

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Beyond Reasonable Doubt:

Data Loggers Dispel Water Use Discrepancies





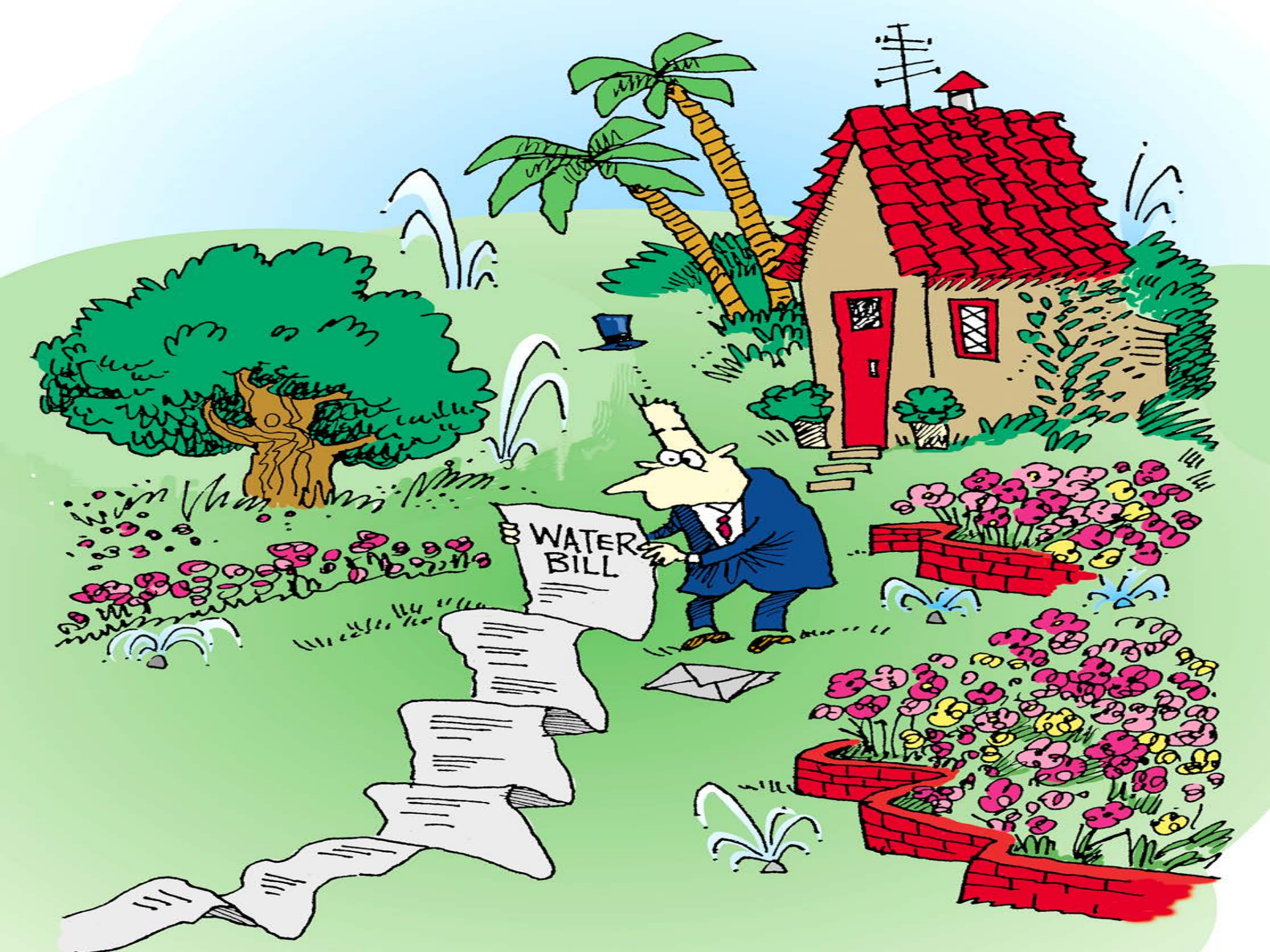
City of Chandler Water Conservation



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Gear Driven Meters

- Manual Read
- Oldest technology in our City
- Accuracy
- Requires isolation to verify water loss



Displacement Meter w/Encoder Receive Transmitter

- Electronic Read
- Accuracy issues

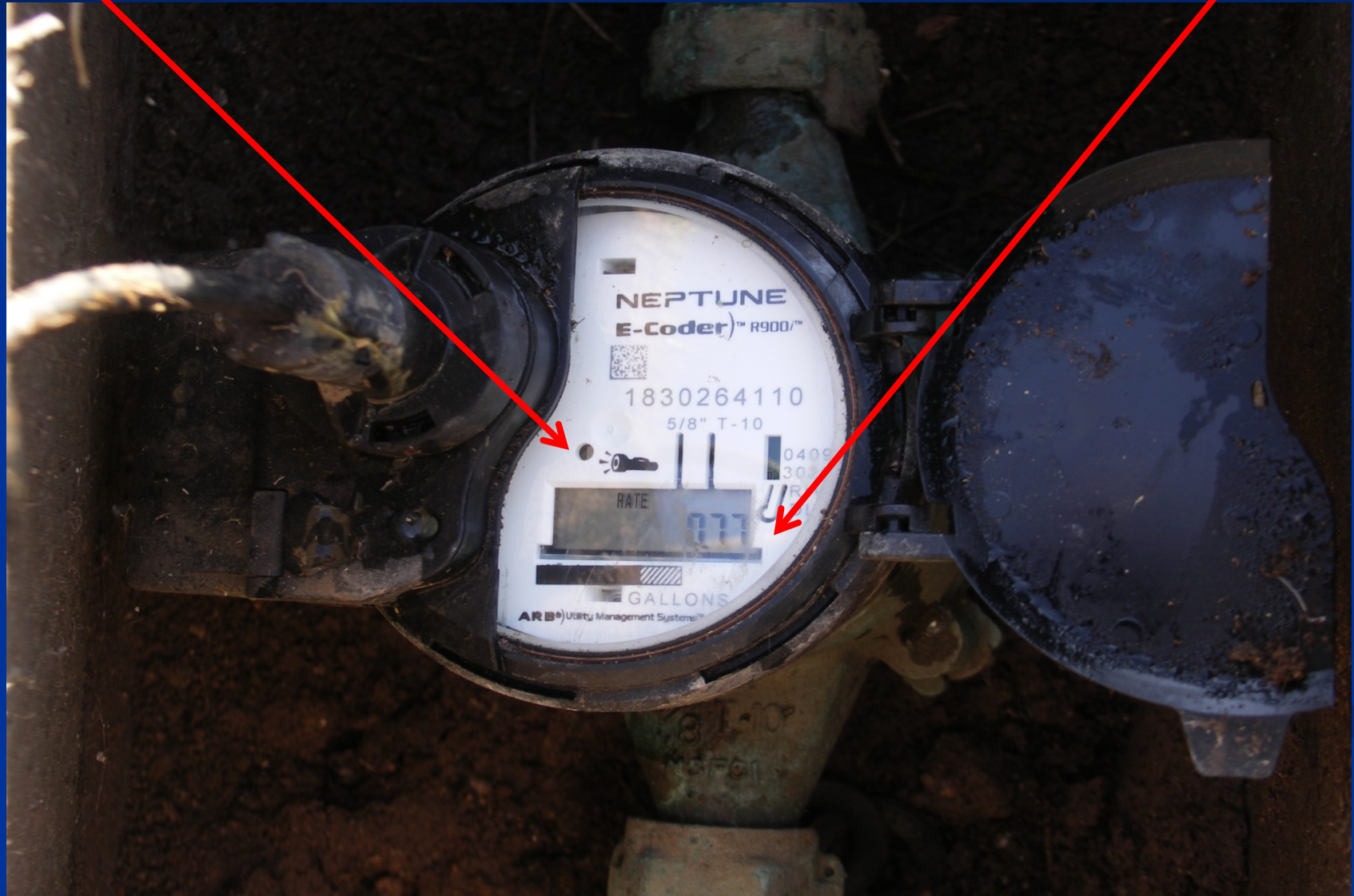


Digital Meters

- Leak & Flow Icons
 - Leak Icon = Dripping Faucet
 - Flow Icon = Arrow
- Rate of Flow Tool
- Newer Meters are data log capable



