

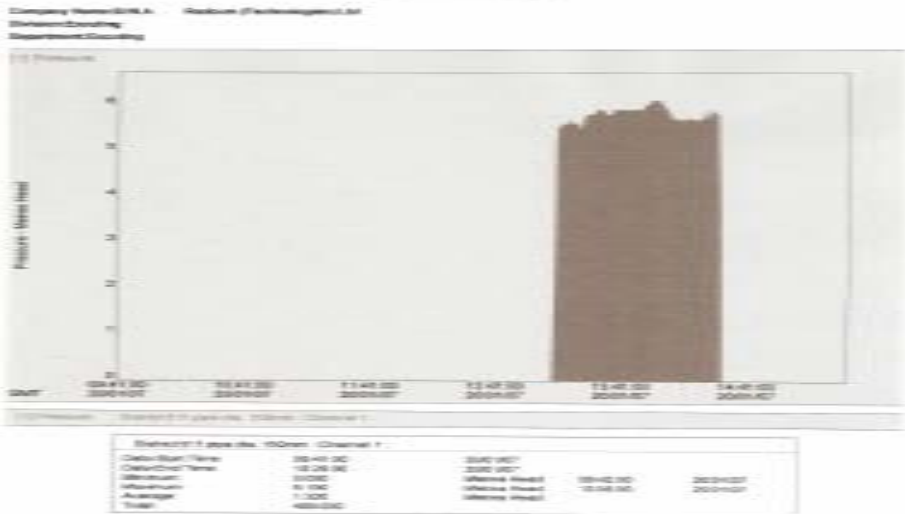
Analyses of data for pressure (q1)

- ✓ The reading (2.4 m) at a time (12:40 p.m) is considered as a normal reading.
- ✓ the reading (1 m) at a time (13:12 p.m) is unnormal because of many reasons like as :-
 - 1) There is a problem in the project (W.T.P.).
 - 2) This time may be considered the peak consumption used.
 - 3) National electricity provided for the district 511, so all customers operate the water pumps.

Measurement of pressure in (q2)

- ❖ Data logger used in apposition (q2) to measure of pressure to pipe dia.300mm iron.
- ❖ The data and graph shows the measurement of pressure.

Radwin Graph



Talibular Data

Time	Pressure (mm Hg)	Flow (L/min)	Flow (m³/hr)	Flow (m³/day)
12:00:00	1.2	100	0.001	0.001
12:01:00	1.2	100	0.001	0.001
12:02:00	1.2	100	0.001	0.001
12:03:00	1.2	100	0.001	0.001
12:04:00	1.2	100	0.001	0.001
12:05:00	1.2	100	0.001	0.001
12:06:00	1.2	100	0.001	0.001
12:07:00	1.2	100	0.001	0.001
12:08:00	1.2	100	0.001	0.001
12:09:00	1.2	100	0.001	0.001
12:10:00	1.2	100	0.001	0.001
12:11:00	1.2	100	0.001	0.001
12:12:00	1.2	100	0.001	0.001
12:13:00	1.2	100	0.001	0.001
12:14:00	1.2	100	0.001	0.001
12:15:00	1.2	100	0.001	0.001
12:16:00	1.2	100	0.001	0.001
12:17:00	1.2	100	0.001	0.001
12:18:00	1.2	100	0.001	0.001
12:19:00	1.2	100	0.001	0.001
12:20:00	1.2	100	0.001	0.001
12:21:00	1.2	100	0.001	0.001
12:22:00	1.2	100	0.001	0.001
12:23:00	1.2	100	0.001	0.001
12:24:00	1.2	100	0.001	0.001
12:25:00	1.2	100	0.001	0.001
12:26:00	1.2	100	0.001	0.001
12:27:00	1.2	100	0.001	0.001
12:28:00	1.2	100	0.001	0.001
12:29:00	1.2	100	0.001	0.001
12:30:00	1.2	100	0.001	0.001
12:31:00	1.2	100	0.001	0.001
12:32:00	1.2	100	0.001	0.001
12:33:00	1.2	100	0.001	0.001
12:34:00	1.2	100	0.001	0.001
12:35:00	1.2	100	0.001	0.001
12:36:00	1.2	100	0.001	0.001
12:37:00	1.2	100	0.001	0.001
12:38:00	1.2	100	0.001	0.001
12:39:00	1.2	100	0.001	0.001
12:40:00	2.4	100	0.001	0.001
12:41:00	1.2	100	0.001	0.001
12:42:00	1.2	100	0.001	0.001
12:43:00	1.2	100	0.001	0.001
12:44:00	1.2	100	0.001	0.001
12:45:00	1.2	100	0.001	0.001
12:46:00	1.2	100	0.001	0.001
12:47:00	1.2	100	0.001	0.001
12:48:00	1.2	100	0.001	0.001
12:49:00	1.2	100	0.001	0.001
12:50:00	1.2	100	0.001	0.001
12:51:00	1.2	100	0.001	0.001
12:52:00	1.2	100	0.001	0.001
12:53:00	1.2	100	0.001	0.001
12:54:00	1.2	100	0.001	0.001
12:55:00	1.2	100	0.001	0.001
12:56:00	1.2	100	0.001	0.001
12:57:00	1.2	100	0.001	0.001
12:58:00	1.2	100	0.001	0.001
12:59:00	1.2	100	0.001	0.001
13:00:00	1.2	100	0.001	0.001

Computer Report 2016-11-15 - Nelson Technology Ltd
 Instrument: FLO 430
 Measurement: Flow

Report 01: Pipe dia. 150mm - Channel 1				
Channel Name	150mm dia.	Flow Rate	0.00000	0.00000
Channel Type	Flow	Flow Rate	0.00000	0.00000
Channel	150mm dia.	Flow Rate	0.00000	0.00000
Channel	150mm dia.	Flow Rate	0.00000	0.00000
Average	150mm dia.	Flow Rate	0.00000	0.00000

Measurement of flow in (q2)

- ❖ Ultra sonic FLO used in apposition (q2) to measure of flow to pipe dia.150mm ductile.
- ❖ The data and graph shows the measurement of flow.





