

NC

FILE

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BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

RECEIVED-DOCKET NO. 09-259-PL-ATA

2009 MAR 24 AM 11:45

APPLICATION NOT FOR AN INCREASE IN RATES, PURSUANT TO SECTION
4909.18, REVISED CODE

PUCO

IN THE MATTER OF THE)
APPLICATION OF ORWELL-)
TRUMBULL PIPELINE COMPANY,)
LLC TO IMPLEMENT AN)
ELECTRONIC MEASUREMENT)
SERVICE)

CASE NO. 09-259-PL-ATA

1. APPLICANT RESPECTFULLY PROPOSES:

- | | |
|--|--|
| <input checked="" type="checkbox"/> New Service | <input type="checkbox"/> Change in Rule/Regulation |
| <input type="checkbox"/> New Classification | <input type="checkbox"/> Reduction in Rates |
| <input type="checkbox"/> Change in Classification | <input type="checkbox"/> Correction of Error |
| <input type="checkbox"/> Other, not involving
increase in rates | <input type="checkbox"/> Various related and unrelated
textual revisions, without change of
intent |

2. DESCRIPTION OF PROPOSAL

This Application constitutes a "first filing" pursuant to Ohio Rev. Code §4909.18.

3. TARIFFS AFFECTED:

4. ATTACHED HERETO AND MADE A PART HEREOF ARE: (Check applicable Exhibits)

- ☒ Exhibit A – existing schedule sheets (to be superseded) if applicable
- ☒ Exhibit B – proposed schedule sheets
- ☒ Exhibit B-1-redline tariff sheet showing proposed schedules relative to current schedule
- ☒ Exhibit C-1

(a) if new service is proposed, describe;

This is to certify that the images appearing are an
accurate and complete reproduction of a case file
document delivered in the regular course of business.
Technician SM Date Processed MAR 24 2009

The new service Orwell-Trumbull Pipeline Co., LLC proposes to provide is an elective electronic measurement service. For the stated monthly electronic measurement service charge, Orwell-Trumbull will provide telemetering equipment and maintenance and daily measurement through Orwell-Trumbull's proprietary SCADA system. Customer will be responsible for the cost of a dedicated telephone line, and the necessary power to operate such electronic measurement and telemetering equipment.

Customer electing this service will also have password protected access to Orwell-Trumbull's gas control website and can view and download daily throughput for each electronically measured delivery point. By means of such access, Customers can effectively monitor consumption in order to avoid potential cash-outs or imbalance penalties.

- (b) if new equipment is involved, describe (preferably with a picture, brochure, etc.) and where appropriate, a statement distinguishing proposed service from existing services;

Attached are descriptive brochures for the two types of telemetering devices Orwell-Trumbull will install on the Customer's dedicated telephone line

- (c) if proposed service results from customer requests, so state giving if available, the number and type of customers requesting proposed service. **(not applicable)**
- (d) if a change in classification, rule or regulation is proposed, a statement explaining reason for change: **(not applicable)**
- (e) statement explaining reason for any proposal not covered in the attached exhibits: **(not applicable)**

5. Proposed Customer Notice:

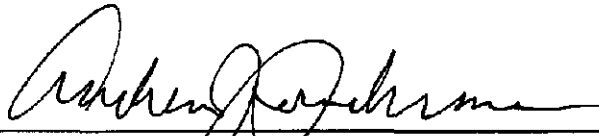
Upon approval of the proposed services set forth in Exhibit B, Orwell-Trumbull Pipeline Company, LLC will, by a special mailing, inform its customers who have been served pursuant to its tariff P.U.C.O. No. 1, through the proposed customer notice attached hereto as Exhibit D.

6. This Application will not result in an increase in any rate, joint rate, toll, classification, charge or rental.

7. A copy of the required officer verification is attached.

WHEREFORE, Orwell-Trumbull Pipeline Company, LLC respectfully requests that the Commission permit the filing of the proposed schedule sheets, to become effective on the date, subsequent to filing, to be shown on the proposed schedule sheets which will be filed with the Commission; and to be in the form of the schedule sheets in Exhibit B as modified by any further revisions that have become effective prior to the effective date of the proposed schedule sheets. Orwell-Trumbull Pipeline Company, LLC further requests that the same changes be incorporated in its TRF docket, Case No. 89-8041-PL-TRF.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrew J. Sonderman', is written over a horizontal line.

Andrew J. Sonderman (0008610)
Weltman, Weinberg & Reis Co. LPA
175 S. Third Street, Suite 900
Columbus, Ohio 43215
614.857.4383 (Voice)
614.233.6826 (Fax)
asonderman@weltman.com


Counsel for Orwell-Trumbull Pipeline Company,
LLC

VERIFICATION


State of Ohio)

County of Lake)

Thomas J. Smith, President and Rebecca Howell, Secretary of Orwell-Trumbull Pipeline Company LLC, being first duly cautioned and sworn, state that they have read the foregoing Application Not For An Increase in Rates and that it is true and correct to the best of their information and belief.




Thomas J. Smith



Rebecca Howell

Sworn and subscribed before me, a Notary Public in and for the State of Ohio on this 23rd day of March, 2009.




