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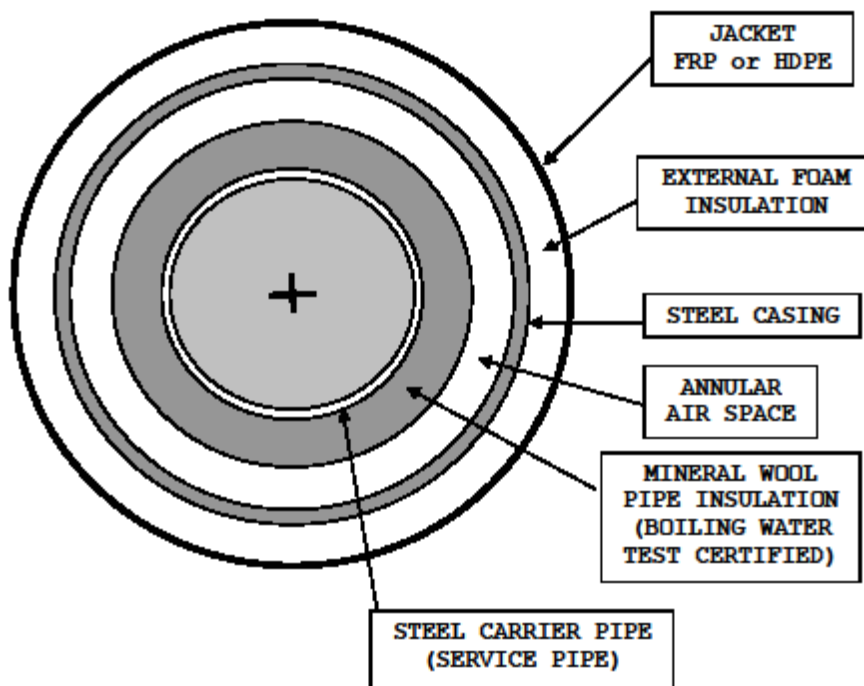
DoD Corrosion Prevention and Control Program

In Situ Corrosion and Heat Loss Assessment of Two Nonstandard Underground Heat Distribution System Piping Designs

Supplement-Appendices for Final Report on Project F07-AR01

Alfred D. Beitelman, Charles P. Marsh, Douglas Neale,
Vernon Meyer, John Taylor, David Butler, Forest Mandan,
Lawrence Clark, and Thomas A. Carlson

June 2011



In Situ Corrosion and Heat Loss Assessment of Two Nonstandard Underground Heat Distribution System Piping Designs

Supplement–Appendices for Final Report on Project F07-AR01

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Final report

Approved for public release; distribution is unlimited.

Prepared for Office of the Secretary of Defense (OUSD(AT&L))
3090 Defense Pentagon
Washington, DC 20301-3090

Under Military Interdepartmental Purchase Request MIPR7CCORB1019, dated 21
November 2006.

Abstract: The objective of this project was to assess the performance of nonstandard underground heat distribution system (UHDS) designs being implemented at various Department of Defense (DoD) installations. These systems incorporate nonmetallic cladding and alternative insulation materials that are advertised to improve energy conservation and corrosion resistance, but they deviate from established guide specifications for UHDS. The ongoing reliable operation of UHDS on military installations is mission-critical, and service interruptions can have adverse and extended negative mission impacts.

This report documents the assessment of two similar nonstandard UHDS piping system designs — one at Fort Carson, CO, and one at Fort Stewart, GA. The study consisted of environmental corrosivity tests, air pressure tests, visible inspection of excavated sections, and heat loss evaluation using two methods. Deficiencies in design, installation, and accessibility for maintenance were recorded, and significantly degraded sections were documented. Recommendations for addressing site-specific deficiencies are offered, and supporting technical discussions are provided. Overall, it is advised that these systems not be recommended or allowed in guide specifications and criteria.

This volume is a supplement to the main text of ERDC/CERL TR-11-14. It contains all UHDS testing data and other documentation supporting the authors' conclusions.

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¹ All appendices are collected in a supplement to the main report.

Preface

This investigation was performed for the Office of the Secretary of Defense under the Department of Defense Corrosion Prevention and Control Program, Project F07-AR01, “Corrosion Condition and Performance Assessment of Heat Distribution System Piping at Fort Stewart, GA”; Military Interdepartmental Purchase Request MIPR7CCORB1019, dated 21 November 2006. The proponent was the US Army Office of the Assistant Chief of Staff for Installation Management (ACSIM) and the stakeholder was the US Army Installation Management Command (IMCOM). The technical monitors were Daniel J. Dunmire (OUSD(AT&L)), Bernie Rodriguez (IMPW-E), and Valerie D. Hines (DAIM-ODF).

The work was performed by the Materials and Structures Branch (CF-M) of the Facilities Division (CF), Construction Engineering Research Laboratory – Engineer Research and Development Center (ERDC-CERL). The ERDC-CERL Project Managers were Dr. Charles P. Marsh and Alfred D. Beitelman (CEERD-CF-M). A portion of this work was performed by, or under the supervision of, Mandaree Enterprise Corporation, Warner Robins, GA 31088. At the time this report was prepared, the Chief of the ERDC-CERL Materials and Structures Branch was Vicki L. Van Blaricum (CEERD-CF-M), the Chief of the Facilities Division was L. Michael Golish, (CEERD-CF), and the Technical Director for Installations was Martin J. Savoie (CEERD-CV-ZT). The Deputy Director of ERDC-CERL was Dr. Kirankumar Topudurti and the Director was Dr. Ilker Adiguzel.

The Commander and Executive Director of the U.S. Army Engineer Research and Development Center was COL Kevin J. Wilson and the Director was Dr. Jeffery P. Holland.

Executive Summary

The objective of this project was to perform a representative and statistically significant corrosion and thermal performance assessment of the installed Fort Stewart heat distribution system (HDS) network to determine its condition after at least 3 years in service. The system was also evaluated for design, quality of construction, physical condition and maintenance procedures in parallel with detailed corrosion and thermal measurements.

The corrosion evaluation focused on potential interaction between the conduit system and the soil in which it is buried. A close interval survey (CIS) was conducted to ascertain the level of corrosive activity on the underground high-temperature hot water delivery piping system. Additional resistivity and composition measurements were made at strategically selected sites to document soil parameters at Fort Stewart. Finally, a substantial portion of the conduit system was pressure-tested for pneumatic integrity. In these tests, the sealed annular volume between the hot water carrier pipe and the surrounding steel casing was pressurized at 15 psig and monitored for 2 hours to determine whether the conduit piping system is protected from ground water infiltration and its degrading impacts. Pressurization tests also included inspection of the drains and vents associated with the casing annulus for ground water accumulation.

The contract requirements for this project also included the evaluation of underground HDS thermal performance at Fort Stewart. First, the system manufacturer's published heat loss data were compared with heat losses predicted by an ASHRAE-accepted analysis method using identical soil/thermal properties. Second, heat losses were also calculated with the ASHRAE method using the published conduit material properties and actual soil thermal conductivity properties, moisture content, and temperatures measured at designated Fort Stewart test sites. Third, an array of heat flux sensors was bonded to the external jacket of both the supply and return conduits at four excavation/inspection sites separate from the ASHRAE sites. After inspection of the conduits and installation of the sensors at these sites, the conduits were reburied and the soil was

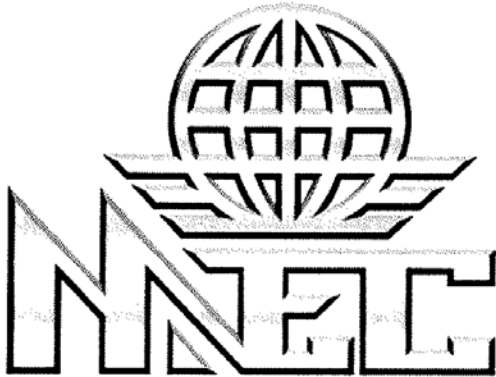
allowed to equilibrate for 2 months before direct heat flux measurements were recorded.

This volume is a supplement to the main text of ERDC/CERL TR-11-14. It contains all UHDS testing data and other documentation supporting the authors' conclusions.

Unit Conversion Factors

Multiply	By	To Obtain
degrees Fahrenheit	$(F-32)/1.8$	degrees Celsius
Feet	0.3048	meters
gallons (U.S. liquid)	3.785412 E-03	cubic meters
Inches	0.0254	meters
Mils	0.0254	millimeters
square feet	0.09290304	square meters

Appendix A: Project Management Plans for CPC Project F07-AR01



WORK PLAN

Corrosion Condition and Performance Assessment of Heat Distribution Piping at Ft. Carson, Colorado

July 18, 2007

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Submitted to:
U.S. Army Engineer Research & Development Center (ERDC)
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**WORK PLAN - Corrosion Condition and Performance
Assessment of Heat Distribution Piping at Ft.
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1.0 INTRODUCTION

Mandaree Enterprise Corporation (MEC) is pleased to submit this proposed Work Plan to execute the assigned tasks specified in the Statement of Work (SOW) for delivery order W9132T-07-T-0083. The SOW is for a Corrosion Condition and Performance Assessment of two types of heat distribution piping at Ft. Carson, Colorado. This Work Plan defines the methodologies MEC will use to fulfill the requirements of this task to evaluate the condition of the Duo Therm 505 high density polyethylene (HDPE) jacketed piping and the MULTI –THERM 500 fiberglass reinforced plastic (FRP) jacketed piping installed for the heat distribution at Ft. Carson.

1.1 Objective

The objective of this task order is to assess the HDPE and FRP jacketed piping used at Ft. Carson for heat distribution with respect to corrosion condition and thermal performance.

1.2 Performance

MEC will accomplish the contracted work for ERDC CERL as required by contract. MEC is cognizant that Government certification of satisfactory services provided is contingent on MEC performing in accordance with the terms and conditions of the referenced contract, the project SOW, the approved project Work Plan, and all subsequent amendments. MEC will meet with designated Government representatives as required and directed to review the performance and inspect the work. Since this is an assessment project, MEC will insure that a high degree of coordination is maintained with appropriate entities associated with this project including Installation Engineering personnel, the Corps of Engineers researcher responsible for the project, and the COTR. MEC will perform the required evaluation of the Heat Distribution System (HDS) piping in a manner that insures the assessment is accurate, statistically significant and representative.

2.0 TECHNICAL REQUIREMENTS

2.1 Work Description

The objective of this task order is to perform a corrosion condition and performance assessment of the Ft. Carson HDS piping. This assessment will involve performing a heat loss analysis of the HDS piping, leak and pressure testing, and Close Interval Surveys (CIS) along with Wenner 4-Pin soil resistivity tests to assess the corrosion condition of the HDS piping system.

2.1.1 Scope of Work

The assessment to be accomplished for evaluation of the HDS piping shall consist of an initial conduit pressure test with compressed air to identify and correct leaks. Based on the pressure test results, a more comprehensive assessment consisting of heat loss measurements/calculations, close interval surveys, soil property measurements, and pipe inspection at selected sites will be completed.

2.1.2 Work Plan

2.1.2.1 On-Site Planning Meeting (Task 1)

In accordance with the project SOW, MEC personnel will participate in a Pre-work Conference at Ft. Carson prior to start of work. At this meeting Ft. Carson representatives and MEC personnel will conduct a mutual review of requirements and procedures for project execution, roles and responsibilities of Government and MEC personnel, and outlines for communications and safety practices for the contracted

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work. In addition, MEC will present a draft Work Plan for discussion and editing to insure clear mutual understanding of all work tasks to be completed. MEC will coordinate this meeting with the COTR and all desired participants of the COTR.

At the conclusion of the Pre-work conference, selected MEC personnel will remain at Ft. Carson to complete the following activities as needed to lay the foundation for subsequent tests:

- a. Obtain all available installation drawings and technical documentation for the existing HDS.
- b. Conduct a preliminary, comprehensive site survey and inspection of the Ft. Carson HDS system. Document findings.
- c. Initiate development of draft Test Plan identifying proposed test sites and detailed test procedures.
- d. Review draft Test Plan with project COTR, as needed.
- e. Establish credentials and documentation for subsequent test activity site visits.
- f. Complete required safety/procedures training for subsequent site visits.
- g. Meet with local vendors as needed for planning and coordination of subsequent test equipment, materials and activities.
- h. Address and resolve additional issues identified in Pre-work conference or activities described in items a – g above.
- i. Conduct exit meeting with base DPW POC and report activities to COTR in monthly report to insure agreement with and understanding of subsequent test activities

2.1.2.2 Conduit Air Pressure Tests (Task 2)

Based on the preliminary data and information gathered in Task 1, MEC will develop a detailed and specific test plan identifying specific proposed candidate test sites/segments for required evaluation activities. MEC will then return to Ft. Carson with the appropriate test gear to perform a detailed inspection, assessment and documentation of the HDS system to define the segments that are to receive pressure testing. The MEC HDS Expert will determine if there are any segments to be exempted from the pressure testing not to exceed 10% of the Phase I piping in accordance with the project SOW. Likewise, MEC will perform pressure testing on 70% of the Phase II/III piping system as determined by the MEC HDS Expert in accordance with the project SOW. After identification of the specific test sites, MEC will conduct the required pressure tests and document the results.

In preparation for pressure testing, MEC will inspect for the presence of water in the conduit, measure the approximate quantity of any water drained from the conduit (if any), and record all observations. Additionally, MEC will inspect for any factors pertinent to the corrosion condition and/or long term performance of the piping and will note all observations to include any pertinent details as to the condition of each manhole. All data will be recorded for inclusion in subsequent project reports

The pressure testing to be performed by MEC will consist of pressurizing the annular conduit air space in each designated segment to 15 psig and not to exceed 16 psig. The conduit will be checked to insure it is sealed and adjustments made such as tightening gland seals will be accomplished as required to insure that it is sealed properly. Pressure will be monitored for a period of two hours. Pressure readings will be taken at a minimum rate of one per minute during the first 10 minutes, at five minute intervals for the next 30 minutes, and at 20 minute intervals for the final 80 minutes of the test. All data will be recorded for reporting. The gauges used for this measurement shall be tested daily and verified to

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be in working order. The full scale deflection of the gauges used shall not exceed 30-psig. A drop of pressure to 13.5 psig prior to expiration of the two-hour test period will be considered failure. The value of "Phase I percentage passed" and "Phases II and III percentage passed" shall be calculated and verified by the HDS Expert.

MEC will comply with all Ft. Carson safety procedures in the course of completing the pressure tests. At any time during testing, if it is found that live steam is present when removing the drain plug, the plug will be re-tightened and the MEC will notify the HDS Expert and appropriate base personnel immediately. All testing will be under the supervision and approval of the designated MEC HDS Expert approved by the project COTR.

2.1.2.3 Close Interval Survey Testing (Task 3)

As a separate task, MEC NACE-certified personnel will utilize the Close Interval Survey (CIS) method to determine the native potential at numerous locations along the HDS piping network using a copper/copper sulfate reference cell. A null or inconclusive result at a test site will indicate the piping in the vicinity of that site to be in good condition with respect to corrosion activity. If measurable, reproducible potential readings are found at sites along the pipe route, the data will be reported as the metallic conduit not being electrically isolated from the soil as a possible condition. All readings will be taken relative to the metallic conduit and not the carrier pipe. All efforts will be made to verify that the carrier pipe has a sound electrical connection to the conduit and findings recorded for reporting.

The CIS will be performed on twelve (12) piping segments of the Phase I piping using a survey interval of every two feet. The segments selected for CIS testing will be at the recommendation of the HDS Expert and based on the results of the conduit air pressure tests conducted in Task 1. Three (3) CIS test sets will be on segments that passed the air pressure tests and nine (9) CIS test sets will be on segments that did not pass pressure test. If this is not possible, then incremental adjustments (i.e., switching a test from a failed to a passed conduit, or visa versa) shall be made until all twelve (12) CIS test sets are allocated to Phase I piping.

CIS testing will be performed on twenty four (24) Phase II & III piping segments and will be accomplished in the same manner as for Phase I. Testing will be based on the recommendation of the HDS expert and results of the conduit air pressure test. Six (6) segments will be tested that passed the air pressure test and eighteen (18) tests will be on segments that failed. If this is not possible, then incremental adjustments (i.e., switching a test from a failed to a passed conduit, or visa versa) shall be made until all twenty-four (24) tests are allocated to Phase II & III piping. CIS testing will be conducted under the supervision and approval of the designated MEC HDS Expert. All test results will be recorded and included in the project final report.

In conjunction with the CIS testing, MEC will perform six (6) measurements of soil resistivity using the Wenner 4-pin method. Selected testing locations will be distributed to reflect representative characteristics of the soil conditions experienced by the HDS piping network. Additionally, four soil box resistivity measurements of the native soil at burial depth will be done in association with excavations conducted in Task 4 (Paragraph 2.1.2.4). These measurements shall be performed on site or at a certified laboratory on soil samples obtained from the excavation. The Wenner 4-pin tests will be conducted under the supervision and approval of the designated MEC HDS Expert. Test results will be documented and reported in the final report.

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2.1.2.4 Excavation Exposures (Task 4)

MEC will excavate six local sites to expose, inspect and document the condition of the outer jacketing of the installed HDS piping network at Ft. Carson. Three (3) of these excavations will be performed on Phase I piping and a total of three (3) excavations shall be performed on Phase II/III piping. At least one of the excavations associated with Phase I piping and one excavation for Phase II/III shall be at a 90-degree (approximate) elbow. Preferred sites for excavation shall be selected by the designated HDS Expert, but shall also be absolutely subject to approval (reference paragraph 5 of the SOW) by the Ft. Carson installation point of contact (POC). Typical locations of particular interest for indications of ongoing condition and performance include: elbows, anchors, and field joint closures. Given the relatively brief service life of the HDS network to date, concerted efforts will be made to choose the most severe or challenging environments to locate the excavation sites in order to increase the probability of exposing early indications of corrosion, physical deterioration or thermal performance degradation, if they exist.

Documentation of each excavation shall include, but not be limited to: site location, piping system type and size, estimated carrier pipe temperature, photos, outer jacket condition, notes on any wear or abrasion or other damage, properties and character of backfill soil immediately in contact with the pipe along with inclusions if any, depth of burial, native soil type at burial depth, Wenner 4-pin soil box measurement results of native soil resistivity at burial depth, and any other pertinent data evident upon inspection. All due care will be taken during excavation to avoid damage to the piping.

MEC will insure that care is taken during excavation to avoid damage to the piping. In the last stages of excavation hand shovels/trowels will be used. The HDS pipe system will not be cut or otherwise physically compromised during the activities included in this Task. Each excavation shall also include re-burial. This process shall be in accordance with manufacturer's recommendations and Corps of Engineers guidance.

2.1.2.5 Quantitative In-Situ Measurement of Heat Loss (Task 5)

As required by the project Statement of Work, MEC will conduct quantitative in-situ measurements of mid-segment operational heat loss for six (6) HDS piping sections. Three (3) of these measurements shall be on Phase I piping, and a total of three (3) on Phase II/III piping. The primary measurement methods will be the ASHRAE Heat Loss Method (2004 ASHRAE Handbook, HVAC Systems and Equipment, Chapter 11).

The ASHRAE measurement method will be conducted at six sites (three in Phase I HDS network and three in Phase II/III HDS network) selected by the designated MEC HDS Expert. This method does not require excavation of the HDS pipe, but does require measurement of the soil moisture, geotech soil type, and the conduit burial depth at each in-situ site. This soil data is used to determine thermal conductivity of the local soil adjacent to the HDS pipe from published geophysical literature. MEC will employ a qualified local laboratory for obtaining and analyzing the soil samples. Thermal conductance design properties of the HDS pipe in question is obtained from the manufacturer. This data is combined with knowledge of fluid temperature in the carrier pipe and soil temperature measurements recorded at a known distance from the pipe to obtain a calculated heat flux for that site.

In addition to SOW requirements, MEC will conduct further tests using the Heat Flux Sensor Direct Measurement Method (flux sensors bonded directly to outer jacket of HDS conduit). This method will be executed at four of the six HDS excavation sites described in Paragraph 2.1.2.4 (separate and distinct from the pipe segments that are evaluated using the ASHRAE method). Two excavation sites for the Phase I HDS network and two excavation sites for the Phase II/III HDS network will be selected by the

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designated HDS Expert to conduct the direct heat flux measurements. At these four sites, commercial heat flux and surface temperature sensors will be bonded to the outer casing of the HDS pipe. The pipe will then be carefully reburied. Sensor leads will extend from the buried HDS pipe to above grade through small diameter PVC conduits anchored to the pipe and terminated in a weather-head accessible for later acquisition of heat flux and temperature data. The soil will be allowed to stabilize for at least two months before heat flux and pipe surface temperature data is recorded with the HDS system in full operation.

Both the ASHRAE and direct heat flux methods will require measurement of hot water temperatures upstream and downstream of the test segment. These measurements will be conducted at the manhole sites at either end of the test segment.

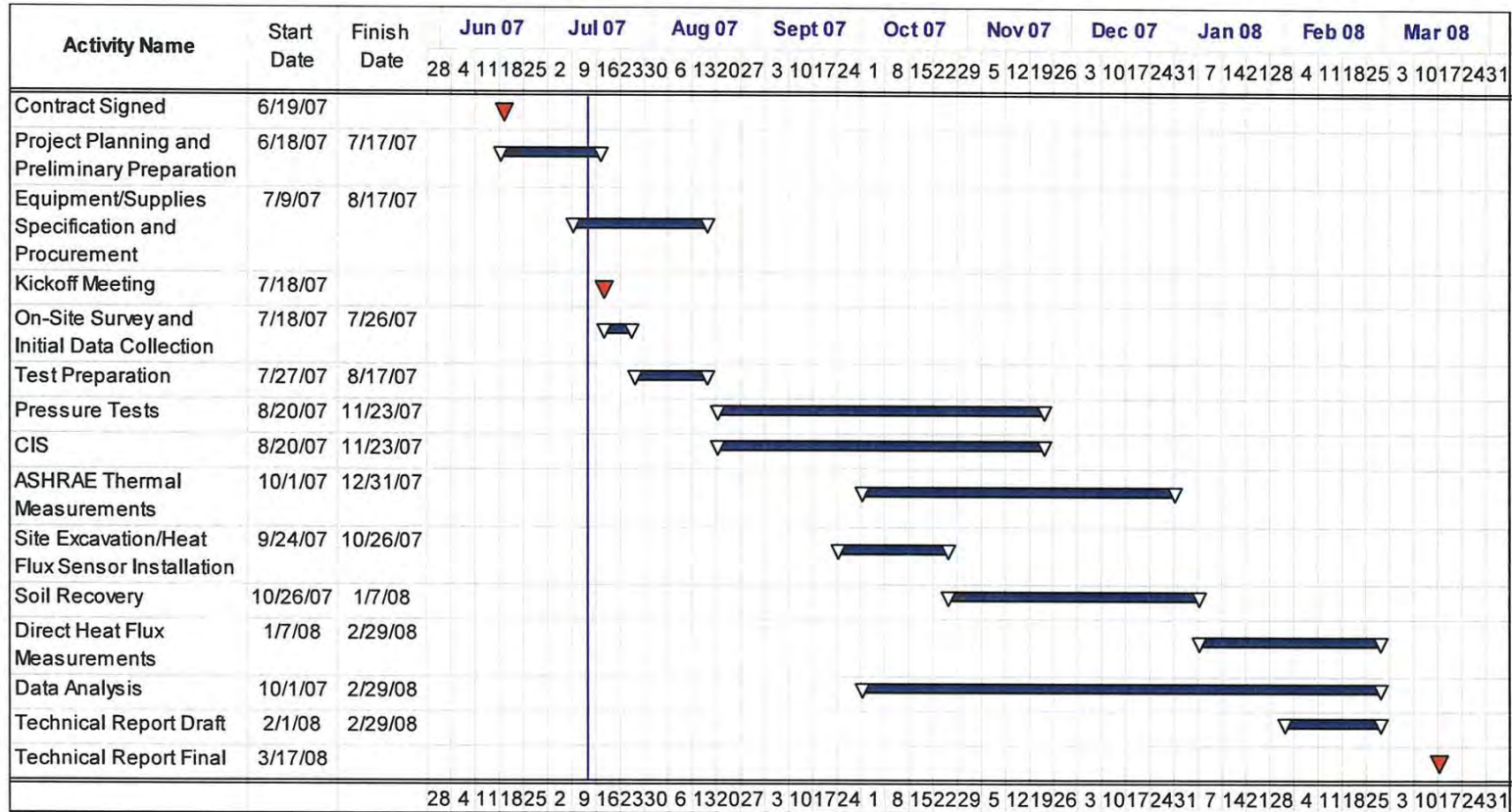
After the heat loss calculation data collection and calculations are complete, indicated heat loss in excess of design values (if any) will be used to calculate the resulting estimated additional annual heat distribution costs for Ft. Carson, presuming that the discrete measurements and calculations are representative of the entire system. Results of these cost computations will be included in the project final report.

Both the ASHRAE and direct heat flux measurement installation, data collection and data/cost analysis activities will be closely supervised and approved by the designated MEC HDS Expert.

2.1.2.6 Final Report (Task 6)

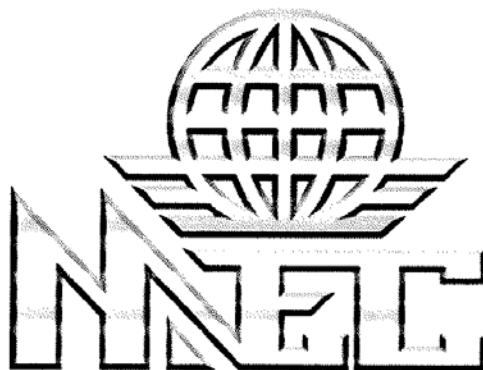
MEC will prepare a preliminary comprehensive draft Final Technical Report that includes all the information, detailed data and analysis collected or produced during the execution of the tasks outlined above. A complete description of the methods, assumptions, conclusions and recommendations will also be included in the final report for the project. The report will be submitted prior to the end of the Period of Performance for the project.

2.2 Estimated Schedule



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Stewart, Georgia**

August 8, 2007



WORK PLAN

**Corrosion Condition and Performance Assessment
of Heat Distribution Piping at Ft. Stewart, Georgia**

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**WORK PLAN - Corrosion Condition and Performance
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August 8, 2007

1.0 INTRODUCTION

Mandaree Enterprise Corporation (MEC) is pleased to submit this proposed Work Plan to execute the assigned tasks specified in the Statement of Work (SOW) for delivery order W9132T-07-T-0083. The SOW is for a Corrosion Condition and Performance Assessment of two phases of heat distribution piping at Ft. Stewart, Georgia. This Work Plan defines the methodologies MEC will use to fulfill the requirements of this task to evaluate the condition of the Duo Therm 505 high density polyethylene (HDPE) jacketed piping installed for the heat distribution at Ft. Stewart.

1.1 Objective

The objective of this task order is to assess the HDPE jacketed piping used at Ft. Stewart for heat distribution with respect to corrosion condition and thermal performance.

1.2 Performance

MEC will accomplish the contracted work for ERDC CERL as required by contract. MEC is cognizant that Government certification of satisfactory services provided is contingent on MEC performing in accordance with the terms and conditions of the referenced contract, the project SOW, the approved project Work Plan, and all subsequent amendments. MEC will meet with designated Government representatives as required and directed to review the performance and inspect the work. Since this is an assessment project, MEC will insure that a high degree of coordination is maintained with appropriate entities associated with this project including Installation Engineering personnel, the Corps of Engineers researcher responsible for the project, and the COTR. MEC will perform the required evaluation of the Heat Distribution System (HDS) piping in a manner that insures the assessment is accurate, statistically significant and representative.

2.0 TECHNICAL REQUIREMENTS

2.1 Work Description

The objective of this task order is to perform a corrosion condition and performance assessment of the Ft. Stewart HDS piping. This assessment will involve performing a heat loss analysis of the HDS piping, leak and pressure testing, and Close Interval Surveys (CIS) along with Wenner 4-Pin soil resistivity tests to assess the corrosion condition of the HDS piping system.

2.1.1 Scope of Work

The assessment to be accomplished for evaluation of the HDS piping shall consist of an initial conduit pressure test with compressed air to identify and correct leaks. Based on the pressure test results, a more comprehensive assessment consisting of heat loss measurements/calculations, close interval surveys, soil property measurements, and pipe inspection at selected sites will be completed.

2.1.2 Work Plan

2.1.2.1 On-Site Planning Meeting (Task 1)

In accordance with the project SOW, MEC personnel will participate in a Pre-work Conference at Ft. Stewart prior to start of work. At this meeting Ft. Stewart representatives and MEC personnel will conduct a mutual review of requirements and procedures for project execution, roles and responsibilities of Government and MEC personnel, and outlines for communications and safety practices for the contracted work. In addition, MEC will present a draft Work Plan for discussion and editing to insure

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clear mutual understanding of all work tasks to be completed. MEC will coordinate this meeting with the COTR and all desired participants of the COTR.

At the conclusion of the Pre-work conference, selected MEC personnel will remain at Ft. Stewart to complete the following activities as needed to lay the foundation for subsequent tests:

- a. Obtain all available installation drawings and technical documentation for the existing HDS.
- b. Conduct a preliminary, comprehensive site survey and inspection of the Ft. Stewart HDS system. Document findings.
- c. Initiate development of draft Test Plan identifying proposed test sites and detailed test procedures.
- d. Review draft Test Plan with project COTR, as needed.
- e. Establish credentials and documentation for subsequent test activity site visits.
- f. Complete required safety/procedures training for subsequent site visits.
- g. Meet with local vendors as needed for planning and coordination of subsequent test equipment, materials and activities.
- h. Address and resolve additional issues identified in Pre-work conference or activities described in items a – g above.
- i. Conduct exit meeting with base DPW POC and report activities to COTR in monthly report to insure agreement with and understanding of subsequent test activities

2.1.1.2 Conduit Air Pressure Tests (Task 2)

Based on the preliminary data and information gathered in Task 1, MEC will develop a detailed and specific test plan identifying specific proposed candidate test sites/segments for required evaluation activities. MEC will accomplish an assessment of the HDS system and map its total layout for the Phase I and Phase II piping installations at Ft. Stewart and determine the segments involved that are to receive pressure testing. MEC will then return to Ft. Stewart with the appropriate test gear to perform the detailed inspection, performance tests and documentation of the HDS system. The first performance tests involve a pressure integrity assessment of the Phase I and Phase II piping network. MEC will conduct compressed air pressure tests on a minimum of 90% of the HDS conduit for the Phase I network. The MEC HDS Expert will determine if there are any Phase I segments exempted from pressure testing not to exceed 10% of the Phase I system. For Phase II piping, MEC will perform pressure testing on 10% of the Phase II system selected by the MEC HDS Expert.

In preparation for pressure testing, MEC will inspect for the presence of water in the conduit, measure the approximate quantity of any water drained from the conduit (if any), and record all observations. Additionally, MEC will inspect for any factors pertinent to the corrosion condition and/or long term performance of the piping and will note all observations to include any pertinent details as to the condition of each manhole. All data will be recorded for inclusion in subsequent project reports

The pressure testing to be performed by MEC will consist of pressurizing the annular conduit air space in each designated segment to 15 psig and not to exceed 16 psig. The conduit will be checked to insure it is sealed and adjustments made such as tightening gland seals will be accomplished as required to insure that it is sealed properly. Pressure will be monitored for a period of two hours. Pressure readings will be taken at a minimum rate of one per minute during the first 10 minutes, at five minute intervals for the next 30 minutes, and at 20 minute intervals for the final 80 minutes of the test. All data

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will be recorded for reporting. The gauges used for this measurement shall be tested daily and verified to be in working order. The full scale deflection of the gauges used shall not exceed 30-psig. A drop of pressure to 13.5 psig prior to expiration of the two-hour test period will be considered failure. The value of "Phase I percentage passed" and "Phases II and III percentage passed" shall be calculated and verified by the HDS Expert.

MEC will comply with all Ft. Stewart safety procedures in the course of completing the pressure tests. At any time during testing, if it is found that live steam is present when removing the drain plug, the plug will be re-tightened and the MEC will notify the HDS Expert and appropriate base personnel immediately. All testing will be under the supervision and approval of the designated MEC HDS Expert approved by the project COTR.

2.1.2.3 Close Interval Survey Testing (Task 3)

As a separate task, MEC NACE-certified personnel will utilize the Close Interval Survey (CIS) method to determine the native potential at numerous locations along the HDS piping network using a copper/copper sulfate reference cell. A null or inconclusive result at a test site will indicate the piping in the vicinity of that site to be in good condition with respect to corrosion activity. If measurable, reproducible potential readings are found at sites along the pipe route, the data will be reported as the metallic conduit not being electrically isolated from the soil as a possible condition. All readings will be taken relative to the metallic conduit and not the carrier pipe. All efforts will be made to verify that the carrier pipe has a sound electrical connection to the conduit and findings recorded for reporting.

The CIS will be performed on eight (8) piping segments of the Phase I piping using a survey interval of every two feet. The segments selected for CIS testing will be at the recommendation of the HDS Expert and based on the results of the conduit air pressure tests conducted in Task 1. Three (3) CIS test sets will be on segments that passed the air pressure tests and five (5) CIS test sets will be on segments that did not pass pressure test. If this is not possible, then incremental adjustments (i.e., switching a test from a failed to a passed conduit, or visa versa) shall be made until all eight (8) CIS test sets are allocated to Phase I piping.

CIS testing will be performed on four (4) Phase II piping segments and will be accomplished in the same manner as for Phase I. Testing will be based on the recommendation of the HDS expert and results of the conduit air pressure test. Two (2) segments will be tested that passed the air pressure test and two (2) tests will be on segments that failed. If this is not possible, then incremental adjustments (i.e., switching a test from a failed to a passed conduit, or visa versa) shall be made until all four (4) tests are allocated to Phase II piping. CIS testing will be conducted under the supervision and approval of the designated MEC HDS Expert. All test results will be recorded and included in the project final report.

In conjunction with the CIS testing, MEC will perform six (6) measurements of soil resistivity using the Wenner 4-pin method. Selected testing locations will be distributed to reflect representative characteristics of the soil conditions experienced by the HDS piping network. Additionally, four (4) soil box resistivity measurements of the native soil at burial depth will be done in association with excavations conducted in Task 4 (Paragraph 2.1.2.4). These measurements shall be performed on site or at a certified laboratory on soil samples obtained from the excavation. The Wenner 4-pin tests will be conducted under the supervision and approval of the designated MEC HDS Expert. Test results will be documented and reported in the final report.

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2.1.2.4 Excavation Exposures (Task 4)

MEC will excavate four (4) local sites to expose, inspect and document the condition of the outer jacketing of the installed HDS piping network at Ft. Stewart. Three (3) of these excavations will be performed on Phase I piping and one (1) excavation shall be performed on Phase II piping. At least one of the excavations associated with Phase I piping shall be at a 90-degree (approximate) elbow. Preferred sites for excavation shall be selected by the designated HDS Expert, but shall also be absolutely subject to approval (reference paragraph 5 of the SOW) by the Ft. Stewart installation point of contact (POC). Typical locations of particular interest for indications of ongoing condition and performance include: elbows, anchors, and field joint closures. Given the relatively brief service life of the HDS network to date, concerted efforts will be made to choose the most severe or challenging environments to locate the excavation sites in order to increase the probability of exposing early indications of corrosion, physical deterioration or thermal performance degradation, if they exist.

Documentation of each excavation shall include, but not be limited to: site location, piping system type and size, estimated carrier pipe temperature, photos, outer jacket condition, notes on any wear or abrasion or other damage, properties and character of backfill soil immediately in contact with the pipe along with inclusions if any, depth of burial, native soil type at burial depth, Wenner 4-pin soil box measurement results of native soil resistivity at burial depth, and any other pertinent data evident upon inspection. All due care will be taken during excavation to avoid damage to the piping.

MEC will insure that care is taken during excavation to avoid damage to the piping. In the last stages of excavation hand shovels/trowels will be used. The HDS pipe system will not be cut or otherwise physically compromised during the activities included in this Task. Each excavation shall also include reburial. This process shall be in accordance with manufacturer's recommendations and Corps of Engineers guidance.

2.1.2.5 Quantitative In-Situ Measurement of Heat Loss (Task 5)

As specified by the project Statement of Work, MEC will conduct quantitative in-situ measurements of mid-segment operational heat loss for four (4) HDS piping sections to be selected by the designated MEC HDS Expert to include all Phase I and Phase II piping. The primary measurement method will be the ASHRAE Heat Loss Method (2004 ASHRAE Handbook, HVAC Systems and Equipment, Chapter 11). This method does not require excavation of the HDS pipe, but does require measurement of the soil moisture, geotech soil type, and the conduit burial depth at each in-situ site. This soil data is used to determine thermal conductivity of the local soil adjacent to the HDS pipe from published geophysical literature. MEC will employ a qualified local laboratory for obtaining and analyzing the soil samples. Thermal conductance design properties of the HDS pipe in question is obtained from the manufacturer. This data is combined with knowledge of fluid temperature in the carrier pipe and soil temperature measurements recorded at a known distance from the pipe to obtain a calculated heat flux for that site.

In addition to SOW requirements, MEC will conduct further tests using the Heat Flux Sensor Direct Measurement Method (flux sensors bonded directly to outer jacket of HDS conduit). This method will be executed at the four HDS excavation sites described in Paragraph 2.1.2.4 (separate and distinct from the pipe segments that are evaluated using the ASHRAE method). At these four sites, commercial heat flux and surface temperature sensors will be bonded to the outer casing of the HDS pipe. The pipe will then be carefully reburied. Sensor leads will extend from the buried HDS pipe to above grade through small diameter PVC conduits anchored to the pipe and terminated in a weather-head accessible for later acquisition of heat flux and temperature data. The soil will be allowed to stabilize for at least two months before heat flux and pipe surface temperature data is recorded with the HDS system in full operation.

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Both the ASHRAE and direct heat flux methods will require measurement of hot water temperatures upstream and downstream of the test segment. These measurements will be conducted at the manhole sites at either end of the test segment.

After the heat loss calculation data collection and calculations are complete, indicated heat loss in excess of design values (if any) will be used to calculate the resulting estimated additional annual heat distribution costs for Ft. Stewart, presuming that the discrete measurements and calculations are representative of the entire system. Results of these cost computations will be included in the project final report.

Both the ASHRAE and direct heat flux measurement installation, data collection and data/cost analysis activities will be closely supervised and approved by the designated MEC HDS Expert.

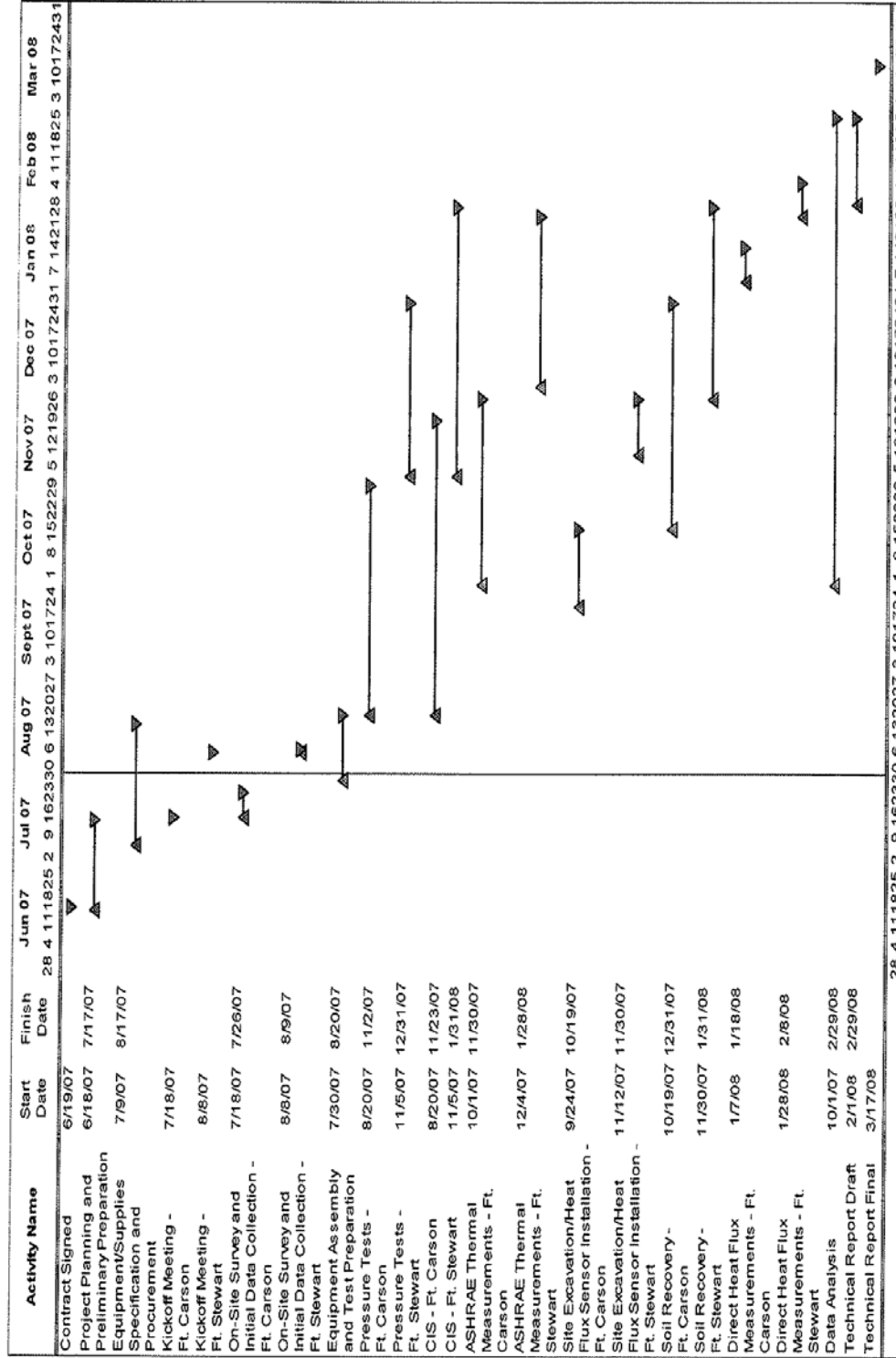
2.1.2.6 Final Report (Task 6)

MEC will prepare a preliminary comprehensive draft Final Technical Report that includes all the information, detailed data and analysis collected or produced during the execution of the tasks outlined above. A complete description of the methods, assumptions, conclusions and recommendations will also be included in the final report for the project. The report will be submitted prior to the end of the Period of Performance for the project.

WORK PLAN - Corrosion Condition and Performance Assessment of Heat Distribution Piping at Ft. Stewart, Georgia


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2.2 Ft. Carson/Ft. Stewart Heat Distribution System Integrated Schedule



28 4 111825 2 9 162330 6 132027 3 101724 1 8 152229 5 121926 3 10172431 7 142128 4 111825 3 10172431

Appendix B: Thermacor Duo-Therm 505 and Perma-Pipe HTHW Conduit Specifications

	DUO-THERM "505" Specification Guide	DTSG 3.101
	STANDARD SPECIFICATION	2.06.07
<p><i>Duo - Therm "505" Steel Piping Systems suitable for Steam, High Temperature Hot Water, Gravity and Pumped Condensate.</i></p> <p>Part 1 - General</p> <p>1.1 Pre-insulated Piping - Furnish a complete system of factory pre-insulated steel piping for the specified service. The system shall be a combination of a drainable, dryable, testable type conduit system, suitable for all ground water and soil conditions, site Classification "A" (Federal Construction Guide Spec. 02695), with an external covering of polyurethane insulation and an HDPE jacket. The system shall be provided as specified below and shown on the drawings.</p> <p>1.2 The pre-insulated pipe manufacturer shall make a complete layout of the system showing anchors, expansion provisions, and building entrance details. Means for expansion must be made in pipe offsets or loops unless this is compensated for integrally in the system.</p> <p>1.3 The system shall be Duo-Therm "505" as manufactured by Thermacor Process, L.P., of Fort Worth, Texas.</p> <p>Part 2 - Products</p> <p>2.1 The conduit shall be 10 gauge, welded, smooth-wall black steel conforming to ASTM A-211, A-139, A-134, and A-135. Conduit shall be tested at the factory to insure air and watertight welds prior to any fabrication or application of coating. No internal coating of conduit</p> <p>2.2 Conduit closures shall be 10 gauge steel, furnished with the conduit at a ratio of one closure for each fabricated item or length. Closures shall be field welded over adjacent units after pipe insulation.</p> <p>2.3 Piping in the conduit shall be standard weight (Std. Wt. is the same as Sch. 40 through 10"), steel, ASTM A-53, Grade B, ERW 2" and larger and A-106 SWI for 1- 1/2" and smaller. Steam lines shall be standard weight, and condensate lines shall be extra strong (XS is the same as Sch. 80 through 8"). Pipe joints shall be welded in accordance with the Pressure Piping Code, ASME/ANSI B 31.1.</p> <p>2.4 The Class "A" pipe insulation shall be mineral wool applied to the thickness shown on drawing DTSG 3.105.</p> <p>2.5 Pre-fabricated ells, loops, and tees shall be furnished and installed where shown on plans and shall consist of pipe, insulation, and conduit conforming to the same specification as hereinbefore stated for straight runs. Expansion loops shall be designed in accordance with the stress limits as dictated by the Power Piping Code, ASME/ANSI B31.1. Loop piping shall be installed in conduit suitably sized to handle indicated pipe movement. Elbows, loops, offsets, or any other direction changes shall conform to the standards set by ASME B31.1, Code for Power Piping.</p> <p>2.6 Terminal ends of conduits inside manholes, pits, or building walls shall be equipped with end seals consisting of a 1/2" steel plate welded to the pipe and conduit, followed by the 16" steel sleeve, and with a 2" overlap of the heat shrink sleeve. End seals shall be equipped with drain and vent openings. Terminate all conduits 2" beyond the inside face of manhole or building walls.</p> <p>2.7 Pre-fabricated anchors shall be furnished and installed where shown on plans and shall consist of a steel plate, welded to pipe and conduit. The steel anchor plate shall be 1/2" thick and shall be 5" larger horizontally and 2" larger vertically than the HDPE jacket outer diameter. Heat shrink wrap shall be used seal the overlap of anchor water shed over the HDPE jacket.</p> <p>2.8 A concrete thrust block shall be cast over the anchor plate and conduit, large enough for firm anchorage into undisturbed trench sidewalls and/ or bottom. The concrete block shall be at least 36" in length and extend a minimum of 12" beyond the top and bottom of the anchor plate.</p> <p>2.9 Wall sleeves with leak plates shall be provided at all building and manhole entries to provide an effective moisture barrier. The space between the conduit and wall sleeve shall be made watertight by use of Link-Seal or equal assemblies, which will also provide electrical isolation.</p> <p style="text-align: center;">(Continued)</p>		

	DUO-THERM "505" Specification Guide	DTSG 3.102
	STANDARD SPECIFICATION	2.06.07

2.10 The steel conduit for the steam and condensate shall be insulated with polyurethane foam insulation to a minimum thickness of 1". Insulation shall be rigid, minimum 90% closed cell polyurethane with a minimum 2.0 lbs per cubic foot density, compressive strength of 30 psi @ 75°F, and a coefficient of thermal conductivity (K factor) not higher than .15 @ 75°F per ASTM C518. Maximum conduit interface temperature shall not exceed 250°F.

2.11 Jacketing material shall be extruded, black, high density polyethylene (HDPE), having a minimum wall thickness of 125 mils for jacket sizes less than or equal to 12", 150 mils for jacket sizes larger than 12" to 24", and 175 mils for jacket sizes greater than 24". The inner surface of the HDPE jacket shall be oxidized by means of corona treatment, flame treatment (patent pending), or other approved methods. This will ensure a secure bond between the jacket and foam insulation preventing any ingress of water at the jacket/ foam interface.

2.12 Straight run joints are insulated using a wrap around HDPE jacket placed over the field joint and insulated with polyurethane foam. The HDPE jacket is sealed with a heat shrink sleeve, as recommended by the manufacturer.

2.13 Conduit fittings are factory pre-fabricated and pre-insulated with urethane to the thickness specified and jacketed with a molded, extrusion welded, or butt fusion welded PE jacket. **NO TAPING OR HOT AIR WELDING SHALL BE ALLOWED.**

Part 3 - Execution

3.1 The installing contractor shall be responsible to excavate, string conduit, weld test, place in trench, backfill, or otherwise treat and install the system as per the specifications and the directions furnished by the manufacturer and approved by the design engineer in accordance with plans and specifications.


3.2 The conduit shall be air tested at 15 psi. Test pressure shall be held for two hours. Repair any conduit leaks and retest prior to making joint closures.

3.3 Pre-engineered systems shall be provided with all straight pipe and fittings factory pre-insulated and pre-fabricated to job dimensions.

3.4 Underground systems shall be buried in a trench not less than two feet deeper than the top of the pipe and not less than eighteen inches wider than the combined O.D. of all piping systems. A minimum thickness of 24 inches of compacted backfill placed over the top of the pipe will meet H-20 highway loading.

3.5 Trench bottom shall have a minimum of 6" of sand, pea gravel, or specified backfill as a cushion for the piping. All field cutting of the pipe shall be performed in accordance with the manufacturer's installation instructions.

3.6 A hydrostatic pressure test of the carrier pipe shall be performed per the engineer's specification with a factory recommendation of one and one-half times the normal system operating pressure for not less than two hours. Care shall be taken to insure all trapped air is removed from the system prior to the test. *Appropriate safety precautions shall be taken to guard against possible injury to personnel in the event of a failure.*

	DUO-THERM "505" Specification Guide	DTSG 3.103
	PRESSURE TESTABLE SPECIFICATION WITH ERM	2.06.07

Duo - Therm "505" Steel Piping Systems suitable for Steam, High Temperature Hot Water, and Gravity or Pumped Condensate.

Part 1 - General

1.1 Pre-insulated Piping - Furnish a complete system of factory pre-insulated steel piping for the specified service. The system shall be a combination of a drainable, dryable, testable type conduit system, suitable for all ground water and soil conditions, site Classification "A" (Federal Construction Guide Spec. 02695), with an external covering of polyurethane insulation and an HDPE jacket. The jacket throughout the entire system shall incorporate electric fusion, butt fusion, or extrusion welding at all fittings, joint closures, or other points of connection. This shall create a jacket that is seamless throughout the entire system with the exception of anchors, whose water shed rings are sealed with a Raychem Dirax or Canusa GTS-65 wrap prohibiting the ingress of water. All pre-insulated pipe, fittings, insulating materials, and technical support shall be provided by the Pre-insulated Piping System manufacturer. The system shall be provided as specified below and shown on the drawings.

1.2 The pre-insulated pipe manufacturer shall make a complete layout of the system showing anchors, expansion provisions, and building entrance details. Means for expansion must be made in pipe offsets or loops unless this is compensated for integrally in the system.

1.3 The system shall be Duo-Therm "505" as manufactured by **Thermacor Process, L.P.**, of Fort Worth, Texas.

Part 2 - Products

2.1 The conduit shall be 10 gauge, welded, smooth-wall black steel conforming to ASTM A-211, A-139, A-134, and A-135. Conduit shall be tested at the factory to insure air and watertight welds prior to any fabrication or application of coating. No internal coating of conduit.

2.2 Conduit closures shall be 10 gauge steel, furnished with the conduit at a ratio of one closure for each fabricated item or length. Closures shall be field welded over adjacent units after pipe insulation.

2.3 Piping in the conduit shall be standard weight (Std. Wt. is the same as Sch. 40 through 10"), steel, ASTM A-53, Grade B, ERW 2" and larger, and A106 SML. Steam lines shall be standard weight and condensate lines shall be extra strong, (XS is the same as Sch. 80 through 8"). Pipe joints shall be welded in accordance with the Pressure Piping Code, ASME/ANSI B 31.1.

2.4 The Class "A" pipe insulation shall be mineral wool applied to the thickness shown on drawing DTSG 3.105.

2.5 Pre-fabricated ells, loops, and tees shall be furnished and installed where shown on plans and shall consist of pipe, insulation, and conduit conforming to the same specification as hereinbefore stated for straight runs. Expansion loops shall be designed in accordance with the stress limits as dictated by the Power Piping Code, ASME/ANSI B31.1. Loop piping shall be installed in conduit suitably sized to handle indicated pipe movement.


2.6 Terminal ends of conduits inside manholes, pits, or building walls shall be equipped with end seals consisting of a 1/2" steel plate welded to the pipe and conduit, followed by the 16" steel sleeve, and with a 2" overlap of the heat shrink sleeve. End seals shall be equipped with drain and vent openings. Terminate all conduits 2" beyond the inside face of manhole or building walls.

2.7 Pre-fabricated anchors shall be furnished and installed where shown on plans and shall consist of a steel plate, welded to pipe and conduit. The steel anchor plate shall be 1/2" thick and shall be 5" larger horizontally and 2" larger vertically than the HDPE jacket outer diameter. Raychem Dirax or Canusa GTS-65 wrap shall be used to seal the overlap of the anchor water shed ring over the HDPE jacket.

2.8 A concrete thrust block shall be cast over the anchor plate and conduit, large enough for firm anchorage into undisturbed trench sidewalls and/or bottom. The concrete block shall be at least 36" in length and extend a minimum of 12" beyond the top and bottom of the anchor plate.

2.9 Wall sleeves with leak plates shall be provided at all building and manhole entries to provide an effective moisture barrier. The wall sleeve and leak plate shall be electrically isolated from building rebar. The space between the conduit and wall sleeve shall be made watertight by use of Link-Seal or equal assemblies, which will also provide electrical isolation.

(Continued)

	DUO-THERM "505" Specification Guide	DTSG 3.104
	PRESSURE TESTABLE SPECIFICATION WITH ERM	2.06.07

2.10 The steel conduit for the steam and condensate shall be insulated with polyurethane foam insulation to a minimum thickness of 1". Insulation shall be rigid, minimum 90% closed cell polyurethane with a minimum 2.0 lbs per cubic foot density, compressive strength of 30 psi @ 75°F, and a coefficient of thermal conductivity (K factor) not higher than .15 @ 75°F per ASTM C518. Maximum conduit interface temperature shall not exceed 250°F.

2.11 Jacketing material shall be extruded, black, high density polyethylene (HDPE), having a minimum wall thickness of 125 mils for jacket sizes less than or equal to 12", 150 mils for jacket sizes larger than 12" to 24", and 175 mils for jacket sizes greater than 24". The jacket throughout the entire system shall incorporate electric fusion, butt fusion, or extrusion welding at all fittings, joint closures, or other points of connection. This shall create a jacket that is seamless throughout the entire system with the exception of anchors, whose water shed rings are sealed with a Raychem Dirax or Canusa GTS-65 wrap prohibiting the ingress of water. The inner surface of the HDPE jacket shall be oxidized by means of corona treatment, flame treatment (patent pending), or other approved methods. This will ensure a secure bond between the jacket and foam insulation preventing any ingress of water at the jacket/foam interface.

2.12 Straight run joints are jacketed with a pressure testable joint closure, either an electro-fusion welded split sleeve HDPE joint closure, Canusa Supercase, or Raychem Rayjoint. The joint shall be pressure tested at 5 psi for 5 minutes while simultaneously soap tested at the joint closure's seams for possible leaks. After passing the pressure test, joints are insulated using polyurethane foam and a closure patch is welded (as per specified joint closure instructions) over the foam holes. All joint closures and insulation shall occur at straight sections of pipe.

2.13 Conduit fittings are factory pre-fabricated and pre-insulated with urethane to the thickness specified and jacketed with a molded, extrusion welded, or butt fusion welded PE jacket. **NO TAPING OR HOT AIR WELDING SHALL BE ALLOWED.** All fitting jackets/covers shall be connected to the straight lengths of pipe by electro fusion, butt fusion, or extrusion welding.

2.14 The system shall be leak detection ready by means of manufacturing into the system a copper wire through each piece of pre-insulated pipe and fittings. The piping system manufacturer shall install the wire in a manner that has the wire embedded in the outer polyurethane foam insulation and not touching the steel conduit. The contractor shall connect the wire together at each field joint with a recommended crimping tool. After crimping the wire at the joint, the contractor shall check the joined pieces for continuity of the wire and electrical isolation from the conduit by use of a standard analog volt ohmmeter. This check shall be repeated after each crimp, until the entire system is connected. After the piping system is installed, the owner at any time may check the system for a conduit leak by using a standard volt ohmmeter. If a leak is detected (a leak is signaled by a drastic drop in the electrical resistance of the circuit) the owner should contact the system manufacturer for a TDR instrument to determine the location of the leak. (At owner's option, an ohmmeter panel may be purchased which will provide continuous leak detection monitoring.)

Part 3 - Execution

3.1 The installing contractor shall be responsible to excavate, string conduit, weld test, place in trench, backfill, or otherwise treat and install the system as per the specifications and the directions furnished by the manufacturer and approved by the design engineer in accordance with plans and specifications.

3.2 The conduit shall be air tested at 15 psi. Test pressure shall be held for two hours. Repair any conduit leaks and retest prior to making joint closures.

3.3 Pre-engineered systems shall be provided with all straight pipe and fittings factory pre-insulated and pre-fabricated to job dimensions.

3.4 Underground systems shall be buried in a trench not less than two feet deeper than the top of the pipe and not less than eighteen inches wider than the combined O.D. of all piping systems. A minimum thickness of 24 inches of compacted backfill placed over the top of the pipe will meet H-20 highway loading.

3.5 Trench bottom shall have a minimum of 6" of sand, pea gravel, or specified backfill as a cushion for the piping. All field cutting of the pipe shall be performed in accordance with the manufacturer's installation instructions.

3.6 A hydrostatic pressure test of the carrier pipe shall be performed per the engineer's specification with a factory recommendation of one and one-half times the normal system operating pressure for not less than two hours. Care shall be taken to insure all trapped air is removed from the system prior to the test. *Appropriate safety precautions shall be taken to guard against possible injury to personnel in the event of a failure.*



DUO-THERM "505"

Specification Guide

DTSG
3.105

DUO-THERM IN HDPE JACKET

1.08.07

Carrier Pipe:

- d ≥ 2" - A53 ERW Grade B, Std. Wt. Black Steel
- Seamless and Schedule 80 pipe available for all sizes
- Std. Wt. is the same as Schedule 40 for all sizes thru 10"
- XS is the same as Schedule 80 for all sizes thru 8"

Conduit:

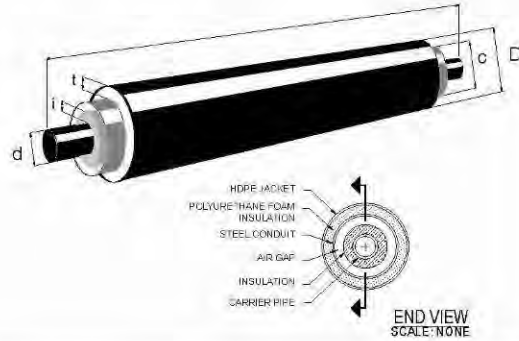
- 6" ≤ c ≤ 26" - 10 Gauge
- 28" ≤ c ≤ 36" - 6 Gauge
- 38" ≤ c ≤ 42" - 4 Gauge

Jacketing Material:

- High Density Polyethylene (HDPE)

Insulation:

- Mineral Wool
- Polyurethane Foam



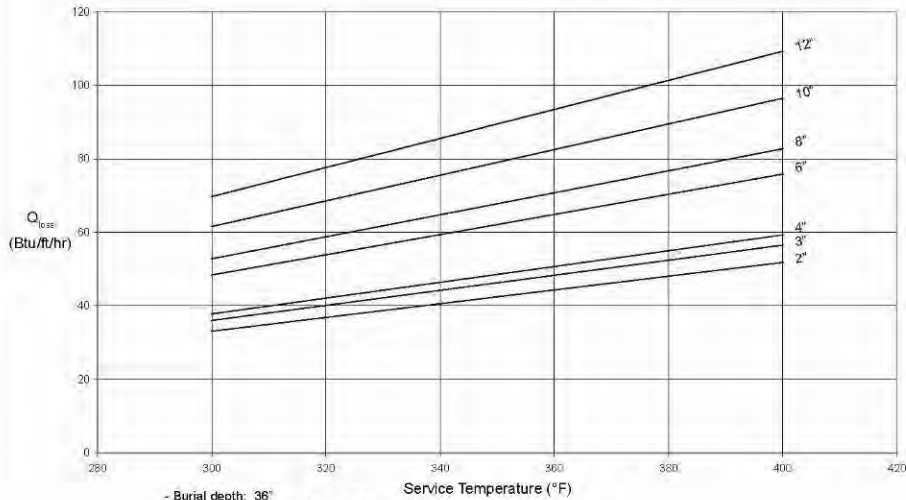
Pipe Size	Mineral Wool Thickness i	Conduit O.D. c	Min. Insulation Thickness t	Minimum Jacket Thickness	External Diameter D
2"	1-1/2"	8-5/8"	1.0"	125"	10.9"
3"	1-1/2"	8-5/8"	1.0"	125"	10.9"
4"	1-1/2"	10-3/4"	1.0"	125"	13.1"
6"	2"	12-3/4"	1.0"	150"	15.1"
8"	2"	16"	1.0"	150"	18.3"
10"	2"	18"	1.0"	150"	20.3"
12"	2-1/2"	20"	1.0"	150"	22.3"
14"	2-1/2"	22"	1.0"	150"	24.3"
16"	3"	24"	1.0"	150"	36.4"
18"	3"	26"	1.0"	175"	28.4"
20"	3"	28"	1.0"	175"	30.4"
24"	3-1/2"	34"	1.0"	175"	36.4"

* Other pipe sizes and pipe, insulation thickness, and conduit size combinations are available.

** Insulation thickness is calculated using minimum wall thickness. Actual wall thickness may be greater than stated, thereby minimally increasing actual external diameter.

	<h2 style="margin: 0;">DUO-THERM "505"</h2> <p style="margin: 0;">Specification Guide</p>	<p style="margin: 0;">DTSG</p> <p style="margin: 0;">3.106</p>
	<p style="margin: 0;">HEAT LOSS DIAGRAM</p>	<p style="margin: 0;">1.08.07</p>

**HEAT LOSS FOR STANDARD SIZES OF MINERAL WOOL
AND 1" POLYURETHANE FOAM***



- Burial depth: 36"
- Soil conductivity: 12 (Btu/h.ft².°F/ft)
- Soil temperature: 50°F

Pipe Size	Mineral Wool Thickness	Conduit O.D.	Polyurethane Thickness
2"	1-1/2"	8-5/8"	1.0"
3"	1-1/2"	8-5/8"	1.0"
4"	1-1/2"	10-3/4"	1.0"
6"	2"	12-3/4"	1.0"
8"	2"	16"	1.0"
10"	2"	18"	1.0"
12"	2-1/2"	20"	1.0"
14"	2-1/2"	22"	1.0"
16"	3"	24"	1.0"
18"	3"	26"	1.0"
20"	3"	28"	1.0"
24"	3-1/2"	34"	1.0"

* Other pipe sizes and pipe, insulation thickness, and conduit size combinations are available.

* Actual Heat Loss may vary.

