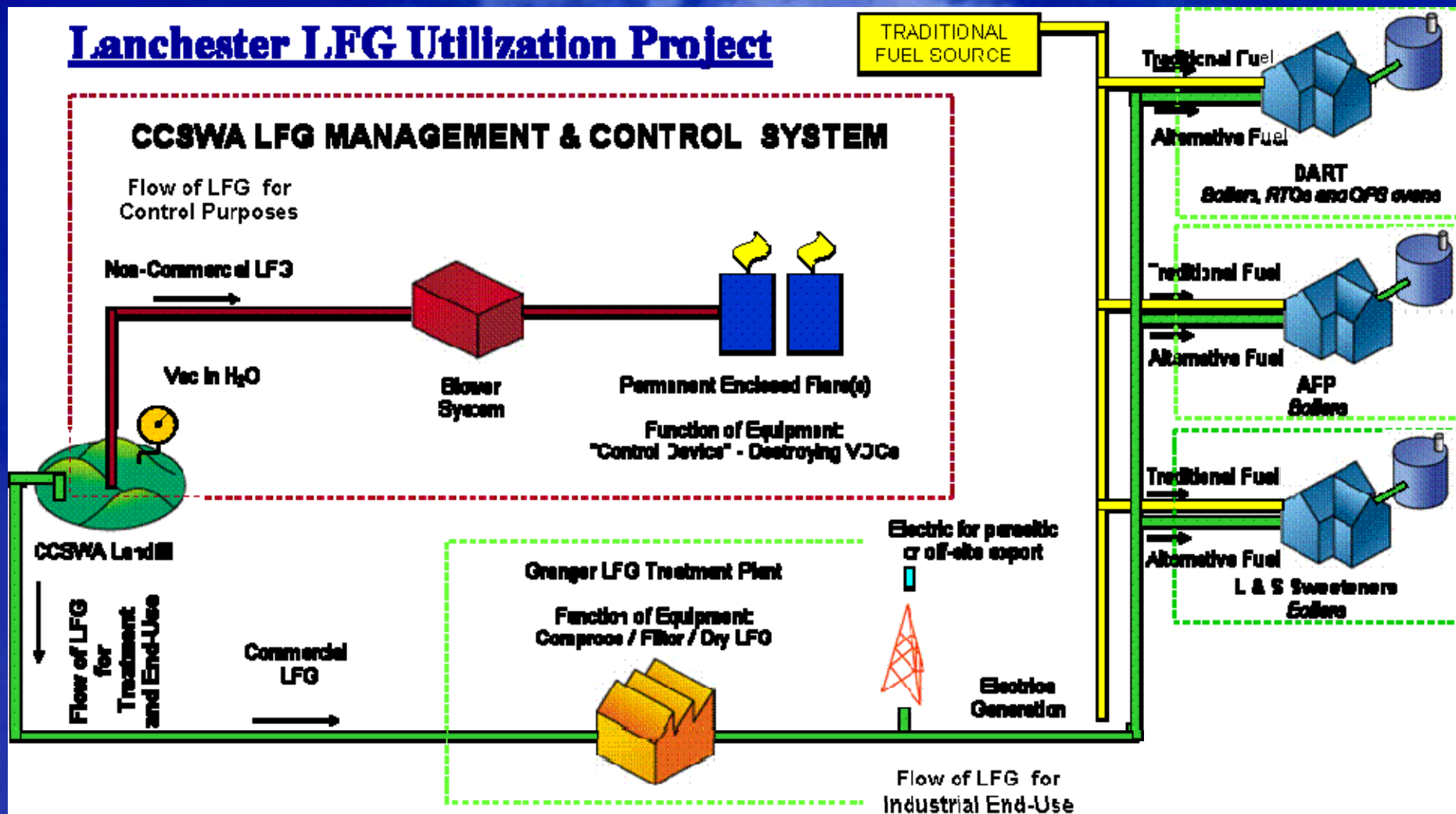


12th Annual LMOP Conference Presentation: Conestoga Landfill Gas Utilization Project

