

Mexico City, October 2019

LIC. REINER JAHN
PROJECT COORDINATOR
100 years, 100 shares for Mexico

PRESENT.

The Rotary Club of Motul, Yucatan. Next we request and express the intention to be considered in the Project 100 years, 100 actions for Mexico.

1) APPLICANT INFORMATION.

Rotary Club: Motul

Name: Profr. José Manuel Bacelis Ramírez
Address: Calle 26 No. 286 x 27 and 25 centro, Motul, Yucatán C.P. 97430
District and Club Number: 4195 Club No. 7132

2) NAME OF THE PROJECT

"WATER TREATMENT AND DISINFECTION PROCESS FOR HUMAN CONSUMPTION"

3) OBJECTIVE OF THE PROJECT

Improve the quality of drinking water consumed by the municipal population through the disinfection by chlorine gas, to obtain the vital liquid free of pathogens, Clean, colorless, pleasant taste, odorless and without toxic elements for all inhabitants, especially Children and the elderly

4) DESCRIPTION OF THE PROJECT, SHORT AND LONG TERM DEGLOZED

Water is an essential element for life, it is the main component of living beings, since between 70 and 80% of body weight is water.

Access to drinking water and sanitation is essential for life and a recognized human right. Likewise, water is of vital importance for sustainable development, from health and nutrition.

In the City of Motul, in the State of Yucatán, which has approximately 26,000 inhabitants, the water purification plant that works dates back 35 years; When the inhabitants were less than now, their pipes are constantly being repaired. But what worries us most is the quality of the water that reaches the homes of this population. The Project will impact on the correct chlorination and disinfection of the vital liquid, avoiding infectious gastrointestinal diseases and the elimination of pathogenic germs that lead to other diseases. In the long term, the chlorination system will be modernized and 8694 Motuleños households will benefit.

PROBLEM

Forms of water pollution.

Among the main forms of water pollution we have:

- Improper disposal and disposal of human and animal excreta and solid waste or waste.
- Use of agrochemicals, detergents and bleach.
- Disposal of residual liquids from communities

There are a whole series of conditions related to excreta and wastewater that commonly affect the inhabitants of the populations, with children under five being the most exposed to these diseases, since their immune system is not fully developed and also May be weakened by malnutrition. Diarrheal diseases are, by far, the main cause of morbi-mortality in this age group.

In Motul, drinking water is disinfected by the chlorination of water, to inactivate pathogens; However, the effectiveness of the procedure is not always optimal, due to the volume of water to be sanitized, the wear of the pipe and the lack of staff training. This procedure is generally evaluated by the determination of residual chlorine, whose presence in the household outlet indicates the low efficiency of disinfection.

In the municipality of Motul, the disinfection of the drinking water system is carried out through the continuous dripping of sodium hypochlorite through a pump. But the conditions of the equipment and the facilities so old, as well as the growth of the population merit a radical change in the way of chlorinating the water.

Motul has a distribution network of 41,783 ML and 528 ML of driving that give a total of 42,311 ML necessary to disinfect; since they reach 8,694 shots.

Drinking water collected from a source can be contaminated before use in certain critical circumstances due to unsafe hygiene practices, such as:

- Transport water from the source to the house in dirty containers.
- Store water in the house in open and / or dirty containers.
- Use water in the house with dirty hands or utensils.

Among the main water-related diseases we have, diarrheal diseases of various kinds due to the consumption of contaminated water such as cholera, typhoid fever, hepatitis, shigellosis, dermatological and ophthalmological diseases. Others have an indirect link to it due to lack of water. The population does not have adequate hygiene habits, especially handwashing, increasing the cycle of oral-fecal (ano-hand-mouth) disease transmission.

5) EXPLANATION OF THE SUSTAINABILITY OF THE PROJECT IF YOU HAVE IT

Water quality.

It is understood that a water has good quality when it is free of pathogenic germs, clean, colorless, with a pleasant taste, an odorless smell, without toxic elements and not cloudy.