 JULIE E. DUNBAR
NOTARY PUBLIC, STATE OF OHIO
MY COMMISSION EXPIRES 05/20/12
RECORDED IN LAKE COUNTY

EXHIBIT A

Existing Tariff Sheets to be Superseded

P.U.C.O. No. 1

ORWELL-TRUMBULL PIPELINE CO., LLC

Original Title Sheet and
Table of Contents

**RULES AND REGULATIONS GOVERNING THE TRANSPORTATION
OF GAS IN UNINCORPORATED AREAS**

GAS TRANSPORTATION SERVICE

<u>Section</u>	<u>Sheet No.</u>
1. Definitions	1-4
2. Applicability	4
3. Term	4
4. Types of Service and Capacity	5
5. Delivery and Transportation	5-6
6. Shrinkage	6
7. Transportation Rate	6
8. Imbalances	6-7
9. Title To Gas	7
10. Operational Flow Orders	7-8
11. Quality	8
12. Billing and Payment	8-10
13. Service to Grandfathered Transport Customers	10
14. General Terms and Conditions	10-12

Filed pursuant to PUCO Entry dated March 16, 2005 in Case No. 05-67-PL-ATA

ISSUED: March 21, 2006

EFFECTIVE: March 21, 2006

Issued By
Orwell-Trumbull Pipeline Co., LLC
Stephen G. Rigo, Vice President

**RULES AND REGULATIONS GOVERNING THE TRANSPORTATION
OF GAS IN UNINCORPORATED AREAS**

6. Shrinkage

Unless otherwise agreed, the Customer shall have the right to retain, pursuant to this Tariff, 100% of the gas delivered to the Receipt Point(s), less the Shrinkage.

7. Transportation Rate

The rates and charges for transportation services will be established pursuant to contracts submitted to the Commission for approval under Section 4905.31, Revised Code.

8. Imbalances

The following shall apply unless otherwise agreed to by the Parties and approved by the Commission:

Customer shall be entitled to take, at the Delivery Point(s) on a daily basis the tendered quantity at the Receipt Point(s) minus the Shrinkage. The Service Agreement shall set out the time period in which the volumes tendered minus the Shrinkage will be balanced against the volumes taken at the Delivery Point(s). When the amount of natural gas tendered at the Receipt Point(s) minus the Shrinkage exceeds the amount redelivered to the Delivery Point(s) for the period of time listed in the Service Agreement for balancing, then the Company may either carryover the surplus for subsequent redelivery at a specified time, or cash-out the imbalance by paying the Customer the Cash-out Price for each Dth minus a percentage penalty as determined from the chart below for the surplus amount. If the amount of natural gas tendered to the Receipt Point(s) minus the Shrinkage for the period of time listed in the Service Agreement for balancing is less than that the amount of natural gas taken by the Customer at the Delivery Point(s), then the Customer shall be cashed out by paying the Company the Cash-out Price for each Dth plus a percentage penalty as determined from the chart below for the amount the Customer has overtaken.

<u>Percentage Imbalance Level</u>	<u>Penalty</u>
0-10%	No penalty for cash-outs
10-20%	Ten Percent (10%) penalty fee on all Dth cashed-out
>20%	Twenty Percent (20%) penalty fee on all Dth cashed-out

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EXHIBIT B

Proposed Tariff Sheets

**RULES AND REGULATIONS GOVERNING THE TRANSPORTATION
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6. Shrinkage	6
7. Transportation Rate	6
8. Imbalances	6-6-A
9. Title To Gas	7
10. Operational Flow Orders	7
11. Quality	7-8
12. Billing and Payment	8-9
13. Service to Grandfathered Transport Customers	9
14. General Terms and Conditions	9-11
Gas Transportation Guidelines	App. A

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OPTIONAL ELECTRONIC MEASUREMENT SERVICE

For each Delivery Point electronically measured: \$125 per month

Customers who elect this service must provide and pay for a dedicated telephone line and the necessary power to operate such electronic measurement and telemetering equipment. The meter, electronic measurement device and associated telemetering equipment shall be and remain the property of the Company. The Company will install and maintain the electronic measurement and telemetering equipment.

Customers who elect this optional service shall agree to continue it for a minimum period of thirty-six (36) months or until the Delivery Point is no longer in use for transportation service from Company, whichever first occurs.

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The following shall apply unless otherwise agreed to by the Parties and approved by the Commission:

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**RULES AND REGULATIONS GOVERNING THE
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Stephen G. Rigo, Vice President

EXHIBIT B-1

Redline Version of Amended Tariff Sheets

P.U.C.O. No. 1

**ORWELL-TRUMBULL PIPELINE CO., LLC ~~Original-First~~ Revised Title Sheet and
Table of Contents**

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11. Quality	8-9 8
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13. Service to Grandfathered Transport Customers	10-11 10-9
14. General Terms and Conditions	10-12 10-11
<u>Gas Transportation Guidelines</u>	<u>App. A</u>

Filed pursuant to PUCO Entry dated ~~March 16, 2006~~ _____, 2009 in Case No. ~~05-~~
~~6709-259-PL-ATA~~

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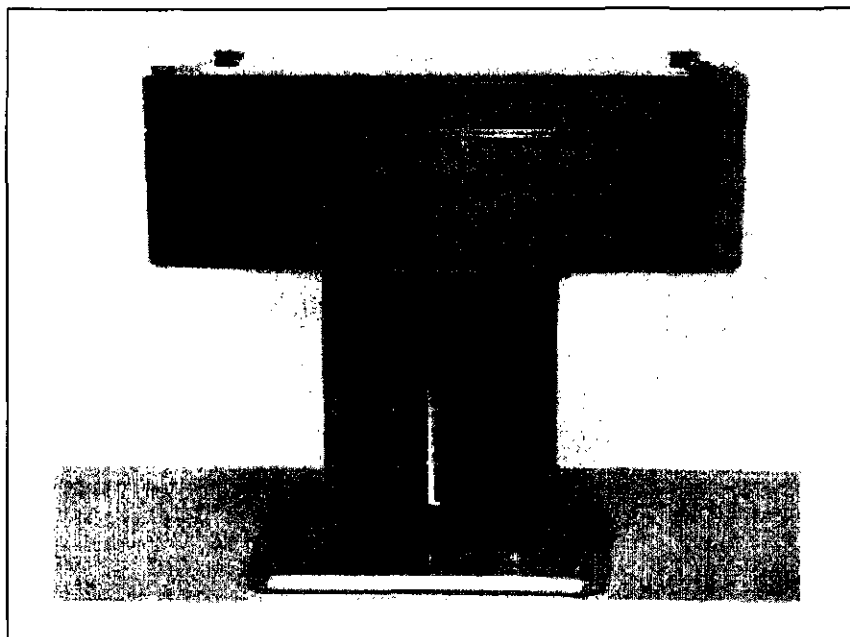
Issued By
Orwell-Trumbull Pipeline Co., LLC
Stephen G. Rigo, Vice President

EXHIBIT C-1(b)
Descriptive Brochures



PRODUCT DATA

XARTU—PAT1—LDVI™



Pulse Accumulator

Overview

The XA-Series Pulse Accumulator (PA) gives new advantages to monitoring of the LDC's Industrial, Commercial, and Residential customer's transportation volumes. Allowing Two-Way calling, the device can be connected to existing customer's telephone lines for the shared approach. Off Hook Detection ensures the device will not disable customer's telephone lines in times of business hour needs or emergencies. Fixed Factor entries of critical measurement parameters provides corrected and uncorrected volumetric readings.

