

With reference to Multigas IPPC application for renewal, kindly note that the IPPC Committee is requesting further information regarding the industrial liquid treatment unit. In this regard, you are kindly requested to submit details on:

(i) type of structure and positioning within the plant area (kindly mark location on a site layout plan);

The liquid treatment unit consists of:

1. two dosing pumps
2. two PVC holding tanks with manual mixers to hold chemicals to be added to the industrial liquid waste
3. two level probes for measuring the Ph of the liquid waste and
4. the pipework set-up.

The dosing pumps are fixed in a room adjacent to the pit holding the industrial liquid waste. The holding tanks are placed in a cabinet outside the room while the level probes are fitted in the circulating water pipework.

Photographs of the dosing pumps, holding tanks and probes and pipework are shown in appendices 1 to 3. The location of the treatment unit is shown on the site layout being supplied, see appendix 4.

(ii) type/level of treatment (including specifications of equipment);

The treatment consists of dosing diluted Hydrochloric Acid and dissolved Ferric Chloride. These chemicals are added to the liquid industrial waste to control:

1. the Ph of the liquid
2. the sulphides contained in the liquid and
3. the chlorides contained in the liquid.

The amounts of chemicals ( $\text{HCl}$  and  $\text{FeCl}_3$ ) to be dosed have been established after various tests and analysis on raw, treated and treated/ domestic waste mix were carried out by an accredited laboratory. Levels of Ph have been established for dosing purposes.

Dosing procedure:

The Ph of the industrial liquid waste is measured. Then dosing with diluted Hydrochloric Acid is started to obtain the predetermined Ph level. When this predetermined Ph level is reached dosing with dissolved Ferric Chloride is started. When the preset Ph level is reached, the treated liquid is ready for mixing with domestic waste for discharge to the public sewer. The analysis of the mix shall meet the requirements of 'Schedule C' of the

Legal Notice LN 139 of 2002 - Sewer Discharge Control Regulations, 2002. Samples of the raw, treated and treated/ domestic waste mix shall be carried out periodically as appropriate by an accredited laboratory.

The pumps are started manually but stop automatically when the preset Ph level is reached. Also when the level of the Ph is close to the preset level, the amount chemical being dosed is automatically reduced in order not exceed the preset Ph value.

(iii) testing/analysis of the discharged effluent (pre- and post- treatment), providing copies of such analysis;

As described above Multigas has the equipment to check the Ph of the liquid effluent while testing for sulphides and chlorides are carried out by an external accredited laboratory. A certificate of the result of the analysis of the samples during the tests to establish the amount of dosing chemicals, is shown in appendix 5.

(iv) confirmation that the final discharge meets the limits stipulated in LN 139 of 2002, Sewer Discharge Control Regulations, 2002.

The certificate of the result of the analysis of the samples carried out by the accredited laboratory confirms that the waste to be discharged in the public sewer meets 'Schedule C' of the LN 139 of 2002, Sewer Discharge Control Regulations, 2002.

In addition, with reference to point 4(v) Area Segregation, Site safety measure (document dated 13th February 2012), kindly clarify whether the physical segregation from the production area is a recent development.

We wish to clarify that the production area has always been segregated from other areas within the company property by a masonry boundary wall, however the iron gate giving access to other areas was missing. A new gate has been manufactured and fixed to completely segregate the production area.

Could you please indicate a timeframe for the submission of such analysis & issuing of sewer discharge permit?

It is planned that within this April the Water Services Corporation shall carry out a final inspection of the site and treatment unit and the sewer discharge permit for the site shall the discharge of the treated industrial waste.