Thermacor Component Dimension Table

SERVICE PIPE Nominal Diameter	INSULATION THICKNESS	STEEL CASING O.D. - inches	Exterior Foam Thickness	Jacket Thickness	SERVICE
10 in. SCH 40	2 inches	18	1.0 inch	0.12 inch	HTHW S&R
8 in. SCH 40	2 inches	16	1.0 inch	0.12 inch	HTHW S&R
6 in. SCH 40	1 ½ in.	12 ¾	1.0 inch	.120 inch	HTHW S&R
4 in. SCH 40	1 ½" in.	10 ¾	1.0 inch	.120 inch	HTHW S&R
3 in. SCH 40	1 ½" in.	8 5/8	1.0 inch	.120 inch	HTHW S&R
2 ½ in. SCH 40	1 ½" in.	8 5/8	1.0 inch	.120 inch	HTHW S&R
2 in. SCH 40	1 inch	8 5/8	1.0 inch	.120 inch	HTHW S&R
1 1/2 in. SCH 40	1 inch	6 5/8	1.0 inch	.120 inch	HTHW S&R
1 1/4 in. SCH 40	1 inch	6 5/8	1.0 inch	.120 inch	HTHW S&R
1 in. SCH 40	1 inch	6 5/8	1.0 inch	.120 inch	HTHW S&R

Reference:Thermacor Quotation Number 94731-84PP, DACA87-97-D-0052
Contractor: Vanguard, attn: Joel Guess



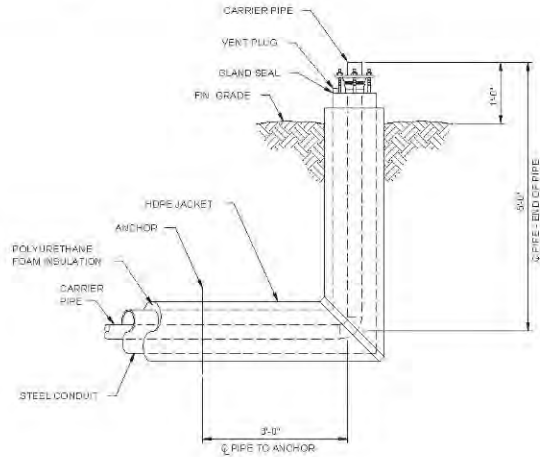
DUO-THERM "505"

Details

RISER DETAIL

DTAD
3.301

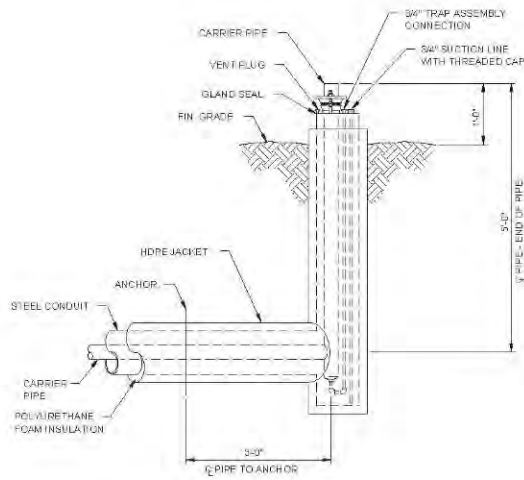
1.08.07



ELEVATION

PIPING RISER DETAIL

SCALE: NONE

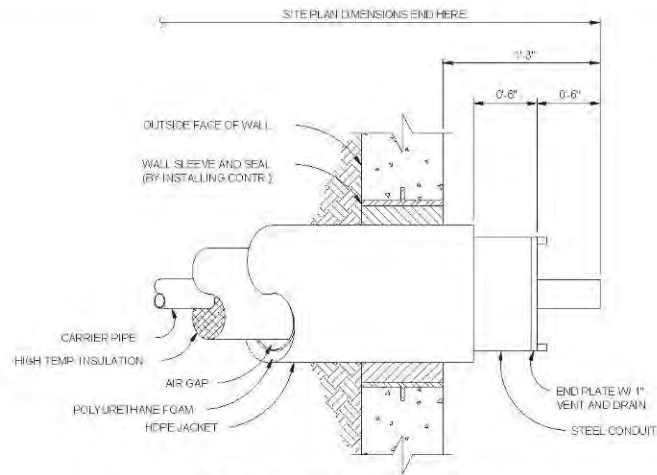


ELEVATION

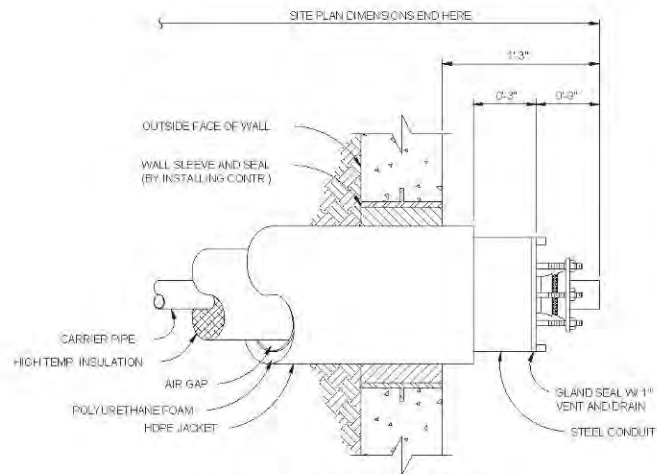
DRIP-TEE RISER DETAIL

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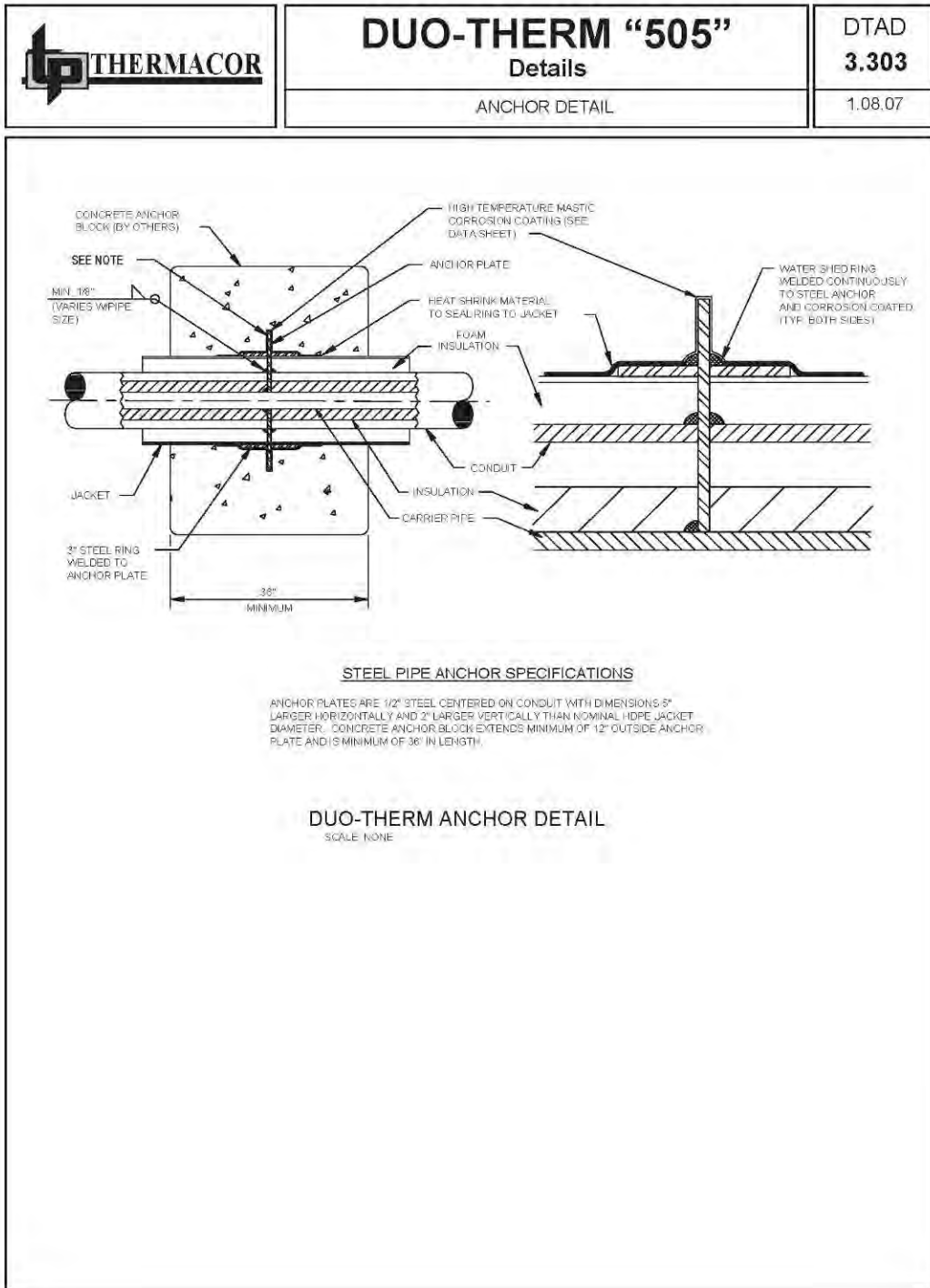
	DUO-THERM "505" Details	DTAD 3.302
	WALL PENETRATION DETAIL	1.08.07



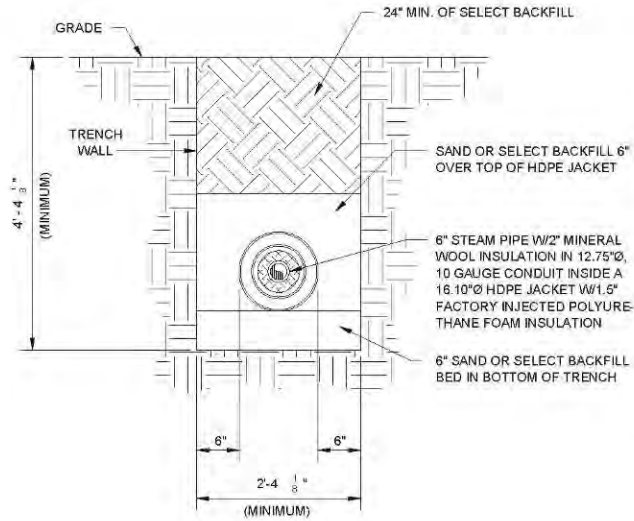
WALL PENETRATION DETAIL
SCALE: NONE



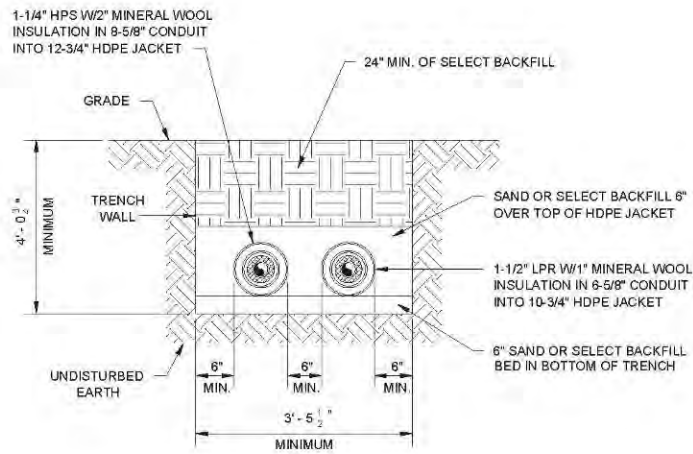
WALL PENETRATION DETAIL
SCALE: NONE



	<h2>DUO-THERM "505"</h2> <h3>Details</h3>	DTAD 3.304
	TRENCH DETAIL	1.08.07



TRENCH DETAIL
SCALE: NONE



TYPICAL 2-PIPE TRENCH DETAIL
SCALE: NONE

Perma-Pipe

MULTI-THERM 500 SYSTEM FEATURES

Industrial & Municipal Steam Transmission
 Geothermal Collection & Distribution
 District Heating & Cooling
 Cogeneration
 Process Fluid Transport

Transportation of Fuel & Heavy Oil
 Solar Collection & Distribution

Fiberglass Jacketed Steel Conduit

MULTI-THERM 500 is the only preinsulated piping system that combines both the strength of steel and the corrosion resistance of fiberglass. Using the heat resistance of mineral wool insulation along with the thermal efficiency of polyurethane foam insulation, it is also the most energy efficient system available. This innovative piping system unites these materials in a unique combination to satisfy the most demanding criteria for underground heat distribution systems.

The steel service pipe is insulated with mineral wool insulation (optional cellular glass) and contained within a drainable, dryable, pressure testable steel conduit. This combination alone would be an excellent piping system, but we also insulate the conduit with polyurethane foam and jacket it with fiberglass.

Service Pipe Insulation

MULTI-THERM 500's preformed high temperature mineral wool insulation is rated for continuous service up to 1200°F. The mineral wool insulation has superior thermal conductivity, low moisture absorption and good physical properties. When specified, cellular glass insulation can be supplied.

Steel Conduit

Smoothwall, minimum 10 gauge steel conduit, is used for high strength and system integrity. It can withstand H-20 (highway) loads at minimal burial depths.

Polyurethane Foam Insulation

MULTI-THERM 500 is designed to maintain a conduit temperature below 250°F. Therefore, the conduit can be safely insulated with polyurethane foam, the most thermally efficient of all pipe



MULTI-THERM 500

insulations. Using polyurethane foam on the outside allows the service pipe insulation on the inside to be reduced in thickness, while still maintaining a low heat loss. Reducing the service pipe insulation allows the conduit size to be reduced, which saves on the piping system price and installation costs.

Fiberglass Jacket

PERMA-PIPE's multidirectional filament winding process produces a high strength fiberglass jacket over the outer foam insulation, to ensure maximum protection from the environment. This jacket provides complete protection to the insulation and conduit and is far superior to even the best conduit coatings. The need for cathodic protection is eliminated, which saves additional material, installation and maintenance costs.

Options

- Leak Detection/Location
- Electric or Steam Heat Traced
- Cellular Glass service pipe insulation
- Cathodic Protection - not required

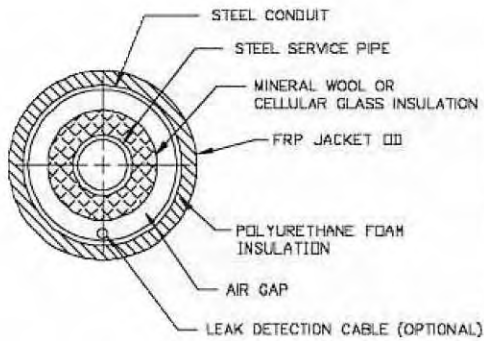


PAL-AT Leak Detection/Location System

PAL-AT Leak Detection and Location System

It is recommended that drainable, dryable systems be installed dry, to achieve a longer period of satisfactory performance and improved system life. MULTI-THERM 500 can be provided with the advanced electronic monitoring system, PAL-AT, that provides full time surveillance for system integrity. The PAL-AT continuously monitors for the presence of moisture in the conduit and will signal the location of any moisture. This system ensures that the conduit is installed dry and continues to stay dry.

**SYSTEM COMPONENTS
MULTI-THERM 500**

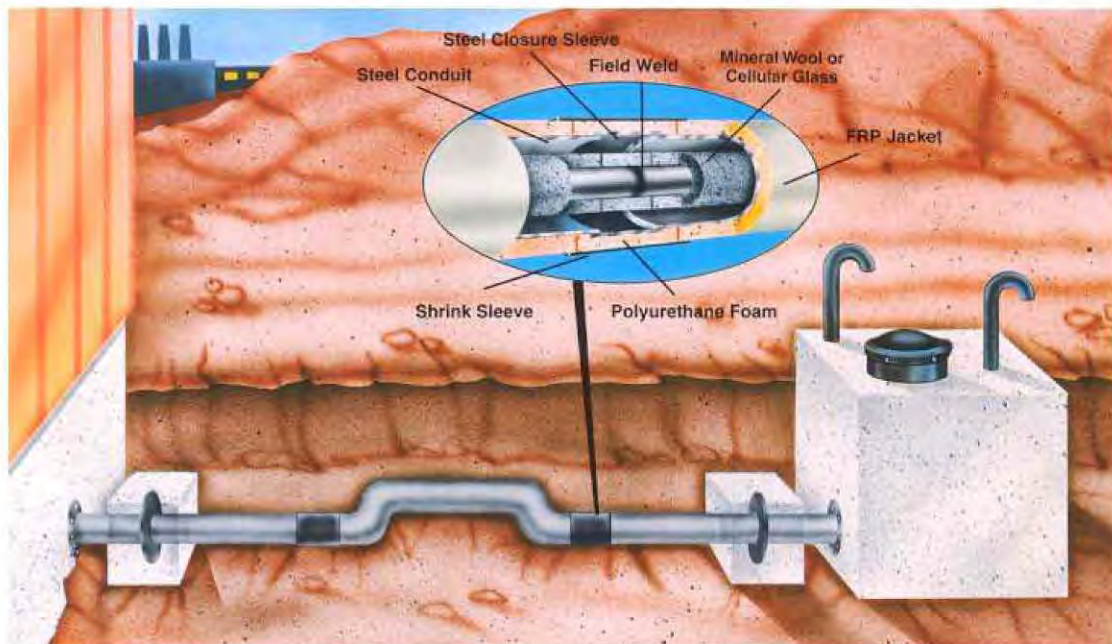


Recommended insulation thicknesses and heat losses for mineral wool and cellular glass insulation.

Note: All conduits are insulated with 1" thick polyurethane foam.

Nominal Pipe Size (In)	Mineral Wool Thickness (In)	Conduit O.D. (In)	Heat Loss (BTU/ FT-HR)	Cellular Glass Thickness (In)	Conduit O.D. (In)	Heat Loss (BTU/ FT-HR)
2	1	6 ⁵ / ₈	41	1 ¹ / ₂	8 ⁵ / ₈	49
3	1 ¹ / ₂	10 ³ / ₄	50	1 ¹ / ₂	10 ³ / ₄	62
4	1 ¹ / ₂	12 ³ / ₄	56	2	12 ³ / ₄	67
6	1 ¹ / ₂	12 ³ / ₄	71	2	14	81
8	2	16	77	2 ¹ / ₂	18	90
10	2	18	88	2 ¹ / ₂	20	104
12	2	20	99	2 ¹ / ₂	22	116
14	2	22	109	3	24	118
16	2	24	120	3	26	129
18	2 ¹ / ₂	26	119	3	28	140
20	2 ¹ / ₂	28	129	3	30	151
24	2 ¹ / ₂	32	148	3 ¹ / ₂	34	162

Based on 3 foot burial depth, 353°F operating temperature, 40°F ground temperature and soil conductivity of 15 BTU-IN/HR-F²-°F.



MULTI-THERM 500's field joints are made only at straight sections. The steel service pipe is welded and then insulated. Next, the steel conduit closure sleeve is welded in place and insulated with polyurethane foam. The entire joint is then sealed with a heat shrinkable sleeve.

Perma-Pipe Component Dimension Table

SECTION	SERVICE PIPE Nominal Diameter	INSULATION THICKNESS	STEEL CASING O.D. - inches	Exterior Foam Thickness	Jacket Thickness	SERVICE
A	12in. STD Wt.	2 inches	20	1.0 inch	0.12 inch	HTHW S&R
B	10 in. SCH 40	2 inches	18	1.0 inch	0.12 inch	HTHW S&R
C	8 in. SCH 40	2 inches	16	1.0 inch	0.12 inch	HTHW S&R
D	6 in. SCH 40	1 ½" in.	12 ¾	1.0 inch	.080 inch	HTHW S&R
E	4 in. SCH 40	1 ½" in.	12 ¾	1.0 inch	.080 inch	HTHW S&R
F	3 in. SCH 40	1 ½" in.	10 ¾	1.0 inch	.080 inch	HTHW S&R
G	2 ½ in. SCH 40	1 ½" in.	8 5/8	1.0 inch	.080 inch	HTHW S&R
H	2 in. SCH 40	1 in.	6 5/8	1.0 inch	.080 inch	HTHW S&R
J	1 1/2 in. SCH 40	1 in.	6 5/8	1.0 inch	.080 inch	HTHW S&R
F	1 1/4 in. SCH 40	1 in.	6 5/8	1.0 inch	.080 inch	HTHW S&R
L	1 in. SCH 40	1 in.	6 5/8	1.0 inch	.080 inch	HTHW S&R

Reference: Perma-Pipe drawing: Job PCT7865, Contract 70045, Sheet 5 of 15.

MULTI-THERM 500

SPECIFICATION GUIDE

GENERAL

All underground distribution lines, as shown on the contract drawings, shall be MULTI-THERM 500, as manufactured by PERMA-PIPE. The system supplier shall have at least five years experience fabricating systems of the composition defined herein. All straight sections, fittings, anchors and other accessories shall be factory prefabricated to job dimensions. Each system layout shall be computer analyzed by the piping system manufacturer, to determine stresses and movement of the service pipe. The system design shall be in strict conformance with ANSI B31.1, latest edition, and stamped by a Registered Professional Engineer. Factory trained field technical assistance shall be provided for the critical periods of the installation; i.e., unloading, field joint instruction and testing.

SERVICE PIPE

Internal piping shall be standard weight carbon steel, except for condensate piping which shall be Schedule 80. Pipe shall be butt welded for sizes 2.5 inches and larger and socket welded for 2 inches and below. Where possible, straight sections shall be supplied in 40 foot random lengths with 6 inches of piping exposed at each end for field joint fabrication.

SUBASSEMBLIES

End seals, gland seals and anchors shall be designed and factory prefabricated to prevent the ingress of moisture into the system. All subassemblies shall be designed to allow for complete draining and drying of the conduit system.

SERVICE PIPE INSULATION

Service pipe insulation shall be mineral wool. Split insulation shall be held in place by stainless steel bands installed not more than 18 inches apart. The insulation shall have passed the boiling test requirements specified in the Federal Agency Guidelines. The insulation shall be applied to a thickness of _____ inches.

OUTER CONDUIT

The steel conduit casing shall be smooth wall, welded steel conduit of the thicknesses specified below:

Conduit Size	Conduit Thickness
6" - 26"	10 Gauge
28" - 36"	6 Gauge
38" - 42"	4 Gauge

Changes in casing size, as required at oversized casing to allow for carrier pipe expansion, shall be accomplished by eccentric and/or concentric fittings and shall provide for continuous drainage.

PIPE SUPPORTS

All pipes within the outer casing shall be supported at not more than 10 foot intervals. These supports shall be designed to allow for continuous airflow and drainage of the conduit in place. The straight supports shall be designed to occupy not more than 10% of the annular air space. Supports shall be of the type where insulation thermally isolates the carrier pipe from the outer conduit. The surface of the insulation shall be protected at the support by a sleeve not less than 12 inches long, fitted with traverse and, where required, rotational arresters.

OUTER CONDUIT INSULATION AND JACKET

Conduit insulation shall be spray applied polyurethane foam, having a nominal 2 lb/ft³ density for all straight lengths and fittings. The insulation thickness shall be 1 inch maximum. Quality assurance procedures for the insulation shall include either a visual check prior to jacketing, an infrared inspection or an x-ray inspection of the entire length to insure there are no insulation voids. The urethane foam shall have the minimum characteristics of 0.16 K-factor, density of 2 lb/ft³ and a closed cell content of 90 to 95%.

The outer jacket shall be fiberglass (FRP) and shall be applied directly onto the urethane foam insulation. No PVC or polyethylene jackets shall be allowed. All straights and fittings shall be factory jacketed.

INSTALLATION

The installing contractor shall handle the system in accordance with the directions furnished by the manufacturer and as approved by the architect and engineer. The casing shall be air tested at 15 psig and the service piping shall be hydrostatically tested to 150 psig or 1/2 times the operating pressure, or as specified in the contract documents. The test pressure shall be held for not less than one hour.

BACKFILL

A 4 inch layer of sand or fine gravel shall be placed and tamped in the trench to provide a uniform bedding for the system. The entire trench shall be evenly backfilled with a similar material as the bedding in 6 inch compacted layers to a minimum height of 6 inches above the top of the insulated piping system. The remaining trench shall be evenly and continuously backfilled in uniform layers with suitable excavated soil.

PERMA-PIPE®

Your Authorized PERMA-PIPE Representative is:

PERMA-PIPE, INC.

A Subsidiary of MFRI, Inc.
7720 North Lehigh Avenue
Niles, Illinois 60714-3491
Phone (847) 966-2235
Fax (847) 470-1204
<http://www.pernapipes.com>

The information contained in this document is subject to change without notice. PERMA-PIPE believes the information contained herein to be reliable, but makes no representations as to its accuracy or completeness.

Appendix C: Air Pressure Testing Method

Procedure

Taps installed to the annular space were used for pressure testing pipe sections. Low point drains and high point vents were also occasionally installed between segment end points in the buried conduits with access at intermediate shallow pits that expose only the taps. All taps to the annulus not used for pressurization were sealed prior to testing to insure that only the integrity of the annular welds was being tested. If a segment was observed to be losing pressure during test, all accessible taps were re-checked with soap solution and further secured, if possible.

Testing requirements specify that the annular conduit air space be pressurized and isolated at 15 psig. Once isolated, pressure is monitored for a period of two hours to determine the pneumatic integrity of the annulus between the carrier pipe and the steel casing. If pressure falls below 13.5 psig (a 10% drop) before two hours expires, the segment is deemed to have failed the test. Pressure readings are recorded at one-minute intervals for the entire two-hour test period. The pressure transducer range is 0 – 30 psig and operation (zero and response) was observed each test day to verify proper operation.

MEC designed and constructed a pressurization system capable of evaluating up to eight annular segments simultaneously. The pressure source is a mobile, diesel compressor with a capacity of 185 SCFM at 90 psig. The output of the compressor is controlled with an adjustable pressure regulator and ported to a hard-plumbed manifold with eight separate takeoffs each isolated with a shut-off valve. Eight, 20 ft. flexible hoses direct the pressurization air to the individual conduit legs to be tested. A separate pressure test rig is hard-plumbed to each annular segment at the selected access port. Each rig consists of an isolation valve on the inlet, a calibrated electronic pressure transducer, and a small mechanical pressure gage (for visual verification). Transducer output is monitored and recorded with two dedicated hand-held, four channel data-loggers set to read/record at one-minute intervals. Pressure test equipment setup in the field is shown in Figures C1–C4 below.



Figure C1. Pressure check field setup at Fort Carson.



Figure C2. Compressed air distribution manifold and data acquisition equipment.

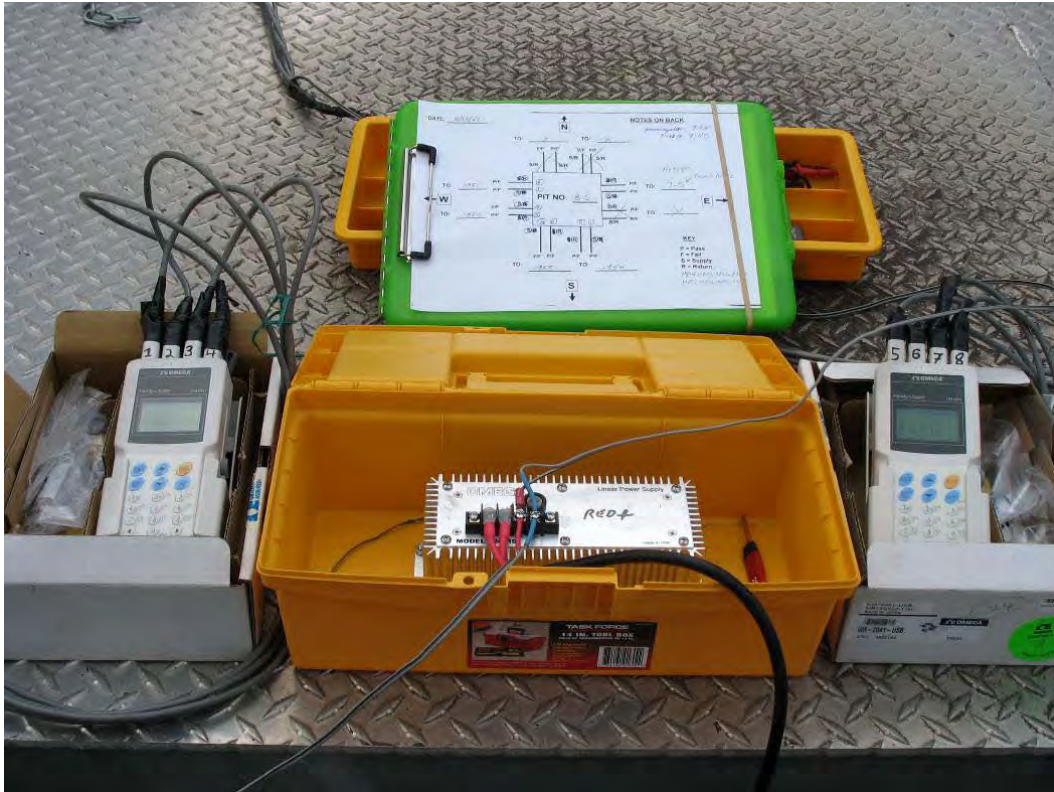


Figure C3. Data acquisition system.



Figure C4. Conduit pressurization test rigs.

Appendix D: Close Internal Survey (CIS) Procedure

The negative side of the pressure circuit is the structure under test, in this case the exterior casing pipe. A copper wire is connected to the vent pipe and reeled off along the pipe route. The positive side of the circuit is the reference electrode placed directly over the pipe. This completes the circuit through the soil resulting in a voltage measurement. The reference potential is negative in an open circuit and any corrosion activity results in voltage readings that become less negative and approach zero, depending on the level of current flowing as a consequence of the corrosion. A recently buried, non-cathodically protected structure with a minimal protective coating should exhibit a native potential measurement in the range of -0.450 to -0.500 volts DC (characteristic of the copper/copper sulphate reference). As the structure ages, the potentials will decrease with time, depending on soil resistivity and/or extraneous DC sources (such as corrosion activity) that adversely affect the structure. If the structure is experiencing severe corrosion activity, the potential measurements will either vary widely from point to point or will approach zero. In extreme cases, potential readings can go into the positive range indicating the presence of very strong corrosion attack on the structure. For this project, potentials were taken at two-foot intervals along the UHDS conduits under test by reeling out the copper wire. In this report, all potential readings displayed are negative (the “-” sign has been omitted to simplify) unless otherwise stated.

The test readings for this project were taken relative to the steel casing (by way of the vent pipes) and not the carrier pipe (although the two are likely to be electrically connected in the current conduit design). In accordance with the project SOW, these tests and subsequent data analyses were performed by a NACE-certified Cathodic Protection Specialist. If the conduit is in good condition and no significant corrosion conditions exist, potential measurements will approximate the open circuit reference standard voltage and will not vary substantially from point to point. However, if potential measurements vary significantly, or approach positive readings, then the existence of corrosion problems may be indicated. One possible situation is that the metallic conduit is not electrically isolated from the soil and

that a corrosion cell is active. Because the piping at Fort Stewart has been buried for more than 3 years, the measured potentials would typically be somewhat lower (less negative) than at initial burial.

Appendix E: ASHRAE Heat Loss Calculation Method

Overview

For this project, all measured soil parameters were obtained at burial depth in the undisturbed native soil. Heating water temperature was determined by measuring the carrier pipe temperature at an access location upstream and downstream of the measurement site, usually in a valve manhole or at the entry into a building. The difference between the water temperature inside the pipe and the temperature at the outside of the carrier pipe is typically less than 0.1 °F. These measured properties are used with published thermal properties of the component materials that make up the conduit cross-section to compute heat loss of the Supply and Return conduit pair using a computerized two-dimensional iterative thermal analysis program. Real soil thermal conductivities are needed in the calculation method and were determined by evaluating core samples taken at the actual sites.

The ASHRAE Heat Loss Calculation requires parameters that will describe the thermal properties of the soil and the conduit components over the entire range of temperature that each component will be exposed to. The thermal properties of each conduit component are readily available from the literature or from the manufacturer of any specific component material that make up the conduit cross section. Materials encountered were steel, mineral wool pipe insulation, polyurethane foam, high density polyethylene (HDPE), shrink wrap (polyethylene), and soil. The thermal conductivity of each conduit component varies with temperature; therefore, the temperature of each component must be known to do the necessary calculation. A computer was used to determine the mean temperature of each component and the thermal conductivity at that temperature.

Soil thermal properties vary with the percentage of sand, gravel, silt, clay, moisture, the density, and temperature. Soil samples were taken at each ASHRAE test site and all of the necessary parameters were determined for that site. The soil samples were taken just outboard of the back fill zone in

native soil. The soil temperature measurement was taken farther away from the conduit, out of the heat affected zone, usually 25 to 30 feet away from the conduit of interest. The soil temperature and soil samples were taken at the burial depth of the bottom of the conduit. These measured soil parameters are then compared to published literature where the thermal properties (k-factor) are given as a function of moisture content for a specific soil composition. Once the soil conductivity is determined, it is considered a constant at that test site when calculating the heat loss of the conduits.

The exact dimensions of each conduit component are not easy parameters to obtain because the “nominal size” is often misleading. Pipe and steel casings used in this project are sized on the outside diameter. The “nominal” size is not the real size for all of the carrier pipes and most of the steel casings used in this project. The nominal diameter is not the real outside diameter for pipe and casings with outside diameters less than 14 inches. For sizes 14 inches and larger, the outside diameter and the nominal size are the same. For all pipe sizes, the inside diameter is a calculated parameter obtained by subtracting the pipe or casing thickness from the outside diameter. The carrier pipe insulation thickness is very close to the nominal thickness given. Usually within 1/32 inch if it specified according to an ASTM specification. The foam insulation on the exterior of the steel casing (covered with an FRP or HDPE jacket) varies with the manufacturing process; therefore must be measured to determine the real thickness. The FRP jacket and the HDPE jacket also vary with the manufacturing process used by the conduit manufacturer and must be measured to determine the real thickness. To counter errors made by using the wrong dimension, the computer program used to calculate the heat loss has this information built into tables stored inside the computer program. Selecting a nominal size automatically inserts the correct dimensions and parameters for that component. The “Inch Pound” version of the ASHRAE heat loss calculation method for buried conduits is a little unusual in that the dimensional units are often a mixture of classical units and special units adapted to this special type of analysis for conduits. Most notably, thermal resistance is given per inch of material thickness rather than per foot of thickness, and, the conduit heat loss is given for one linear foot of conduit rather than for each square foot of conduit. The computer program asks for the typical unit or definition used commercially, then converts them to what is needed internally, if a conversion is needed. The

computer program displays the parameters calculated internally so that they can be used to check the result manually with a single calculation.

Heat loss calculation demonstration

ASHRAE Heat Loss Method

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE)

The ASHRAE Method used to calculate the heat loss from heat distribution conduits has been published, and has received peer review for at least 30 years. The latest version available on the date of the report is:

2004 ASHRAE Handbook

HVAC Systems and Equipment

I-P Edition (Inch Pound or American Units)

The method is in Chapter 11, pages 11.9 – 11.14. Reference Figure 8 on page 11.13 for two conduits buried side by side. This is the arrangement studied in this report.

The equations are a little more difficult than necessary because they are modified to match the terminology used in the Underground Heat Distribution manufacturing industry. Instead of giving the heat loss in the classical BTU per Hour per Square Foot, the heat loss is given in BTU per Hour per Linear Foot of conduit. Classical units would use a k-factor defined per foot of material thickness; however, here we use the units that are used in designing buildings, k-factors defined are per inch of thickness.

The physical parameters that describe the conduit materials change when the mean temperature changes, specifically the k-factors. This means that the mean temperature for each material that makes up the conduit must be determined. The heat loss is needed to calculate each material's mean temperature, and, the k-factor at that temperature. The ASHRAE method uses an iterative technique to solve this problem. Because the mean temperature is not known at the start of the first iteration, assume k-factors for each component for the first iteration. During the first iteration, the mean temperature is calculated for each component in the conduit, and used to find the k-factor at that temperature. Each component will have a different mean temperature and a new k-factor at the new mean temperature. For the second iteration, the new k-factors are inserted into the calculation, and a second heat loss is calculated. With this second heat loss, new mean temperatures and new k-factors are determined for each component. For the third iteration the most recent k-factors are inserted into the problem and the calculation for the heat loss is repeated. As the example approaches the correct solution, the k-factors will stop changing from iteration to iteration and approach a single value. Usually the accuracy of the manufacturer's k-value versus mean temperature is not accurate to any more than two or three decimal places, so if you are doing the iterations manually, you would consider that you have the correct heat loss when the k-factors are staying the same in the second or third decimal place. You can get more apparent accuracy by doing more iteration.

In this example, the term conduit means the final product as it shipped for the factory. The components that make up the conduit are: the carrier pipe (steel), the carrier pipe insulation (mineral wool), an annular air space, a steel casing, external polyurethane foam insulation covering the steel casing, and, a High Density Polyethylene (HDPE) jacket that covers the polyurethane foam insulation.

You will need to know the physical dimensions (thickness and diameter) of all components in both conduits. You will also need to know how deep each conduit is buried, the spacing between the conduits, the temperature of the earth away from the heat affected zone, the k-factor of the earth's soil, the temperature of the High Temperature Hot Water (HTHW) in the supply conduit, the temperature of the (HTHW) in the return conduit.

A table is attached that indicates the k-factor of the insulation that was used in this example at various temperatures. In this example MPT mineral wool insulation was used on the carrier pipe and generic polyurethane insulation was used to cover the steel casing (the exterior insulation, between the steel casing and the HDPE jacket).

For this example, in the temperature range encountered, the k-factors for steel and HDPE jacket change very little and are considered constant in this example. This means that only the k-factors for the MPT mineral wool pipe insulation and the polyurethane foam will change from iteration to iteration.

In the steel piping industry, the nominal diameter referenced is seldom the real diameter. The nominal and the real outside diameter are the same only in pipe sizes 14 inches and larger. The inside diameter is always obtained by subtracting two times the thickness from the outside diameter.

COMPUTER PRINTOUT SCREENS

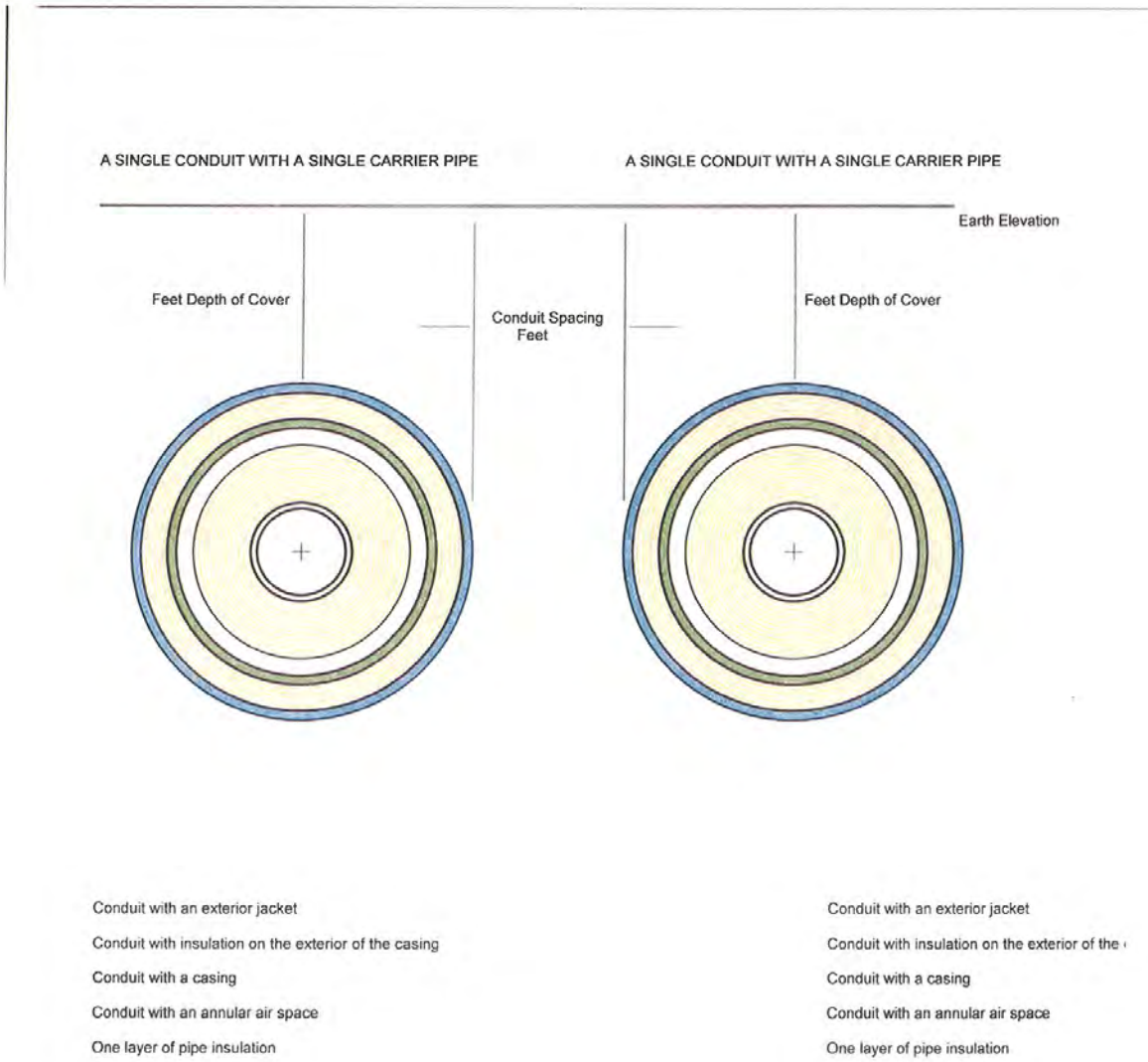
Supply Conduit (#1)		Return Conduit (#2)		Feet Between Conduit Surfaces 2.0433	C/L to C/L Inches 47.0002	100 Supply Conduit Heat Loss #1 93.36128
Design Pipe #1 +Pipe Insulation	View Casing #1 Data	Design Pipe #2 +Pipe Insulation	View Casing #2 Data	Earth Temperature F 62.5	End Session	Return Conduit Heat Loss #2 76.61046
Design Casing #1	Supply Pipe Fluid Temperature F 363	Design Casing #2	Return Pipe Fluid Temperature F 321	Soil Conductivity per inch of Thickness Btu-in/h-sq ft-F 8.750	Data Summary	Total Heat Loss Both Conduits 169.9717
Pipe Mean Temp F 362.9841	Feet of Earth Cover Supply Conduit 2.5	Pipe Mean Temp F 320.9869	Feet of Earth Cover Return Conduit 2.5	Calculate Heat Loss	SUPPLY Conduit Expansion Data	RETURN Conduit Expansion Data
Inches to C/L 41.2602		Inches to C/L 41.2204				

Supply Conduit #1		Return Conduit #2	
Pipe #1 Conductivity	340	Temp at Pipe OD	362.968
Layer One Mean K	0.34726	Temp OD Layer 1	222.859
Layer Two Mean K	None	Temp OD Layer 2	None
Inner Casing Mean K	340	Temp Casing ID	215.763
Inner Casing Coating Mean K	None	Temp Casing OD	215.765
Exterior Insulation Mean K	0.19162	Temp Outer Layer	115.283
Jacket Mean K	2.3	Temp Jacket OD	114.453

SUPPLY CONDUIT		SUPPLY CASING DATA		CONDUIT OUTER JACKET		TOTAL HEAT LOSS BOTH CONDUITS
Pipe OD	12.75	Material	Steel	Brand	Plexco PE 3408	169.9717
Pipe ID	12	Inches Thick	0.1345	Material	High Density	
Material	Steel	K-factor Used	340	Inches Thick	0.12	
K-factor Used	340	Casing OD	20	K-factor Used	2.3	
PIPE INSUL - LAYER ONE		CASING COATING		Jacket OD	22.5204	
Brand	Mineral Products of	Mat'l	None	Feet of Cover	2.5	Soil Temp F 62.5
Material	Mineral Fiber	Inches Thick	None	Inches - Earth Surface to Conduit Center Line	41.2602	Soil K-factor 8.75
Inches Thick	2	K-factor Used	None	Supply Fluid Temp	363	
K-factor Used	0.3472602	Casing Coating OD	None	Supply Conduit	93.36128	Note: When you print this page, the cross section of the system will also be printed
PIPE INSUL - LAYER TWO		CASING EXTERIOR INSUL		Heat Loss		
Material	None	Material	Polyurethane Foam			
Inches Thick	None	Inches Thick	1.1402			
K-factor Used	None	K-factor Used	0.1916223			

RETURN CONDUIT		RETURN CASING DATA		CONDUIT OUTER JACKET		View Temperatures
Pipe OD	12.75	Material	Steel	Brand	Plexco PE 3408	Return Home
Pipe ID	12	Inches Thick	0.1345	Material	High Density	
Material	Steel	K-factor Used	340	Inches Thick	0.12	
K-factor Used	340	Casing OD	20	K-factor Used	2.3	
PIPE INSUL - LAYER ONE		CASING COATING		Jacket OD	22.4408	
Brand	Mineral Products of	Mat'l	None	Feet of Cover	2.5	Note: When you print this page, the cross section of the two conduits will be printed
Material	Mineral Fiber	Inches Thick	None	Inches - Earth Surface to Conduit Center Line	41.2204	
Inches Thick	2	K-factor Used	None	Return Fluid Temp	321	
K-factor Used	0.3291402	Casing Coating OD	None			
PIPE INSUL - LAYER TWO		CASING EXTERIOR INSUL		Return Conduit	76.61046	
Material	None	Material	Polyurethane	Heat Loss		
Inches Thick	None	Inches Thick	1.1004			
K-factor Used	None	K-factor Used	0.1833594			

LOCATION in Supply Conduit			LOCATION in Return Conduit		
	Diameter	Temperature - F		Diameter	Temperature - F
At Pipe Inside Diameter	12	363	At Pipe Inside Diameter	12	321
At Pipe Outside Diameter	12.75	362.9682	At Pipe Outside Diameter	12.75	320.9739
At OD First Layer Of Pipe Insulation	16.75	222.8588	At OD First Layer Of Pipe Insulation	16.75	199.6743
At Casing Inside Diameter	19.731	215.763	At Casing Inside Diameter	19.731	193.8508
At Casing Outside Diameter	20	215.7559	At Casing Outside Diameter	20	193.845
At Outer Casing Insulation OD	22.2804	115.2838	At Outer Casing Insulation OD	22.2008	110.5401
At Casing Jacket Outside Diameter	22.520	114.4532	At Casing Jacket Outside Diameter	22.4408	109.8561
Soil Temperature Far From Conduits		62.5	<input type="button" value="Return"/>		



Example k-Factors

Brand Name	Material Type	Temperature - °F									
		50	100	150	200	250	300	350	400	450	500
MPT*	Mineral Wool	.2281	.2503	.2733	.2976	.3234	.3512	.3811	.4135	.4486	.4866
Generic	Polyurethane	.12	.151	.182	.213	.244					

* Mineral Product of Texas (MPT)

$TT8 = TT7 = TT8$ $TT8 = 109.8564795$ THIS IS THE TEMPERATURE AT THE OUTSIDE OF THE HDPE JACKET, AND, AT THE OUTSIDE OF THE CONDUIT.
 $TTm78 = \frac{TT7 + TT8}{2}$ $TTm78 = 110.19848765$ THE MEAN TEMP OF THE OUTER JACKET, RETURN CONDUIT

NOW CHECK IF THE K-VALUES YOU GUESSED FOR K23, K67, KK23 AND KK67 ARE CORRECT. YOU WILL BE ABLE TO TELL BY COMPARING THE NEW CALCULATED VALUE TO THE OLD VALUE YOU GUESSED. IF THE OLD AND NEW VALUES ARE THE SAME, YOU HAVE ACHIEVED A CORRECT ANSWER. IF THE ERRORS ARE TOO LARGE, CONTINUE THE ITERATION. USE THE NEW VALUES CALCULATED BELOW TO REPLACE VALUES AT THE FRONT OF THE PROBLEM.

$Tm12 = \frac{Tf + T2}{2}$ $Tm12 = 362.98410271$

THIS IS THE MEAN TEMPERATURE OF THE SUPPLY CARRIER PIPE THAT IS USED TO DETERMINE THE K-FACTOR OF THE CARRIER PIPE: HOWEVER THE K-FACTOR IS ASSUMED TO BE CONSTANT AT $k = 340$ IN THE TEMPERATURE RANGE OF THIS EXAMPLE.

Check the first layer of carrier pipe insulation:

$Tm23 = \frac{T2 + T3}{2}$ $Tm23 = 292.91163718$ Is $k23 = .3472602$??

From the manufacturer, MPT Mineral Wool $k = .3234$ at 250F and $.3512$ at 300F. You will find these k-factors in the attached tables for MPT mineral wool insulation.

$k23 = .3234 + \frac{Tm23 - 250}{50} \cdot (.3512 - .3234)$ $k23 = 0.34725887$ GOOD because it is the same as your last guess !!

THE MEAN TEMPERATURE OF THE OUTER POLYURETHANE INSULATION IS:

$Tm67 = \frac{T6 + T7}{2}$ $Tm67 = 165.51805895$

This Thermacor polyurethane foam: $k = .182$ @ 150F and $k = .213$ @ 200F

You will find these k-factors in the attached tables for Generic Polyurethan insulation

Question: is $k67 = .1916223$????

$k67 = .182 + \frac{Tm67 - 150}{50} \cdot (.213 - .182)$ $k67 = 0.1916212$ GOOD because it is the same as your last guess !!

RETURN CONDUIT

NOW CHECK THE K-VALUES FOR THE RETURN CONDUIT:

$TTm12 = \frac{TTf + TT2}{2}$ $TTm12 = 320.98695546$ This is the mean temperature of the steel carrier pipe. $k=340$ constant

Check the first layer of carrier pipe insulation, return conduit

$TTm23 = \frac{TT2 + TT3}{2}$ $TTm23 = 260.32420686$ THE MEAN TEMPERATURE OF THE FIRST LAYER OF CARRIER PIPE INSULATION.

d5 = 19.731	The inside diameter of the inner steel casing (t = .1345 inch)
d6 = 20.000	The outside diameter of the innermost steel casing, and, the inside diameter of the polyurethane foam insulation covering the steel casing. This diameter is dictated by an ASTM and is considered absolute for this example.
d7 = 22.2804	The outside diameter of the foam insulation covering the inner casing, and, the inner diameter of the outer HDPE jacket (t = 1.1402 inches). The thickness of the polyurethane insulation varies as a tolerance in the manufacturing process. It was physically measure for this example.
d8 = 22.5204	The outer diameter of the HDPE jacket. This is also the extreme outside diameter of the "Supply Conduit". (jacket t = .120 inces). Thermacore used a special spiral winding technique for this product. This thickness is considered absolute for this example.
k12 = 340	The k-value of the SUPPLY carrier pipe (Steel) assumed constant in the temperature range of this example.
k23 = 0.3472602	This the first-layer k-value of the SUPPLY pipe insulation, MPT mineral wool. (Note: you have to guess at this value for the first calculation) Ordinarily you will calculate a new value for this parameter near the end of this problem that you will use to improve you guess for the next iteration. However for this example I use the value from a computer program that has already went through numerous iteration to get this value.
k34	This is the k-value of the second layer of SUPPLY pipe insulation (Not used in this example)
k45	The air space conductance is handled by $2/(3*d4)$
k56 = 340	The k-value of the inner steel casing of the SUPPLY conduit, considered constant in the temperature range for this example so you do not have to iterate on this value.
k67 = .191641	The k-value of the polyurethane foam insulation covering the inner steel casing, (varies with mean temperature) SUPPLY conduit. Note: you have to guess at this value for the first calculation) You will calculate a new value for this parameter near the end of this problem that you will use to improve you guess for the next iteration. The computer program iterated this value correctly.
k78 = 2.3	The k-value of the outer HDPE jacket, SUPPLY conduit: considered constant in the temperature range of this example.

NOW DESCRIBE THE "RETURN" HIGH TEMP RETURN WATER CONDUIT: Note that all of explantion for the Supply conduit applys to this Return conduit

Note that the designators are the same as the Supply Conduit except they have an second identical letter in the disignator

dd1 = 12.000	The inside diameter of the carrier pipe in the HTHW RETURN conduit, This steel pipe carries the HIGH TEMP RETURN WATER
dd2 = 12.750	The outide diameter of the steel Schedule 40 carrier pipe, and, the inside diameter of the carrier pipe insulation on the return carrier pipe.
dd3 = 16.750	The outside diameter of the first layer of the RETURN carrier pipe insulation. This is MPT mineral wool insulation (t = 2.0 inches).

dd4	16.750	No second layer of RETURN carrier pipe insulation (zero thickness, not used). Also interfaces with the annular air space
dd5	19.731	The inside diameter of the inner steel casing, RETURN conduit (t = .1345)
dd6	20.000	The outside diameter of the inner steel casing, and, the inside diameter of the polyurethane foam covering the steel casing, RETURN conduit.
dd7	22.2008	The outside diameter of the foam insulation covering the steel casing, and, the inner diameter of the outer HDPE jacket (foam t = 1.1004).
dd8	22.4408	The outer diameter of the HDPE jacket (t = .120 inches). Also the extreme outside diameter of the "Conduit"
kk12	340	The k-value of the steel carrier pipe
kk23	0.3291402	This is the k-factor of the first layer of the RETURN pipe insulation. This varies with the mean temperature of the insulation. Note: you have to guess at this value for the first calculation) You will calculate a new value for this parameter near the end of this problem that you will use to improve your guess for the next iteration. However this value is correct because it came for the computer program that already iterated numerous times.
kk34		This is the second layer (Not used) of the RETURN pipe insulation
kk45		The annular air space conductance is handled by $2/(3*dd4)$
kk56	340	The k-value of the inner steel casing (considered constant in this example).
kk67	.1833594	The k-value of the polyurethane foam insulation covering the steel casing. This varies with the mean temperature of the insulation. Note: you have to guess at this value for the first calculation) You will calculate a new value for this parameter near the end of this problem that you will use to improve your guess for the next iteration. However for this example, this guess came from a computer program that already iterated numerous times.
kk78	2.3	The k-value of the outer casing or jacket (HDPE). A constant in the temperature range of this example.

NOW START THE MATHEMATICAL CALCULATIONS: First for the supply conduit, then for the return conduit. The goal here is to determine the mean temperature for every component in the conduit cross section and the heat loss. This gives you the mean temperature for each component that is to be used in the next iteration. We need the heat loss first, to determine the mean temperature.

C1	$\frac{1}{k_{12}} \cdot \ln \left(\frac{d_2}{d_1} \right)$	The contribution of the steel carrier pipe material, SUPPLY conduit
C2	$\frac{1}{k_{23}} \cdot \ln \left(\frac{d_3}{d_2} \right)$	The contribution of the carrier pipe insulation, layer one, SUPPLY conduit. The insulation is mineral wool from Mineral Products of Texas.
C3	0	The contribution of the second layer of pipe insulation, if used (None Used). SUPPLY conduit

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$$C4 = \frac{2}{3 \cdot d4} \quad \text{This is the contribution of the annular air space in SUPPLY conduit}$$

$$C5 = \frac{1}{k56} \cdot \ln \left(\frac{d6}{d5} \right) \quad \text{This is the contribution of the inner steel casing, SUPPLY conduit}$$

$$C6 = \frac{1}{k67} \cdot \ln \left(\frac{d7}{d6} \right) \quad \text{This is the contribution of the foam polyurethane insulation that covers the inner steel casing of the SUPPLY conduit}$$

$$C7 = \frac{1}{k78} \cdot \ln \left(\frac{d8}{d7} \right) \quad \text{This is the contribution of the HDPE jacket on the SUPPLY conduit}$$

$$Cs = \frac{1}{(C1 + C2 + C3 + C4 + C5 + C6 + C7)} \quad Cs = 0.71742588$$

NEXT, THESE ARE THE CALCULATIONS FOR THE "RETURN" CONDUIT:

$$CC1 = \frac{1}{kk12} \cdot \ln \left(\frac{dd2}{dd1} \right) \quad \text{The contribution of the RETURN steel carrier pipe}$$

$$CC2 = \frac{1}{kk23} \cdot \ln \left(\frac{dd3}{dd2} \right) \quad \text{The first layer of the carrier pipe insulation contribution, mineral wool from MPT, RETURN conduit.}$$

$$CC3 = 0 \quad \text{No second layer (not used) on the RETURN carrier pipe: insulation. No contribution.}$$

$$CC4 = \frac{2}{3 \cdot dd4} \quad \text{This is the contribution of the annular air space, RETURN conduit}$$

$$CC5 = \frac{1}{kk56} \cdot \ln \left(\frac{dd6}{dd5} \right) \quad \text{This is the contribution of the inner steel casing, RETURN conduit}$$

$$CC6 = \frac{1}{kk67} \cdot \ln \left(\frac{dd7}{dd6} \right) \quad \text{This is the contribution of the polyurethane foam insulation that covers the steel casing, RETURN conduit}$$

$$CC7 = \frac{1}{kk78} \cdot \ln \left(\frac{dd8}{dd7} \right) \quad \text{This is the contribution of the outermost HDPE jacket, RETURN conduit}$$

$$Cr = \frac{1}{(CC1 + CC2 + CC3 + CC4 + CC5 + CC6 + CC7)} \quad Cr = 0.69296429$$

The delta (the mathematical interaction of the physical parameters) and finish up calculation for Q and QQ

I will call the conductance for the supply conduit Cs

I will call the conductance for the return conduit Cr

The distance, center to center, of the conduits is aaa (in inches)

The subscript "s" denotes the supply conduit

The subscript "r" denotes the return or condensate conduit.

These are the mathematical equations that account for the interaction between the two conduits. This accounts for burial depth, conduit spacing, earth properties and conduit physical parameters. You will find these in the ASHRAE Handbook.

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$$P11 = 1 + \frac{C_s}{k_s} \cdot \ln \left[\frac{2 \cdot d0}{d8} + \sqrt{\left(\frac{2 \cdot d0}{d8} \right)^2 - 1} \right] \quad P11 = 1.16173722$$

$$X1 = \frac{\sqrt{aaa^2 + (d0 + dd0)^2}}{\sqrt{aaa^2 + (d0 - dd0)^2}} \quad X1 = 2.01981862$$

$$X2 = \frac{\sqrt{aaa^2 + (dd0 + d0)^2}}{\sqrt{aaa^2 + (dd0 - d0)^2}} \quad X2 = 2.01981862$$

$$P12 = \frac{C_r}{k_s} \cdot \ln(X1) \quad P12 = 0.05567534$$

$$P21 = \frac{C_s}{k_s} \cdot \ln(X2) \quad P21 = 0.05764068$$

$$P22 = 1 + \frac{C_r}{k_s} \cdot \ln \left[\frac{2 \cdot dd0}{dd8} + \sqrt{\left(\frac{2 \cdot dd0}{dd8} \right)^2 - 1} \right] \quad P22 = 1.15643459$$

$$\text{delta} = P12 \cdot P21 - P11 \cdot P22 \quad \text{delta} = -1.34026395$$

$$KPs = \frac{C_s \cdot \pi}{\text{delta} \cdot 6} \cdot (P12 - P22) \quad KPs = 0.30851598$$

$$KPr = \frac{C_r \cdot \pi}{\text{delta} \cdot 6} \cdot (P21 - P11) \quad KPr = 0.29890019$$

$$TPs = \frac{P12 \cdot Ttf - P22 \cdot Tf}{P12 - P22} \quad TPs = 365.12431954$$

$$TPr = \frac{P21 \cdot Tf - P11 \cdot Ttf}{P21 - P11} \quad TPr = 318.80733989$$

$$Q = KPs \cdot (TPs - Tg) \quad QQ = KPr \cdot (TPr - Tg) \quad QQ = 76.6103132 \quad Q = 93.36443933$$

$$Q - QQ = 169.97475253 \quad \text{BTUH/LF for both conduits}$$

Notice that these units are in BTU per Hour for one Linear Foot. Not classical units!

NOW CALCULATE THE TEMPERATURE DISTRIBUTION THROUGH THE CROSS SECTION OF THE SUPPLY CONDUIT. THESE TEMPERATURES ARE USE TO DETERMINE THE MEAN TEMPERATURE OF EACH COMPONENT.

Notice that the single letter designator is for the Supply Conduit and the double letter designator will be for the Return Conduit.

$$T12 = \frac{6 \cdot Q}{\pi \cdot k12} \cdot \ln \left(\frac{d2}{d1} \right) \quad T12 = 0.03179457$$

THIS IS THE DELTA TEMPERATURE ACROSS THE SUPPLY CARRIER PIPE

$$T2 = Tf - T12 \quad T2 = 362.96820543$$

THE TEMPERATURE AT THE OUTSIDE OF THE CARRIER PIPE AND, THE INSIDE OF THE CARRIER PIPE INSULATION.

$$Tm12 = \frac{Tf + T2}{2} \quad Tm12 = 362.98410271 \quad \text{THE MEAN TEMPERATURE OF THE SUPPLY CARRIER PIPE.}$$

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$T_{23} = \frac{6 \cdot Q}{\pi \cdot k_{23}} \cdot \ln \left(\frac{d_3}{d_2} \right)$	$T_{23} = 140.1131365$	THE TEMPERATURE DELTA ACROSS THE CARRIER PIPE INSULATION (first layer)
$T_3 = T_2 - T_{23}$	$T_3 = 222.85506893$	THE TEMPERATURE AT THE OUTSIDE OF THE CARRIER PIPE INSULATION (FIRST LAYER).
$T_{m23} = \frac{T_2 + T_3}{2}$	$T_{m23} = 292.91163718$	THE MEAN TEMPERATURE OF THE FIRST LAYER OF CARRIER PIPE INSULATION.
$T_{34} = 0$	$T_{34} = 0$	THE TEMPERATURE DELTA ACROSS THE SECOND LAYER OF CARRIER PIPE INSULATION (No Second layer)
$T_4 = T_3 - T_{34}$	$T_4 = 222.85506893$	THE TEMPERATURE AT THE OUTSIDE OF THE SECOND LAYER OF CARRIER PIPE INSULATION. (No change from the first layer of insulation because there is no second layer of insulation)
$T_{m34} = \frac{T_3 + T_4}{2}$	$T_{m34} = 222.85506893$	THE MEAN TEMPERATURE OF THE SECOND LAYER OR CARRIER PIPE INSULATION. (The same temperature at the outside diameter of the first layer of insulation.)
$T_{45} = \frac{6 \cdot 2 \cdot Q}{\pi \cdot 3 \cdot d_4}$	$T_{45} = 7.09703261$	THE DELTA TEMPERATURE ACROSS THE ANNULAR AIR SPACE.
$T_5 = T_4 - T_{45}$	$T_5 = 215.75803632$	THE TEMPERATURE AT THE INSIDE OF THE STEEL CASING.
$T_{56} = \frac{6 \cdot Q}{\pi \cdot k_{56}} \cdot \ln \left(\frac{d_6}{d_5} \right)$	$T_{56} = 7.10171713 \cdot 10^{-3}$	THE TEMPERATURE DELTA ACROSS THE STEEL CASING.
$T_6 = T_5 - T_{56}$	$T_6 = 215.7509346$	THIS IS THE TEMPERATURE AT THE OUTSIDE OF THE STEEL CASING, & INSIDE OF THE POLYURETHANE FOAM.
$T_{m56} = \frac{T_5 + T_6}{2}$	$T_{m56} = 215.75448546$	THE MEAN TEMPERATURE OF THE SUPPLY STEEL CASING
$T_{67} = \frac{6 \cdot Q}{\pi \cdot k_{67}} \cdot \ln \left(\frac{d_7}{d_6} \right)$	$T_{67} = 100.4657513$	THE DELTA TEMPERATURE ACROSS THE POLYURETHANE EXTERIOR FOAM.
$T_7 = T_6 - T_{67}$	$T_7 = 115.2851833$	THE TEMPERATURE AT THE OUTSIDE OF THE POLYURETHANE FOAM, AND, AT THE INSIDE OF THE HDPE JACKET
$T_{m67} = \frac{T_6 + T_7}{2}$	$T_{m67} = 165.51805895$	THE MEAN TEMPERATURE OF THE POLYURETHANE FOAM THAT SURROUNDS THE CASING
$T_{78} = \frac{6 \cdot Q}{\pi \cdot k_{78}} \cdot \ln \left(\frac{d_8}{d_7} \right)$	$T_{78} = 0.83064348$	THE DELTA TEMPERATURE ACROSS THE HDPE JACKET.
$T_8 = T_7 - T_{78}$	$T_8 = 114.45453983$	THIS IS THE TEMPERATURE AT THE OUTSIDE OF THE HDPE JACKET, AND, AT THE OUTSIDE OF THE CONDUIT.
$T_{m78} = \frac{T_7 + T_8}{2}$	$T_{m78} = 114.86986156$	THE MEAN TEMP OF THE OUTER JACKET
NOW CALCULATE THE TEMPERATURE DISTRIBUTION THROUGH THE CROSS SECTION OF THE RETURN CONDUIT (HIGH TEMPERATURE HOT WATER RETURN).		
$TT_{12} = \frac{6 \cdot QQ}{\pi \cdot kk_{12}} \cdot \ln \left(\frac{dd_2}{dd_1} \right)$	$TT_{12} = 0.02608908$	THIS IS THE DELTA TEMPERATURE ACROSS THE RETURN CARRIER PIPE

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$TT2 = TTf - TT12$	$TT2 = 320.97391092$	THE TEMPERATURE AT THE OUTSIDE OF THE CARRIER PIPE AND, THE INSIDE OF THE FIRST LAYER OR CARRIER PIPE INSULATION.
$TTm_{rp} = \frac{TTf + TT2}{2}$	$TTm_{rp} = 320.98695546$	THE MEAN TEMP OF THE RETURN PIPE
$TT23 = \frac{6 \cdot QQ}{\pi \cdot kk23} \cdot \ln\left(\frac{dd3}{dd2}\right)$	$TT23 = 121.29940812$	THE TEMPERATURE DELTA ACROSS THE FIRST LAYER OF CARRIER PIPE INSULATION, RETURN
$TT3 = TT2 - TT23$	$TT3 = 199.6745028$	THE TEMPERATURE AT THE OUTSIDE OF THE FIRST LAYER OF CARRIER PIPE INSULATION.
$TTm_{23} = \frac{TT2 + TT3}{2}$	$TTm_{23} = 260.32420686$	THE MEAN TEMPERATURE OF THE FIRST LAYER OF CARRIER PIPE INSULATION.
$TT34 = 0$	$TT34 = 0$	THE TEMPERATURE DELTA ACROSS THE SECOND LAYER OF CARRIER PIPE INSULATION (THERE IS NO SECOND LAYER OF INSULATION)
$TT4 = TT3 - TT34$	$TT4 = 199.6745028$	THE TEMPERATURE AT THE OUTSIDE OF THE SECOND LAYER OF CARRIER PIPE INSULATION. (IS THE SAME AS THE OUTSIDE OF THE FIRST LAYER BECAUSE THE SECOND LAYER DOES NOT EXIST, OR, ZERO THICKNESS)
$TTm_{34} = \frac{TT3 + TT4}{2}$	$TTm_{34} = 199.6745028$	THE MEAN TEMPERATURE OF THE SECOND LAYER OF CARRIER PIPE INSULATION (ZERO THICKNESS).
$TT45 = \frac{6 \cdot 2 \cdot QQ}{\pi \cdot 3 \cdot dd4}$	$TT45 = 5.82347942$	THE DELTA TEMPERATURE ACROSS THE ANNULAR AIR SPACE.
$TT5 = TT4 - TT45$	$TT5 = 193.85102338$	THE TEMPERATURE AT THE INSIDE OF THE STEEL CASING.
$TT56 = \frac{6 \cdot QQ}{\pi \cdot kk56} \cdot \ln\left(\frac{dd6}{dd5}\right)$	$TT56 = 5.82732331 \cdot 10^{-3}$	THE TEMPERATURE DELTA ACROSS THE STEEL CASING.
$TT6 = TT5 - TT56$	$TT6 = 193.84519605$	THIS IS THE TEMPERATURE AT THE OUTSIDE OF THE STEEL CASING, & INSIDE OF THE EXTERIOR POLYURETHANE FOAM INSULATION.
$TTm_{56} = \frac{TT5 + TT6}{2}$	$TTm_{56} = 193.84810971$	THE MEAN TEMP OF THE STEEL CASING
$TT67 = \frac{6 \cdot QQ}{\pi \cdot kk67} \cdot \ln\left(\frac{dd7}{dd6}\right)$	$TT67 = 83.30470026$	THE DELTA TEMPERATURE ACROSS THE POLYURETHANE FOAM.
$TT7 = TT6 - TT67$	$TT7 = 110.5404958$	THE TEMPERATURE AT THE OUTSIDE OF THE POLYURETHANE FOAM, AND AT THE INSIDE OF THE HDPE JACKET.
$TTm_{67} = \frac{TT6 + TT7}{2}$	$TTm_{67} = 152.19284592$	THE MEAN TEMP OF THE EXTERIOR POLYURETHANE STEEL CASING INSULATION
$TT78 = \frac{6 \cdot QQ}{\pi \cdot kk78} \cdot \ln\left(\frac{dd8}{dd7}\right)$	$TT78 = 0.6840163$	THE DELTA TEMPERATURE ACROSS THE HDPE JACKET.

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Question: Is $kk_{23} = .3291402$??

