr.

Mr.

Mr.

**(5.1) (2e)**

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1.V. (5.1) (1e) • Tel: +31 (0) 30 0210 • Fax: +31 (0) 30 00011 • e-mail: [info@tahal.nl](mailto:info@tahal.nl)

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© Tahal/Verhaegh & WARENDIJS ORET APPLICATION GHWM07029 - ORET - Overlever: 9 SEP 07

1073159

## Questions Regarding the Project

## Question:

## A. Project Definition

Please clearly formulate the project definition.

## A. Project Definition

The Project consists of the following rehabilitation and expansion works of an existing old system to provide potable water to communities in five districts located around Accra and Tema, with a total projected population (2020) of 578,000 inhabitants.

## Rehabilitation Works

- One of the existing treatment plant units for a capacity of approximately 9,000 m<sup>3</sup>/day.
- The main transmission pipe (steel, 525 mm) will be replaced by a (6.1)(te) long pipe, followed by a (5.1)(te) long pipe.
- Repair of the existing Tema Service Reservoir – 2,000 m<sup>3</sup>.

## Expansion Works

- A new treatment plant for a capacity of (1.9)(te) m<sup>3</sup>/day.
- Construction of (6.1)(te) reservoirs one of (1.9)(te) m<sup>3</sup> and three of (0.9)(te) m<sup>3</sup> each.
- Expansion of the distribution networks in the most densely populated communities, by laying (0.9)(te) km of (0.9)(te) pipes with diameters ranging between (0.9)(te) and (6.1)(te).
- Installation of (0.9)(te) metered house connections.
- Installation of (0.9)(te) standpipes.

With the exception of the above items, all the other existing elements will continue to be operational.

## Question:

## B. Institutional Background

## B. Institutional Background

1. Provide background information on Tahol in general, Tahol in Ghana, and the long relationship of Tahol with this project.

**B.1 TAHAL – General**

TAHAL Group is a leading international engineering concern, ranking among the top companies of its kind in the world. Founded in 1952, TAHAL is a pioneer in the fields of planning, development and management of water resources in Israel and has to date carried out innumerable projects in over 50 countries on five continents. Services are offered at various levels of activity, namely: master plans; feasibility studies; detailed design; project management; construction supervision; full turnkey projects' implementation, including design, construction and financing, construction implementation as a main contractor, and BOT/BOO projects including equity investment. TAHAL is wholly owned by Kardan N.V., an international investment company based in the Netherlands, listed on Euronext Amsterdam and the Tel-Aviv Stock Exchange.

The Kardan Group's total assets amounted to approximately USD 2.9 billion (as of 31 December 2006), with revenues of USD 700.7 million in 2006 and 7,980 employees in its consolidated group of companies.

TAHAL GROUP B.V. was incorporated by Kardan in January 2005, and has been structured as the holding company of the TAHAL group of companies, under Kardan's full ownership.

**a) TAHAL in Ghana**

TAHAL has been actively involved in development projects in Ghana since 1961, when it served as a water supply consultant to Ghana Water and Sewerage Corporation (GWSC) for the Accra-Tema Metropolitan Area (ATMA) and other related projects. TAHAL's work for GWSC has included various consultancy services, from master plans, feasibility studies, design and supervision of construction, to post-construction services. TAHAL has also provided substantial technical assistance for numerous GWSC projects, as well as consultancy services for reorganization, management and rehabilitation of GWSC itself. Major long-term projects performed by TAHAL for GWSC include the supervision of Pipeline Rehabilitation and Emergency Works of ATMA Water Supply Scheme, Project Management Consultancy for Water Sector Rehabilitation and Strategic Investment Program (SIP) for Water Sector Rehabilitation. This latter project was completed in January 1998.

TAHAL has assumed a major role in the upgrading of works and organization of the Ghana Highway Authority (GHA). In the roads and bridges sector, TAHAL has been responsible for ranking over 600 bridges according to repair and upgrading priorities, followed by feasibility studies, design and construction supervision for the rehabilitation of 100 bridges and construction of several new



*ATMA Rural Water Supply System - South of Kpong, Ghana*

bridges. Under the Second and Third Highway Projects, TAHAL provided technical assistance to the GHA in the upgrading of some (6.1)(1c) of roads and guidance to local contractors engaged in road construction and maintenance. Another major project was technical assistance to GHA in the management of its Mechanical Division, including management of the mechanical workshops for maintenance and repair of heavy equipment and other vehicles, as well as the reorganization and computerization of stores operation and implementation of training programs, both on-the-job and within the framework of the Mechanical Training School. TAHAL provided a Management Information System for the Ministry of Roads and Highways. Under the Cocoa Feeder Roads Rehabilitation Project of the Department of Feeder Roads, TAHAL carried out studies and designs for spot improvement of (6.1)(1c) of feeder roads, including the design of 70 km of new roads, standard water crossings and culverts.

In the Agricultural Sector, TAHAL has provided technical assistance in the reorganization and training of extension staff of the Volta Region Agricultural Project (VORADEP), carried out the feasibility studies and design of the Weija Irrigation Project and the Kamba Irrigation Project, and prepared a review and update of the Dove Agricultural Project.

*b) ATMA Rural Water Supply System -History*

The above system was designed by TAHAL in the early 1970s to supply water to the communities located in the Greater Accra Region and within a distance of about 60 km from Accra and Tema in the Eastern Region.

The source of water is the Kpong Old Water Works, which were built in the early 1950s to supply water to Accra. After the construction of the New Kpong Water Works for Accra, the old Kpong Water Works, along with other existing system components, were incorporated into the system called ATMA Rural Water Supply System (also called OLD KPONG). The current system was constructed in the late 1970s with World Bank credit, under the contract management and supervision of TAHAL. No major rehabilitation works have been undertaken since, except for the replacement of old water pumps.

It is to be noted that this System is part of the Urban Water Sector of Ghana and is today managed by AQUA VITENS RAND LIMITED (AVRL), the private operator for the whole Urban Water Sector of Ghana.

*c) ATMA Rural Water Supply System - Tender for Design, Build and Finance*

TAHAL completed the Sector Investment Program (SIP) in 1998 for the GWSC (now replaced by Ghana Water Company Limited (GWCL)) under a World Bank Water Rehabilitation Program. The World Bank then declared that it would not

**ATMA Rural Water Supply System - South of Kpong, Ghana**

continue to support the Urban Water Sector of Ghana, unless the Government of Ghana (GOG) introduced the Private Sector. Thus, until the years 2004/5, when the GOG finally decided to introduce the Private Sector, there was no major investment in the sector, except by European Development Agencies, mainly from the Netherlands and Spain.

In June 2000, mindful of the abovementioned restriction and in order to develop the Sector, the GOG through GWCL issued an international tender for the design, build and finance of the rehabilitation and expansion of many water supply systems, based on the technical data provided in the Project Profiles prepared in the SIP Report.

TAHAL submitted its offer for the ATMA Rural Water Supply System (Lot 9a), a system that previously was designed by TAHAL and for which valuable information and data was available in-house. After evaluation of the offers and selection of the best evaluated bid, GWCL conducted negotiations with TAHAL and a commercial Contract was signed in January 2001.

Some months thereafter, a new Government took office following general elections in the country, and it was decided to delay any signed contracts that had not begun.

Early in 2003, the signed contract between GWCL and TAHAL was given to Crown Agents for their review and their assessment for Value for Money.

Based on their report, the Ministry of Finance and GWCL conducted negotiations with TAHAL in July 2003 and reached an agreement, which is reflected in a signed Addendum to the original Contract.

In order to meet the financial limits determined by ORET, the project was downsized and an Application for ORET Financing was submitted accordingly in February 2007.

**d) TAHAL's On-going Projects with GWCL**

Three years ago, the World Bank initiated an Urban Water Project in GHANA for the amount of \$US 120 million comprising the following components:

- a) System Expansion and Rehabilitation - \$US <sup>(6.000)</sup><sub>(6.000)</sub> million
- b) Public - Private Partnership Development - \$US <sup>(2.000)</sup><sub>(2.000)</sub> million
- c) Capacity Building and Project Management - \$US <sup>(6.000)</sup><sub>(6.000)</sub> million
- d) Severance Program - \$US <sup>(6.000)</sup><sub>(6.000)</sub> million

## ATMA Rural Water Supply System - South of Kpong, Ghana

The 6-year investment programme for physical Works has been divided into three sub-components:

- a.1) The First Year Investment Program (FYIP) –\$US [a.1.1] million
- a.2) The Subsequent Year Investment Program (SYIP) –\$US [a.1.2] million
- a.3) Repair, Replacement and Rehabilitation Fund (RRRF) –\$US [a.1.3] million

TAHAL is assisting GWCL in the Contract Management and Supervision of the First Year Investment Program (FYIP) for 18 months dating from April 2007 and is about to sign a 16-month contract for Consultancy Services for the Review and Updating of the SIP and Engineering Studies for Preparation of the SYIP of the Urban Water Project.

## Question:

2. Provide the annual accounts for 2006 for the Tahal Group.

## B.2 TAHAL GROUP BV - ANNUAL REPORTS for 2006

The annual financial reports for 2006 have been completed and are currently waiting for the team-manager at Ernst & Young Amsterdam to return from his vacation, for a formal approval and signature. The full final draft as of 31/07/07 is attached herewith. (Annex I)

## Question:

3. Provide information for the cooperation between AVRL and GWCL. What will be their respective roles in general and specifically for this project?

## B.3 Cooperation GWCL/AVRL

At the beginning of 2006, GWCL signed a Management Contract with AVRL, following World Bank procedures for tendering and procurement.

The contract is for a [a.3.1] period, during which AVRL will be responsible for the operation, maintenance and revenue collection for the whole Urban Water Sector of Ghana, including of course the ATMA Rurals Water Supply System, which forms an integral part of the GHANA Urban Water Sector.

The Management Contract specifies that by the end of the fourth year period, GWCL may decide to issue a tender for an Affermage.

## ATMA Rural Water Supply System - South of Kpong, Ghana

It should be noted that this Management Contract is supported financially by the World Bank.

The role of GWCL, besides monitoring the performance of AVRL, is now limited to managing the investment program for the rehabilitation/expansion of the various water systems.

The Investment Program is largely supported by the World Bank and a few European countries, such as the Netherlands and Spain.

*Question:**C. Current Situation*

*Provide a clear and factual overview of the current situation:*

1. *Demand (based on number of users in the service area, usage per person, size of household, etc). Please note that this should also include the households in the area's that are not yet served by the 'South of Kpong' system.*
2. *Supply and distribution (capacity of current system, number of household connections, stand pipes etc.)*
3. *Revenues (based on current prices)*
4. *Costs (costs of operations, number of personnel, etc)*
5. *What is the book value of the current system?*
6. *Please specify / describe what would happen if the project is not implemented?*

**C. Current Situation**

- a) As recorded over the last 6 months, the measured capacity at Kpong is 25,650 m<sup>3</sup>/day.
- b) Taking into consideration about 45% water losses, the effective consumption is only 14,110 m<sup>3</sup>/day for an estimated current population of 355,000 inhabitants.
- c) The average per capita water consumption is about 40 litres/day (as an indicator for demand).
- d) The number of registered consumers is 9,682.
- e) The number of persons per household varies between 10 and 15.
- f) The number of house connections is 7,450.
- g) The number of standpipes is 450.

As can be seen from the above figures, only about 35% of the population is actually connected to the system. The majority are obliged to fetch water from distant standpipes, or from un-salubrious streams nearby. Young

children are sent twice daily to fetch water and carry the heavy buckets or jerry cans on their heads over long distances.

- h) As mentioned above, the actual water supplied from Old Kpong to the system, is 25,650 m<sup>3</sup>/day. However, the existing treatment plant, constructed over 50 years ago, is in a very bad state and needs urgent replacement and expansion to meet the requirements of potable water according to international standards.
- i) The average revenue from water sales from the system is as follows (based on available data): (5.1) (1c)
- j) The present operational costs are as follows:  
 Chemicals: (5.1) (1c)  
 Energy: (5.1) (1c)  
 Manpower: (5.1) (1c)
- k) The number of staff working in the South of Kpong system is 58.
- l) The book value of the existing South of Kpong system is (5.1) (1c) Cedi and the amount for investment budgeted this year is (5.1) (1c)
- m) In a "without project" scenario (where this Project is not implemented), the water shortage will become more pronounced and acute, the un-served population will swell, and the walking distance from the standpipes to the houses will increase. The worsening living conditions will no doubt have had economic implications and since the project area is very close to Accra, this will result in a substantial population migration to Accra, which already suffers from an insufficient and overstretched infrastructure.

TABLE 1- ATMA Rural Water Supply System Information Table

Item	Without Project	With Project
Population in Project Area	355,000	578,000
Production capacity	25,652 m <sup>3</sup> /day	37,120 m <sup>3</sup> /day
Effective consumption (Demand)	14,119 m <sup>3</sup> /day	31,550 m <sup>3</sup> /day
Water losses	45%	15%
Average per capita demand	40 litres/day	55 litres/day
Number of consumers	9,882	15,800
Persons per household	10-15	10-15
Number of house connections	7,450	16,450
Number of standpipes	450	1,050
Water Tariffs (1)		
Domestic Metered (up to 20 m <sup>3</sup> /month)		
(above 20 m <sup>3</sup> /month)		
Public standpipes		
Government institution		
Commercial / Industrial		
Operational Costs		
Chemicals		
Energy		
Maintenance		
No. of staff		
Book Value		

(5.1) (1c)

(1) For economic evaluation: the domestic price of "With project" scenario is based upon "willingness to pay". The price in the model is changed according to projected variations of consumption per capita and growth of income per capita. For the financial sustainability, present prices were used, incorporating 1% annual growth.