Basic Specifications

The XA-Series Pulse Accumulator (PA) gives new advantages to monitoring of the LDC's Industrial, Commercial, and Residential customer's transportation volumes. Allowing Two-Way calling, the device can be connected to existing customer's telephone lines for the shared approach. Off Hook Detection insures the device will not disable customer's telephone lines in times of business hour needs or emergencies. Fixed Factor entries of critical measurement parameters provides corrected and uncorrected volumetric readings.

- ◆ **Low Power CMOS Design**
- ◆ **5-Year Battery Life**
 - Field Replaceable 3.6VDC Lithium Battery
- ◆ **Compact, Rugged, Reliable**
 - NEMA 4X Enclosure
 - Screw Cover Poly Carbonate
- ◆ **Fixed Factor Volume Accumulation**
- ◆ **Optional Low Drag Vertical Index for Direct Meter Mount (Pictured)**
- ◆ **On-Board Modem**
 - 1200 bps Auto Dial - Auto Answer
 - Off-Hook Detection Allows Consumer Phone Line Sharing
- ◆ **One Form-C Set / Reset Pulse Input**
 - 40 ms minimum closure time
 - 40 ms minimum open time
 - 10 PPS maximum pulse rate
 - lead line supervision
- ◆ **One (1) Tamper Input: (N.C.)**
 - Tilt, Open Door, Magnetic
- ◆ **Two (2) Form A Pulse Outputs (Opto-Coupler)**
- ◆ **Eagle's I²C Expansion Port for Future Product Enhancements**
- ◆ **Historical Data Storage**
 - 40 days of hourly & daily consumption data
- ◆ **Real Time Clock**
- ◆ **One (1) RS232C Port for Field Configuration / Data Collection**
- ◆ **Eagle Process Concept Compatible**
- ◆ **Two-Way Calling**
 - Call in on Alarm and / or Call in on Periodic Intervals
 - User On-Demand Access
- ◆ **UL and ULC Approvals Pending**

For more information contact Eagle Research Corporation, your partner in measurement applications.

www.eagleresearchcorp.com

Phone: 304.757.6565

Fax: 304.757.3332



PRODUCT DATA

XA Series™ RTU Expansion Capability

The standard XA Series™ RTU configuration includes 2 serial ports, 8 analog inputs and 16 digital I/O's. It can be expanded to 6 serial ports, 8 analog outputs, and up to 136 analog inputs & 528 digital I/O's depending on the expansion chassis selected. The serial ports and analog outputs are independent of the expansion chassis used.

Independent Expansion Modules

The Table below lists the expansion modules that are independent of the expansion chassis selected.

Independent Modules	Max. No. of Cards	Description
Analog Output XA-AO	8	Single Channel optically isolated analog output Card (4-20 mA)
Serial Port XA-ESP	4	Single Channel Expansion Serial Port

Non-addressable Expansion Cards (80 Series)

The table below lists the XA Series™ RTU expansion capability using the non-addressable (limited) expansion chassis and cards. It supports a maximum of 16 analog inputs and 32 digital I/O's with this configuration. Any combination of 1 analog input card and a maximum of up to 3 digital I/O cards (3 slots total) can be selected without the expansion chassis. Any combination of 1 analog input and 4 digital I/O cards (5 slots total) can be selected when using the expansion chassis.

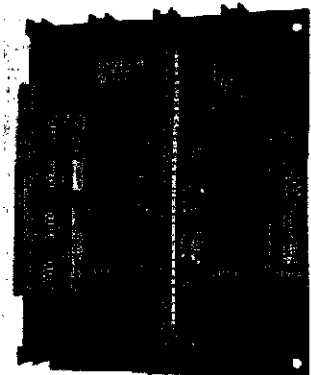
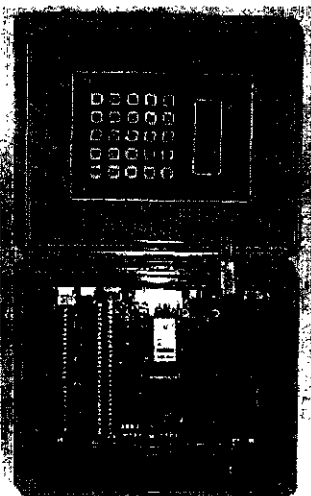
Non-addressable Cards	Max. No. of Cards	Description
Expansion Chassis EBM80/BP5	1	5-Slot expansion chassis
Analog Input EBM80/AI8	1	8-Channel analog input conditioning card (4-20 mA or 0-5 volts providing gas tube and transorb surge protection of all inputs)
Digital I/O EBM80/DI4 EBM80/RC4 EBM80/RC4SS	4 4 4	4-Channel digital input / output card 4-Channel mechanical relay card 4-Channel solid state relay card

Addressable Expansion Cards (800 Series)

The table below lists the XA Series™ RTU expansion capability using the addressable (expandable) expansion chassis and cards. It supports a maximum of 136 analog inputs and 528 digital I/O's with this configuration. The EBM800/ID card can be used with any combination of the Opto Mother Boards.