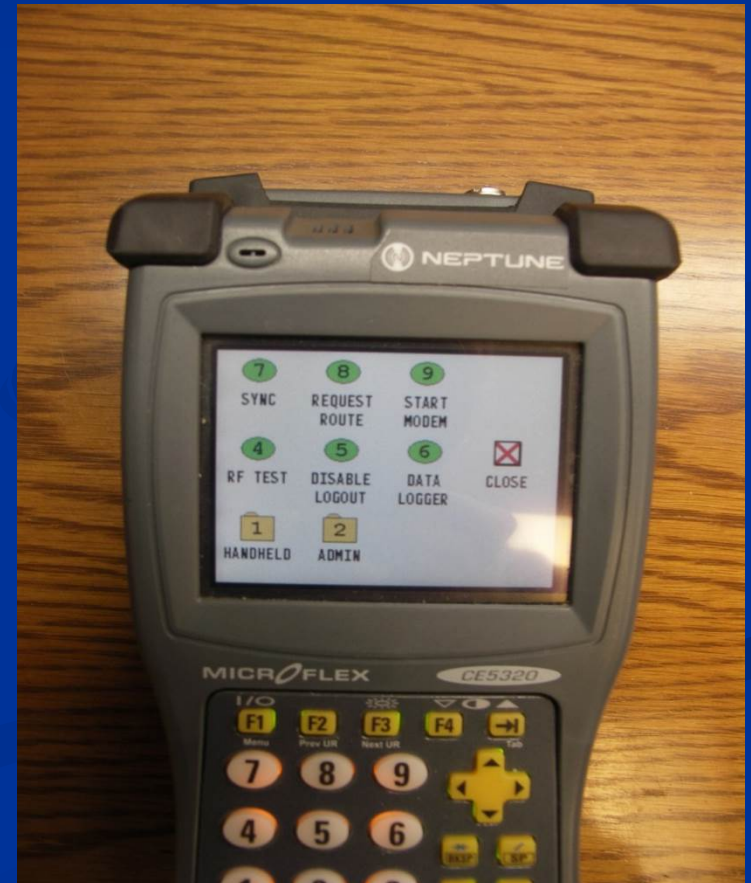
Rate of Flow Tool



Data Logging

Requires on-site visit with handheld unit to download data.

Handheld unit allows test reads without opening meter box as well as ability to capture 3 months of prior water use data.



Data Log Examples

Pool Fill Valve / Irrigation Leak

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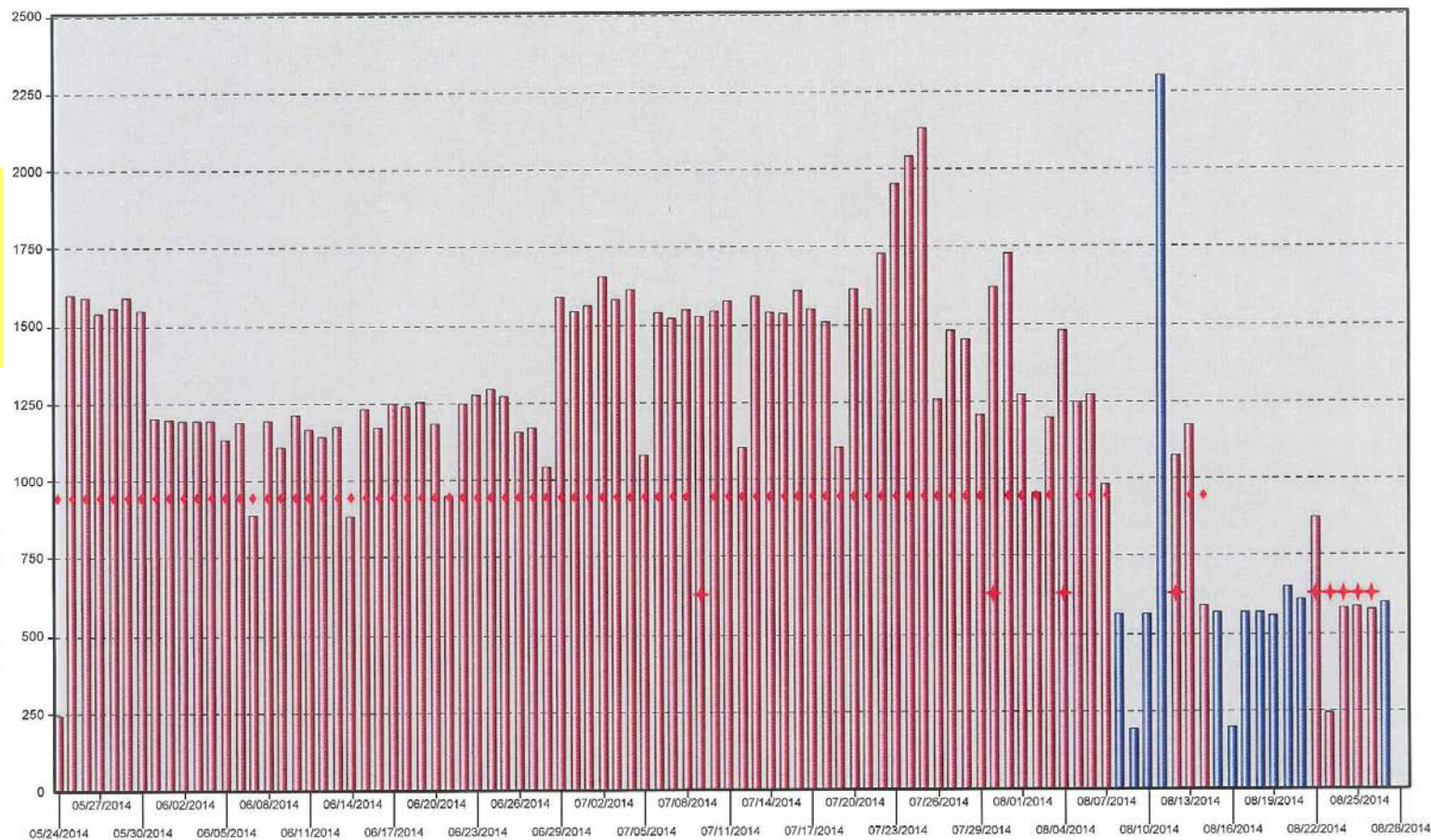
City of Chandler Municipal Utilities Division
E-Coder R900i Data Logging Report

MIU#: 1830676125 Acct: 00034278 Mtr #: 1830676125 Addr: 4842 W OAKLAND ST for 05/24/2014 through 08/28/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Daily)