MPT Mineral Wool $k = .3234$ at 250F and $.3512$ at 300F

You will find these k-factors in the attached tables for MPT mineral wool insulation

$$kk_{23} = .3234 + \frac{TT_{m23} - 250}{50} \cdot (.3512 - .3234) \quad kk_{23} = 0.32914026 \quad \text{GOOD because it is the same as your last guess !!}$$

THE MEAN TEMPERATURE OF THE OUTER POLYURETHANE INSULATION IS:

$$TT_{m67} = \frac{TT_6 + TT_7}{2} \quad TT_{m67} = 152.19284592$$

Thermacor polyurethane foam: $k = .182$ @ 150F and $k = .213$ @ 200F

You will find these k-factors in the attached tables for Generic Polyurethane insulation

Question: is $kk_{67} = .1833594$????

$$kk_{67} = .182 + \frac{TT_{m67} - 150}{50} \cdot (.213 - .182) \quad kk_{67} = 0.18335956 \quad \text{GOOD because it is the same as your last guess !!}$$

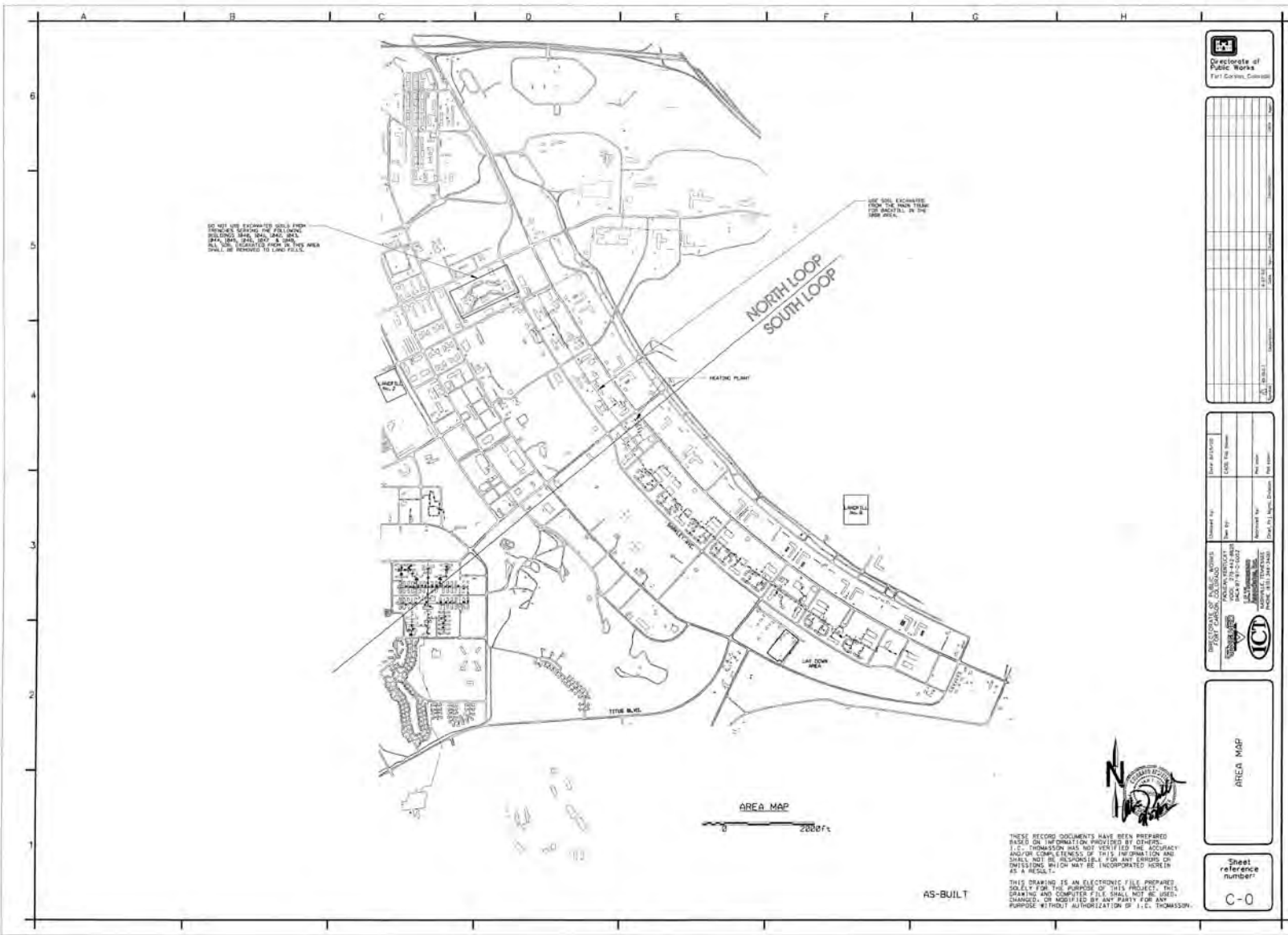
CONCLUSION: The k-factors for k_{23} , k_{267} , kk_{23} , and kk_{67} are accurate to at least six places which indicates that no more iterations are required.

NOTE: The “Heat Conduit Expert” software used for thermal analysis in this project is available on CD. To request a copy of this software with instructions for use and associated data files, please contact:

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Warner Robins, Georgia 31088
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Appendix F: Consolidated Phase I Drawings for Forts Carson and Stewart

Part 1: Fort Carson North Loop Phase I Drawings



Directorate of Public Works
Fort Carson, Colorado

Sheet No.	C-0
Project No.	
Date	

Drawn by: []
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 Date: []
 Project No: []
 Sheet No: []

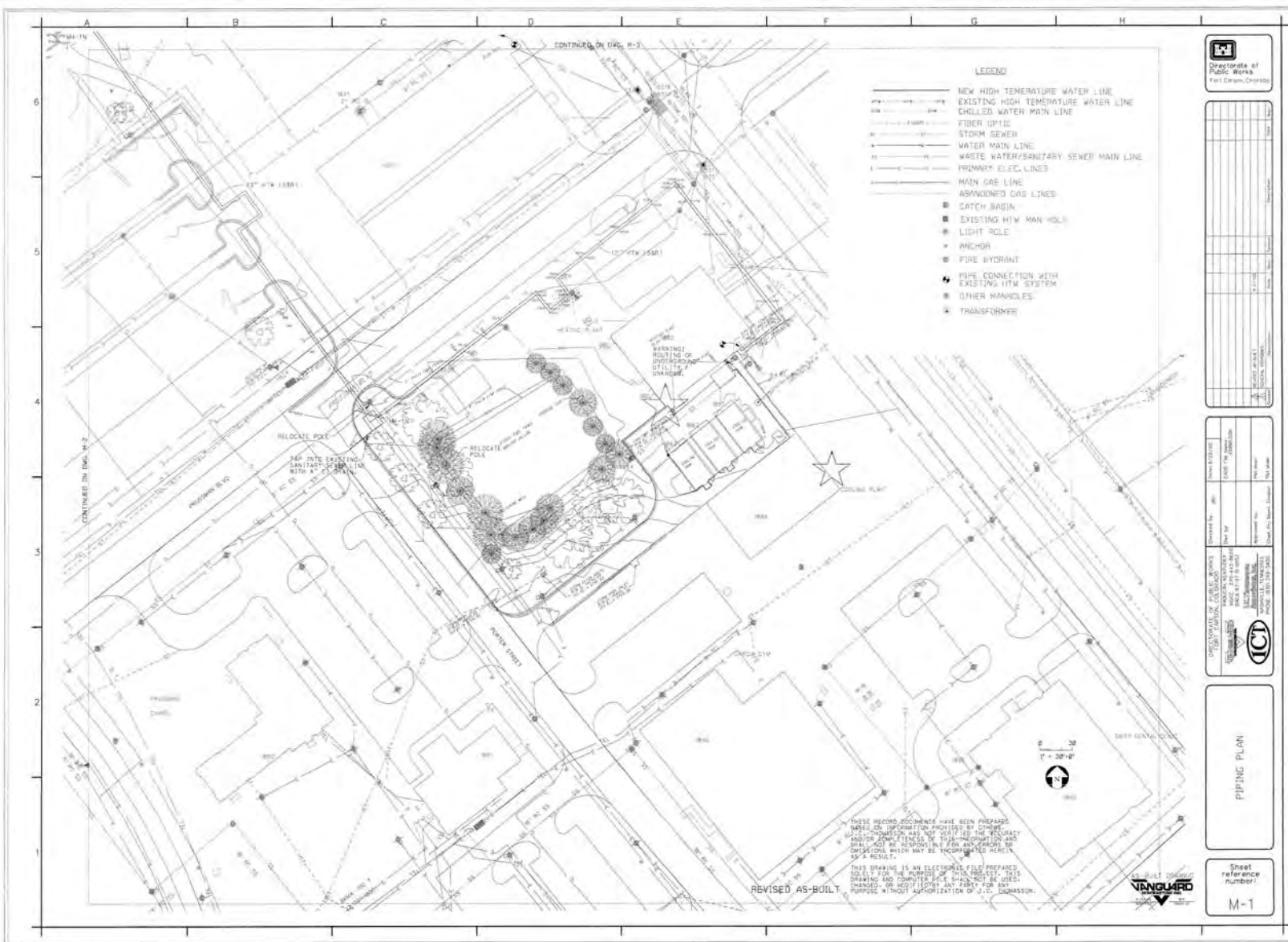
OFFICIAL SEAL OF PUBLIC WORKS DIRECTORATE

PROFESSIONAL ENGINEER
J.C. THOMASSEN
No. 12345678
EXPIRES 12/31/2020

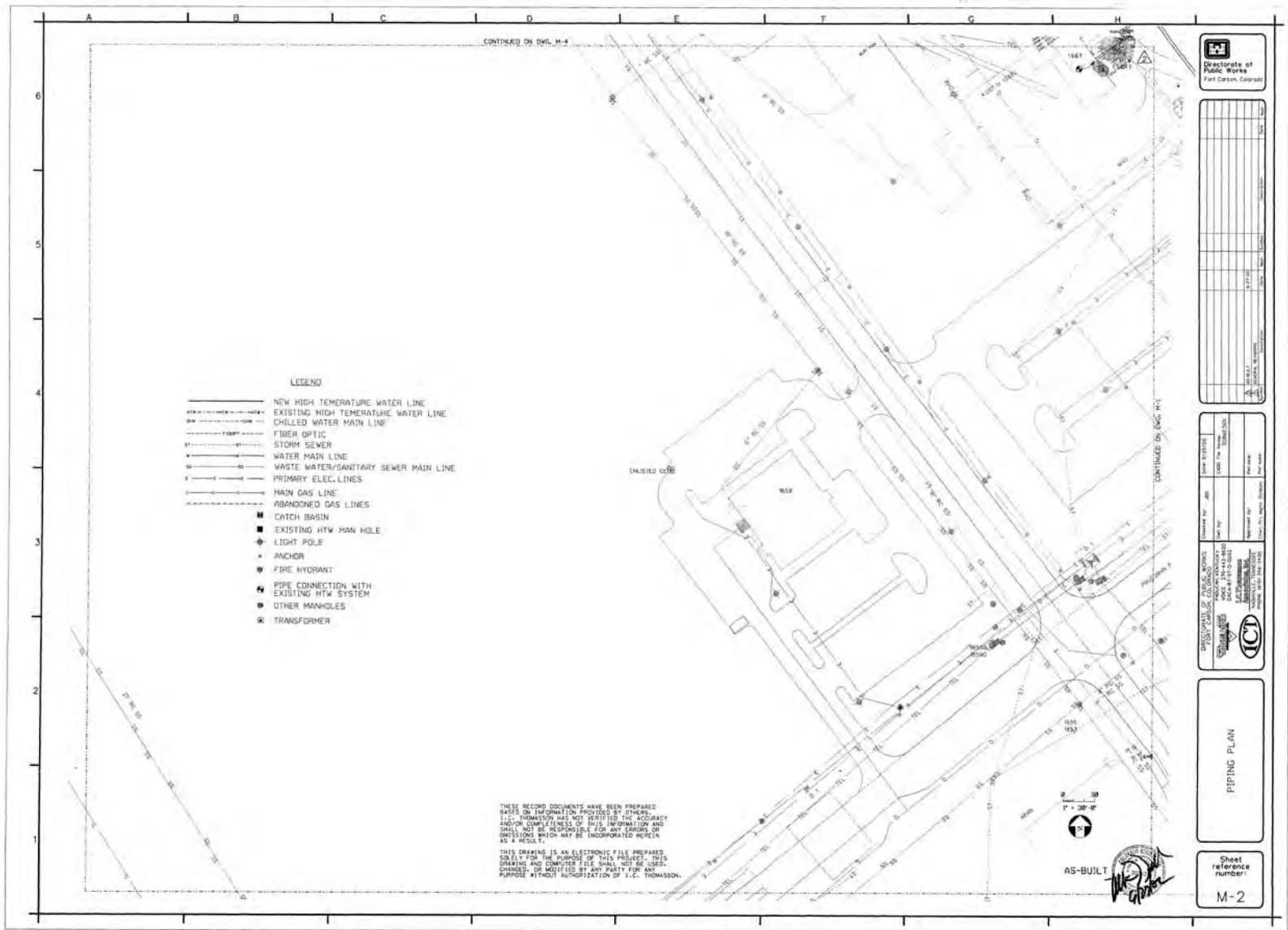
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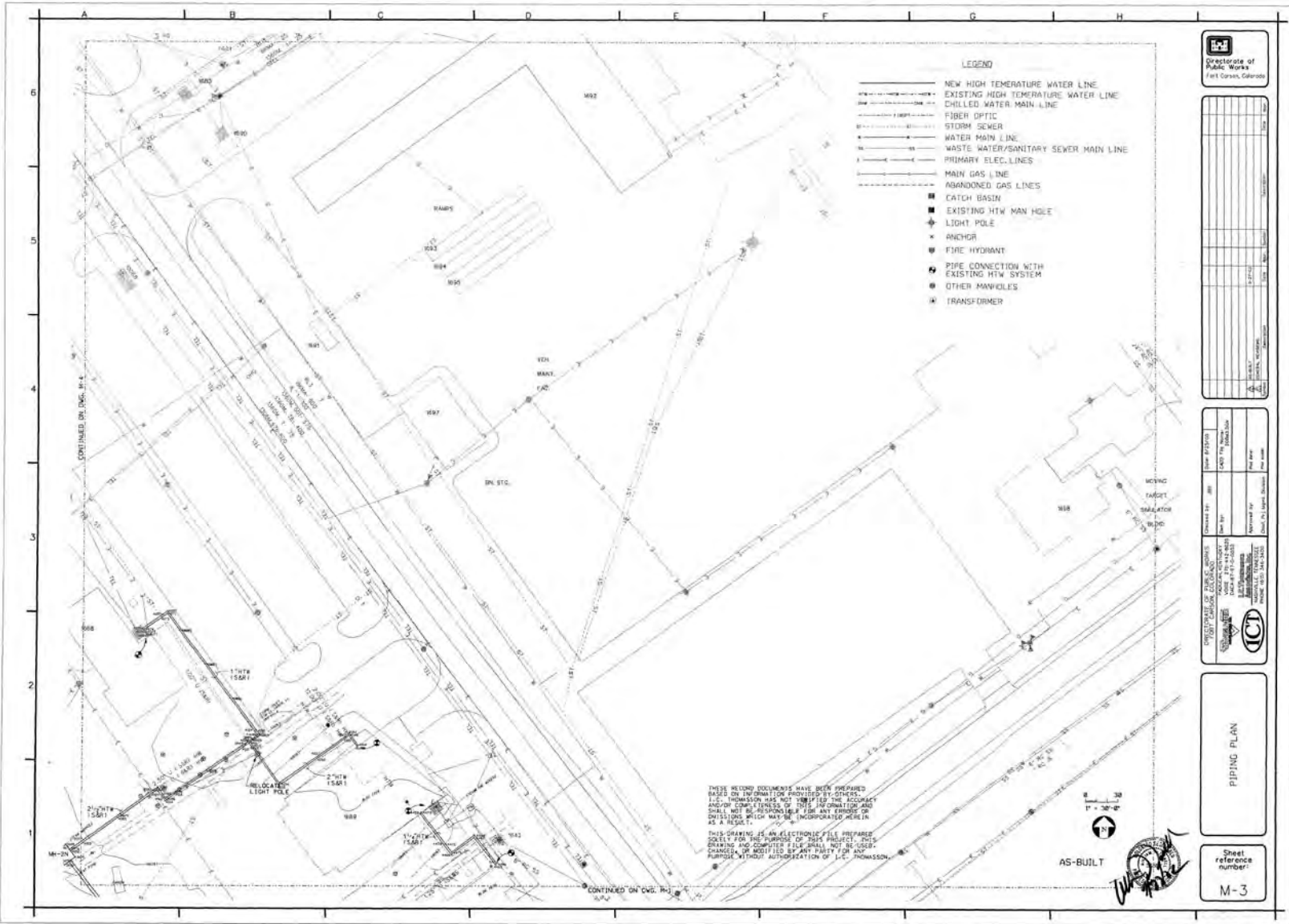


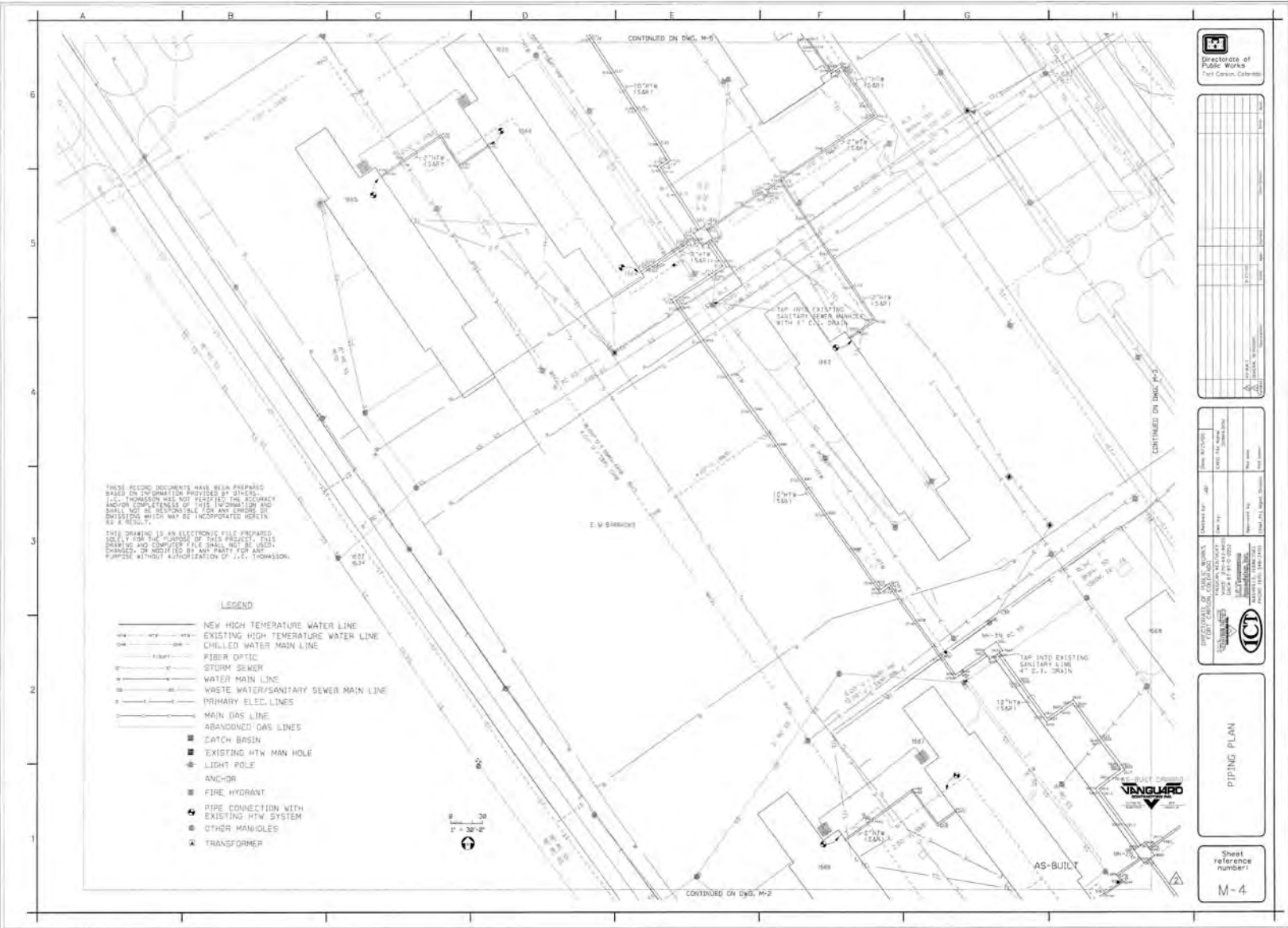
DATE	DESCRIPTION

PROJECT NO. 15-0000
 SHEET NO. M-2
 DATE 11/11/14
 DRAWN BY J. GIBSON
 CHECKED BY J. GIBSON
 I.C. THOMASSON
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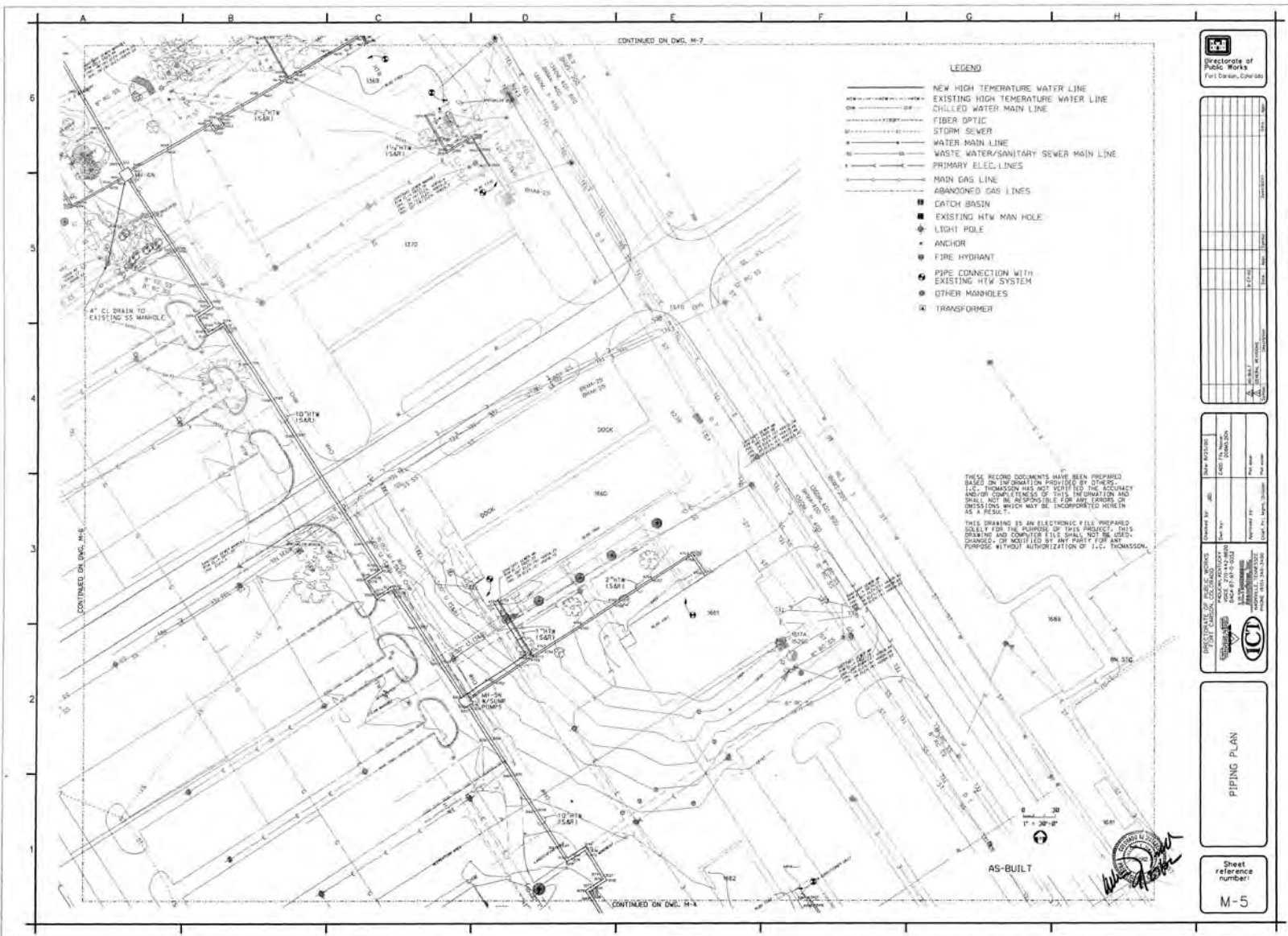
PIPING PLAN

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M-2





1/15/2015 10:00:00 AM



- LEGEND**
- NEW HIGH TEMPERATURE WATER LINE
 - EXISTING HIGH TEMPERATURE WATER LINE
 - CHILLED WATER MAIN LINE
 - FIBER OPTIC
 - STORM SEWER
 - WATER MAIN LINE
 - WASTE WATER/SANITARY SEWER MAIN LINE
 - PRIMARY ELEC. LINES
 - MAIN GAS LINE
 - ABANDONED GAS LINES
 - CATCH BASIN
 - EXISTING HTW MAN HOLE
 - ◆ LIGHT POLE
 - ANCHOR
 - FIRE HYDRANT
 - ⊙ PIPE CONNECTION WITH EXISTING HTW SYSTEM
 - ⊙ OTHER MANHOLES
 - ⊠ TRANSFORMER

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. J.C. THOMPSON HAS NOT VISITED THE PROJECT AND IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

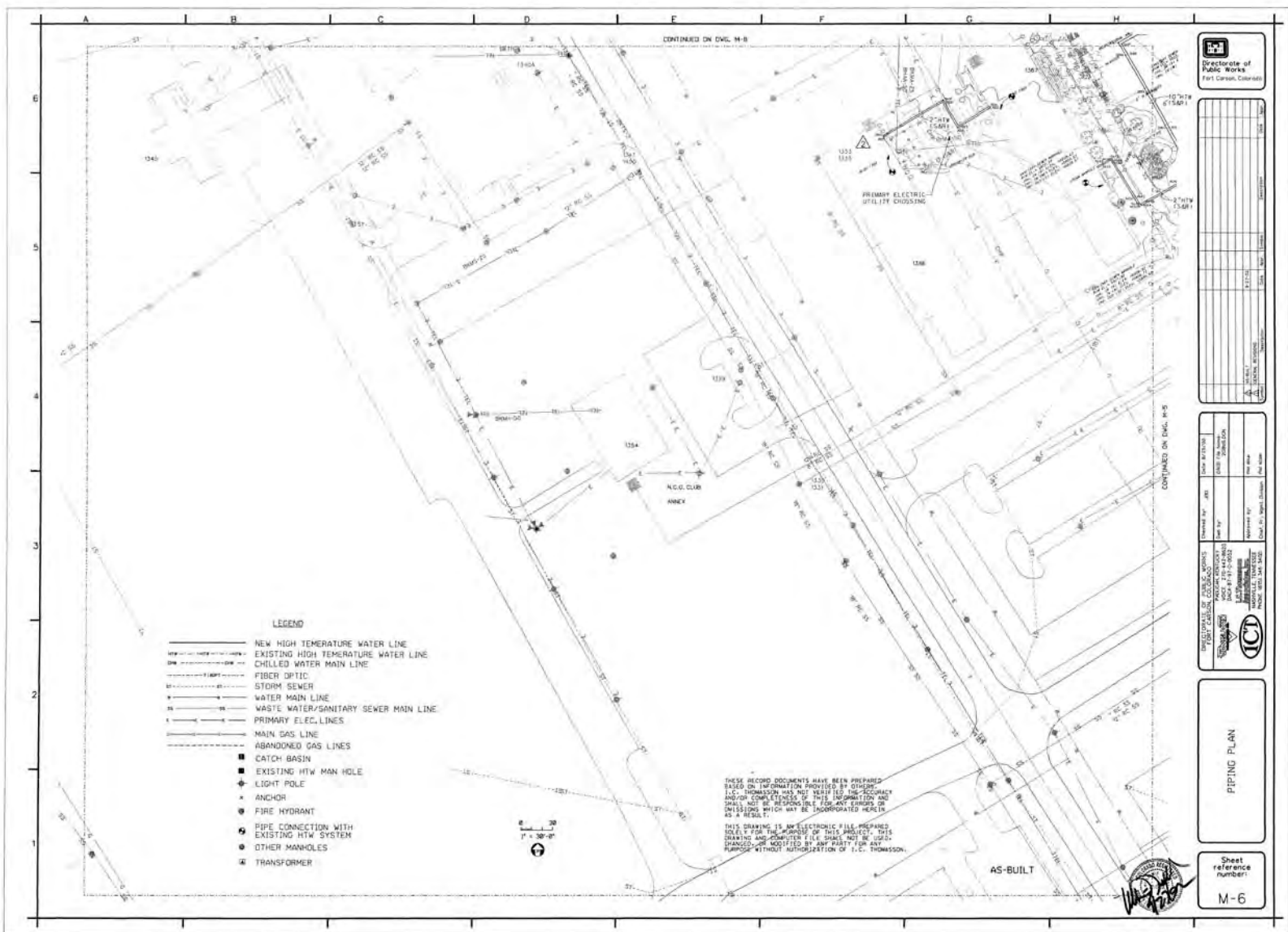
THIS DRAWING IS AN ELECTRONIC FILE PREPARED SOLELY FOR THE PURPOSE OF THIS PROJECT. THIS DRAWING AND COMPUTER FILE SHALL NOT BE USED, CHANGED, OR REPRODUCED BY ANY PARTY FOR ANY PURPOSE WITHOUT AUTHORIZATION OF J.C. THOMPSON.

Directorate of Public Works
Fort Worth, Texas

DATE	BY	CHECKED	APPROVED

PIPING PLAN

Sheet reference number: **M-5**



- LEGEND**
- NEW HIGH TEMPERATURE WATER LINE
 - EXISTING HIGH TEMPERATURE WATER LINE
 - CHILLED WATER MAIN LINE
 - FIBER OPTIC
 - STORM SEWER
 - WATER MAIN LINE
 - WASTE WATER/SANITARY SEWER MAIN LINE
 - PRIMARY ELEC. LINES
 - MAIN GAS LINE
 - ABANDONED GAS LINES
 - CATCH-BASIN
 - EXISTING HTW MAN HOLE
 - ⊕ LIGHT POLE
 - × ANCHOR
 - ⊙ FIRE HYDRANT
 - ⊕ PIPE CONNECTION WITH EXISTING HTW SYSTEM
 - ⊙ OTHER MANHOLES
 - ⊕ TRANSFORMER

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. I.C. THOMASSON HAS NO LIABILITY FOR ACCURACY AND/OR COMPLETENESS OF INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

THIS DRAWING IS AN ELECTRONIC FILE PREPARED SOLELY FOR THE PURPOSES OF THIS PROJECT. THIS DRAWING AND COMPUTER FILE SHALL NOT BE USED, CHANGED OR MODIFIED BY ANY PARTY FOR ANY PURPOSES WITHOUT AUTHORIZATION OF I.C. THOMASSON.

CONTINUED ON DWG. M-5

CONTINUED ON DWG. M-7

AS-BUILT

1" = 30'-0"

M-6

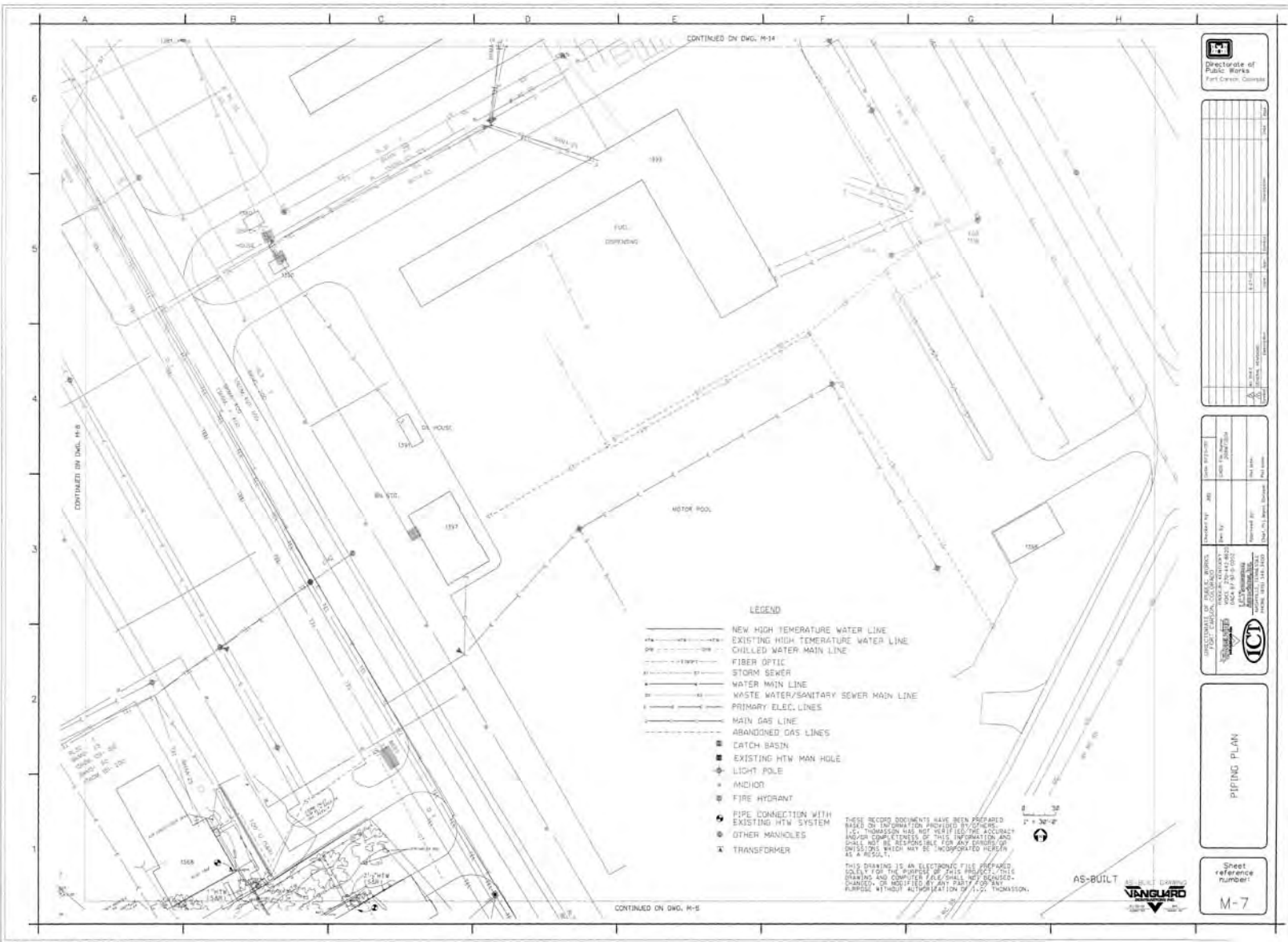
Sheet reference number:

PEPPING PLAN

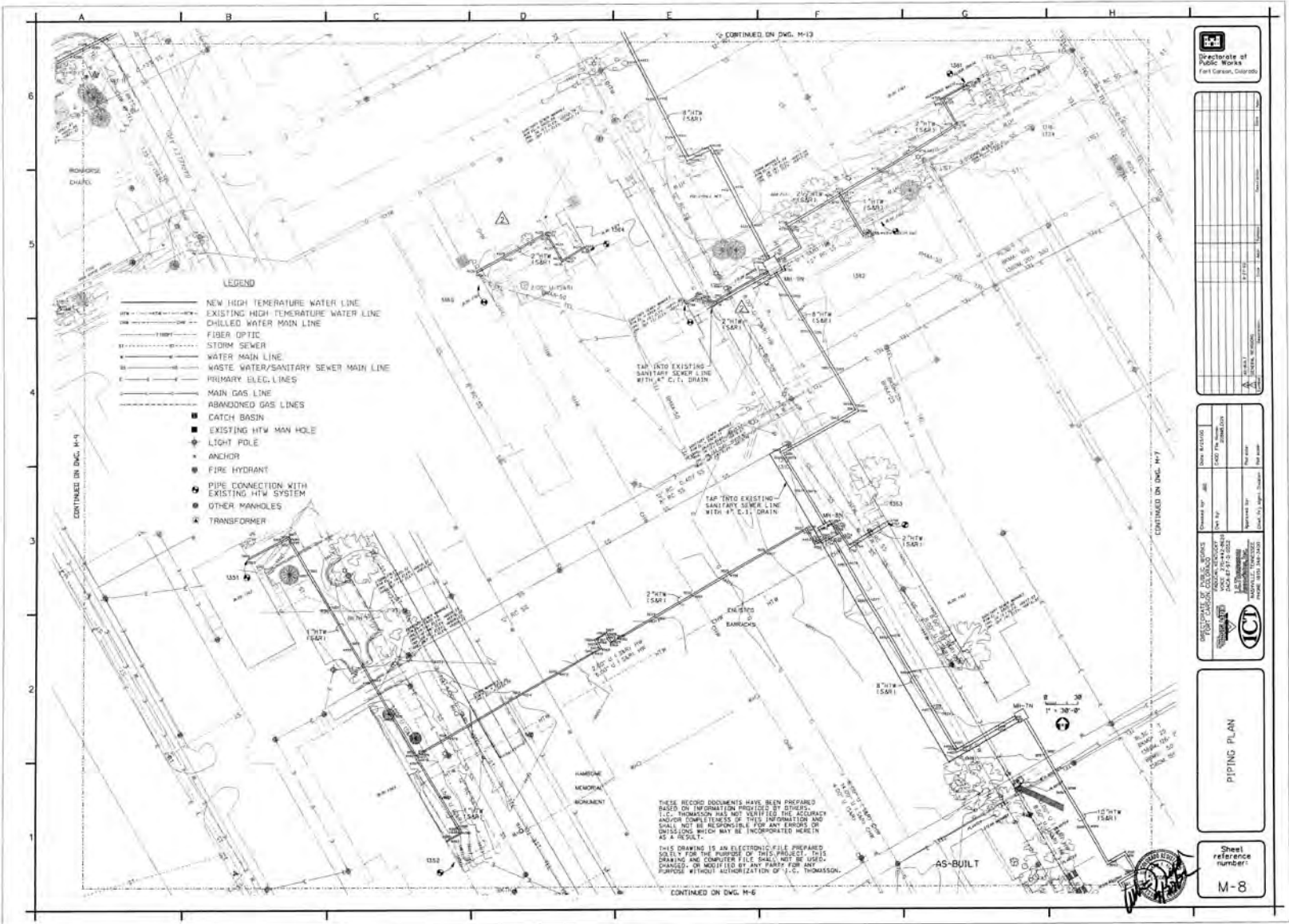
DIRECTORATE OF Public Works
First Corner, Colorado

I.C. THOMASSON
REGISTERED PROFESSIONAL ENGINEER
NO. 100000000
P.O. BOX 1000
DENVER, COLORADO 80202
PHONE: 303.733.1000

Prepared by: JAV
Checked by: JAV
Date: 11/11/14
Scale: 1" = 30'-0"
Title: PEPPING PLAN
Drawing No.: M-6



175-82-Covered 328x7-Apr 01/27/03 09:57:05 AM

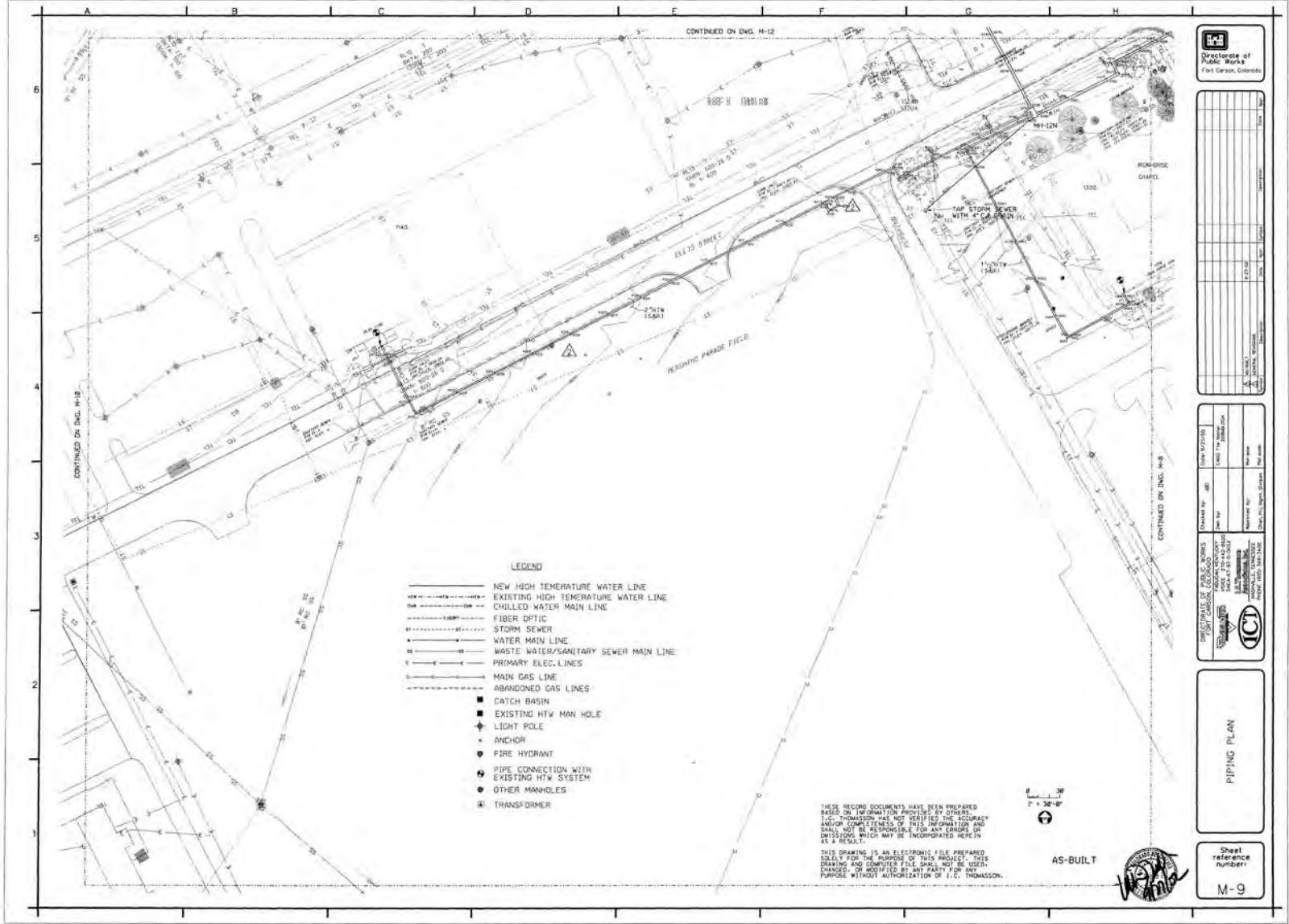


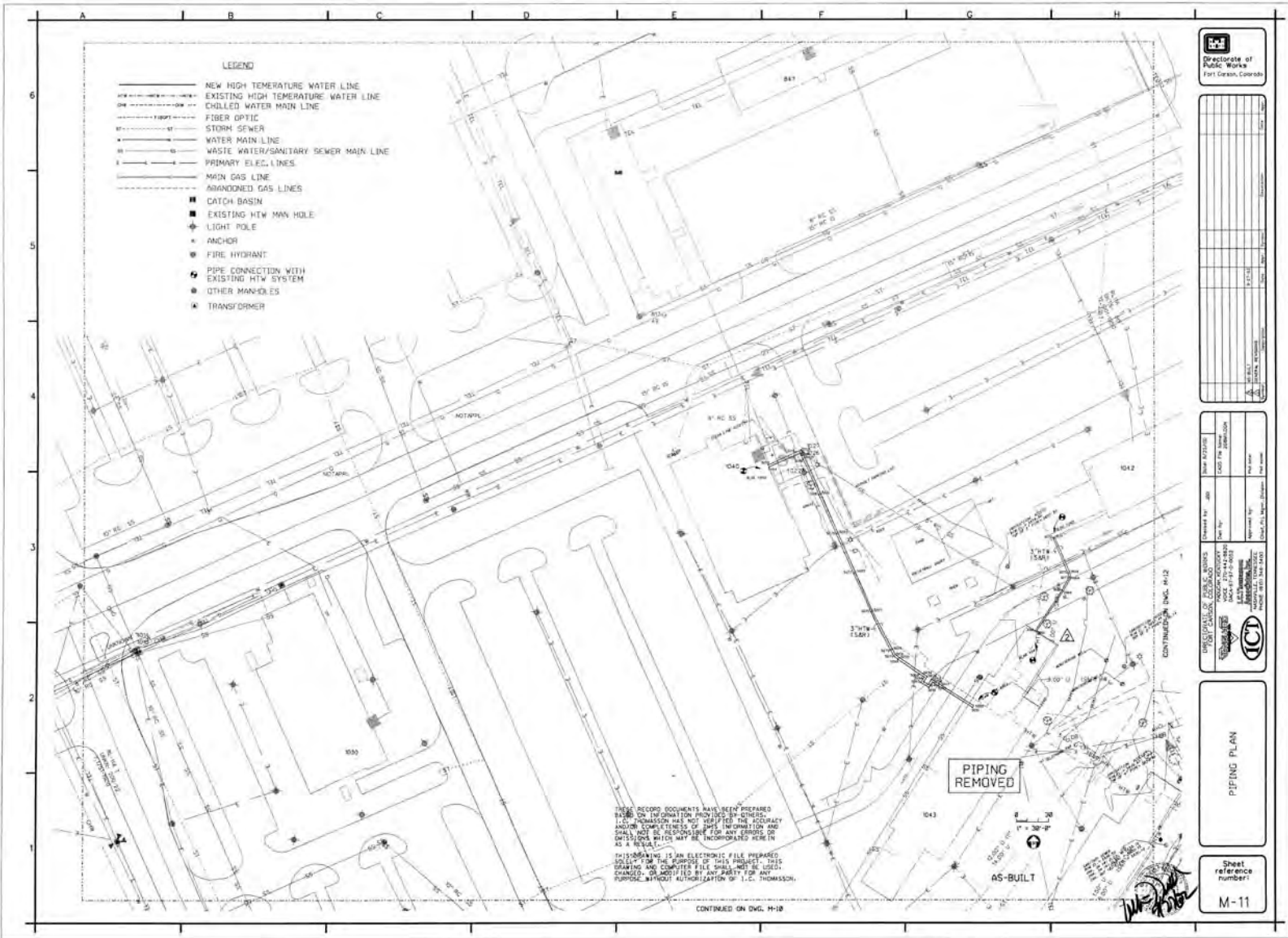
DATE	DESCRIPTION	BY	CHECKED

PROJECT NO. 15-001
 SHEET NO. M-8
 DATE: 10/20/15
 DRAWN BY: J. THOMAS
 CHECKED BY: J. THOMAS
 SCALE: 1" = 30'-0"

PIPING PLAN

Sheet reference number: M-8





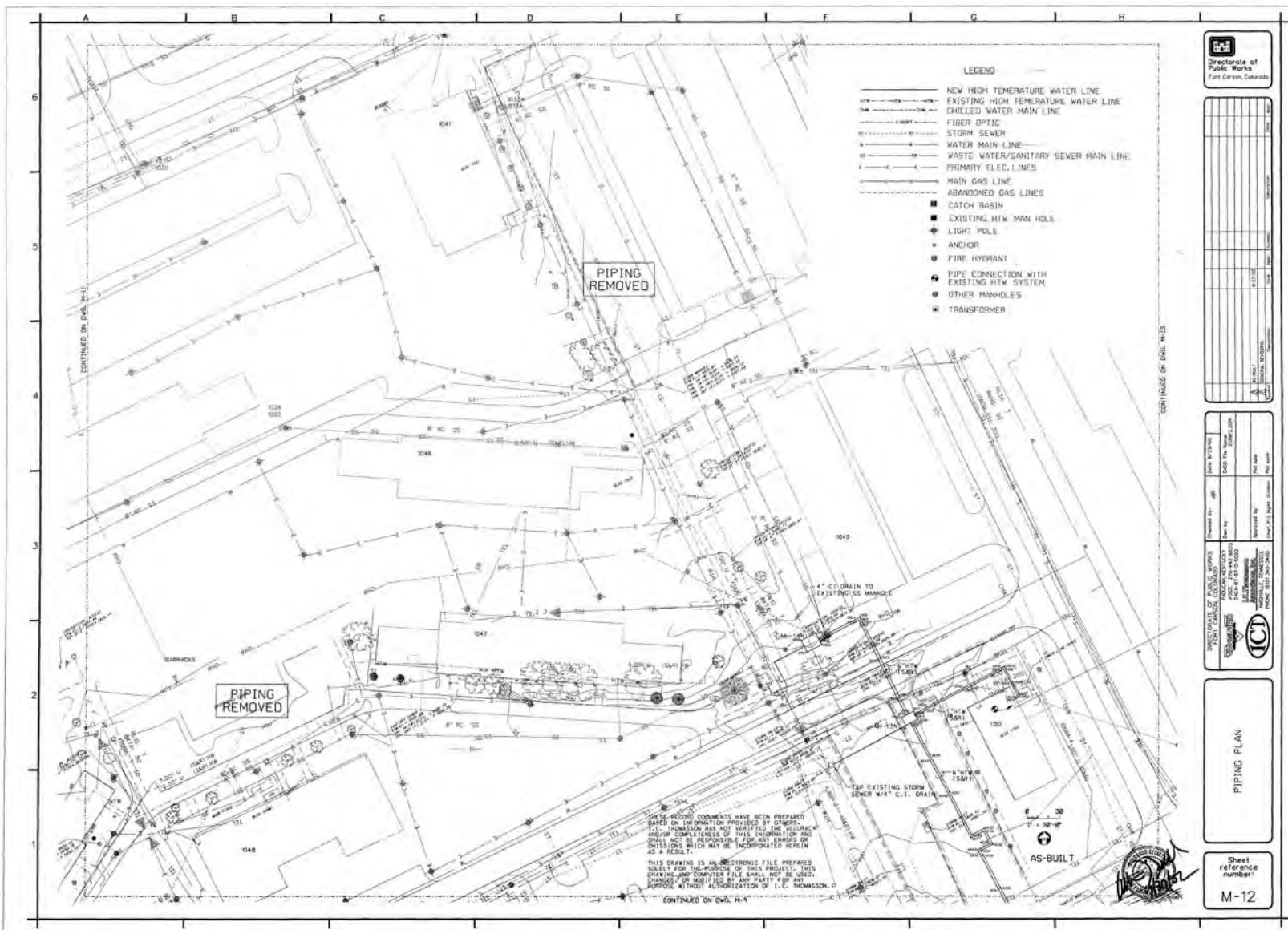
Directorate of
Public Works
Fort Saskatchewan

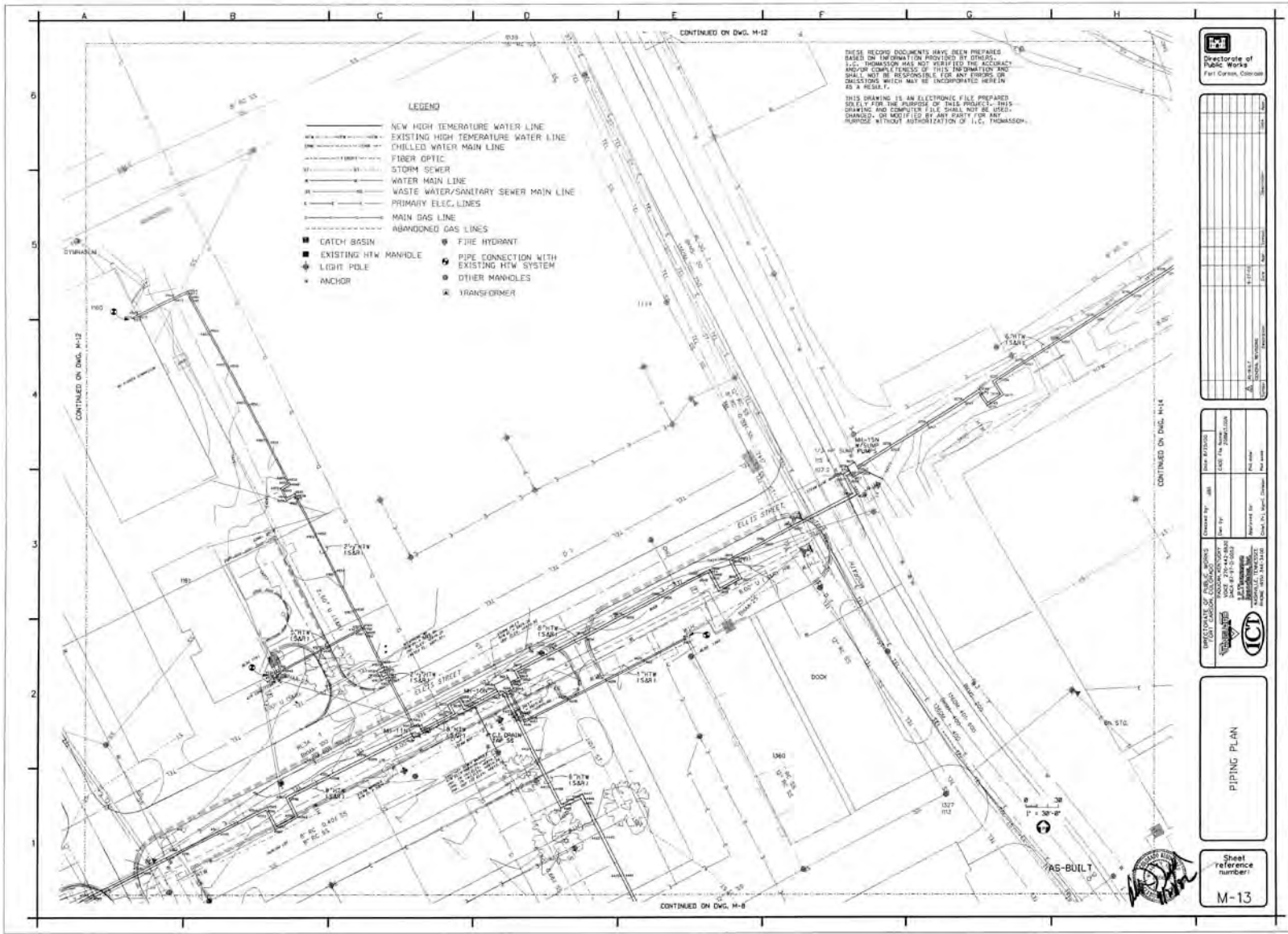
DATE	DESCRIPTION	BY	CHECKED

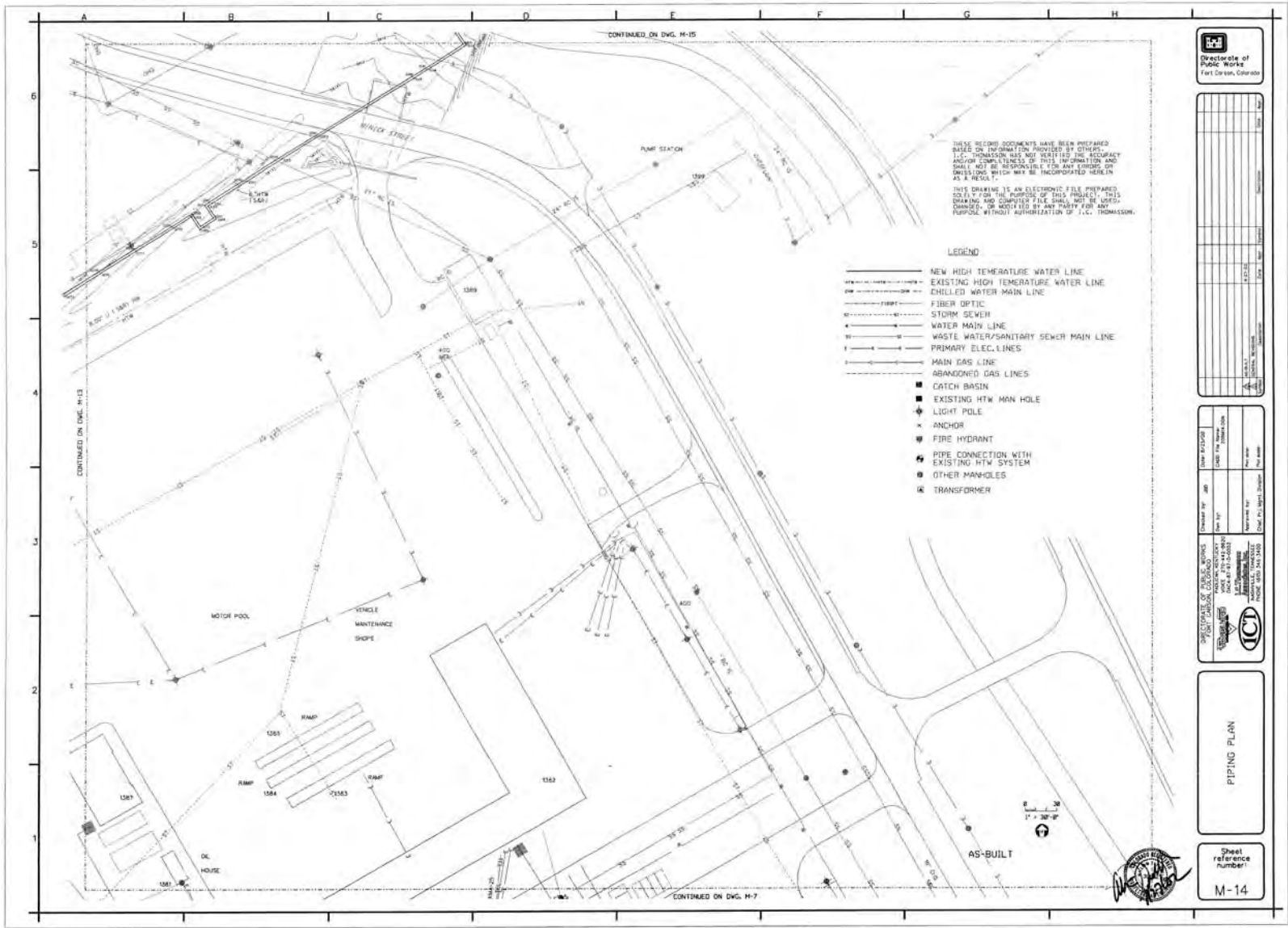
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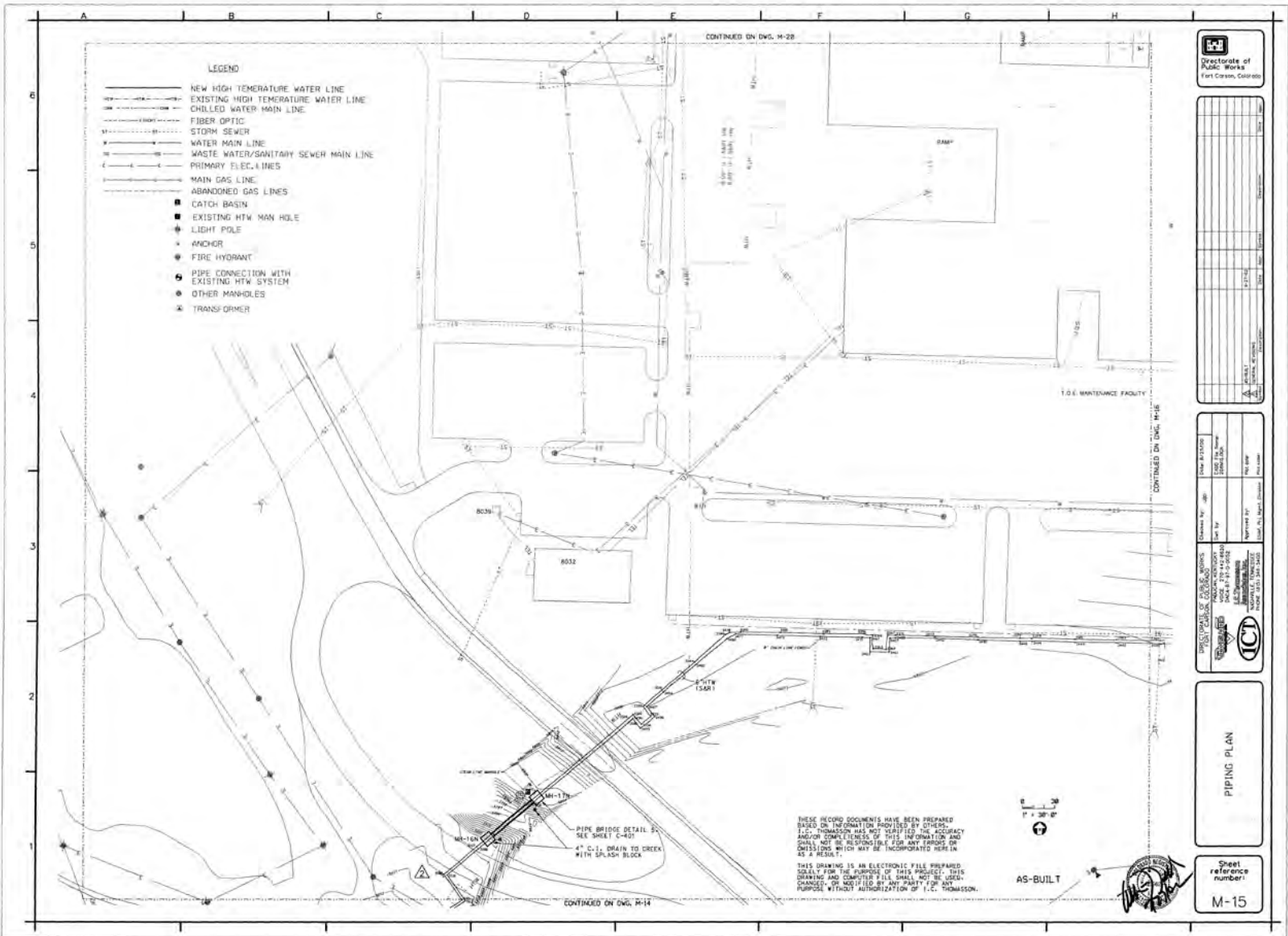
PIPING PLAN

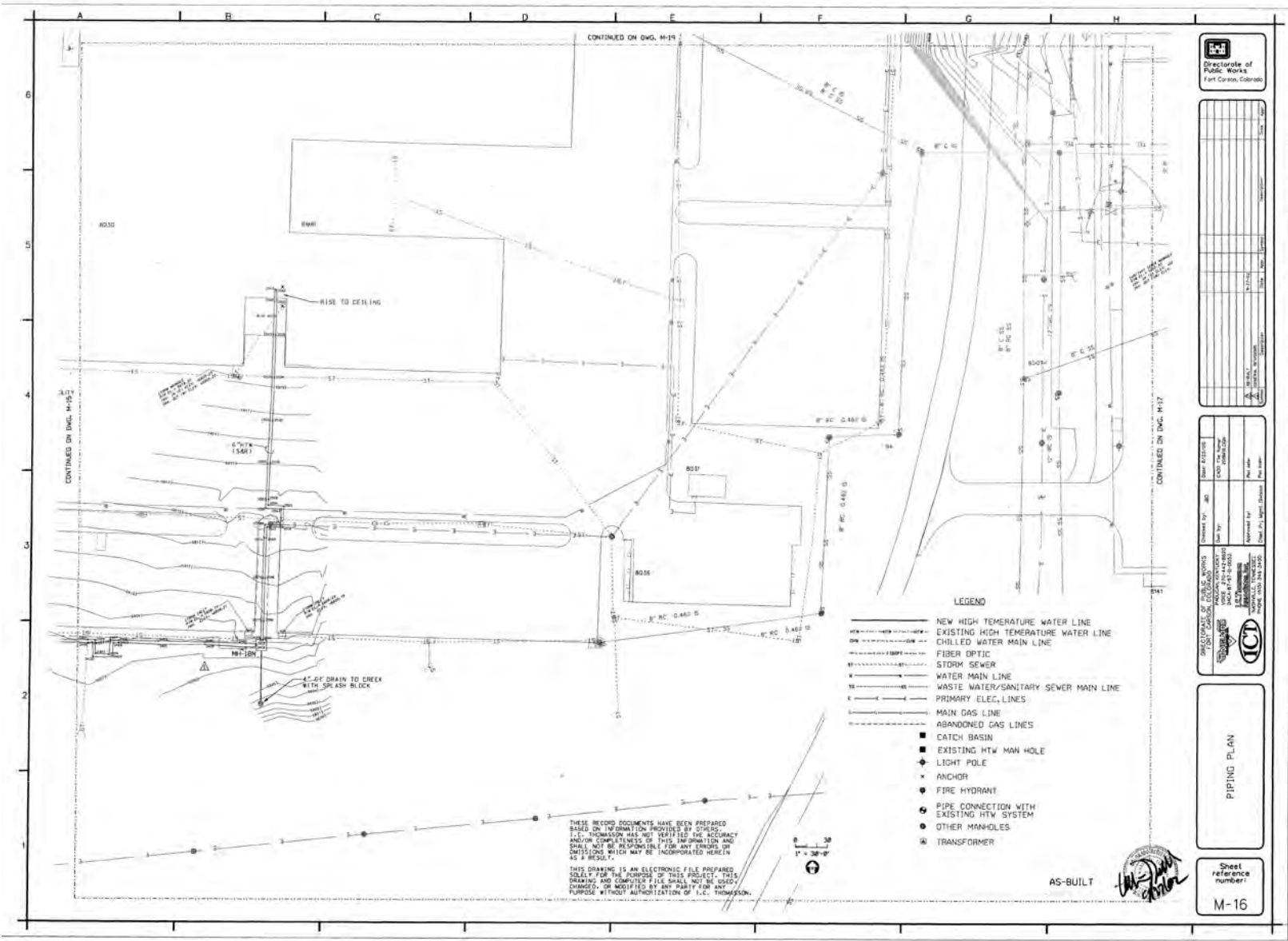
Sheet
reference
number
M-11











City of Fort Collins
Directorate of Public Works
Fort Collins, Colorado

NO.	DATE	REVISION

DESIGNED BY	DATE	SCALE	PROJECT NO.	SHEET NO.	JOB NO.

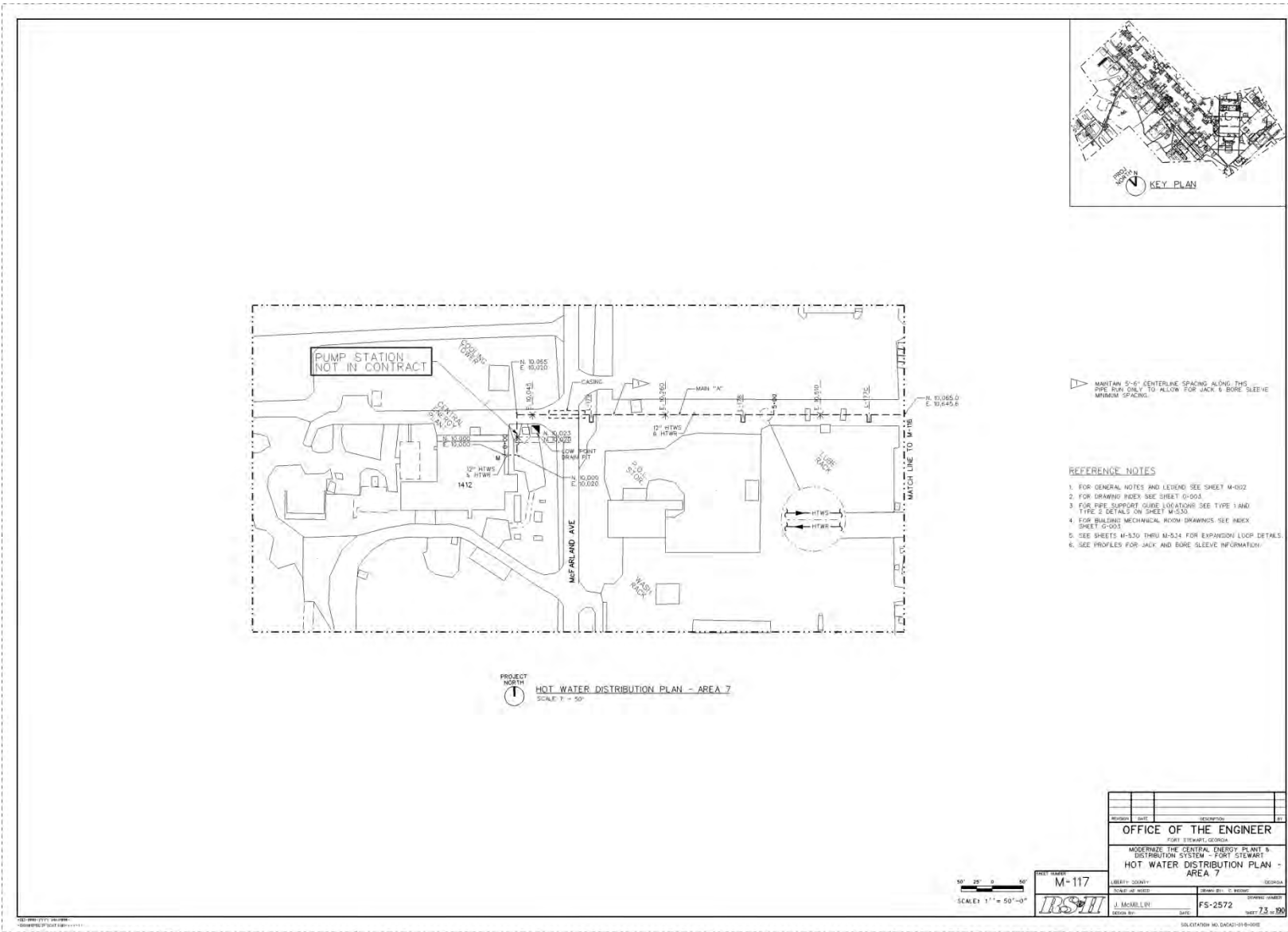
PIPING PLAN

Sheet reference number:
M-16

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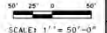
Part 2: Fort Stewart Phase I Drawings



MAINTAIN 5'-6" CENTERLINE SPACING ALONG THIS PIPE RUN ONLY TO ALLOW FOR JACK & BORE SLEEVE MINIMUM SPACING.