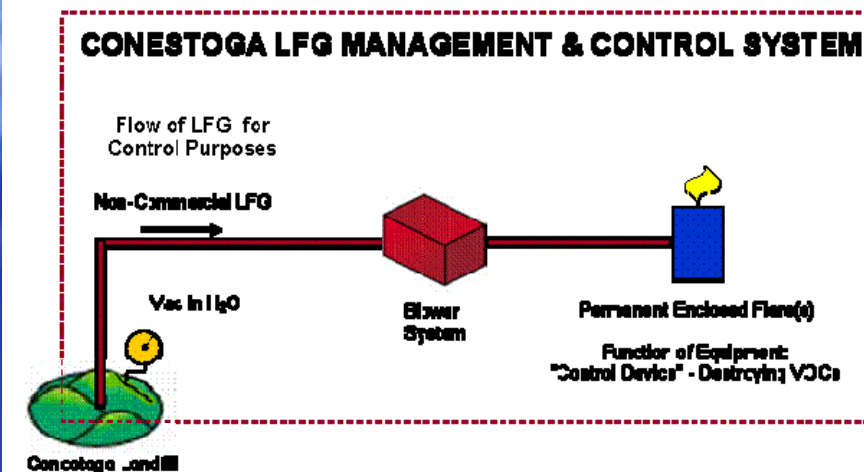
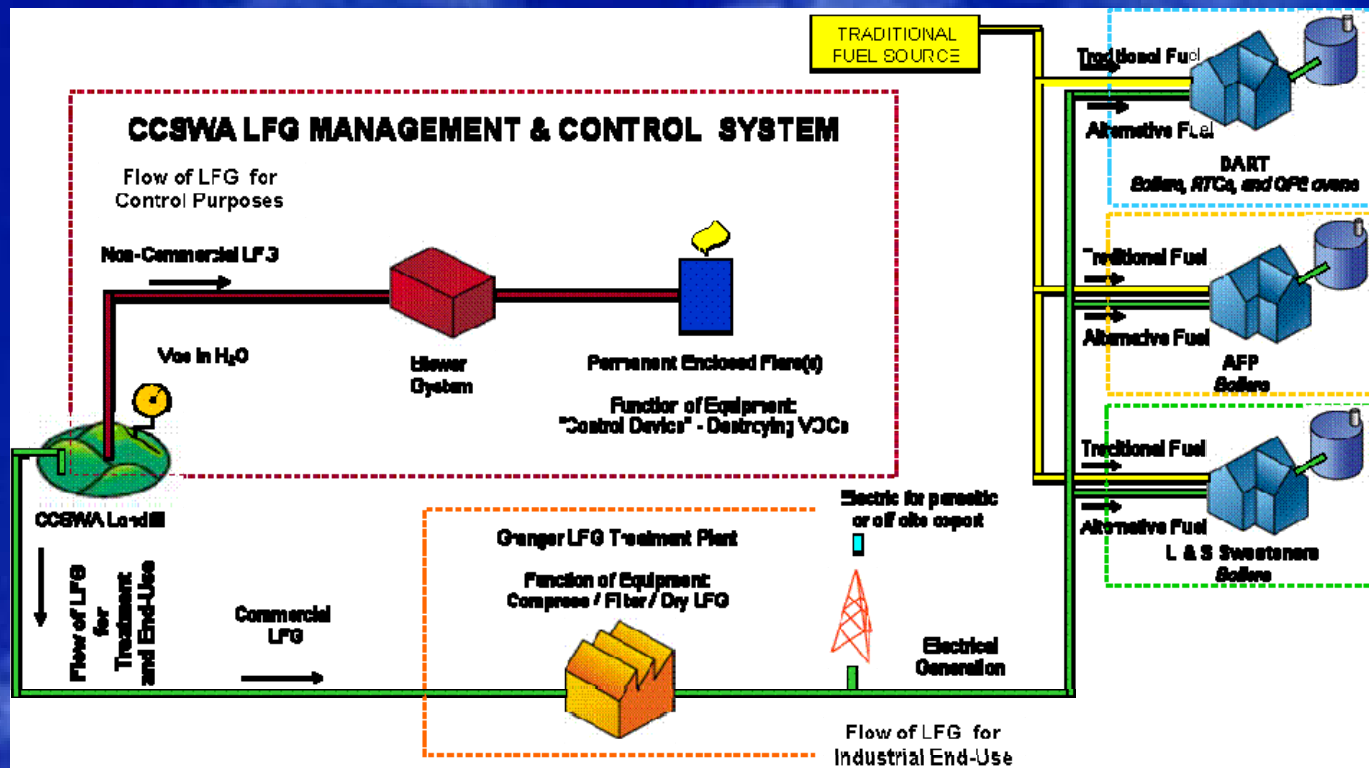
**Joel Zylstra, *President/COO*
Tuesday, January 13, 2009**