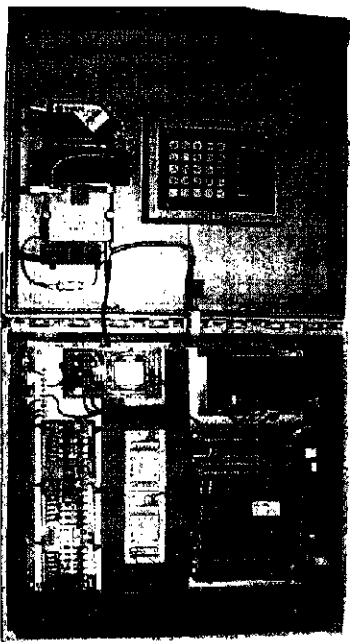
Addressable Cards	Max. No. of Cards	Description
Expansion Chassis EBM800/BP4 EBM800/BP6	10 7	4-slot expansion chassis 6-slot expansion chassis
Analog Input EBM800/AI	8	16-Channel analog input card (4-20 mA or 0-5 volts)
Digital I/O EBM800/ID PB4-Opto Mother Board PB8-Opto Mother Board PB16-Opto Mother Board	32 128 64 32	16-Channel digital input / output card 4-slot board for AC/DC, Input / Output Opto Modules 8-slot board for AC/DC, Input / Output Opto Modules 16-slot board for AC/DC, Input / Output Opto Modules

XARTU/5 & Expansion Chassis



XARTU /10

Standard Internal Power Supply
Shown with Optional Cellular Communications and Surge Suppression Modules



EAGLE RESEARCH CORPORATION

Product Information

PRODUCT DATA

XARTU/5 & XARTU/10—Remote Terminal Unit

Major Features

- Low Power CMOS Design
- Compact, Rugged, Reliable
- Full AGA-3, AGA-5, AGA-7, AGA-8 (Detail/Gross 1611), NX-19 Calculations
- Flexible Communications Options
- Operating Temperatures from -40°C to 70°C (-40°F to 158°F)
- Uninterruptible Power Supply
- 24V Transmitter Power
- Diverse and Expandable I/O
- Multiple Run Capability
- Multitasking Operating System
- Full Remote Monitoring and Control
- Local and/or Remote Data Collection
- Two-way Calling - Call in on Alarm and/or Call in on Periodic Intervals

Product Description

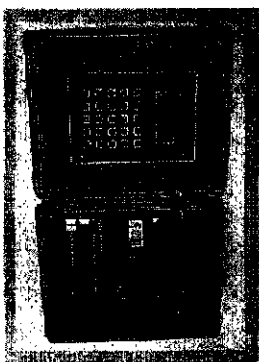
The XA Series™ Remote Terminal Unit (RTU) is an intelligent, compact, rugged, and reliable industrial computer designed for real-time remote data acquisition and control applications. It can execute multiple processes, including tasks such as complex math functions, control algorithms, etc., without host intervention.

Flexibility, expandability, and reliability were the major factors in the XA Series™ RTU design philosophy. It is a balanced system, featuring flexible and expandable memory, I/O, power, and communication schemes including support for HEXASCI, MOD-BUS, and various other custom protocols upon request. A harsh environment tolerance is also one of the XA Series™ RTU strengths. The operating temperature can range from -40°C to 70°C, and the XA Series RTU comes in a fiberglass NEMA 4X enclosure. This allows the RTU to exist where the work must be done, eliminating costly signal conditioning or expensive long sensor runs.

The XARTU/5, normally fed with a 9-30 VDC supply, employs a low-power CMOS design. The optional XAUPS 120/240 VAC power supply unit includes an uninterruptible power supply. Should it lose power, the RTU will sense the failure, automatically switch to battery power, and continue to operate at full capacity. Other power options include thermoelectric generators for sites without conventional power.

The optional operator interface is a two-line, 32-character liquid crystal display, and 25-key keypad with 10 user-definable keys. This allows users to remotely examine and/or change process data and diagnose problems without a local host or terminal.

The XARTU/5 can calculate corrected volume using AGA-3, AGA-5, AGA-7, AGA-8 and NX-19 Reports and is fully compatible with Eagle Research's entire family of products. Eagle Research is committed to providing a complete solution for all gas flow and control applications.



XARTU/5
w/ Internal Keypad/Display

XARTU/5 - Technical Specifications

Reliability

XA Series™ RTU's are ruggedly built to perform in a variety of industrial environments. Care is taken to maximize reliability by using a urethane conformal coating on all circuit boards, utilizing a thermally-sealed keypad and display, and providing NEMA 4X packaging.

Memory

The XARTU/5 has a minimum of 512K X 16 RAM for data and 512K X 16 Flash memory allowing easy upgrade of run-time code. With the large memory capacity, a minimum of 56,000 historical inputs with time and date stamp can be stored. You can define data type and collection period with Eagle Research's software.

Communications

Two RS-232C serial ports for hand held data collector/PC are standard. Available XARTU communications options are:

- Internal 2400 bps Hayes compatible modem, Bell 212A (1200bps), and 103 (300bps);CICIT V.22 bis (2400 bps), V.22 (1200 bps), V.34 (33,600 bps), V.34 (28,800 bps)
- Cellular telephone
- RS-422 and RS-485 multi-drop
- Bell 202 lease line 1200 baud modem
- Packet radio
- Point-to-point radio
- Ethernet Card available for LAN/WAN connectivity

User-Definable Alarms

The user can configure the XARTU/5 to activate an alarm when user-defined limits are exceeded, including low battery power. Using Eagle Research's host software, a user can program the XARTU/5 to alarm on almost any condition, such as box intrusion, liquid levels, etc.

Audit Trail and Alarm Log

An audit trail file maintains a record of all parameter changes. A complete history of alarms is also stored in a separate file. Each entry includes the item value as well as the time and date the item entered and exited alarm status. These non-editable files may be retrieved using Eagle Research's software.

Pulse Inputs

Eight programmable Form A or C pulse inputs for low or high speed applications are standard. These inputs can be used for simple pulse counters, or in more demanding applications such as card readers.