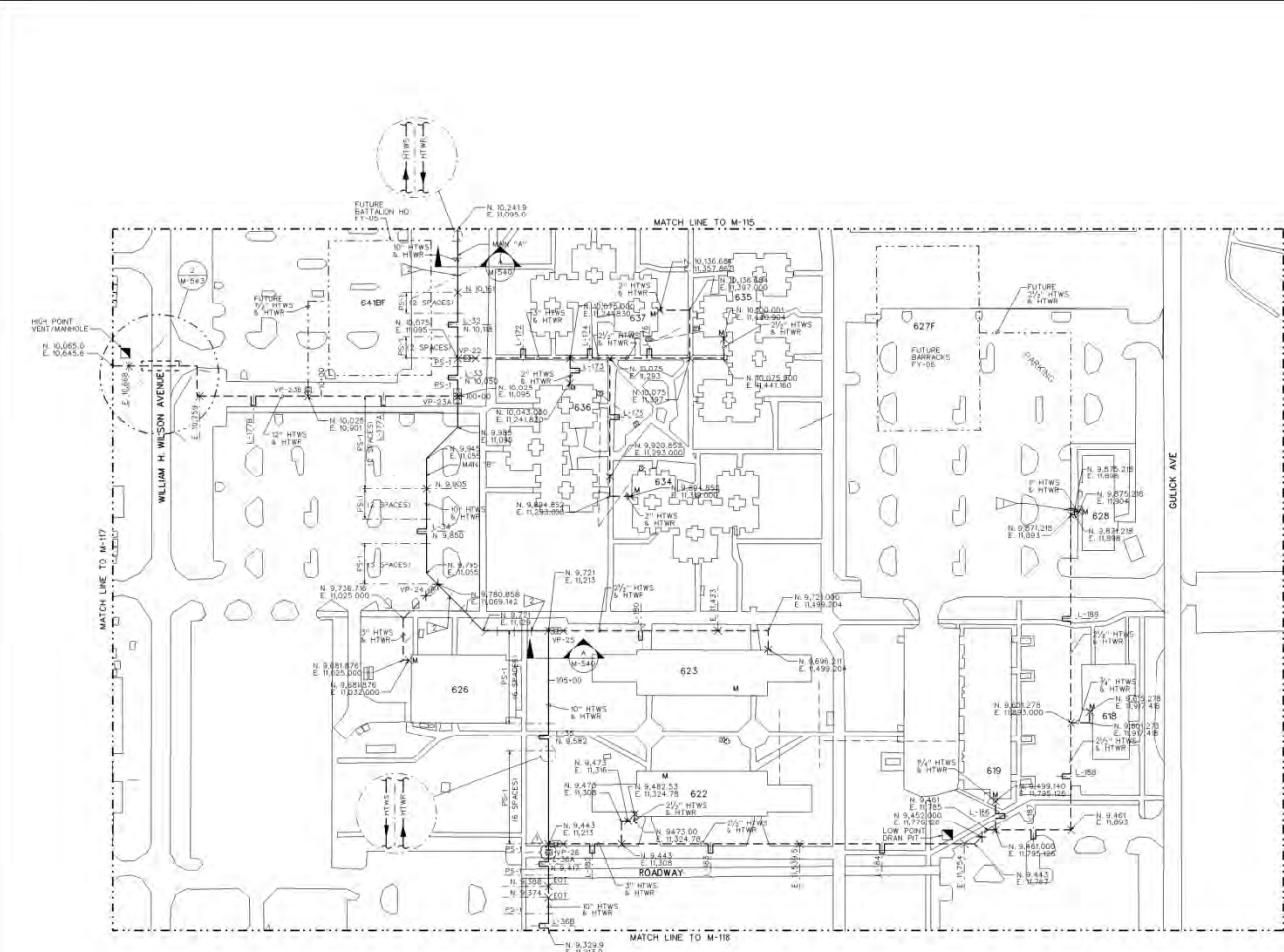
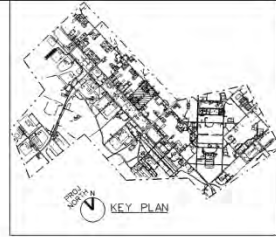
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002
 2. FOR DRAWING INDEX SEE SHEET G-004
 3. FOR PIPE SUPPORT GUIDE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-030
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET G-001
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS
 6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION.

PROJECT NORTH
HOT WATER DISTRIBUTION PLAN - AREA 7
 SCALE: 1" = 50'



PROJECT NUMBER	M-117
LIBERTY COUNTY	GEORGIA
SCALE OF WORK	DATE
J. MACMILLIN	FS-2572
DRAWN BY	DATE
	7.3.19

NO.	DATE	DESCRIPTION
OFFICE OF THE ENGINEER		
FORT STEWART, GEORGIA		
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART		
HOT WATER DISTRIBUTION PLAN - AREA 7		
LIBERTY COUNTY, GEORGIA		
SOLUTION NO. 04621-01-0002		



FLAG NOTES

- ▽ CONTRACTOR TO INSTALL BRANCH CONNECTIONS WITH BLIND FLANGES FOR FUTURE BUILDING SERVICES.
- ▽ ADD RS-1 SUPPORTS AT POINTS INDICATED WITH 22'-0" INTERVALS ORIGINATING FROM EACH ANCHOR.

REFERENCE NOTES

1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
2. FOR DRAWING INDEX SEE SHEET G-003.
3. FOR PIPE SUPPORT CLUDE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-530.
4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET G-003.
5. SEE SHEETS M-501 THRU M-514 FOR EXPANSION LOOP DETAILS.
6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION.

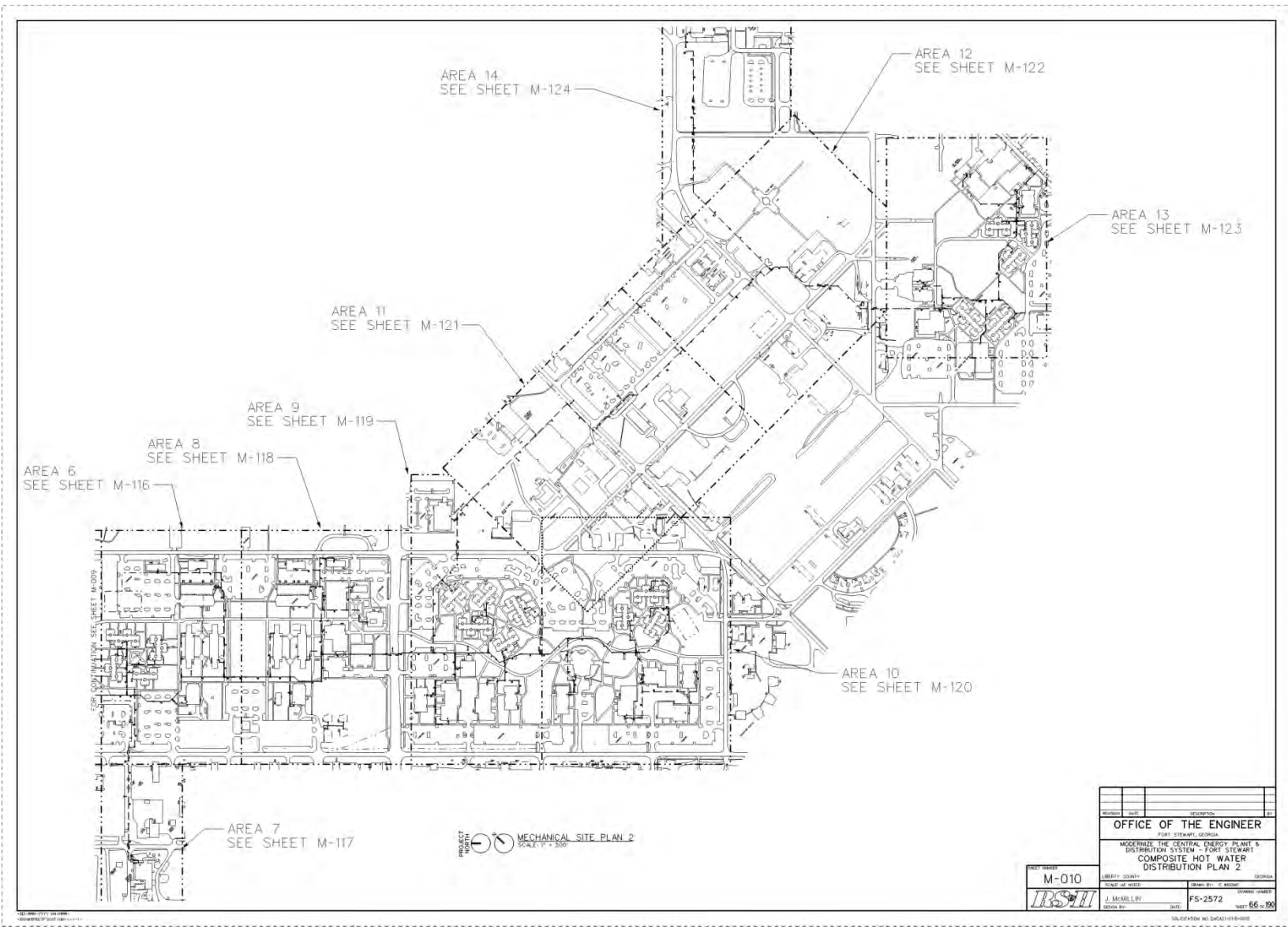
PROJECT MAPSHEET
 HOT WATER DISTRIBUTION PLAN - AREA 6
 SCALE: 1" = 50'-0"

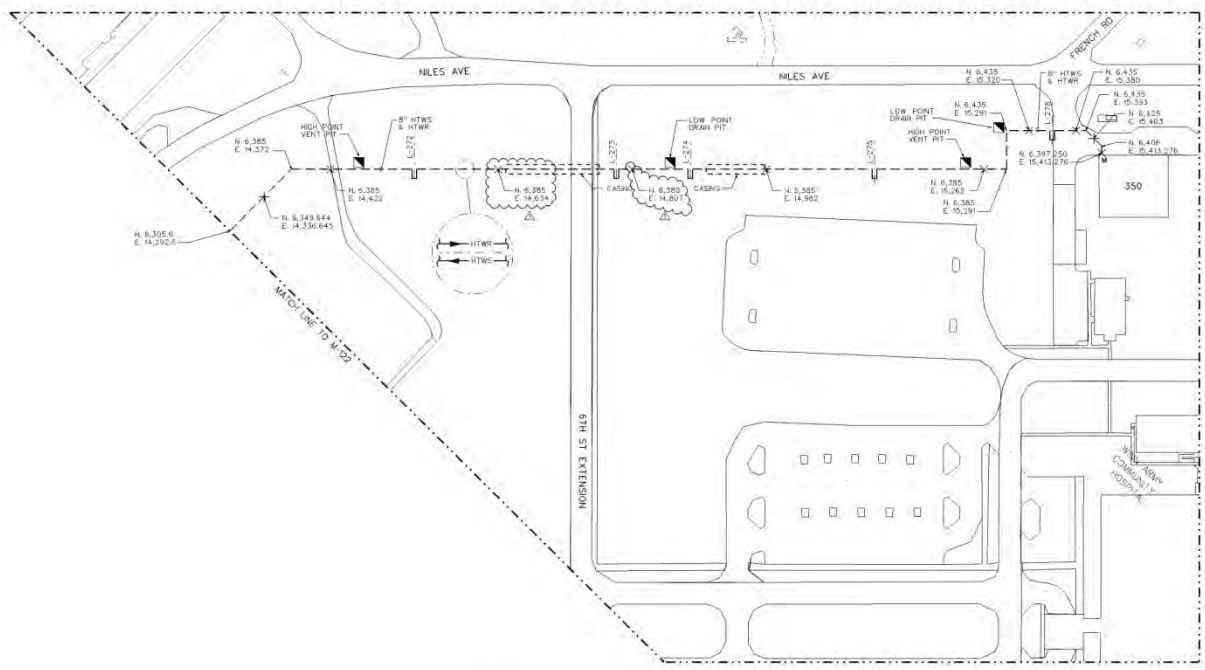
SCALE: 1" = 50'-0"



PROJECT NO.	M-116
DATE	05/25/12
DESIGNER	J. McMILLIN
CHECKED	C. WOOD
DATE	05/25/12
SCALE	AS SHOWN
PROJECT NO.	M-116
DATE	05/25/12
DESIGNER	J. McMILLIN
CHECKED	C. WOOD
DATE	05/25/12
SCALE	AS SHOWN

SCALE: 1" = 50'-0"





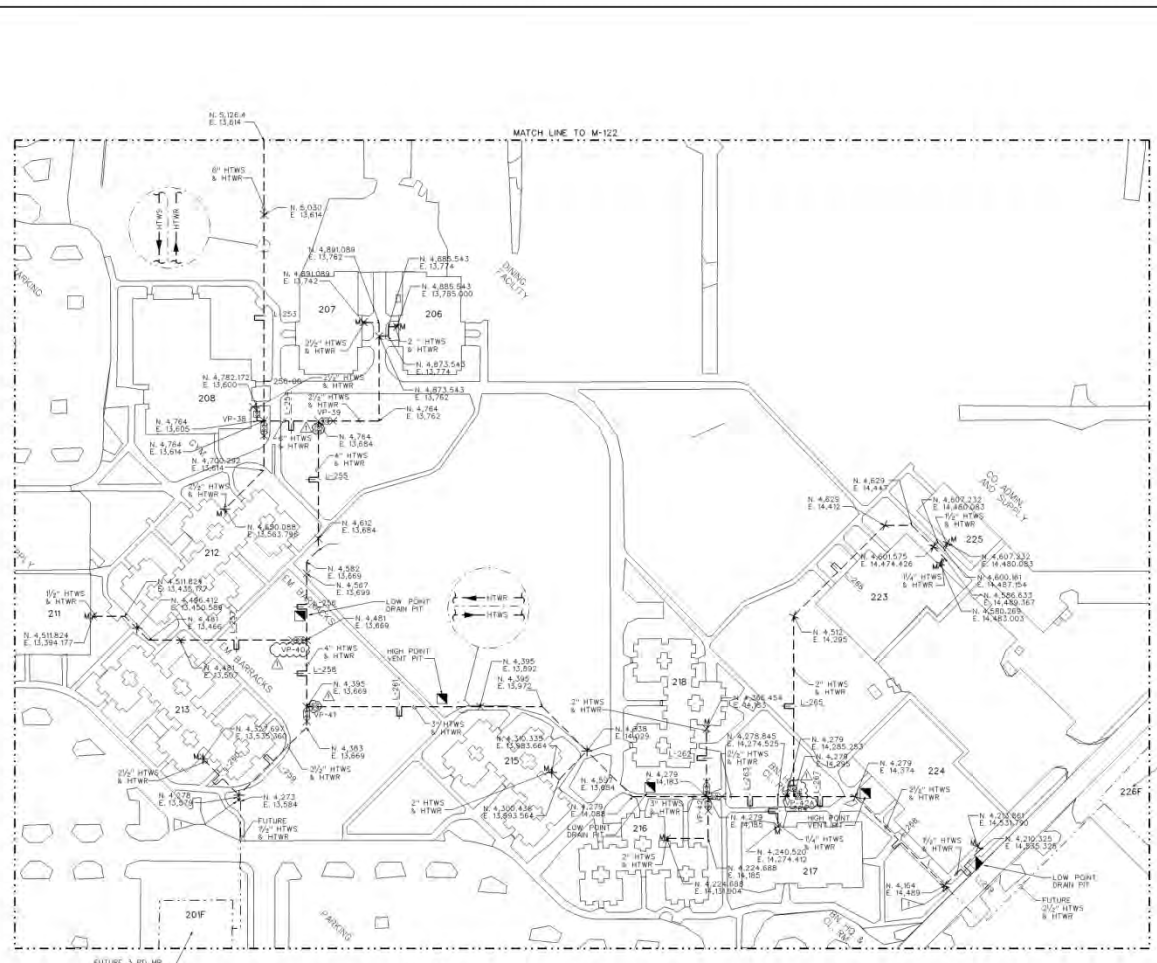
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
 2. FOR DRAWING INDEX SEE SHEET 0-003.
 3. FOR PIPE SUPPORT GUIDE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-530.
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET C-503.
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.

PROJECT NORTH
SITE & UTILITY DEMO PLAN - AREA 14
 SCALE: 1" = 50'-0"

SCALE: 1" = 50'-0"

PROJECT NUMBER
M-124

DATE	DESCRIPTION
OFFICE OF THE ENGINEER FORT STEWART, GEORGIA	
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART	
HOT WATER DISTRIBUTION PLAN - AREA 14	
LIBERTY COUNTY, GEORGIA	DATE: 8/20/14
DRAWN BY: J. McMILLIN	CHECKED BY: C. WOODS
DESIGN BY: J. McMILLIN	SCALE: 80% 8/20/14
SOLUTIONS NO. DCA02-0118-002	



FLAG NOTES
 ▲ CONTRACTOR TO PROVIDE BRANCH CONNECTORS WITH BEND FLANGES FOR FUTURE BUILDING SERVICES

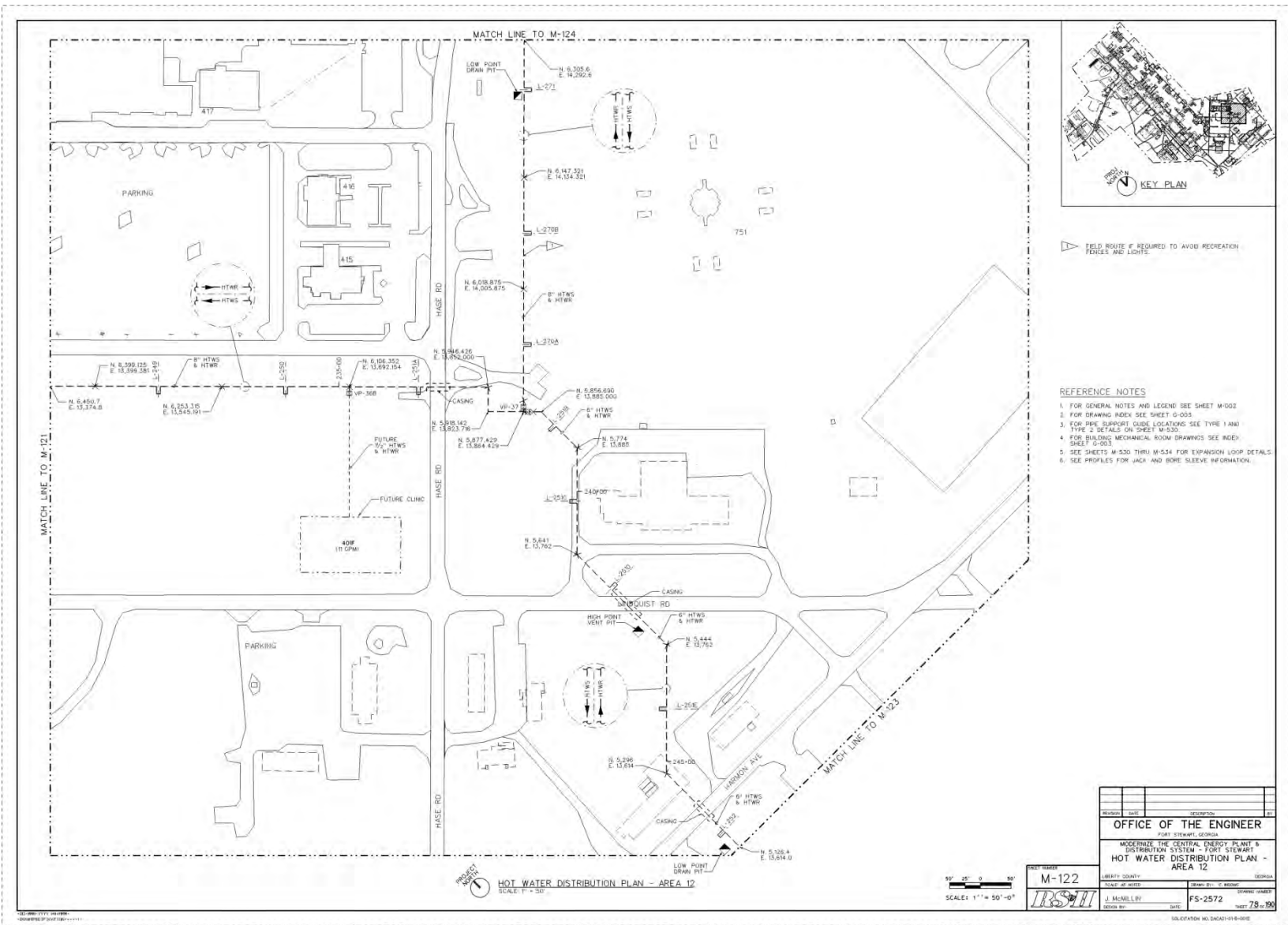
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002
 2. FOR DRAWING INDEX SEE SHEET C-003
 3. FOR PIPE SUPPORT GUIDE LOCATIONS SEE TYPE YAW TYPE 2 DETAILS ON SHEET M-235
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET C-003
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS
 6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION

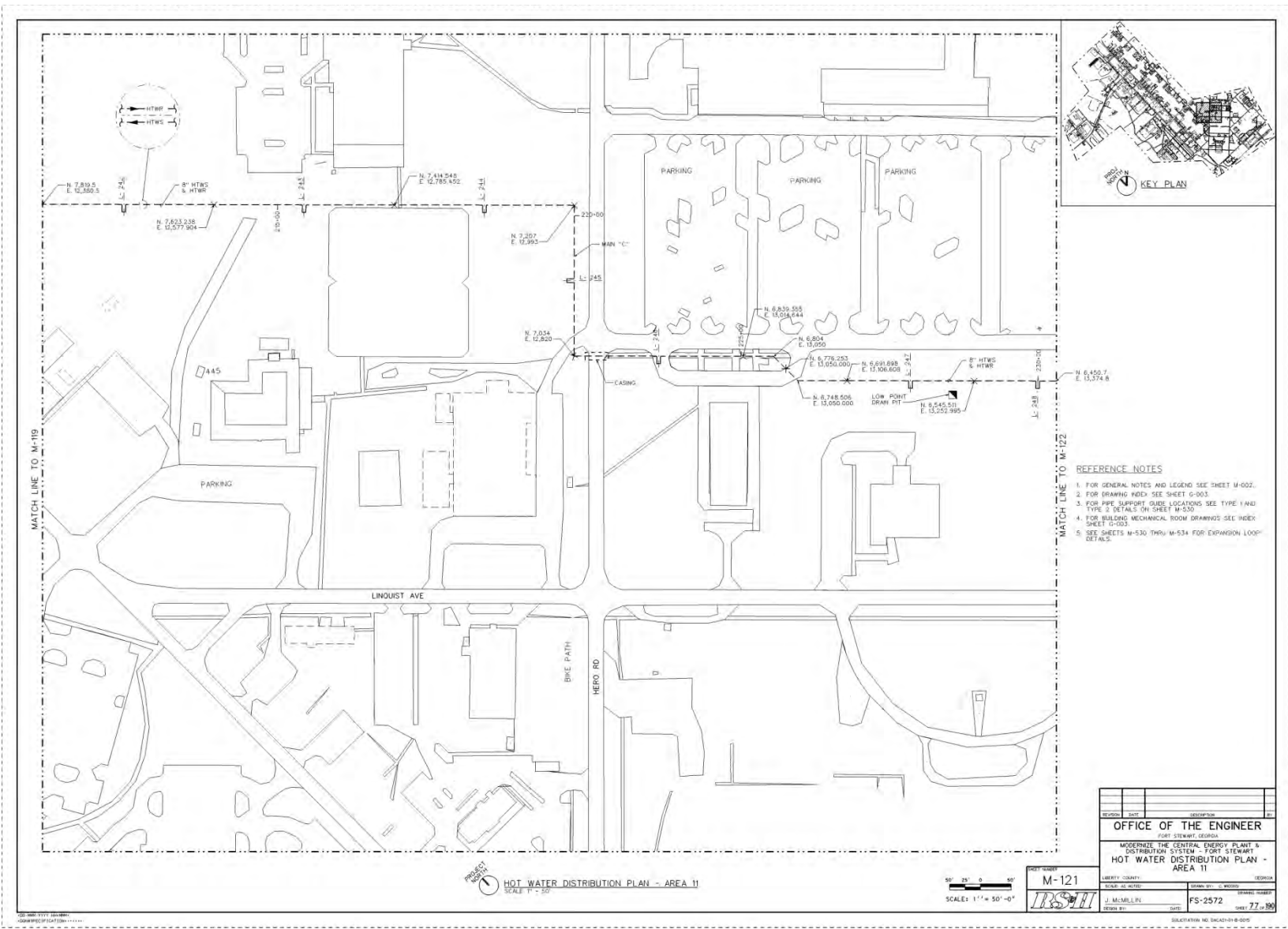
PROJECT NORTH
 HOT WATER DISTRIBUTION PLAN - AREA 13
 SCALE: 1" = 50'

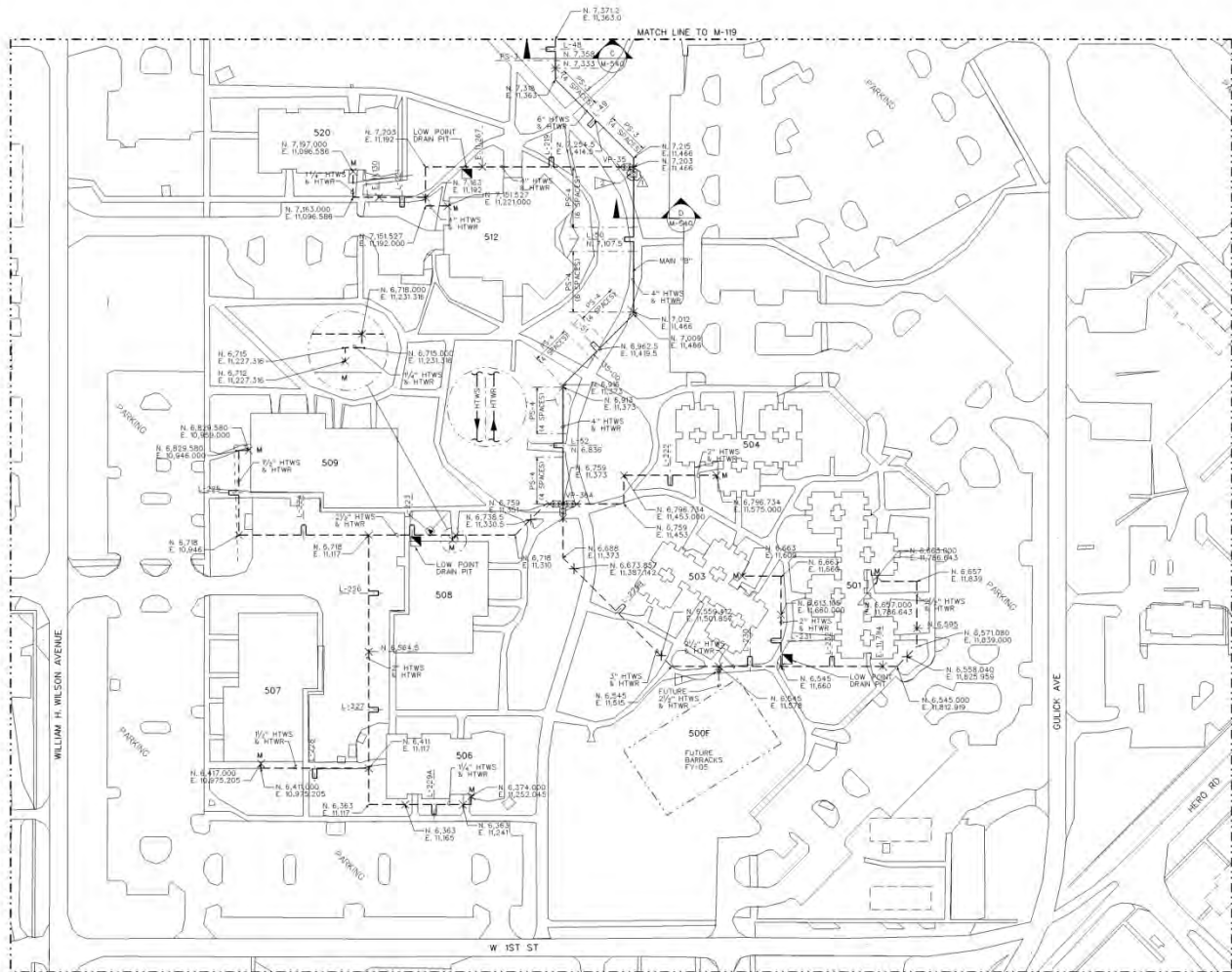
SCALE: 1" = 50'-0"

NO.	DATE	REVISION	BY
OFFICE OF THE ENGINEER			
FORT STEWART, GEORGIA			
MILNERVILLE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART			
HOT WATER DISTRIBUTION PLAN - AREA 13			
DESIGNER	LIBERTY COUNTY	DATE	
M-123			
BLANK AS NOTED			
J. McMILLIN		FS-2572	
			79 OF 80









FLAG NOTES

- CONTRACTOR TO INSTALL BRANCH CONNECTIONS WITH BLIND FLANGES FOR FUTURE BUILDING SERVICES.
- AT VE-35 PROVIDE MANHOLE ISOLATION VALVES.

REFERENCE NOTES

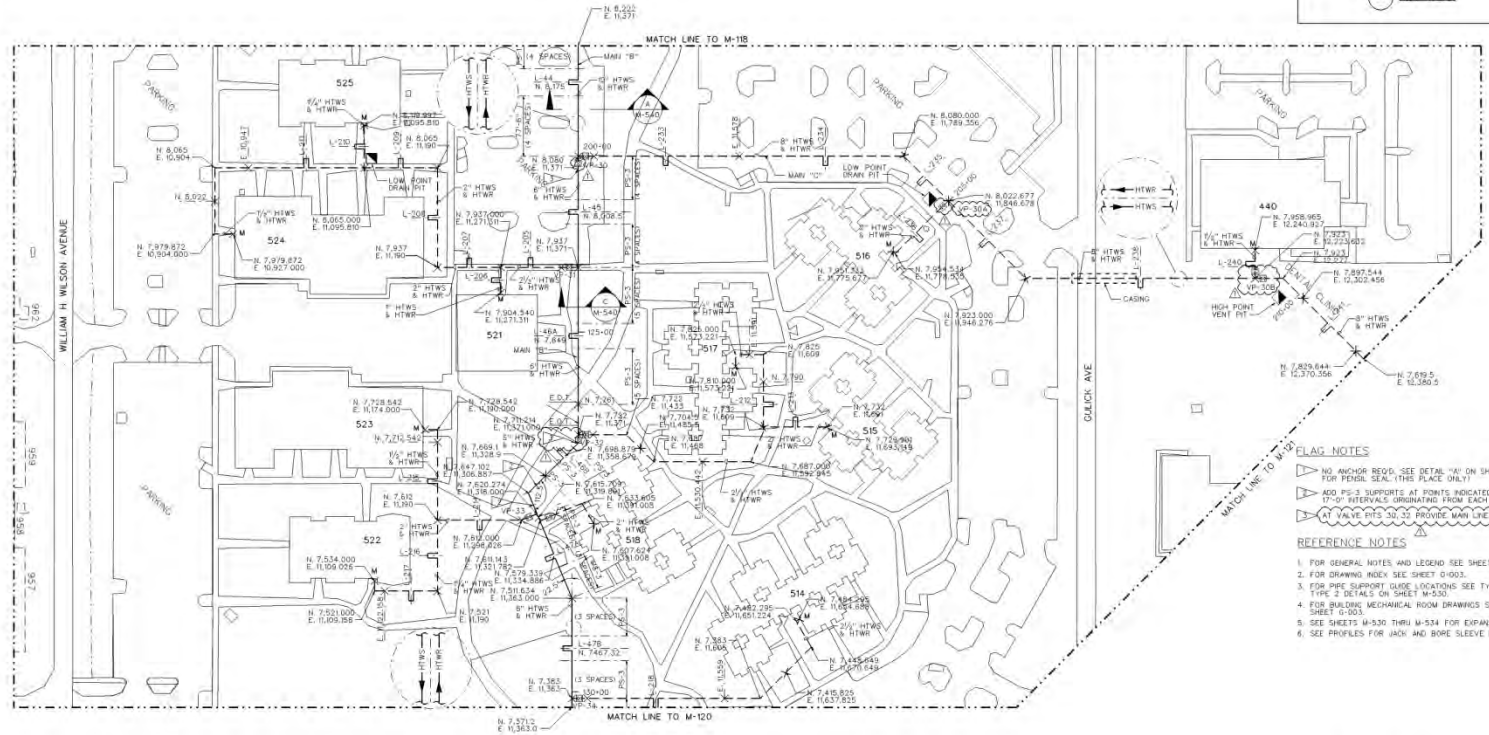
- FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
- FOR DRAWING INDEX SEE SHEET G-003.
- FOR PPE SUPPORT QUOTE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-550.
- FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET G-003.
- SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.

PROJECT NORTH
HOT WATER DISTRIBUTION PLAN - AREA 10
 SCALE: 1" = 50'-0"

SCALE: 1" = 50'-0"

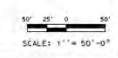


PROJECT NO.	M-120	DATE	7/6/11
CLIENT	ERDC/CERL	DRAWN BY	J. McMILLEN
CHECKED BY		DATE	7/6/11
OFFICE OF THE ENGINEER			
FORT STEWART, GEORGIA			
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART			
HOT WATER DISTRIBUTION PLAN - AREA 10			
PROJECT NO.	M-120	DATE	7/6/11
CHECKED BY		DRAWN BY	J. McMILLEN
CHECKED BY		DATE	7/6/11
SOLUTION NO. DCA21-11-005			



- FLAG NOTES**
- ▶ NO ANCHOR REQ'D. SEE DETAIL "A" ON SHEET M-543 FOR PENSL SEAL (THIS PLACE ONLY)
 - ▶ ADD PS-3 SUPPORTS AT POINTS INDICATED WITH 17'-0" INTERVALS ORIGINATING FROM EACH ANCHOR
 - ▶ AT VALVE FIES SW-23 PROVIDE MAIN LINE ISOLATION VALVES
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002
 2. FOR DRAWING INDEX SEE SHEET 0-003
 3. FOR PIPE SUPPORT GUIDE LOCATIONS SEE TYPE I AND TYPE II DETAILS ON SHEET M-250
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET 0-003
 5. SEE SHEETS M-930 THRU M-514 FOR EXPANSION LOOP DETAILS
 6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION

PROJECT NORTH
 HOT WATER DISTRIBUTION PLAN - AREA 9
 SCALE: 1" = 50'-0"



PROJECT NUMBER
M-119

DATE	REVISION	DESCRIPTION

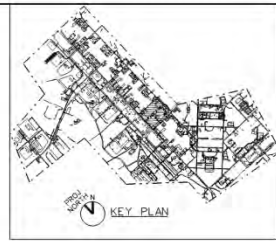
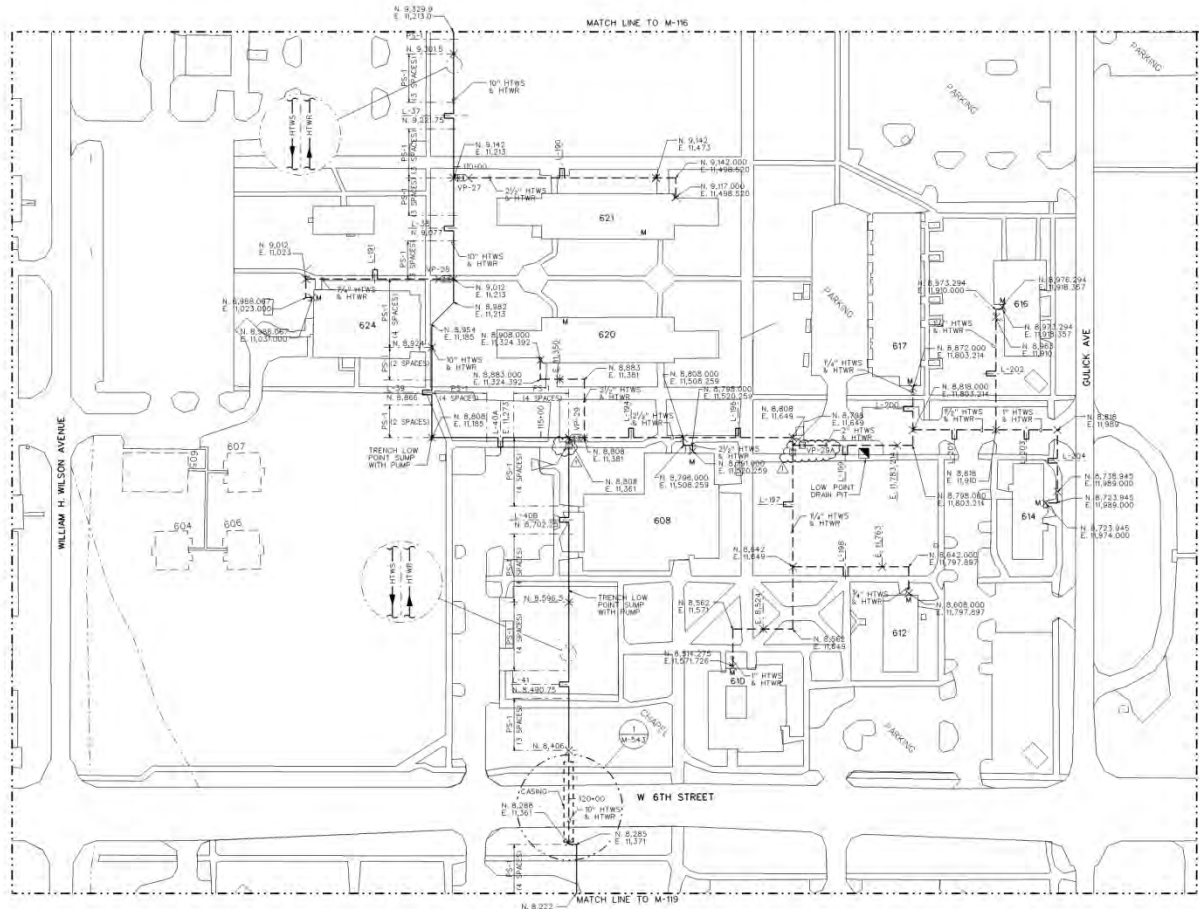
OFFICE OF THE ENGINEER
 FORT STEWART, GEORGIA

MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART
HOT WATER DISTRIBUTION PLAN - AREA 9

CLIENT COUNTY	DESIGNER
COUNTY OF HOUSTON	J. McLELLY
DRAWN BY: D. WOODRUFF	DATE: FS-2572
CHECKED BY: J. McLELLY	SCALE: 75% OF 100

SCALE: 1" = 50'-0"

SOLIDWORKS NO. 045421-018-0005



REFERENCE NOTES
 AT VALVE RT TO PROVIDE MAIN LINE SOLAR VALVES

- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
 2. FOR DRAWING INDEX SEE SHEET G-003.
 3. FOR PIPE SUPPORT GUIDE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-500.
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET G-003.
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.
 6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION.

HOT WATER DISTRIBUTION PLAN - AREA 8
 SCALE: 1" = 50'-0"

SCALE: 1" = 50'-0"




DATE	DESCRIPTION	BY
11/11/11	ISSUED FOR PERMIT	JM
11/11/11	REVISED	JM
OFFICE OF THE ENGINEER		
FORT STEWART, GEORGIA		
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART		
HOT WATER DISTRIBUTION PLAN - AREA 8		
PROJECT NUMBER	CLIENT	STATE
M-118	USMC	GEORGIA
DESIGNED BY	CHECKED BY	DATE
J. McMLLEN	F. S. 2572	11/11/11
SCALE	SHEET	TOTAL SHEETS
1" = 50'-0"	74	100

SCALE: 1" = 50'-0"

Appendix G: Consolidated Phase II and III Drawings for Forts Carson and Stewart

Fort Carson South Loop Phase II and Phase III Drawings

HIGH TEMPERATURE WATER DISTRIBUTION SYSTEM REVITALIZATION PROGRAM

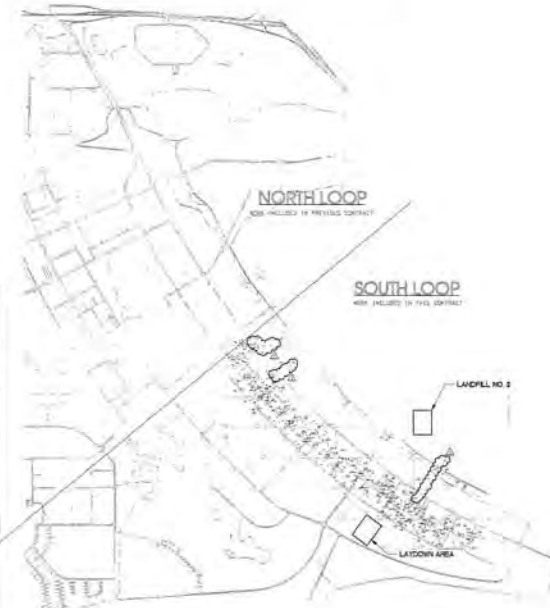


DRAWING LIST

G-101 - GENERAL NOTES AND SITE PREPARATION DETAILS
 C-201 - MANHOLE STRUCTURAL DETAILS

M-0 - SOUTH LOOP PIPING PLAN
 M-1 - PIPING PLAN
 M-2 - PIPING PLAN
 M-3 - PIPING PLAN
 M-4 - PIPING PLAN
 M-5 - PIPING PLAN
 M-6 - PIPING PLAN
 M-7 - PIPING PLAN
 M-8 - PIPING PLAN
 M-9 - PIPING PLAN
 M-10 - PIPING PLAN
 M-11 - PIPING PLAN
 M-12 - PIPING PLAN
 M-13 - PIPING PLAN
 M-14 - PIPING PLAN
 M-15 - PIPING PLAN
 M-16 - PIPING PLAN
 M-17 - PIPING PLAN
 M-18 - PIPING PLAN
 M-19 - PIPING PLAN
 M-20 - PIPING PLAN
 M-101 - BUILDING CONNECTION DETAILS
 M-102 - BUILDING CONNECTION DETAILS
 M-103 - BUILDING CONNECTION DETAILS
 M-104 - BUILDING CONNECTION DETAILS
 M-105 - BUILDING CONNECTION DETAILS
 M-201 - ROAD & UTILITY CROSSING & TRENCH DETAILS
 M-301 - MANHOLE PLAN DETAILS
 M-302 - MANHOLE PLAN DETAILS
 M-303 - MANHOLE PLAN DETAILS
 M-311 - MANHOLE TOP AND LADDER DETAILS
 M-312 - MANHOLE TOP STRUCTURAL DETAILS
 M-313 - MANHOLE TOP STRUCTURAL DETAILS
 M-314 - MANHOLE TOP STRUCTURAL DETAILS
 M-321 - EXISTING MANHOLE PLAN DETAILS
 M-322 - EXISTING MANHOLE PLAN DETAILS

M-201 - PIPE HANGER AND SUPPORT DETAILS
 M-201 - DIRECT-BURIED PIPING DETAILS
 M-201 - MANHOLE PIPING DETAILS
 M-710 - MECHANICAL ROOM CONNECTION DETAILS
 M-711 - MECHANICAL ROOM CONNECTION DETAILS
 M-801 - PIPING PROFILE DETAILS
 M-802 - PIPING PROFILE DETAILS
 M-803 - PIPING PROFILE DETAILS
 M-804 - PIPING PROFILE DETAILS
 M-805 - PIPING PROFILE DETAILS
 M-806 - PIPING PROFILE DETAILS
 M-807 - PIPING PROFILE DETAILS
 M-810 - PIPING PROFILE DETAILS
 M-811 - PIPING PROFILE DETAILS
 M-812 - PIPING PROFILE DETAILS
 M-813 - PIPING PROFILE DETAILS
 M-814 - PIPING PROFILE DETAILS
 M-815 - PIPING PROFILE DETAILS
 M-816 - PIPING PROFILE DETAILS
 M-817 - PIPING PROFILE DETAILS
 M-818 - PIPING PROFILE DETAILS
 E-101 - ELECTRICAL DETAILS
 E-102 - UNDERGROUND POWER PARTIAL SITE PLANS




NORTH LOOP
NOT INCLUDED IN PREVIOUS CONTRACT

SOUTH LOOP
NOT INCLUDED IN THIS CONTRACT

LANDFILL # 2
 LAYDOWN AREA

As Built Red Line Drawing 2 South Loop
 7.0.20.141
 Preliminary drawing
 Plans will be provided as final drawings are available

PROJECT	Fort Carson, Colorado
DATE	7/0.20.141
SCALE	AS SHOWN
DESIGNED BY	ERDC/CERL
CHECKED BY	ERDC/CERL
APPROVED BY	ERDC/CERL



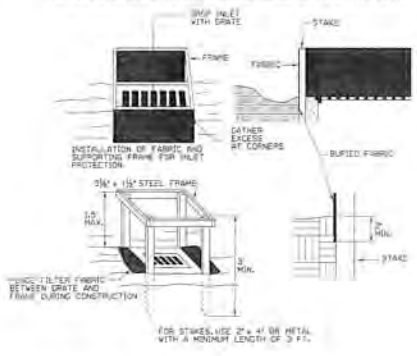
GENERAL NOTES:

1. GENERAL NOTES SHALL APPLY TO ALL SHEETS, UNLESS OTHERWISE INDICATED BY NOTES ON EACH SHEET.
2. UNLESS OTHERWISE INDICATED, ROADWAYS ARE ASPHALT PAVEMENT.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL BELOW GRADE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION WORK. REFERENCES DRAWINGS INDICATING APPROXIMATE LOCATION OF KNOWN UTILITIES ARE INCLUDED IN THIS SET & AVAILABLE UPON WRITTEN REQUEST FROM THE DPM.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING SITE CONDITIONS TO ORIGINAL OR BETTER CONDITION. THIS INCLUDES, BUT IS NOT LIMITED TO FENCING, CURBS, LANDSCAPING, SIDEWALKS, DRAINAGE CHANNELS, PAVEMENT, DRIVEWAYS, EXISTING PIPING, INSULATION AND JACKING AND EQUIPMENT.
5. ALL DISTURBED AREAS SHALL BE FINAL GRADED AND RE-SEED.
6. ONLY ITEMS SCHEDULED FOR REMOVAL OR REPLACEMENT REQUIRE ABATEMENT OF ASBESTOS. ALL OTHER ASBESTOS CONTAINING MATERIAL (ACM) SHALL REMAIN IN PLACE.
7. CONTRACTOR WILL BE RESPONSIBLE FOR REMOVAL OF IDENTIFIED ASBESTOS. DISPOSAL OF ASBESTOS TO BE PERFORMED BY GOVERNMENT. CONTRACTOR WILL BE GRANTED EQUITABLE CONSIDERATION FOR REMOVAL OF UNIDENTIFIED ASBESTOS ON A CASE BY CASE BASIS.
8. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE (COR) OF ANY COMPONENT THAT HAS NOT BEEN IDENTIFIED AS ASBESTOS BUT IS SUSPECTED TO CONTAIN ASBESTOS AND LOCATED IN WORK AREAS.
9. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR FINAL LAYOUT AND ALIGNMENT OF NEW PIPE.
10. CONTRACTOR SHALL OBTAIN AN APPROPRIATE DIG PERMIT PRIOR TO PERFORMING ANY EXCAVATION FROM THE LEAD DIG PERMIT OFFICE. CONTRACTOR SHALL STOP WORK IMMEDIATELY IF ANY ITEMS ARE ENCOUNTERED DURING EXCAVATION THAT MAY HAVE A HISTORICAL OR CULTURAL VALUE. CONTAMINATED SOIL MAY NOT BE USED FOR BACKFILL OR LAND FILL, AND MUST BE DISPOSED OF PROPERLY. CONTRACTOR SHALL REQUEST UTILITY DETAIL.
11. TRANSPORTATION OF EQUIPMENT THAT EXCEEDS THE SIZE, WEIGHT OR HAZARDOUS MATERIAL REQUIREMENTS OF THE STATE SHALL BE PROPERLY ESCORTED.
12. MATERIAL LAYDOWN AREAS ARE SHOWN ON THE COVER SHEET. TEMPORARY LAYDOWN AREAS FOR PIPING MAY ALSO INCLUDE AREAS ADJACENT TO EXCAVATION TRENCH, DO NOT BLOCK FIRE LINES OR INTERFERE WITH MILITARY OPERATIONS. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN & EXCAVATION SIGN PLAN (H) PRIOR TO STARTING CONSTRUCTION.
13. PLAN SHALL INCLUDE THE FOLLOWING:
 1. STREET CLOSURES WITH DATES & TIMES (ALL CLOSURES MUST BE APPROVED BY SPN).
 2. PARTIAL STREET CLOSURES WITH DATES (ALL CLOSURES MUST BE APPROVED BY SPN).
 3. METHOD OF COVERING EXCAVATION IN TRAFFIC AREAS.
 4. METHOD OF CHANNELING TRAFFIC IN TRAFFIC AREAS.
 5. METHOD OF DIRECTING TRAFFIC IN THE EVENT OF LANE CLOSURES.
 6. METHOD OF CHANNELING EXCAVATION IN NON-TRAFFIC AREAS.
 7. NUMBER & TYPES OF SIGNS AT EACH EXCAVATION.
14. REPLACE DAMAGED HYDROPHONE WIRES TO MATCH EXISTING. REPAIR, REPLACEMENT, OR RELOCATION OF EXISTING UTILITIES SHALL BE ON AN AS NEEDED BASIS WHEN AN INTRUSION IS ENCOUNTERED WITH THE NEW PIPING SYSTEM. UTILITIES NOT PREVIOUSLY IDENTIFIED AS KNOWN INTERFERENCES ON THESE DESIGN DOCUMENTS WILL BE CONSIDERED A CHANGE IN EXISTING SITE CONDITIONS AND WILL BE DISCARDED WITH THE AREA ENGINEERING OFFICE PRIOR TO ANY REPAIR, REPLACEMENT, OR RELOCATION. REPAIR, REPLACEMENT OR RELOCATION SHALL BE CONDUCTED USING CURRENT GOVERNMENT APPROVED INDUSTRIES MATERIALS AND TECHNIQUES.
15. WHEN BENEATH BELOW GRADE OF UTILITIES IS NOT SHOWN CONTRACTOR SHALL ASSUME THE FOLLOWING:

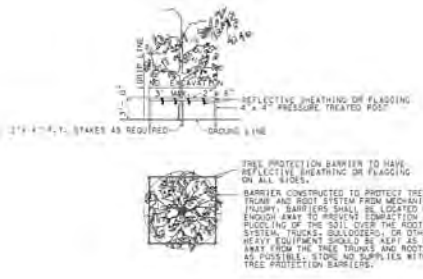
WATER - 48"-60" DEEP	ELECTRICAL (HYDRO) - 48" DEEP
GAS - 30"-36" DEEP	ELECTRICAL (SIGNALING) - 24"-36" DEEP
TELEPHONE - 24" DEEP	FIBER OPTICS (COMMUNICATION) - 36" DEEP
STORM SEWER, SANITARY SEWER, HIGH TEMPERATURE WATER, CHILLED WATER ... VARIES	

SITE PREPARATION NOTES:

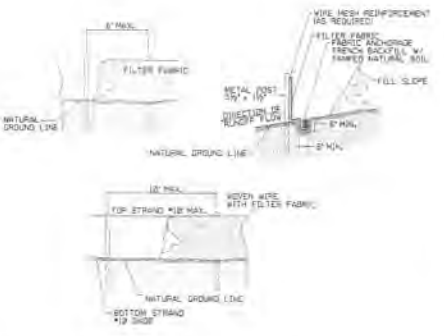
1. FILTER FABRICS SHALL CONFORM TO SPECIAL PROVISIONS CONTAINED IN THE SPECIFICATIONS FOR THIS PROJECT.
2. WOVEN WIRE FENCE SHALL BE REQUIRED AS A BACKING FOR FILTER FABRIC WITH AN ELONGATION AS DETERMINED BY ASTM D 882, OF 20% OR GREATER. THE WIRE FENCE SHALL BE A MINIMUM OF 34 INCHES IN WIDTH AND SHALL HAVE A MINIMUM OF 8 LINE WIRES WITH 12 INCH STAY SPACING.
3. STEEL POST SHALL BE A MINIMUM OF 8 FEET LONG WITH A MINIMUM OF 1.5 LB/SYD² AND HAVE PROJECTIONS FOR FASTENING THE WIRE ON THE FABRIC TO THE POST. STEEL POST SHALL ALSO HAVE A METAL PLATE SECURELY ATTACHED SUCH THAT WHEN THE POST IS DRIVEN TO PROPER DEPTH THE PLATE WILL BE BELOW ORIGINAL LEVEL FOR ADDITIONAL STABILITY. POST SHALL BE INSTALLED TO A DEPTH DIRECTED BY THE ENGINEER WITH 1 TO 3 INCHES OF THE POST PROTRUDING ABOVE THE TOP OF THE WIRE FENCE OR FABRIC BEING IDEAL, BUT IN ANY CASE, NO MORE THAN 3 FEET OF THE POST SHALL PROTRUDE ABOVE THE DRAINAGE.
4. WHEN WOVEN WIRE IS NOT REQUIRED, POST SPACING WILL BE REDUCED TO A MAXIMUM OF 6 FEET ON CENTER. FABRIC SHALL BE ATTACHED TO STEEL POST USING THE WIRE NUMBER AND LOCATION OF FASTENERS WILL BE AS DIRECTED BY THE ENGINEER IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC, BUT IN ALL CASES, ATTACHED TO THE POST IN NO LESS THAN FOUR PLACES. WHEN WOVEN WIRE IS USED, THE WIRE WILL BE STITCHED TO THE POST. AN IDENTIFIED FABRIC AND THE FILTER FABRIC SHALL BE TIED TO THE FENCE AS DIRECTED BY THE ENGINEER IN SUCH A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. WHERE SILT FENCE IS USED ACROSS A SWALE INCLUDE THE USE OF A STAKED ROW OF STAKE BALES OR CHECK DAM.



1 SILT FENCE AROUND INLET SCALE: NONE



2 TEMPORARY PROTECTION BARRIER FOR TREES SCALE: NONE



3 TEMPORARY SILT FENCE SCALE: NONE



NO.	DATE	BY	DESCRIPTION

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

DATE: [Date]

SCALE: [Scale]

PROJECT NO.: [Project Number]

DATE OF ISSUE: [Date]

REVISIONS:

NO. [] DATE [] BY [] DESCRIPTION []

NO. [] DATE [] BY [] DESCRIPTION []

NO. [] DATE [] BY [] DESCRIPTION []

GENERAL NOTES & SITE PREPARATION DETAILS

Sheet Reference Number: C-101

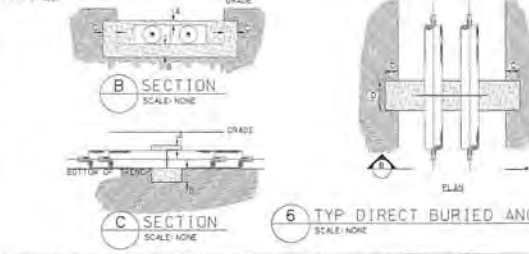


MANHOLE SCHEDULE

MANHOLE NO.	WALL DIMENSIONS		WALL INFORMATION		BASE SLAB REINFORCEMENT		LO SLAB REINFORCEMENT		NUMBER OF LIFTING INSERTS	THICKNESS (IN)
	WEDGE DIMENSIONS	HEIGHT	THICKNESS	REINFORCEMENT	BOTTOM REINP.	TOP REINP.	SECTION REINP.	TOP REINP.		
MN-1	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-2	14x14	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-3	REMOVED									
MN-4	10x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-5	10x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-6	10x10	10'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-7	8x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	8"
MN-8	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-9	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-10	10x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-11	REMOVED									
MN-12	8x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-13	10x14	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-14	EXISTING									
MN-15	EXISTING									
MN-16	10x14	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	8"
MN-17	10x14	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-18	8x10	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	8"
MN-19	14x14	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-20	10x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-21	8x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-22	8x10	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-23	EXISTING									
MN-24	EXISTING									
MN-25	10x12	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-26	10x12	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	8"
MN-27	10x14	10'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-28	8x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	8"
MN-29	REMOVED									
MN-30	14x14	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-31	8x10	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-32	8x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-33	8x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-34	EXISTING									
MN-35	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	10"
MN-36	8x10	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-37	10x12	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-38	10x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-39	8x10	8'-0"	8"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-40	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-41	EXISTING									
MN-42	8x10	7'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	YES	#5@20" C EA WAY	4	10"
MN-43	REMOVED									
MN-44	REMOVED									
MN-45	14x14	9'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-47	12x12	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-48	10x10	10'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		
MN-49	REMOVED									
MN-50	10x10	8'-0"	10"	#5@20" C	#5@20" C EA WAY	#5@20" C EA WAY	NO	NO		

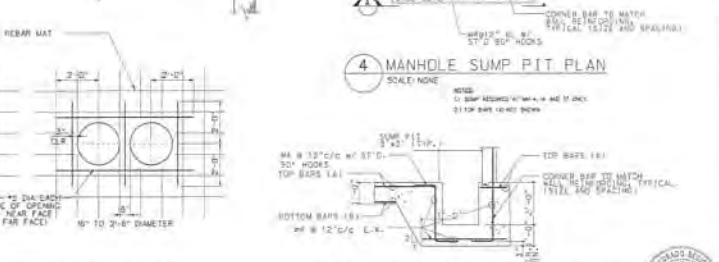
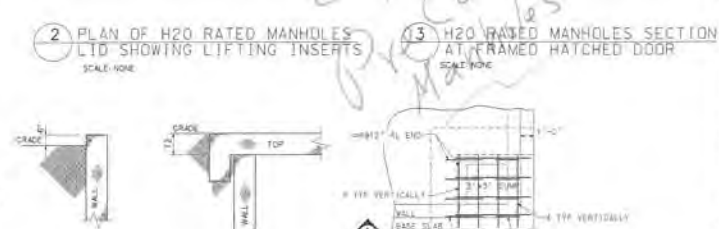
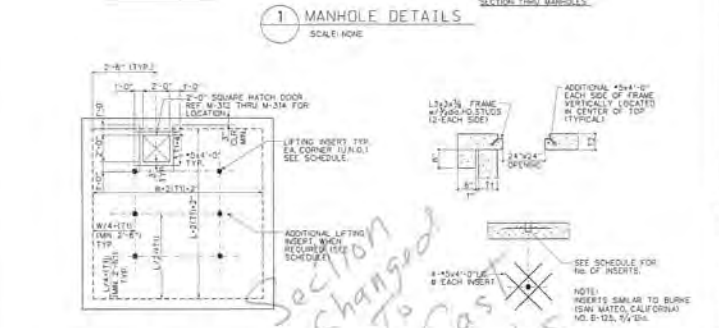
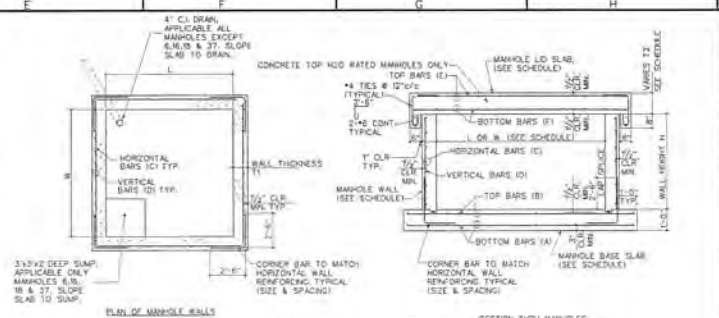
NOTES:

1. REQUIRES SUMP PUMP AND SUMP PIT AS SHOWN ON DETAIL 4 THIS SHEET.
2. ** IF CONC. LG IS NOT REQUIRED REFERENCE SHEETS M-312, M-313 & M-314 FOR 7.5" MIN. METAL COVER AND DESIGN LOADINGS.
3. MANHOLE HEIGHT 7" IS TOP OF SLAB TO GRADE.
4. MANHOLE WALLS ADDITIONALLY EXTEND 8" ABOVE GRADE, WITH THE EXCEPTION OF H2O RATED MANHOLES.
5. H2O RATED MANHOLE TOPS ARE TO BE FLUSH WITH GRADE. TOP OF WALLS SHALL BE 7/8" (TOP THICKNESS) MINUS LESS THAN GRADE.
6. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
7. 1.5" MIN. METAL COVER REQUIRED FOR ALL REINFORCEMENT. THE MIN. SIZE & NUMBER OF BARS SHALL BE AS SHOWN ON THIS SCHEDULE. UNLESS NOTED OTHERWISE, WALLS (INSIDE FACE) SHALL BE REINFORCED AS FOLLOWS: UNLESS NOTED OTHERWISE, CONCRETE SHALL BE 3000 PSI. TOP: 2" CLEAR; BOTTOM: 1.5" CLEAR; (STRIPS): 1" CLEAR.



PIPE SIZE	FRP JACKET SIZE	A	B	C	D
UNDER 3"	UNDER 13"	3"	9"	9"	18"
4" THRU 8"	13" THRU 18, 25"	3"	12"	9"	24"
10" THRU 12"	20, 25" THRU 24, 25"	3"	18"	18"	36"

* BASED ON A MINIMUM SOIL BEARING OF 1000psf.