Lanchester LFG Utilization Project



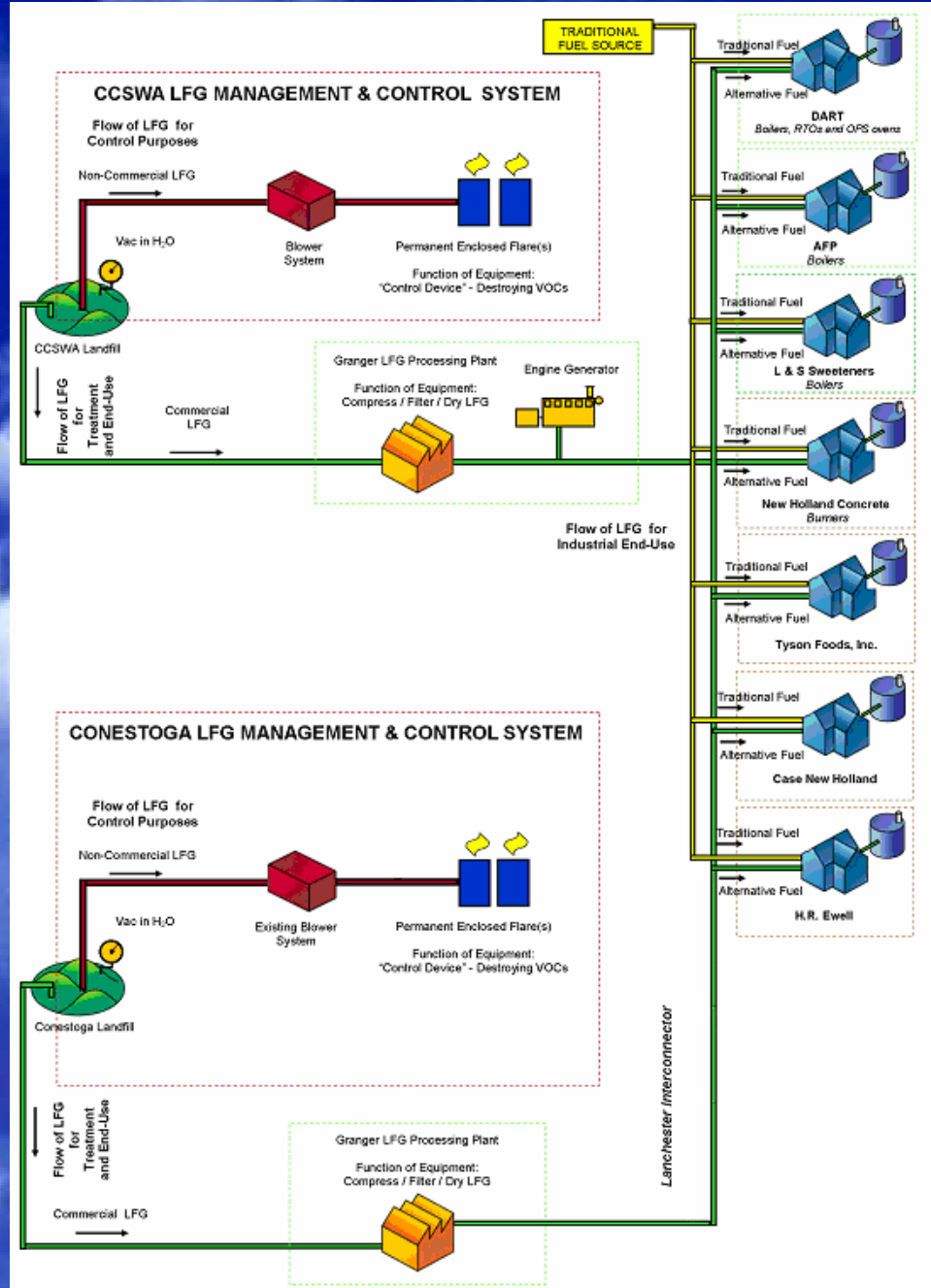
Commercial Operation Date: December 2004