Data Log Examples

Pool Fill Valve / Irrigation Leak

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08/29/2014

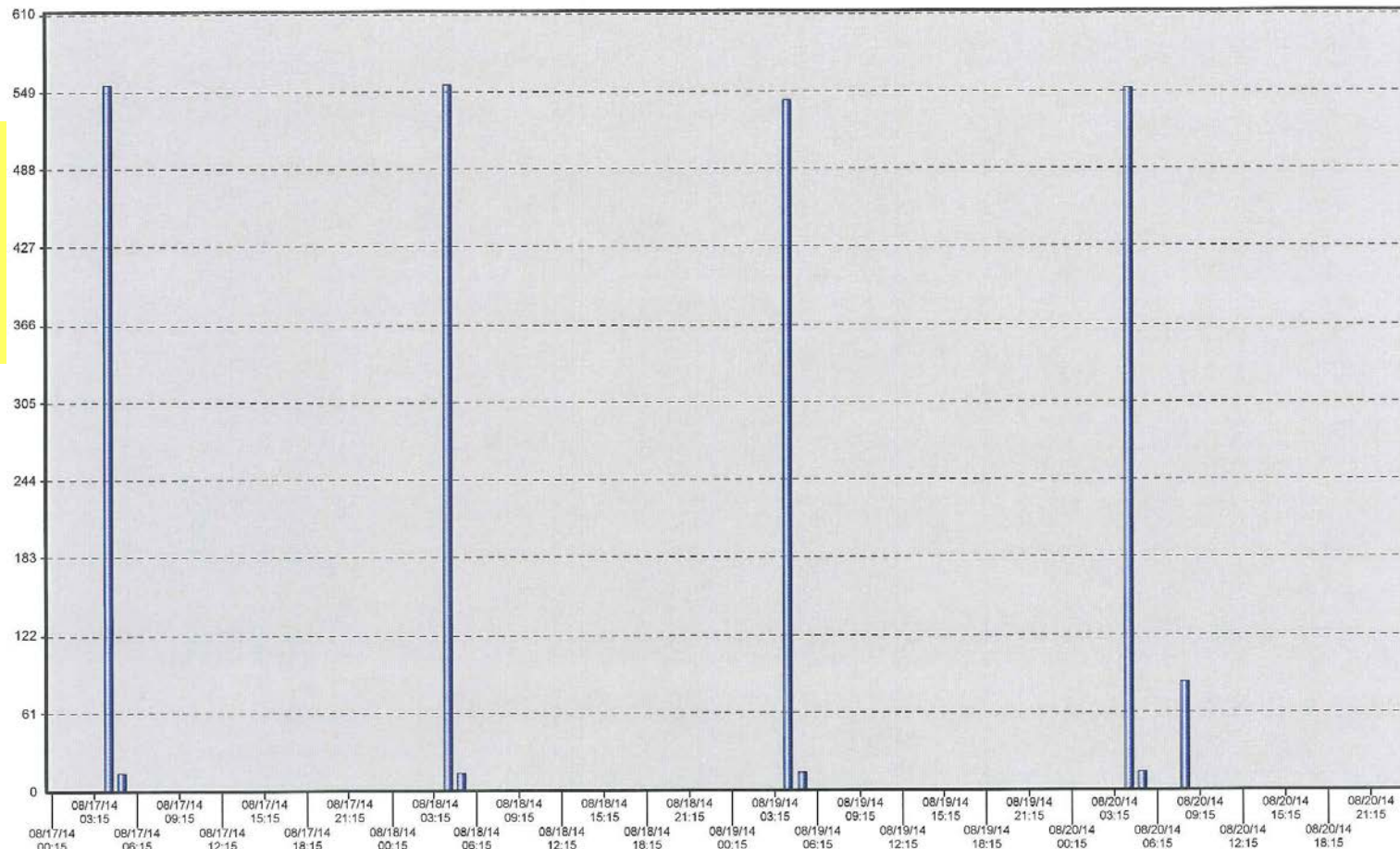
City of Chandler Municipal Utilities Division
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MIU#: 1830676125 Acct: 00034278 Mtr #: 1830676125 Addr: 4842 W OAKLAND ST for 08/17/2014 through 08/20/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Hourly)

Data Log Examples

Irrigation Overwatering

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08/29/2014

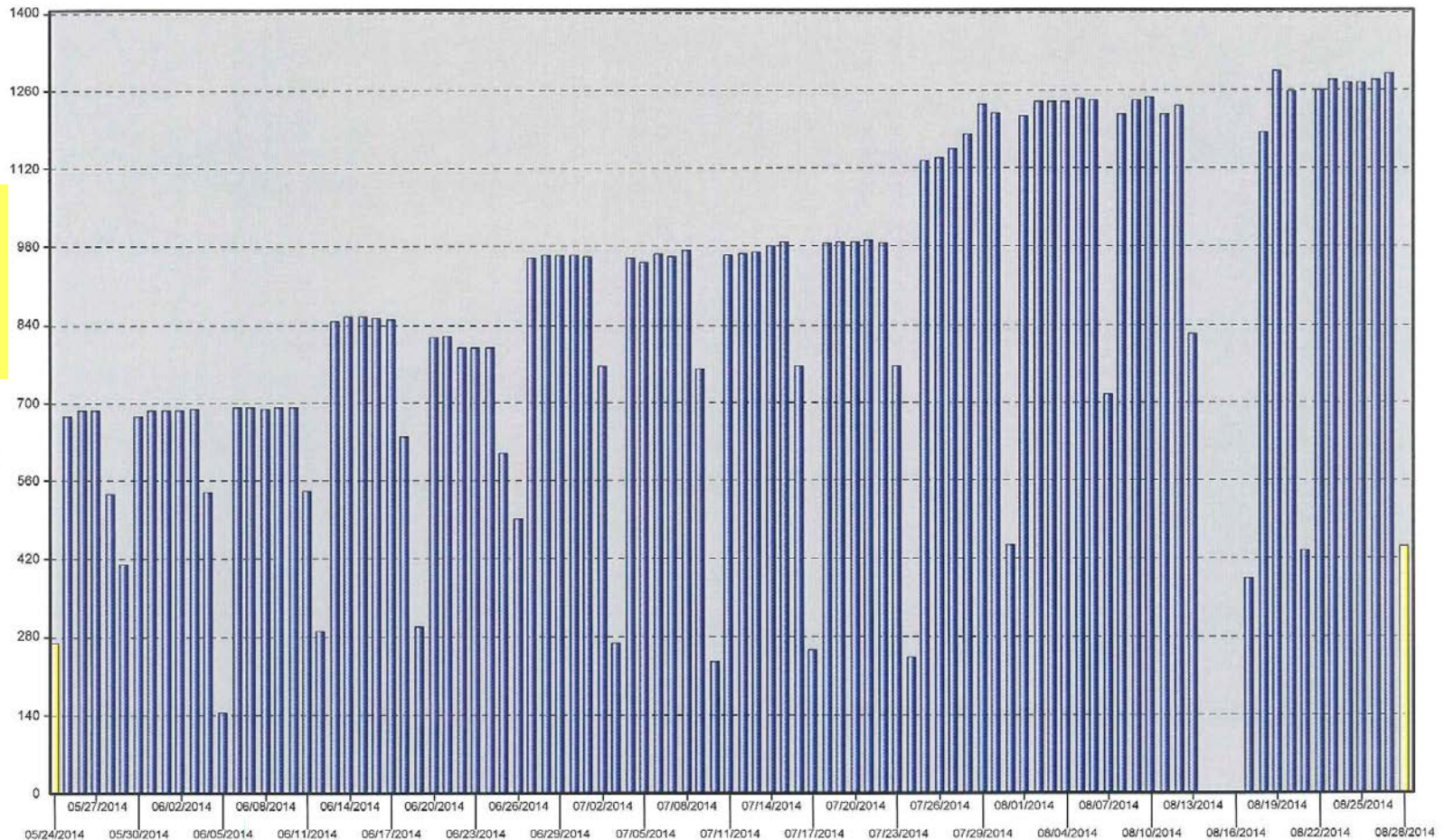
City of Chandler Municipal Utilities Division
E-Coder R900i Data Logging Report

MIU#: 1830472552 Acct: 00058848 Mtr #: 1830472552 Addr: 4456 W RICKENBACKER WY for 05/24/2014 through 08/28/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Daily)