Digital Inputs / Outputs

Thirty-two (32) programmable digital inputs/outputs are standard, programmable in groups of eight. Outputs can be configured as simple discrete as well as pulse forms.

Environmental Tolerance

Operating temperature can range from -40°F to +158°F (-40°C to +70°C) with non-condensing humidity of 0 to 95%. The NEMA-4X compression-formed, fiberglass-reinforced nylon enclosure makes the unit ideal for demanding outside installations.

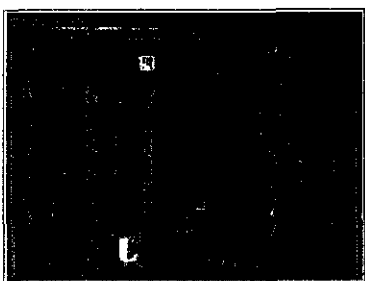
Hazardous Location

The Standard XA Series™ RTU is designed for NFPA Class 1, Division 2 installations. It can also be designed for Class 1, Division 1 locations when mounted in the "safe area" and Intrinsically-Safe (IS) barriers are used for field signals.

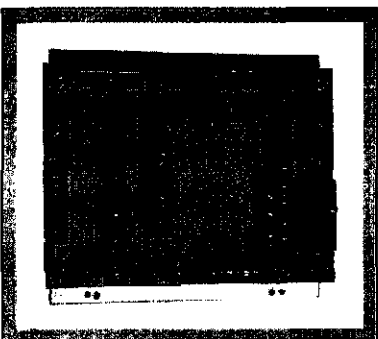
Custom XA Series Products

The heart of the XA Series™ is an intelligent, rugged, industrial computer programmable via modular processes to perform custom tasks. Eagle Research can cost-effectively supply a product tailored to your specific application. Talk to

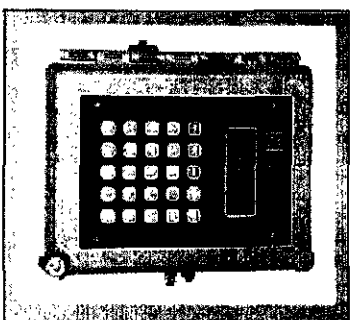
Feature	Description
Input Power	8-30 VDC
5 (VCC) Volt Supply	5V @ 500mA max, high efficiency switching supply
Analog Supplies	Optional 24 VDC isolated transmitter loop power, 400 mA output
Power Monitoring	Supply voltage monitoring through aid with low supply voltage interrupt
Backup Battery	3.6V lithium backup battery; 10 year typical backup of database and timetable during normal use; low backup battery voltage detection
Processor	Philips P51XAS3 high performance 16-bit microcontroller running at 24.576 Mhz
Memory	512K x 16 remotely-programmable FLASH program memory; 512 x 16 battery-backed RAM data memory.
Real Time Clock	Battery-backed, quartz crystal controlled; +/- 1 second typical accuracy; Programmable time scheduled interrupt capability
Pulse Inputs	Eight (8) pulse inputs; software programmable for Form A or C; high or low speed. Each counter is a six-digit (0-999999) hardware counter with programmable interrupt support. Precision pulse width measurement is supported using the programmable counter array module in the P51XAS3 microcontroller. Can be used for simple pulse accumulation, and for more complex applications such as card readers
Digital I/O's	Thirty-two (32) memory-mapped digital I/O lines programmable in groups of eight as input or Output. Digital outputs can be configured as simple discrete outputs, or as precisely-timed pulse outputs.
Analog Inputs	16-bit resolution, max +/-3 LSB integral linearity error, software calibrated; 16-channel, single ended with floating common. Nominal input range 0-5 V with +/- 4% over-range measurable. Optional 8-channel differential configuration possible. Input impedance greater than 100M
Communications	Two RS-232 ports with Rx, Tx, RTS, CTS, and GMSW signals. Max speed 38,400 bps. Directly interfaces to modems, radios, etc. Communication protocols selectable on a per port basis. Eagle HEXASCI1, Modbus, Teledyne/Geotech, Valmet - others on request.
Status LED	Two LEDs; one red and one green for visual status information. Software controllable for various function indications
Expansion Capability	Two 50-position connectors provide access to all I/O lines. This allows the SBC20 processor board to be plugged directly into compatible family termination boards. Additional connectors provide redundant termination points to allow for configuration flexibility. Two 10-position connectors allow for expansion over the I ² C communication bus; two 8-position connectors for RS-232, and a 3-position connector for input power.
Accuracy Specifications	
Analog to Digital (A/D)	16 Bit
IEEE	754 Single Precision Floating Point Format



XARTU/1—9010080 RTU Board



XARTU/1—9010080 Panel Mounted



XARTU/1—w/External Keypad & Display

- ♦ 6 - Analog Inputs (1.5 vdc or 4-20 ma)
- ♦ On-Board Solar Regulator
- ♦ 2 - RTD Temperature Inputs
 - 4 - Pulse Inputs
 - 1 - Vent or Timed
- ♦ 0/5 - Digital I/O ports
- ♦ Discrete Points
- ♦ (3) Form C Relay Sockets
- ♦ (2) OPTO 22 Sockets
- ♦ 2 - RS232 Communications ports
- ♦ On-Board 2400 Baud Modem
 - Supports Line Sharing
- ♦ Approx. 32,000 User configurable History Record locations



EAGLE RESEARCH CORPORATION

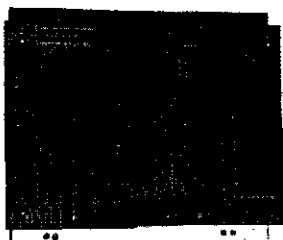
Product Information

PRODUCT DATA

XARTU/1—Panel Mounted

Product Features

- Panel Mounted Low-Power CMOS Design
- Compact, Rugged, and Reliable:
 - Operating Temperatures from -40 C to +70 C (-40 F to +158 F)
- Flexible Communications Options
- Uninterruptible Power Supply
- Diverse I/O
- Multitasking Operating System
- Full Remote Monitoring and Control Capability
- Local and/or Remote Data Collection
- Two-Way Calling - Call in on Alarm and/or Call in on Periodic Intervals
- 32,000 Record History Capability
- Approximately 45 Days of Hourly Data



Product Description

The XARTU/1 Remote terminal unit (RTU) is a low-cost version of the XA Series™ Flow Computer products. It is an intelligent, compact, rugged, and reliable industrial computer designed for real-time remote data acquisition and control applications. It can execute multiple processes, including tasks such as complex math functions, control algorithms, etc., without host intervention.