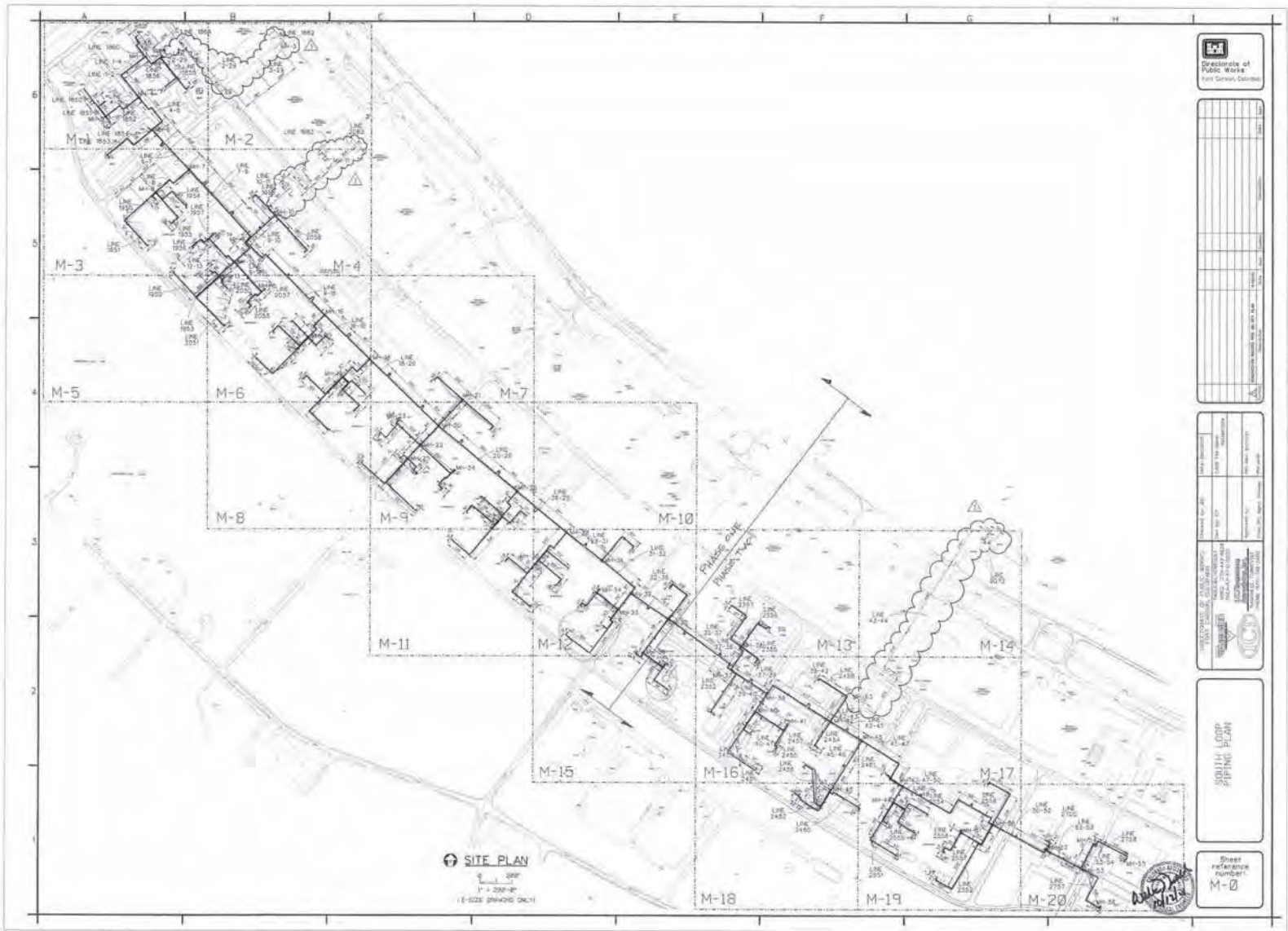


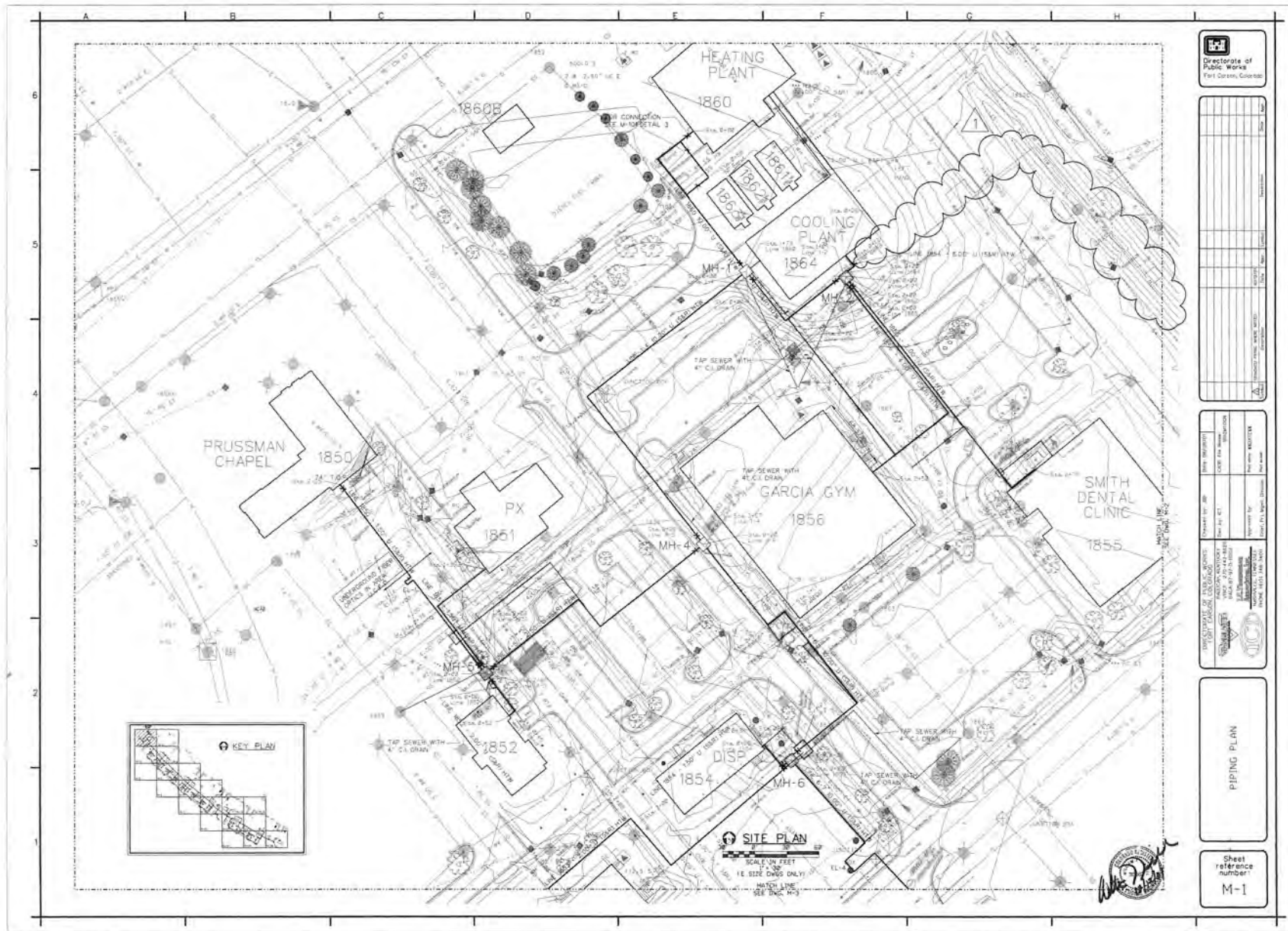
Structorate of Public Works
Port Cities Council

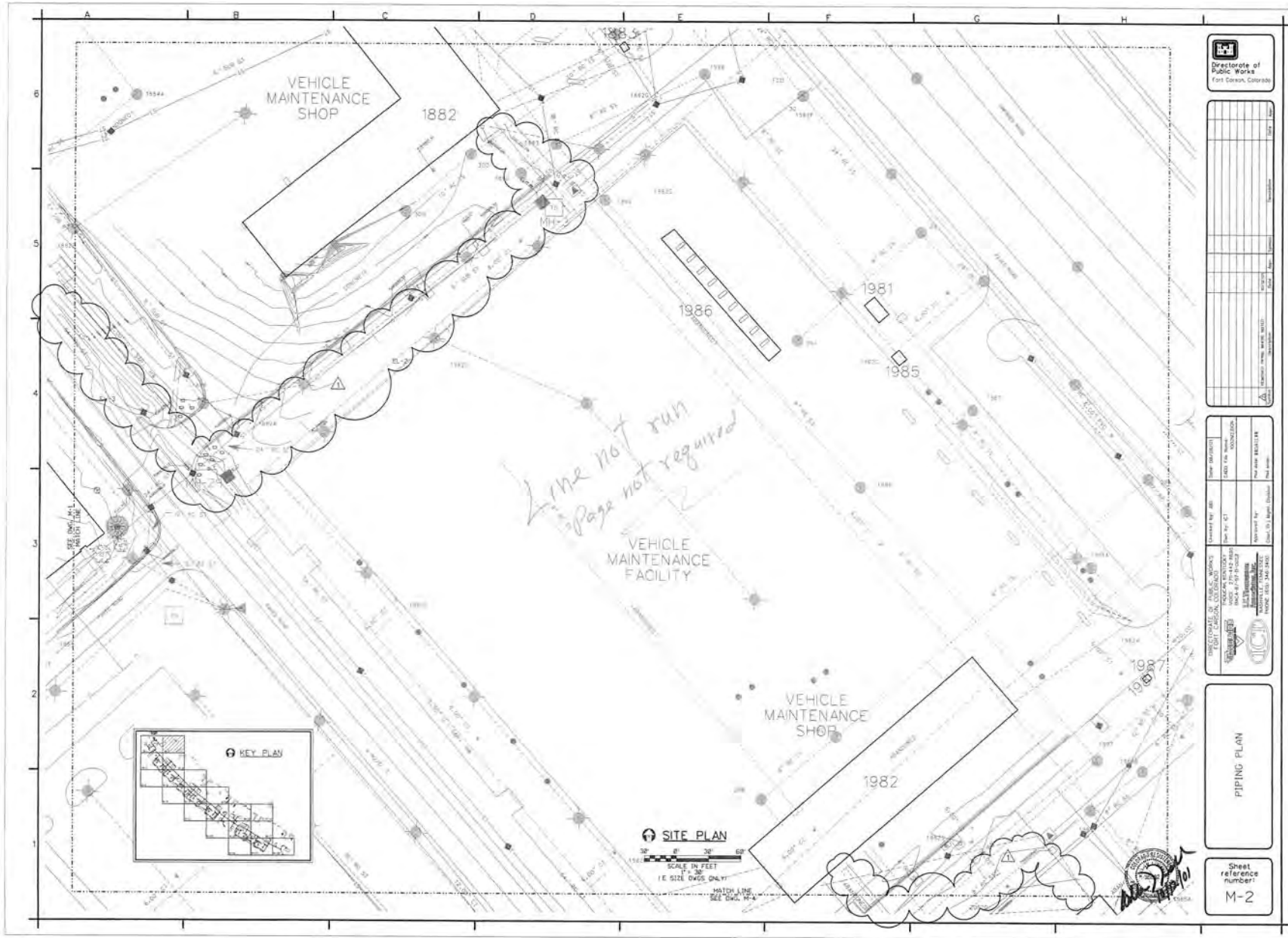
PROJECT:
SHEET:
DATE:
BY:
CHECKED:
APPROVED:
SCALE:
DRAWN BY:
DATE:
BY:
CHECKED:
APPROVED:
SCALE:
DRAWN BY:
DATE:

MANHOLE STRUCTURAL DETAILS

Sheet reference number **C-201**







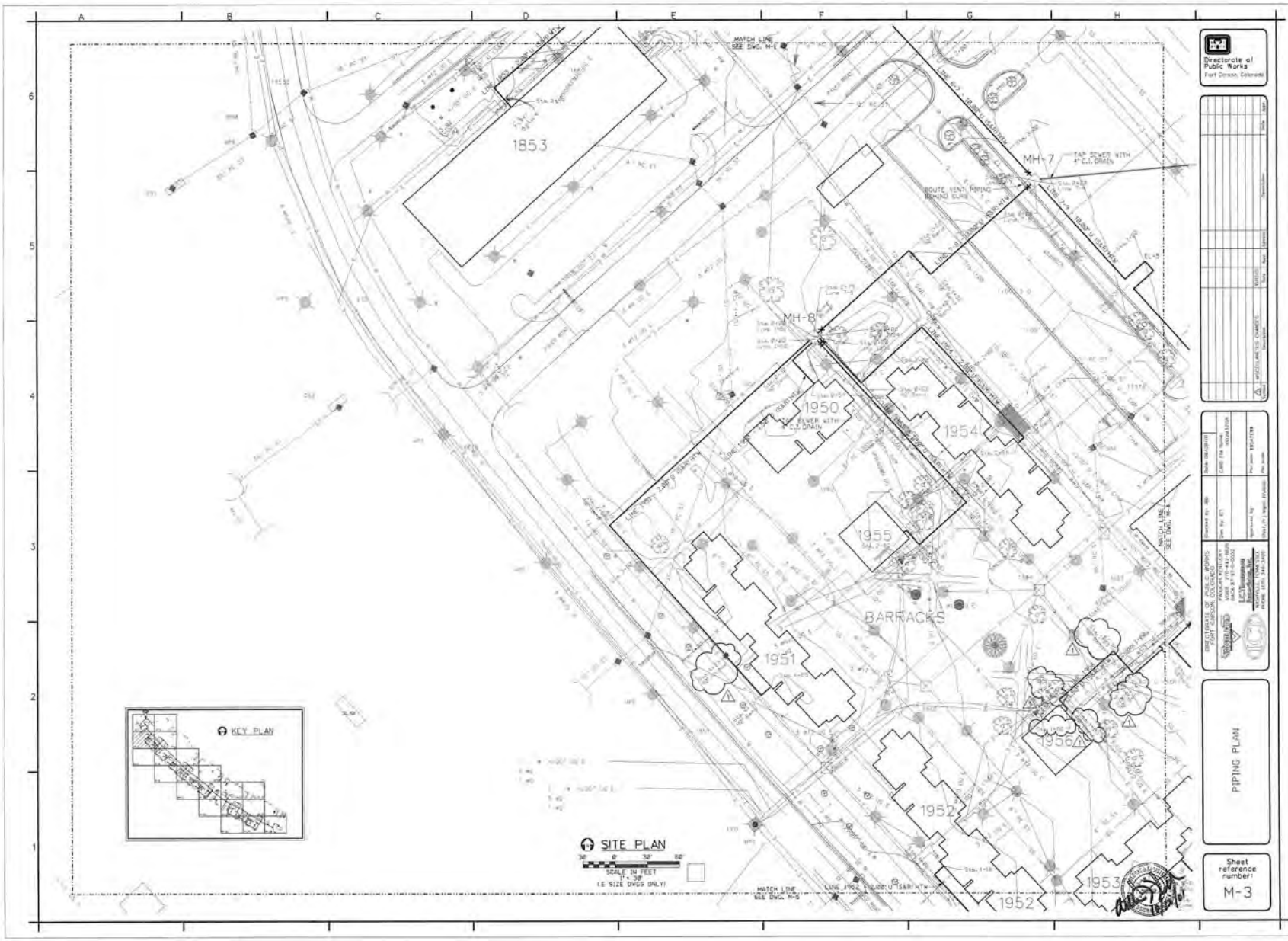
Directorate of
Public Works
Fort Carson, Colorado

DATE		BY	

PROJECT TITLE	
PROJECT NUMBER	
DESIGNER	
CHECKED BY	
DATE	

PIPING PLAN

Sheet
reference
number
M-2



Directorate of Public Works

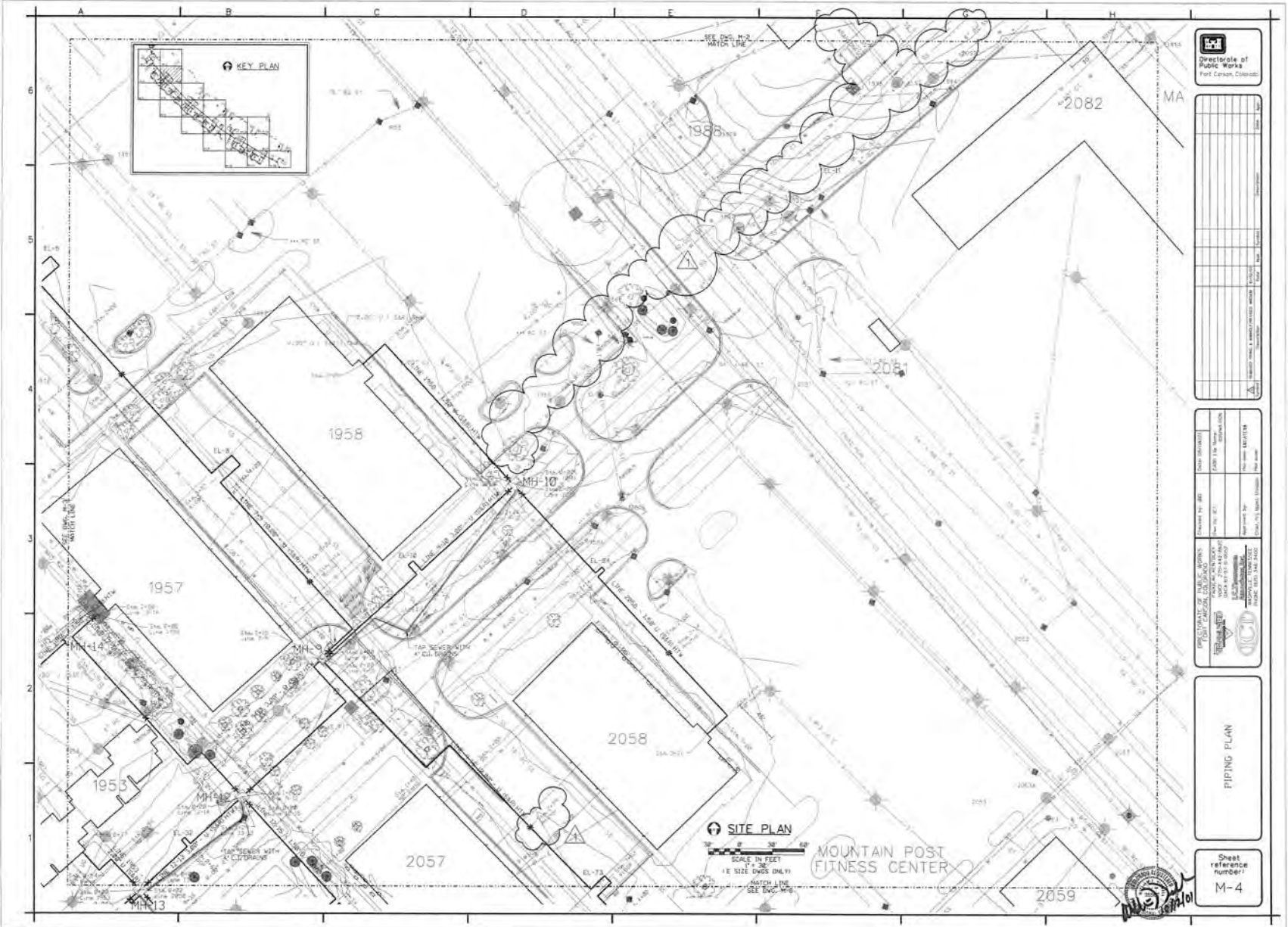
 Fort Carson, Colorado

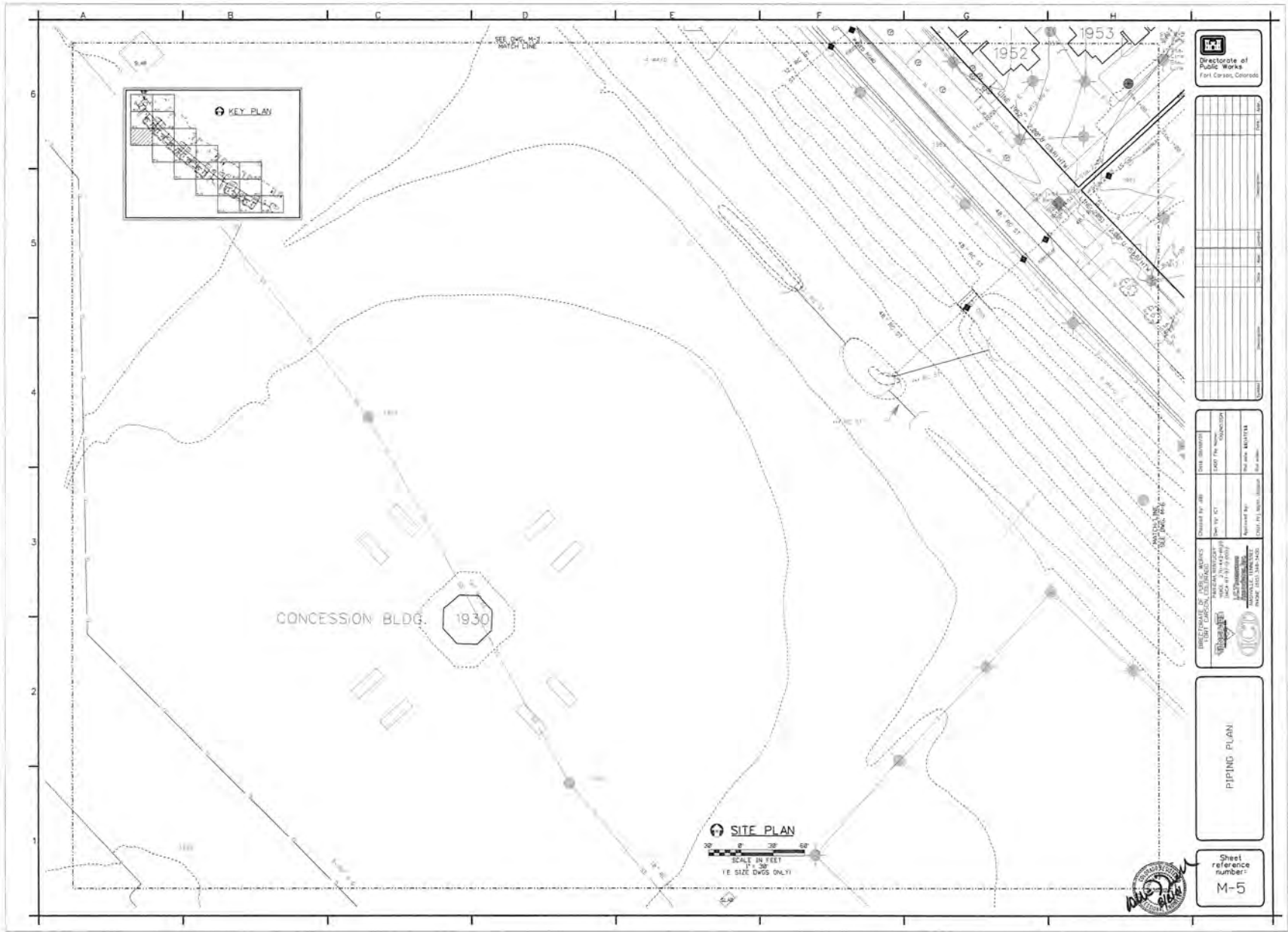
NO.	DATE	BY	CHKD.	DESCRIPTION

PROJECT NO. 11-14-001
 DATE FOR ISSUE 11/14/14
 DRAWN BY J. J. [Signature]
 CHECKED BY [Signature]
 PROJECT MANAGER [Signature]
 APPROVED BY [Signature]
 DATE 11/14/14

PIPING PLAN

Sheet reference number:
M-3





Colorado of
Public Works
Fort Carson, Colorado

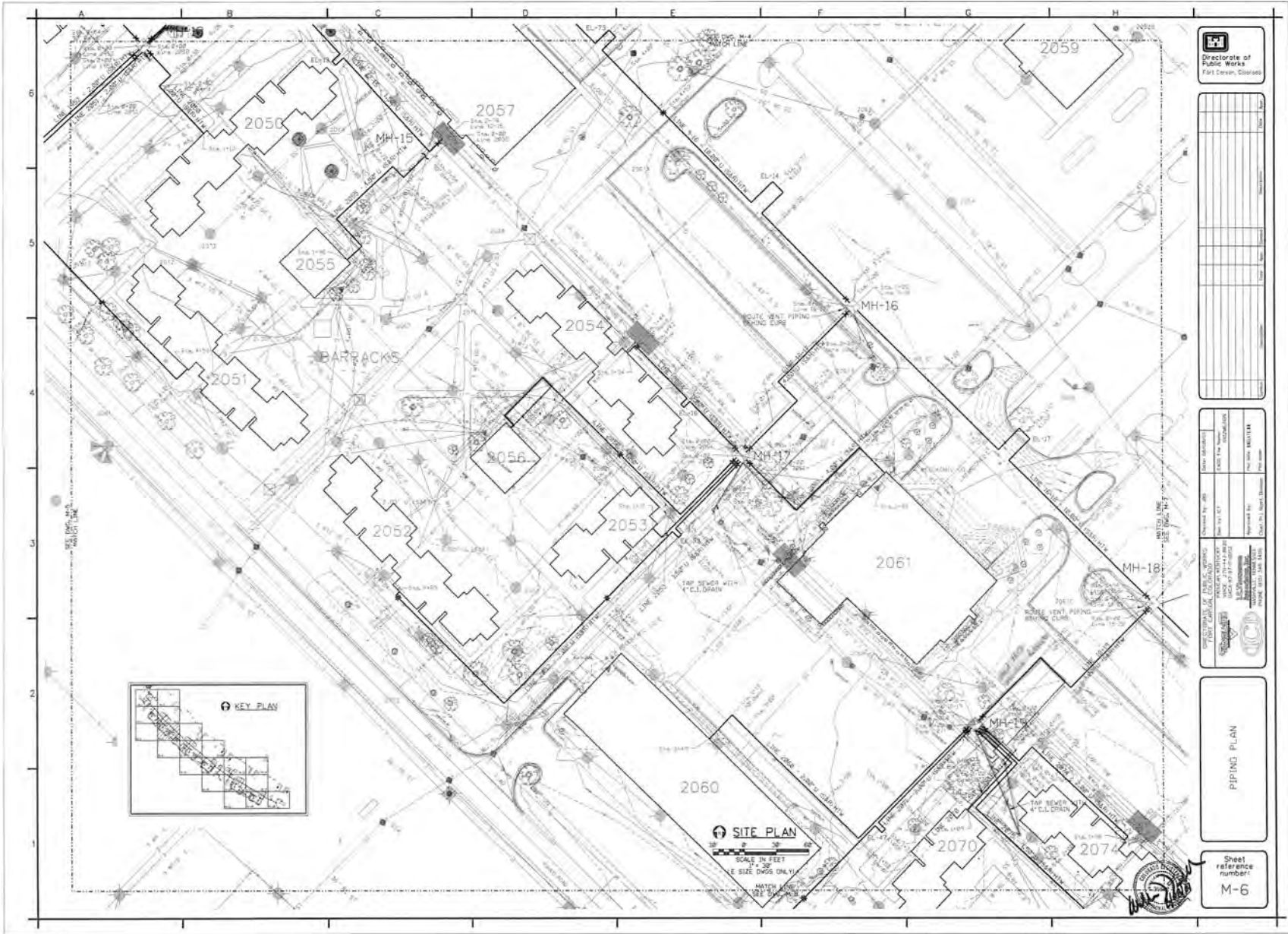
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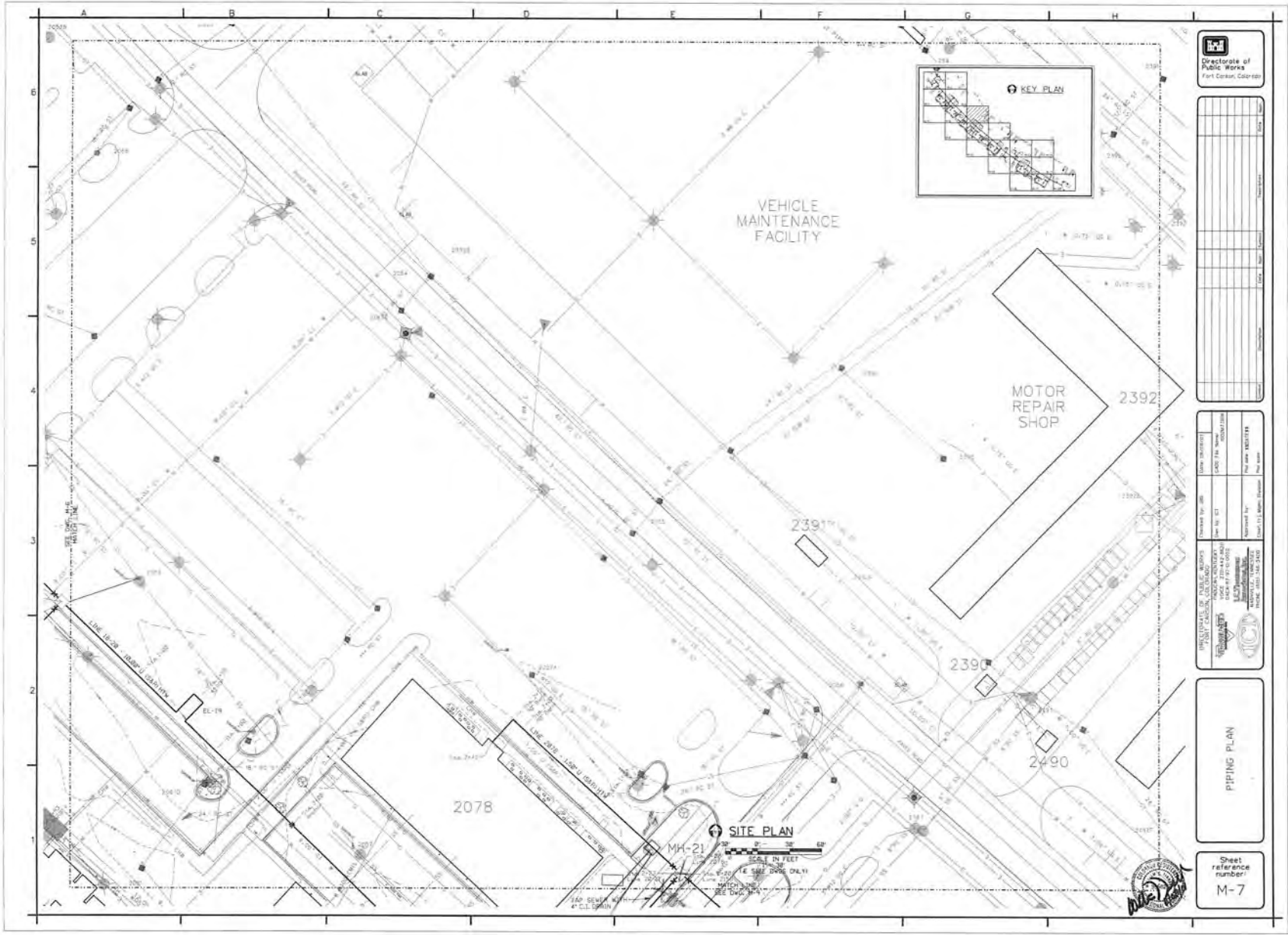
PROJECT NAME: CONN. SERVICES BUILDING
 CLIENT: COLORADO STATE POLICE
 DRAWING NO.: 17-11-14-001
 DATE: 11/11/14
 SCALE: AS SHOWN
 DRAWN BY: JACOBSON
 CHECKED BY: JACOBSON
 APPROVED BY: JACOBSON
 PROJECT NO.: 17-11-14-001

PIPING PLAN

Sheet
reference
number:
M-5







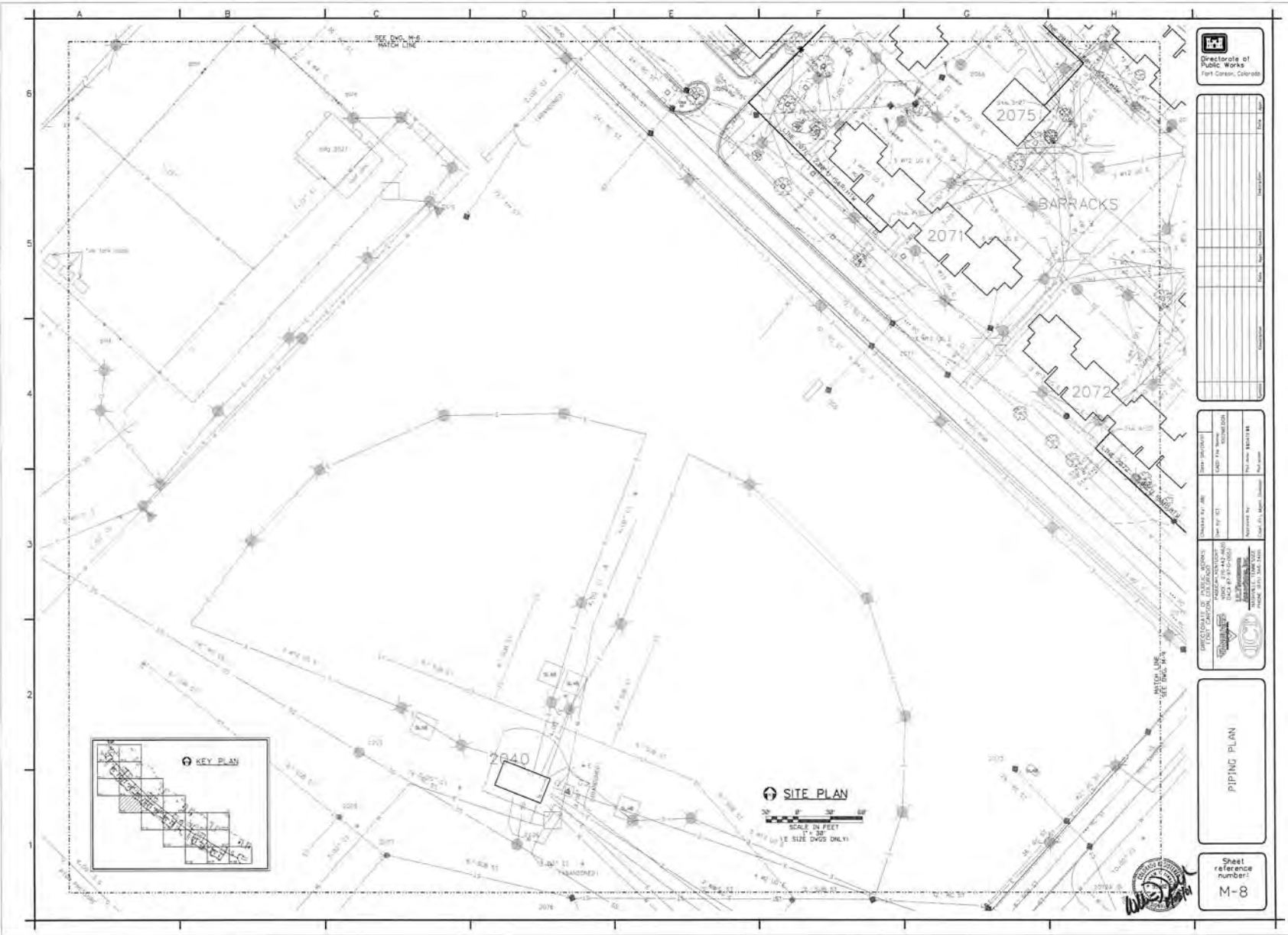
Directorate of Public Works
Fort Collins, Colorado

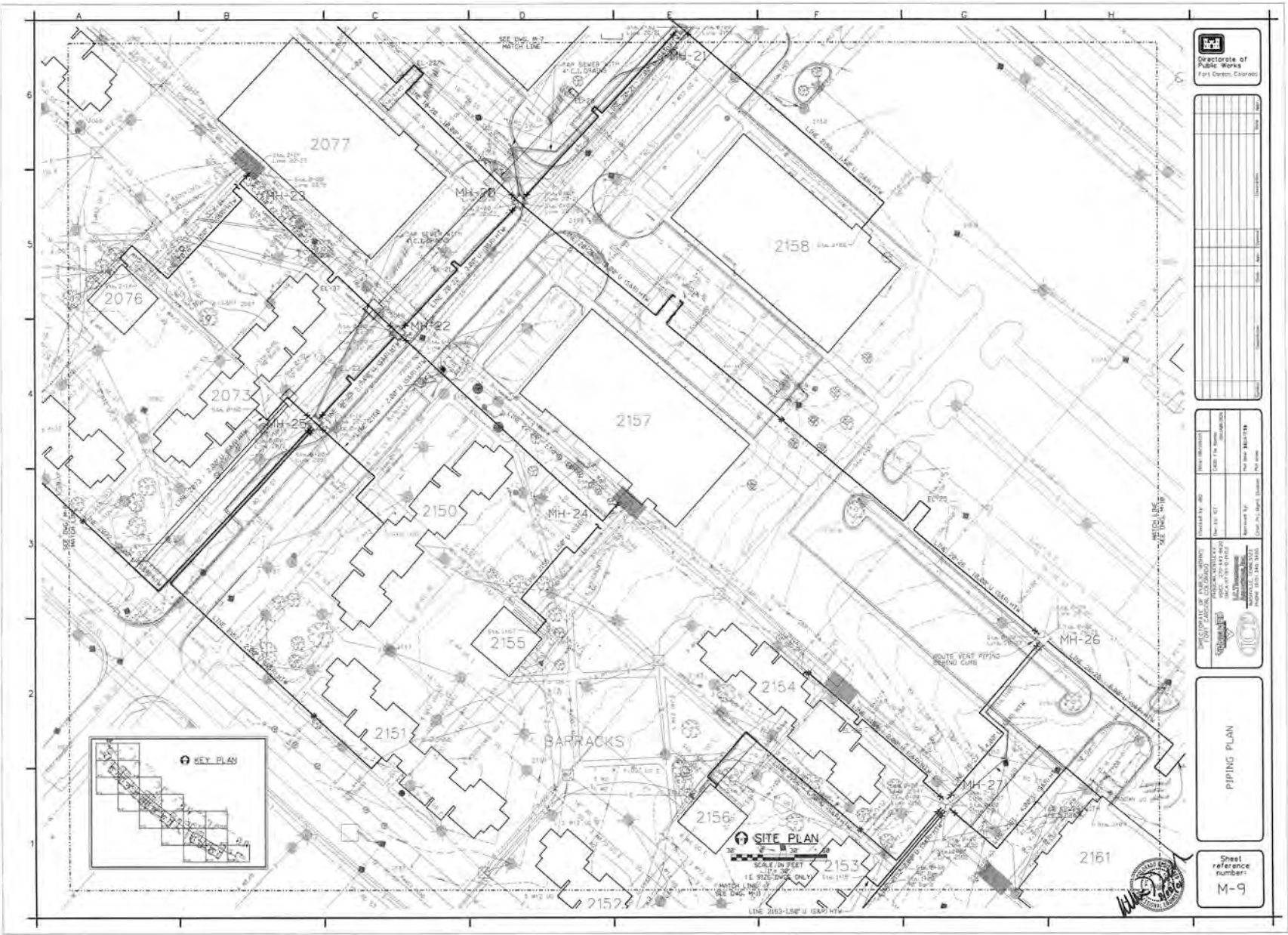
NO.	DATE	DESCRIPTION	BY	CHECKED

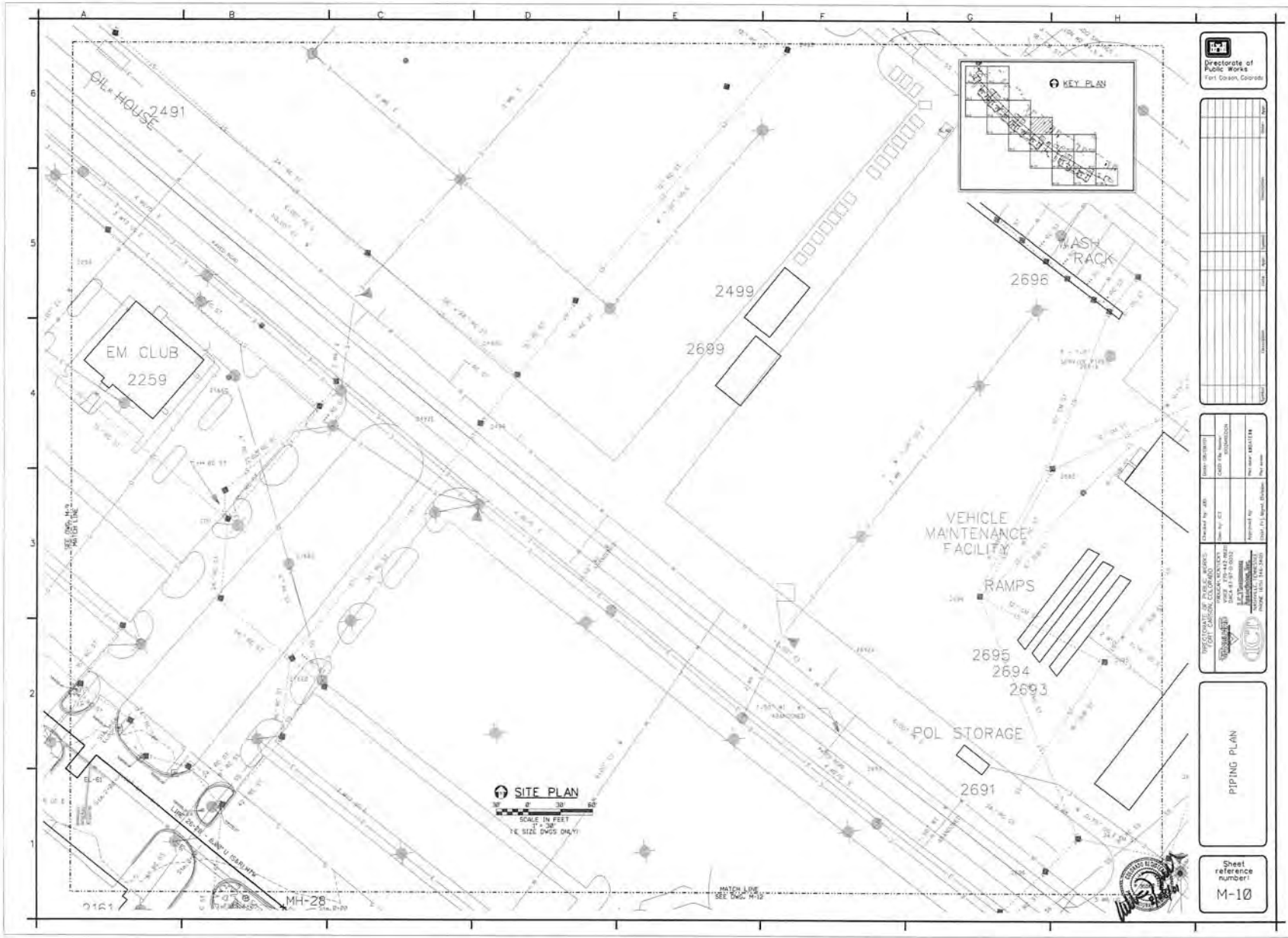
Project No. 0000000000
 Date: 01/11/2011
 Scale: 1" = 30' (Horizontal), 1" = 10' (Vertical)
 Drawn by: [Name]
 Checked by: [Name]
 Approved by: [Name]
 Title: PIPING PLAN
 Project: [Name]

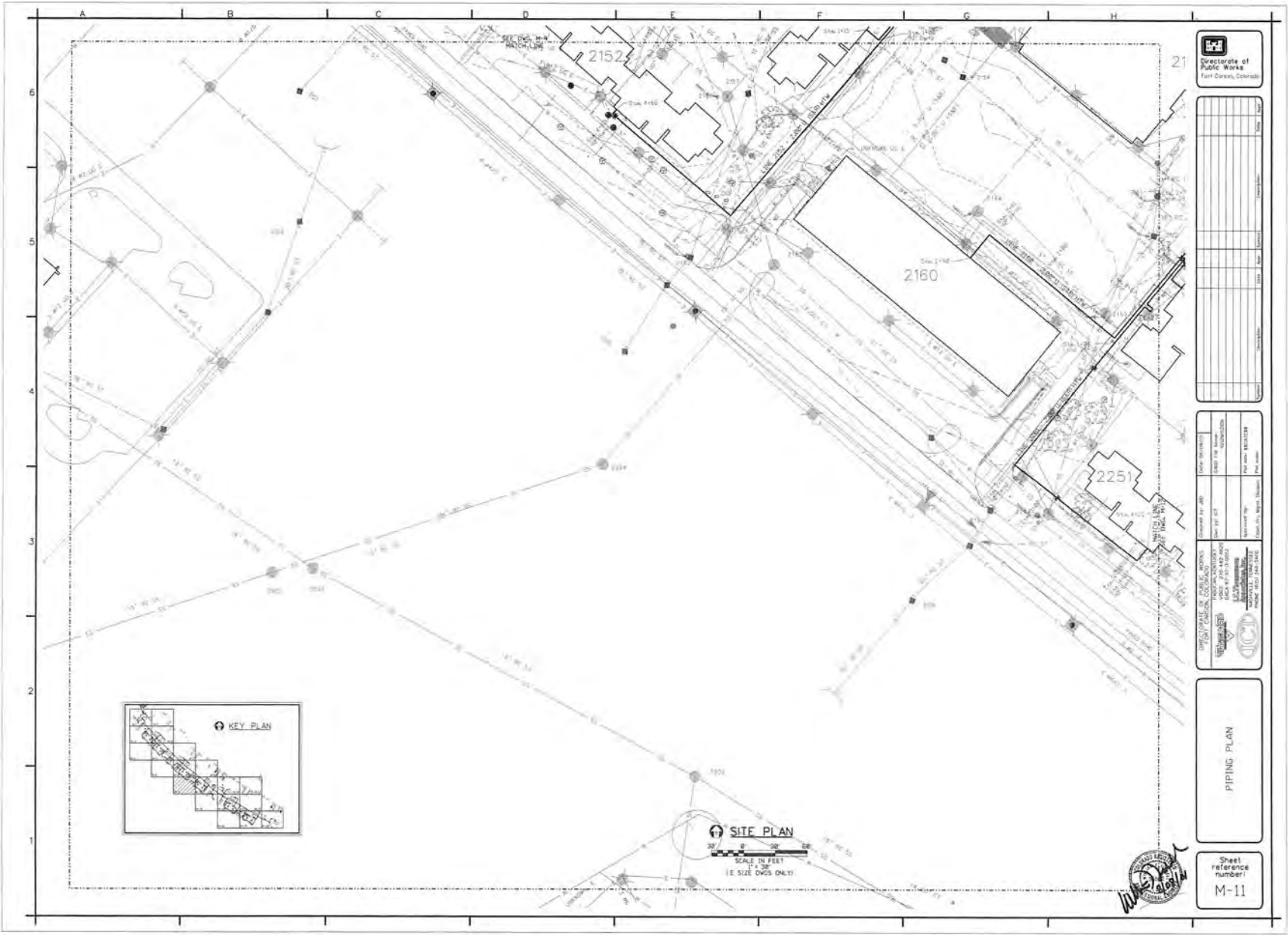
PIPING PLAN

Sheet reference number
M-7









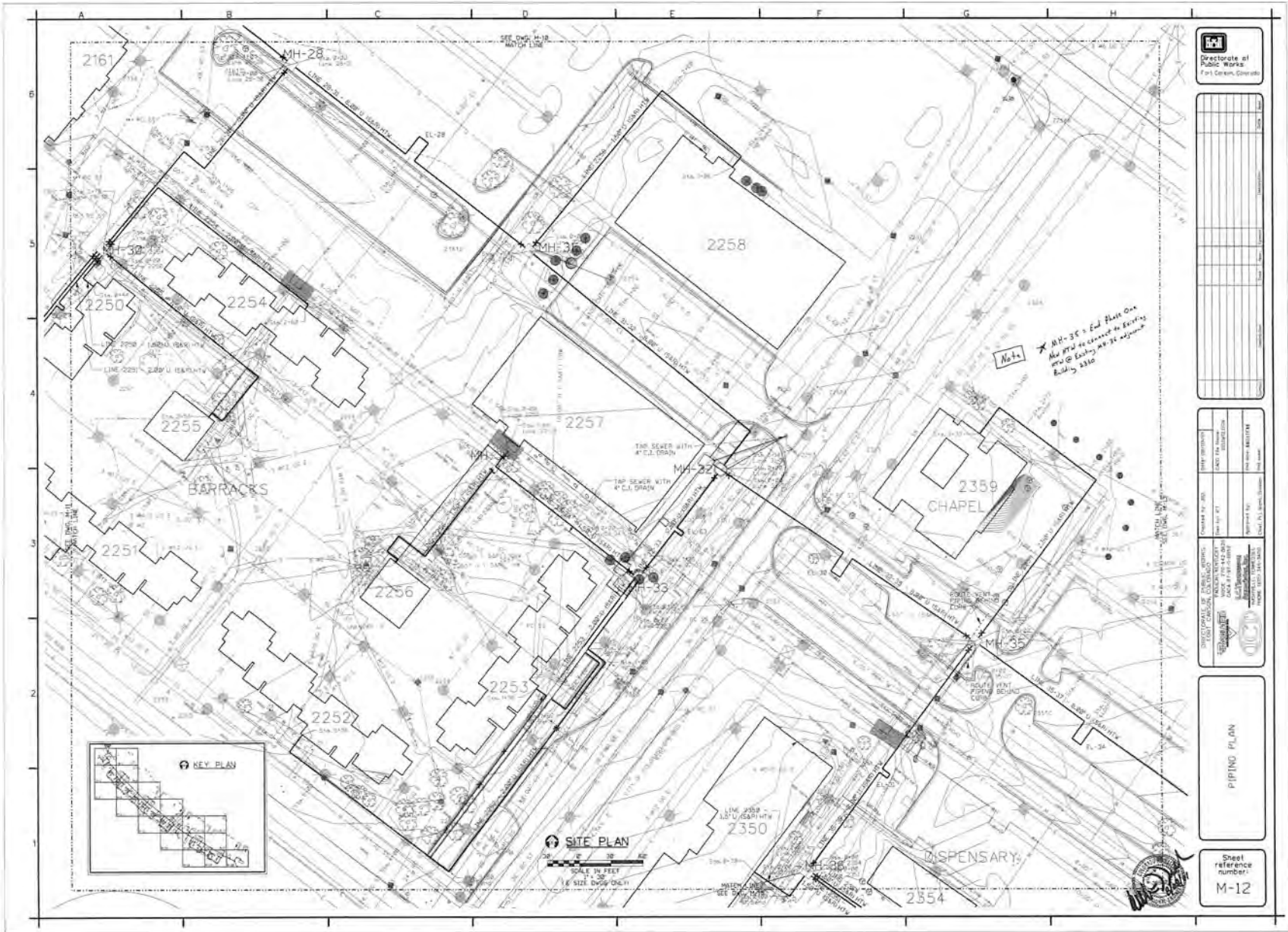
City of Fort Collins
 Directorate of Public Works
 Fort Collins, Colorado

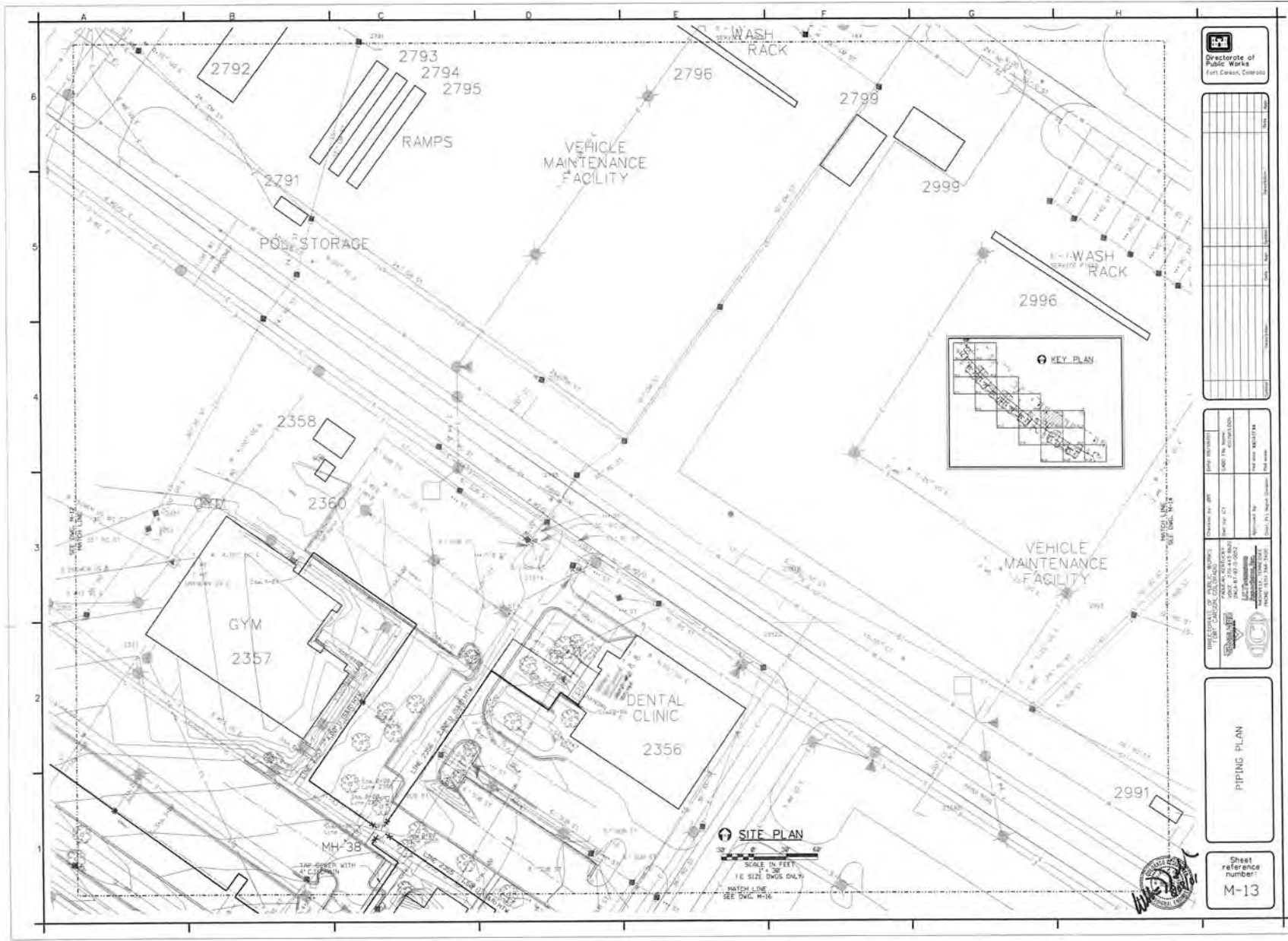
NO.	DATE	DESCRIPTION	BY	CHECKED

NO.	DATE	DESCRIPTION	BY	CHECKED

PIPING PLAN

Sheet reference number
 M-11





Directorate of
Public Works
Fort Cavah, Colorado

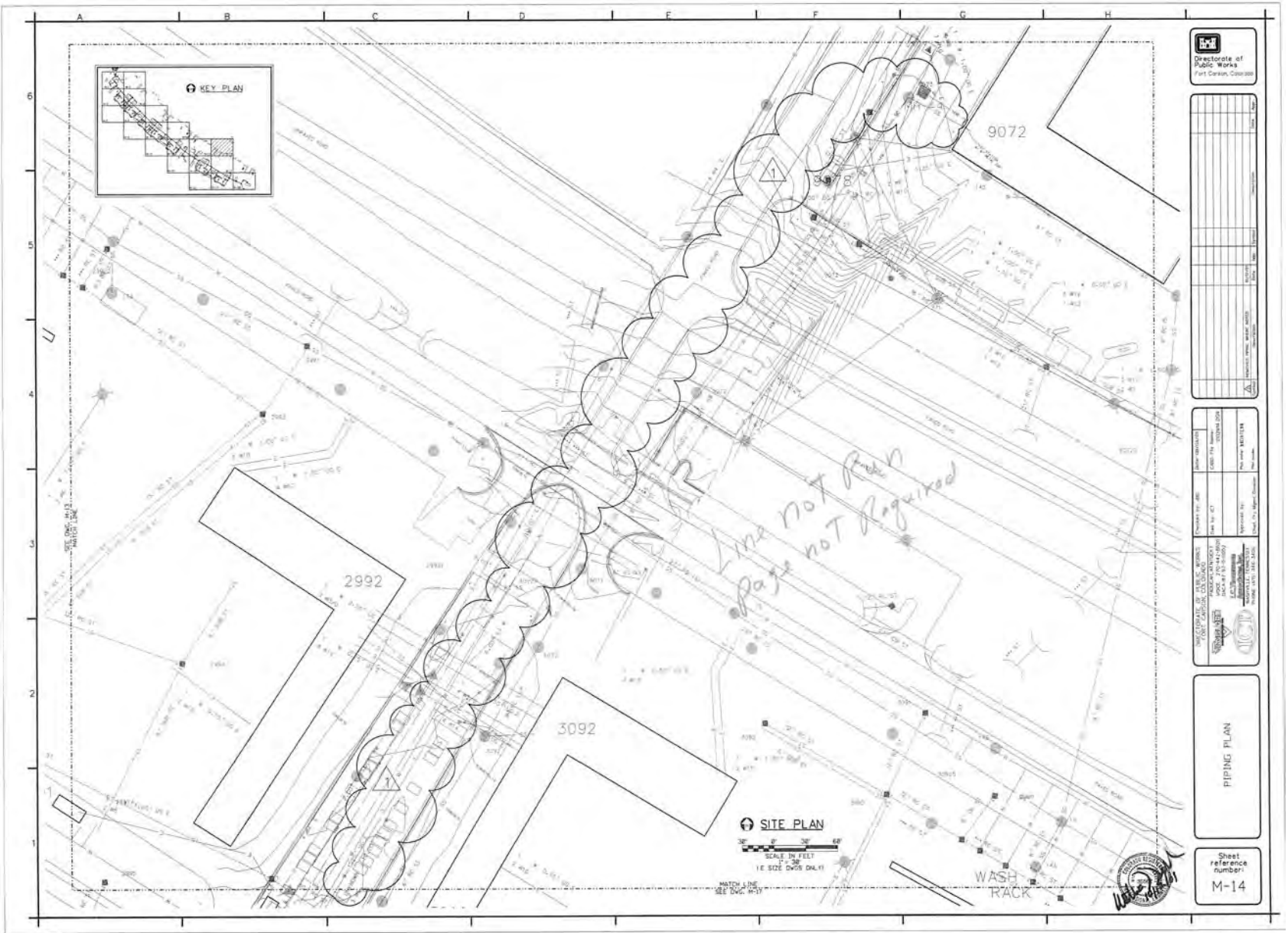
NO.	DATE	BY	REVISION

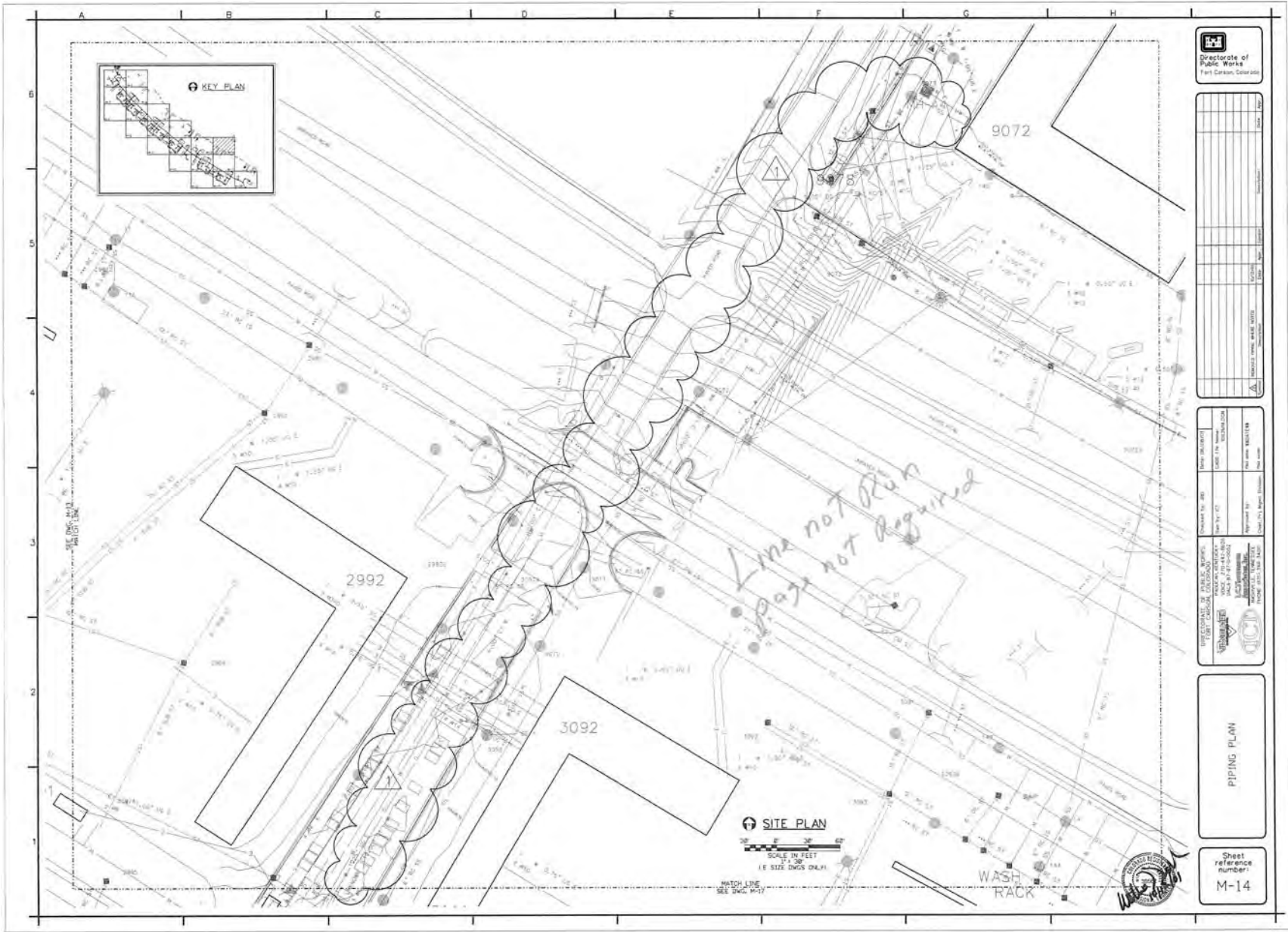
DATE	BY	REVISION

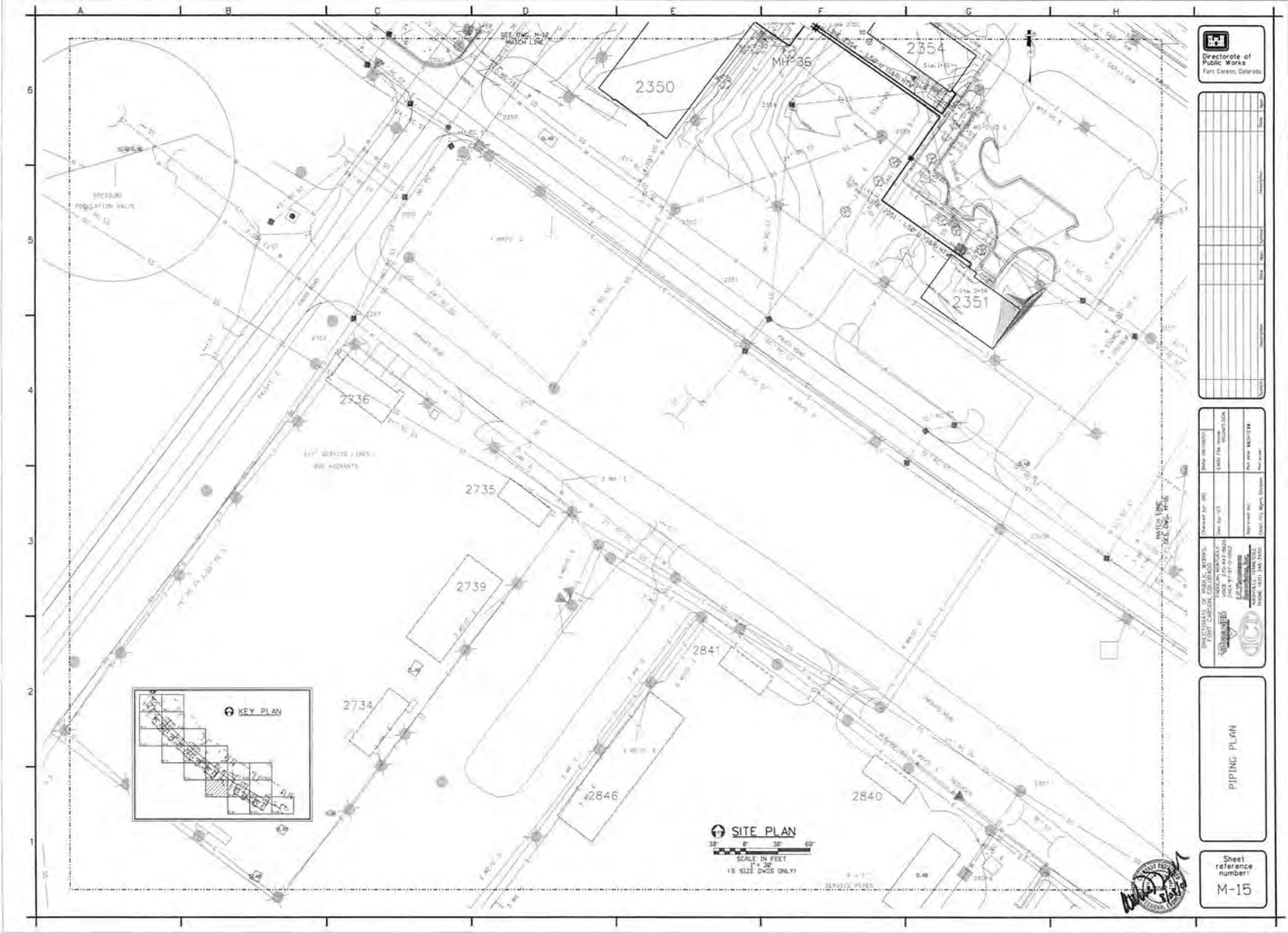
PROJECT NO. 15-0001
SHEET NO. M-13 OF 13
DATE: 10/15/2015
SCALE: AS SHOWN
DRAWN BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

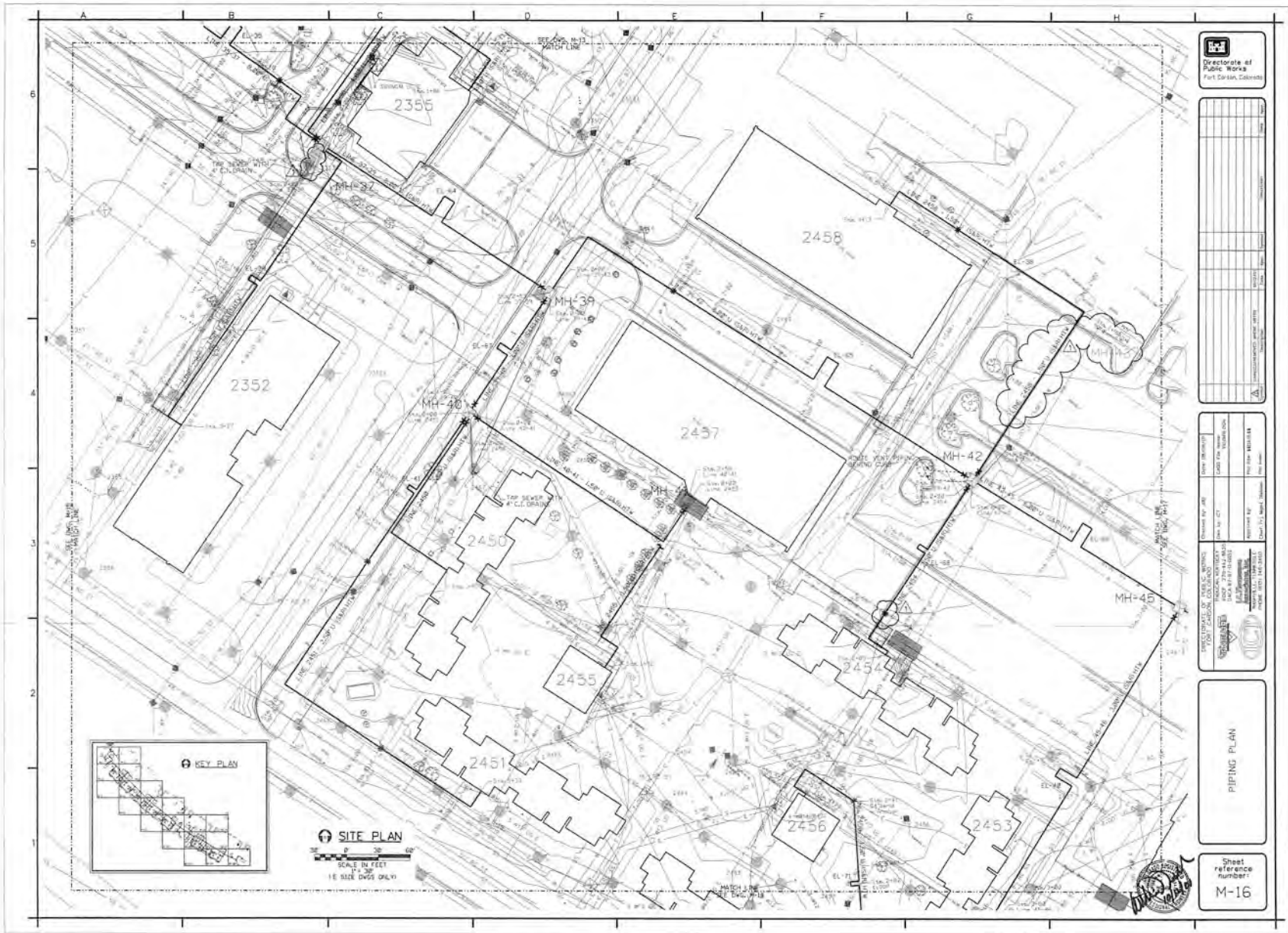
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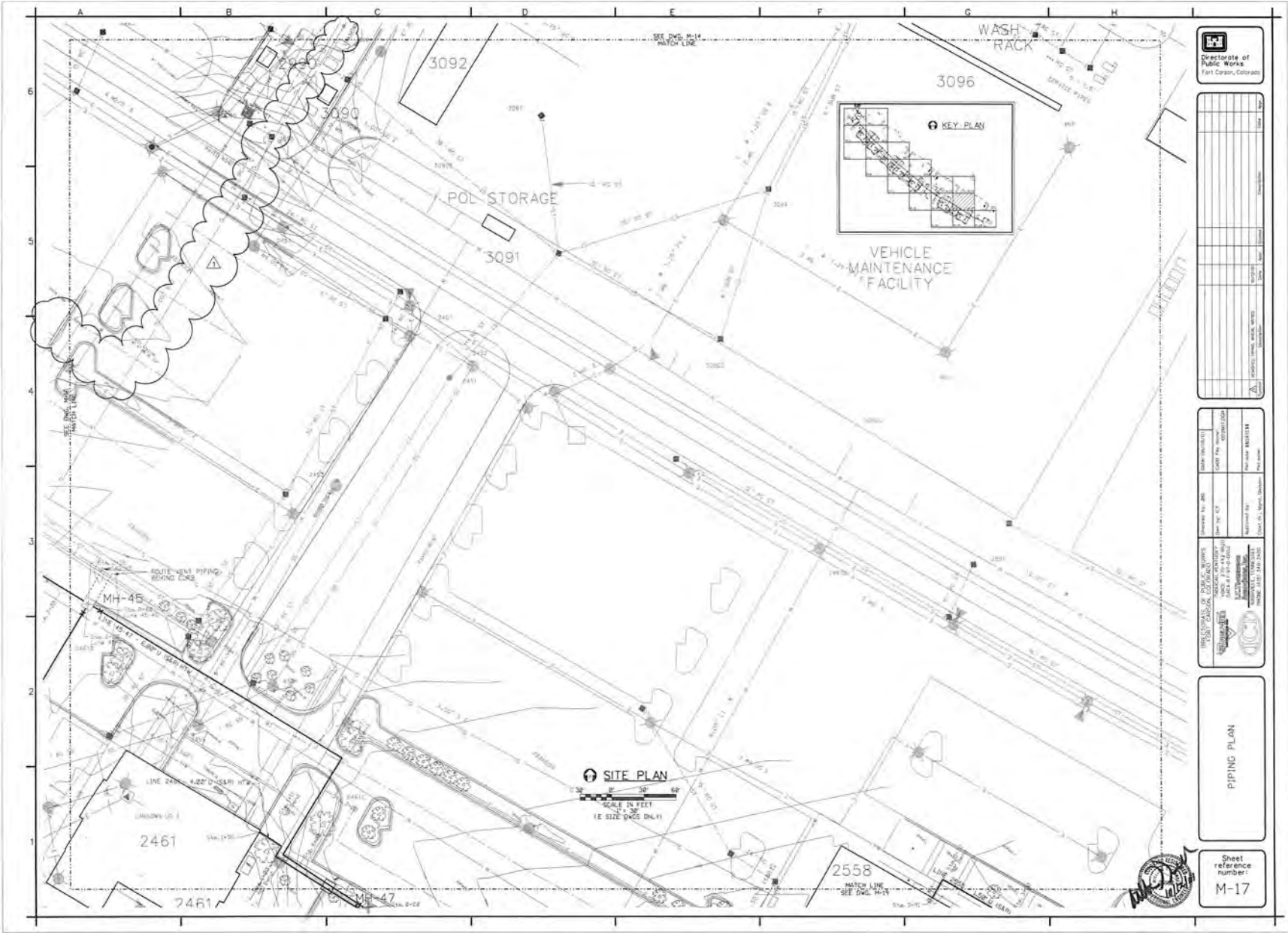
Sheet
reference
number
M-13