## Question:

## D. Projections for the project

1. Clearly indicate the scope of the project and what you have to do to get from the 'current situation' to the new situation.

## D. Projections for the Project

## D.1 Scope of the Project

In order to alleviate the present water shortage and improve the water supply in the area, both from the quantity and quality points of view, as well as for water supply reliability, the following actions will be carried out within the framework of this project:

*Newly Built/Installed*

- A new treatment plant with a capacity of (5.1) (1c)
- Main transmission pipe: (5.1) (1c)
- Concrete ground level reservoirs: (5.1) (1c)
- Distribution networks expansion: (5.1) (1c) mm).
- Metered house connections: (5.1) (1c)
- Standpipes: (5.1) (1c)

*Rehabilitation Works*

- One existing water treatment unit (approximately (5.1) (1c)).
- Repair of the existing Tema Service Reservoir - (5.1) (1c).

**Change in Product Quality:** With the rehabilitation and expansion of the treatment plant, the quality of water supplied will dramatically improve and reach the accepted international standards.

**Operational Improvement:** Besides the improvement introduced by the construction of the storage reservoirs, the treatment plant will include a control system, with as much automation as required to minimize manual intervention as much as possible and reduce the number of staff. The local personnel will be trained to enhance their capacities to operate a modern treatment plant. The number of employees is expected to decline to (5.1) (1c) but due to the resultant higher skill/education level of some, the total manpower costs are expected to remain unchanged.

**Reduction of Water Losses:** The replacement of the old corroded transmission mains, and broken sections of old AC pipes, coupled with the introduction of a modern treatment plant, will result in a drastic reduction of water losses from the present (5.1) (1c) and thus augment the proceeds of the water revenues.

Question:

2. Clearly indicate the assumptions for the project and the sources on which the assumptions are based, i.e. assumptions on: growth of inhabitants, usage per inhabitants and growth rate, pricing, operational costs (personnel, chemicals, etc), percentage of leakage, percentage of uncollected.  
If these assumptions deviate from the 'normal' situation in Ghana, i.e. 'leakage' or 'uncollected' are very low, please explain why.

## D.2 Assumptions

In making our calculations, the following assumptions have been made. See also Annex 2.

- **Population:** The present population is 355,000 with an estimated annual population growth rate of 3.25%.
- **Production capacity:** "without-project" state, capacity will remain **[(5.1) (1c)]** per day. "With-project" state, capacity will be **[(5.1) (1c)]** per day from 2010.
- **Domestic and non-domestic consumption:**
  - The non-domestic is assumed to be a 10% of the total consumption.
  - The domestic demand is at present about 40 litres per capita per day and, as a consequence of forecasted upgrades in the standard of living, it is forecasted to increase by an annual rate of 2.5%, up to 55 litres per capita per day (in 2020).
- **Water prices:**
  - Prices of water in the project area at present (in 2006-2007) amount to \$US **[(0.01) (1c)]** per cubic metre for (average) domestic users and \$US **[(0.05) (1c)]** per cubic metre for (average) non-domestic users.
  - For the domestic consumption at the "with project" state it is assumed that the WTP price is the water price based on the "willingness-to-pay". (\$ US 1.04 for 2007)
  - For non domestic consumption, it is assumed that the current water prices will remain in effect. All prices are annually escalated by 1%.
  - For the "without-project" state, it was assumed that present prices will remain in effect until 2025, as there are no project benefits to influence.
  - The representative WTP function is that of an income group. The model assumes an average income of \$US 506 per capita.
  - For the income group, a reference point on the demand curve is characterized by a normative per capita consumption of 40 litres per day, and at this point the WTP is 3% of income.
  - The normative willingness to pay is, therefore, \$US 1.04/m<sup>3</sup>, representing the basic water price used in the economic analysis.
  - Annual income per capita growth rate is 2%.



Water price data for the economic analysis are summarized in Table 2.

Table 2: Water Price Data

	Water Initial Price (\$US/m <sup>3</sup> )		Annual Price Escalation Rate	
	With Project	Without Project	With Project	Without Project
Basic Domestic Water Price	1.04	0.544	WTP <sup>(1)</sup>	0%
Basic Non-Domestic Water Price	0.866	0.866	1.0%	0%

(1) For economic evaluation, the domestic price of "With project" scenario is based upon "willingness to pay". The price in the model is changed according to projected variations of consumption per capita and growth of income per capita. For the financial sustainability, present prices were used, incorporating 1% annual growth.

#### • Collection Rates

The income is based on water bills. It is calculated as a product of water prices and water quantities sold, taking into consideration the collection rates of these bills (Table 3).

Table 3: Bill Collection Rates

From	2007	2009	2011	2013	2015
To	2008	2010	2012	2014	2016
<b>With Project</b>					
Domestic	70%	85%	95%	99%	99%
Non-domestic	100%	100%	100%	100%	100%
<b>Without Project</b>					
Domestic	50%	70%	70%	80%	50%
Non-domestic	90%	90%	90%	90%	90%

#### • Investment Costs

- Table 4 presents a summary of the required investments according to the type of investment required and their timing. Gradual implementation of the project (5.1115) of additional water.
- For "without project" scenario we have assumed an inevitable investment in order to maintain the system in a working situation. It was assumed to be 100% out of the "with project" state in construction of transmission lines.

**Table 4: Investment Costs**  
(in thousands of \$US)

	Initial Investments			
Years	2007	2008	2009	Total
<u>With Project</u>	<b>(5.1) (1c)</b>			
General and Preliminaries				
Construction of transmission lines				
Construction of storage GLR				
<u>Kpong Water Treatment Plant</u>				
Treatment plant - civil engineering works				
Treatment plant - electromechanical works				
<u>Subtotal Kpong Water Treatment Plant</u>				
Construction of Water Distribution Network				
<u>Subtotal Other Investments</u>				
Total Investments				
Contingencies (5%)				
<u>Grand Total Investments &amp; contingencies</u>				
<u>Without Project</u>				
Rate of Without Project inevitable investments				
<u>Without Project inevitable Investments</u>				

For "without project" scenario, we have assumed an inevitable investment to maintain the system in a working condition. It was assumed to be 10% out of the "with project" state in the construction of transmission lines.

• **Operational Costs**

Energy:

- The electricity rate used was (6.0) (1e)
- The energy requirements at a rate of (6.0) (1e)

Chemicals:

- The costs of the chemicals needed for the Water Treatment Plant were calculated as the product of each chemical's consumption per cubic metre, the unit cost of each chemical in \$ US, and the actual water production in cubic metres.

- It is assumed the cost of \$ (5.1) (1c) for without project scenario (present cost) and 20% increase to \$ (5.1) (1c) for the "with-project" scenario.

**Maintenance****"With-Project" Scenario**

- Present maintenance costs (reduced as described in Table 5)
- Future Maintenance costs of (5.1) (1c) of the initial investment

**"Without-Project" Scenario**

- Current maintenance costs were estimated to be \$ (5.1) (1c)
- Costs escalated by 20% annually if the project is not implemented.
- Future Maintenance costs of (5.1) (1c) of the inevitable investment of transmission lines.

Table 5: "With-Project" and "Without-Project" Annual Maintenance Costs

(In thousands of \$ US)

	2007	2008	2009	Growth Rate (2010-2025)
With project				
Annual costs				
Ratio to present costs				
Without project				
Annual costs				
(1) Annual maintenance cost % of the initial investment				

**(5.1) (1c)**

**Manpower**

- This is assumed to remain at the present cost of \$ (5.1) (1c) for both scenarios.

**Question:**

- Provide calculations for 15 years based on the assumptions for
  - Commercial viability based on appropriate prices
  - Financial viability (based on current / realistic prices)
  - Economic viability

**D.3 Calculations****Commercial Viability based on appropriate prices:**

The results indicate that the payback period is 15 years. This renders the project commercially non-viable, as it indicates that the project would fail to generate sufficient income within 15 years to cover the initial capital investment and

ongoing (operating and financing) costs. This is in accordance with the standards of the OECD Consensus relating to commercial non-viability.

**Financial Viability (based on current / realistic prices):**

It is obvious that after one year, the accumulated net cash flow becomes positive, indicating financial sustainability.

**Economic Viability:**

The differential cash flow analysis yielded the following results:

**(5.1) (1c)**

Differential economic evaluation results are presented in Table 6.

**Table 6: Results of Differential Economic Evaluation**

	<b>(5.1) (1c)</b>
NPV (in thousands of US\$)	
Economic IRR	
Project payback period (in years):	

**Question:**

**E. Context Information**

Provide information on the policy of the Government of Ghana regarding water that may influence the sustainability of the project, in specific the pricing policy and the organisation of the water sector.

**E. Context Information**

The Water Policy has been submitted to Parliament for approval. The water pricing is concluded among the stakeholders with the Public Utilities Regulatory Commission who have the mandate to approve water prices. The water sector has been restructured with the following functions:

- GWCL: Provision of water to urban centres with a population larger than 5,000.

- Community Water and Sanitation Agency in charge of the provision of water to the rural and small towns.
- Water Resources Commission in charge of the protection of water bodies.
- Public Utilities Regulatory Commission in charge of approval of water prices and regulating the performance of utility providers.
- Water Director at the Ministry of Water Resources, Works and Housing to coordinate water issues nationwide.

The main objective is that the water tariff will cover the operation and maintenance (O&M) cost within the next 3-4 years.

*Question:*

**F. Social Aspects**

- What are the direct effects of the envisaged project on employment?
- What are the consequences for the water level/availability downstream?

**F. Social Aspects**

The Project will not have any direct effect on employment, except for a minor reduction of staff. However, some of the present staff will be trained and their capacities will be enhanced to enable them to operate and maintain this Project adequately.

The water source of the Project is a large artificial lake created between two hydro-power dams; Akasombo upstream and Akuse downstream.

The capacity of the Project is comparatively very small so that it will not have any effect on the water levels downstream.

*Question:*

*G. Other Aspects*

- Technical Assistance is not included in the project. Probably because AVRL has enough capable resources to operate the system sustainable. Why AVRL will be able to operate the system successfully for at least 10 years.

**G. Other Aspects**

**G.1 Technical Assistance**

Technical Assistance is limited to on-the-job training of the local staff during the design, construction and commissioning of the System and then handing over to GWCL/AVRL.

AVRL has been selected following a tender issued by GWCL, reviewed and approved by the World Bank. AVRL's scope of work is to manage all urban water systems, including this particular one. AVRL signed a management contract, supported financially by the World Bank, for a period of 5-years (2006-2010).

After this period, the intention is to shift to an Affermage Contract.

As far as we could learn from the GWCL, the operation of the Management Contract is successful so far. AVRL managed to double the revenue over the first six months of its operation, and it is therefore believed that AVRL has the required resources to operate this Project in a sustainable manner as well.

*Question:*

- Please provide a break down of the financing cost.

**G.2 Financing Costs**

**Commitment Fee:**  $\frac{0.1(10)}{360}$  p.a., which will be payable semi-annually in arrears and calculated on the undisbursed balance of the loan amount as from the coming into force of the loan agreement, on an actual/360 days basis.

**Management Fee:**  $\frac{15.11(10)}{360}$  flat fee, calculated from the total loan amount, payable upon coming into force of the loan agreement.

**Insurance Costs (by Atradius):** An indicative rate of  $\frac{0.25(10)}{360}$  flat, payable in advance for covering political risks as requested by the bank.

Table 7

## Other Financial Expenses

	Rate	(x US\$ 1,000)
Commitment fee (p.a.)		
ATRADIUS fee (flat)		
Bank's management fee (flat)		
Total		(5.1) (1c)

(Table from the Economic Model: Sheet: Main Data, A41)

## Question:

## H. Technical Evaluation / Price Control

## H. Technical Evaluation / Price Control

## Question:

1. Although you stated the preliminary design has been checked by Tahal by a field survey we still like to have more design information on the water treatment plant. Can you give a full design report, including all starting points for dimensioning for the main equipment?

## H.1 Treatment Plant

It will not be possible at this stage to provide a full design report on the water treatment plant. The dimensioning and pricing of the main elements were prepared by a very well known company specialised in the design and installation of water treatment plants worldwide, and based on actual raw water analyses and a field survey conducted by TAHAL's engineers.

## Question:

2. The deliveries of Dutch supplies are not per definition Dutch deliveries. Which percentage is of Dutch origin of the deliveries done by Dutch sub suppliers? Please split up per sub supplier its main components and the origin of these components.

## H.2 Dutch Supplies

As stated in the submitted application form (Table 16a, category III), components that are over 50% Dutch origin are estimated to be worth \$1 (5.1) (1c). In any agreement to be made with a Dutch Sub-supplier, it is a condition of TAHAL that the Sub-supplier qualifies for that category by providing the necessary acceptable documentation attesting to that fact. As indicated in Table 16a, almost

65% of Category III, is to be procured from Dutch (per definition) Sub-suppliers. The following Table 8 shows a division by sub-supplier, as per your example.