- 5 miles from Chester County Solid Waste Authority
- Landfill is producing approximately 8,000 scfm
- Landfill maximum production estimated at 12,500 scfm

Conestoga LFG Project

DEVELOPMENT PLAN



Permitting Obstacles:

- Extensive Right of Way's and Easements: 36 private easements were required for the 9-mile pipeline.
- Wetlands Permitting: Granger was forced to complete a 12 month study to ensure there were no bog turtles in the area of the Pennsylvania Wetlands. The pipeline route contained 14 water crossings, each of which needed a permit to cross.



LFG Processing Plant Obstacles:

- Limited Real Estate: The boundary of the permitted solid waste area left little space for a processing facility

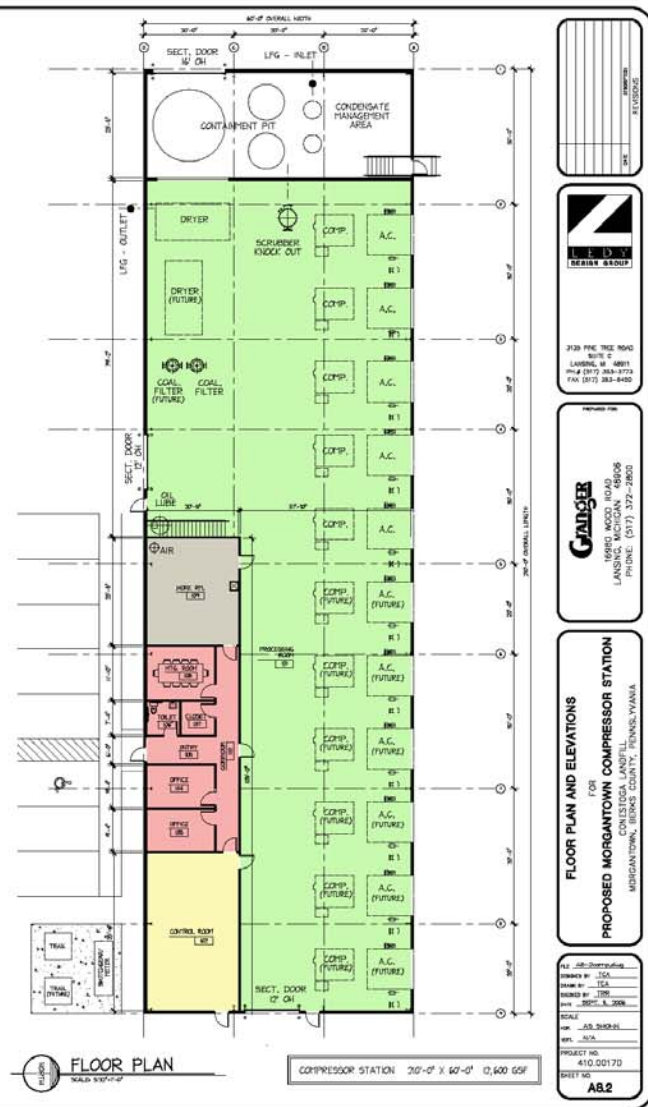


Property Acquisition Information:

- 28 acres bounded by I-176 and the Pennsylvania Turnpike
- Parcel located immediately adjacent to the landfill and with an acceptable distance from the LFG collection system
- Parcel located in the direction of the pipeline
- Zoning: Commercial/Light Industrial
- Previous owner had recently declared bankruptcy



DOI: 10.1002/PLA.10004



Building Front Elevation



Building Rear Elevation



Five 350 H.P. Sliding Vane Compressors



Coalescing Filter and Dryer



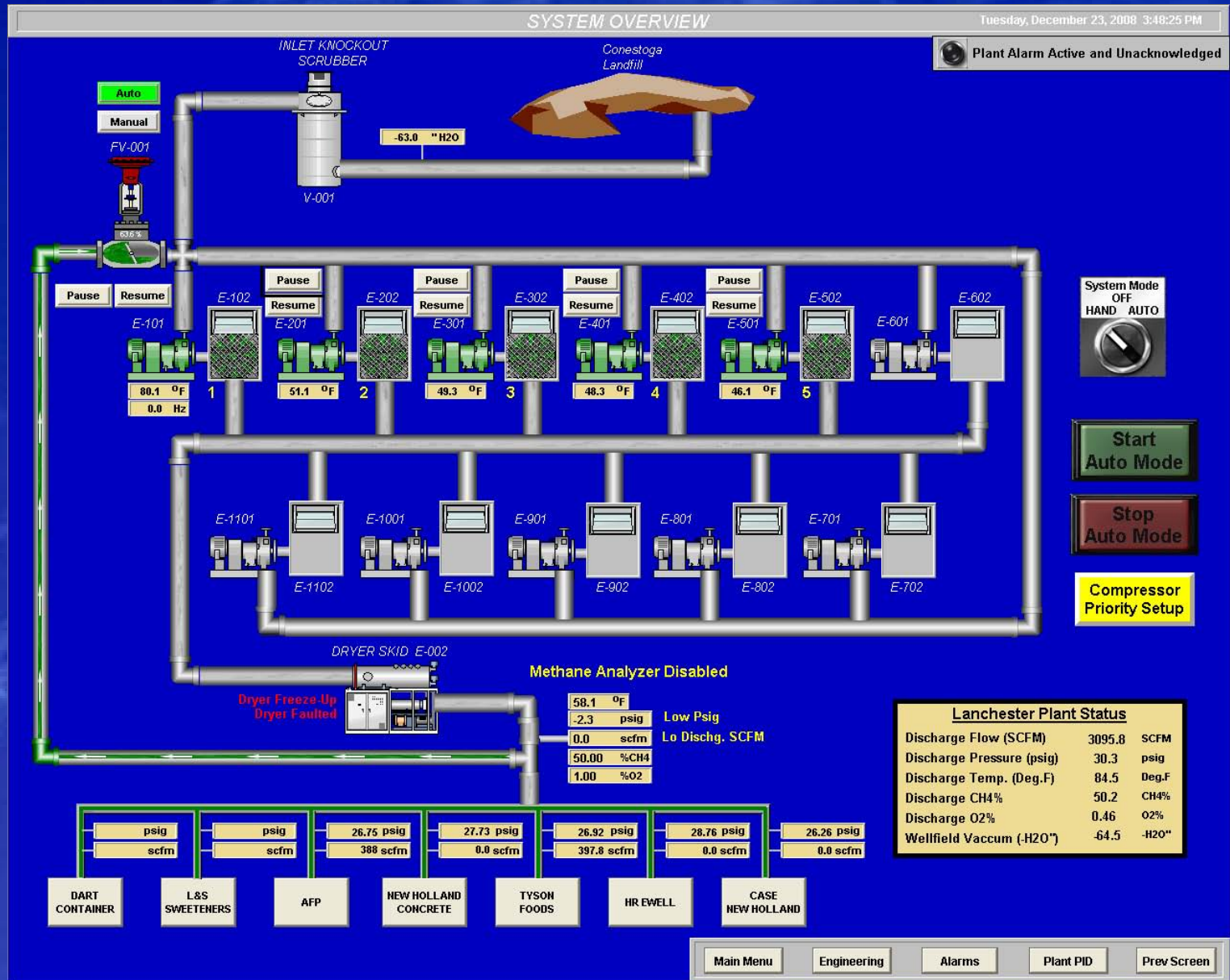
Condensate Processing Area



Plant Control Station



Plant Control Station



Plant Control Station-Trends

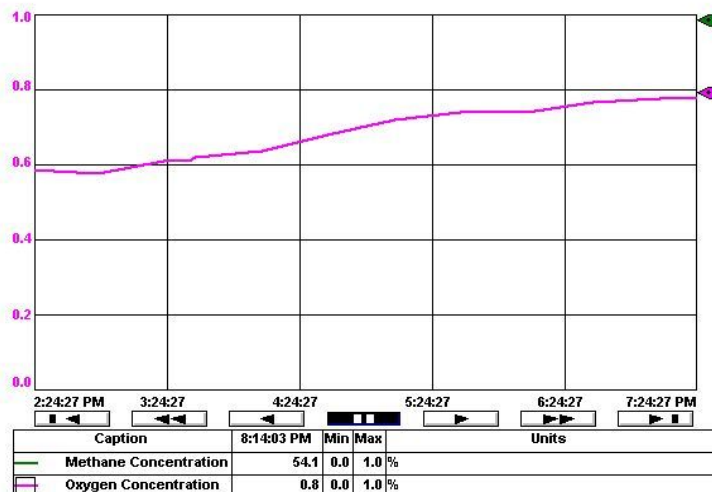
Morgantown Compressor Station Trends

Thursday, December 04, 2008 8:14:04 PM

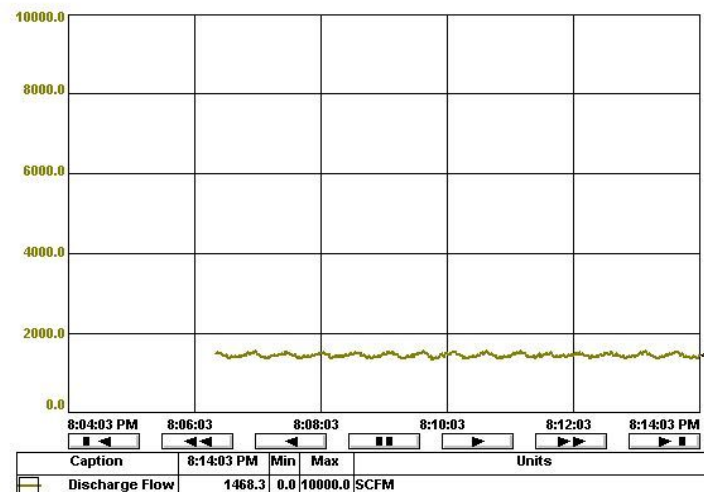


Plant Alarm Active and Unacknowledged

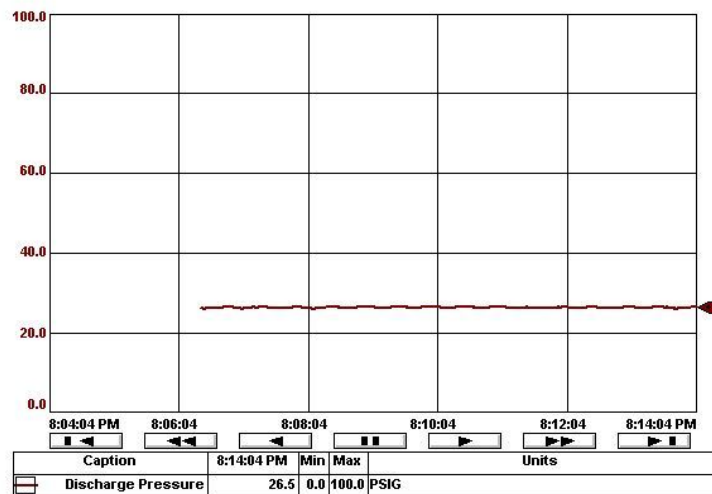
Methane/Oxygen % Thursday, December 04, 2008