Data Log Examples

Irrigation Overwatering

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08/29/2014

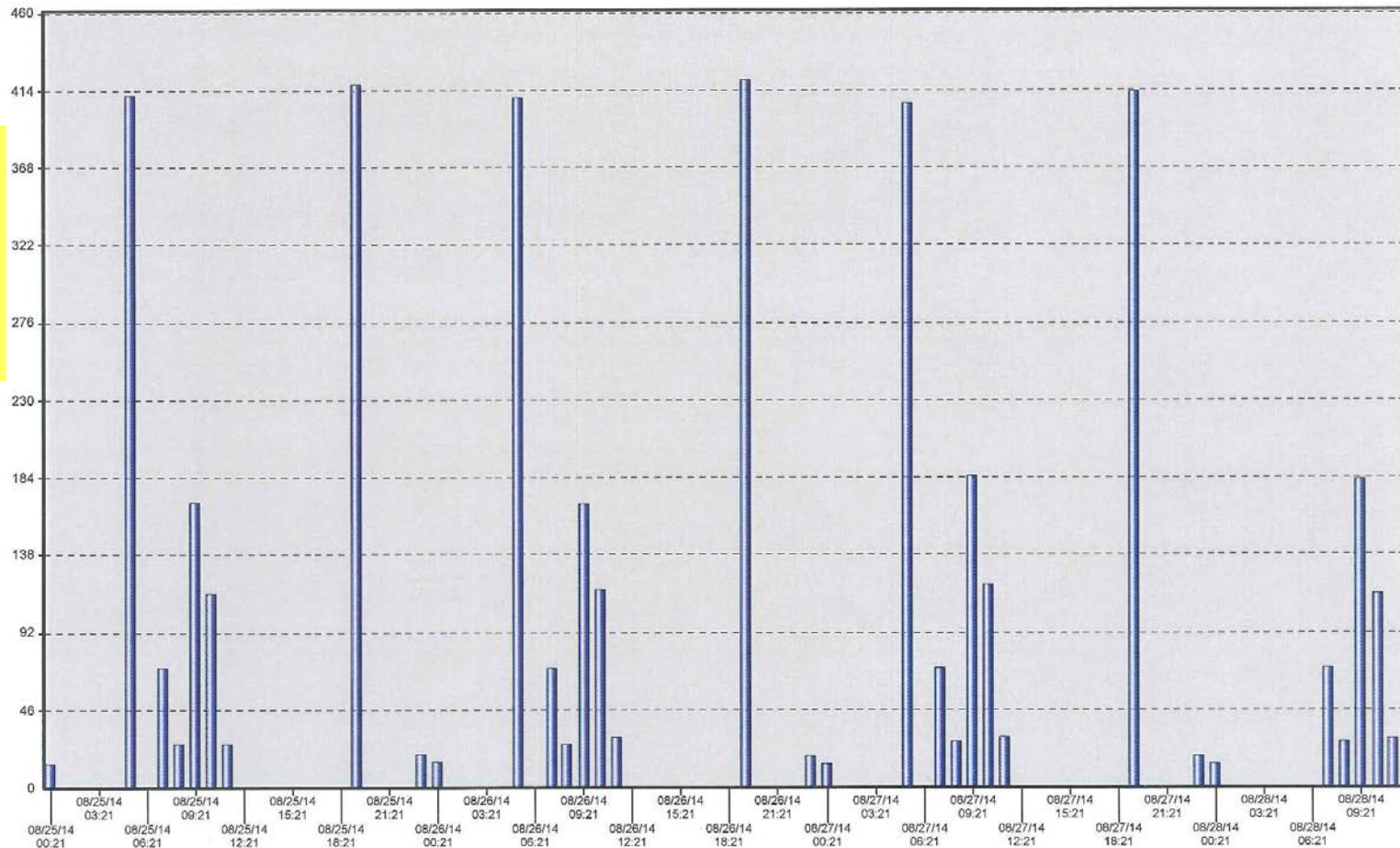
City of Chandler Municipal Utilities Division
E-Coder R900i Data Logging Report

MIU#: 1830472552 Acct: 00058848 Mtr #: 1830472552 Addr: 4456 W RICKENBACKER WY for 08/25/2014 through 08/28/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Hourly)

Data Log Examples

Faulty Water Softener/Irrigation – Intermittent

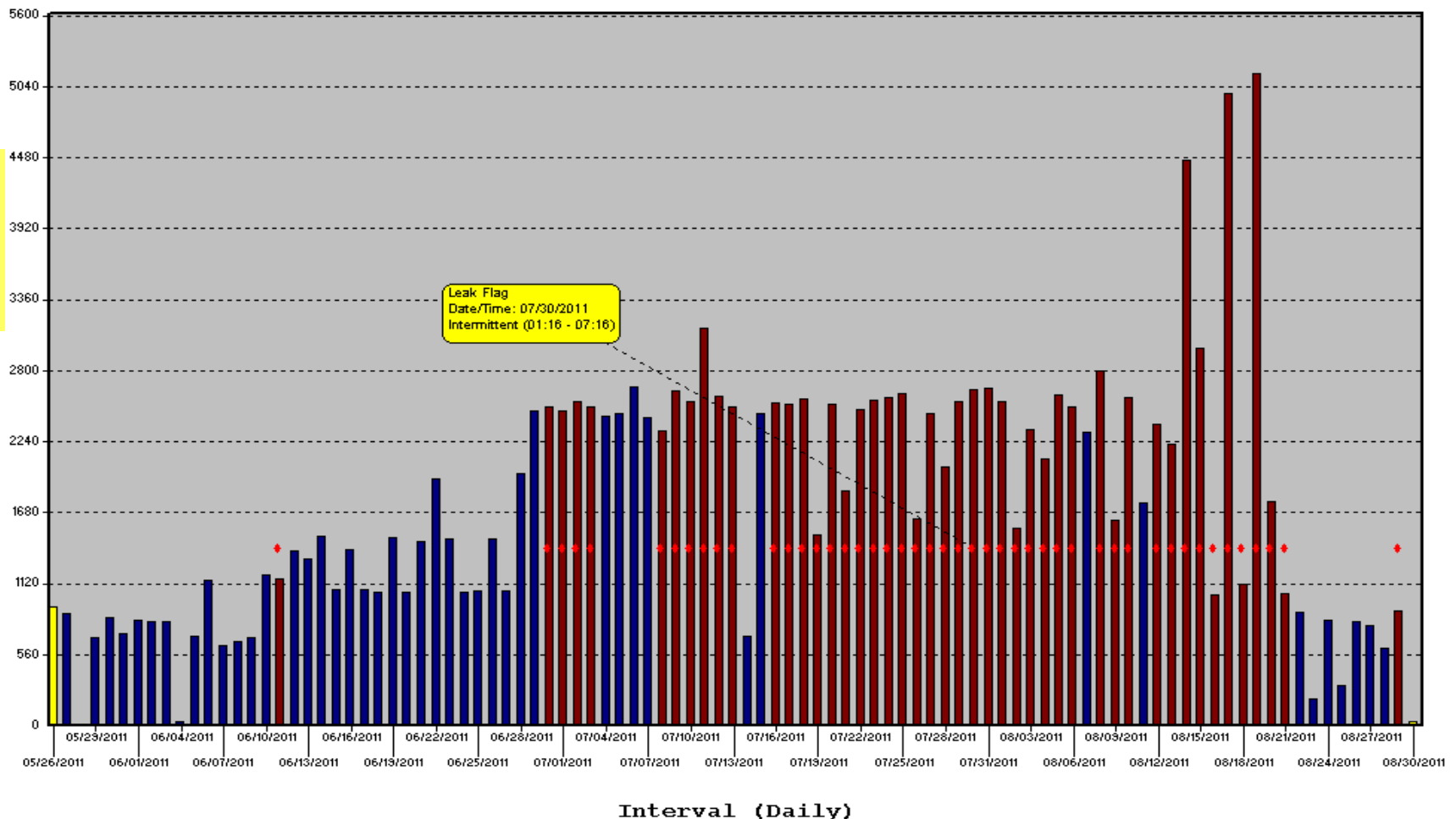
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02/29/2012

ARB N_SIGHT Mobile Report
E-Coder R900i Data Logging Report
MIU#: 1830918378 for 05/26/2011 through 08/30/2011