TABLE 8

Article	Potential Dutch Supplier (%)	Amount in millions of \$US
Piping	<b>(5.1) (1c)</b>	
Fittings & accessories		
House connections & standpipes		
Water Treatment Plant		

**(5.1) (1c)****Question:**

3. How will Tahal guarantee the Dutch content will be above the required minimum?

**H.3 TAHAL's Compliance with Minimum Dutch Content Requirements**

For many years, Tahal has been involved in projects in which procurement was defined by the sources of finance. TAHAL has always complied with any such conditions to the full satisfaction of the Financier/ECA involved. From this perspective, the Dutch content minimum requirement in this case is a similar guideline to follow. TAHAL's procurement specialists are always very responsive to such requirements, and constantly strive to comply with any such directives.

According to our plan, as stated in a duly signed application for the ORET grant, at least 65% of the transaction is of Dutch origin.

This commitment of TAHAL GROUP B.V. is to be reinforced by signing the ORET grant documents, stating that it is obligated to follow the ORET rules.



## Bijeenkomst Goedkeuringscomité

Datum: 18 september 2007

Bespreking Grant Appraisal Document:

Ghana GH/WMO7029 ATMA Rural Water Supply System South of Kpong

Aanvrager: TAHAL Groep B.V.

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### Discussiepunten:

1. De heer (5.1) (2e) vraagt om nadere informatie over de Kardan Groep. De heer (5.1) (2e) vraagt zich af of TAHAL, onderdeel van de Kardan Groep kan worden leggezogen? In de condities is opgenomen dat Kardan NV een garantie afgeeft.
2. Gevraagd wordt of er voldoende garanties aanwezig zijn om het Nederlands aandeel te realiseren aangezien TAHAL een buitenlands bedrijf is. De heer (5.1) (2e) geeft aan dat verwacht kan worden dat aan deze voorwaarde van het ORET Reglement zonder problemen voldaan wordt.
3. De heer (5.1) (2e) vraagt of training voldoende tot stand kan komen. De heer (5.1) (2e) geeft aan dat opbouw van institutionele capaciteit geen onderdeel is van het project (75 procent subsidie), maar dat training ter plaatse wel zal plaatsvinden.
4. De heer (5.1) (2e) geeft aan niet tevreden te zijn met de wijze waarop de financieringskosten gepresenteerd zijn in het rapport.
5. Ook bij dit waterproject in Ghana wordt gesproken over de invloed van de prijspolitiek van Ghana op ORET besluitvorming.

### Conclusie:

Geconcludeerd wordt dat de prijspolitiek van Ghana geen grond vormt voor afwijzing. Het Comité vraagt wel aan de beoordelaars aandacht te geven aan deze problematiek.

### Besluit: Positief advies

Tahai Group B.V.

**(5.1) (2e)**

25 March 2011

2011-0067/AK/fw/mvb

**Approval Condition Precedent GHWM07029**

Dear Mr. **(5.1) (2e)**,

With regard to the fulfilment of Condition Precedent 2.5d of the grant agreement for the project "ATMA Water Supply System" with project number GHWM07029 I wish to inform you as follows.

The condition precedent in article 2.5d of the grant agreement has been fulfilled accordingly.

From the submitted list of spare parts I have however concluded that the spare parts for the High Lift Pumps have become redundant. As a result of the redundancy of these spare parts the scope of the project has been marginally reduced. I wish to inform you that you may propose to ORET.nl an alternate use for the budget of approximately **(5.1) (1e)** that has become available. The alternative utilisation of the budget has to be agreed upon with and approved by the buyer, after which ORET.nl will also have to give its approval.

In case the available budget will not be used alternatively, this budget will not be eligible for funding from the ORET grant.

I trust to have informed you sufficiently. Please do not hesitate to contact ORET.nl in case you have any questions.

The minister for European Affairs and International Cooperation,  
On his behalf:

**(5.1) (2e)**

Tahal Group B.V.

**(5.1) (1c)**

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15 July 2011

2011-0117/AK/ff/ji

**Request for changes in the distribution network of ORET Project "ATMA Rural Water Supply System South of Kpong" (GH/WMO7029): Questions for clarification**

Dear Mr. **(5.1) (2e)**

On the 27<sup>th</sup> of June 2011, ORET.nl received a letter from TAHAL Group concerning a request for a change in scope in the distribution network originally proposed for the "ATMA Rural Water Supply System (Lot 9A) South of Kpong" (GH/WMO7029). This request is explained in a letter from GWCL dated 15<sup>th</sup> of April 2011, in which also the discussion with the ORET inspection team during last February is mentioned. The letter from GWCL is mainly dealing with replacing small distribution pipelines with sizes of **(5.1) (1a)** into larger sizes **(5.1) (1c)**. Although in February 2011, GWCL informed the ORET mission team that only a (secondary) pipeline of **(5.1) (2a)** has to be replaced by one with **(5.1) (1c)** with a total length of about **(5.1) (1c)**, the request in the letter from 15<sup>th</sup> of April is covering substantial changes in various areas (see table 1). Moreover, in the letter from TAHAL dated 27<sup>th</sup> of June, one of the pipe sizes has been changed again from **(5.1) (1a)** to **(5.1) (1c)**.

TABLE 1: Details of areas to be catered for under the distribution network of the ATMA Rural South of Kpong Project (in order of priority)

	Area	Size of pipe	Length of pipe
1	Kpone – Kalamenso - Michel Camp	<b>5.1.1c</b>	
2	Ampoku – Frankadia pipeline		
3	Gbatsila – Michel Camp		
4	Dawhenye Junction – Tema Community 25		

\*) In letter from TAHAL Group dated 27<sup>th</sup> of June 2011, the size of **(5.1) (1a)** changed into a **(5.1) (1c)** pipeline

However, in the original scope of the ORET application the distribution system consisted of the following pipelines including a substantial number of new household connections and standpipes (see table 2).

Table 2: Water Distribution network (with various sizes of pipes) in the project area including additional household connections and additional standpipes

	Area	Size of pipe	Length of pipe
1	Bill No 5.1.1 (in project area)	<b>(5.1)(1c)</b>	
2	Bill No 5.1.2 (in project area)		
3	Bill No 5.1.3 (in project area)		
4	Bill No 5.2 (in project area)		
5	Bill No 5.3 (in project area)		

It should be noted that the above mentioned distribution network (see table 2) is the main core of the expansion networks, besides the construction of both a new treatment plant with a capacity of **(5.1) (1c)** and four concrete ground level reservoirs. The overall objective of the project is to meet growing demand caused by the expected continued population growth in the project area and to supply clean drinking water to the consumers (mainly households) through additional new household connections and additional new standpipes. If all activities have been implemented approximately **(6.1)(1c)** additional people shall be supplied with drinking water in 2022.

In order to be able to assess the request as stated above and to finally decide on its approval, a number of questions for clarification have to be answered. The questions are:

- Please, provide a map in which the original project area has been drawn, including the distribution system (existing and new) in the five districts located around the cities of Accra and Tema.
- Please, outline and clarify in the map mentioned in point 1 all the changes in the distribution system as proposed in your request, including its consequences for the distribution system as proposed in the original proposal of the project.
- Will the proposed changes in the distribution system also affect the original project area? If yes, please explain in what way.
- In the letter from TAHAL Group (dated 27<sup>th</sup> of June 2011) on page 2 the table is indicating the proposed changes including the amounts in Euros. From this table ORET.nl do understand that the activities mentioned on the right side of the table (Bill no 5.1.1; 5.1.2; 5.1.3; 5.2 and 5.3) summing up to **(6.1)(1c)** Euro will not be carried out under this ORET project anymore. These activities appearare completely replaced by the activities proposed on the left side of this table (Bill no 2, 3, 4, 5 and 6) summing up to **(6.1)(1c)** Euro.
  - Is our view on what you have proposed correct? If no, please explain?
  - If yes, please explain and elaborate on what will happen with the original activities 5.1.1 up to 5.3. Will these activities be carried out later on? When (provide time schedule), by whom, and how is its financing arranged (by which financier/donor, already agreed upon and contracts signed)?
- By implementing the proposed changes in the distribution system (to reach new areas) in our view the supply of clean drinking water to consumers in the new areas is still not solved and/or guaranteed. Additional investments are definitely required to connect new households to the system and to install new standpipes. How do you deal with those investments? Is financing already available? If yes, who is the financier? What is the timing of implementing these additional investments? Please, elaborate and explain?

8. Please, taking into account the above, elaborate and explain if and how the overall objective of the original project approved by ORET still will be met?

We kindly ask you to answer all above questions in as much detail as possible within a period of two weeks after the date of this letter, in order to avoid a significant delay in the activities of the project and to avoid that proposed activities will already start without having an approval from ORET.nl.

We thank you very much in advance for your collaboration and are waiting for your swift response. In case you have any questions concerning the above, please contact ORET.nl.

The minister for European Affairs and International Cooperation,  
On his behalf:

**(5.1) (2e)**

# Ghana ATMA Rural Water Supply Project

Data collection and assessment of acceptable  
scenario

Final report

Client: TAHAL Group B.V.

ECORYS Nederland BV

Rotterdam, 12 September 2006

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1073163

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## 1 Introduction

TAHAL Group B.V. has applied for financing under the ORET-programme for an export transaction to Ghana for Ghana Water Company Ltd. (GWCL). The application concerns rehabilitation and expansion works of the ATMA rural water supply system.

TAHAL Group B.V. has asked ECORYS Nederland BV to support TAHAL in the ORET-application.

The service to be provided by ECORYS comprises the following:

1. Collection and verification of data on the following four variables:
  - Unaccounted percentage for water (UfW);
  - Willingness to pay (WTP);
  - GDP per capita (preferably regional disposable income data if available);
  - Water consumption per capita.
2. Completion of the cash-flow model provided by TAHAL Group B.V. with the data and assessment under which combination of values an acceptable scenario could be developed.

### *Approach*

The collection and verification of data on the four variables has been done on the basis of the following data sources:

- Earlier evaluations of ORET application for Ghana in Winneba (April 1998), Sekondi-Takoradi (January 2001), Western Accra (June 2001) and Baifokrom water works (July 2004);
- CIA world fact book;
- Human Development report, UNDP;
- World Bank;
- WHO.

After the completion of the cash-flow model we analysed whether this scenario is realistic and results in an economic IRR acceptable to FMO.

## 2 Collection and verification of data

In this chapter we will discuss values of four variables (1) water leakage rate, (2) annual income, (3) average water use per day and (4) Willingness to Pay, which have an effect on the Economic Internal Rate of Return.

Starting point of economic impact calculations of TAHAL are the values presented in the first row in the table below. From the period 1998 to today ECORYS evaluated four ORET water applications for Ghana; Baifilem water works, Sekondi Takoradi water supply system, Water distribution improvement Western Accra and Winneba Waterworks.

Table 2.1 gives an overview of the values of the four variables used in these ORET applications.

Table 2.1 Overview values of four variables

	Water leakage rate	Annual income per capita	Average water use per day (l)	WTP
TAHAL Group data	15 percent in year 1 with gradual reduction to 10 percent over a 5 year period (starting reduction in year 4)	300 USD	50	3%
Oret Baifkrom water works (2004)	40 percent in year 1 to 10 percent from year seven onwards	GNI per capita in 2002 USD 270 (worldbank), estimated GNI per capita in 2004 USD 295	70	2%
Oret Sekondi-Takoradi water supply system (2001)	55 percent in year 0 to 30 percent in year 15	Income per capita USD 390 per year for 1999 (worldbank)	2005: 60 2010: 58 2015: 62 2020: 66 (demand is derived from capacity available with the project)	2%
Oret Water distribution Improvement Western Accra (2001)	42 percent without a programme aimed at a reduction of leakage	Income per capita USD 390 per year for 1999 (worldbank)	-	2%
Oret Winneba Waterworks (1999)	20 percent in year 0, after implementation on project 5 percent	GNI per capita USD 410 (source unknown)	60	3.5%

#### Short description ORET applications

**Oret Baifkrom water works:** The project concerns the installation and subsequent operation of a drinking water supply system in Baifkrom. The treatment plant will extract raw water from the Ochi/Amisa Rivers and the nearby Mankessim Irrigation Reservoir. The production capacity of the plant will amount to 0.7 m<sup>3</sup>/day.

**Oret Sekondi-Takoradi water supply system:** The project concerns the supply of water for industrial use and consumption through an improved water supply system, for which the following investments are required: (1) Dredging of the Inchaban Reservoir; (2) replacement of some of the trunk mains; (3) Some minor rehabilitation works on the technical installations and treatment plant.

**Oret Water distribution Improvement: Western Accra:** The project is defined as the supply of potable water for industrial use and private consumption in the Western Accra area and prevention of sludge disposal into Weija lake, through the installation and implementation of a water supply system, for which the following investments are required: (1) installation of distribution lines; (2) provision of new reservoirs;

(3) sludge disposal of the Adam Clark, Bamag and Candy treatment plant; (4) design and supervision activities.

*Oret Winneba Waterworks:* The project involves the construction, installation and operation of the Winneba Waterworks, consisting of a weir, a raw water intake pumping station, a transmission pipe line, a water treatment plant and the rehabilitation and extension of the distribution piping system in the Greater Winneba area. In addition, connections have to be established to households and other consumers in order to actually realise an improved drinking water supply for the population of Winneba.