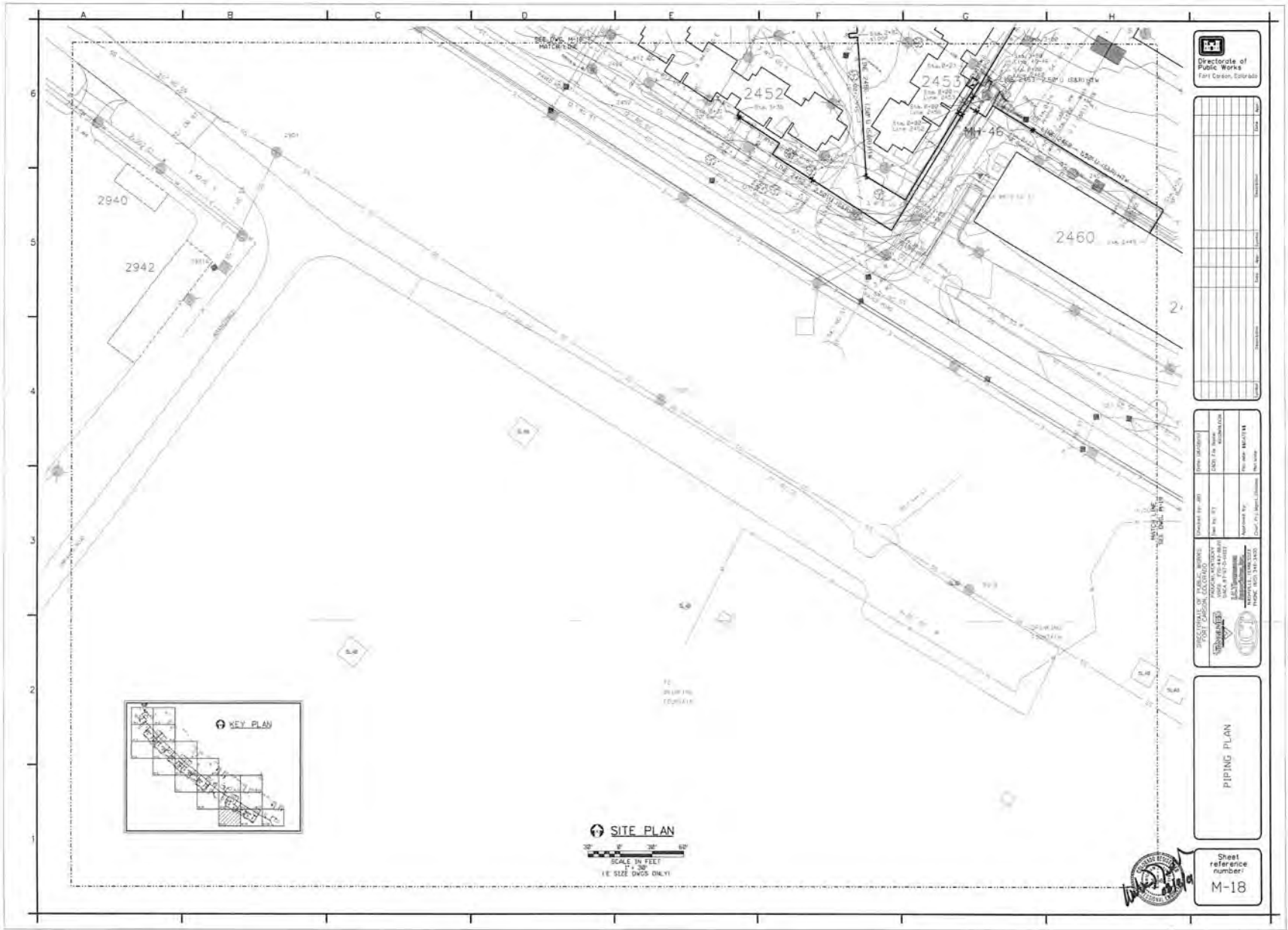
Directorate of
Public Works
Fort Carson, Colorado

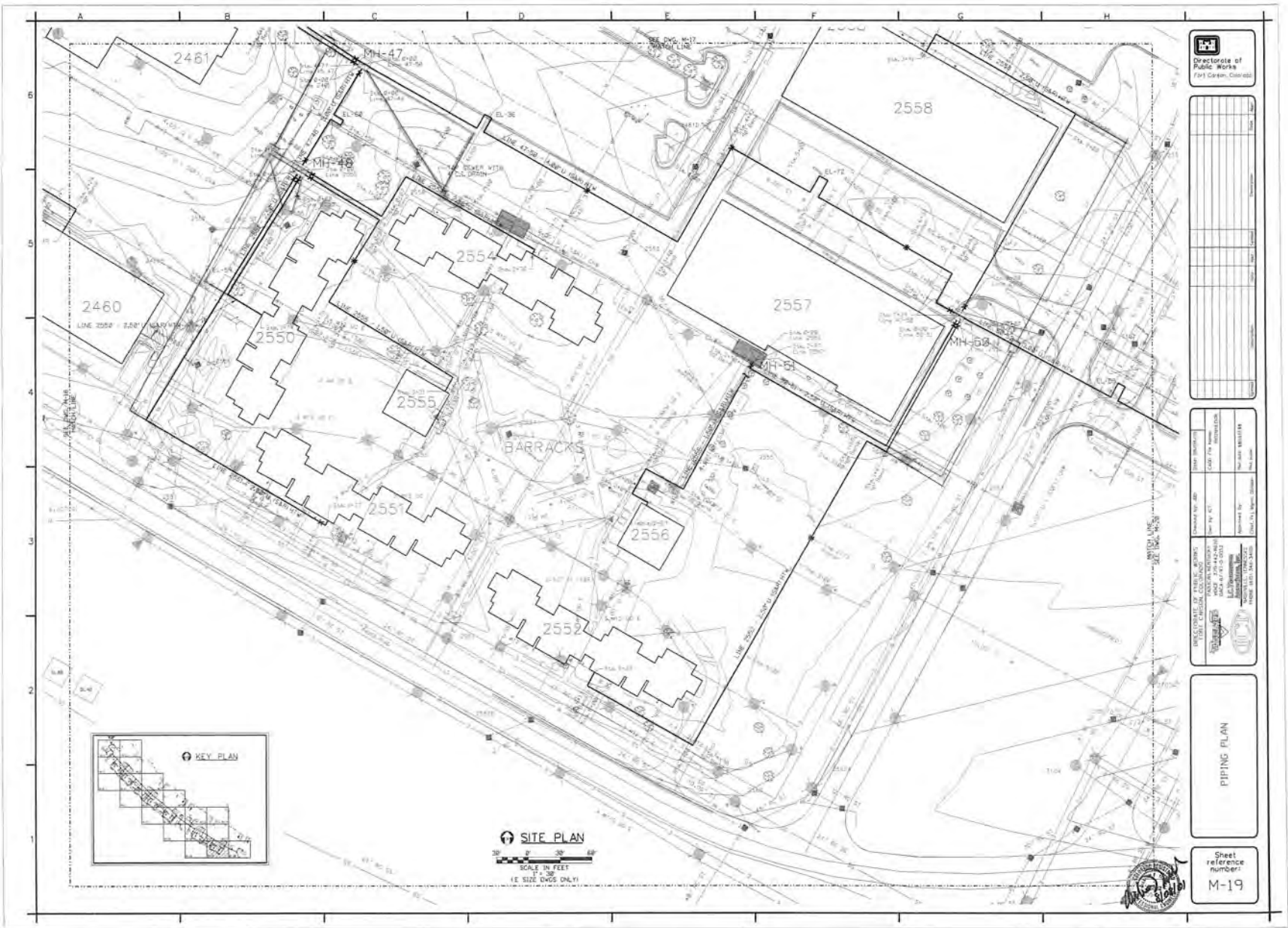
NO.	DATE	DESCRIPTION

DATE	BY	CHKD	APP'D

PIPING PLAN

Sheet
reference
number:
M-17





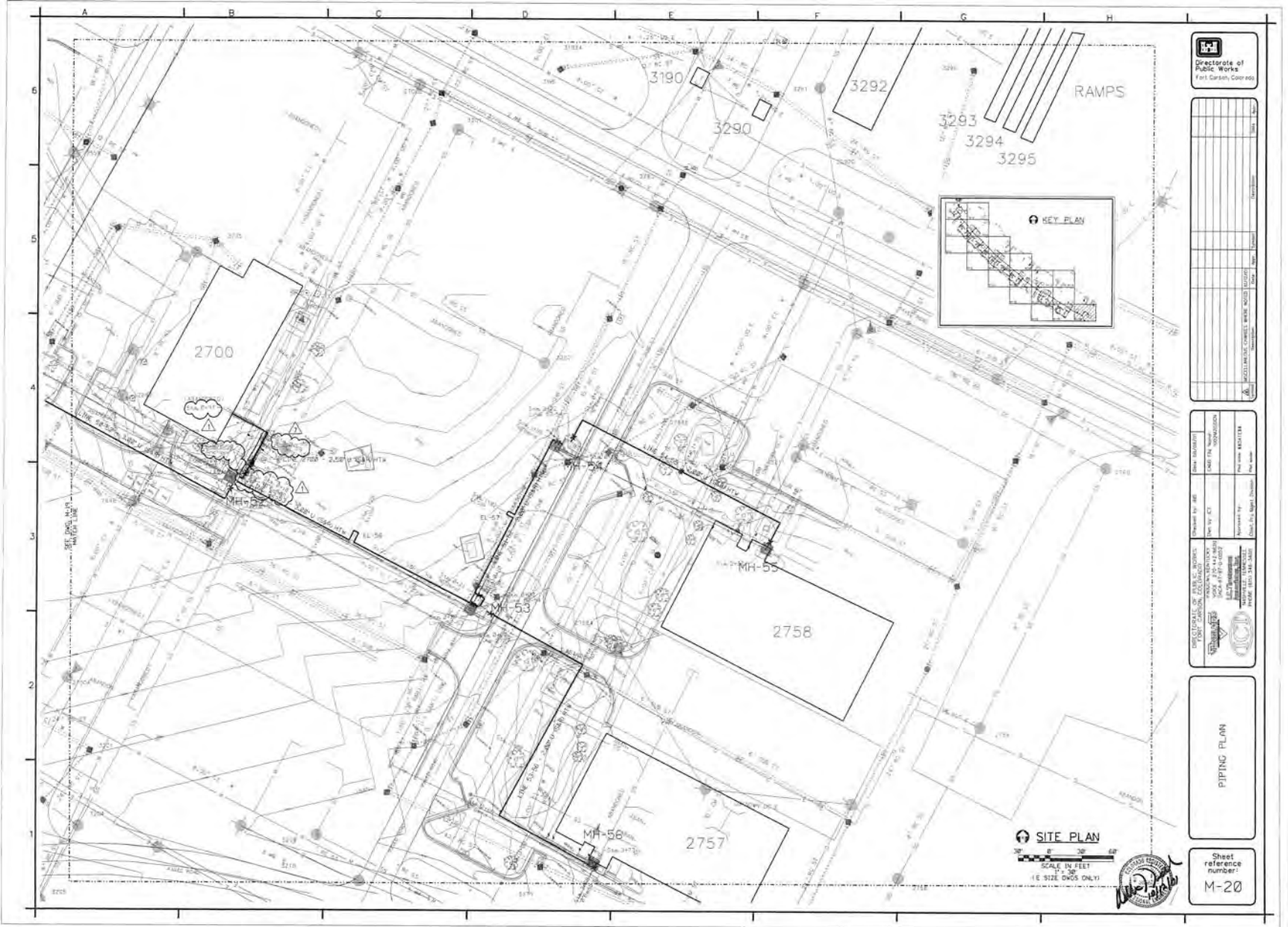
SITE PLAN
 SCALE IN FEET
 1" = 30'
 (E. SIZE ONLY)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

REVISIONS	
NO.	DESCRIPTION
DESIGNED BY: CHECKED BY: DATE:	

PIPING PLAN

Sheet reference number: M-19



Directorate of
Public Works
Fort Carson, Colorado

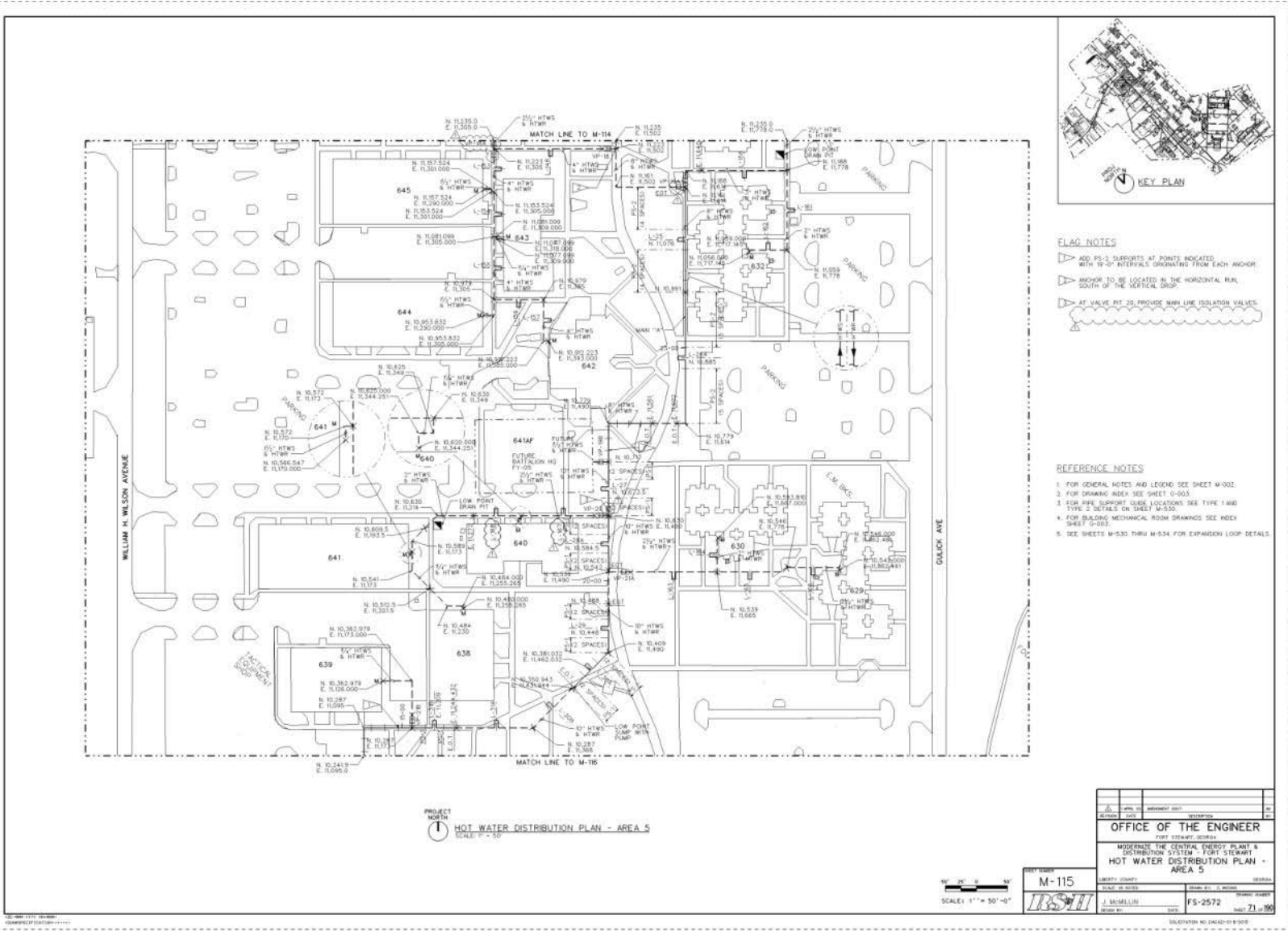
NO.	DATE	DESCRIPTION

SCALE	AS SHOWN
DRAWN BY	DATE
CHECKED BY	DATE
APPROVED BY	DATE
PROJECT NO.	
PROJECT NAME	

PIPING PLAN

Sheet
reference
number
M-20

Fort Stewart Phase II As-Built Drawings



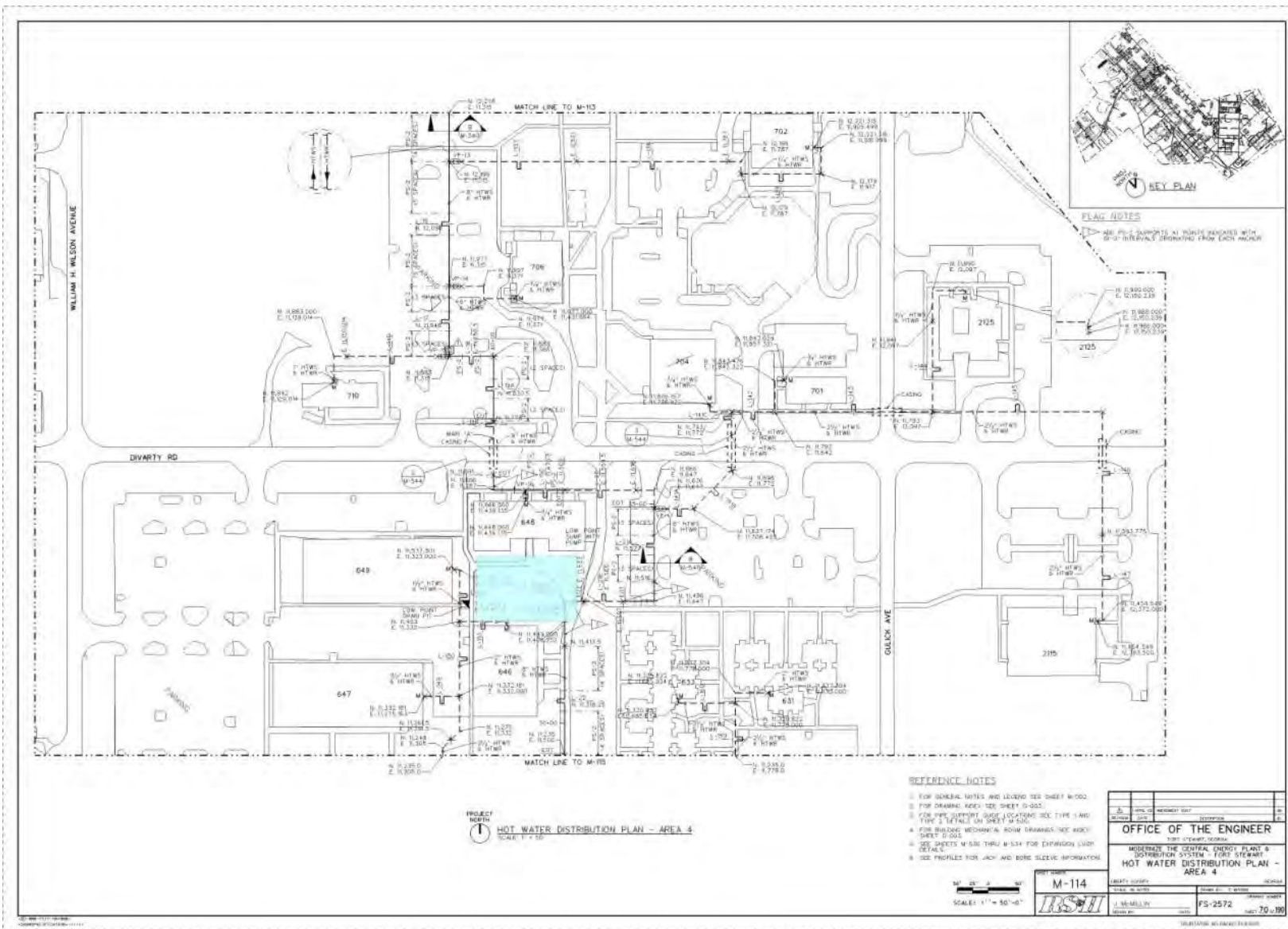
- FLAG NOTES**
- ▶ 400 PSI-0 ORIFICES AT POINTS INDICATED WITH 10'-0" INTERVALS ORIGINATED FROM EACH ANCHOR.
 - ▶ ANCHOR TO BE LOCATED IN THE HORIZONTAL RUN, SOUTH OF THE VERTICAL DROP.
 - ▶ AT VALVE PT. 20, PROVIDE MAIN LINE ISOLATION VALVES.

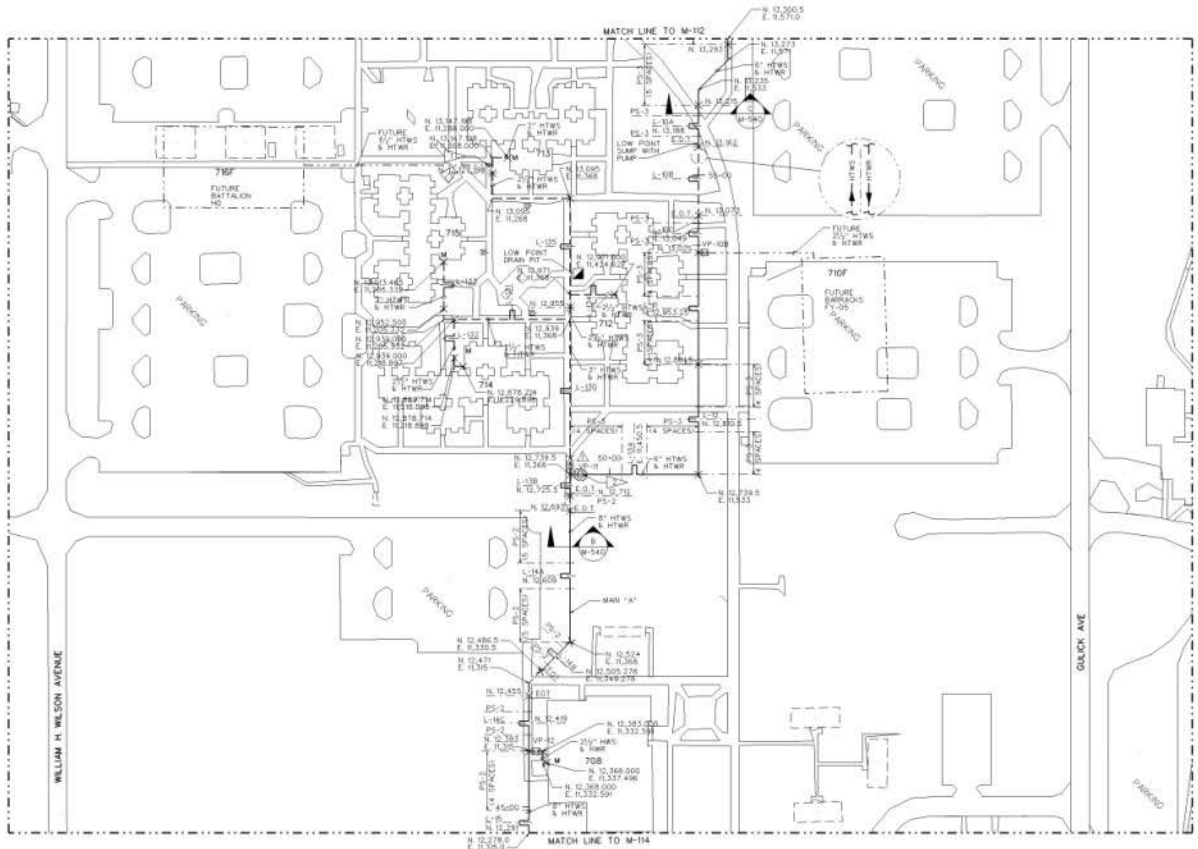
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
 2. FOR DRAWING INDEX SEE SHEET D-003.
 3. FOR PIPE SUPPORT BASE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-530.
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET D-003.
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.

PROJECT NORTH
 1 HOT WATER DISTRIBUTION PLAN - AREA 5
 SCALE: 1" = 50'

SCALE: 1" = 50'-0"

DATE	DESCRIPTION	BY	CHK
APR 10 2011	REVISION		
OFFICE OF THE ENGINEER FORT STEWART, GEORGIA			
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART HOT WATER DISTRIBUTION PLAN - AREA 5			
PROJECT NUMBER	DESIGNER	DATE	SHEET NUMBER
M-115	J. McMillin	FS-2572	21 of 195
SOLUTION NO. ENR-01-1-103			





FLAG NOTES

- ▽ CONTRACTOR TO INSTALL BRANCH CONNECTIONS WITH BLEED FLANGES FOR FUTURE BUILDING SERVICE
- ▽ AT VPIs PROVIDE MAN LINE ISOLATION VALVES

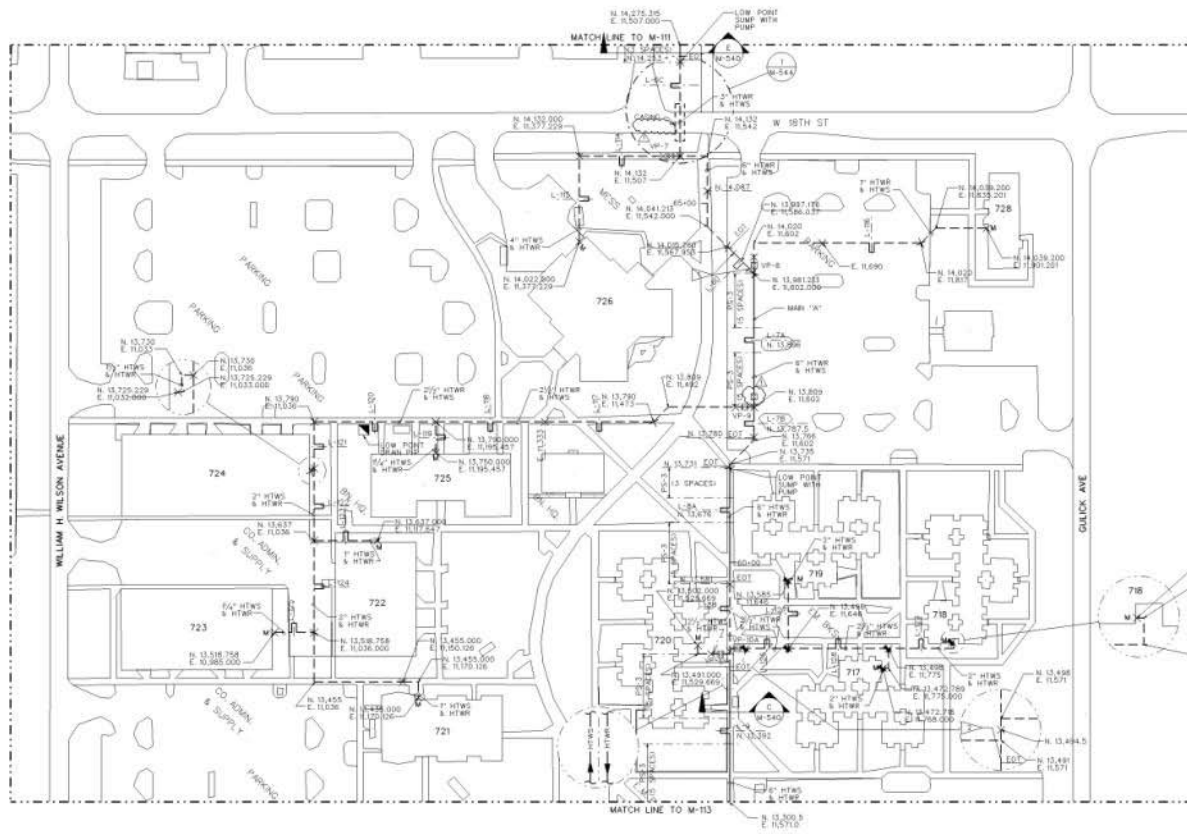
REFERENCE NOTES

1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
2. FOR DRAWING INDEX SEE SHEET 0-003.
3. FOR PIPE SUPPORT UDDIE LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-530.
4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE INDEX SHEET 0-023.
5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.

PROJECT NORTH
 ① HOT WATER DISTRIBUTION PLAN - AREA 3
 SCALE: P-1-20'



PROJECT NO.	M-113
DATE	FS-2572
DESIGNED BY	J. MULLIN
CHECKED BY	
DATE	6/9/10
SCALE	AS SHOWN
OFFICE OF THE ENGINEER FORT STOKELY, GEORGIA MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STOKELY HOT WATER DISTRIBUTION PLAN - AREA 3	
LIBERTY COUNTY	020004
SOLUTIONS NO. 04042-11-0105	

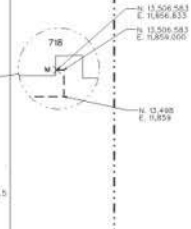


FLAG NOTES

- ▽ ADD PS-3 SUPPORTS, SEE SHEET M-530 LOOP SCHEDULE FOR DIMENSIONS
- ▽ NO ANCHOR BOLTS, SEE DETAIL "A" ON SHEET M-542 FOR FINAL SEAL THIS FLUCT ONLY

REFERENCE NOTES

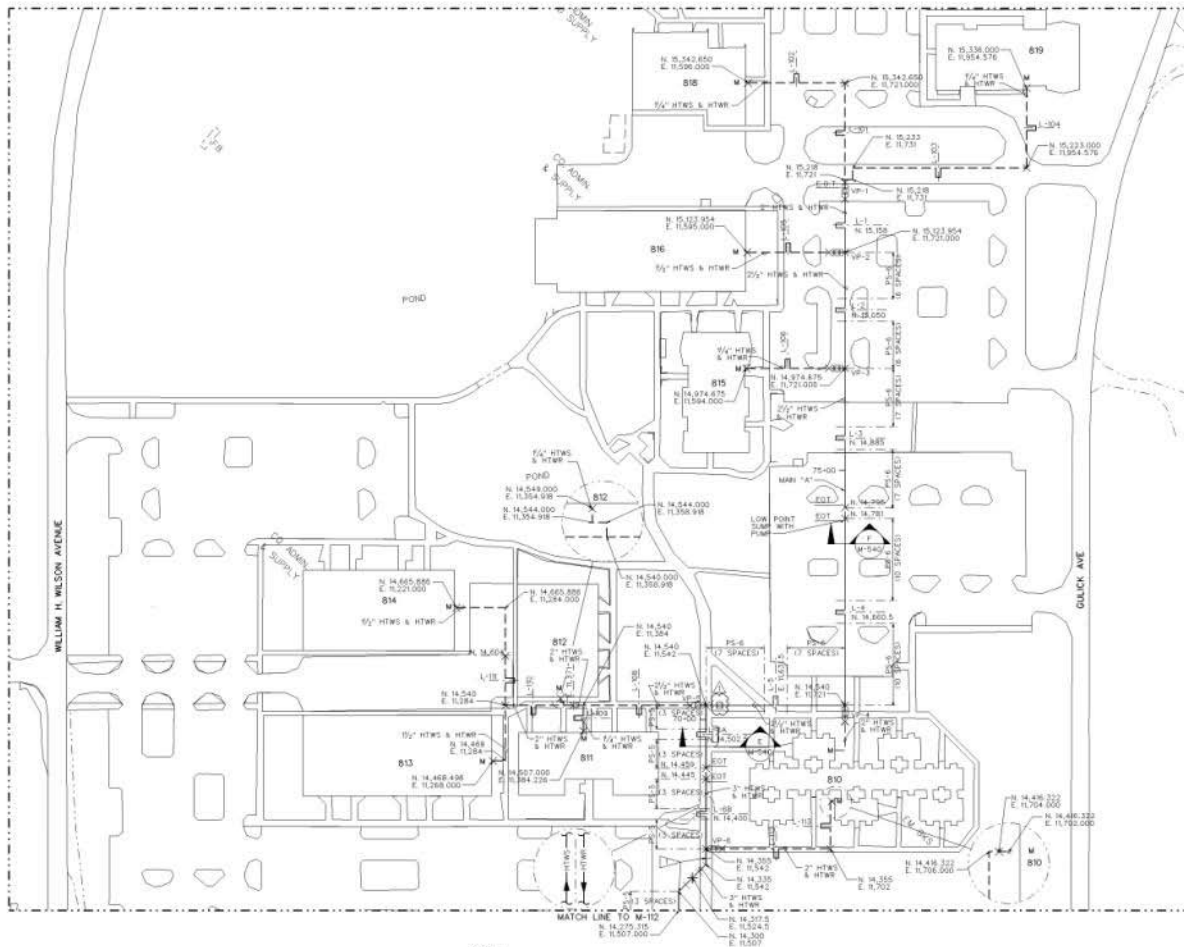
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-002.
2. FOR DRAWING INDEX SEE SHEET G-003.
3. FOR PPE SUPPORT GUYE LOCATIONS SEE TYPE I AND TYPE S DETAILS ON SHEET M-530.
4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE SHEET M-555.
5. SEE SHEETS M-530 THRU M-554 FOR EXPANSION LOOP DETAILS.
6. SEE PROFILES FOR JACK AND BORE SLEEVE INFORMATION.



PROJECT NORTH
HOT WATER DISTRIBUTION PLAN - AREA 2
 SCALE: 1" = 50'-0"

SCALE: 1" = 50'-0"

NO.	DATE	REVISION
OFFICE OF THE ENGINEER		
FORT STOWART, GEORGIA		
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STOWART		
HOT WATER DISTRIBUTION PLAN - AREA 2		
LIBERTY COUNTY	PROJECT NO.	020004
DATE OF ISSUE	ISSUED BY	J. WOOD
RS&I	DRAWN BY	J. MULLIN
	CHECKED BY	FS-2572
	DATE	06-19-10
SOLUTION NO. 04242-11-010		



- FLAG NOTES**
- ▽ 400-PS-S SUPPORTS SPACED AT 12'-0\"/>

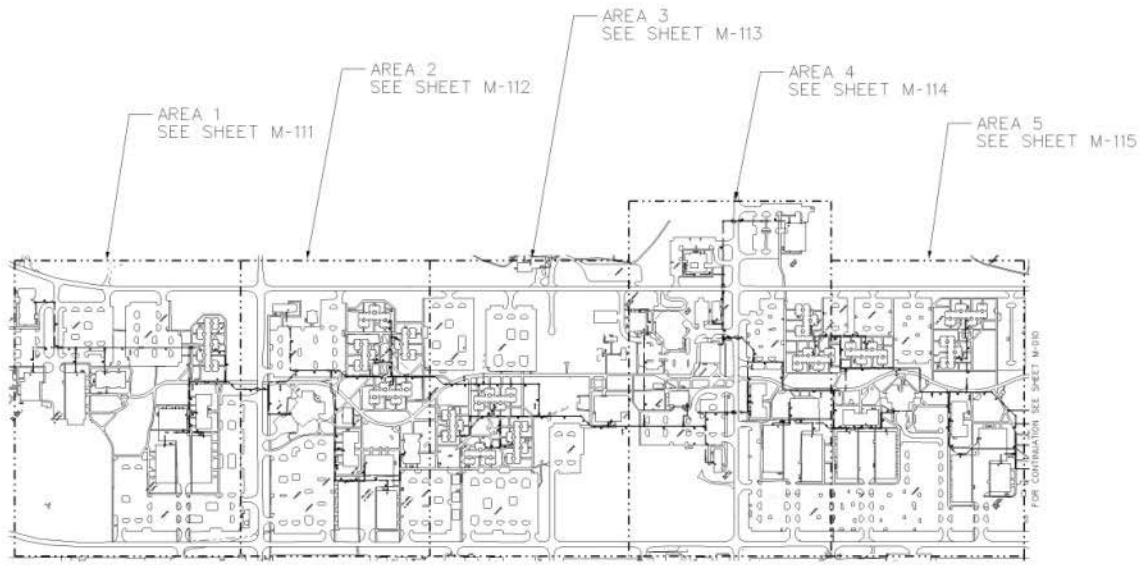
- REFERENCE NOTES**
1. FOR GENERAL NOTES AND LEGEND SEE SHEET M-000.
 2. FOR DRAWING INDEX SEE SHEET 0-000.
 3. FOR PIPE SUPPORT GASKET LOCATIONS SEE TYPE 1 AND TYPE 2 DETAILS ON SHEET M-000.
 4. FOR BUILDING MECHANICAL ROOM DRAWINGS SEE SHEET 0-000.
 5. SEE SHEETS M-530 THRU M-534 FOR EXPANSION LOOP DETAILS.

PROJECT NORTH
HOT WATER DISTRIBUTION PLAN - AREA 1
 SCALE: 1" = 50'-0"

SCALE: 1" = 50'-0"

NO. 11	DATE 11/11/11	REVISION	DESCRIPTION	BY	CHK
OFFICE OF THE ENGINEER					
FORT STEWART, GEORGIA					
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STEWART					
HOT WATER DISTRIBUTION PLAN - AREA 1					
PROJECT NO.	M-111	LIBRARY SYMBOL			
STAGE OR SERIES		DATE BY			
DESIGNER	J. McMILLIN		FS-2572		
CHECKER					67/188

DATE PLOTTED: 11/11/11 10:00 AM



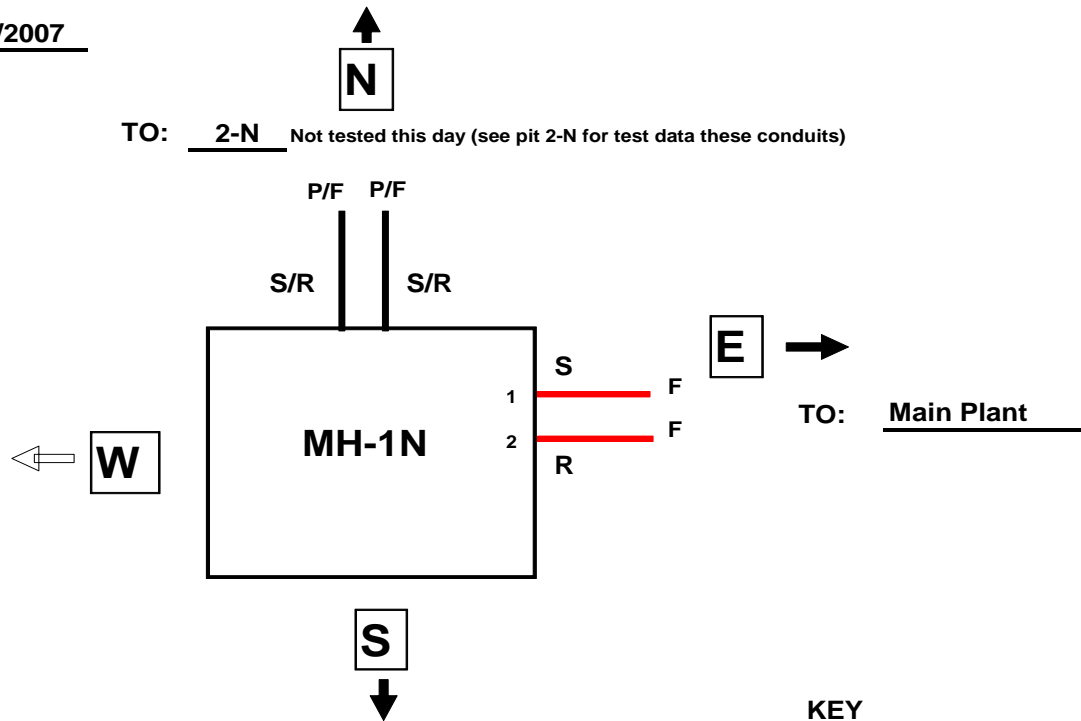
PROJECT:  MECHANICAL SITE PLAN 1
SCALE: 1" = 200'

OFFICE OF THE ENGINEER FORT STODART, GEORGIA			
MODERNIZE THE CENTRAL ENERGY PLANT & DISTRIBUTION SYSTEM - FORT STODART COMPOSITE HOT WATER DISTRIBUTION PLAN 1			
PROJECT NUMBER: M-009	LIBERTY COUNTY	ISSUED BY: J. MUMFORD	ISSUED DATE: 02/04/14
	DESIGNED BY: J. MUMFORD	DATE: FS-2572	DRAWN BY: DATE: 05/11/13
SUBMITTAL NO. 040421-11-015			

Appendix H: Consolidated Phase I Manhole and Pressure Test Data for Forts Carson and Stewart

Fort Carson Phase I Manhole and Pressure Test Data

DATE: 10/3/2007



TO: 2-N Not tested this day (see pit 2-N for test data these conduits)

TO: Main Plant

KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

1. Gland seals at Main Plant leak, cannot access to tighten, cannot pressurize.
2. Supply, Return drains checked on 8/15/07: All Dry

MH 1-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to Main Plant	F	Unable to access & tighten gland seal at MP, cannot pressurize
	2	2	Return to Main Plant	F	Unable to access & tighten gland seal at MP, cannot pressurize

printed 1/7/2008

Handy logger

Name : **LOGGER 1**

LOG Name	10030843
Interval	00:01:00
Personnel	

Start	10/3/2007 8:43:32 AM
Stop	10/3/2007 8:53:10 AM
Comment	12 S

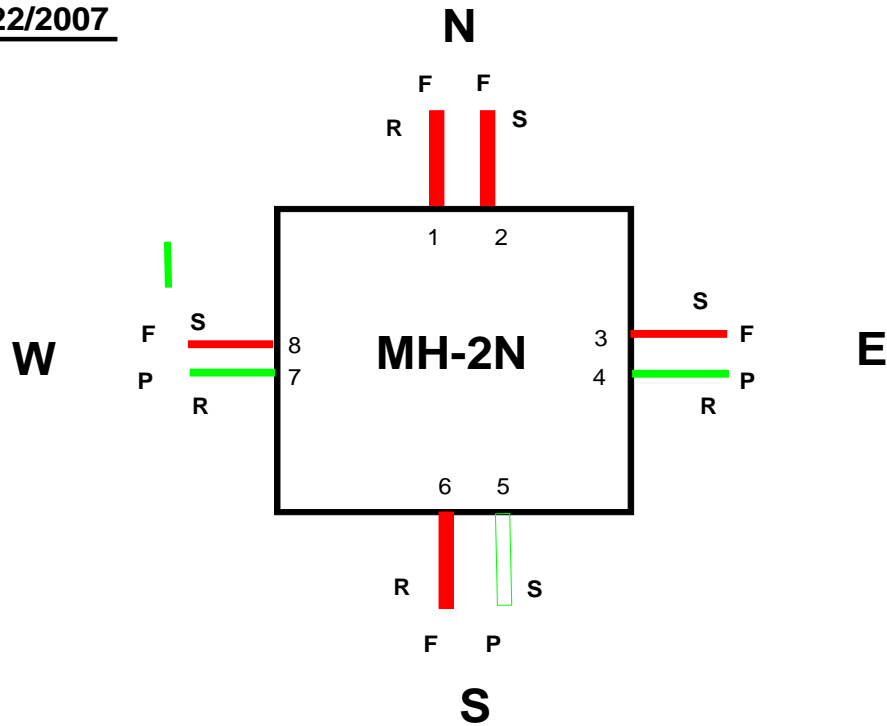
Data	12
------	----

Set value	CH1	CH2	CH3	CH4
Sensor	v	v	v	v
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	6.10	6.56		
Minimum	0.00	0.04		
Average	4.04	4.22		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/3/2007 8:43:32 AM	0.04	0.21	O.R.	O.R.
	2	10/3/2007 8:44:00 AM	5.86	6.07	O.R.	O.R.
	3	10/3/2007 8:45:00 AM	5.96	6.34	O.R.	O.R.
	4	10/3/2007 8:46:00 AM	5.83	6.00	O.R.	O.R.
	5	10/3/2007 8:47:00 AM	5.93	6.07	O.R.	O.R.
	6	10/3/2007 8:48:00 AM	6.05	6.56	O.R.	O.R.
	7	10/3/2007 8:49:00 AM	^ 8.10	6.44	O.R.	O.R.
	8	10/3/2007 8:50:00 AM	6.08	6.37	O.R.	O.R.
	9	10/3/2007 8:51:00 AM	6.03	6.17	O.R.	O.R.
	10	10/3/2007 8:52:00 AM	0.54	0.30	O.R.	O.R.
	11	10/3/2007 8:53:00 AM	0.04	0.06	O.R.	O.R.
	12	10/3/2007 8:53:10 AM	v 0.00	v 0.04	O.R.	O.R.

DATE: 8/22/2007



N - 12" Main Trunk to 3-N

E - Feeder to Bldg. 1668, 1669 and 1670

S - 12" Main Trunk to 1-N

W - Feeder to Bldg. 1667

NOTES:

1. Pit drain plugged, water & mud on floor.
2. Supply, Return drains tested on 8/15/07: All Dry

MH 2-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return Main from 3-N	F	Could not pressurize
	2	2	Supply Main from 3-N	F	Could not pressurize
	3	3	Supply Feeder to Bldgs. 1668, 1669 and 1670	F	
	4	4	Return Feeder from Bldgs. 1668, 1669 and 1670	P	
2	1	5	Supply from 1-N	P	
	2	6	Return to 1-N	F	Pressurized, but could not maintain
	3	7	Return to Bldg. 1667	P	
	4	8	Supply to Bldg. 1667	F	

printed 1/7/2008

Handy logger

Name : LOGGER 1

LOG Name	08220941
Interval	00.01.00
Personnel	

Start	8/22/2007 9:41:25 AM
Stop	8/22/2007 12:42:00 PM
Comment	

Data	182
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	1.32	1.70	16.00	16.03
Minimum	-7.50	-7.50	-7.50	-7.50
Average	-1.16	-0.94	9.71	13.98
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/22/2007 9:41:25 AM	0.05	0.14	0.11	0.29
	2	8/22/2007 9:42:00 AM	0.05	0.16	0.14	0.29
	3	8/22/2007 9:43:00 AM	0.69	0.66	1.36	1.11
	4	8/22/2007 9:44:00 AM	0.52	0.59	2.69	2.40
	5	8/22/2007 9:45:00 AM	0.44	0.59	3.88	3.53
	6	8/22/2007 9:46:00 AM	0.42	0.58	4.92	4.62
	7	8/22/2007 9:47:00 AM	0.46	0.58	5.90	5.59
	8	8/22/2007 9:48:00 AM	0.46	0.62	6.76	6.47
	9	8/22/2007 9:49:00 AM	0.46	0.62	7.51	7.28
	10	8/22/2007 9:50:00 AM	0.50	0.66	8.17	8.04
	11	8/22/2007 9:51:00 AM	0.50	0.68	8.79	8.69
	12	8/22/2007 9:52:00 AM	0.39	0.60	9.40	9.35
	13	8/22/2007 9:53:00 AM	0.06	0.16	10.90	10.79
	14	8/22/2007 9:54:00 AM	0.02	0.08	12.40	12.23
	15	8/22/2007 9:55:00 AM	0.04	0.10	13.80	13.65
	16	8/22/2007 9:56:00 AM	0.03	0.08	15.14	14.96
	17	8/22/2007 9:57:00 AM	0.02	0.07	[^] 16.00	[^] 16.03
	18	8/22/2007 9:58:00 AM	0.45	0.61	15.94	15.99
	19	8/22/2007 9:59:00 AM	0.57	0.76	15.85	16.00
	20	8/22/2007 10:00:00 AM	0.61	0.84	15.80	15.99
	21	8/22/2007 10:01:00 AM	0.19	0.39	15.71	15.97
	22	8/22/2007 10:02:00 AM	-0.01	0.07	15.66	15.96
	23	8/22/2007 10:03:00 AM	0.00	0.07	15.63	15.99
	24	8/22/2007 10:04:00 AM	-0.01	0.05	15.56	15.98
	25	8/22/2007 10:05:00 AM	0.02	0.04	15.49	15.96
	26	8/22/2007 10:06:00 AM	0.01	0.06	15.41	15.95
	27	8/22/2007 10:07:00 AM	0.00	0.06	15.34	15.94
	28	8/22/2007 10:08:00 AM	0.00	0.05	15.31	15.94
	29	8/22/2007 10:09:00 AM	0.00	0.04	15.25	15.93
	30	8/22/2007 10:10:00 AM	0.00	0.08	15.17	15.93

printed 1/7/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/22/2007 10:11:00 AM	0.00	0.07	15.15	15.92
	32	8/22/2007 10:12:00 AM	0.00	0.08	15.08	15.95
	33	8/22/2007 10:13:00 AM	0.00	0.08	15.02	15.94
	34	8/22/2007 10:14:00 AM	0.01	0.08	14.95	15.93
	35	8/22/2007 10:15:00 AM	0.78	0.96	14.89	15.93
	36	8/22/2007 10:16:00 AM	1.07	1.36	14.83	15.92
	37	8/22/2007 10:17:00 AM	1.20	1.52	14.77	15.93
	38	8/22/2007 10:18:00 AM	1.30	1.59	14.71	15.92
	39	8/22/2007 10:19:00 AM	1.31	1.65	14.65	15.92
	40	8/22/2007 10:20:00 AM	1.31	1.64	14.59	15.92
	41	8/22/2007 10:21:00 AM	^ 1.32	1.68	14.53	15.91
	42	8/22/2007 10:22:00 AM	1.30	1.69	14.50	15.91
	43	8/22/2007 10:23:00 AM	^ 1.32	1.69	14.44	15.90
	44	8/22/2007 10:24:00 AM	1.29	^ 1.70	14.39	15.89
	45	8/22/2007 10:25:00 AM	0.96	1.39	14.32	15.89
	46	8/22/2007 10:26:00 AM	0.15	0.34	14.26	15.88
	47	8/22/2007 10:27:00 AM	-0.02	0.05	14.20	15.87
	48	8/22/2007 10:28:00 AM	-0.03	0.02	14.13	15.86
	49	8/22/2007 10:29:00 AM	-0.04	0.01	14.07	15.86
	50	8/22/2007 10:30:00 AM	-0.04	0.01	14.02	15.85
	51	8/22/2007 10:31:00 AM	-0.04	0.02	13.96	15.85
	52	8/22/2007 10:32:00 AM	-0.04	-0.01	13.91	15.85
	53	8/22/2007 10:33:00 AM	-0.03	0.00	13.85	15.84
	54	8/22/2007 10:34:00 AM	-0.02	0.02	13.80	15.84
	55	8/22/2007 10:35:00 AM	-0.01	0.03	13.74	15.84
	56	8/22/2007 10:36:00 AM	-0.03	0.05	13.69	15.84
	57	8/22/2007 10:37:00 AM	-0.02	0.02	13.61	15.84
	58	8/22/2007 10:38:00 AM	-0.01	0.03	13.58	15.83
	59	8/22/2007 10:39:00 AM	0.00	0.05	13.50	15.83
	60	8/22/2007 10:40:00 AM	-0.02	0.06	13.48	15.83
	61	8/22/2007 10:41:00 AM	-0.02	0.04	13.39	15.82
	62	8/22/2007 10:42:00 AM	-0.01	0.05	13.33	15.82
	63	8/22/2007 10:43:00 AM	0.00	0.05	13.28	15.82
	64	8/22/2007 10:44:00 AM	0.01	0.06	13.23	15.81
	65	8/22/2007 10:45:00 AM	0.01	0.04	13.18	15.81
	66	8/22/2007 10:46:00 AM	0.02	0.04	13.12	15.80
	67	8/22/2007 10:47:00 AM	-0.01	0.04	13.07	15.80
	68	8/22/2007 10:48:00 AM	0.00	0.05	13.01	15.80
	69	8/22/2007 10:49:00 AM	0.00	0.06	12.96	15.79
	70	8/22/2007 10:50:00 AM	0.01	0.04	12.91	15.79
	71	8/22/2007 10:51:00 AM	0.01	0.08	12.86	15.79
	72	8/22/2007 10:52:00 AM	0.02	0.04	12.81	15.78
	73	8/22/2007 10:53:00 AM	0.02	0.04	12.76	15.78
	74	8/22/2007 10:54:00 AM	0.02	0.05	12.70	15.78
	75	8/22/2007 10:55:00 AM	0.03	0.06	12.66	15.77
	76	8/22/2007 10:56:00 AM	0.03	0.06	12.60	15.77
	77	8/22/2007 10:57:00 AM	0.03	0.06	12.54	15.76
	78	8/22/2007 10:58:00 AM	0.03	0.07	12.49	15.75
	79	8/22/2007 10:59:00 AM	0.04	0.07	12.43	15.75
	80	8/22/2007 11:00:00 AM	0.03	0.08	12.39	15.75

printed 1/7/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/22/2007 11:01:00 AM	0.04	0.08	12.34	15.74
	82	8/22/2007 11:02:00 AM	0.03	0.08	12.28	15.74
	83	8/22/2007 11:03:00 AM	0.01	0.09	12.24	15.73
	84	8/22/2007 11:04:00 AM	0.04	0.09	12.18	15.73
	85	8/22/2007 11:05:00 AM	0.04	0.09	12.13	15.73
	86	8/22/2007 11:06:00 AM	0.04	0.08	12.07	15.72
	87	8/22/2007 11:07:00 AM	0.04	0.07	12.03	15.71
	88	8/22/2007 11:08:00 AM	0.04	0.07	11.97	15.71
	89	8/22/2007 11:09:00 AM	0.04	0.11	11.92	15.70
	90	8/22/2007 11:10:00 AM	0.03	0.06	11.87	15.70
	91	8/22/2007 11:11:00 AM	0.03	0.10	11.86	15.69
	92	8/22/2007 11:12:00 AM	0.03	0.10	11.80	15.69
	93	8/22/2007 11:13:00 AM	0.03	0.09	11.75	15.69
	94	8/22/2007 11:14:00 AM	0.03	0.09	11.70	15.68
	95	8/22/2007 11:15:00 AM	0.03	0.09	11.65	15.67
	96	8/22/2007 11:16:00 AM	0.02	0.08	11.60	15.67
	97	8/22/2007 11:17:00 AM	0.06	0.09	11.55	15.67
	98	8/22/2007 11:18:00 AM	0.02	0.08	11.50	15.66
	99	8/22/2007 11:19:00 AM	0.02	0.09	11.45	15.65
	100	8/22/2007 11:20:00 AM	0.02	0.09	11.41	15.65
	101	8/22/2007 11:21:00 AM	0.03	0.09	11.33	15.65
	102	8/22/2007 11:22:00 AM	0.03	0.09	11.31	15.64
	103	8/22/2007 11:23:00 AM	0.02	0.08	11.26	15.64
	104	8/22/2007 11:24:00 AM	0.06	0.08	11.22	15.64
	105	8/22/2007 11:25:00 AM	0.02	0.08	11.16	15.63
	106	8/22/2007 11:26:00 AM	0.02	0.09	11.11	15.63
	107	8/22/2007 11:27:00 AM	0.06	0.10	11.07	15.62
	108	8/22/2007 11:28:00 AM	0.05	0.10	11.02	15.61
	109	8/22/2007 11:29:00 AM	0.05	0.09	10.97	15.61
	110	8/22/2007 11:30:00 AM	0.05	0.09	10.92	15.60
	111	8/22/2007 11:31:00 AM	0.05	0.09	10.87	15.60
	112	8/22/2007 11:32:00 AM	0.05	0.09	10.82	15.64
	113	8/22/2007 11:33:00 AM	0.05	0.09	10.78	15.64
	114	8/22/2007 11:34:00 AM	0.04	0.09	10.73	15.63
	115	8/22/2007 11:35:00 AM	0.04	0.09	10.68	15.58
	116	8/22/2007 11:36:00 AM	0.04	0.09	10.63	15.57
	117	8/22/2007 11:37:00 AM	0.04	0.09	10.59	15.57
	118	8/22/2007 11:38:00 AM	0.04	0.09	10.55	15.57
	119	8/22/2007 11:39:00 AM	0.04	0.09	10.50	15.56
	120	8/22/2007 11:40:00 AM	0.03	0.09	10.46	15.56
	121	8/22/2007 11:41:00 AM	0.03	0.10	10.42	15.56
	122	8/22/2007 11:42:00 AM	0.03	0.09	10.37	15.55
	123	8/22/2007 11:43:00 AM	0.03	0.08	10.32	15.55
	124	8/22/2007 11:44:00 AM	v -7.50	0.08	10.28	15.54
	125	8/22/2007 11:45:00 AM	v -7.50	0.12	10.24	15.54
	126	8/22/2007 11:46:00 AM	v -7.50	0.12	10.19	15.58
	127	8/22/2007 11:47:00 AM	v -7.50	v -7.50	10.14	15.58
	128	8/22/2007 11:48:00 AM	v -7.50	v -7.50	10.10	15.57
	129	8/22/2007 11:49:00 AM	v -7.50	v -7.50	10.06	15.56
	130	8/22/2007 11:50:00 AM	v -7.50	v -7.50	10.01	15.51

printed 1/7/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/22/2007 11:51:00 AM	v -7.50	v -7.50	8.25	15.51
	132	8/22/2007 11:52:00 AM	v -7.50	v -7.50	v -7.50	15.55
	133	8/22/2007 11:53:00 AM	v -7.50	v -7.50	v -7.50	15.55
	134	8/22/2007 11:54:00 AM	v -7.50	v -7.50	v -7.50	15.54
	135	8/22/2007 11:55:00 AM	v -7.50	v -7.50	v -7.50	15.54
	136	8/22/2007 11:56:00 AM	v -7.50	v -7.50	v -7.50	15.53
	137	8/22/2007 11:57:00 AM	v -7.50	v -7.50	v -7.50	15.53
	138	8/22/2007 11:58:00 AM	v -7.50	v -7.50	v -7.50	15.52
	139	8/22/2007 11:59:00 AM	v -7.50	v -7.50	v -7.50	15.52
	140	8/22/2007 12:00:00 PM	v -7.50	v -7.50	v -7.50	15.52
	141	8/22/2007 12:01:00 PM	v -7.50	v -7.50	v -7.50	15.51
	142	8/22/2007 12:02:00 PM	v -7.50	v -7.50	v -7.50	15.51
	143	8/22/2007 12:03:00 PM	v -7.50	v -7.50	v -7.50	14.38
	144	8/22/2007 12:04:00 PM	v -7.50	v -7.50	v -7.50	12.40
	145	8/22/2007 12:05:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	146	8/22/2007 12:06:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	147	8/22/2007 12:07:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	148	8/22/2007 12:08:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	149	8/22/2007 12:09:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	150	8/22/2007 12:10:00 PM	O.R.	O.R.	O.R.	O.R.
	151	8/22/2007 12:11:00 PM	O.R.	O.R.	O.R.	O.R.
	152	8/22/2007 12:12:00 PM	O.R.	O.R.	O.R.	O.R.
	153	8/22/2007 12:13:00 PM	O.R.	O.R.	O.R.	O.R.
	154	8/22/2007 12:14:00 PM	O.R.	O.R.	O.R.	O.R.
	155	8/22/2007 12:15:00 PM	O.R.	O.R.	O.R.	O.R.
	156	8/22/2007 12:16:00 PM	O.R.	O.R.	O.R.	O.R.
	157	8/22/2007 12:17:00 PM	O.R.	O.R.	O.R.	O.R.
	158	8/22/2007 12:18:00 PM	O.R.	O.R.	O.R.	O.R.
	159	8/22/2007 12:19:00 PM	O.R.	O.R.	O.R.	O.R.
	160	8/22/2007 12:20:00 PM	O.R.	O.R.	O.R.	O.R.
	161	8/22/2007 12:21:00 PM	O.R.	O.R.	O.R.	O.R.
	162	8/22/2007 12:22:00 PM	O.R.	O.R.	O.R.	O.R.
	163	8/22/2007 12:23:00 PM	O.R.	O.R.	O.R.	O.R.
	164	8/22/2007 12:24:00 PM	O.R.	O.R.	O.R.	O.R.
	165	8/22/2007 12:25:00 PM	O.R.	O.R.	O.R.	O.R.
	166	8/22/2007 12:26:00 PM	O.R.	O.R.	O.R.	O.R.
	167	8/22/2007 12:27:00 PM	O.R.	O.R.	O.R.	O.R.
	168	8/22/2007 12:28:00 PM	O.R.	O.R.	O.R.	O.R.
	169	8/22/2007 12:29:00 PM	O.R.	O.R.	O.R.	O.R.
	170	8/22/2007 12:30:00 PM	O.R.	O.R.	O.R.	O.R.
	171	8/22/2007 12:31:00 PM	O.R.	O.R.	O.R.	O.R.
	172	8/22/2007 12:32:00 PM	O.R.	O.R.	O.R.	O.R.
	173	8/22/2007 12:33:00 PM	O.R.	O.R.	O.R.	O.R.
	174	8/22/2007 12:34:00 PM	O.R.	O.R.	O.R.	O.R.
	175	8/22/2007 12:35:00 PM	O.R.	O.R.	O.R.	O.R.
	176	8/22/2007 12:36:00 PM	O.R.	O.R.	O.R.	O.R.
	177	8/22/2007 12:37:00 PM	O.R.	O.R.	O.R.	O.R.
	178	8/22/2007 12:38:00 PM	O.R.	O.R.	O.R.	O.R.
	179	8/22/2007 12:39:00 PM	O.R.	O.R.	O.R.	O.R.
	180	8/22/2007 12:40:00 PM	O.R.	O.R.	O.R.	O.R.