■ Daily Consumption ⬤ Backflow Flag ♦ Leak Flag

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Data Log Examples

Faulty Water Softener/Irrigation – Intermittent Cont'd

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02/29/2012

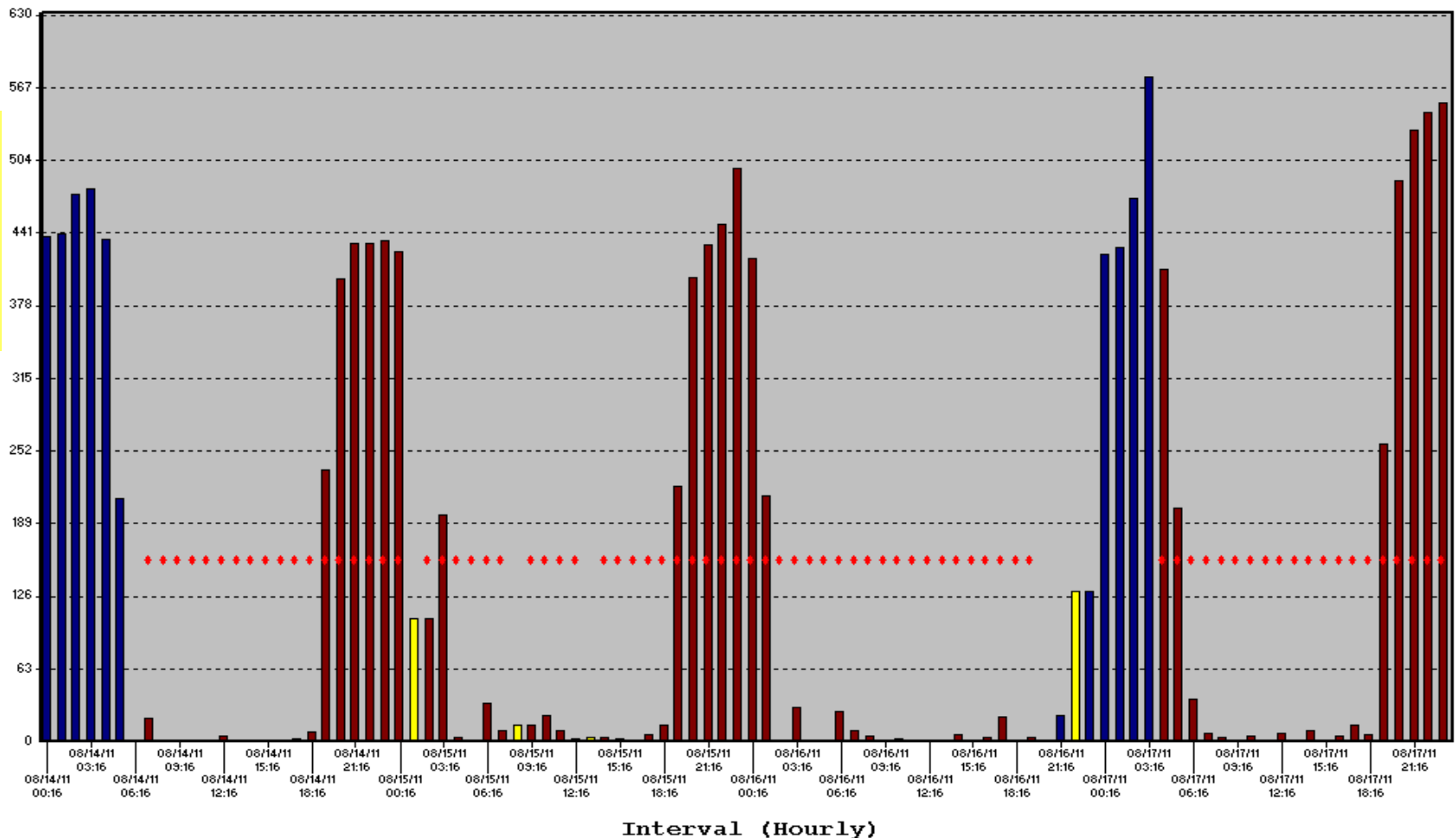
ARB N_SIGHT Mobile Report
E-Coder R900i Data Logging Report

MIU#: 1830918378 for 08/14/2011 through 08/17/2011

■ Consumption ⬤ Backflow Flag ♦ Leak Flag

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Data Log Examples

Faulty Water Softener/Irrigation – Intermittent Cont'd

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02/29/2012

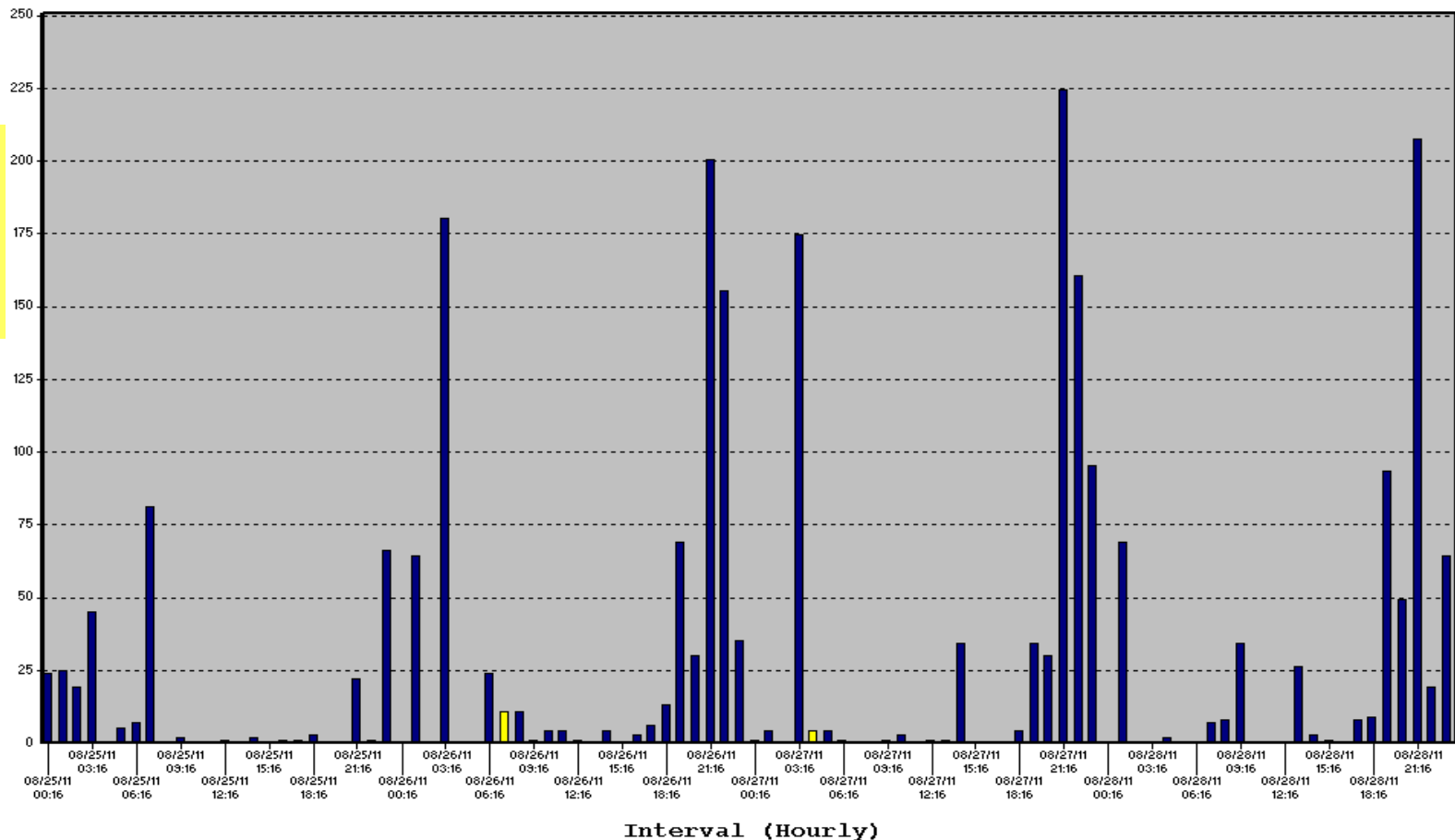
ARB N_SIGHT Mobile Report E-Coder R900i Data Logging Report

MIU#: 1830918378 for 08/25/2011 through 08/28/2011

■ Consumption ⚙ Backflow Flag ♦ Leak Flag

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Data Log Examples

Vet Clinic Leak - Continuous

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08/29/2014

City of Chandler Municipal Utilities Division

E-Coder R900i Data Logging Report

MIU#: 1831142336 Acct: 00035940 Mtr #: 1831142336 Addr: 7 W KNOX RD for 05/24/2014 through 08/28/2014, WATER, 5/8" - 1" T-10, GALLONS