## 2.1 Water leakage rate

TAHAL suggest applying a leakage rate of [ ] percent from the system's initial and partial operation with a gradual reduction to [ ] percent over a [ (5.1) (16) ] starting the reduction from year [ ]. A leakage rate of [ ] percent is also assumed in the ORET application Buikrom water works (2004). The implementation of a management contract of the transaction will cause a gradual decline from [ ] percent to [ ] percent from year seven onwards. Without a management contract or a programme aimed at a reduction of leakage, like in the ORET application Water distribution improvement Western Accra (2001), the leakage rate remains [ ] percent. A higher leakage rate is mentioned in ORET application Sekondi-Takoradi water supply system (2001). A reduction in leakage rate from [ ] percent to [ ] percent in year [ ] can be realised in case of a replacement of the [ (5.1) (16) ] together with investments in [ (5.1) (16) ] and [ (5.1) (16) ]. The smallest leakage rate is mentioned in ORET application Winneba Waterworks (1998). After the replacement and augmentation on the Winneba Waterworks a leakage rate of [ ] percent was expected.

### *Additional information*

According to a report of an international fact-finding mission on water sector reform in Ghana in August 2002, overall system loss of non-revenue water is unknown, but generally estimated on the order of [ ] percent of overall production. They estimate approximately 30 percent losses due to non-payment, and [ ] percent to physical leakage. Statistics from the GWCL in February 2003 show an 'unaccounted for water' percentage of the Accra-Tema Metropolitan Area of [ ] percent, divided in [ ] percent physical losses and [ ] percent commercial losses.<sup>1</sup>

Based on the current leakage rate and the rates used in the different ORET applications after a new constructed system, we can conclude that the leakage rate could have a maximum of [ (5.1) (16) ] and a minimum of five percent. According to the comments of FMO on the feasibility study part 4.2, the water leakage rate of five to [ ] percent is unreasonably low in the Ghanaian context and should be [ (5.1) (16) ]. TAHAL has responded that the above-mentioned percentages of physical losses are losses in the

<sup>1</sup> ([www.arch.columbia.edu/DocId/30920374/Accra/PDF/accra%20water%20management%20-%20over%20and%20over.pdf](http://www.arch.columbia.edu/DocId/30920374/Accra/PDF/accra%20water%20management%20-%20over%20and%20over.pdf))

current situation and expects that a new constructed water system will improve the current leakage rate in the range of  $\frac{1}{10}$  percent of total consumption. ECORYS agrees with the assumption that physical leakage ratios can improve with the newly constructed system, even to a range indicated by TAHAL. Still, the total 'unaccounted for water' percentage will be slightly higher than that due to illegal tapping etc.

For a realistic scenario a leakage rate of  $\frac{1}{10}$  (5.1%) will be applied (see chapter 3). This is the same level as arrived at after the discussions between FMO and TAHAL.

## 2.2 Annual income per capita

In the economic cash flow calculation TAHAL assumes an annual income per capita of USD  $\frac{1}{10}$ . The annual income figures in the four ORET applications range between USD  $\frac{1}{10}$  and USD  $\frac{1}{10}$  per capita, reflecting the economic performance of Ghana during this time period. In these assessments, national figures were assumed to reflect the regional situation due to limited availability of statistical data on regional level.

For the current application, it is important to assess the current disposable household income, as well as to obtain data on forecasts for 2007.

According to the Worldbank the Gross National Income (GNI) per capita in 2005 was USD 450.

Table 2.2 Gross National Income per capita in Ghana

	2000	2001	2002	2003	2004	2005
GNI <sup>a</sup> per capita (current USD)	330	290	270	310	390	450

To estimate the national disposable income in 2007, a GDP growth forecast of 5.6-5.7 percent<sup>1</sup> will be applied, will deducting the population growth rate of 2.1-2.2 percent, arriving at an estimated GNI per capita of USD 465 in 2006 and USD 481 in 2007.

TAHAL took a closer look at the disposable income in the project target area on the basis of the data gathered in the Ghana Living Standard Survey No. 4 (GLSS4) that was carried out in 1998-1999 by a combined effort of the Ghana Statistical Service, the World Bank and the European Union. The GLSS4 is the most recent survey available that collected and analysed living standards in Ghana. The GLSS4 arrived at an average per capita income of USD  $\frac{1}{10}$  according to the prices prevailing in March 1999. It also concluded that the income disparities in Ghana were substantial, ranging from USD 387 in and around Accra ("Greater Accra" Region) to only USD 86 in the region of "Upper West". Taking into account the fact that the project area is close to Accra and quite a substantial number of inhabitants generate its income in or around the urban areas of the city,

<sup>a</sup> Gross National Income prices the total value of goods and services produced within a country (i.e. its Gross Domestic Product), together with its income received from other countries (notably interest and dividends), less similar payments made to other countries.

<sup>1</sup> Source: EIU Forecast, September 2008.

TAHAL arrived at a regional breakdown of disposable income for the project target area. In a separate report, TAHAL arrived at a weighted disposable income in the project area of USD 506 for 2007.<sup>4</sup> This is slightly higher than the USD 481 per capita income taken as national average, which seems to reflect the slightly better-than-average economic situation in the region.

ECORYS did not verify the input data on income in detail, but agrees with the approach taken by TAHAL to arrive at the disposable income level in the project area and confirms that the applied methodology was appropriate.

The average disposable income for the project area of USD 506 will therefore be used for further analysis in Chapter 3.

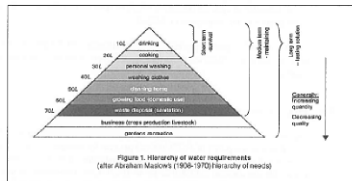
## 2.3 Average water use per day

According to TAHAL the average water consumption amount to 50 litres per day per person. In both the Baifokrom water works and Winneba Waterworks projects, the average water use is higher, respectively 70 and 60 litres per day. The average water usage in estimated in ORET Sokoradi-Takoradi water supply system increase from 50 litres to 66 litres, however this estimate is based on the production capacity available.

### Additional information

The WHO established standard quantities as guidelines. These have been broken down into categories to increase the accuracy of the estimate, see figure below.

Figure 2.1 Hierarchy of water requirements



Source: WHO, Minimum water quantity needed for domestic use in emergencies

<sup>4</sup> Ghana ATMA Rural Water Supply Project – Detailed Review of the Household Income in the Project Region, 5-9-2008.

For the short term survival 20 litres per person a day is needed for drinking and cooking. More water will be needed for personal and clothes washing and cleaning homes etc. Water does not all have to come from the same source. People may be provided with bottled drinking water, but use a stream to wash their clothes in. As demand for water increases, generally the quality needed for each use can be reduced.

From figure 2.1 we can conclude that the water consumption of 70 litres used in the Baifokrom water works is too high for the ATMA rural water supply system because this project will not include sanitation. Water consumption of 50 to 60 litres per day estimated by TAHAL and used in the Sekondi-Takoradi water supply system and Winneba Waterworks ORET is a reasonable estimate. An average water use per day of 50 litres will be input for the scenario assessment in Chapter 3.

#### 2.4 Willingness to pay

Since it is difficult to quantify the economic value of the benefits of water projects, the economic assessment of drinking water projects is carried out on the basis of the willingness to pay for high quality water services. Although a willingness to pay analysis tends to understate the benefits that would accrue to the society as a whole, it is an appropriate mode to determine the cost-effectiveness of the project analysed. In the analysis of the ORET projects in Winneba, western Accra and Sekondi-Takoradi, ECORYS assumed that households are willing to pay five percent of their income for water services, including distribution and supply of drinking water and sewerage activities. This assumption was taken from similar studies carried out by the World Bank and reports written by the Asian Development Bank. Since sewerage activities have not been part of the Baifokrom water works ORET, it was assumed that two to three percent of the disposable income per household would be spent on drinking water services. This corresponds with the assumption of TAHAL.

Based on the willingness to pay rate used in the different ORET applications we think three percent is acceptable and this will be used as input value in the scenario assessed in Chapter 3.

#### 2.5 Production costs

The production costs of ATMA rural water supply system amounts to USD 0.3333 per year. Based on a capacity of (6.1) (16) m<sup>3</sup> per year the production costs per m<sup>3</sup> amounts to USD 0.0208 per m<sup>3</sup>. The weighted average of production costs of five water works in Central Region amounts to EUR 0.0044 per m<sup>3</sup> (USD 0.0055). These costs include personnel, consumption of electricity, fuel, lubricants and chemicals and it is assumed this figure already incorporates maintenance of the plant and the distribution network. Based on this comparison, one could conclude that the production costs of ATMA rural water supply system production costs are realistic.

### 3 Assessment of acceptable scenario

The information per variable described in chapter two, has been input for the cash flow model provided by TAHAL. This chapter deals with the effects of the different values of the four variables on the Economic Internal Rate of Return (eIRR).

In the base case TAHAL used the following values for the four variables:

- Water leakage rate: 15 percent;
- Annual income: USD 300;
- Average water use per day: 50 litre per capita;
- Willingness to pay: three percent.

Using the willingness to pay principle in combination with indirect benefits has not been applied in previous economic viability appraisals carried out by ECORYS and has also been rejected by FMO. For this reason the value of the indirect benefits will be set at 0.

Table 3.1 Base case

Water leakage rate (percent)	Benefits to Economy (percent out of water price)	Annual Income (USD per capita)	Average water use per day (l)	WTP percent	eIRR (percent)
15	-	300	50	3	1.76

The eIRR in the base case amounts to 1.76 percent. Since the eIRR does not exceed the opportunity costs of capital of 3 percent, the project would not be economically viable.

#### Impact of changes in values

- The decrease of water leakage rate with five percent point shows an increase of the eIRR with 0.05 percent point;
- An increase of income with USD 100 per year per capita results in an increase of the eIRR with 0.05 percent point;
- An increase of the average water use with 10 litres per capita per day results in a decrease of the eIRR with 0.05 percent point;
- An increase of the willingness to pay percentage from three to four percent results in an increase of the eIRR with 0.05 percent point.



*Developing an acceptable scenario*

On the basis of the analysis carried out in Chapter 2, we have assessed the eIRR for a scenario based on the following values for the four variables:

- Water leakage rate: 15 percent;
- Annual disposable household income: USD 506 on the basis of the analysis of disposable income in the project area as calculated by TAHAL, to remain stable throughout the project;
- Average water use per day: 50 litre per capita;
- Willingness to pay: three percent.

On the basis of the above-mentioned values the eIRR can be calculated to be 5.1 percent, which is slightly higher than the cut-off rate. This would mean that the project is economically viable. A remark is made here that a potential increase in real disposable income was not taken into account here.

Table 3.2 Summary of scenario analysis on basis of values assessed in Chapter 2

**(5.1) (1c)**

## 4 Conclusion

The assessment of the values put forward in the base case for the project showed that most values are consistent with the assumptions taken in earlier assessments of ORET applications. The exception to this conclusion was the level of the annual disposable household income.

On the basis of a more thorough analysis of the disposable income in the project area carried out by TAHAL, it was concluded that the disposable income for 2007 would be substantially higher than assumed in the base case. The regional income survey of 1999 showed that the disparities between Accra, rural areas, and the project area are substantial. ECORYS did not verify these income data in great detail, but agrees with the approach taken by TAHAL to arrive at the disposable income level in the project area and confirms that the applied methodology was appropriate.

With this adjusted figure for the disposable income, Chapter 3 analysed the economic viability of the project on the basis of a new scenario. The result of this analysis showed that the project's eIRR is slightly higher than the cut-off rate of 10 percent, indicating that the project would be economically viable.

**A. Projectgegevens**

Projectnummer:	GH/W/07029
Projecttitel:	Rehabilitation and expansion of the Accra Tema Metropolitan Area (ATMA) Rural Water Supply Scheme
Schenkingbedrag:	€21.338.519
Aanvrager:	Tahul Group B.V.
Conticipans:	(5.1)(2e)
Conticred:	
Afhemer:	Ghana Water Company Limited (GWCL)
Land:	Ghana
Beschikkingdatum:	5 oktober 2017
Datum schenkingsovereenkomst:	18 maart 2008
Van toepassing zijnde ORET-regeling (jaar):	2006
Jaar vaststelling:	2017

**B. Ontvangstdata slotdocumenten**

Final Certificate of Completion:	7 maart 2014 (bevestiging aansluitingen door afnemer op 4-03-2016)
Eindrapportage:	7 augustus 2017 (eigen format eindrapport in mei 2016)
Accountantsverklaring:	7 augustus 2017

**C. Inhoudelijke beoordeling slotdocumenten**

**Projectbeschrijving**

*Probleem/aanleiding project*

Het Kpong watersysteem biedt drinkwater aan de Greater Accra Region in Ghana. Het systeem dateert uit de jaren '50 en is in de jaren '70 met behulp van de Wereldbank gerenoveerd door Tahul. Uitgezonderd van kleine onderhoudswerkzaamheden hebben sindsdien geen investeringen meer plaatsgevonden. Het huidige systeem was ten tijde van de aanvraag zodoende niet meer ierend en betrouwbaar en verkeerde bovendien in een slechte staat. De waterzuiveringsinstallatie functioneerde slecht en dagelijks ging veel schoon drinkwater verloren. Ook was het systeem niet in staat om te voldoen aan de groeiende vraag naar schoon drinkwater in de regio.

*Voorgestelde oplossing*

Naar aanleiding van de slechte staat van het netwerk heeft de Ghana Water and Sewerage Corporation een studie uitgevoerd naar de benodigde investering voor het oplossen van de problemen met de bestaande voorzieningen. De beste oplossing was het opwaarderen (rehabilitatie en uitbreiding) van het bestaande watersysteem in Kpong. Het Accra Tema Metropolitan Area (ATMA) Rural Water Supply System – South of Kpong Project (intern: project) is van daaruit ontwikkeld.