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Handy logger

Name : LOGGER 2

LOG Name	08220941
Interval	00:01:00
Personnel	

Start	8/22/2007 9:41:23 AM
Stop	8/22/2007 12:42:00 PM
Comment	

Data	182
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.00	16.14	15.95	15.90
Minimum	-7.50	-7.50	-7.50	-7.50
Average	12.65	4.97	14.08	2.34
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/22/2007 9:41:23 AM	0.12	0.04	0.21	0.18
	2	8/22/2007 9:42:00 AM	0.14	0.06	0.20	0.18
	3	8/22/2007 9:43:00 AM	0.13	0.06	0.23	0.20
	4	8/22/2007 9:44:00 AM	0.60	0.54	6.78	6.79
	5	8/22/2007 9:45:00 AM	0.95	0.86	6.99	6.97
	6	8/22/2007 9:46:00 AM	1.28	1.20	7.40	7.42
	7	8/22/2007 9:47:00 AM	1.66	1.58	7.82	7.85
	8	8/22/2007 9:48:00 AM	2.01	1.93	8.27	8.32
	9	8/22/2007 9:49:00 AM	2.37	2.29	8.74	8.75
	10	8/22/2007 9:50:00 AM	2.77	2.69	9.16	9.21
	11	8/22/2007 9:51:00 AM	3.13	3.07	9.56	9.61
	12	8/22/2007 9:52:00 AM	3.64	3.55	11.01	11.18
	13	8/22/2007 9:53:00 AM	4.27	4.14	14.99	15.03
	14	8/22/2007 9:54:00 AM	4.85	4.67	15.87	^ 15.90
	15	8/22/2007 9:55:00 AM	5.40	5.25	^ 15.95	15.59
	16	8/22/2007 9:56:00 AM	5.96	5.79	15.88	15.10
	17	8/22/2007 9:57:00 AM	7.12	6.80	15.82	14.65
	18	8/22/2007 9:58:00 AM	6.68	6.52	15.77	14.16
	19	8/22/2007 9:59:00 AM	7.07	6.91	15.72	13.68
	20	8/22/2007 10:00:00 AM	7.49	7.26	15.72	13.21
	21	8/22/2007 10:01:00 AM	8.86	8.45	15.72	12.78
	22	8/22/2007 10:02:00 AM	9.56	9.11	15.69	12.33
	23	8/22/2007 10:03:00 AM	10.33	9.78	15.67	11.88
	24	8/22/2007 10:04:00 AM	11.01	10.41	15.64	11.44
	25	8/22/2007 10:05:00 AM	11.73	11.07	15.63	11.06
	26	8/22/2007 10:06:00 AM	12.45	11.72	15.63	10.65
	27	8/22/2007 10:07:00 AM	13.20	12.32	15.68	10.25
	28	8/22/2007 10:08:00 AM	13.89	12.92	15.73	9.86
	29	8/22/2007 10:09:00 AM	14.60	13.50	15.74	9.47
	30	8/22/2007 10:10:00 AM	15.28	14.04	15.75	9.10

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/22/2007 10:11:00 AM	^ 16.00	14.58	15.75	8.74
	32	8/22/2007 10:12:00 AM	15.26	15.58	15.75	8.38
	33	8/22/2007 10:13:00 AM	15.25	^ 16.14	15.76	8.03
	34	8/22/2007 10:14:00 AM	15.28	15.51	15.77	7.69
	35	8/22/2007 10:15:00 AM	15.27	15.16	15.76	7.37
	36	8/22/2007 10:16:00 AM	15.27	14.83	15.76	7.04
	37	8/22/2007 10:17:00 AM	15.27	14.53	15.75	6.72
	38	8/22/2007 10:18:00 AM	15.26	14.23	15.78	6.42
	39	8/22/2007 10:19:00 AM	15.26	13.91	15.77	6.11
	40	8/22/2007 10:20:00 AM	15.30	13.60	15.75	5.85
	41	8/22/2007 10:21:00 AM	15.30	13.30	15.74	5.56
	42	8/22/2007 10:22:00 AM	15.30	13.00	15.73	5.29
	43	8/22/2007 10:23:00 AM	15.29	12.73	15.73	5.02
	44	8/22/2007 10:24:00 AM	15.29	12.44	15.72	4.76
	45	8/22/2007 10:25:00 AM	15.31	12.19	15.74	4.51
	46	8/22/2007 10:26:00 AM	15.31	11.92	15.72	4.26
	47	8/22/2007 10:27:00 AM	15.31	11.66	15.71	4.02
	48	8/22/2007 10:28:00 AM	15.31	11.37	15.70	3.79
	49	8/22/2007 10:29:00 AM	15.31	11.12	15.69	3.57
	50	8/22/2007 10:30:00 AM	15.29	10.87	15.69	3.35
	51	8/22/2007 10:31:00 AM	15.30	10.63	15.67	3.15
	52	8/22/2007 10:32:00 AM	15.30	10.41	15.67	2.96
	53	8/22/2007 10:33:00 AM	15.32	10.15	15.66	2.77
	54	8/22/2007 10:34:00 AM	15.32	9.93	15.66	2.59
	55	8/22/2007 10:35:00 AM	15.32	9.69	15.66	2.42
	56	8/22/2007 10:36:00 AM	15.29	9.48	15.66	2.26
	57	8/22/2007 10:37:00 AM	15.30	9.26	15.66	2.10
	58	8/22/2007 10:38:00 AM	15.31	9.03	15.65	1.94
	59	8/22/2007 10:39:00 AM	15.31	8.83	15.65	1.77
	60	8/22/2007 10:40:00 AM	15.32	8.64	15.65	1.63
	61	8/22/2007 10:41:00 AM	15.33	8.45	15.65	1.51
	62	8/22/2007 10:42:00 AM	15.33	8.26	15.65	1.38
	63	8/22/2007 10:43:00 AM	15.33	8.08	15.65	1.27
	64	8/22/2007 10:44:00 AM	15.29	7.86	15.65	1.16
	65	8/22/2007 10:45:00 AM	15.30	7.68	15.65	1.05
	66	8/22/2007 10:46:00 AM	15.30	7.50	15.64	0.96
	67	8/22/2007 10:47:00 AM	15.30	7.33	15.63	0.87
	68	8/22/2007 10:48:00 AM	15.30	7.16	15.64	0.78
	69	8/22/2007 10:49:00 AM	15.30	7.00	15.63	0.70
	70	8/22/2007 10:50:00 AM	15.30	6.83	15.62	0.62
	71	8/22/2007 10:51:00 AM	15.30	6.66	15.63	0.57
	72	8/22/2007 10:52:00 AM	15.30	6.51	15.63	0.51
	73	8/22/2007 10:53:00 AM	15.30	6.35	15.62	0.45
	74	8/22/2007 10:54:00 AM	15.30	6.20	15.62	0.40
	75	8/22/2007 10:55:00 AM	15.30	6.04	15.61	0.36
	76	8/22/2007 10:56:00 AM	15.30	5.89	15.62	0.33
	77	8/22/2007 10:57:00 AM	15.30	5.75	15.61	0.29
	78	8/22/2007 10:58:00 AM	15.30	5.60	15.61	0.27
	79	8/22/2007 10:59:00 AM	15.30	5.47	15.61	0.25
	80	8/22/2007 11:00:00 AM	15.31	5.30	15.61	0.24

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Handy logger

Name : LOGGER 2

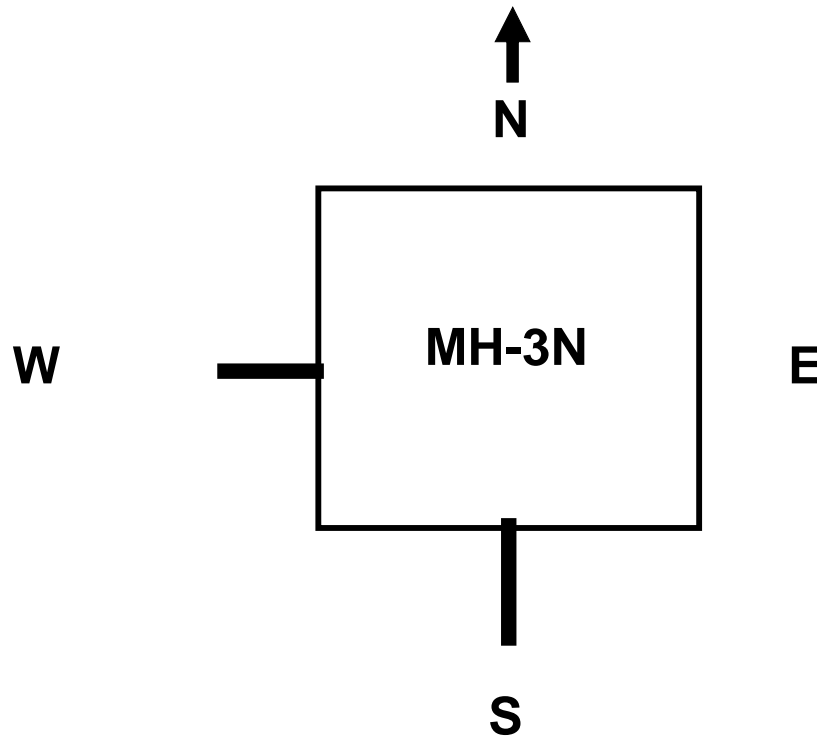
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/22/2007 11:01:00 AM	15.30	5.16	15.60	0.23
	82	8/22/2007 11:02:00 AM	15.30	5.03	15.60	0.22
	83	8/22/2007 11:03:00 AM	15.30	4.90	15.60	0.21
	84	8/22/2007 11:04:00 AM	15.30	4.78	15.59	0.21
	85	8/22/2007 11:05:00 AM	15.30	4.66	15.64	0.21
	86	8/22/2007 11:06:00 AM	15.30	4.57	15.63	0.21
	87	8/22/2007 11:07:00 AM	15.30	4.44	15.62	0.21
	88	8/22/2007 11:08:00 AM	15.29	4.32	15.62	0.20
	89	8/22/2007 11:09:00 AM	15.30	4.20	15.61	0.20
	90	8/22/2007 11:10:00 AM	15.30	4.10	15.61	0.20
	91	8/22/2007 11:11:00 AM	15.30	3.98	15.60	0.19
	92	8/22/2007 11:12:00 AM	15.29	3.88	15.60	0.19
	93	8/22/2007 11:13:00 AM	15.29	3.77	15.59	0.18
	94	8/22/2007 11:14:00 AM	15.30	3.66	15.58	0.21
	95	8/22/2007 11:15:00 AM	15.28	3.56	15.58	0.21
	96	8/22/2007 11:16:00 AM	15.28	3.46	15.57	0.21
	97	8/22/2007 11:17:00 AM	15.32	3.36	15.57	0.21
	98	8/22/2007 11:18:00 AM	15.32	3.28	15.56	0.18
	99	8/22/2007 11:19:00 AM	15.32	3.18	15.56	0.18
	100	8/22/2007 11:20:00 AM	15.32	3.10	15.56	0.18
	101	8/22/2007 11:21:00 AM	15.31	3.01	15.57	0.18
	102	8/22/2007 11:22:00 AM	15.31	2.92	15.56	0.18
	103	8/22/2007 11:23:00 AM	15.31	2.84	15.55	0.21
	104	8/22/2007 11:24:00 AM	15.31	2.75	15.55	0.21
	105	8/22/2007 11:25:00 AM	15.31	2.67	15.55	0.21
	106	8/22/2007 11:26:00 AM	15.30	2.58	15.55	0.20
	107	8/22/2007 11:27:00 AM	15.30	2.51	15.55	0.20
	108	8/22/2007 11:28:00 AM	15.29	2.43	15.54	0.20
	109	8/22/2007 11:29:00 AM	15.29	2.36	15.54	0.19
	110	8/22/2007 11:30:00 AM	15.28	2.28	15.58	0.20
	111	8/22/2007 11:31:00 AM	15.27	2.20	15.58	0.19
	112	8/22/2007 11:32:00 AM	15.27	2.12	15.58	0.19
	113	8/22/2007 11:33:00 AM	15.27	2.06	15.57	0.19
	114	8/22/2007 11:34:00 AM	15.27	1.99	15.57	0.19
	115	8/22/2007 11:35:00 AM	15.30	1.92	15.57	0.19
	116	8/22/2007 11:36:00 AM	15.30	1.85	15.56	0.19
	117	8/22/2007 11:37:00 AM	15.30	1.80	15.55	0.18
	118	8/22/2007 11:38:00 AM	15.26	1.73	15.55	0.18
	119	8/22/2007 11:39:00 AM	15.26	1.67	15.55	0.18
	120	8/22/2007 11:40:00 AM	15.29	1.61	15.55	0.21
	121	8/22/2007 11:41:00 AM	15.29	1.56	15.54	0.17
	122	8/22/2007 11:42:00 AM	15.29	1.50	15.54	0.18
	123	8/22/2007 11:43:00 AM	15.28	1.45	15.54	0.17
	124	8/22/2007 11:44:00 AM	15.29	1.39	15.54	0.21
	125	8/22/2007 11:45:00 AM	15.29	1.35	15.53	0.17
	126	8/22/2007 11:46:00 AM	15.28	1.30	15.53	0.20
	127	8/22/2007 11:47:00 AM	15.28	1.25	15.53	0.20
	128	8/22/2007 11:48:00 AM	15.28	1.20	15.53	0.20
	129	8/22/2007 11:49:00 AM	15.28	1.15	15.52	0.20
	130	8/22/2007 11:50:00 AM	15.28	1.11	15.52	0.20

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/22/2007 11:51:00 AM	15.27	1.06	15.52	0.20
	132	8/22/2007 11:52:00 AM	15.27	1.03	15.51	0.20
	133	8/22/2007 11:53:00 AM	15.27	0.98	15.51	v -7.50
	134	8/22/2007 11:54:00 AM	15.26	0.94	15.50	v -7.50
	135	8/22/2007 11:55:00 AM	15.26	0.90	15.50	v -7.50
	136	8/22/2007 11:56:00 AM	15.26	0.87	15.50	v -7.50
	137	8/22/2007 11:57:00 AM	15.26	v -7.50	15.49	v -7.50
	138	8/22/2007 11:58:00 AM	15.25	v -7.50	15.50	v -7.50
	139	8/22/2007 11:59:00 AM	15.25	v -7.50	15.50	v -7.50
	140	8/22/2007 12:00:00 PM	15.26	v -7.50	15.50	v -7.50
	141	8/22/2007 12:01:00 PM	15.25	v -7.50	15.49	v -7.50
	142	8/22/2007 12:02:00 PM	15.25	v -7.50	15.49	v -7.50
	143	8/22/2007 12:03:00 PM	15.25	v -7.50	13.86	v -7.50
	144	8/22/2007 12:04:00 PM	15.25	v -7.50	v -7.50	v -7.50
	145	8/22/2007 12:05:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	146	8/22/2007 12:06:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	147	8/22/2007 12:07:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	148	8/22/2007 12:08:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	149	8/22/2007 12:09:00 PM	O.R.	O.R.	O.R.	O.R.
	150	8/22/2007 12:10:00 PM	O.R.	O.R.	O.R.	O.R.
	151	8/22/2007 12:11:00 PM	O.R.	O.R.	O.R.	O.R.
	152	8/22/2007 12:12:00 PM	O.R.	O.R.	O.R.	O.R.
	153	8/22/2007 12:13:00 PM	O.R.	O.R.	O.R.	O.R.
	154	8/22/2007 12:14:00 PM	O.R.	O.R.	O.R.	O.R.
	155	8/22/2007 12:15:00 PM	O.R.	O.R.	O.R.	O.R.
	156	8/22/2007 12:16:00 PM	O.R.	O.R.	O.R.	O.R.
	157	8/22/2007 12:17:00 PM	O.R.	O.R.	O.R.	O.R.
	158	8/22/2007 12:18:00 PM	O.R.	O.R.	O.R.	O.R.
	159	8/22/2007 12:19:00 PM	O.R.	O.R.	O.R.	O.R.
	160	8/22/2007 12:20:00 PM	O.R.	O.R.	O.R.	O.R.
	161	8/22/2007 12:21:00 PM	O.R.	O.R.	O.R.	O.R.
	162	8/22/2007 12:22:00 PM	O.R.	O.R.	O.R.	O.R.
	163	8/22/2007 12:23:00 PM	O.R.	O.R.	O.R.	O.R.
	164	8/22/2007 12:24:00 PM	O.R.	O.R.	O.R.	O.R.
	165	8/22/2007 12:25:00 PM	O.R.	O.R.	O.R.	O.R.
	166	8/22/2007 12:26:00 PM	O.R.	O.R.	O.R.	O.R.
	167	8/22/2007 12:27:00 PM	O.R.	O.R.	O.R.	O.R.
	168	8/22/2007 12:28:00 PM	O.R.	O.R.	O.R.	O.R.
	169	8/22/2007 12:29:00 PM	O.R.	O.R.	O.R.	O.R.
	170	8/22/2007 12:30:00 PM	O.R.	O.R.	O.R.	O.R.
	171	8/22/2007 12:31:00 PM	O.R.	O.R.	O.R.	O.R.
	172	8/22/2007 12:32:00 PM	O.R.	O.R.	O.R.	O.R.
	173	8/22/2007 12:33:00 PM	O.R.	O.R.	O.R.	O.R.
	174	8/22/2007 12:34:00 PM	O.R.	O.R.	O.R.	O.R.
	175	8/22/2007 12:35:00 PM	O.R.	O.R.	O.R.	O.R.
	176	8/22/2007 12:36:00 PM	O.R.	O.R.	O.R.	O.R.
	177	8/22/2007 12:37:00 PM	O.R.	O.R.	O.R.	O.R.
	178	8/22/2007 12:38:00 PM	O.R.	O.R.	O.R.	O.R.
	179	8/22/2007 12:39:00 PM	O.R.	O.R.	O.R.	O.R.
	180	8/22/2007 12:40:00 PM	O.R.	O.R.	O.R.	O.R.

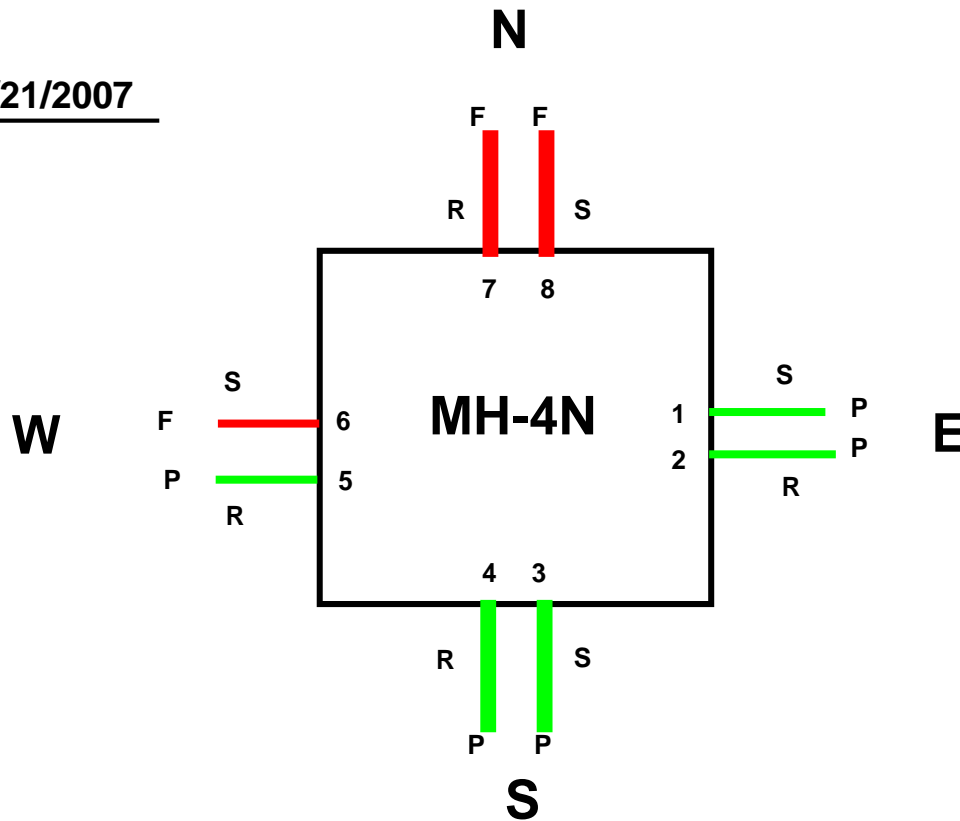


N - Main trunk to MH-4N

S - Main trunk to MH-3N

NOTES:

- 1, No pressurization testing conducted at this pit. Conduits to/from this pit were tested from adjacent pits.
2. Supply, Return drains tested on 8/15/07: All Dry

DATE: 8/21/2007

N - Main Trunk to 5-N, Tested 10-08-07 after modification to 5-N vent plumbing

E - Feeder to Bldgs. 1662 and 1663

S - Main Trunk to 3-N

W - Feeder to Bldg 1664

NOTES:

- 1, Pit dry on North end, but wet and muddy on South end.
2. Supply, Return drains tested on 8/15/07: All dry except supply on East wall (< 1 oz. water drained)

MH 4-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	East wall, supply to 1662 (and 1663?)	P	Inspected and tightened drain plugs at entrance to 1662. Did not visit entrance to 1663.
	2	2	East wall, return from 1662 and 1663)	P	Inspected and tightened drain plugs at entrance to 1662. Did not visit entrance to 1663.
	3	3	South wall, supply from N-3	P	
	4	4	South wall, return to N-3	P	
2	1	5	West wall, return from Bldg. 1664	P	Could not locate entrance into 1664 to check vent plugs
	2	6	West wall, supply to Bldg. 1664	F	Could not locate entrance into 1664 to check vent plugs
	3	7	North wall, return to 5-N	See Below	Could not enter 5-N (permit required pit) to seal, pressure test later
	4	8	North wall, supply from 5-N	See Below	Could not enter 5-N (permit required pit) to seal, pressure test later
1	1	1	Return to 5-N	F	Test attempted on 10-08-07 after vent plumbing modification in 5-N. Unable to pressurize, test aborted (gland seals in 4-N failed)
	2	2	Supply to 5-N	F	Test attempted on 10-08-07 after vent plumbing modification in 5-N. Unable to pressurize, test aborted (gland seals in 4-N failed)

printed 1/7/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08211437
Interval	00:01:00
Personnel	

Start	8/21/2007 2:37:05 PM
Stop	8/21/2007 5:02:17 PM
Comment	

Data	147
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.00	16.05	15.52	15.84
Minimum	-0.03	0.07	0.08	0.16
Average	15.19	15.10	13.99	14.34
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/21/2007 2:37:05 PM	-0.02	v 0.07	v 0.08	v 0.16
	2	8/21/2007 2:38:00 PM	v -0.03	0.10	1.09	1.19
	3	8/21/2007 2:39:00 PM	2.30	2.64	1.11	1.29
	4	8/21/2007 2:40:00 PM	4.68	4.87	1.55	1.72
	5	8/21/2007 2:41:00 PM	6.95	7.04	2.00	2.18
	6	8/21/2007 2:42:00 PM	9.10	9.07	2.48	2.66
	7	8/21/2007 2:43:00 PM	11.11	10.97	2.97	3.16
	8	8/21/2007 2:44:00 PM	12.95	12.77	3.48	3.67
	9	8/21/2007 2:45:00 PM	14.65	14.40	4.04	4.20
	10	8/21/2007 2:46:00 PM	^ 16.00	^ 16.05	4.64	4.80
	11	8/21/2007 2:47:00 PM	15.94	16.00	5.47	5.61
	12	8/21/2007 2:48:00 PM	15.95	15.97	6.15	6.32
	13	8/21/2007 2:49:00 PM	15.94	15.97	6.83	7.00
	14	8/21/2007 2:50:00 PM	15.92	15.95	7.53	7.69
	15	8/21/2007 2:51:00 PM	15.92	15.97	8.19	8.38
	16	8/21/2007 2:52:00 PM	15.91	15.96	8.87	9.07
	17	8/21/2007 2:53:00 PM	15.90	15.96	9.57	9.80
	18	8/21/2007 2:54:00 PM	15.89	15.94	10.25	10.49
	19	8/21/2007 2:55:00 PM	15.88	15.93	10.93	11.17
	20	8/21/2007 2:56:00 PM	15.88	15.93	11.63	11.87
	21	8/21/2007 2:57:00 PM	15.87	15.93	12.29	12.57
	22	8/21/2007 2:58:00 PM	15.86	15.93	12.97	13.26
	23	8/21/2007 2:59:00 PM	15.86	15.92	13.44	13.80
	24	8/21/2007 3:00:00 PM	15.89	15.92	14.00	14.32
	25	8/21/2007 3:01:00 PM	15.84	15.92	14.80	15.12
	26	8/21/2007 3:02:00 PM	15.84	15.91	15.47	15.80
	27	8/21/2007 3:03:00 PM	15.83	15.90	15.49	15.79
	28	8/21/2007 3:04:00 PM	15.83	15.90	15.48	15.79
	29	8/21/2007 3:05:00 PM	15.82	15.90	15.47	15.79
	30	8/21/2007 3:06:00 PM	15.81	15.90	15.48	15.79

printed 1/7/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/23/2007 12:42:00 PM	v -7.50	v -7.50	13.47	16.45
	132	8/23/2007 12:43:00 PM	v -7.50	v -7.50	13.45	16.45
	133	8/23/2007 12:43:43 PM	v -7.50	v -7.50	13.43	16.44

printed 1/7/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/21/2007 3:57:00 PM	15.80	15.61	15.42	15.80
	82	8/21/2007 3:58:00 PM	15.79	15.60	15.42	15.80
	83	8/21/2007 3:59:00 PM	15.79	15.60	15.42	15.81
	84	8/21/2007 4:00:00 PM	15.78	15.60	15.43	15.80
	85	8/21/2007 4:01:00 PM	15.78	15.61	15.42	15.81
	86	8/21/2007 4:02:00 PM	15.78	15.80	15.42	15.80
	87	8/21/2007 4:03:00 PM	15.78	15.61	15.42	15.78
	88	8/21/2007 4:04:00 PM	15.77	15.60	15.42	15.79
	89	8/21/2007 4:05:00 PM	15.77	15.56	15.43	15.79
	90	8/21/2007 4:06:00 PM	15.73	15.56	15.39	15.80
	91	8/21/2007 4:07:00 PM	15.73	15.55	15.40	15.80
	92	8/21/2007 4:08:00 PM	15.73	15.56	15.39	15.77
	93	8/21/2007 4:09:00 PM	15.74	15.56	15.39	15.77
	94	8/21/2007 4:10:00 PM	15.73	15.56	15.39	15.78
	95	8/21/2007 4:11:00 PM	15.72	15.56	15.36	15.78
	96	8/21/2007 4:12:00 PM	15.72	15.53	15.36	15.78
	97	8/21/2007 4:13:00 PM	15.72	15.51	15.36	15.79
	98	8/21/2007 4:14:00 PM	15.72	15.51	15.36	15.79
	99	8/21/2007 4:15:00 PM	15.72	15.51	15.36	15.79
	100	8/21/2007 4:16:00 PM	15.72	15.50	15.36	15.80
	101	8/21/2007 4:17:00 PM	15.68	15.50	15.36	15.80
	102	8/21/2007 4:18:00 PM	15.68	15.50	15.37	15.80
	103	8/21/2007 4:19:00 PM	15.68	15.50	15.36	15.79
	104	8/21/2007 4:20:00 PM	15.68	15.49	15.37	15.79
	105	8/21/2007 4:21:00 PM	15.68	15.49	15.37	15.78
	106	8/21/2007 4:22:00 PM	15.68	15.49	15.37	15.78
	107	8/21/2007 4:23:00 PM	15.67	15.48	15.36	15.78
	108	8/21/2007 4:24:00 PM	15.67	15.49	15.33	15.79
	109	8/21/2007 4:25:00 PM	15.67	15.48	15.34	15.78
	110	8/21/2007 4:26:00 PM	15.67	15.48	15.34	15.78
	111	8/21/2007 4:27:00 PM	15.67	15.48	15.34	15.79
	112	8/21/2007 4:28:00 PM	15.64	15.47	15.34	15.75
	113	8/21/2007 4:29:00 PM	15.64	15.47	15.30	15.75
	114	8/21/2007 4:30:00 PM	15.63	15.43	15.30	15.75
	115	8/21/2007 4:31:00 PM	15.64	15.43	15.31	15.76
	116	8/21/2007 4:32:00 PM	15.63	15.43	15.31	15.75
	117	8/21/2007 4:33:00 PM	15.63	15.43	15.31	15.75
	118	8/21/2007 4:34:00 PM	15.62	15.43	15.31	15.75
	119	8/21/2007 4:35:00 PM	15.62	15.42	15.31	15.75
	120	8/21/2007 4:36:00 PM	15.62	15.41	15.31	15.75
	121	8/21/2007 4:37:00 PM	15.61	15.42	15.32	15.76
	122	8/21/2007 4:38:00 PM	15.62	15.41	15.33	15.76
	123	8/21/2007 4:39:00 PM	15.62	15.41	15.29	15.73
	124	8/21/2007 4:40:00 PM	15.61	15.41	15.29	15.73
	125	8/21/2007 4:41:00 PM	15.60	15.41	15.30	15.76
	126	8/21/2007 4:42:00 PM	15.59	15.35	15.30	15.75
	127	8/21/2007 4:43:00 PM	15.59	15.38	15.30	15.76
	128	8/21/2007 4:44:00 PM	15.59	15.35	15.31	15.76
	129	8/21/2007 4:45:00 PM	15.59	15.35	15.31	15.76
	130	8/21/2007 4:46:00 PM	15.58	15.35	15.30	15.73

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/21/2007 4:47:00 PM	15.54	15.34	15.31	15.73
	132	8/21/2007 4:48:00 PM	15.58	15.35	15.31	15.74
	133	8/21/2007 4:49:00 PM	15.57	15.33	15.31	15.74
	134	8/21/2007 4:50:00 PM	15.57	15.33	15.31	15.74
	135	8/21/2007 4:51:00 PM	15.55	15.32	15.31	15.74
	136	8/21/2007 4:52:00 PM	15.57	15.32	15.31	15.74
	137	8/21/2007 4:53:00 PM	15.53	15.32	15.31	15.74
	138	8/21/2007 4:54:00 PM	15.53	15.31	15.32	15.75
	139	8/21/2007 4:55:00 PM	15.52	15.30	15.32	15.74
	140	8/21/2007 4:56:00 PM	15.51	15.31	15.32	15.74
	141	8/21/2007 4:57:00 PM	15.51	15.31	15.32	15.75
	142	8/21/2007 4:58:00 PM	15.51	15.30	15.32	15.74
	143	8/21/2007 4:59:00 PM	15.51	15.28	15.32	15.74
	144	8/21/2007 5:00:00 PM	15.51	15.25	15.33	15.74
	145	8/21/2007 5:01:00 PM	15.51	15.29	15.33	15.74
	146	8/21/2007 5:02:00 PM	15.51	15.25	15.32	15.75
	147	8/21/2007 5:02:17 PM	15.50	15.25	15.33	15.75

printed 1/7/2008

Handy logger

Name : LOGGER 2

LOG Name	08211458
Interval	00:01:00
Personnel	

Start	8/21/2007 2:58:19 PM
Stop	8/21/2007 5:01:50 PM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.60	16.56	-7.50	-7.50
Minimum	0.06	0.07	-7.50	-7.50
Average	15.53	9.90	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/21/2007 2:58:19 PM	v 0.06	v 0.07	v -7.50	v -7.50
	2	8/21/2007 2:59:00 PM	2.84	0.09	v -7.50	v -7.50
	3	8/21/2007 3:00:00 PM	^ 16.60	12.93	v -7.50	v -7.50
	4	8/21/2007 3:01:00 PM	16.58	^ 16.56	v -7.50	v -7.50
	5	8/21/2007 3:02:00 PM	16.50	16.35	v -7.50	v -7.50
	6	8/21/2007 3:03:00 PM	16.47	16.19	v -7.50	v -7.50
	7	8/21/2007 3:04:00 PM	16.45	16.03	v -7.50	v -7.50
	8	8/21/2007 3:05:00 PM	16.41	15.86	v -7.50	v -7.50
	9	8/21/2007 3:06:00 PM	16.40	15.72	v -7.50	v -7.50
	10	8/21/2007 3:07:00 PM	16.37	15.57	v -7.50	v -7.50
	11	8/21/2007 3:08:00 PM	16.33	15.41	v -7.50	v -7.50
	12	8/21/2007 3:09:00 PM	16.30	15.30	v -7.50	v -7.50
	13	8/21/2007 3:10:00 PM	16.27	15.15	v -7.50	v -7.50
	14	8/21/2007 3:11:00 PM	16.27	15.00	v -7.50	v -7.50
	15	8/21/2007 3:12:00 PM	16.24	14.85	v -7.50	v -7.50
	16	8/21/2007 3:13:00 PM	16.21	14.72	v -7.50	v -7.50
	17	8/21/2007 3:14:00 PM	16.20	14.57	v -7.50	v -7.50
	18	8/21/2007 3:15:00 PM	16.18	14.45	v -7.50	v -7.50
	19	8/21/2007 3:16:00 PM	16.16	14.31	v -7.50	v -7.50
	20	8/21/2007 3:17:00 PM	16.14	14.18	v -7.50	v -7.50
	21	8/21/2007 3:18:00 PM	16.13	14.08	v -7.50	v -7.50
	22	8/21/2007 3:19:00 PM	16.11	13.95	v -7.50	v -7.50
	23	8/21/2007 3:20:00 PM	16.14	13.82	v -7.50	v -7.50
	24	8/21/2007 3:21:00 PM	16.11	13.69	v -7.50	v -7.50
	25	8/21/2007 3:22:00 PM	16.11	13.56	v -7.50	v -7.50
	26	8/21/2007 3:23:00 PM	16.09	13.43	v -7.50	v -7.50
	27	8/21/2007 3:24:00 PM	16.08	13.31	v -7.50	v -7.50
	28	8/21/2007 3:25:00 PM	16.06	13.18	v -7.50	v -7.50
	29	8/21/2007 3:26:00 PM	16.05	13.10	v -7.50	v -7.50
	30	8/21/2007 3:27:00 PM	16.04	12.94	v -7.50	v -7.50

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Handy logger

Name : LOGGER 2

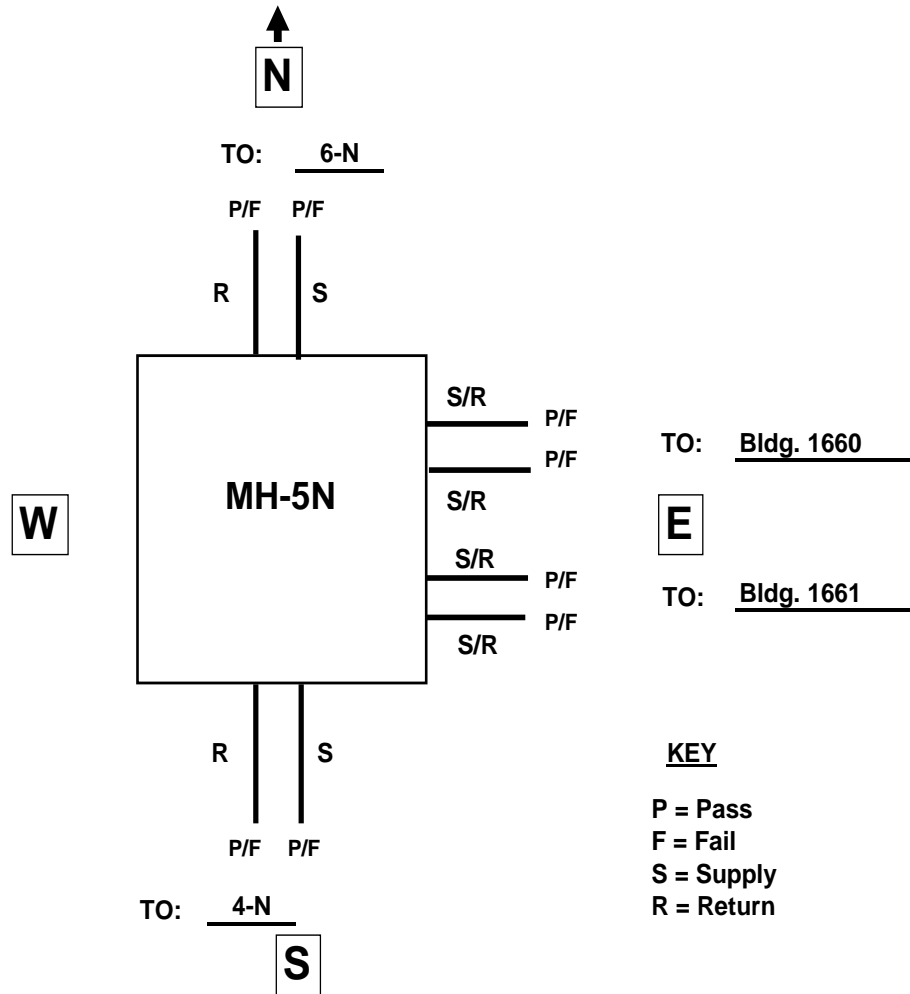
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/21/2007 3:28:00 PM	16.03	12.82	v -7.50	v -7.50
	32	8/21/2007 3:29:00 PM	16.02	12.70	v -7.50	v -7.50
	33	8/21/2007 3:30:00 PM	16.01	12.58	v -7.50	v -7.50
	34	8/21/2007 3:31:00 PM	16.00	12.47	v -7.50	v -7.50
	35	8/21/2007 3:32:00 PM	15.97	12.36	v -7.50	v -7.50
	36	8/21/2007 3:33:00 PM	15.95	12.25	v -7.50	v -7.50
	37	8/21/2007 3:34:00 PM	15.94	12.14	v -7.50	v -7.50
	38	8/21/2007 3:35:00 PM	15.93	12.02	v -7.50	v -7.50
	39	8/21/2007 3:36:00 PM	15.91	11.92	v -7.50	v -7.50
	40	8/21/2007 3:37:00 PM	15.92	11.82	v -7.50	v -7.50
	41	8/21/2007 3:38:00 PM	15.90	11.69	v -7.50	v -7.50
	42	8/21/2007 3:39:00 PM	15.92	11.59	v -7.50	v -7.50
	43	8/21/2007 3:40:00 PM	15.88	11.48	v -7.50	v -7.50
	44	8/21/2007 3:41:00 PM	15.88	11.37	v -7.50	v -7.50
	45	8/21/2007 3:42:00 PM	15.86	11.27	v -7.50	v -7.50
	46	8/21/2007 3:43:00 PM	15.85	11.17	v -7.50	v -7.50
	47	8/21/2007 3:44:00 PM	15.84	11.07	v -7.50	v -7.50
	48	8/21/2007 3:45:00 PM	15.83	10.96	v -7.50	v -7.50
	49	8/21/2007 3:46:00 PM	15.82	10.86	v -7.50	v -7.50
	50	8/21/2007 3:47:00 PM	15.82	10.76	v -7.50	v -7.50
	51	8/21/2007 3:48:00 PM	15.81	10.66	v -7.50	v -7.50
	52	8/21/2007 3:49:00 PM	15.80	10.57	v -7.50	v -7.50
	53	8/21/2007 3:50:00 PM	15.80	10.44	v -7.50	v -7.50
	54	8/21/2007 3:51:00 PM	15.77	10.35	v -7.50	v -7.50
	55	8/21/2007 3:52:00 PM	15.76	10.25	v -7.50	v -7.50
	56	8/21/2007 3:53:00 PM	15.75	10.16	v -7.50	v -7.50
	57	8/21/2007 3:54:00 PM	15.74	10.07	v -7.50	v -7.50
	58	8/21/2007 3:55:00 PM	15.74	9.98	v -7.50	v -7.50
	59	8/21/2007 3:56:00 PM	15.73	9.90	v -7.50	v -7.50
	60	8/21/2007 3:57:00 PM	15.71	9.81	v -7.50	v -7.50
	61	8/21/2007 3:58:00 PM	15.70	9.74	v -7.50	v -7.50
	62	8/21/2007 3:59:00 PM	15.68	9.64	v -7.50	v -7.50
	63	8/21/2007 4:00:00 PM	15.70	9.62	v -7.50	v -7.50
	64	8/21/2007 4:01:00 PM	15.71	9.56	v -7.50	v -7.50
	65	8/21/2007 4:02:00 PM	15.71	9.50	v -7.50	v -7.50
	66	8/21/2007 4:03:00 PM	15.72	9.44	v -7.50	v -7.50
	67	8/21/2007 4:04:00 PM	15.72	9.38	v -7.50	v -7.50
	68	8/21/2007 4:05:00 PM	15.71	9.31	v -7.50	v -7.50
	69	8/21/2007 4:06:00 PM	15.68	9.25	v -7.50	v -7.50
	70	8/21/2007 4:07:00 PM	15.68	9.18	v -7.50	v -7.50
	71	8/21/2007 4:08:00 PM	15.67	9.09	v -7.50	v -7.50
	72	8/21/2007 4:09:00 PM	15.67	9.01	v -7.50	v -7.50
	73	8/21/2007 4:10:00 PM	15.67	8.94	v -7.50	v -7.50
	74	8/21/2007 4:11:00 PM	15.66	8.86	v -7.50	v -7.50
	75	8/21/2007 4:12:00 PM	15.67	8.79	v -7.50	v -7.50
	76	8/21/2007 4:13:00 PM	15.67	8.69	v -7.50	v -7.50
	77	8/21/2007 4:14:00 PM	15.62	8.61	v -7.50	v -7.50
	78	8/21/2007 4:15:00 PM	15.66	8.55	v -7.50	v -7.50
	79	8/21/2007 4:16:00 PM	15.61	8.47	v -7.50	v -7.50
	80	8/21/2007 4:17:00 PM	15.59	8.40	v -7.50	v -7.50

printed 1/7/2008

Handy logger

Name : LOGGER 2

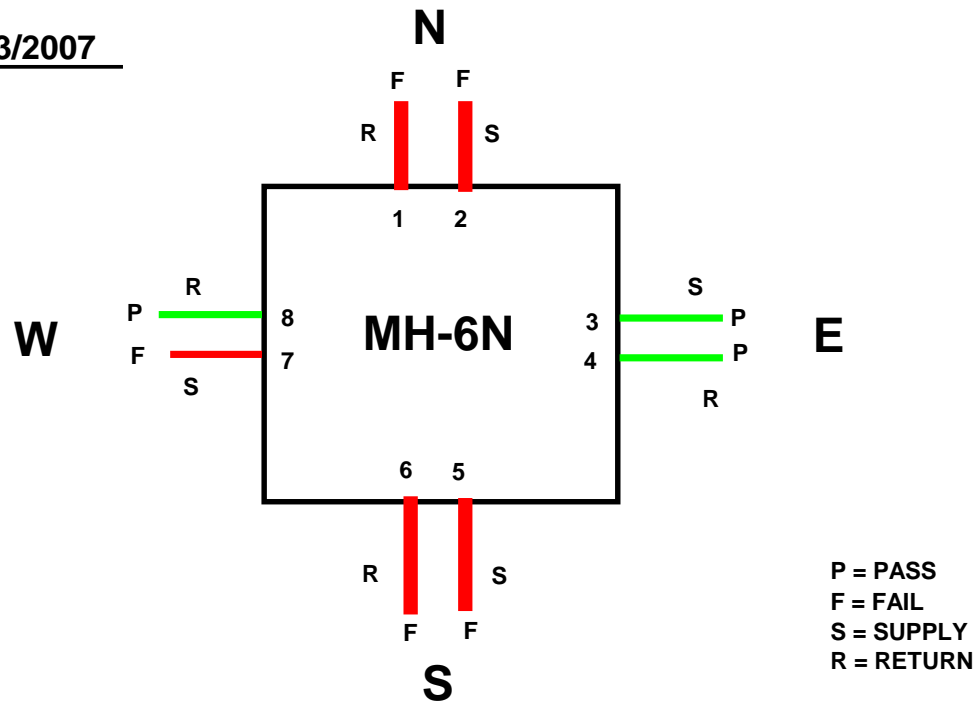
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/21/2007 4:18:00 PM	15.57	8.33	v -7.50	v -7.50
	82	8/21/2007 4:19:00 PM	15.57	8.27	v -7.50	v -7.50
	83	8/21/2007 4:20:00 PM	15.56	8.19	v -7.50	v -7.50
	84	8/21/2007 4:21:00 PM	15.56	8.12	v -7.50	v -7.50
	85	8/21/2007 4:22:00 PM	15.55	8.05	v -7.50	v -7.50
	86	8/21/2007 4:23:00 PM	15.54	7.98	v -7.50	v -7.50
	87	8/21/2007 4:24:00 PM	15.53	7.90	v -7.50	v -7.50
	88	8/21/2007 4:25:00 PM	15.53	7.83	v -7.50	v -7.50
	89	8/21/2007 4:26:00 PM	15.52	7.73	v -7.50	v -7.50
	90	8/21/2007 4:27:00 PM	15.49	7.67	v -7.50	v -7.50
	91	8/21/2007 4:28:00 PM	15.49	7.60	v -7.50	v -7.50
	92	8/21/2007 4:29:00 PM	15.49	7.54	v -7.50	v -7.50
	93	8/21/2007 4:30:00 PM	15.48	7.47	v -7.50	v -7.50
	94	8/21/2007 4:31:00 PM	15.48	7.41	v -7.50	v -7.50
	95	8/21/2007 4:32:00 PM	15.47	7.35	v -7.50	v -7.50
	96	8/21/2007 4:33:00 PM	15.47	7.28	v -7.50	v -7.50
	97	8/21/2007 4:34:00 PM	15.47	7.22	v -7.50	v -7.50
	98	8/21/2007 4:35:00 PM	15.46	7.16	v -7.50	v -7.50
	99	8/21/2007 4:36:00 PM	15.45	7.10	v -7.50	v -7.50
	100	8/21/2007 4:37:00 PM	15.45	7.03	v -7.50	v -7.50
	101	8/21/2007 4:38:00 PM	15.44	6.95	v -7.50	v -7.50
	102	8/21/2007 4:39:00 PM	15.44	6.89	v -7.50	v -7.50
	103	8/21/2007 4:40:00 PM	15.43	6.83	v -7.50	v -7.50
	104	8/21/2007 4:41:00 PM	15.43	6.77	v -7.50	v -7.50
	105	8/21/2007 4:42:00 PM	15.42	6.71	v -7.50	v -7.50
	106	8/21/2007 4:43:00 PM	15.41	6.65	v -7.50	v -7.50
	107	8/21/2007 4:44:00 PM	15.40	6.58	v -7.50	v -7.50
	108	8/21/2007 4:45:00 PM	15.37	6.53	v -7.50	v -7.50
	109	8/21/2007 4:46:00 PM	15.36	6.46	v -7.50	v -7.50
	110	8/21/2007 4:47:00 PM	15.36	6.41	v -7.50	v -7.50
	111	8/21/2007 4:48:00 PM	15.35	6.36	v -7.50	v -7.50
	112	8/21/2007 4:49:00 PM	15.34	6.30	v -7.50	v -7.50
	113	8/21/2007 4:50:00 PM	15.33	6.24	v -7.50	v -7.50
	114	8/21/2007 4:51:00 PM	15.33	6.18	v -7.50	v -7.50
	115	8/21/2007 4:52:00 PM	15.32	6.12	v -7.50	v -7.50
	116	8/21/2007 4:53:00 PM	15.32	6.07	v -7.50	v -7.50
	117	8/21/2007 4:54:00 PM	15.31	6.01	v -7.50	v -7.50
	118	8/21/2007 4:55:00 PM	15.26	5.92	v -7.50	v -7.50
	119	8/21/2007 4:56:00 PM	15.29	5.87	v -7.50	v -7.50
	120	8/21/2007 4:57:00 PM	15.28	5.81	v -7.50	v -7.50
	121	8/21/2007 4:58:00 PM	15.28	5.76	v -7.50	v -7.50
	122	8/21/2007 4:59:00 PM	15.25	5.71	v -7.50	v -7.50
	123	8/21/2007 5:00:00 PM	15.24	5.65	v -7.50	v -7.50
	124	8/21/2007 5:01:00 PM	15.23	5.60	v -7.50	v -7.50
	125	8/21/2007 5:01:50 PM	15.23	5.52	v -7.50	v -7.50



COMMENTS

No tests conducted from this pit (permit-required). Vents combined and welded to common large vent in original construction. Vent plumbing modified to allow pressurization of mains by closing off valves on individual vent lines. See 4-N and 6-N for main trunk pressurization results.

DATE: 8/23/2007



N - Main Trunk to 7-N

E - Feeder to Bldgs. 1368, 1369 And 1370

S - Main Trunk from 5-N, tested 10-08-07 after vent plumbing modification in 5-N

W - Feeder to Bldg. 1367

NOTES:

1. Pit is dry and relatively clean.
2. Supply, Return drains checked on 8/15/07: All dry except Supply on West wall (< 1 oz. drained)
3. Bypass valve on North wall Supply leaking at packing, approx. 1 drop per 10 seconds dripping to floor

MH 6-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Main return to 7-N	F	Could not pressurize
	2	2	Main supply to 7-N	F	Could not pressurize
	3	3	Feeder supply to Bldgs. 1368, 1369, and 1370	P	
	4	4	Feeder return to Bldgs. 1368, 1369, and 1370	P	
2	1	5	Main Supply from 5-N	See Below	Could not pressurize due to leak at 5-N (could not enter 5-N because it is confined space, permit required). Mains between 5-N and 6-N will be tested later.
	2	6	Main Return to 5-N	See Below	Could not pressurize due to leak at 5-N (could not enter 5-N because it is confined space, permit required). Mains between 5-N and 6-N will be tested later.
	3	7	Feeder supply to Bldg. 1367	F	
	4	8	Feeder return to Bldg. 1367	P	
2	3	7	Supply to 5-N	F	Test attempted on 10-08-07 after vent plumbing modification in 5-N. Unable to pressurize above 3 psi. Test aborted
	4	8	Return to 5-N	F	Test attempted on 10-08-07 after vent plumbing modification in 5-N. Unable to pressurize above 3 psi. Test aborted

printed 1/7/2008

Handy logger

Name : LOGGER 1

LOG Name	08231032
Interval	00.01.00
Personnel	

Start	8/23/2007 10:32:51 AM
Stop	8/23/2007 12:43:49 PM
Comment	

Data	133
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	1.11	1.90	15.88	16.96
Minimum	-7.50	-7.50	0.03	0.21
Average	-3.83	-3.67	14.76	15.54
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/23/2007 10:32:51 AM	0.02	0.07	v 0.03	0.22
	2	8/23/2007 10:33:00 AM	0.02	0.07	v 0.03	0.22
	3	8/23/2007 10:34:00 AM	0.61	0.77	0.06	v 0.21
	4	8/23/2007 10:35:00 AM	0.41	0.65	1.38	1.23
	5	8/23/2007 10:36:00 AM	0.34	0.62	2.85	2.60
	6	8/23/2007 10:37:00 AM	0.32	0.59	4.12	3.80
	7	8/23/2007 10:38:00 AM	0.33	0.60	5.21	4.91
	8	8/23/2007 10:39:00 AM	0.35	0.67	6.17	5.91
	9	8/23/2007 10:40:00 AM	0.24	0.48	7.36	7.06
	10	8/23/2007 10:41:00 AM	0.08	0.20	10.46	9.91
	11	8/23/2007 10:42:00 AM	0.08	0.18	14.11	13.30
	12	8/23/2007 10:43:00 AM	0.08	0.19	^ 15.88	^ 16.96
	13	8/23/2007 10:44:00 AM	0.65	1.12	15.87	16.76
	14	8/23/2007 10:45:00 AM	0.94	1.58	15.85	16.74
	15	8/23/2007 10:46:00 AM	1.04	1.75	15.87	16.72
	16	8/23/2007 10:47:00 AM	1.07	1.83	15.85	16.74
	17	8/23/2007 10:48:00 AM	1.09	1.86	15.86	16.71
	18	8/23/2007 10:49:00 AM	1.09	^ 1.90	15.84	16.69
	19	8/23/2007 10:50:00 AM	^ 1.11	1.89	15.86	16.68
	20	8/23/2007 10:51:00 AM	1.09	1.87	15.85	16.67
	21	8/23/2007 10:52:00 AM	1.10	1.86	15.83	16.67
	22	8/23/2007 10:53:00 AM	1.09	1.87	15.85	16.68
	23	8/23/2007 10:54:00 AM	1.07	1.89	15.83	16.67
	24	8/23/2007 10:55:00 AM	0.10	0.48	15.85	16.67
	25	8/23/2007 10:56:00 AM	0.02	0.13	15.84	16.65
	26	8/23/2007 10:57:00 AM	0.01	0.08	15.82	16.65
	27	8/23/2007 10:58:00 AM	0.00	0.08	15.82	16.65
	28	8/23/2007 10:59:00 AM	-0.01	0.08	15.82	16.64
	29	8/23/2007 11:00:00 AM	-0.01	0.07	15.80	16.64
	30	8/23/2007 11:01:00 AM	0.00	0.08	15.81	16.64

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/23/2007 11:02:00 AM	0.00	0.08	15.80	16.64
	32	8/23/2007 11:03:00 AM	0.00	0.09	15.77	16.62
	33	8/23/2007 11:04:00 AM	0.01	0.10	15.77	16.62
	34	8/23/2007 11:05:00 AM	0.01	0.07	15.77	16.62
	35	8/23/2007 11:06:00 AM	0.01	0.07	15.79	16.61
	36	8/23/2007 11:07:00 AM	0.02	0.07	15.78	16.61
	37	8/23/2007 11:08:00 AM	0.02	0.08	15.78	16.60
	38	8/23/2007 11:09:00 AM	0.02	0.09	15.78	16.60
	39	8/23/2007 11:10:00 AM	0.03	0.09	15.76	16.61
	40	8/23/2007 11:11:00 AM	0.03	0.10	15.78	16.60
	41	8/23/2007 11:12:00 AM	0.03	0.11	15.78	16.60
	42	8/23/2007 11:13:00 AM	0.03	0.11	15.76	16.59
	43	8/23/2007 11:14:00 AM	0.03	0.11	15.76	16.59
	44	8/23/2007 11:15:00 AM	0.03	0.11	15.75	16.58
	45	8/23/2007 11:16:00 AM	0.03	0.11	15.75	16.58
	46	8/23/2007 11:17:00 AM	0.04	0.11	15.72	16.57
	47	8/23/2007 11:18:00 AM	0.04	0.11	15.73	16.57
	48	8/23/2007 11:19:00 AM	0.04	0.12	15.72	16.57
	49	8/23/2007 11:20:00 AM	0.05	0.11	15.72	16.57
	50	8/23/2007 11:21:00 AM	0.01	0.09	15.74	16.56
	51	8/23/2007 11:22:00 AM	0.02	0.13	15.73	16.58
	52	8/23/2007 11:23:00 AM	0.05	0.09	15.72	16.57
	53	8/23/2007 11:24:00 AM	0.05	0.09	15.74	16.56
	54	8/23/2007 11:25:00 AM	0.05	0.09	15.73	16.55
	55	8/23/2007 11:26:00 AM	0.05	0.10	15.71	16.54
	56	8/23/2007 11:27:00 AM	0.05	0.10	15.70	16.57
	57	8/23/2007 11:28:00 AM	0.05	0.10	15.69	16.57
	58	8/23/2007 11:29:00 AM	0.05	0.10	15.69	16.53
	59	8/23/2007 11:30:00 AM	0.05	0.10	15.69	16.53
	60	8/23/2007 11:31:00 AM	0.05	0.09	15.69	16.53
	61	8/23/2007 11:32:00 AM	0.05	0.10	15.68	16.53
	62	8/23/2007 11:33:00 AM	0.05	0.09	15.68	16.53
	63	8/23/2007 11:34:00 AM	0.05	0.09	15.67	16.52
	64	8/23/2007 11:35:00 AM	v -7.50	0.09	15.67	16.51
	65	8/23/2007 11:36:00 AM	v -7.50	v -7.50	15.66	16.55
	66	8/23/2007 11:37:00 AM	v -7.50	v -7.50	15.69	16.54
	67	8/23/2007 11:38:00 AM	v -7.50	v -7.50	15.69	16.54
	68	8/23/2007 11:39:00 AM	v -7.50	v -7.50	15.64	16.54
	69	8/23/2007 11:40:00 AM	v -7.50	v -7.50	15.69	16.53
	70	8/23/2007 11:41:00 AM	v -7.50	v -7.50	15.68	16.53
	71	8/23/2007 11:42:00 AM	v -7.50	v -7.50	15.67	16.52
	72	8/23/2007 11:43:00 AM	v -7.50	v -7.50	15.67	16.52
	73	8/23/2007 11:44:00 AM	v -7.50	v -7.50	15.67	16.52
	74	8/23/2007 11:45:00 AM	v -7.50	v -7.50	15.66	16.51
	75	8/23/2007 11:46:00 AM	v -7.50	v -7.50	15.66	16.51
	76	8/23/2007 11:47:00 AM	v -7.50	v -7.50	15.65	16.51
	77	8/23/2007 11:48:00 AM	v -7.50	v -7.50	15.64	16.50
	78	8/23/2007 11:49:00 AM	v -7.50	v -7.50	15.63	16.49
	79	8/23/2007 11:50:00 AM	v -7.50	v -7.50	15.63	16.49
	80	8/23/2007 11:51:00 AM	v -7.50	v -7.50	15.62	16.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/23/2007 11:52:00 AM	v -7.50	v -7.50	15.65	16.49
	82	8/23/2007 11:53:00 AM	v -7.50	v -7.50	15.63	16.49
	83	8/23/2007 11:54:00 AM	v -7.50	v -7.50	15.62	16.48
	84	8/23/2007 11:55:00 AM	v -7.50	v -7.50	15.61	16.48
	85	8/23/2007 11:56:00 AM	v -7.50	v -7.50	15.65	16.47
	86	8/23/2007 11:57:00 AM	v -7.50	v -7.50	15.60	16.48
	87	8/23/2007 11:58:00 AM	v -7.50	v -7.50	15.59	16.47
	88	8/23/2007 11:59:00 AM	v -7.50	v -7.50	15.59	16.48
	89	8/23/2007 12:00:00 PM	v -7.50	v -7.50	15.58	16.47
	90	8/23/2007 12:01:00 PM	v -7.50	v -7.50	15.63	16.46
	91	8/23/2007 12:02:00 PM	v -7.50	v -7.50	15.62	16.46
	92	8/23/2007 12:03:00 PM	v -7.50	v -7.50	15.62	16.48
	93	8/23/2007 12:04:00 PM	v -7.50	v -7.50	15.61	16.49
	94	8/23/2007 12:05:00 PM	v -7.50	v -7.50	15.60	16.50
	95	8/23/2007 12:06:00 PM	v -7.50	v -7.50	15.59	16.49
	96	8/23/2007 12:07:00 PM	v -7.50	v -7.50	15.59	16.49
	97	8/23/2007 12:08:00 PM	v -7.50	v -7.50	15.58	16.48
	98	8/23/2007 12:09:00 PM	v -7.50	v -7.50	15.57	16.50
	99	8/23/2007 12:10:00 PM	v -7.50	v -7.50	15.60	16.49
	100	8/23/2007 12:11:00 PM	v -7.50	v -7.50	15.59	16.48
	101	8/23/2007 12:12:00 PM	v -7.50	v -7.50	15.58	16.49
	102	8/23/2007 12:13:00 PM	v -7.50	v -7.50	15.58	16.48
	103	8/23/2007 12:14:00 PM	v -7.50	v -7.50	15.57	16.47
	104	8/23/2007 12:15:00 PM	v -7.50	v -7.50	15.56	16.48
	105	8/23/2007 12:16:00 PM	v -7.50	v -7.50	15.56	16.48
	106	8/23/2007 12:17:00 PM	v -7.50	v -7.50	15.56	16.48
	107	8/23/2007 12:18:00 PM	v -7.50	v -7.50	15.55	16.48
	108	8/23/2007 12:19:00 PM	v -7.50	v -7.50	15.58	16.47
	109	8/23/2007 12:20:00 PM	v -7.50	v -7.50	15.54	16.47
	110	8/23/2007 12:21:00 PM	v -7.50	v -7.50	15.58	16.47
	111	8/23/2007 12:22:00 PM	v -7.50	v -7.50	15.57	16.46
	112	8/23/2007 12:23:00 PM	v -7.50	v -7.50	15.57	16.46
	113	8/23/2007 12:24:00 PM	v -7.50	v -7.50	15.57	16.46
	114	8/23/2007 12:25:00 PM	v -7.50	v -7.50	15.55	16.45
	115	8/23/2007 12:26:00 PM	v -7.50	v -7.50	15.55	16.45
	116	8/23/2007 12:27:00 PM	v -7.50	v -7.50	15.55	16.44
	117	8/23/2007 12:28:00 PM	v -7.50	v -7.50	15.54	16.48
	118	8/23/2007 12:29:00 PM	v -7.50	v -7.50	15.54	16.47
	119	8/23/2007 12:30:00 PM	v -7.50	v -7.50	15.53	16.47
	120	8/23/2007 12:31:00 PM	v -7.50	v -7.50	15.56	16.47
	121	8/23/2007 12:32:00 PM	v -7.50	v -7.50	15.54	16.47
	122	8/23/2007 12:33:00 PM	v -7.50	v -7.50	15.52	16.47
	123	8/23/2007 12:34:00 PM	v -7.50	v -7.50	15.55	16.47
	124	8/23/2007 12:35:00 PM	v -7.50	v -7.50	15.54	16.46
	125	8/23/2007 12:36:00 PM	v -7.50	v -7.50	15.54	16.46
	126	8/23/2007 12:37:00 PM	v -7.50	v -7.50	15.54	16.46
	127	8/23/2007 12:38:00 PM	v -7.50	v -7.50	15.50	16.46
	128	8/23/2007 12:39:00 PM	v -7.50	v -7.50	15.51	16.43
	129	8/23/2007 12:40:00 PM	v -7.50	v -7.50	15.51	16.43
	130	8/23/2007 12:41:00 PM	v -7.50	v -7.50	15.51	16.43

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/23/2007 12:42:00 PM	v -7.50	v -7.50	15.51	16.46
	132	8/23/2007 12:43:00 PM	v -7.50	v -7.50	15.50	16.45
	133	8/23/2007 12:43:49 PM	v -7.50	v -7.50	15.53	16.45

printed 1/7/2008

Handy logger

Name : LOGGER 2

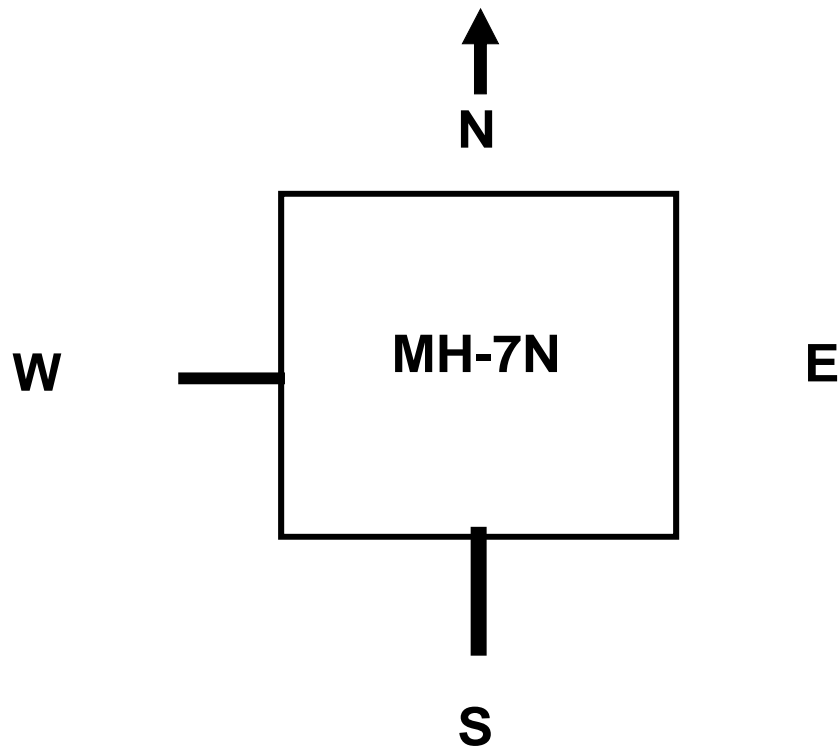
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/23/2007 11:02:00 AM	1.43	1.12	15.59	16.72
	32	8/23/2007 11:03:00 AM	1.42	^ 1.15	15.55	16.71
	33	8/23/2007 11:04:00 AM	0.27	0.19	15.53	16.73
	34	8/23/2007 11:05:00 AM	0.10	0.06	15.49	16.73
	35	8/23/2007 11:06:00 AM	0.09	0.05	15.46	16.71
	36	8/23/2007 11:07:00 AM	0.08	0.04	15.43	16.70
	37	8/23/2007 11:08:00 AM	0.10	0.04	15.39	16.69
	38	8/23/2007 11:09:00 AM	0.11	0.03	15.36	16.68
	39	8/23/2007 11:10:00 AM	0.11	0.03	15.33	16.67
	40	8/23/2007 11:11:00 AM	0.11	0.06	15.29	16.65
	41	8/23/2007 11:12:00 AM	0.12	0.06	15.29	16.64
	42	8/23/2007 11:13:00 AM	0.12	0.07	15.26	16.66
	43	8/23/2007 11:14:00 AM	0.12	0.07	15.23	16.65
	44	8/23/2007 11:15:00 AM	0.12	0.07	15.21	16.64
	45	8/23/2007 11:16:00 AM	0.12	0.07	15.18	16.63
	46	8/23/2007 11:17:00 AM	0.12	0.05	15.16	16.59
	47	8/23/2007 11:18:00 AM	0.13	0.05	15.13	16.58
	48	8/23/2007 11:19:00 AM	0.13	0.05	15.07	16.58
	49	8/23/2007 11:20:00 AM	0.13	0.06	15.07	16.57
	50	8/23/2007 11:21:00 AM	0.13	0.06	15.05	16.56
	51	8/23/2007 11:22:00 AM	0.14	0.06	15.03	16.59
	52	8/23/2007 11:23:00 AM	0.14	0.06	14.99	16.58
	53	8/23/2007 11:24:00 AM	0.14	0.07	14.97	16.57
	54	8/23/2007 11:25:00 AM	0.14	0.07	14.94	16.56
	55	8/23/2007 11:26:00 AM	0.15	0.07	14.91	16.55
	56	8/23/2007 11:27:00 AM	0.14	0.07	14.88	16.54
	57	8/23/2007 11:28:00 AM	0.14	0.07	14.86	16.53
	58	8/23/2007 11:29:00 AM	0.15	0.07	14.84	16.53
	59	8/23/2007 11:30:00 AM	0.15	0.07	14.82	16.52
	60	8/23/2007 11:31:00 AM	0.15	0.07	14.80	16.52
	61	8/23/2007 11:32:00 AM	0.15	0.08	14.77	16.52
	62	8/23/2007 11:33:00 AM	0.15	0.07	14.74	16.51
	63	8/23/2007 11:34:00 AM	0.15	0.07	14.72	16.50
	64	8/23/2007 11:35:00 AM	0.15	0.07	14.68	16.49
	65	8/23/2007 11:36:00 AM	0.15	0.10	14.66	16.48
	66	8/23/2007 11:37:00 AM	0.15	0.09	14.63	16.47
	67	8/23/2007 11:38:00 AM	0.15	0.10	14.61	16.46
	68	8/23/2007 11:39:00 AM	0.14	0.10	14.58	16.46
	69	8/23/2007 11:40:00 AM	0.14	0.10	14.60	16.45
	70	8/23/2007 11:41:00 AM	0.14	0.09	14.53	16.44
	71	8/23/2007 11:42:00 AM	v -7.50	v -7.50	14.50	16.43
	72	8/23/2007 11:43:00 AM	v -7.50	v -7.50	14.48	16.43
	73	8/23/2007 11:44:00 AM	v -7.50	v -7.50	14.45	16.43
	74	8/23/2007 11:45:00 AM	v -7.50	v -7.50	14.47	16.41
	75	8/23/2007 11:46:00 AM	v -7.50	v -7.50	14.44	16.40
	76	8/23/2007 11:47:00 AM	v -7.50	v -7.50	14.41	16.40
	77	8/23/2007 11:48:00 AM	v -7.50	v -7.50	14.38	16.42
	78	8/23/2007 11:49:00 AM	v -7.50	v -7.50	14.37	16.41
	79	8/23/2007 11:50:00 AM	v -7.50	v -7.50	14.37	16.38
	80	8/23/2007 11:51:00 AM	v -7.50	v -7.50	14.41	16.40

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/23/2007 11:52:00 AM	v -7.50	v -7.50	14.43	16.44
	82	8/23/2007 11:53:00 AM	v -7.50	v -7.50	14.44	16.49
	83	8/23/2007 11:54:00 AM	v -7.50	v -7.50	14.43	16.53
	84	8/23/2007 11:55:00 AM	v -7.50	v -7.50	14.43	16.57
	85	8/23/2007 11:56:00 AM	v -7.50	v -7.50	14.43	16.61
	86	8/23/2007 11:57:00 AM	v -7.50	v -7.50	14.42	16.60
	87	8/23/2007 11:58:00 AM	v -7.50	v -7.50	14.41	16.58
	88	8/23/2007 11:59:00 AM	v -7.50	v -7.50	14.39	16.57
	89	8/23/2007 12:00:00 PM	v -7.50	v -7.50	14.37	16.57
	90	8/23/2007 12:01:00 PM	v -7.50	v -7.50	14.35	16.59
	91	8/23/2007 12:02:00 PM	v -7.50	v -7.50	14.32	16.57
	92	8/23/2007 12:03:00 PM	v -7.50	v -7.50	14.34	16.57
	93	8/23/2007 12:04:00 PM	v -7.50	v -7.50	14.31	16.57
	94	8/23/2007 12:05:00 PM	v -7.50	v -7.50	14.29	16.56
	95	8/23/2007 12:06:00 PM	v -7.50	v -7.50	14.27	16.55
	96	8/23/2007 12:07:00 PM	v -7.50	v -7.50	14.25	16.55
	97	8/23/2007 12:08:00 PM	v -7.50	v -7.50	14.23	16.54
	98	8/23/2007 12:09:00 PM	v -7.50	v -7.50	14.20	16.53
	99	8/23/2007 12:10:00 PM	v -7.50	v -7.50	14.17	16.53
	100	8/23/2007 12:11:00 PM	v -7.50	v -7.50	14.15	16.57
	101	8/23/2007 12:12:00 PM	v -7.50	v -7.50	14.13	16.56
	102	8/23/2007 12:13:00 PM	v -7.50	v -7.50	14.10	16.56
	103	8/23/2007 12:14:00 PM	v -7.50	v -7.50	14.08	16.55
	104	8/23/2007 12:15:00 PM	v -7.50	v -7.50	14.06	16.55
	105	8/23/2007 12:16:00 PM	v -7.50	v -7.50	14.03	16.54
	106	8/23/2007 12:17:00 PM	v -7.50	v -7.50	14.01	16.53
	107	8/23/2007 12:18:00 PM	v -7.50	v -7.50	13.98	16.53
	108	8/23/2007 12:19:00 PM	v -7.50	v -7.50	13.99	16.52
	109	8/23/2007 12:20:00 PM	v -7.50	v -7.50	13.97	16.51
	110	8/23/2007 12:21:00 PM	v -7.50	v -7.50	13.95	16.50
	111	8/23/2007 12:22:00 PM	v -7.50	v -7.50	13.92	16.51
	112	8/23/2007 12:23:00 PM	v -7.50	v -7.50	13.90	16.50
	113	8/23/2007 12:24:00 PM	v -7.50	v -7.50	13.88	16.49
	114	8/23/2007 12:25:00 PM	v -7.50	v -7.50	13.85	16.49
	115	8/23/2007 12:26:00 PM	v -7.50	v -7.50	13.83	16.49
	116	8/23/2007 12:27:00 PM	v -7.50	v -7.50	13.81	16.48
	117	8/23/2007 12:28:00 PM	v -7.50	v -7.50	13.78	16.47
	118	8/23/2007 12:29:00 PM	v -7.50	v -7.50	13.76	16.47
	119	8/23/2007 12:30:00 PM	v -7.50	v -7.50	13.73	16.47
	120	8/23/2007 12:31:00 PM	v -7.50	v -7.50	13.71	16.48
	121	8/23/2007 12:32:00 PM	v -7.50	v -7.50	13.68	16.45
	122	8/23/2007 12:33:00 PM	v -7.50	v -7.50	13.66	16.48
	123	8/23/2007 12:34:00 PM	v -7.50	v -7.50	13.64	16.48
	124	8/23/2007 12:35:00 PM	v -7.50	v -7.50	13.62	16.47
	125	8/23/2007 12:36:00 PM	v -7.50	v -7.50	13.60	16.47
	126	8/23/2007 12:37:00 PM	v -7.50	v -7.50	13.58	16.47
	127	8/23/2007 12:38:00 PM	v -7.50	v -7.50	13.55	16.47
	128	8/23/2007 12:39:00 PM	v -7.50	v -7.50	13.54	16.43
	129	8/23/2007 12:40:00 PM	v -7.50	v -7.50	13.52	16.43
	130	8/23/2007 12:41:00 PM	v -7.50	v -7.50	13.50	16.43

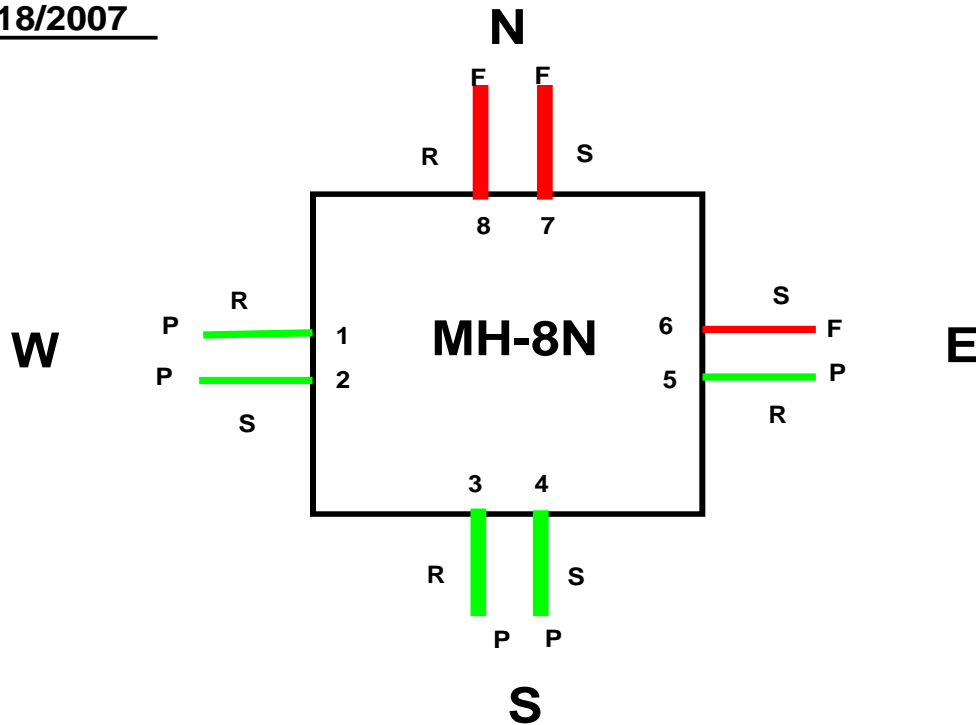


S - Main Trunk from 6-N

W - Main Trunk to 8-N

NOTES:

1. No pressurization conducted from this pit. Trunk lines pressurized from Pits 6-N and 8-N.
2. Supply/Return drains tested on 8/15/07: All dry

DATE: 8/18/2007

N - Main Trunk to 9-N

E - Feeder to Bldg. 1363

S - Main Trunk to 7-N

W - Feeder to Bldgs. 1351 and 1352

NOTES:

1. Pit has standing water over drain and mud on floor. Soil subsidence on SW corner of pit.
2. North Wall Supply/Return drains dry
3. East wall Return drain dry; Supply drain discharged a few drops and then dry
4. South wall Supply/Return drains dry
5. West wall Return drain dry; Supply drain discharged less than 1 oz. and then dry

MH 8-N				
Logger No.	Transducer No. (Channel No.)	Description	P/F	Comment
1 (08181029)	1 (1)	West Wall Return	F	Found leak in vent/drain plug at Bldg 1352. - Sealed, retest below
	2 (2)	West Wall Supply	F	Found leak in vent/drain plug at Bldg.1352 - Sealed, retest below
	3 (3)	South Wall Main Return	P	
	4 (4)	South Wall Main Supply	P	
2 (08181032)	5 (1)	East Wall Return	P	See retest below
	6 (2)	East Wall Supply	F	See retest below
	7 (3)	North Wall Main Supply	F	Unable to pressurize, Leakage felt around link seal
	8 (4)	North Wall Main Return	F	Unable to pressurize, Leakage felt around link seal
1 (08181357)	1 (1)	West Wall Return	F	Could not access entry at Bldg 1351 -see retest below
	2 (2)	West Wall Supply	P	Could not access entry at Bldg 1351 - see retest below
1 (08200854)	1 (1)	West Wall Return	P	Sealed vent/drain plug at Bldg 1351 - retest
	2 (2)	West Wall Supply	P	Sealed vent/drain plug at Bldg 1351, - retest
2 (08200854)	5 (1)	East Wall Return	P	Attempt to locate vent/drain plug in Bldg. 1363 was not successful, This is a retest. Suspect that new system terminates in old manhole adjacent to 8-N
	6 (2)	East Wall Supply	F	Attempt to locate vent/drain plug in Bldg. was not successful, This is retest. Suspect that new system terminates in old manhole adjacent to 8-N, possible loose vent/drain plug.