● Minor Reverse Flow Flag

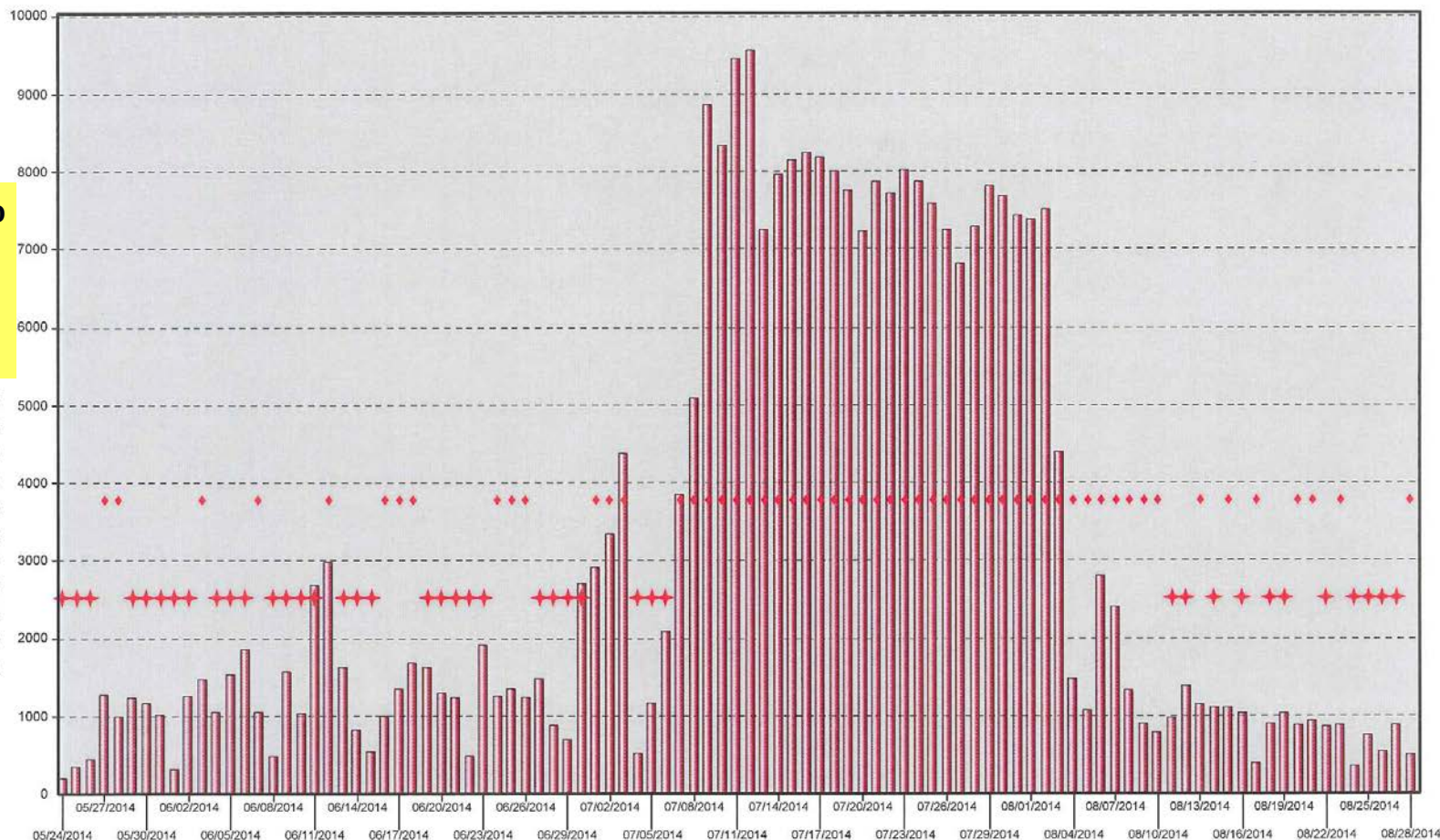
✱ Major Reverse Flow Flag

✦ Intermittent Leak Flag

✦ Continuous Leak Flag

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Interval (Daily)

Data Log Examples

Vet Clinic Leak - Continuous

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08/13/2014

City of Chandler Municipal Utilities Division

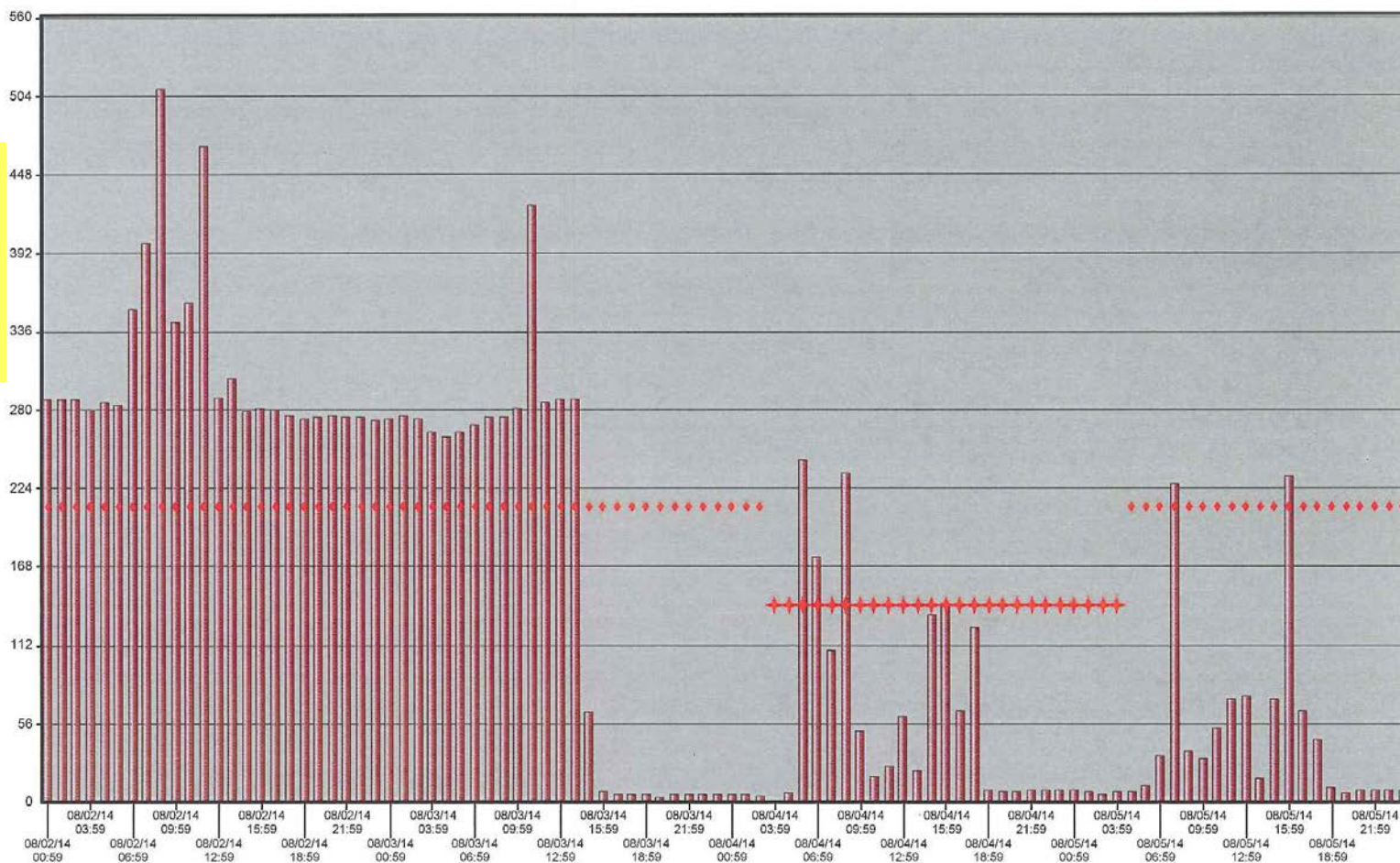
E-Coder R900i Data Logging Report

MIU#: 1831142336 Acct: 00035940 Mtr #: 1831142336 Addr: 7 W KNOX RD for 08/02/2014 through 08/05/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Hourly)