*Voorgestelde transactie*

Het project bestaat uit de volgende rehabilitatiewerkzaamheden en uitbreidingswerkzaamheden. Rehabilitatiewerkzaamheden:

- Rehabilitatie van bestaande waterzuiveringsinstallatie met een capaciteit van 9.000 m<sup>3</sup> per dag;
- Vervanging van de belangrijkste transmissieliding;
- Reparatie van het bestaande "Tema Service Reservoir" van 2.000 m<sup>3</sup>.

Uitbreidingswerkzaamheden:

- Bouw van een nieuwe waterzuiveringsinstallatie: (6.1)(1e)
- Constructie van vier betonnen reservoirs: 35.500 m<sup>3</sup>
- Uitbreiding van de distributienetwerken in de dichtst bevolkte gemeenschappen;
- Installatie van extra huishoudaansluitingen;

- Installatie van <sup>1500</sup> extra standpijpen.

#### Doelstellingen

Het project had als doel om watervoorziening en kwaliteit van schoon drinkwater te garanderen en om te voorzien in de toenemende vraag naar schoon drinkwater van de continu groeiende populatie.

#### Bijzondere aannames, bezwaren, wijzigingen in projectopzet vooraf

De eerste aanvraag was ingediend op 1 mei 2006. Deze aanvraag was niet goedgekeurd en moest worden herzien in verband met een onjuiste methodologische opzet van de berekening van de economische haalbaarheid. De herziene aanvraag is ingediend op 5 maart 2007.

#### Bevindingen met betrekking tot commerciële, financiële en economische toetsen vooraf

De IRR was voortschrijdend na het project berekend op <sup>15,5%</sup>, dat was ruim boven de cut-off rate van <sup>10,5%</sup>. Het project was daarom financieel uitvoelbaar. De eIRR was berekend op <sup>12,5%</sup>. Het project was daarom niet commercieel haalbaar. De eIRR was berekend op <sup>9,5%</sup>. Dit is ruim boven de opportunity cost of capital en het project kon daarom gezien worden als economisch haalbaar.

#### Realisatie transactie en doelstellingen

##### Realisatie activiteiten van het project

Volgens de eindrapportage zijn alle onderdelen van het project geleverd en de geplande activiteiten uitgevoerd. Het Final Certificate of Completion bevestigt dat en geeft tevens een uitgebreide beschrijving van de geleverde werken door Tahal. Naast de geleverde werken heeft Tahal training gegeven aan de werknemers van GWCL, zowel op managementniveau als op het niveau van het uitvoerend personeel. Dit stelt de afnemer in staat om het project te managen en te onderhouden, nu en in de toekomst, om zodoende de duurzaamheid van het project zeker te stellen. Volgens Tahal hebben meer dan 10 werknemers van GWCL training ontvangen van een ingenieur van Tahal.

##### Eventuele afwijkingen en aanpassingen in de projectinvoering

In het commerciële contract tussen GWCL en Tahal was een Price Escalation Formula opgenomen, die Tahal toestond om, in bepaalde omstandigheden, prijsaanpassingen door te berekenen. In verband met prijsescalaties door opgelopen verhogingen heeft Tahal aanspraak gemaakt op deze optie. Omdat vanuit ORET.nl geen extra subsidie beschikbaar kon worden gesteld en omdat GWCL zelf ook geen extra financiering kon krijgen beschikking had om Tahal te compenseren, moesten aanpassingen aan het project worden gedaan om het project binnen het bestaande budget tot een goed einde te brengen. In totaal moest ruim EUR 1 miljoen de oorspronkelijke contractprijs worden bespaard. Een deel van de prijsaanpassingen is wel gecompenseerd door ORET.nl vanuit de post invoorzien.

Volgens GWCL zijn, na een wat stroeve start, de onderhandelingen met Tahal over de aanpassingen aan het project in goede harmonie verlopen. Dit kwam mede doordat een aantal aanpassingen een logisch gevolg waren van veranderende omstandigheden van de bevolking in de regio. Zo was er minder behoefte aan standpijpen dan ten tijde van de ORET aanvraag was voorzien. Dit kwam vooral door de toegenomen urbanisatie rondom Acara.

In het oorspronkelijke budget werd uitgegaan van <sup>1500</sup>standpijpen en <sup>1500</sup>huisaansluitingen. In de nieuwe opzet zou met <sup>1500</sup>standpijpen, meer huisaansluitingen en de aanleg van yard taps, het totaal aantal bereikte personen uitkomen op ca. 16.500. De huisaansluitingen zouden door GWCL worden geplaatst en aangesloten op het waterleidingnetwerk dat door Tahal is aangelegd. Oorspronkelijk zouden de huisaansluitingen door Tahal worden aangelegd. Nu GWCL zelf de aansluitingen zou maken, werd op de contractprijs bespaard, terwijl de scope behouden bleef. De ORET delegatie is verder tijdens de monitoringmissie van 2013 overeengekomen dat voorafgaande aan het aanleggen van de huisaansluitingen een bewustwordings- en communicatiecampagne zou worden gevoerd door GWCL, om bewoners te informeren over de mogelijkheden voor het aanleggen van een waterleiding naar hun huis. ORET.nl heeft op 15 juli 2013 de wijzigingen goedgekeurd op voorwaarde dat GWCL driemaandjiks zou rapporteren op de voortgang van de huisaansluitingen.

Volgens de eindrapportage van Tahal is er ook een verandering geweest in de geleverde aantallen transmissie- en distributieleidingen. Er waren minder leidingen nodig dan gedacht op het moment van contractondersteuning. Het vrijgekomen budget werd later gealloceerd voor andere onderdelen van het project.

waarvoor het budget krap was. Dit is goedgekeurd door ORET.nl.

Een andere wijziging betrof de renovatie van het Tema reservoir in plaats van het plaatsen van een nieuw reservoir, omdat het bestaande reservoir daar nog in vrij goede staat bleek te zijn. Dit is in 2012 goedgekeurd door ORET.nl.

#### *Realisatie doelstellingen project*

Het is aannemelijk dat de doelstellingen van het project grotendeels behaald zijn, doordat de waterzuiveringsinstallatie is gefinancierd, de installatieslijtingen zijn aangelegd, en huishoudelingen en standplaatsen zijn gerealiseerd. Ongeveer 4.500 huishoudens hebben goede toegang tot schoon drinkwater en hadden dat niet voorafgaand aan het project. Dit betekent voor hen verbeterde sanitatie, minder tijd kwijt aan het halen van ongezond water van verre locaties, en meer tijd voor andere (productieve) bezigheden die meer nut opleveren voor de individuen, de families en de community. Dit zou volgens de aanvrager op langere termijn kunnen leiden door vermindering van sociale onrust.

Het oorspronkelijk voorziene bereik van het project kwam meer op 18.310 (86) personen die door dit project van schoon drinkwater zouden worden voorzien. Volgens de eindrapportage uit mei 2016 (zie de officiële ORET eindrapportage) hebben naar schatting 18.310 (86) personen nieuwe of verbeterde toegang tot water door de 18.310 (86) huishoudelingen en de 18.310 (86) standplaatsen. Dit zijn aanzienlijk minder mensen dan aanvankelijk voorzien, echter hebben wel relatief veel meer huishoudens en huishoudelingen gekregen dan oorspronkelijk gepland was.

De eindrapportage van mei 2016 bevat foto's waarop diverse onderdelen van het project zichtbaar zijn. Ook de verslagen van de ORET.nl monitoringmissies van 2011, 2012 en 2013 bevatten foto's van de bouw. Voor wat betreft de huishoudelingen is een certificaat beschikbaar van maart 2016 (zie tab 9) waarin is aangegeven dat 95% van de aansluitingen is gerealiseerd. Per mail d.d. 23 augustus 2016 (th 108) heeft ORET.nl aangegeven dat het aannemelijk is dat de resterende huishoudelingen ook zijn geplaatst en dat deze werkzaamheden hiermee worden als afgerond worden beschouwd.

De realisatie van de doelstellingen op langere termijn is deels afhankelijk van de mate waarin het systeem goed onderhouden wordt. GWCL heeft geen onderhoudscontract afgesloten voor de zuiveringsinstallatie en het distributienetwerk, maar heeft aangegeven zelf het onderhoud te zullen verrichten met eigen personeel. Voor de zuiveringsinstallatie is daarvoor een ervaren ingenieur aangesteld.

#### Bevindingen

##### *Verloop projectimplementatie en bijzonderheden*

De eerste aanvraag is ingediend op 1 mei 2006. Deze aanvraag moest worden herzien door Tahaal in verband met een onjuiste methodologische opzet van de berekening van de economische haalbaarheid. De herziene aanvraag is ingediend op 5 maart 2007. De schenkingsovereenkomst is getekend op 18 maart 2008. Het project is gestart op 15 oktober 2009 met een geplande looptijd van 36 maanden, met daarop volgend een garantperiodes van 12 maanden. Echter is het contract verlengd met 9,5 maand. De uiteindelijke date of completion was 31 juli 2013. De inauguratie ceremonie van de ATMA zuiveringsinstallatie heeft plaatsgevonden op 23 december 2014.

Het project heeft een aantal vertragingen ondervonden. De eerste vertragende kwestie betrof het uitblijven van de goedkeuring van de Ghaneese overheid van de belastingvrijstelling. De Nederlandse ambassade in Ghana heeft hierin uiteindelijk met succes bemiddeld.

Volgens Tahaal zorgde de afnemer verder ook voor vertraging met het ontwerp en keuze van de locatie van de nieuwe waterzuiveringsinstallatie en het reservoir. Een andere vertraging werd veroorzaakt door de afnemer bij het realiseren van de huishoudelingen met de materialen die aangeleverd waren door Tahaal, zoals hierboven beschreven.

Verder bleek het lastig om lokaal goede ondernemers te vinden voor graafwerkzaamheden en het aanleggen van de pijpleidingen. Daarom werd vervolgens buiten de regio gekeken om voldoende ondernemers te vinden. Ook was het niet mogelijk om lokaal ondernemers te vinden met voldoende capaciteit voor ondersteuning bij de bouw van de waterreservoirs en de waterzuiveringsinstallatie. Daarom zijn bedrijven uit het buitenland aangetrokken en verantwoordelijk gesteld voor deze componenten van het project.

In de voortgangsrapportages worden tenslotte ook nog de verkiezingen in Ghana en vandalisme door herders als vertragende factoren genoemd.

*Uitvoering door aanvrager (kwaliteit uitvoering, organisatie, management, rapportage)*

ORET.nl heeft tijdens de monitoringsmissies geconstateerd dat Tahal het project goed beheerde en ze leken de ondernemers ook goed aan te sturen. Hun constante lokale aanwezigheid was daarbij van groot belang. De laatste voortgangsrapportage van Tahal noemt dat er bijna dagelijks contact werd opgenomen met de afnemer om het project te bespoedigen.

Er zijn twee eindrapportages opgeleverd: één in het ORET format en een eerdere versie in een ander format. De kwaliteit van het Engels in de ORET rapportages lust te wensen over. In de voortgangsrapportages zijn niet alle vragen beantwoord en sommige ingevuld. Daarom zijn aanvullende vragen gesteld die per email d.d. 16-10-2017 (tab 10b) zijn beantwoord.

*Uitvoering door afnemer*

Volgens Tahal was er gedurende het project een goede en nauwe samenwerking met de afnemer. Er zijn wettelijke vergaderingen gehouden met de lokale vertegenwoordigers van de afnemer in het veld, samen met onafhankelijke ingenieurs. Ook waren er maandelijks vergaderingen op kantoor bij de afnemer. Hier werden alle lopende kwesties besproken en gedisussieerd. Van de vergaderingen zijn verslagen gemaakt. Tahal is van mening dat GWCL werknemers voldoende capaciteit zijn om het waternetwerk te gaan onderhouden in de toekomst.

*Betrokkenheid ontvangend land*

De samenwerking met de lokale autoriteiten, met name de belastingdienst en de douane, startte wat lastig en ging wat traag. Later heeft veel verbetering in de samenwerking plaatsgevonden, mede door ondersteuning van de afnemer.

*Effect op positie van de vrouw, milieu, werkgelegenheidseffecten en aantal gecreëerde arbeidplaatsen*

Tijdens de implementatie van het project is volgens Tahal voornamelijk gewerkt met lokale werknemers, lokale ondernemers en lokale leveranciers. Positieve effecten waren dus (tijdelijke) werkgelegenheid en kennisoverdracht door samenwerking met een buitenlands bedrijf. Tijdens de monitoringsmissie in 2013 is geobserveerd dat op dat moment [...] (6.1)(6e) [...] werkzaam waren bij het TEMA reservoir. Bij de zuivering waren op dat moment [...] (6.1)(6e) [...] bij het werk. Volgens Tahal heeft het project gedurende de implementatie tijdelijk werk geboden aan een paar honderd arbeidskrachten (ook via ondernemers). De permanente extra werkgelegenheid bij GWCL zou bestaan uit enkele tientallen banen. De exacte aantallen zijn niet bekend.

De effecten op het milieu lijken goed te zijn gemonitord. Het milieubeleid van de afnemer is gebaseerd op de lokale en internationale standaarden voor de oprichting en onderhoud van de faciliteiten. Dit heeft met name betrekking op de waterzuiveringsinstallatie. Afspraken t.a.v. milieubescherming tijdens de werken waren opgenomen in het contract tussen Tahal en GWCL. (Chemisch) afval uit de waterzuiveringsinstallatie zou scheidbaar worden gedumpt op vuilnisplaatsen. Volgens Tahal wordt het afval in de praktijk bevestigd bij de zuiveringsinstallatie en stroomafwaarts geloosd. Lokale boeren gebruiken het ook als mest voor hun tuinbouwgrond.