Flexibility and reliability were the major factors in the XARTU/1 design philosophy. It is a balanced system featuring flexible memory, I/O, power, and communication schemes including support for HEXASCII, MODBUS, and various other custom protocols upon request. A harsh environment tolerance is another of the XARTU/1 strengths. The operating temperature can range from -40 C to 70 C, and the XARTU/1 comes in a fiberglass NEMA 4X enclosure. This allows the RTU to exist where the work must be done, eliminating costly signal conditioning or expensive long sensor runs.

The XARTU/1, normally fed with a 7-30 VDC supply, employs a low-power CMOS design. An optional 120/240VAC unit includes an uninterruptible power supply. Should it lose power, the RTU will sense the failure, automatically switch to battery power, and continue to operate at full capacity. Other power options include solar power and thermoelectric generators for sites without conventional power.

The optional operator interface is a two-line, 32-character liquid crystal display, and 25-key keypad with 10 user-definable function keys. This allows users to examine and/or change process data and diagnose problems at the remote site without a local host or terminal.

The XARTU/1 can calculate corrected volume using AGA-3, AGA-5, AGA-7, AGA-8, and NX-19 reports and is fully compatible with Eagle Research's entire family of products. Eagle Research is committed to providing a complete solution for all gas flow and control applications.

4237 State Rt. 34, Hurricane, WV 25526 ~ P O Box 608, Scott Depot, WV 25560
 Phone: (304) 757-6565 ~ Fax: (304) 757-3332 ~ Web: <http://www.eagle-research.com>

Reliability

The XARTU/1 is ruggedly built to perform in a variety of industrial environments. Care is taken to maximize reliability by using a urethane conformal coating on all circuit boards, utilizing a hermetically-sealed optional keypad and display, and providing NEMA 4X packaging.

Memory

The XARTU/1 has a minimum of 512K x 8 RAM for data and 512K x 8 Flash memory allowing easy upgrade of run-time code. With the large memory capacity, a minimum of 32,000 historical inputs with time and date stamp can be stored. You can define data type and collection period with Eagle Research's software.

Communications

One modem port and one RS-232C serial port for hand held data collector/PC are standard. Available XARTU/1 communications options are:

- Internal 2400 baud modem, supports standard CCITT V.22bis (2400 bps), Bell 212A (1200 bps), and Bell 103 (300 bps). Extension off-hook detection.
- Cellular telephone
- RS-422 and RS-485 multi-drop
- Bell 202 lease line 1200 baud modem
- CDPD (cellular digital packet data)
- Packet radio
- Point-to-point radio

User-Definable Alarms

The user can configure the XARTU/1 to activate an alarm when user-defined limits are exceeded, including low battery power. Using Eagle Research's Host software, a user can program the XARTU/1 to alarm on almost any condition, such as box intrusion, liquid levels, etc.

Audit Trail and Alarm Log

An audit trail file maintains a record of all parameter changes. A complete history of alarms is also stored in a separate file. Each entry includes the item value as well as the time and date the item entered and exited alarm status. These unreadable files may be retrieved using Eagle Research's software.

Pulse Inputs

Four programmable Form A or C pulse inputs for low or high speed applications are standard. These inputs can be used for simple pulse counters, or in more demanding applications such as card readers.

Digital Inputs / Outputs

Five multi-purpose digital I/O lines are present. High-level functionality includes pulse inputs, PWM (pulse width modulation) outputs, and complex custom inputs/outputs. Two I/O lines are connected to field terminals through standard OPTO-22 modules. The other 3 I/O lines can be used as either Form C or A relay outputs or status inputs.

Environmental Tolerance

Operating temperature can range from -40°F to +158°F (-40°C to +70°C) with non-condensing humidity of 0 to 95%. The NEMA-4X compression-formed, fiberglass-reinforced nylon enclosure makes the unit ideal for demanding outside installations.

Hazardous Location

The XARTU/1 is approved for use in Class I, Division 2 hazardous locations. Class I, Division I approval is pending. The XARTU/1-PM (Panel Mounted) is designed for General Purpose locations only.

Custom XARTU/1 Products

The heart of the XARTU/1 is an intelligent, rugged, industrial computer programmable via modular processes to perform custom tasks. Eagle Research can cost-effectively supply a product tailored to your specific application. Talk to your sales representative for details.