Data Log Examples

Vet Clinic Leak - Continuous

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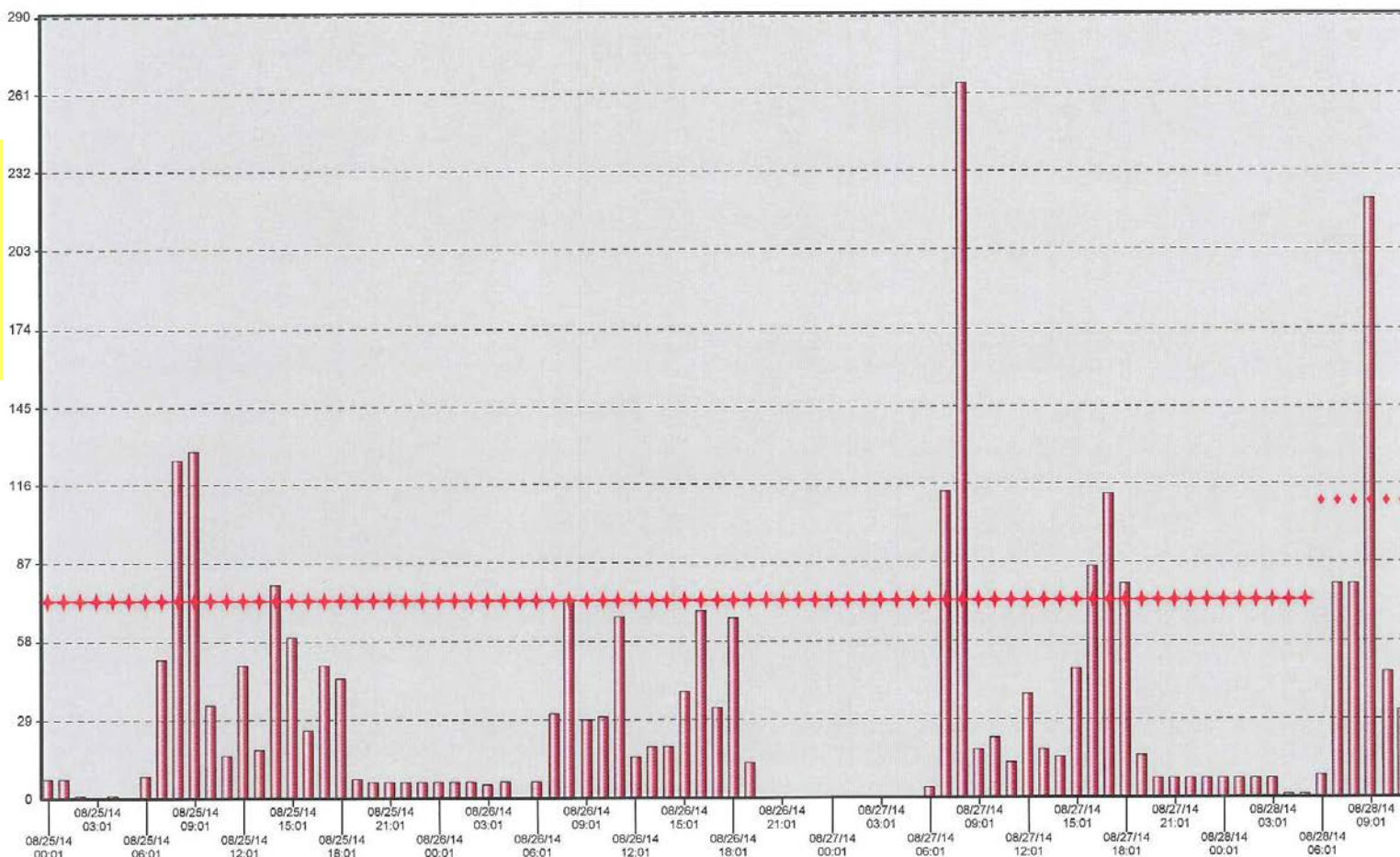
City of Chandler Municipal Utilities Division
E-Coder R900i Data Logging Report

MIU#: 1831142336 Acct: 00035940 Mtr #: 1831142336 Addr: 7 W KNOX RD for 08/25/2014 through 08/28/2014, WATER, 5/8" - 1" T-10, GALLONS

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag

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Interval (Hourly)

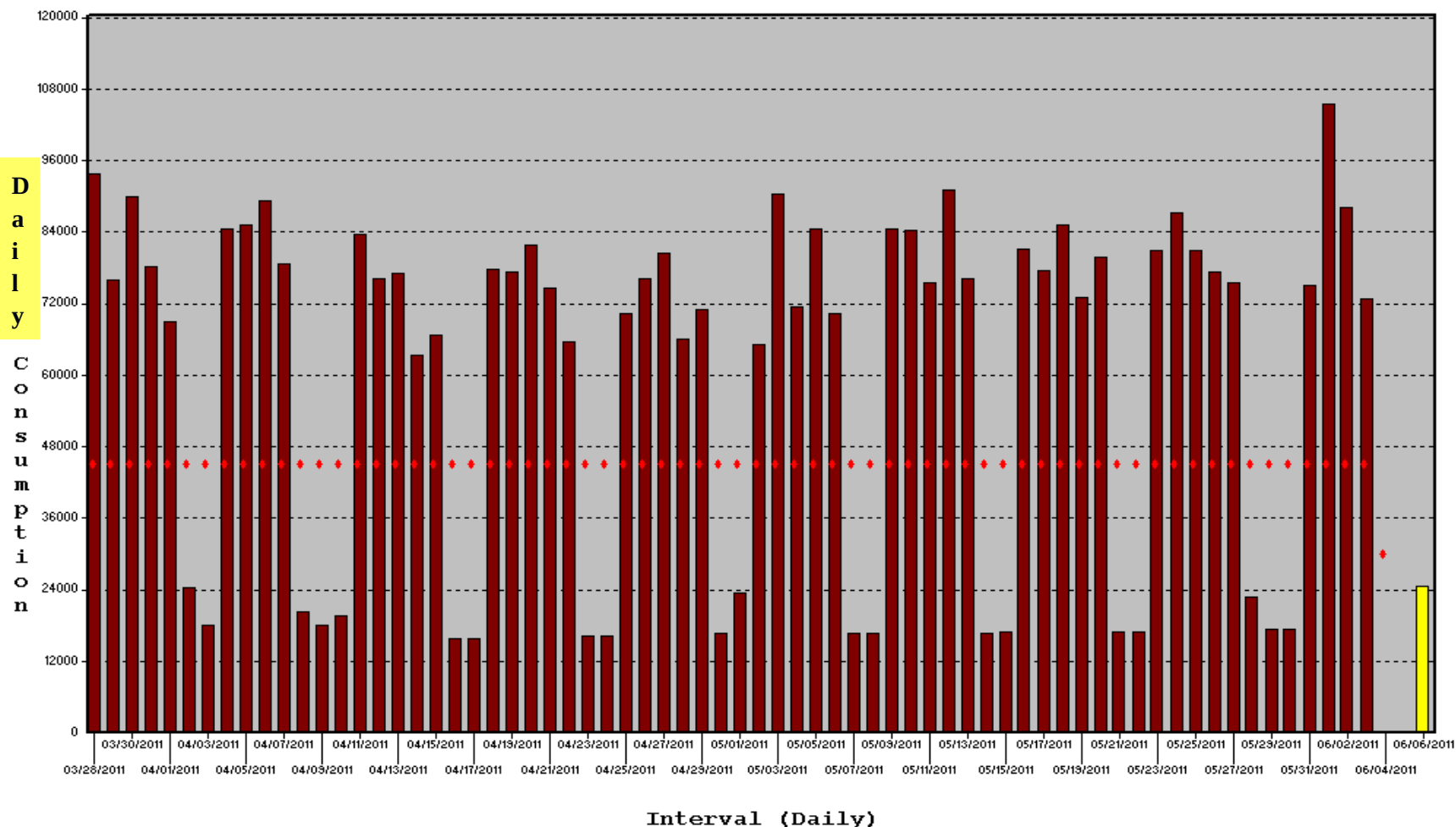
Data Log Examples

Commercial Laundry Service Leak - Continuous

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ARB N_SIGHT Mobile Report
E-Coder R900i Data Logging Report
MIU#: 1831652669 for 03/28/2011 through 06/06/2011