Subsidieplichtingen/voorwaarden vaststelling in de beschikking en schenkingsovereenkomst (GA)

Zaak de Beschikking d.d. 5 oktober 2007 als de Schenkingsovereenkomst d.d. 18 maart 2008 bevatten geen projectspecifieke voorwaarden aan de eindverantwoording of vaststelling, anders dan de standaardvoorwaarden. Wel geeft artikel 2.54 uit de schenkingsovereenkomst aan dat "After completion of Phase 1 of the Transaction, which involves the Preliminary and Final Engineering Design as specified in the contract, and within twelve months after the disbursement of the down payment, a final list of spare parts should be submitted for review and approval by ORET.nl". Aan deze voorwaarde is voldaan, en ORET.nl heeft op 25 maart 2011 de goedkeuring hiervoor verstuurd.

Final Certificate of Completion

De Final Certificate of Completion is getekend in maart 2014. Het bevestigt dat Tahal aan haar contractuele verplichtingen heeft voldaan en dat de afnemer tevreden is. Het is ondertekend door de "acting managing

director van GWCL en een vertegenwoordiger van Civil & Planning Group. Het certificaat heeft echter geen betrekking op installatie van de huisaansluitingen (wel levering) waarvan later is besloten dat GWCL deze zou plaatsen. De voortgangstrapportages van GWCL geven wel voldoende zekerheid dat deze aansluitingen voor minstens 95% gerealiseerd zijn. Het Final Certificate of Completion voldoet aan de eisen van de ORET-regeling en is akkoord.

#### D. Financiële beoordeling slotdocumenten

##### Financiële eindrapportage

Nadat Tatai in eerste instantie een onvolledige financiële verantwoording had ingediend, hebben zij op verzoek van ORET.nl een herziene versie ingediend die beter aansluit bij de accountantsverklaring. Verantwoording is ondertekent en ingediend door [8.1.10] bekend bij ORET.nl als projectverantwoordelijke. In de financiële verantwoording wordt voldoende toelichting gegeven op de realisatie en verschillen. De begrote kosten in het financiële overzicht komen overeen met de breakdown in het appraisal document. Bij de verantwoording zijn een aantal onderbouwende documenten meegestuurd.

##### Verschillen tussen budget en gerealiseerde kosten

De verschillen tussen budget en gerealiseerde kosten zijn beperkt. Het grootste verschil is gemaakt op de winstpost. Verder zijn geen verschillen van groter dan € 100.000 gemaakt. De toelichting die aanvrager geeft voor de kleine onderbesteding op productiekosten ([8.1.10]) en transportkosten ([8.1.10]) is dat inkoopkosten lager zijn uitgevallen. Deze besparing is met goedkeuring van ORET.nl (zie brief d.d. 15 juli 2013) ingezet om de prijsescalatie te bekostigen. Zoals in de inhoudelijke beoordeling is beschreven zijn minder kosten voor pijpleidingen gemaakt maar is het vrijgekomen budget aan andere productiekosten besteed.

##### Nederlands en buitenlands aandeel

In de aanvraag was het Nederlands aandeel 62,5%. De accountantsverklaring geeft geen informatie over het Nederlandse en buitenlands aandeel. Uit de brief van de potentiële pijpleverancier en de reactie van ORET.nl d.d. 23-03-2010 (tab 10b) blijkt dat de voorwaarde van het Nederlandse aandeel van 50% tijdens het project een punt van aandacht was. Per email d.d. 9 november 2017 (tab 10b) en in telefonisch overleg met ORET.nl heeft de accountant bevestigd dat zij de afkomst van leveranties hebben gecontroleerd en dat aan de eis voor het Nederlands aandeel is voldaan.

##### Agentkosten

Er is geen sprake van een afzonderlijke post agentkosten.

##### Financieringskosten

De financieringskosten zijn volgens het financiële overzicht ([8.1.10]) lager gerealiseerd dan begroot. Het getele bedrag aan financieringskosten is reeds op 31/07/08 goedgekeurd en vervolgens uitgekeerd. Voor deze bestelling zijn facturen voor financieringskosten met een totale waarde van [8.1.10] ingediend. Dit bedrag is zelfs hoger dan het begrote totale bedrag voor financieringskosten van [8.1.10]. De financieringskosten zijn akkoord.

##### Contingencies

De post contingencies is volledig aangewend. ORET.nl heeft hierop toestemming gegeven per brief d.d. 15 juli 2013 (tab 10). Dit is derhalve akkoord.

##### Winst

In de bijlage bij de financiële verantwoording wordt gerealiseerde winst gespecificeerd op [8.1.10]. Het gerealiseerde winstpercentage is daarmee [8.1.10]. Deze verantwoording is door de accountant goedgekeurd op 7 augustus 2017. In een eerdere verklaring (d.d. 5 mei 2016) noemt dezelfde accountant een winstbedrag van € [8.1.10]. In verband met de prijsescalatie, die door ORET.nl op 15 juli 2013 is goedgekeurd (tab 10b), is aangegeven dat de winst bij vaststelling zou worden beoordeeld en niet hoger diende te zijn dan bij de projectaanvraag. In de aanvraag (tab 9) is de winst begroot op [8.1.10] op een transactiemvang van € [8.1.10]. In een telefoongesprek over de prijs escalatie met de aanvrager op 2 mei 2013 (zie telefoonnotitie en memo d.d. 2 juli 2013, tab 10b) is ook overeengekomen dat de winst niet hoger dan €

§ 5.1(16) zou zijn. Met geen van beide gerapporteerde winstbedragen heeft de aanvrager het toegestane winstmarge overschreden. De winstmarge is akkoord.

De eindrapportage voldoet aan de eisen van de ORET-regeling en is akkoord.

#### Accountantsverklaring

Nadat aanvrager bij de eerste indiening van eindverantwoording een accountantsverklaring in had gediend die niet was opgesteld volgens het protocol hebben zij nu opnieuw een toets uit laten voeren en een nieuwe verklaring op laten stellen. De verklaring is afgegeven door accountants Kesselmijn en Kesselmijn, onderdeel van PwC Israel. Dit is een gerenommeerde externe accountant. De accountant volgt het controle protocol en merkt geen bijzonderheden op, behalve dat er veranderingen zijn opgetreden die ertoe hebben geleid dat zowel het subsidieverleningsstijftek als de termijn voor indiening van slotdocumenten zijn overschreden. Accountant concludeert dat de eindverantwoording volgens ORET voorschriften is opgesteld.

De accountantsverklaring voldoet aan de eisen van de ORET-regeling en is akkoord.

#### E. Samenvattend

In het project zijn enige veranderingen opgelopen. Als gevolg zijn aanvrager en afnemer een kleinere projectscope overeengekomen. Aanvrager heeft aan de contractuele voorwaarden voldaan en dit is bevestigd in de FCC uit 2014. Dit heeft slechts beperkt effect gehad op het aantal mensen dat van schoon water wordt voorzien. Het aantal huisaansluitingen (yard taps) is daarbij juist groter geworden. Deze aansluitingen zijn door de afnemer zelf geplaatst en zeer waarschijnlijk allemaal geplaatst.

Uit de financiële rapportage, gecontroleerd door de accountant, blijkt dat gerealiseerde kosten nagenoeg gelijk zijn aan de begrote kosten. Dit komt ook samen met het gegeven dat de projectscope en niet het projectbudget is gewijzigd en dat vrijgekomen kosten elders zijn gebruikt. De gerealiseerde winstmarge is lager dan in de aanvraag. Ook heeft de accountant bevestigd dat aan het minimum voor productieaandeel van Nederlandse afkomst is voldaan.

De definitieve subsidie wordt vastgesteld op het maximale beschikbare subsidiebedrag van € (5.1)(16).

#### Financieel overzicht

1. Transactievervang bij beschikking	€ 41.030.147
2. Maximale subsidieverlening bij beschikking	€ 21.338.971
3. Definitieve transactievervang bij schenkingsovereenkomst	€
4. Definitieve max. subsidieverlening bij schenkingsovereenkomst	€ (5.1)(16)
5. Transactievervang conform goedkeurende accountantsverklaring	€
6. Subsidievaststelling	€
7. Tevoorschotting	€

#### 8. Restant te ontvangen/betalen (6-7)

\*De restbetaling is reeds uitgekend. Voor het restbedrag van € (5.1)(16) is geen betaalverzoek ingediend (inclusief bewijs van restfinanciering) en het bedrag is niet substantieel. Om die redenen wordt het bedrag niet uitgekend.

#### Bankgarantie

Er is sprake van een bankgarantie ter waarde van € (5.1)(16). De bankgarantie verloopt op 31 december 2017.

#### F. Conclusie



De definitieve subsidie wordt vastgesteld op het maximale beschikbare subsidiebedrag van € (5.1) (2e)

De slotbetaling is reeds uitgekeerd. Voor het restbedrag van € (5.1) (2e) is geen betaalverzoek ingediend (inclusief bewijs van restfinanciering) en het bedrag is niet substantieel. Daarnaast is het bedrag dusdanig klein dat we niet verwachten dat aanvrager alsnog een betalingsverzoek in zal dienen. Om die reden valt dit restbedrag vrij.

*Naam 1<sup>e</sup> Beoordelaar Ecovys:*

(5.1) (2e)

*Datum afronding beoordeling:*

26-12-2017

*Naam 1<sup>e</sup> Beoordelaar PoC:*

(5.1) (2e)

*Datum afronding beoordeling:*

15-12-2017

*Paraf:*

*Naam Programmacoördinator:*

*Datum afronding beoordeling:*

*Paraf:*

*Opmerkingen*

*Naam Manager Operations:*

(5.1) (2e)

*Datum afronding beoordeling:*

*Paraf:*

*Opmerkingen*

**Beschikking d.d. 19 december 2017,  
met betrekking tot het project "Rehabilitation and expansion of the Accra Tema  
Metropolitan Area (ATMA) Rural Water Supply Scheme" (GH/WM07029)**

De Manager Operations van Stichting ORET (deze laatste hierna te noemen ORET.nl),  
verantwoordelijk voor de uitvoering van het ORET-programma,

**OVERWEGENDE**

dat aan Tahal Group B.V., in de beschikking d.d. 5 oktober 2007 een voorlopige maximale  
subsidie is verleend ten bedrage van € 21.338.971 en dat deze in de schenkingsovereenkomst  
d.d. 18 maart 2008, is herzien naar een maximale subsidie ten bedrage van € 21.338.519  
(zege eenentwintig miljoen driehonderdachtendertigduizend vijfhonderdnegenien), ter  
geleefelijke financiering van de transactie in het kader van "Rehabilitation and expansion of  
the Accra Tema Metropolitan Area (ATMA) Rural Water Supply Scheme",

GELET

op artikelen 2 en 5 van de Kadervet Subsidiën Ministerie van Buitenlandse Zaken (Staatsblad  
1998, nummer 739),

GELET

op het Subsidiebesluit Ministerie van Buitenlandse Zaken (Staatsblad 2005, nummer 137),

GELET

op artikel 7.3, onder h, van de Subsidieregeling Ministerie van Buitenlandse Zaken  
(Staatscourant d.d. 21 december 2005, nummer 251),

Mede GELET

Op de ORET-regeling (Staatscourant 18 mei 2005, nummer 97 en 9 oktober 2006,  
nummer 196, 8 januari 2007, nummer 5, en 10 april 2007, nummer 69),

**BESLUIT**

op grond van artikel 4:42 van de Algemene wet bestuursrecht, en rekening houdend met de  
door aanvrager aangeleverde verantwoording van het transactiebedrag, de subsidie vast te  
stellen op € 21.338.519 (zege eenentwintig miljoen driehonderdachtendertigduizend  
vijfhonderdnegenien euro).

## MOTIVATIE BESLUIT

De definitieve subsidie wordt vastgesteld op het maximale beschikbare subsidiebedrag bedragende € 21.339.519. De slotbetaling voor het project heeft reeds plaatsgevonden. Voor het restbedrag van € 923 is geen betaalverzoek, inclusief bewijs van restfinanciering, ingediend. Daarnaast is het bedrag dusdanig klein dat we niet verwachten dat aanvrager alsnog een betalingsverzoek in zal dienen. Om die redenen valt dit restbedrag vrij.

1. Transactiemvang	€ 41.029.976
2. Subsidieverlening	€ 21.339.519
3. Subsidievaststelling	
4. Bevoorschotting	
5. Saldo	(5.1)(1c)

De bepalingen van onze voorgenoemde subsidieverlening blijven onverminderd van kracht.

Aldus opgemaakt in enkelvoud,

De minister voor Buitenlandse Handel en Ontwikkelingssamenwerking,

Naar is deze:

**(5.1) (2e)**

Binnen zes weken na verzending van deze beschikking kan hiertegen schriftelijk bezwaar worden aangekend bij ORET.nl. Het bezwaarschrift moet op grond artikel 5:15 van de Algemene wet bestuursrecht zijn ondertekend en tenminste bevatten: naam en adres van de indiener, de dagtekening, de omschrijving van de beschikking waartegen het bezwaar is gericht en de gronden waarop het bezwaarschrift berust. Zo mogelijk dient een kopie van de bestreden beschikking te worden toegevoegd.