## Appendix 1

### The Dosing pumps



## Appendix 2

### The Chemical Holding Tanks



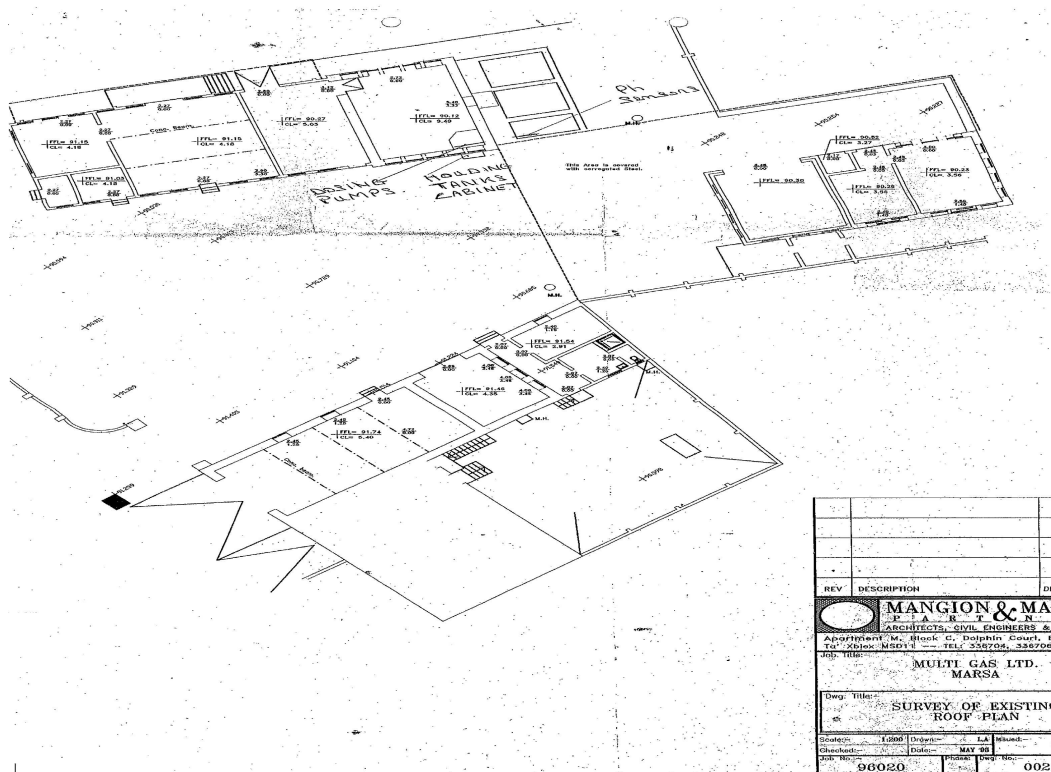
## Appendix 3

### Section of the Pipework



## Appendix 4

Site Layout showing location of the Treatment Unit



## Appendix 5

Result of the Analysis

|   |   |
|---|---|
|  | <b>Water Services Corporation Laboratory</b><br><small>Water Services Corporation, Gormi Road Luqa LQA 05 Tel: 00356 22443119 Fax: 00356 22443125</small> |
|---|---|


### CERTIFICATE OF ANALYSIS

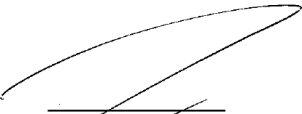
**Customer:** Mr. Vincent Bartolo  
**'Bliss',**  
**G. Abos Str.,**  
**Iklin, IKL1023.**
**Certificate No.: 1021/1**

**Sample Description:** L.N. WW12-0382: Sample A.  
 L.N. WW12-0383: Sample B.  
 L.N. WW12-0386: Sample C.

**(\*\*)Date of Sample Submission:** 29<sup>th</sup> February 2012
 **Date of commencement of analysis:** 29<sup>th</sup> February 2012

| PARAMETER         | UNITS                 | METHOD OF ANALYSIS | SOP No.         | RESULT    |           |           |
|-------------------|-----------------------|--------------------|-----------------|-----------|-----------|-----------|
|                   |                       |                    |                 | WW12-0382 | WW12-0383 | WW12-0385 |
| CHEMICAL ANALYSIS |                       |                    |                 |           |           |           |
| pH                | pH units              | pH meter           | SOP/C/003       | 12.45     | 10.51     | 8.90      |
| Chlorides         | mg/L                  | Titrimetric        | SOP/C/WW003     | 240       | 1460      | 660       |
| *Sulphides        | mg/L H <sub>2</sub> S | Photometric        | In-house method | 60.3      | 0.7       | 0.43      |

  
 Analysis checked by:  
 Matthew John Vella B.Sc.(Hons) M.Sc.  
 Scientist

  
 Analysis approved by:  
 Trevor G Chircop Bray B.Sc.(Hons) M.Sc.  
 Scientist

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 (\*\*\*)The words sample submission imply that the sample has been collected by the customer and thus sampling is not covered by laboratory accreditation.