There may be several reasons to improve water quality. The most important is the destruction of microorganisms, such as germs and parasites, that cause diseases. Water consumption can be beneficial or harmful to the health of the family, since it is also a vehicle that transmits digestive diseases.

What we propose is to use chlorine in gas to disinfect water in water treatment plants and supply systems.

The Official Mexican Standard NOM. 127 establishes as parameter 0.5 mg / l for the amount of residual chlorine suitable for consumption; However, the municipal agency must also meet quality standards of the Health Sector and the National Water Commission (Conagua).

After this process, the product is sent to areas that have carcasses to supply pressure to the liquid in order to store it in elevated and superficial tanks, which accumulate quantities of water as a reserve.

After storage, it is directed to the conduction line, a name that is given within the water supply system, which is a set consisting of pipes and control devices, which allow the transport of water (in adequate quality conditions, quantity and pressure) from the source of collection to the site where it will be distributed.

And through these pipes it finally reaches homes, where water is stored in the water tanks for domestic use.

Ensuring the disinfection of said piped water, guarantees optimum disinfection

and in turn the eradication of diseases of various kinds.

The H. Motul City Council, in collaboration with the Rotary club of this town, undertakes to permanently monitor this project to maintain the quality of the water consumed by the inhabitants of this municipality.

1) DIRECT AND INDIRECT BENEFICIARIES BREAKING UP YOUR VULNERABLE SITUATION ATTACHING IMAGES.

Taking into account that there are currently 8,694 intakes of drinking water in the municipal seat; The direct benefit will be for all the inhabitants (26,000), who will drink better quality water for human consumption. Children and the elderly are the ones who will be better protected as well as families that, due to their socioeconomic status, drink water from the pipes within their reach and cannot buy purified water.

1) LOCATION OF THE PROJECT

MOTUL CABECERA MUNICIPAL AND ITS COLONIES

2) AREA OF INTEREST:

Disease prevention and treatment _____ x _____
 Water supply and sanitation _____ x _____

3) PROJECT BUDGET

The project budget is: TOTAL \$ 202,982.87.

If our project is approved, we are willing to contribute 20% of the commitment as an applicant club.

	Aportación		Cantidad	
		Pesos	Dólares	
From the requesting club:		\$40,000.00	\$4,145.26	USD
Resources from other sources in Mexico: FURMEX or others:				
Requested to Heart 2 Heart:		\$162,982.87	\$8,740.97	USD
TOTAL:		\$202,982.87	\$12,886.23	

Concepto	Monto
Dosing of chlorine gas Nora Waters, Advanced Series 480 model, vacuum operated for direct mounting on 68 kg cylinder 481C1 series, ISO90001 quality certificate, maximum capacity 100LBS / DIA 2kg manual control, 3 "rotameter scale one ejector with valve , gaskets, wrench for general purposes, dosing adjustment valve two 68kg cylinders and support pump.	\$130,000.00

Installation of gas chlorine dispenser with suction and PVC injection line CED 80 magnetic starter, electrical installation. It includes hydrostatic test, tool and the necessary for its correct execution.	\$44,985.23
Subtotal	\$174,985.23
IVA (16%)	\$27,997.64
TOTAL	\$202,982.87

FIRMS

APPLICANT'S NAME:

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PRESIDENT 2020 - 2021, NAME AND SIGNATURE

 ADDY RUTH AGUILAR AND CONTRERAS

LEADERS RESPONSIBLE FOR THE PROJECT, NAME AND SIGNATURE

LEADER 1 LEADER 2

JOSE MANUEL BACELIS RAMÍREZ ADDY RUTH AGUILAR Y CONTRERAS

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APPENDIX 1

IDEAL STATE OF THE CHLORINE GAS DISINFECTION CENTER OF THE CITY OF
MOTUL WATER POTABILIZADORA DE AGUA.

ANNEX 2 QUOTATION