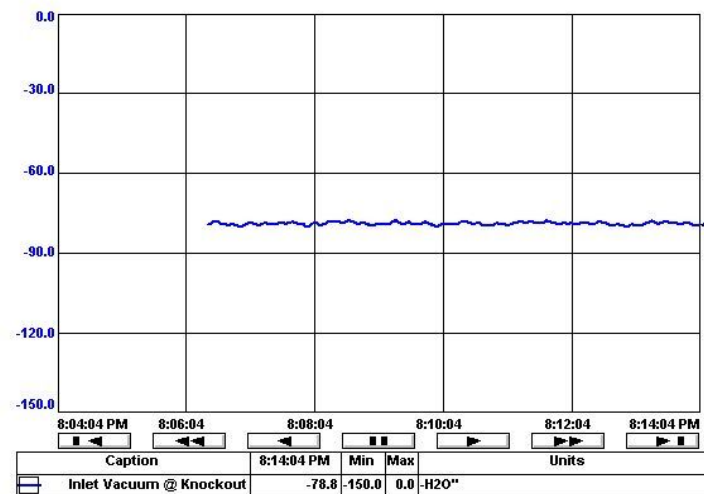
Flow(s) Thursday, December 04, 2008



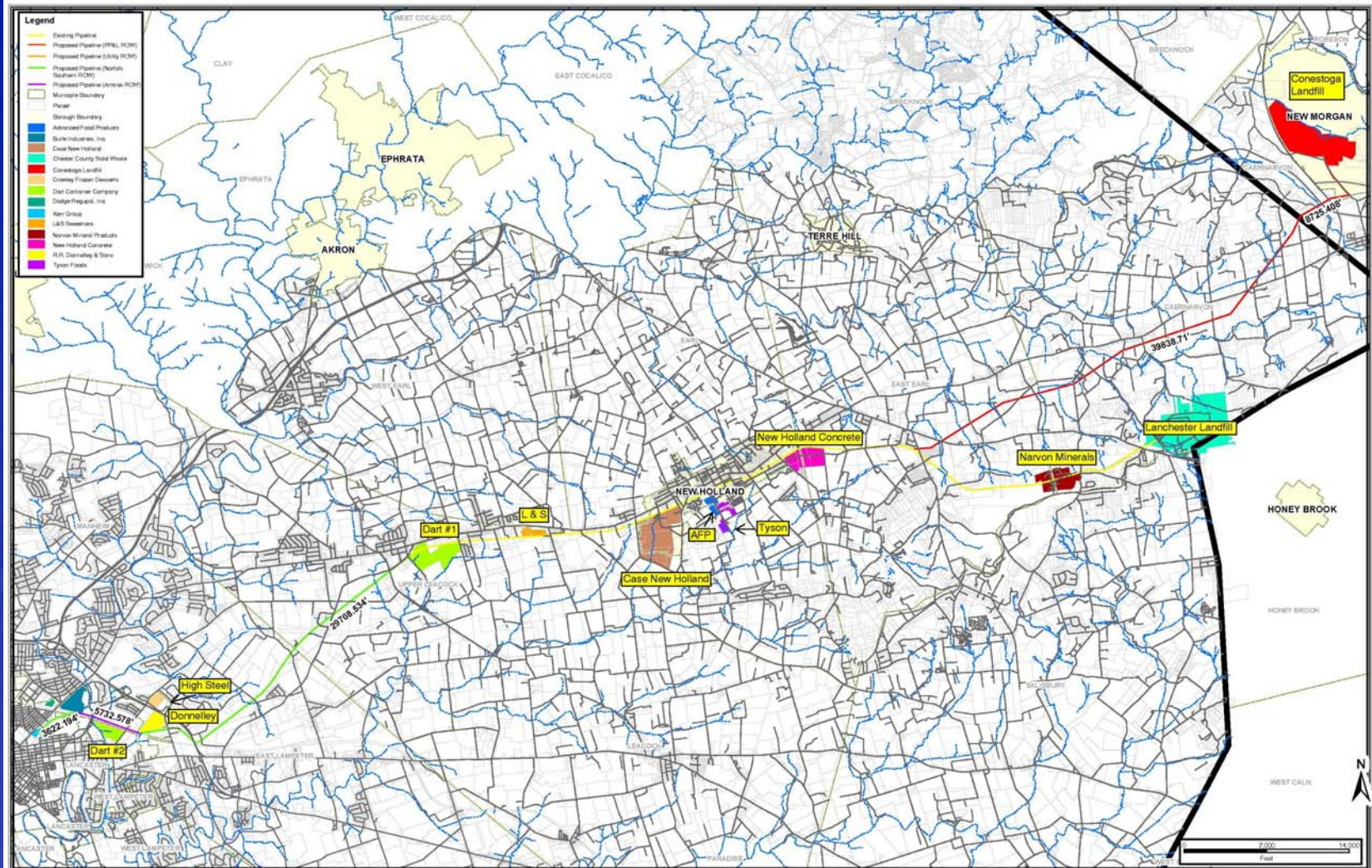
Pressure(s) Thursday, December 04, 2008



Vacuum (-H2O") Thursday, December 04, 2008



- 9 miles of 18 inch HDPE Pipe – rated at 75 psi
- 1 mile of 24 to 30 inch HDPE Pipe – vacuum (Landfill Interconnector)



Pipeline Routing

Primary route followed an existing electrical transmission R.O.W.



Secondary route followed existing roads or interstates.



Pipeline Construction Team

Pipeline Owner: Granger Energy of Morgantown, LLC

Pipeline Design: Gannett Fleming and Barton & Loguidice

Construction Management: UGI Utilities

Pipeline Contractors: Brubacher Excavating

Construction Time Frame: November 2007 – November 2008



Customer Summary



Boilers	25
Hot Oil Heaters	4
Ovens	4
Indirect Fired Heaters	3
Direct Fired Heaters	2
Remote Thermal Oxidizers	2
Process Water Heaters	<u>2</u>

Total to Date: **42** separate pieces of combustion equipment



Customer Conversions

Metering:

- Multiple meters installed at customer locations
- Btu content transmitted from the LFG Processing Plants
- Meters owned and maintained by Granger

Combustion Equipment:

- Auto switch or co-fire systems at customer locations
- CPL Systems was the designer and contractor for nearly all conversions