Technical Specifications—XARTU/1

Input Power	7-30 VDC. Two battery inputs with MTA connectors. One power supply/rechargeable battery input with screw terminals. One solar power input with screw terminals.
Consumption	5 AH battery, 2-yr charging per day @ 50 mA charge rate 1 mA average current. Less than 100 uA sleep current.
Power Monitoring	Supply voltage monitoring through and with low supply voltage interrupt
Backup Battery	3.6 VDC lithium backup battery: 10 years typical backup of database and time/date during normal use.
Processor	Philips 681XAS3 high performance 16-bit microcontroller running at 22.1184 MHz
Memory	512K x 8 remotely-programmable FLASH program memory 512K x 8 battery-backed RAM data memory
Real-time Clock	Battery-backed, quartz crystal controlled; +/- 1 sec/day typical accuracy. Programmable time scheduled interrupt capability
Internal Inputs	One ambient temperature input; one supply voltage input
Pulse Inputs	Four pulse inputs, software programmable for Form A or C; high or low speed. Each counter is a six-digit (0-999999) hardware counter with programmable interrupt support. Can be used for simple pulse accumulation, and for more complex applications such as card readers
Digital I/O's	Five multi-purpose, memory-mapped digital I/O lines. High-level functionality including pulse inputs, PWM (pulse width modulation) outputs, and complex custom inputs/outputs. Two I/O lines are connected to field terminals through standard OPTO-22 modules. The other 3 I/O lines can be used as either Form C or A relay outputs (solid state 100 mA max ac/dc) or status inputs (50 V max, DC only).
Analog Inputs	Six general-purpose analog inputs, 12-bit resolution, analog sampling, software Calibration. Nominal input ranges 0-5.12 VDC. A 250 ohm resistor in series allows 4-20 mA, or 0-5 VDC input for each channel. Each input has 3 screw terminals (Supply, Signal, and Ground). Supply voltage jumper selectable to connect the switched input voltage or allow connection of an external source or 5 VDC buffered reference.
RTD Inputs	Two 12-bit resolution RTD inputs; 3-wire lead compensated with ground shield Connection; four screw terminals per input
Communications	One modem port with extension off-hook detection. Speed up to 2400 baud. One RS-232 port with RX, TX, RTS, CTS, and communication switch signals. Configurable speed up to 115,200 baud. Directly interfaces to modems, CDPD (cellular digital packet data), radios, etc. via 6-position MTA or screw terminals. Communication protocol selectable on a per port basis. Eagle HexASCII, Modbus, Teletype/Geotach, Valmet, BSAF
Status LED	One software-controllable LED for various function indications
Expansion Capability	Additional connectors provide redundant termination points to allow for configuration flexibility. Two 10-position connectors allow for expansion over the PC communication bus. Optional isolated analog output modules and optional serial ports

Low-Cost, Reliable Remote Monitoring & Interruption

The Bullhorn Wireless Remote Monitoring System includes a number of different devices capable of remote monitoring for scheduled and by exception inbound reporting, as well as two-way communication for on-demand reads and testing/diagnostic equipment. 100% coverage is provided via cellular and satellite communication systems. Bullhorn devices can collect scheduled reads and/or provide instant notification of alarm events via email, fax, pager and/or voice notification for a low monthly fee. Set up your personalized notification scheme and/or access data from the Bullhorn website via your Internet browser. Bullhorn can also be upgraded to include an interrupter for IR-free cathodic protection reads. Please see the Product Specifications Sheet or talk to your Bullhorn representative to determine which model, enclosure and communication system is right for your needs.

Product Families Include:

Automated Meter Reading - Unit reports utility meter readings daily with up to 6 digits of meter resolution. During installation, unit is set to match the meter's reading to allow for occasional verification of accuracy. Unit can be configured to store the reading at a particular time that may be different from the reporting time to ensure that meter readings from multiple meters are comparative. Model types include:

- AMRG-GSM: Functionality as described with GSM digital cellular communications.
- AMRG-ORR: Functionality as described with Orbcomm satellite communications.
- AMRG-SAT: Functionality as described with Inmarsat D+ satellite communications.

Alarm Monitoring - Unit suitable for general monitoring or cathodic protection monitoring (rectifiers, test points, and critical bonds). Unit accepts analog (5V, ±50mV or 4 to 20 mA with external resistor) and/or digital signals.

Model types include:

- APMAAMCP-ORR: Channels 1-4 are selectable as analog and/or active digital. Channel 5 & 6 accept dry contact digital signals. Alternatively, Channel 5 can be an accumulator and Channel 6 can be setup as an accumulator reset. Uses Orbcomm satellite communications.
- APMAAMCP-SAT: Same functionality as APMAAMCP-ORR with Inmarsat D+ satellite communications capability.
- APMAAM-GSM: Channels 1-4 are selectable as analog and/or active digital. Ch. 5 and 6 accept digital signals and can be accumulators with a max rate of 2.5 pulses/second. A turbine meter interface board for higher pulse rates is available. Uses GSM digital cellular communications.
- APMAAM-ORR: Same functionality as APMAAM-GSM with Orbcomm satellite communications capability.
- APMAAM-SAT: Same functionality as APMAAM-GSM with Inmarsat D+ satellite communications capability.

Serial Data Terminal - Unit interrogates modbus-compatible instruments via an RS232 connection and reports register readings based on a configurable, transmission interval. Unit is compatible with ASCII, RTU Modbus, and several flow corrector protocols. Model types include:

- SDT1-G-GSM: Unit reports up to sixteen 6-digit register readings, eight 12-digit register readings or a combination of both from ASCII or RTU Modbus equipment. Uses GSM digital cellular communications.

Remote Interruption, Control and On-Demand - Bullhorn i-series ICP provides scheduled and by exception inbound reporting as well as two-way communication via satellite for on-demand reads and activating/deactivating equipment. Unit can be field upgraded to include a MicroMax® GPS30 current interrupter for IR-free CP reads, and even lets you know if the interrupter has stopped working. Instant On/Off readings are available as scheduled or on-demand reads. 2 to 4 analog channels available.

The Company

Based in Austin, Texas, American Innovations is a fast growing provider of products and services for the oil & gas and water pipeline industries, including web-based remote monitoring & equipment control, total survey solutions for corrosion monitoring, automatic meter reading, alarm point monitoring and integrity management. All product lines include Bullhorn's Remote Monitoring, MicroMax® Interrupters, CP Loggers, Allegro™ Field Computers, Pipeline Compliance System (PCS) and Integrity Management Program (IMP). All also offers international cathodic protection services via Bass Engineering. All product lines help pipeline companies comply with current regulations and improve the maintenance and reliability of their assets.

**AMERICAN
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BULLHORN
WIRELESS REMOTE MONITORING

BULLHORN
WIRELESS REMOTE MONITORING

Wireless Remote Monitoring & Interruption Solutions For Industry

American Innovations' Bullhorn Wireless Remote Monitoring System is the low-cost, reliable choice.