## ORET PROGRESS REPORT NO. 11

ORET project number : GH/WM07029

Title of project : ATMA Rural Water Supply System South of Kpong, Ghana

Period : 1st July, 2013– 31<sup>st</sup> December, 2013

Country : Republic of Ghana

Description of transaction : Rehabilitation and expansion of ATMA Rural Water Supply System

Donor company : TAHAL GROUP B.V.

Contact : (5.1)(2e)

tel/fax :

Local recipient : Ghana Water Company Ltd. (GWCL)

Contact : (5.1)(2e)

tel/fax :

Within the framework of the ORET programme, you are obliged as from the date of the positive decision to provide narrative and financial reports to Oret.nl on the progress of the transaction. The objective of the reports is to inform ORET.nl on the progress of the project and the transaction, to enable ORET.nl to establish whether the grant was awarded in accordance with the Ministry of Foreign Affairs Grant Programme 2005 (ORET). These semi-annual reports have to be submitted to Oret.nl (PO Box 30715, 2500 GS, The Hague, the Netherlands) by 1 March and 1 September, respectively. The reports should cover the periods July-December and January-June. The reporting obligation ends after ORET.nl has determined the definitive grant amount. This form is not designated for the final report. For the final report a separate form is available.

These answers have been filled in truthfully.

Date : 25/02/2014

Place : Accra, Ghana

Company : TAHAL GROUP B.V.

Contact :

Position :

Signature : (5.1)(2e)

Print Date: 21-5-2013

Page 1 of 6

## A. Progress of project

- *A delivery may be an isolated event. In that case, the project is the delivery plus the extent to which it is incorporated into the end user's company/organisation.*
- *In many cases, a delivery constitutes an integral part of a combination of activities, deliverables by third parties and the end user's own activities. In that case, the project constitutes the larger whole.*
- *For the definitions of "transaction" and "project", you may refer to the ORET programme, chapter 1, paragraph 5, and chapter 3, paragraph 2, respectively.*
- *The transaction relates to the part of the project to which the applicant is bound by a contract with the end user.*

### A.1 Progress of project

Describe the extent to which the end user was prepared for this project and whether it has completed all of the actions to be carried out. This will suffice if the delivery is an isolated event.  
If the delivery forms an integral part of a larger project and your delivery's success depends on the realisation of the project as a whole, please also indicate in your description how other sub-activities of that project are developing, and whether there have been any frictions in this context and which consequences those frictions will have on the sub-activity that falls under your responsibility.

### A.2 Additional steering

Does the project require additional steering for it to proceed successfully? If so, which steps are you considering to realize this?

- *Frequent sites monitoring and steering in conjunction with the client (on a nearly daily basis) is required and performed to ensure timely resolutions of all setbacks.*

## B. Progress of transaction

Please maintain the same numbering in your description.

1. Describe the transaction's current level of progress. Which developments have taken place over the past six months?
2. Which of these developments are deviations from what was agreed by contract?
3. Describe any problems encountered.
4. In case of any deviations and/or problems, point out their cause and consequences, translated into an adjusted – narrative and financial – planning.

B.1

# Water Distribution Network

- \* Bethlehem 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* Prati Prati 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* Adjei Kojo 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* Gbestele 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* Akuapem 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* Krobo 1.5Km - Pipelaying, Chambers, Fittings & Accessories Completed
- \* House Connections 1.5Units (supply only) - Detail Design, approved, Procurement Completed
- \* Standpipes 1.5Units - Standpipes completed, piping to Main & Meters completed, Procurement Completed

## New water treatment plant (WTP - SOUTH OF KPOKO)

- \* Chlorine Building - Civil works, Equipment have all been procured and delivered to site. Electro-Mechanical Installation Completed
- \* Chemical Building - Dito but, Completed
- \* Filtration Building - Civil works, Equipment, M/E procurement, Steel Filtration Pipeworks, Nozzle's Draft, completed
- \* External Works - Drainage Chambers & pipes, completed, Filling & compaction to receive Roads & access Completed

## Construction of Transmission Mains

- \* TAHAL has completed laying of the 1.5km and 1.5km transmission mains.
- \* Kpong to Tema Service reservoir, 1.5km meters long pipeline, of works completed.
- \* Kpong to Akwele junction, 1.5km meters long pipeline, of works completed
- \* Afienya to Dawhenya, 1.5km meters long pipeline, of works completed
- \* Akwele junction to Michael Camp, 1.5km meters long pipeline, of works completed
- \* The pressure testing of the pipelines has 1.5km as transmission line are in use by the client.

# Construction of Ground Water Reservoirs (GLR)

- \* **Dodowa (5.1)(1c)** - Civil works [are] completed, landscape [are] completed
- \* **New (5.1)(1c)** - New [are] completed, landscape [are] completed, Pumps on site [are] completed
- \* **Alkafefe (5.1)(1c)** - Civil works, Landscaping & Testing [are] completed, Testing Over Certificate (TOC) [are] completed
- \* **Adukrom (5.1)(1c)** - Civil works, Landscaping & Testing [are] completed, Testing Over Certificate (TOC) [are] completed
- \* **Terna (5.1)(1c) Rehabilitation** - Civil (interfederal) works, [are] completed, Erosion works, [are] completed, Landscaping, [are] completed, Water filling to be start based on the Client Authority in approx. one Month time.

B.2.

No major problems were encountered at this stage.

B.3.

## Extension of Time:

Based on the approval of the Financial Extension of Time, (ORET, July 4<sup>th</sup> letter of extension until 31 July 2013), TAIHAL submitted a claim for Physical Extension of Time Which was approved by the Client up to 31 July 2013, and was extended later on till 31<sup>st</sup> Dec. 2013.

Due to the Client Instruction to connect the raw water to [are] completed, Pipe line under construction, which should be completed March 2014, it has been agreed (during the coordinating meeting) to extend the construction period to enable the execution's completion accordingly.

The above Extension of Time should cover as well the Electrical Connection, involving [are] completed, release [are] completed to serve Tshai's WTP.

## Fluctuation:

A claim for Fluctuation Expenses was submitted and approved by the client on 8<sup>th</sup> December 2012, and which was followed by ORET approval later on.

## C. Lessons learnt

Please maintain the same numbering in your description.

- \* Were there any developments in the transaction that had an impact on the project's progress?
- \* During the transaction's implementation, did you encounter any unforeseen circumstances which forced you to change the way you operated?
- \* Would you go about the transaction's implementation differently in the future? If so, in what way?

## D. Other relevant information

Are there any other important aspects you have not mentioned?

Prolongation of execution time, which consequences are additional expenditures reflecting on balance of profits and loss.

Period	Classification	Description	Amount	Grant	Other financing
To date	Total	Sum of received payments	<b>(5.1)(1c)</b>		
Expected Payments					
2013	Q2	Progress Payment	Site works, Material purchased, Civil works-Inv. 27		
2013	Q2	Contingencies	Representing part of contingencies amount of <b>(5.1)(1c)</b> (value of contingency for spare parts)-Inv. 28		
2013	Q3	Contingencies PAF	Price Adjustment Factors -Inv. 28		
2013	Q2	Contingencies	Representing part of contingencies amount of <b>(5.1)(1c)</b> (value of contingency for spare parts) -Inv. 29		
2013	Q2	Progress Payment	Site works - Inv. 29		
2013	Q2	Final Payment	Final payment - Inv. 29		
Total transaction					



Please fill in the liquidity forecast following the eight steps mentioned below. With the forecast you provide insight into the total amount of received payments as well as into the expected payments until the completion of the project on a quarterly basis.

1. Payments received to date – State the total amount of received payments to date, followed by the grant amount and other financing amount.

(Expected payments)

2. Period – Select both year and quarter in which future invoices are due to be submitted to ORET.nl (or other financing party).

3. Classification – Select the classification, in accordance with the grant agreement, to which yet to be invoiced activities should be allocated.

4. Description – State a concise description of the yet to be invoiced activities (e.g. "equipment delivery batch 1", "site clearance", "maintenance training").

5. Amount – State the total amount of the yet to be invoiced activities.

6. Grant – State the total amount out of the grant of the yet to be invoiced activities.

7. Other financing – State the total amount out of other financing of the yet to be invoiced activities.

8. Total transaction – State as means of control per column the total amount of the transaction, grant and other financing at the bottom of the table.

### E.2 Explanation to the liquidity forecast

Please maintain the same numbering in your description.

1. Are there any deviations in the liquidity forecast until the completion of the project compared to liquidity forecast of previous reporting period?

The impact of the Financial and Physical Extension of Time (EOT), and Fluctuation Expenses should be taken into consideration for liquidity forecast.

2. In case of deviations please explain the reason and consequences.

With compliments



Ambassade van het

Koninkrijk der Nederlanden

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GH/WH07029  
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☐ for further distribution  
☐ for your consideration  
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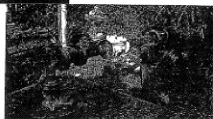
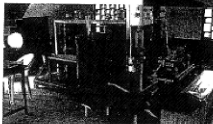


REPUBLIC OF GHANA  
GHANA WATER COMPANY LTD.  
PROJECT MANAGEMENT UNIT

## Urban Water Project

**DRAFT**

Review and Updating of the Strategic Investment Program (SIP) of the Ghana Water Company Ltd; (GWCL), and Engineering Studies for the Preparation of the Subsequent Year Investment Programme (SYIP) of the Urban Water Project (UWP)



**Interim Report**  
March 2008

**Part 1**

In Association with



**ALPHA CONSULT**  
Consulting Engineers

**TAHAL**  
GROUP

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**SIP Review and Updating / SYIP****DRAFT INTERIM REPORT  
(March 2008)****Executive Summary****Study Objectives**

The objectives of the SIP/SYIP Review and Updating are to identify and assess the overall physical and investment requirements for rehabilitation and expansion of the existing 81 urban water supply systems to meet their water demand to the year 2011 and more generally to the years 2015 and 2025 in line with the Government's Millennium Development Goals (MDGs). The requirements for the short term constitute the Five Year Development Plan 2007-2011. The top ranked water projects in the prioritized list within each region of the 2007-2011 development plans will be the subject of feasibility study and detailed design for implementation under the SYIP.

**The Interim Report**

This Interim Report presents the results of the work carried out so far. It includes the System Profiles of 74 water systems inspected so far and the cost estimates for their rehabilitation and expansion requirements to meet the 2011 water demands (Five Year Development Plan).

The scope of work included (i) demographic analysis based on the 2000 population census and preparation of population and water demand projections for the localities and systems, (ii) site inspection of 74 water systems in the 7 southern regions of Ghana and preparation of site visit reports, (iii) analysis of the existing systems, (iv) water resources assessment, (v) formulation of criteria and guidelines for rehabilitation and capacity expansion, (vi) assessment of the physical works and investments required to rehabilitate and expand the water supply systems for the short term Five Year Development Plan, and (vii) preparation of the system profiles.

**Population and Water Demand Projections**

The Consultant carried out a demographic analysis by region and population group sizes of the 2000 population census of Ghana. The population growth rates of the SIP 1998 study were adopted to estimate population projections based however on the 2000 population. System water demand projections were based on the per capita water demand adopted in the SIP 1998.

The localities served by the systems were identified in the SIP 1998. As found from the site inspections, some localities within the supply area were disconnected because of problems in

the distribution network, however they were considered for water demand estimates and for rehabilitation of the distribution network to restore their water supply.

A Socio Economic Survey is now under planning and will be carried out in representative systems in order to validate existing estimates regarding (i) the level of services, (ii) the water consumption (lpcd) and (iii) the willingness and affordability to pay for the services by the various groups of beneficiaries. The results of the survey will be used to update the water demand projections if found necessary.

### Existing Systems Analysis

Site inspections were conducted to 74 urban water systems in the seven (7) southern regions. Site visit reports were prepared for each system to include all the data and information collected regarding the water source, conveyance and treatment facilities, electro mechanical equipment installed and operation and performance of the systems. The site visit reports were the basis for the preparation of the Systems Profiles and requirements for rehabilitation and expansion of the systems. A uniform format have been developed and used for all the systems.

Based on the above analysis a capacity (installed capacity and water production) and a water supply and demand profile of the urban systems was prepared and the regional summaries presented in the two tables below.

Installed Capacity and Water Production of the Urban Systems

ID		Region/System	Present Study		TOR		AVRL	
No	AVRL		Installed Capacity m <sup>3</sup> /day	Actual Production (m <sup>3</sup> /day)	Installed Capacity m <sup>3</sup> /day	Current Production m <sup>3</sup> /day	Installed Capacity m <sup>3</sup> /day	Water Produced 2007 m <sup>3</sup> /day
1-4	R01A	Greater Accra						
5-11	R02	Ashanti						
12-19	R03	Bong Ahafo						
20-25	R04	Central						
26-40	R05	Eastern						
41-52	R06	Northern						
53-59	R09	Upper East						
60	R10	Upper West						
61-73	R07	Volta						
74-81	R08	Western						
TOTAL ALL REGIONS								

(5.1)(1c)

There is a difference in the installed capacity and production figures between the present study, the TOR data and the AVRL data. This is attributed mainly because the estimates were made at different periods of time. For instance the new Kwanyaka system put in operation in 2007 is not reflected in the 2005 AVRL data. The actual assessment of the production is based on the data recorded at time of field inspections.