- New equipment is owned and maintained by customers



Environmental Benefits

Conestoga Project Benefits

- The new pipeline will transport 4,000 scfm of landfill gas replacing the need for about 100,000 barrels of oil per year or
- Annually provide enough power to heat the equivalent of 13,026 averages homes.

The air quality benefits expected from this project are approximately equal to any one of the following:

Source: USEPA Landfill Methane Outreach Program (LMOP)

- Annual greenhouse gas emissions from 86,711 passenger vehicles
- Carbon sequestered annually by 107,600 acres of pine or fir forests
- Carbon dioxide emissions from 1,101,024 barrels of oil consumed
- Carbon dioxide emissions from 53,738,978 million gallons of gasoline consumed



Future Customer Outlook:

- 1. Expansions of customers existing production facilities (3 currently planned)**
- 2. Construction of customer-owned co-generation project(s) (1 currently planned)**
- 3. Construction of Granger-owned co-generation project(s) (1 currently planned)**
- 4. Installation of electrical generation equipment at LFG Processing Facilities**





THANK YOU!



Processing Plant

Pipeline

Customers



THE WIELAND - DAYCO CORPORATION



CIANBRO



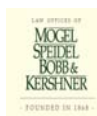
We Supply Solutions



CLARK HILL



Davis Valve, Inc.



HONIGMAN