- **Monitoring your equipment 24/7**
- **Instant notification of alarm events**
- **100% coverage worldwide**
- **Communicates on a scheduled or by exception basis**
- **Two-way communication for remote interruption, control & on-demand reads**
- **Easy to install - Just hook it up and log on**
- **Highly scalable**
- **Secure data via Web browser interface**
- **Reduces operating expenses**
- **Use your resources for value-added activities**

Low-Cost, Reliable Remote Monitoring & Interruption



Monitors Your Equipment - Sending Information To You

OIL & GAS		
Cathodic Protection	Rectifiers	Critical Bonds
Gas Metering	Comm. Gas	Flow Correctors
Transmission & Distribution	City Gates	Odorizers
Production & Gathering	Compressors	Storage Tanks
		& MORE
		Pressure Recording
		Gas Pressure Recorder
		EFMs
		Test Points
WATER & WASTEWATER		
Lift Stations	Cathodic Protection	Security
		& MORE
AGRICULTURE		
Irrigation / Chemigation	Water Well Pumps	Animal Feeders
Back Up Generators	Temperature	
OTHER MKTS.		
Vendor Managed Inventory	Electric Utilities	Railroads
		& MORE

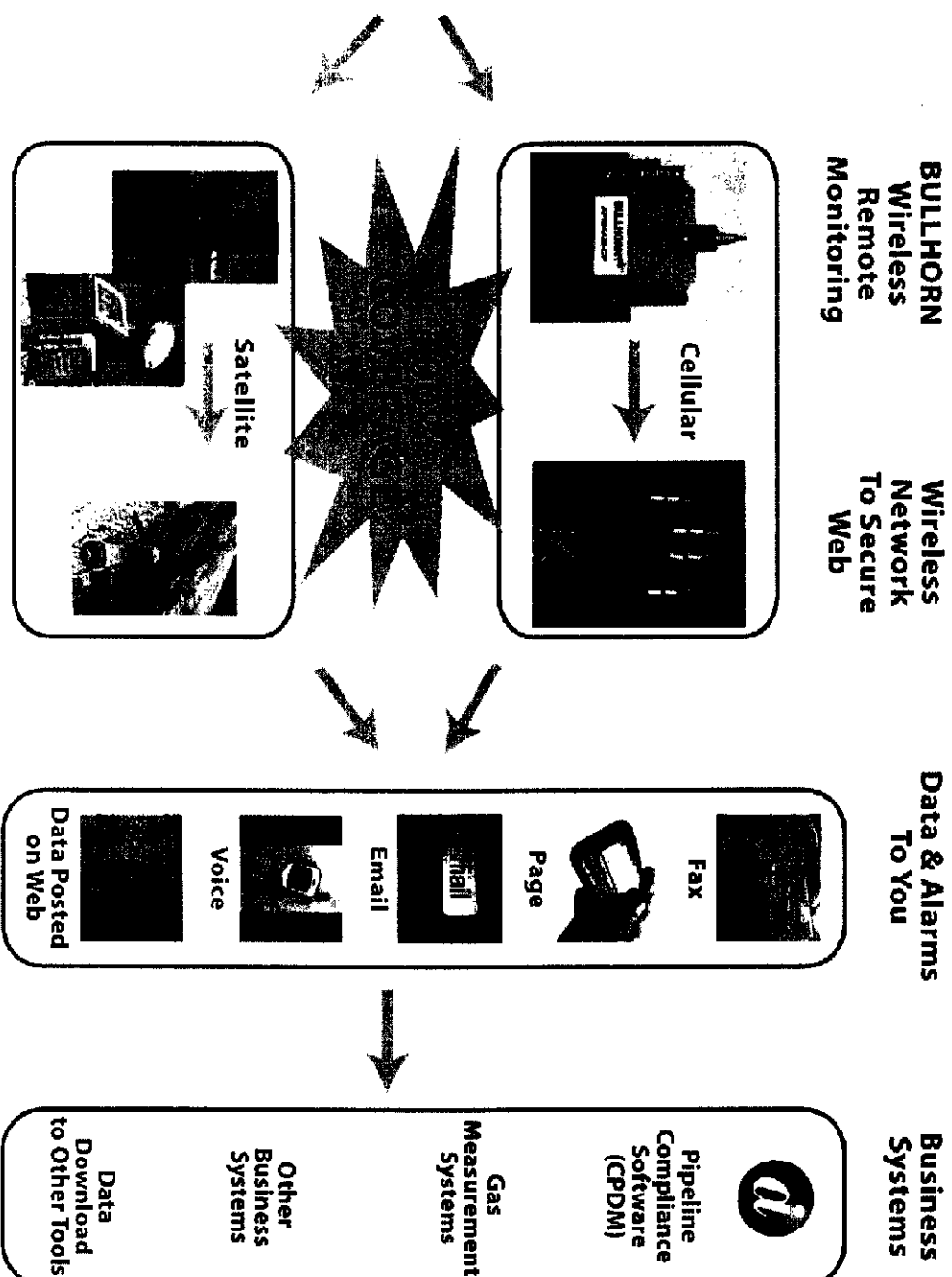


EXHIBIT D

Dear Customer:

By its Order issued on _____, 2009, the Public Utilities Commission of Ohio has authorized Orwell-Trumbull Pipeline Company, LLC to commence offering an optional Daily Electronic Measurement Service to its transportation customers served pursuant to service agreements entered under its approved tariff.

For a monthly Electronic Measurement Service Charge of \$125.00, for transportation customers who elect to participate in this program and who provide a dedicated telephone line and sufficient electric power to accommodate electronic measurement and telemetering equipment, Orwell-Trumbull will install and maintain such electronic measurement and telemetering equipment.

Participating transportation customers will also have password-protected access to Orwell-Trumbull's gas control website where they will be able to monitor and download daily measurement information.

If you are interested in participating in this Daily Electronic Measurement Service, please contact _____ at [telephone number] for additional information.

Very truly yours,

Martin Whelan, Chief Operating Officer