Population and Water Demand Projections of the Urban Systems

ID	Region/System	Projected Population				Projected Water Demand (mln/m)			
		2007	2011	2015	2025	2007	2011	2015	2025
1-4	SO1A Greater Accra	2,655,402	3,962,700	5,386,967	6,777,488	214,000	302,236	316,437	517,480
5-13	SO2 Ashanti	1,473,989	1,797,844	1,917,330	2,824,112	128,439	167,828	186,481	280,820
14-18	SO3 Brong Ahafo	436,302	500,409	676,070	807,471	40,789	46,257	58,987	67,689
19-24	SO4 Central	1,287,771	1,599,072	1,958,109	1,882,408	80,384	78,248	91,474	125,859
25-28	SO5 Eastern	672,267	751,204	891,054	1,070,214	52,287	61,293	73,969	106,444
10-12	SO6 Northern	913,369	838,888	673,219	821,930	47,394	49,688	58,650	68,738
33-35	SO7 Upper East	140,227	185,345	180,628	202,275	13,221	17,383	21,210	31,780
41	SO8 Upper West	54,789	67,899	111,839	167,466	5,813	10,860	12,842	18,897
37-39	SO9 Volta	563,723	624,617	697,286	971,456	27,472	40,284	54,317	76,444
74-81	SO10 Western	889,687	1,056,697	686,323	870,070	38,036	43,949	48,379	63,884
TOTAL ALL REGIONS		8,245,740	9,982,694	12,673,100	14,875,814	624,788	781,245	936,481	1,406,078

It should be mentioned that population and water demands in the table above do not include the new localities outside the supply area to be connected to the systems under the MDG's in 2015 and 2025.

The actual production of about **(5.1)(1c)** is not sufficient to meet the 2007 demands.

The Consultant developed and prepared system project profiles for **(5.1)(1c)** systems for consideration of rehabilitation and expansion to meet the target year's demand. The project profiles capture system population and demand projections, description of the existing system and outline of physical components and cost estimates for rehabilitation and expansion of the system to meet water demands up to the year 2011 and more generally up to the year 2025. In this interim report is presented only the Five Year Development Plan (2007-2011).

### Water Resources Assessment

Out of the 81 urban systems, 40 are based on surface water sources, 34 based on groundwater and 7 systems are based on both surface water and groundwater. There are some 180 boreholes (part of them non operative or abandoned) in the groundwater based systems.

The adequacy of the water resources to meet the projected water demands of the year 2025 in the existing urban systems is under assessment.

A borehole data base and a hydrogeological data base have been implemented to help decision making regarding the rehabilitation and drilling of new boreholes. A groundwater assessment has been also compiled from available studies.

Stream flow and other climatic data are being collected for the surface water assessment to supplement existing studies.

**The Five Year Development Plan 2007-2011  
Estimated Costs of Rehabilitation and Expansion**

ID		Region/System	Cost Estimates (US dollars)	
No	AVRL		Rehabilitation 2008	Expansion 2011
1-4	R01A	Greater Accra	<b>(5.1)(1c)</b>	
5-13	R02	Ashanti		
14-19	R08	Brong Ahafo		
20-25	R04	Central		
26-49	R05	Eastern		
50-62	R06	Northern		
63-66	R09	Upper East		
66	R10	Upper West		
67-73	R07	Volta		
74-81	R03	Western		
TOTAL ALL REGIONS				

#### Investment Plans for 2015 and 2025

In the years 2015 and 2025, under the MDG's, new localities located outside the supply area will be connected to the existing urban systems. This is in addition to the natural growth of the connected and supplied population.

The investment plans for 2015 and 2025 will be estimated based on per capita unit costs to be elaborated by the Consultant and derived from previous projects.

#### Conclusions

Despite bottle necks and gaps in data collection and processing, this report addressed and covered the Five Year Development Plan and cost estimates, update of the SIP, and preparation of the system profiles as required by the TOR, although they will be finalized along with the elaboration of the 2015 and 2025 investment plans, and expanded to cover the remaining 7 systems of the northern regions.

The next tasks to be undertaken immediately in order to complete Part 1 of the Consultancy include:

- Selection of the new localities to be connected to the water systems under the MDG's,
- Surface water assessment to meet 2025 demands,
- The Consultant will carry out a desk study to validate the level of services, lpcd and the willingness and affordability of the beneficiaries to pay. The desk study will be based on all available data like Ghana Survey Living Standards, 2000 population Census and all AVRL data on production and billing. However a socio economic survey in representative systems and groups of population will be carried out if found required to supplement the desk study,
- Elaboration of the per capita costs for rehabilitation and expansion and derivation of the 2015 and 2025 investment plans,
- Prioritization of the five year development plan,
- Finalization of SIP update.

The large water demands anticipated for 2025 might require the development of new sources of water particularly in the groundwater based systems. Furthermore the geographical location of the systems and their distribution in the seven southern regions call for interconnection of the systems and regional transfer of water.

The GWCL is requested to study the Interim Report and submit comments as soon as possible, help collect the remaining data in order to enable the Consultant to complete Part 1 of the assignment.

The time schedule allocated for Part 1 of the study is tight and many reports to be prepared and submitted by the Consultant contain duplicate information. It is suggested to reschedule the number of reports as follows:

- Draft Final Report
- Final Report – Five Year Development Plan, Investment Plans



## Interim Report – March 2008

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layouts and data/information on the transmission and distribution systems and are still to be received. Layouts made available to the Consultant's inspection team have been photocopied.

- A distinction is made between the communities / localities regarding their connection to the system:

-Communities / Localities within the supply area connected but not receiving water due to inadequate network

-Communities / Localities outside the supply area that can be supplied by main extensions and with increased water production.

So far very few information has been received regarding the localities planned to be connected to the systems in the future (b above) in line with the MDG's. More data have been collected on (a) communities and particularly on the inadequate distribution network for rehabilitation/renewal.

Some other localities have been transferred to other schemes (CWS) for water supply and therefore disconnected from the actual supplying urban systems.

- Localities served by the systems: The localities served by the systems and those to be connected in the future are basic data for water demand forecasts and for the elaboration of the SIP and investment/development plans. There are no maps (nor coordinates of the localities) with the location of the localities. The maps could help identify the localities served by the systems and also select those to be connected in the future. It is beyond the capacity of the Consultant and beyond the time frame to collect directly from the field those data and therefore the GWCL is requested to help collect the same as they are known to the regional offices which were also requested to provide the same. A list of the localities has been handed over / sent to the regional offices for update.
- There are localities within the supply area that are connected to the system but are not receiving supply because of a defunct distribution network. Only few data regarding such localities has been made available to the Consultant. It should be noticed that in such systems the water production is below the installed capacity because of the inability to distribute the water. While the demand forecast should be made for all the localities provision should be made to rehabilitate / replace defunct distribution system.
- The number of house connections and standpipes in each system has been collected only for 3 Regions. For the water systems in the other Regions the same will be estimated according to criteria worked out by the Consultant.
- Boreholes: Only very few historical data (if at all) of static and dynamic water levels and exploitation of the wells for comparison with actual yields are available. This information will help decide on rehabilitation / drilling of new wells. Therefore this will be estimated from the local / regional hydrogeology of the area (if these data are not available).
- So far, the Consultant received minor comments from GWCL about the letters and reports submitted and describing the problems and bottle necks encountered by the Consultant when performing the various tasks. A meeting at the beginning of November 2007 was

- Tendering and tenders evaluation.

The location of the 81 urban water systems of Ghana is shown in Map 1.1.

### 1.3 Inception Report and Progress Reports

An Inception Report was prepared and submitted during the first month of the study (October 2007). The Report outlined the work accomplished during the first month of the assignment and particularly the preparatory work involved in the organization of the site inspections of the water systems. The methodologies to be adopted for carrying out the various tasks and the detailed work program are also presented in the Inception Report.

Three Progress Reports (No 2 for November 2007, No 3 for December 2007 and No 4 for January 2008) have been prepared and submitted to the PMU. In the three reports are described the tasks carried out and particularly the progress of the site inspections of the various water systems in the study. A first version of the population and water demand forecasts for all the systems has been prepared and submitted to PMU for remarks/approval.

In Progress Report No 4 have been presented the criteria and guidelines applied for rehabilitation and capacity expansion of the water systems under study. Those guidelines have been also used to reduce the gaps in data, for instance to assess the existing distribution system when such data are not available. A format and sample calculations for 2 systems (Nkawaw in the Eastern Region and Mampong in the Ashanti Region) including the cost estimates for rehabilitation and expansion for 2011 have been also presented in Progress Report No 4.

The Progress Reports discussed in detail the problems encountered while carrying out the tasks in terms of data collection so that measures would be taken to overcome them in the future.

### 1.4 Major Problems Encountered in the Study

- The 1984 and 2000 population censuses: The censuses have been carried out based on Local Councils and Districts respectively. Therefore the 1984 and 2000 intercensal growth rates on areas smaller than regions can not be estimated and compared. Furthermore the identification numbers of the localities in 1984 are different from those of 2000. Therefore the retrieval of localities can be made by name only. The spelling of the names of the localities listed in the existing planning reports and other reports were mostly not the same as the spelling in the data-base of the 1984 and 2000 censuses and this is a source of errors. Identifying the right name of localities in the census data base in order to retrieve the 2000 population and prepare System Water Demands consumed a lot of time of the Consultant.
- Transmission / Distribution Systems: At the site, all the components of the water system (existing / actual / abandoned / reconstructed) and particularly the intake and head works can be visually inspected. This is not the case for the transmission and distribution systems. The system layouts made available to the team are very old (from 1992 and sometimes from the 60's) and might not reflect the actual configuration of the systems because of deterioration and/or rehabilitation/replacement/expansion undertaken since their construction. The System Managers have been requested to supply actual drawings,

The projects consist mostly of rehabilitation of the systems to their designed capacity and some expansion required for supplying the population growth of the localities connected actually to the systems. Connection of new localities in the future in order to comply with the MDG visions will be considered for the preparation of the investment plans of 2015 and 2025.

The hydrological and geo hydrological work to assess the water sources to meet the demands has started. Groundwater resources assessment has been carried out district wise and a groundwater data base has been implemented used all information collected. As to the surface water resources i.e. estimation of stream flow and storage requirement, the basic data are being collected.

The site visit reports have been expanded to contain the rehabilitation and expansion works required for the Five Year Development Plan and their cost estimates. The resultants system profiles are presented here for review and corrections/amendments. They will be used to prepare the investment plans for the long term of 2015 and 2025 as part of the SIP 1998 update when the new localities to be connected to the systems under the MDG's will be made available to the Consultant.

## 1.2 Objectives and Scope of the Study

The main objectives of this Consultancy to be undertaken in two parts consist of (i) to prepare for the 81 urban water systems investment plans for the periods 2007-2011, 2011-2015 and 2015-2025 to achieve the water supply coverage as set in the Millennium Development Goals (MDG) and (ii) to undertake the detailed planning of rehabilitation and expansion of the top ranked systems of the regional prioritized list of the 5 year (2007-2011) development plan to be implemented under the SYIP.

The scope of the services is detailed in the TOR. The sequence of tasks / activities to be carried out by the Consultant is reproduced here briefly and includes:

- Identification of the localities served and new localities to be served by the 81 urban water systems to reach the 2015 and 2025 MDG,
- Demographic analysis to derive population growth rates and population forecast for the 3 planning horizons (2011, 2015 and 2025) based on 2000 population census,
- Determination of the level of services / per capita water consumption / demand to derive water demand forecast, willingness and ability to pay for the services,
- Field visits to the systems and determination of system components for rehabilitation and expansion to meet the 2011, 2015 and 2025 requirements,
- Development of the SIP and investment programs for 2011, 2015 and 2025,
- Prioritization on regional basis of the systems in the 2007-2011 development plan,
- Detailed design of the top ranked systems of the development plan including field surveys,
- Outline of and EIA and required mitigation measures,
- O&M recommendations,
- Preparation of implementation schedules,
- Preparation of bid documents,
- Packaging of tenders,

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### Criteria and Guidelines for Rehabilitation and Expansion

Criteria and guidelines have been formulated and were applied for planning and sizing of distribution network, transmission main, headworks, required storage, house connections, standpipes, etc. These criteria were also used to estimate existing facilities and particularly distribution networks where data are not available.

As defined in the TOR the Five Year Development Plan is aimed at restoring the installed capacity and some expansion to meet the 2011 water demand as a result of population growth.

The requirements for rehabilitation and expansion of the five year development plan as defined above have been prepared taking into account on going and planned works under the FYIP and other funding. Although they address the 2007-2011 term, they have been elaborated with a view to the medium and long term requirements of 2015 and 2025. Impoundments required for the short term are sized and planned to meet the long term demands of 2025. Treatment plants are planned for several years.

For the Greater Accra Region only strict rehabilitation of the Weija and Kpong systems have been considered.

### Proposals for Rehabilitation and Expansion for 2011

For each system, the works required for rehabilitation and expansion to meet the 2011 water demands and their cost estimates are presented in three Excel worksheets: (i) Basic data, (ii) Rehabilitation and (iii) Expansion.

The costs estimates for rehabilitation and expansion have been further subdivided into 5 groups of works:

- Water Source (impoundment, dredging,)
- Transmission mains,
- Treatment plant,
- Storage facilities
- Distribution system.

For each system, as per the requirements and guidelines of the GWCL projects should be selected from the lists above for prioritization within each region. The prioritization will be carried out for rehabilitation and for expansion separately.

The following table presents a regional summary of the total investments required for the Five Year Development plan to meet the 2011 water demands in terms of rehabilitation and expansion for the 7 southern regions of Ghana.