■ Daily Consumption ⬤ Backflow Flag ♦ Leak Flag



Data Log Examples

Commercial Laundry Service Leak - Continuous

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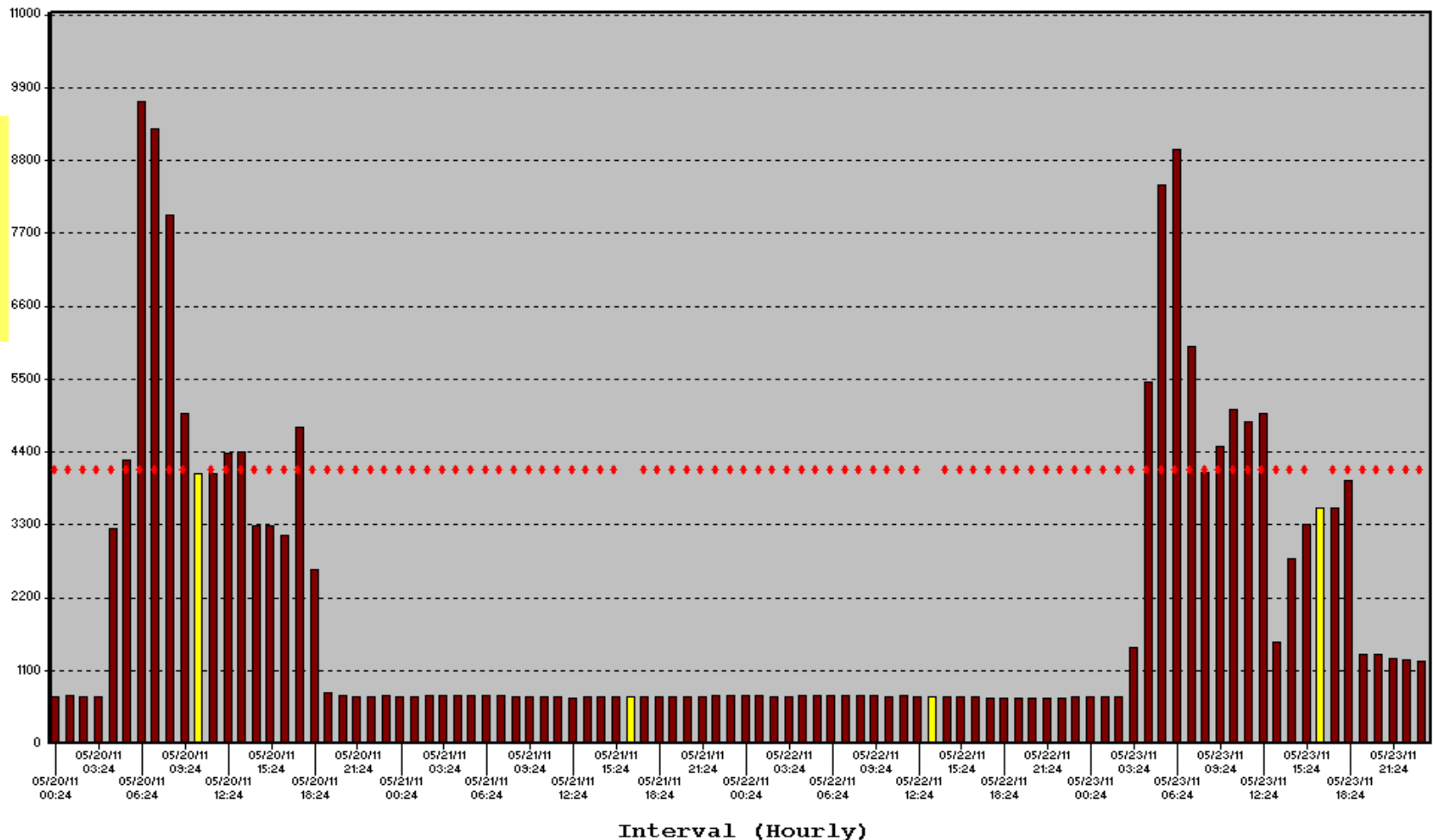
ARB N_SIGHT Mobile Report
E-Coder R900i Data Logging Report

MIU#: 1831652669 for 05/20/2011 through 05/23/2011

Consumption Backflow Flag Leak Flag

Hourly

Consumption



Data Log Examples

Commercial Laundry Service Leak - Continuous

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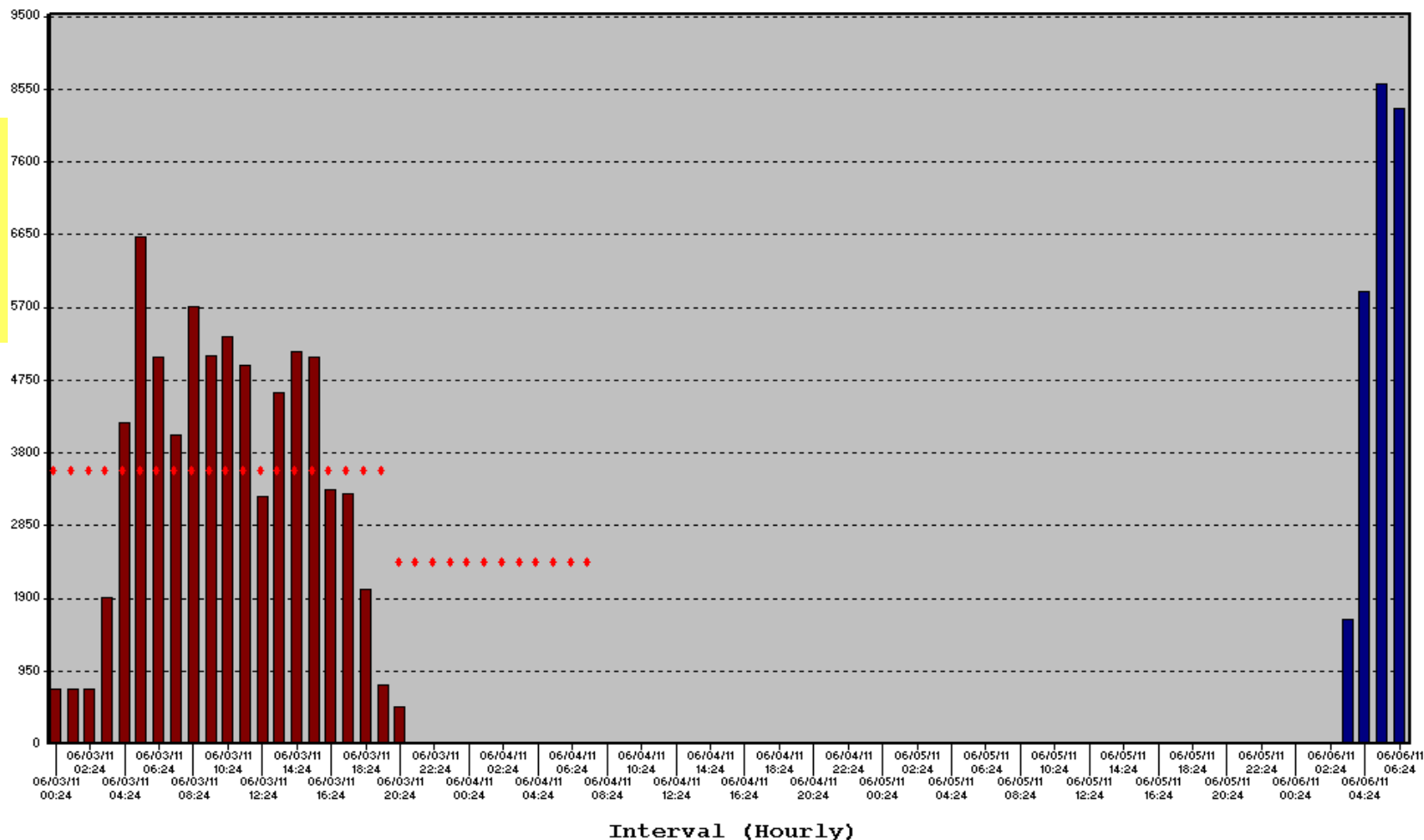
ARB N_SIGHT Mobile Report
E-Coder R900i Data Logging Report

MIU#: 1831652669 for 06/03/2011 through 06/06/2011

■ Consumption * Backflow Flag ♦ Leak Flag

Hourly

Consumption





Conclusions / Questions



Beyond Reasonable Doubt:
*Data Loggers Dispel
Water Use Discrepancies*

Thank You

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