Start Time:03/02/2007--15:27:27
 Stop Time:03/02/2007--15:27:27
 Sitename:Site DIS511
 Pipe Material:Ductile Iron
 Pipe O.D.:170.00 mm
 Wall Thickness:6.30 mm
 Pipe Liner:None
 Liner Thickness:0.00 mm
 Fluid:Water
 Averaging:5
 Interval:4
 Flow [Min = 54.8804 m3/hr Max = 54.8804 m3/hr]
 Sound Speed [Min = 1423.2 m/s Max = 1423.2 m/s]
 Signal Strength [Min = 38.2 Max = 38.2], Quality [Min = 19.1 Max = 19.1], Am
 plitude [Up = 0.0058 Down = 0.0057]
 Errors [0], ErrorCode [0000]
 Date Month Year Hour Min Sec Flow(m3/hr)
 03 02 07 15 27 54.8804

Start Time:03/02/2007--15:27:30
 Stop Time:03/02/2007--15:27:30
 Sitename:Site DIS511
 Pipe Material:Ductile Iron
 Pipe O.D.:170.00 mm
 Wall Thickness:6.30 mm
 Pipe Liner:None
 Liner Thickness:0.00 mm
 Fluid:Water
 Averaging:5
 Interval:4
 Flow [Min = 54.3481 m3/hr Max = 54.3481 m3/hr]
 Sound Speed [Min = 1423.2 m/s Max = 1423.2 m/s]
 Signal Strength [Min = 37.9 Max = 37.9], Quality [Min = 19.0 Max = 19.0],
 plitude [Up = 0.0057 Down = 0.0056]
 Errors [0], ErrorCode [0000]
 Date Month Year Hour Min Sec Flow(m3/hr)
 03 02 07 15 27 50 54.3481

File:Site DIS511-03/02-15:31:07
 Start Time:03/02/2007--15:31:07
 Stop Time:03/02/2007--15:31:07
 Sitename:Site DIS511
 Pipe Material:Ductile Iron
 Pipe O.D.:170.00 mm
 Wall Thickness:6.30 mm
 Pipe Liner:None
 Liner Thickness:0.00 mm
 Fluid:Water
 Averaging:5
 Interval:4
 Flow [Min = 52.2511 m3/hr Max = 52.2511 m3/hr]
 Sound Speed [Min = 1423.4 m/s Max = 1423.4 m/s]
 Signal Strength [Min = 30.0 Max = 30.0], Quality [Min = 15.0 Max = 15.0], Am
 plitude [Up = 0.0056 Down = 0.0055]
 Errors [0], ErrorCode [0000]
 Date Month Year Hour Min Sec Flow(m3/hr)
 03 02 07 15 31 07 52.2511

File:Site DIS511-03/02-15:31:09
 Start Time:03/02/2007--15:31:09
 Stop Time:03/02/2007--15:31:09
 Sitename:Site DIS511
 Pipe Material:Ductile Iron
 Pipe O.D.:170.00 mm
 Wall Thickness:6.30 mm
 Pipe Liner:None
 Liner Thickness:0.00 mm
 Fluid:Water
 Averaging:5
 Interval:4
 Flow [Min = 52.3432 m3/hr Max = 52.3432 m3/hr]
 Sound Speed [Min = 1423.4 m/s Max = 1423.4 m/s]
 Signal Strength [Min = 30.2 Max = 30.2], Quality [Min = 15.0 Max = 15.0], Am
 plitude [Up = 0.0057 Down = 0.0056]
 Errors [0], ErrorCode [0000]
 Date Month Year Hour Min Sec Flow(m3/hr)
 03 02 07 15 31 09 52.3432

Because the main project(Sharq Dijla WTP)

is far from al Sader City, the project

(Sharq Dijla WTP) capacity = 765,000 m³∕day

Al Sader City depends on an compact unit
its range between (50 – 200) m³∕hr.

which does not cover the daily consumption of a

single person acknowledging that al Sader City

has a big population.

compact unit complain from many problem and

needs a permanent maintenance.

Calculating the input water to district 511 estimation.

▪ Number of population in district (511)= 8355

* The daily consumption of a single person

130 liter∕person∕day = 1,086,150 liter∕day
= 45.25625 m³∕hr.

▪ Leakages and illegal rate = 50 %

▪ The total input water in district (511)

= 45.25625 ∕ 50% = 90.5125 m³∕hr

In the future :-

- ✓ Make a chamber and measure the flow and pressure in 24 hours.
- ✓ NRW team will be making four chambers on feeding pipe to district 511.
- ✓ Measurement a flow and pressure in 24 hours to get a minimum night flow

✓ District 511 divide three blocks.

✓ If possible know each house the water quantity consumed.

✓ If possible discover the leak by the instrument.

Thank you for your kind attention