LOGGER 1

LOG no. 001

LOG name 08181029

Start 07-08-18 10:29:10

Stop 07-08-18 12:40:00

Interval 00:01:00

Date/Time	Ch1	Ch2	Ch3	Ch4
8/18/2007 10:29:10 AM	0.09	0.10	0.10	0.26
8/18/2007 10:30:00 AM	0.11	0.13	0.08	0.26
8/18/2007 10:31:00 AM	0.11	0.12	0.12	0.26
8/18/2007 10:32:00 AM	0.10	0.15	0.12	0.29
8/18/2007 10:33:00 AM	0.09	0.14	0.11	0.28
8/18/2007 10:34:00 AM	0.09	0.14	0.11	0.28
8/18/2007 10:35:00 AM	0.09	0.13	0.12	0.28
8/18/2007 10:36:00 AM	0.09	0.13	0.11	0.28
8/18/2007 10:37:00 AM	0.09	0.13	0.11	0.28
8/18/2007 10:38:00 AM	0.12	0.13	0.11	0.29
8/18/2007 10:39:00 AM	0.11	0.13	0.11	0.28
8/18/2007 10:40:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:41:00 AM	0.12	0.13	0.10	0.28
8/18/2007 10:42:00 AM	0.12	0.13	0.11	0.28
8/18/2007 10:43:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:44:00 AM	0.12	0.13	0.10	0.28
8/18/2007 10:45:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:46:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:47:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:48:00 AM	0.12	0.13	0.10	0.28
8/18/2007 10:49:00 AM	0.09	0.13	0.10	0.28
8/18/2007 10:50:00 AM	0.09	0.14	0.11	0.25
8/18/2007 10:51:00 AM	0.09	0.14	0.11	0.25
8/18/2007 10:52:00 AM	0.09	0.14	0.11	0.25
8/18/2007 10:53:00 AM	0.09	0.14	0.11	0.25
8/18/2007 10:54:00 AM	0.09	0.15	0.11	0.25
8/18/2007 10:55:00 AM	0.10	0.15	0.11	0.26
8/18/2007 10:56:00 AM	0.10	0.14	0.11	0.26
8/18/2007 10:57:00 AM	0.10	0.15	0.12	0.25
8/18/2007 10:58:00 AM	0.10	0.15	0.12	0.26
8/18/2007 10:59:00 AM	0.10	0.15	0.12	0.26
8/18/2007 11:00:00 AM	0.10	0.15	0.12	0.26
8/18/2007 11:01:00 AM	0.10	0.16	0.12	0.26
8/18/2007 11:02:00 AM	0.10	0.16	0.41	0.68
8/18/2007 11:03:00 AM	0.82	0.75	0.98	1.31
8/18/2007 11:04:00 AM	1.60	1.56	1.53	1.90
8/18/2007 11:05:00 AM	2.35	2.32	2.07	2.48
8/18/2007 11:06:00 AM	3.05	3.06	2.60	3.04

8/18/2007 11:07:00 AM 3.70 3.73 3.10 3.60
8/18/2007 11:08:00 AM 4.81 4.70 3.90 4.39
8/18/2007 11:09:00 AM 6.42 6.23 5.02 5.57
8/18/2007 11:10:00 AM 7.91 7.75 6.16 6.75
8/18/2007 11:11:00 AM 8.76 8.88 6.79 7.53
8/18/2007 11:12:00 AM 8.71 8.82 6.77 7.51
8/18/2007 11:13:00 AM 8.64 8.78 6.76 7.50
8/18/2007 11:14:00 AM 8.57 8.77 6.76 7.49
8/18/2007 11:15:00 AM 8.54 8.76 6.77 7.51
8/18/2007 11:16:00 AM 8.51 8.76 6.75 7.50
8/18/2007 11:17:00 AM 8.45 8.72 6.77 7.50
8/18/2007 11:18:00 AM 8.41 8.73 6.75 7.49
8/18/2007 11:19:00 AM 8.36 8.70 6.74 7.49
8/18/2007 11:20:00 AM 8.34 8.67 6.78 7.48
8/18/2007 11:21:00 AM 8.29 8.69 6.77 7.48
8/18/2007 11:22:00 AM 8.25 8.67 6.76 7.51
8/18/2007 11:23:00 AM 8.21 8.65 6.76 7.51
8/18/2007 11:24:00 AM 8.17 8.68 6.76 7.51
8/18/2007 11:25:00 AM 8.13 8.66 6.76 7.51
8/18/2007 11:26:00 AM 8.09 8.66 6.76 7.50
8/18/2007 11:27:00 AM 8.05 8.65 6.77 7.50
8/18/2007 11:28:00 AM 8.01 8.63 6.77 9.63
8/18/2007 11:29:00 AM 7.98 8.62 6.77 13.57
8/18/2007 11:30:00 AM 7.95 8.62 6.78 14.90
8/18/2007 11:31:00 AM 7.91 8.57 6.78 15.67
8/18/2007 11:32:00 AM 7.88 8.55 6.79 15.67
8/18/2007 11:33:00 AM 7.84 8.57 11.47 15.66
8/18/2007 11:34:00 AM 7.81 8.53 15.02 15.65
8/18/2007 11:35:00 AM 7.74 10.63 14.98 15.64
8/18/2007 11:36:00 AM 7.70 16.01 14.96 15.64
8/18/2007 11:37:00 AM 15.07 14.81 14.95 15.66
8/18/2007 11:38:00 AM 14.52 14.77 14.97 15.66
8/18/2007 11:39:00 AM 14.43 14.73 14.95 15.65
8/18/2007 11:40:00 AM 14.36 14.70 14.95 15.65
8/18/2007 11:41:00 AM 14.28 14.66 14.95 15.65
8/18/2007 11:42:00 AM 14.24 14.64 14.98 15.65
8/18/2007 11:43:00 AM 14.17 14.60 14.97 15.65
8/18/2007 11:44:00 AM 14.11 14.58 14.97 15.65
8/18/2007 11:45:00 AM 14.06 14.55 14.97 15.65
8/18/2007 11:46:00 AM 14.03 14.53 14.97 15.65
8/18/2007 11:47:00 AM 13.99 14.51 14.97 15.65
8/18/2007 11:48:00 AM 13.95 14.48 14.96 15.65
8/18/2007 11:49:00 AM 13.92 14.47 14.96 15.65
8/18/2007 11:50:00 AM 13.89 14.45 14.96 15.65
8/18/2007 11:51:00 AM 13.86 14.41 14.96 15.65
8/18/2007 11:52:00 AM 13.82 14.39 14.95 15.65
8/18/2007 11:53:00 AM 13.79 14.37 14.95 15.65
8/18/2007 11:54:00 AM 13.79 14.35 14.96 15.65
8/18/2007 11:55:00 AM 13.76 14.32 14.96 15.65
8/18/2007 11:56:00 AM 13.73 14.30 14.96 15.65
8/18/2007 11:57:00 AM 13.70 14.28 14.97 15.65

8/18/2007 11:58:00 AM 13.67 14.25 14.96 15.65
8/18/2007 11:59:00 AM 13.64 14.24 14.96 15.65
8/18/2007 12:00:00 PM 13.61 14.22 14.96 15.65
8/18/2007 12:01:00 PM 13.58 14.20 14.96 15.65
8/18/2007 12:02:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:03:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:04:00 PM 13.37 14.08 14.91 15.51
8/18/2007 12:05:00 PM 13.37 14.06 14.91 15.54
8/18/2007 12:06:00 PM 13.37 14.13 14.94 15.55
8/18/2007 12:07:00 PM 13.34 14.10 14.95 15.55
8/18/2007 12:08:00 PM 13.31 14.07 14.98 15.55
8/18/2007 12:09:00 PM 13.28 14.05 14.98 15.54
8/18/2007 12:10:00 PM 13.25 14.03 14.98 15.54
8/18/2007 12:11:00 PM 13.22 14.01 14.98 15.54
8/18/2007 12:12:00 PM 13.19 13.98 14.97 15.54
8/18/2007 12:13:00 PM 13.16 13.97 14.97 15.54
8/18/2007 12:14:00 PM 13.13 13.94 14.97 15.54
8/18/2007 12:15:00 PM 13.11 13.93 14.97 15.54
8/18/2007 12:16:00 PM 13.07 13.90 14.96 15.53
8/18/2007 12:17:00 PM 13.04 13.87 14.96 15.56
8/18/2007 12:18:00 PM 13.01 13.86 14.96 15.57
8/18/2007 12:19:00 PM 12.99 13.83 14.95 15.57
8/18/2007 12:20:00 PM 12.95 13.80 14.95 15.57
8/18/2007 12:21:00 PM 12.92 13.78 14.98 15.57
8/18/2007 12:22:00 PM 12.89 13.76 14.97 15.58
8/18/2007 12:23:00 PM 12.86 13.74 14.97 15.57
8/18/2007 12:24:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:25:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:26:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:27:00 PM -7.50 -7.50 -7.50 -7.50
8/18/2007 12:28:00 PM 12.63 13.48 14.91 15.49
8/18/2007 12:29:00 PM 12.63 13.55 14.95 15.51
8/18/2007 12:30:00 PM 12.64 13.56 14.99 15.53
8/18/2007 12:31:00 PM 12.63 13.52 15.01 15.54
8/18/2007 12:32:00 PM 12.60 13.59 15.05 15.53
8/18/2007 12:33:00 PM 12.59 13.56 15.04 15.56
8/18/2007 12:34:00 PM 12.56 13.53 15.07 15.56
8/18/2007 12:35:00 PM 12.53 13.50 15.05 15.55
8/18/2007 12:36:00 PM 12.49 13.47 15.04 15.56
8/18/2007 12:37:00 PM 12.46 13.44 15.04 15.55
8/18/2007 12:38:00 PM 12.43 13.42 15.03 15.55
8/18/2007 12:39:00 PM 12.39 13.38 15.07 15.55
8/18/2007 12:40:00 PM 12.37 13.37 15.06 15.54

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Handy logger

Name : **LOGGER 1**

LOG Name	08200854
Interval	00:01:00
Personnel	

Start	8/20/2007 8:54:41 AM
Stop	8/20/2007 11:10:53 AM
Comment	

Data	138
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.82	15.82	0.16	0.22
Minimum	1.63	0.16	-7.50	-7.50
Average	14.64	14.83	-0.14	-0.08
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/20/2007 8:54:41 AM	1.64	v 0.16	^ 0.16	0.19
	2	8/20/2007 8:55:00 AM	v 1.63	v 0.16	^ 0.16	0.19
	3	8/20/2007 8:56:00 AM	5.50	v 0.16	0.15	0.19
	4	8/20/2007 8:57:00 AM	7.26	2.62	0.15	0.19
	5	8/20/2007 8:58:00 AM	9.44	4.81	0.15	0.19
	6	8/20/2007 8:59:00 AM	11.59	7.01	0.14	^ 0.22
	7	8/20/2007 9:00:00 AM	13.71	9.20	0.14	0.21
	8	8/20/2007 9:01:00 AM	^ 15.82	11.45	0.14	^ 0.22
	9	8/20/2007 9:02:00 AM	15.51	14.16	0.13	0.21
	10	8/20/2007 9:03:00 AM	15.49	^ 15.82	0.13	0.21
	11	8/20/2007 9:04:00 AM	15.46	15.76	0.13	0.21
	12	8/20/2007 9:05:00 AM	15.48	15.76	0.13	0.21
	13	8/20/2007 9:06:00 AM	15.45	15.75	0.13	0.21
	14	8/20/2007 9:07:00 AM	15.43	15.71	0.12	0.20
	15	8/20/2007 9:08:00 AM	15.44	15.72	0.12	0.20
	16	8/20/2007 9:09:00 AM	15.42	15.69	0.15	0.20
	17	8/20/2007 9:10:00 AM	15.40	15.71	0.15	0.20
	18	8/20/2007 9:11:00 AM	15.39	15.69	0.14	0.20
	19	8/20/2007 9:12:00 AM	15.38	15.67	0.14	0.20
	20	8/20/2007 9:13:00 AM	15.41	15.65	0.14	0.20
	21	8/20/2007 9:14:00 AM	15.40	15.69	0.13	0.20
	22	8/20/2007 9:15:00 AM	15.39	15.68	0.13	0.19
	23	8/20/2007 9:16:00 AM	15.37	15.67	0.13	0.19
	24	8/20/2007 9:17:00 AM	15.36	15.66	0.13	0.19
	25	8/20/2007 9:18:00 AM	15.39	15.65	0.13	0.19
	26	8/20/2007 9:19:00 AM	15.37	15.68	0.12	0.18
	27	8/20/2007 9:20:00 AM	15.36	15.67	0.12	^ 0.22
	28	8/20/2007 9:21:00 AM	15.35	15.66	0.15	^ 0.22
	29	8/20/2007 9:22:00 AM	15.34	15.65	0.14	0.21
	30	8/20/2007 9:23:00 AM	15.33	15.64	0.13	0.21

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/20/2007 9:24:00 AM	15.32	15.64	0.13	0.20
	32	8/20/2007 9:25:00 AM	15.31	15.67	0.12	0.20
	33	8/20/2007 9:26:00 AM	15.30	15.66	0.13	0.20
	34	8/20/2007 9:27:00 AM	15.29	15.66	0.15	0.20
	35	8/20/2007 9:28:00 AM	15.27	15.65	0.15	0.20
	36	8/20/2007 9:29:00 AM	15.27	15.65	0.15	0.20
	37	8/20/2007 9:30:00 AM	15.29	15.64	0.14	0.20
	38	8/20/2007 9:31:00 AM	15.27	15.62	0.14	0.20
	39	8/20/2007 9:32:00 AM	15.26	15.62	0.13	0.19
	40	8/20/2007 9:33:00 AM	15.26	15.62	0.13	0.19
	41	8/20/2007 9:34:00 AM	15.25	15.62	0.12	0.19
	42	8/20/2007 9:35:00 AM	15.23	15.64	0.12	0.19
	43	8/20/2007 9:36:00 AM	15.23	15.63	0.11	0.19
	44	8/20/2007 9:37:00 AM	15.21	15.62	^ 0.16	0.18
	45	8/20/2007 9:38:00 AM	15.21	15.62	0.15	0.18
	46	8/20/2007 9:39:00 AM	15.20	15.61	0.15	^ 0.22
	47	8/20/2007 9:40:00 AM	15.22	15.61	0.14	^ 0.22
	48	8/20/2007 9:41:00 AM	15.21	15.60	0.14	0.21
	49	8/20/2007 9:42:00 AM	15.20	15.58	0.14	^ 0.22
	50	8/20/2007 9:43:00 AM	15.20	15.58	0.14	0.21
	51	8/20/2007 9:44:00 AM	15.19	15.58	0.13	0.21
	52	8/20/2007 9:45:00 AM	15.18	15.57	0.14	0.21
	53	8/20/2007 9:46:00 AM	15.16	15.57	0.12	0.21
	54	8/20/2007 9:47:00 AM	15.17	15.56	0.12	0.21
	55	8/20/2007 9:48:00 AM	15.16	15.55	0.14	0.21
	56	8/20/2007 9:49:00 AM	15.16	15.55	0.15	0.20
	57	8/20/2007 9:50:00 AM	15.14	15.53	0.15	0.20
	58	8/20/2007 9:51:00 AM	15.14	15.58	0.14	0.20
	59	8/20/2007 9:52:00 AM	15.13	15.56	0.14	0.20
	60	8/20/2007 9:53:00 AM	15.12	15.56	0.14	0.20
	61	8/20/2007 9:54:00 AM	15.10	15.56	0.14	0.20
	62	8/20/2007 9:55:00 AM	15.10	15.55	0.13	0.19
	63	8/20/2007 9:56:00 AM	15.12	15.58	0.12	0.19
	64	8/20/2007 9:57:00 AM	15.11	15.58	^ 0.16	0.19
	65	8/20/2007 9:58:00 AM	15.11	15.57	0.15	0.19
	66	8/20/2007 9:59:00 AM	15.09	15.56	0.15	0.19
	67	8/20/2007 10:00:00 AM	15.08	15.55	0.15	0.18
	68	8/20/2007 10:01:00 AM	15.07	15.54	0.14	0.21
	69	8/20/2007 10:02:00 AM	15.06	15.54	0.14	^ 0.22
	70	8/20/2007 10:03:00 AM	15.05	15.53	0.13	^ 0.22
	71	8/20/2007 10:04:00 AM	15.04	15.52	0.13	0.21
	72	8/20/2007 10:05:00 AM	15.04	15.52	0.13	0.21
	73	8/20/2007 10:06:00 AM	15.04	15.51	0.13	0.21
	74	8/20/2007 10:07:00 AM	15.03	15.50	0.12	0.21
	75	8/20/2007 10:08:00 AM	15.02	15.50	0.12	0.21
	76	8/20/2007 10:09:00 AM	15.00	15.48	0.11	0.21
	77	8/20/2007 10:10:00 AM	15.03	15.48	0.12	0.21
	78	8/20/2007 10:11:00 AM	15.03	15.47	0.15	0.21
	79	8/20/2007 10:12:00 AM	15.01	15.47	0.15	0.21
	80	8/20/2007 10:13:00 AM	15.01	15.46	0.14	0.21

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/20/2007 10:14:00 AM	14.99	15.45	0.14	0.21
	82	8/20/2007 10:15:00 AM	14.99	15.45	0.14	0.20
	83	8/20/2007 10:16:00 AM	14.98	15.44	0.13	0.20
	84	8/20/2007 10:17:00 AM	14.97	15.44	0.14	0.20
	85	8/20/2007 10:18:00 AM	14.97	15.43	0.13	0.20
	86	8/20/2007 10:19:00 AM	14.96	15.42	0.14	0.20
	87	8/20/2007 10:20:00 AM	14.95	15.42	0.13	0.20
	88	8/20/2007 10:21:00 AM	14.94	15.42	0.13	0.20
	89	8/20/2007 10:22:00 AM	14.93	15.40	0.13	0.20
	90	8/20/2007 10:23:00 AM	14.92	15.40	0.13	0.20
	91	8/20/2007 10:24:00 AM	14.92	15.44	^ 0.16	0.20
	92	8/20/2007 10:25:00 AM	14.90	15.42	^ 0.16	0.20
	93	8/20/2007 10:26:00 AM	14.90	15.42	^ 0.16	0.19
	94	8/20/2007 10:27:00 AM	14.89	15.41	^ 0.16	0.19
	95	8/20/2007 10:28:00 AM	14.88	15.40	0.15	0.19
	96	8/20/2007 10:29:00 AM	14.88	15.40	0.15	0.19
	97	8/20/2007 10:30:00 AM	14.87	15.40	0.15	0.19
	98	8/20/2007 10:31:00 AM	14.86	15.36	0.15	0.19
	99	8/20/2007 10:32:00 AM	14.86	15.36	0.12	0.19
	100	8/20/2007 10:33:00 AM	14.85	15.36	0.12	0.19
	101	8/20/2007 10:34:00 AM	14.84	15.35	0.12	0.19
	102	8/20/2007 10:35:00 AM	14.84	15.38	0.14	0.19
	103	8/20/2007 10:36:00 AM	14.83	15.37	0.15	0.19
	104	8/20/2007 10:37:00 AM	14.82	15.36	^ 0.16	0.19
	105	8/20/2007 10:38:00 AM	14.81	15.36	0.15	0.19
	106	8/20/2007 10:39:00 AM	14.80	15.35	0.14	0.19
	107	8/20/2007 10:40:00 AM	14.79	15.35	0.14	0.19
	108	8/20/2007 10:41:00 AM	14.78	15.34	0.14	0.19
	109	8/20/2007 10:42:00 AM	14.78	15.34	0.15	0.19
	110	8/20/2007 10:43:00 AM	14.78	15.34	0.15	0.19
	111	8/20/2007 10:44:00 AM	14.77	15.33	0.15	0.19
	112	8/20/2007 10:45:00 AM	14.77	15.33	0.15	0.19
	113	8/20/2007 10:46:00 AM	14.76	15.29	0.11	0.19
	114	8/20/2007 10:47:00 AM	14.76	15.29	0.12	0.19
	115	8/20/2007 10:48:00 AM	14.75	15.28	0.12	0.19
	116	8/20/2007 10:49:00 AM	14.74	15.31	0.12	0.19
	117	8/20/2007 10:50:00 AM	14.73	15.31	0.12	0.19
	118	8/20/2007 10:51:00 AM	14.72	15.30	0.15	0.19
	119	8/20/2007 10:52:00 AM	14.72	15.29	0.14	0.19
	120	8/20/2007 10:53:00 AM	14.70	15.29	0.15	0.18
	121	8/20/2007 10:54:00 AM	14.69	15.29	0.14	0.19
	122	8/20/2007 10:55:00 AM	14.71	15.27	0.13	^ 0.22
	123	8/20/2007 10:56:00 AM	14.70	15.26	0.13	0.21
	124	8/20/2007 10:57:00 AM	14.71	15.25	0.13	0.21
	125	8/20/2007 10:58:00 AM	14.69	15.25	0.13	0.21
	126	8/20/2007 10:59:00 AM	14.65	15.25	0.13	0.21
	127	8/20/2007 11:00:00 AM	14.65	15.23	0.13	0.18
	128	8/20/2007 11:01:00 AM	14.64	15.24	0.13	0.18
	129	8/20/2007 11:02:00 AM	14.63	15.24	0.13	0.18
	130	8/20/2007 11:03:00 AM	14.63	15.23	0.13	0.19

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/20/2007 11:04:00 AM	14.63	15.23	0.14	0.19
	132	8/20/2007 11:05:00 AM	14.63	15.23	0.14	0.19
	133	8/20/2007 11:06:00 AM	14.62	15.19	0.14	0.19
	134	8/20/2007 11:07:00 AM	14.62	15.19	v -7.50	v -7.50
	135	8/20/2007 11:08:00 AM	14.61	15.19	v -7.50	v -7.50
	136	8/20/2007 11:09:00 AM	14.61	15.19	v -7.50	v -7.50
	137	8/20/2007 11:10:00 AM	14.61	15.18	v -7.50	v -7.50
	138	8/20/2007 11:10:53 AM	14.59	15.21	v -7.50	v -7.50

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Handy logger

Name : **LOGGER 2**

LOG Name	08200854
Interval	00:01:00
Personnel	

Start	8/20/2007 8:54:40 AM
Stop	8/20/2007 11:10:51 AM
Comment	

Data	138
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.45	15.62	0.10	0.09
Minimum	0.41	0.06	-7.50	-7.50
Average	14.56	4.24	-0.05	-0.27
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/20/2007 8:54:40 AM	v 0.41	0.07	0.04	0.03
	2	8/20/2007 8:55:00 AM	v 0.41	0.07	0.04	0.05
	3	8/20/2007 8:56:00 AM	v 0.41	v 0.06	0.04	0.06
	4	8/20/2007 8:57:00 AM	0.42	v 0.06	0.07	0.06
	5	8/20/2007 8:58:00 AM	0.42	0.10	0.07	0.06
	6	8/20/2007 8:59:00 AM	0.42	0.10	0.06	0.06
	7	8/20/2007 9:00:00 AM	0.42	0.09	0.06	0.05
	8	8/20/2007 9:01:00 AM	0.42	0.09	0.06	0.06
	9	8/20/2007 9:02:00 AM	0.42	0.09	0.05	0.05
	10	8/20/2007 9:03:00 AM	0.43	0.08	0.06	0.05
	11	8/20/2007 9:04:00 AM	^ 16.45	8.61	0.05	0.05
	12	8/20/2007 9:05:00 AM	16.41	^ 15.62	0.05	0.05
	13	8/20/2007 9:06:00 AM	16.39	15.24	0.04	0.04
	14	8/20/2007 9:07:00 AM	16.38	14.83	0.07	0.08
	15	8/20/2007 9:08:00 AM	16.34	14.48	0.07	0.04
	16	8/20/2007 9:09:00 AM	16.35	14.12	0.07	0.07
	17	8/20/2007 9:10:00 AM	16.33	13.76	0.06	0.07
	18	8/20/2007 9:11:00 AM	16.30	13.39	0.06	0.07
	19	8/20/2007 9:12:00 AM	16.31	13.05	0.06	0.07
	20	8/20/2007 9:13:00 AM	16.28	12.72	0.05	0.06
	21	8/20/2007 9:14:00 AM	16.28	12.36	0.05	0.06
	22	8/20/2007 9:15:00 AM	16.26	12.06	0.05	0.06
	23	8/20/2007 9:16:00 AM	16.24	11.74	0.09	0.05
	24	8/20/2007 9:17:00 AM	16.22	11.43	0.09	0.05
	25	8/20/2007 9:18:00 AM	16.23	11.13	0.09	0.05
	26	8/20/2007 9:19:00 AM	16.23	10.84	0.08	0.05
	27	8/20/2007 9:20:00 AM	16.21	10.55	0.08	0.07
	28	8/20/2007 9:21:00 AM	16.19	10.27	0.08	0.07
	29	8/20/2007 9:22:00 AM	16.18	9.99	0.08	0.07
	30	8/20/2007 9:23:00 AM	16.17	9.73	0.07	0.07

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/20/2007 9:24:00 AM	16.15	9.47	0.07	0.06
	32	8/20/2007 9:25:00 AM	16.14	9.22	0.07	0.06
	33	8/20/2007 9:26:00 AM	16.12	8.97	0.07	0.05
	34	8/20/2007 9:27:00 AM	16.15	8.74	0.06	0.06
	35	8/20/2007 9:28:00 AM	16.13	8.51	0.06	0.06
	36	8/20/2007 9:29:00 AM	16.15	8.28	0.05	0.05
	37	8/20/2007 9:30:00 AM	16.14	8.06	0.05	0.05
	38	8/20/2007 9:31:00 AM	16.12	7.84	0.05	0.05
	39	8/20/2007 9:32:00 AM	16.11	7.63	0.04	0.04
	40	8/20/2007 9:33:00 AM	16.11	7.43	0.07	0.06
	41	8/20/2007 9:34:00 AM	16.09	7.26	0.08	0.07
	42	8/20/2007 9:35:00 AM	16.08	7.06	0.07	0.06
	43	8/20/2007 9:36:00 AM	16.08	6.87	^ 0.10	0.06
	44	8/20/2007 9:37:00 AM	16.09	6.69	0.09	0.06
	45	8/20/2007 9:38:00 AM	16.07	6.51	0.09	0.05
	46	8/20/2007 9:39:00 AM	16.06	6.33	0.08	0.05
	47	8/20/2007 9:40:00 AM	16.05	6.17	0.08	0.04
	48	8/20/2007 9:41:00 AM	16.04	6.00	0.08	0.04
	49	8/20/2007 9:42:00 AM	16.03	5.84	0.07	0.07
	50	8/20/2007 9:43:00 AM	16.02	5.68	0.07	0.07
	51	8/20/2007 9:44:00 AM	16.01	5.52	0.07	0.07
	52	8/20/2007 9:45:00 AM	15.99	5.38	0.06	0.06
	53	8/20/2007 9:46:00 AM	15.99	5.24	0.06	0.06
	54	8/20/2007 9:47:00 AM	15.97	5.09	0.06	0.06
	55	8/20/2007 9:48:00 AM	15.96	4.95	0.06	^ 0.09
	56	8/20/2007 9:49:00 AM	15.99	4.85	0.06	0.08
	57	8/20/2007 9:50:00 AM	15.98	4.72	0.06	0.08
	58	8/20/2007 9:51:00 AM	15.97	4.59	0.05	0.08
	59	8/20/2007 9:52:00 AM	15.95	4.47	0.05	0.07
	60	8/20/2007 9:53:00 AM	15.94	4.34	0.08	0.06
	61	8/20/2007 9:54:00 AM	15.93	4.22	0.08	0.07
	62	8/20/2007 9:55:00 AM	15.92	4.11	0.08	0.06
	63	8/20/2007 9:56:00 AM	15.91	3.99	0.07	0.06
	64	8/20/2007 9:57:00 AM	15.90	3.88	0.07	0.06
	65	8/20/2007 9:58:00 AM	15.92	3.77	0.08	0.06
	66	8/20/2007 9:59:00 AM	15.91	3.67	0.07	0.06
	67	8/20/2007 10:00:00 AM	15.90	3.57	0.07	0.05
	68	8/20/2007 10:01:00 AM	15.90	3.47	0.07	0.05
	69	8/20/2007 10:02:00 AM	15.90	3.37	0.07	0.04
	70	8/20/2007 10:03:00 AM	15.88	3.31	0.07	0.08
	71	8/20/2007 10:04:00 AM	15.83	3.28	0.06	0.08
	72	8/20/2007 10:05:00 AM	15.78	3.21	0.06	0.07
	73	8/20/2007 10:06:00 AM	15.72	3.14	0.06	0.07
	74	8/20/2007 10:07:00 AM	15.68	3.07	0.05	0.07
	75	8/20/2007 10:08:00 AM	15.64	2.99	0.06	0.07
	76	8/20/2007 10:09:00 AM	15.61	2.91	0.08	0.06
	77	8/20/2007 10:10:00 AM	15.58	2.84	0.09	^ 0.09
	78	8/20/2007 10:11:00 AM	15.56	2.77	0.09	^ 0.09
	79	8/20/2007 10:12:00 AM	15.57	2.69	0.08	0.08
	80	8/20/2007 10:13:00 AM	15.55	2.62	0.08	0.08

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/20/2007 10:14:00 AM	15.53	2.55	0.07	0.08
	82	8/20/2007 10:15:00 AM	15.51	2.48	0.07	0.08
	83	8/20/2007 10:16:00 AM	15.50	2.41	0.06	0.08
	84	8/20/2007 10:17:00 AM	15.48	2.36	0.06	0.08
	85	8/20/2007 10:18:00 AM	15.47	2.28	0.06	0.08
	86	8/20/2007 10:19:00 AM	15.46	2.22	0.06	0.08
	87	8/20/2007 10:20:00 AM	15.44	2.16	0.06	0.08
	88	8/20/2007 10:21:00 AM	15.43	2.10	0.06	0.07
	89	8/20/2007 10:22:00 AM	15.42	2.04	0.05	0.07
	90	8/20/2007 10:23:00 AM	15.40	1.98	0.05	0.06
	91	8/20/2007 10:24:00 AM	15.39	1.96	0.05	0.07
	92	8/20/2007 10:25:00 AM	15.37	1.90	0.05	0.06
	93	8/20/2007 10:26:00 AM	15.36	1.84	0.05	0.06
	94	8/20/2007 10:27:00 AM	15.35	1.80	0.08	0.06
	95	8/20/2007 10:28:00 AM	15.37	1.74	0.04	0.06
	96	8/20/2007 10:29:00 AM	15.32	1.69	0.05	0.06
	97	8/20/2007 10:30:00 AM	15.35	1.65	0.08	0.06
	98	8/20/2007 10:31:00 AM	15.31	1.60	0.04	0.06
	99	8/20/2007 10:32:00 AM	15.30	1.57	0.04	0.07
	100	8/20/2007 10:33:00 AM	15.29	1.48	0.04	0.07
	101	8/20/2007 10:34:00 AM	15.28	1.48	0.04	0.07
	102	8/20/2007 10:35:00 AM	15.27	1.44	0.04	0.06
	103	8/20/2007 10:36:00 AM	15.29	1.39	0.04	0.06
	104	8/20/2007 10:37:00 AM	15.28	1.35	0.08	0.05
	105	8/20/2007 10:38:00 AM	15.26	1.31	0.08	0.05
	106	8/20/2007 10:39:00 AM	15.25	1.26	0.07	0.05
	107	8/20/2007 10:40:00 AM	15.24	1.23	0.07	0.05
	108	8/20/2007 10:41:00 AM	15.23	1.19	0.07	0.05
	109	8/20/2007 10:42:00 AM	15.22	1.16	0.07	0.05
	110	8/20/2007 10:43:00 AM	15.17	1.13	0.07	0.05
	111	8/20/2007 10:44:00 AM	15.17	1.10	0.07	0.06
	112	8/20/2007 10:45:00 AM	15.16	1.07	0.07	0.05
	113	8/20/2007 10:46:00 AM	15.16	1.04	0.06	0.06
	114	8/20/2007 10:47:00 AM	15.14	1.01	0.07	0.06
	115	8/20/2007 10:48:00 AM	15.13	0.98	0.07	0.06
	116	8/20/2007 10:49:00 AM	15.12	0.96	0.07	0.06
	117	8/20/2007 10:50:00 AM	15.11	0.93	0.06	0.06
	118	8/20/2007 10:51:00 AM	15.13	0.90	0.07	0.06
	119	8/20/2007 10:52:00 AM	15.12	0.87	0.06	0.05
	120	8/20/2007 10:53:00 AM	15.10	0.84	0.06	0.04
	121	8/20/2007 10:54:00 AM	15.09	0.81	0.06	0.08
	122	8/20/2007 10:55:00 AM	15.07	0.78	0.06	0.07
	123	8/20/2007 10:56:00 AM	15.06	0.75	0.06	0.07
	124	8/20/2007 10:57:00 AM	15.05	0.73	0.06	0.06
	125	8/20/2007 10:58:00 AM	15.04	0.71	0.06	0.06
	126	8/20/2007 10:59:00 AM	15.04	0.69	0.06	0.06
	127	8/20/2007 11:00:00 AM	15.02	0.67	0.06	0.06
	128	8/20/2007 11:01:00 AM	15.01	0.64	0.09	0.07
	129	8/20/2007 11:02:00 AM	15.01	0.62	0.06	0.07
	130	8/20/2007 11:03:00 AM	15.00	0.61	0.06	0.04

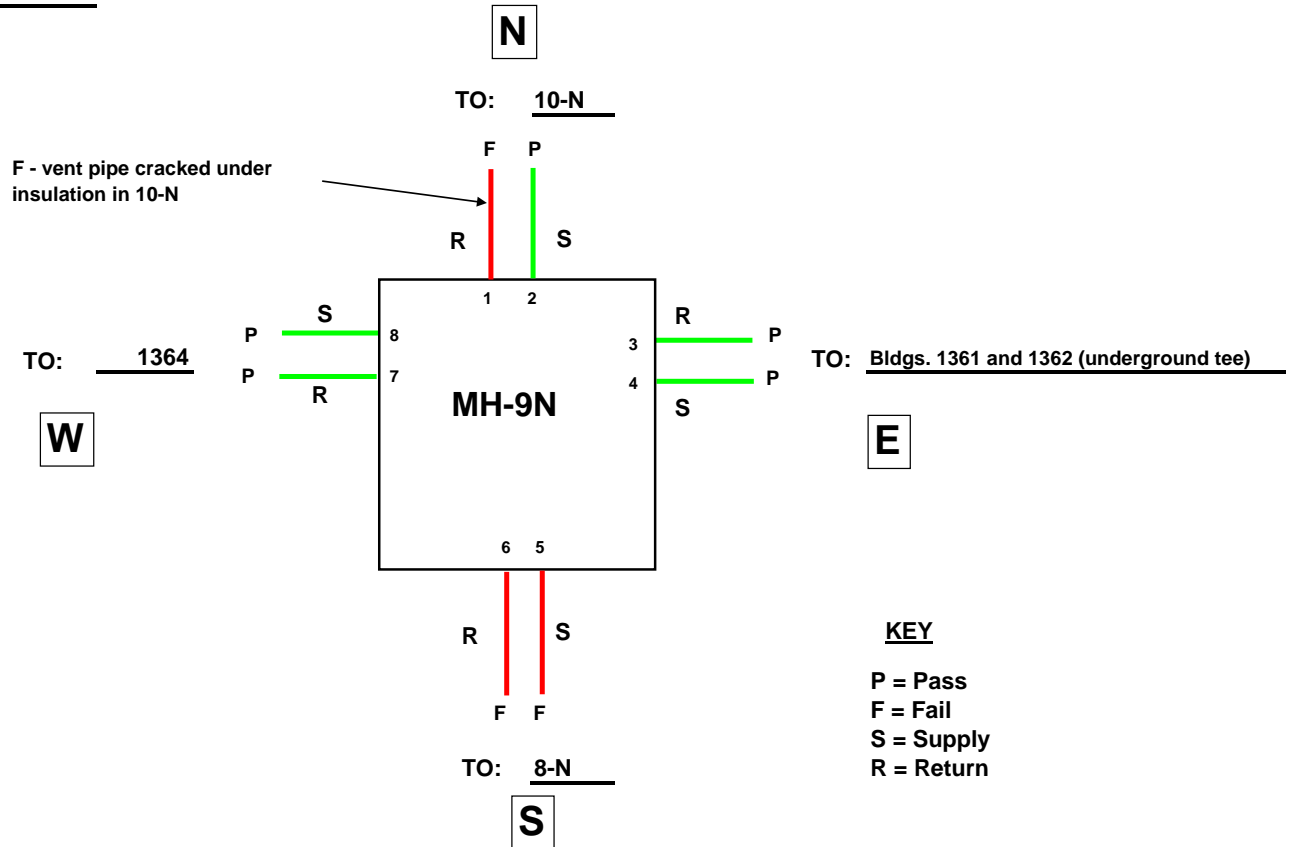
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/20/2007 11:04:00 AM	14.96	0.59	0.06	0.04
	132	8/20/2007 11:05:00 AM	14.95	0.58	0.07	0.04
	133	8/20/2007 11:06:00 AM	14.94	0.56	0.07	v -7.50
	134	8/20/2007 11:07:00 AM	14.93	0.54	0.07	v -7.50
	135	8/20/2007 11:08:00 AM	14.92	0.53	0.07	v -7.50
	136	8/20/2007 11:09:00 AM	14.89	0.53	0.05	v -7.50
	137	8/20/2007 11:10:00 AM	14.90	0.53	v -7.50	v -7.50
	138	8/20/2007 11:10:51 AM	14.91	0.53	v -7.50	v -7.50

DATE: 9/12/2007



NOTES:

1. Supply/Return drains checked on 8/15/07: North and south wall drains dry.
2. East wall Return dry. Small amount of water (deep blue in color) in Supply nipple when cap removed. Drain valve inoperable.
3. Small amount of water (< 1 oz.) in nipple for both Supply and Return on west wall. Dry when drain valve opened.

MH 9-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 10-N	F	Unable to pressurize
	2	2	Supply to 10-N	P	
	3	3	Return to 1361/1362	P	
	4	4	Supply to 1361/1362	P	
2	1	5	Supply to 8-N	F	Unable to pressurize (see comments at MH 8-N)
	2	6	Return to 8-N	F	Unable to pressurize (see comments at MH 8-N)
	3	7	Return to 1364	P	
	4	8	Supply to 1364	P	

printed 1/8/2008

Handy logger

Name : LOGGER 1

LOG Name	09121158
Interval	00:01:00
Personnel	

Start	9/12/2007 11:58:07 AM
Stop	9/12/2007 2:20:31 PM
Comment	

Data	144
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	13.22	15.81	16.08	15.99
Minimum	-0.09	0.07	0.10	0.19
Average	3.22	14.11	14.95	14.84
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/12/2007 11:58:07 AM	0.04	v 0.07	v 0.10	v 0.19
	2	9/12/2007 11:59:00 AM	0.06	0.09	0.12	0.22
	3	9/12/2007 12:00:00 PM	0.99	1.67	0.11	0.22
	4	9/12/2007 12:01:00 PM	1.07	1.27	1.18	1.37
	5	9/12/2007 12:02:00 PM	1.33	1.49	2.75	2.97
	6	9/12/2007 12:03:00 PM	1.71	2.00	4.29	4.53
	7	9/12/2007 12:04:00 PM	2.10	2.50	5.76	6.00
	8	9/12/2007 12:05:00 PM	2.51	2.96	7.08	7.32
	9	9/12/2007 12:06:00 PM	2.96	3.45	8.19	8.39
	10	9/12/2007 12:07:00 PM	3.40	3.99	9.10	9.29
	11	9/12/2007 12:08:00 PM	3.82	4.45	9.78	9.88
	12	9/12/2007 12:09:00 PM	4.24	4.99	10.38	10.46
	13	9/12/2007 12:10:00 PM	4.66	5.51	10.90	10.97
	14	9/12/2007 12:11:00 PM	5.11	5.96	11.37	11.44
	15	9/12/2007 12:12:00 PM	5.53	6.49	11.74	11.82
	16	9/12/2007 12:13:00 PM	5.97	6.97	12.06	12.14
	17	9/12/2007 12:14:00 PM	6.38	7.45	12.39	12.44
	18	9/12/2007 12:15:00 PM	7.00	8.35	14.10	14.21
	19	9/12/2007 12:16:00 PM	7.96	9.91	^ 16.08	^ 15.99
	20	9/12/2007 12:17:00 PM	8.80	10.76	16.05	15.96
	21	9/12/2007 12:18:00 PM	9.69	11.83	16.05	15.95
	22	9/12/2007 12:19:00 PM	10.53	12.77	16.03	15.97
	23	9/12/2007 12:20:00 PM	11.39	13.75	16.02	15.96
	24	9/12/2007 12:21:00 PM	12.25	14.75	16.06	15.96
	25	9/12/2007 12:22:00 PM	13.09	15.63	16.05	15.97
	26	9/12/2007 12:23:00 PM	^ 13.22	15.69	16.05	15.96
	27	9/12/2007 12:24:00 PM	12.89	15.69	16.04	15.96
	28	9/12/2007 12:25:00 PM	12.55	15.68	16.03	15.96
	29	9/12/2007 12:26:00 PM	12.22	15.67	16.03	15.95
	30	9/12/2007 12:27:00 PM	11.89	15.70	16.03	15.95

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/12/2007 12:28:00 PM	11.58	15.70	16.04	15.96
	32	9/12/2007 12:29:00 PM	11.28	15.71	16.04	15.95
	33	9/12/2007 12:30:00 PM	10.98	15.68	16.04	15.94
	34	9/12/2007 12:31:00 PM	10.69	15.70	16.05	15.94
	35	9/12/2007 12:32:00 PM	10.40	15.71	16.04	15.94
	36	9/12/2007 12:33:00 PM	10.12	15.73	16.06	15.91
	37	9/12/2007 12:34:00 PM	9.84	15.74	16.01	15.94
	38	9/12/2007 12:35:00 PM	9.57	15.70	16.01	15.91
	39	9/12/2007 12:36:00 PM	9.30	15.72	16.02	15.91
	40	9/12/2007 12:37:00 PM	9.03	15.73	16.02	15.91
	41	9/12/2007 12:38:00 PM	8.77	15.74	16.02	15.91
	42	9/12/2007 12:39:00 PM	8.52	15.75	16.02	15.91
	43	9/12/2007 12:40:00 PM	8.27	15.76	16.02	15.91
	44	9/12/2007 12:41:00 PM	7.99	15.77	16.03	15.91
	45	9/12/2007 12:42:00 PM	7.75	15.75	16.04	15.91
	46	9/12/2007 12:43:00 PM	7.51	15.76	16.00	15.92
	47	9/12/2007 12:44:00 PM	7.25	15.78	16.01	15.92
	48	9/12/2007 12:45:00 PM	7.01	15.79	16.02	15.93
	49	9/12/2007 12:46:00 PM	6.79	15.75	16.02	15.92
	50	9/12/2007 12:47:00 PM	6.56	15.76	16.02	15.92
	51	9/12/2007 12:48:00 PM	6.35	15.77	16.02	15.92
	52	9/12/2007 12:49:00 PM	6.14	15.76	16.03	15.93
	53	9/12/2007 12:50:00 PM	5.89	15.78	16.03	15.92
	54	9/12/2007 12:51:00 PM	5.69	15.78	16.03	15.92
	55	9/12/2007 12:52:00 PM	5.49	15.78	16.03	15.92
	56	9/12/2007 12:53:00 PM	5.29	15.79	16.04	15.91
	57	9/12/2007 12:54:00 PM	5.10	15.80	16.04	15.91
	58	9/12/2007 12:55:00 PM	4.91	15.79	16.04	15.92
	59	9/12/2007 12:56:00 PM	4.72	15.77	16.04	15.93
	60	9/12/2007 12:57:00 PM	4.53	15.77	16.04	15.91
	61	9/12/2007 12:58:00 PM	4.36	15.78	16.03	15.91
	62	9/12/2007 12:59:00 PM	4.18	15.78	16.05	15.93
	63	9/12/2007 1:00:00 PM	4.01	15.79	16.04	15.93
	64	9/12/2007 1:01:00 PM	3.81	15.79	16.03	15.91
	65	9/12/2007 1:02:00 PM	3.68	15.79	16.05	15.92
	66	9/12/2007 1:03:00 PM	3.18	15.79	16.05	15.91
	67	9/12/2007 1:04:00 PM	2.77	15.80	16.05	15.92
	68	9/12/2007 1:05:00 PM	2.40	15.80	16.05	15.92
	69	9/12/2007 1:06:00 PM	2.04	15.80	16.05	15.92
	70	9/12/2007 1:07:00 PM	1.71	15.80	16.05	15.92
	71	9/12/2007 1:08:00 PM	1.41	^ 15.81	16.05	15.92
	72	9/12/2007 1:09:00 PM	1.16	^ 15.81	16.05	15.92
	73	9/12/2007 1:10:00 PM	0.92	15.76	16.05	15.92
	74	9/12/2007 1:11:00 PM	0.69	15.76	16.04	15.91
	75	9/12/2007 1:12:00 PM	0.50	15.80	16.05	15.91
	76	9/12/2007 1:13:00 PM	0.35	15.80	16.04	15.91
	77	9/12/2007 1:14:00 PM	0.20	15.79	16.03	15.90
	78	9/12/2007 1:15:00 PM	0.10	15.78	16.03	15.90
	79	9/12/2007 1:16:00 PM	0.03	15.78	16.06	15.89
	80	9/12/2007 1:17:00 PM	-0.02	^ 15.81	16.05	15.89

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/12/2007 1:18:00 PM	-0.07	15.80	16.05	15.89
	82	9/12/2007 1:19:00 PM	-0.08	15.79	16.04	15.88
	83	9/12/2007 1:20:00 PM	-0.07	15.78	16.04	15.91
	84	9/12/2007 1:21:00 PM	v -0.09	15.78	^ 16.08	15.91
	85	9/12/2007 1:22:00 PM	-0.07	15.78	^ 16.08	15.90
	86	9/12/2007 1:23:00 PM	-0.07	15.77	^ 16.08	15.91
	87	9/12/2007 1:24:00 PM	-0.07	15.77	16.07	15.90
	88	9/12/2007 1:25:00 PM	-0.07	15.77	16.07	15.90
	89	9/12/2007 1:26:00 PM	-0.07	15.77	16.07	15.91
	90	9/12/2007 1:27:00 PM	-0.07	15.77	16.07	15.91
	91	9/12/2007 1:28:00 PM	-0.05	15.77	16.06	15.90
	92	9/12/2007 1:29:00 PM	-0.05	15.75	16.06	15.90
	93	9/12/2007 1:30:00 PM	-0.04	15.76	16.06	15.90
	94	9/12/2007 1:31:00 PM	-0.06	15.75	16.06	15.90
	95	9/12/2007 1:32:00 PM	-0.05	15.75	16.06	15.89
	96	9/12/2007 1:33:00 PM	-0.04	15.75	16.05	15.90
	97	9/12/2007 1:34:00 PM	-0.06	15.74	16.06	15.90
	98	9/12/2007 1:35:00 PM	-0.06	15.78	16.06	15.88
	99	9/12/2007 1:36:00 PM	-0.03	15.78	16.06	15.88
	100	9/12/2007 1:37:00 PM	-0.03	15.77	16.06	15.88
	101	9/12/2007 1:38:00 PM	-0.03	15.77	16.05	15.88
	102	9/12/2007 1:39:00 PM	-0.04	15.77	16.05	15.88
	103	9/12/2007 1:40:00 PM	-0.04	15.73	16.05	15.88
	104	9/12/2007 1:41:00 PM	-0.05	15.72	16.06	15.87
	105	9/12/2007 1:42:00 PM	-0.05	15.73	16.01	15.87
	106	9/12/2007 1:43:00 PM	-0.06	15.73	16.01	15.88
	107	9/12/2007 1:44:00 PM	-0.06	15.72	16.02	15.87
	108	9/12/2007 1:45:00 PM	-0.06	15.73	16.02	15.87
	109	9/12/2007 1:46:00 PM	-0.03	15.72	16.02	15.88
	110	9/12/2007 1:47:00 PM	-0.04	15.72	16.02	15.87
	111	9/12/2007 1:48:00 PM	-0.04	15.71	16.06	15.87
	112	9/12/2007 1:49:00 PM	-0.04	15.71	16.07	15.87
	113	9/12/2007 1:50:00 PM	-0.01	15.75	16.07	15.87
	114	9/12/2007 1:51:00 PM	-0.02	15.74	16.07	15.87
	115	9/12/2007 1:52:00 PM	-0.02	15.74	16.07	15.87
	116	9/12/2007 1:53:00 PM	-0.03	15.73	16.06	15.87
	117	9/12/2007 1:54:00 PM	-0.03	15.72	16.06	15.88
	118	9/12/2007 1:55:00 PM	-0.03	15.76	16.06	15.88
	119	9/12/2007 1:56:00 PM	-0.04	15.74	16.05	15.88
	120	9/12/2007 1:57:00 PM	-0.03	15.74	16.05	15.88
	121	9/12/2007 1:58:00 PM	-0.04	15.73	16.04	15.87
	122	9/12/2007 1:59:00 PM	-0.04	15.72	16.04	15.87
	123	9/12/2007 2:00:00 PM	-0.01	15.72	16.04	15.87
	124	9/12/2007 2:01:00 PM	-0.01	15.71	16.03	15.86
	125	9/12/2007 2:02:00 PM	-0.02	15.70	16.03	15.86
	126	9/12/2007 2:03:00 PM	-0.04	15.69	16.03	15.87
	127	9/12/2007 2:04:00 PM	-0.03	15.69	16.02	15.86
	128	9/12/2007 2:05:00 PM	-0.05	15.68	16.03	15.85
	129	9/12/2007 2:06:00 PM	-0.04	15.69	16.02	15.85
	130	9/12/2007 2:07:00 PM	-0.06	15.68	16.02	15.85

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/12/2007 2:08:00 PM	-0.05	15.69	16.02	15.85
	132	9/12/2007 2:09:00 PM	-0.04	15.69	16.02	15.85
	133	9/12/2007 2:10:00 PM	-0.06	15.68	16.02	15.85
	134	9/12/2007 2:11:00 PM	-0.04	15.68	16.02	15.84
	135	9/12/2007 2:12:00 PM	-0.03	15.68	16.02	15.84
	136	9/12/2007 2:13:00 PM	-0.02	15.69	16.02	15.85
	137	9/12/2007 2:14:00 PM	-0.05	15.68	16.02	15.85
	138	9/12/2007 2:15:00 PM	-0.03	15.68	16.02	15.85
	139	9/12/2007 2:16:00 PM	-0.02	15.67	16.01	15.84
	140	9/12/2007 2:17:00 PM	-0.05	15.68	16.02	15.84
	141	9/12/2007 2:18:00 PM	-0.04	15.67	16.02	15.85
	142	9/12/2007 2:19:00 PM	-0.03	15.67	16.01	15.84
	143	9/12/2007 2:20:00 PM	-0.01	15.67	16.01	15.84
	144	9/12/2007 2:20:31 PM	-0.01	15.67	16.02	15.84

printed 1/8/2008

Handy logger

Name : **LOGGER 2**

LOG Name	09121157
Interval	00:01:00
Personnel	

Start	9/12/2007 11:57:54 AM
Stop	9/12/2007 2:20:51 PM
Comment	

Data	145
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	7.92	1.17	16.33	16.26
Minimum	-7.50	-7.50	-7.50	0.14
Average	-4.36	-4.51	14.51	14.83
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/12/2007 11:57:54 AM	0.12	0.11	0.03	v 0.14
	2	9/12/2007 11:58:00 AM	0.12	0.11	0.03	0.17
	3	9/12/2007 11:59:00 AM	0.15	0.12	0.05	0.15
	4	9/12/2007 12:00:00 PM	0.13	0.79	0.61	v 0.14
	5	9/12/2007 12:01:00 PM	0.16	0.87	0.53	0.16
	6	9/12/2007 12:02:00 PM	4.78	0.84	0.47	5.30
	7	9/12/2007 12:03:00 PM	7.07	0.96	0.54	7.10
	8	9/12/2007 12:04:00 PM	^ 7.92	1.02	0.59	7.89
	9	9/12/2007 12:05:00 PM	v -7.50	1.11	0.63	8.66
	10	9/12/2007 12:06:00 PM	v -7.50	^ 1.17	0.66	9.34
	11	9/12/2007 12:07:00 PM	1.21	v -7.50	0.70	9.93
	12	9/12/2007 12:08:00 PM	1.27	v -7.50	v -7.50	10.26
	13	9/12/2007 12:09:00 PM	1.33	0.67	10.79	10.82
	14	9/12/2007 12:10:00 PM	1.37	0.73	11.24	11.23
	15	9/12/2007 12:11:00 PM	1.40	0.78	11.64	11.60
	16	9/12/2007 12:12:00 PM	1.44	0.84	11.96	11.92
	17	9/12/2007 12:13:00 PM	1.45	0.81	12.28	12.22
	18	9/12/2007 12:14:00 PM	0.92	0.37	13.41	13.48
	19	9/12/2007 12:15:00 PM	0.30	0.02	^ 16.33	16.22
	20	9/12/2007 12:16:00 PM	0.12	0.00	16.29	16.24
	21	9/12/2007 12:17:00 PM	0.09	0.00	16.27	^ 16.26
	22	9/12/2007 12:18:00 PM	0.09	0.03	16.25	16.25
	23	9/12/2007 12:19:00 PM	0.10	0.02	16.24	16.23
	24	9/12/2007 12:20:00 PM	0.08	0.02	16.22	16.22
	25	9/12/2007 12:21:00 PM	0.08	0.02	16.24	16.21
	26	9/12/2007 12:22:00 PM	0.12	0.02	16.23	16.19
	27	9/12/2007 12:23:00 PM	0.12	0.02	16.25	16.18
	28	9/12/2007 12:24:00 PM	0.13	0.03	16.24	16.18
	29	9/12/2007 12:25:00 PM	0.10	0.03	16.23	16.16
	30	9/12/2007 12:26:00 PM	0.11	0.04	16.22	16.16

printed 1/8/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/12/2007 12:27:00 PM	0.12	0.05	16.21	16.15
	32	9/12/2007 12:28:00 PM	0.13	0.02	16.18	16.15
	33	9/12/2007 12:29:00 PM	0.14	0.04	16.19	16.14
	34	9/12/2007 12:30:00 PM	0.12	0.05	16.17	16.13
	35	9/12/2007 12:31:00 PM	0.12	0.06	16.17	16.12
	36	9/12/2007 12:32:00 PM	0.13	0.03	16.16	16.13
	37	9/12/2007 12:33:00 PM	0.11	0.04	16.12	16.12
	38	9/12/2007 12:34:00 PM	0.12	0.05	16.12	16.12
	39	9/12/2007 12:35:00 PM	0.13	0.05	16.12	16.12
	40	9/12/2007 12:36:00 PM	0.13	0.07	16.12	16.08
	41	9/12/2007 12:37:00 PM	0.13	0.04	16.11	16.07
	42	9/12/2007 12:38:00 PM	0.14	0.04	16.11	16.07
	43	9/12/2007 12:39:00 PM	0.14	0.05	16.11	16.06
	44	9/12/2007 12:40:00 PM	0.12	0.05	16.10	16.08
	45	9/12/2007 12:41:00 PM	0.13	0.06	16.10	16.07
	46	9/12/2007 12:42:00 PM	0.14	0.07	16.10	16.07
	47	9/12/2007 12:43:00 PM	0.12	0.04	16.10	16.02
	48	9/12/2007 12:44:00 PM	0.15	0.04	16.09	16.02
	49	9/12/2007 12:45:00 PM	0.15	0.05	16.09	16.01
	50	9/12/2007 12:46:00 PM	0.16	0.05	16.09	16.01
	51	9/12/2007 12:47:00 PM	0.13	0.05	16.08	16.00
	52	9/12/2007 12:48:00 PM	0.13	0.06	16.09	16.00
	53	9/12/2007 12:49:00 PM	0.13	0.07	16.08	15.99
	54	9/12/2007 12:50:00 PM	0.14	0.07	16.08	15.94
	55	9/12/2007 12:51:00 PM	0.14	0.07	16.08	15.93
	56	9/12/2007 12:52:00 PM	0.14	0.07	16.08	15.92
	57	9/12/2007 12:53:00 PM	0.15	0.07	16.08	15.91
	58	9/12/2007 12:54:00 PM	0.15	0.08	16.08	15.91
	59	9/12/2007 12:55:00 PM	v -7.50	v -7.50	16.07	15.90
	60	9/12/2007 12:56:00 PM	v -7.50	v -7.50	16.07	15.89
	61	9/12/2007 12:57:00 PM	v -7.50	v -7.50	16.07	15.92
	62	9/12/2007 12:58:00 PM	v -7.50	v -7.50	16.07	15.92
	63	9/12/2007 12:59:00 PM	v -7.50	v -7.50	16.07	15.91
	64	9/12/2007 1:00:00 PM	v -7.50	v -7.50	16.06	15.90
	65	9/12/2007 1:01:00 PM	v -7.50	v -7.50	16.06	15.85
	66	9/12/2007 1:02:00 PM	v -7.50	v -7.50	16.06	15.87
	67	9/12/2007 1:03:00 PM	v -7.50	v -7.50	16.06	15.83
	68	9/12/2007 1:04:00 PM	v -7.50	v -7.50	16.05	15.83
	69	9/12/2007 1:05:00 PM	v -7.50	v -7.50	16.06	15.82
	70	9/12/2007 1:06:00 PM	v -7.50	v -7.50	16.05	15.85
	71	9/12/2007 1:07:00 PM	v -7.50	v -7.50	16.05	15.85
	72	9/12/2007 1:08:00 PM	v -7.50	v -7.50	16.04	15.83
	73	9/12/2007 1:09:00 PM	v -7.50	v -7.50	16.05	15.83
	74	9/12/2007 1:10:00 PM	v -7.50	v -7.50	16.05	15.78
	75	9/12/2007 1:11:00 PM	v -7.50	v -7.50	16.04	15.81
	76	9/12/2007 1:12:00 PM	v -7.50	v -7.50	16.04	15.80
	77	9/12/2007 1:13:00 PM	v -7.50	v -7.50	16.03	15.82
	78	9/12/2007 1:14:00 PM	v -7.50	v -7.50	16.05	15.82
	79	9/12/2007 1:15:00 PM	v -7.50	v -7.50	16.03	15.82
	80	9/12/2007 1:16:00 PM	v -7.50	v -7.50	16.04	15.83

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/12/2007 1:17:00 PM	v -7.50	v -7.50	16.02	15.87
	82	9/12/2007 1:18:00 PM	v -7.50	v -7.50	16.01	15.88
	83	9/12/2007 1:19:00 PM	v -7.50	v -7.50	16.00	15.89
	84	9/12/2007 1:20:00 PM	v -7.50	v -7.50	15.99	15.91
	85	9/12/2007 1:21:00 PM	v -7.50	v -7.50	15.98	15.96
	86	9/12/2007 1:22:00 PM	v -7.50	v -7.50	15.97	15.96
	87	9/12/2007 1:23:00 PM	v -7.50	v -7.50	15.96	15.96
	88	9/12/2007 1:24:00 PM	v -7.50	v -7.50	15.96	15.96
	89	9/12/2007 1:25:00 PM	v -7.50	v -7.50	15.96	15.96
	90	9/12/2007 1:26:00 PM	v -7.50	v -7.50	15.95	15.96
	91	9/12/2007 1:27:00 PM	v -7.50	v -7.50	15.95	15.95
	92	9/12/2007 1:28:00 PM	v -7.50	v -7.50	15.94	15.95
	93	9/12/2007 1:29:00 PM	v -7.50	v -7.50	15.94	15.94
	94	9/12/2007 1:30:00 PM	v -7.50	v -7.50	15.93	15.93
	95	9/12/2007 1:31:00 PM	v -7.50	v -7.50	15.93	15.93
	96	9/12/2007 1:32:00 PM	v -7.50	v -7.50	15.92	15.92
	97	9/12/2007 1:33:00 PM	v -7.50	v -7.50	15.92	15.91
	98	9/12/2007 1:34:00 PM	v -7.50	v -7.50	15.94	15.90
	99	9/12/2007 1:35:00 PM	v -7.50	v -7.50	15.92	15.93
	100	9/12/2007 1:36:00 PM	v -7.50	v -7.50	15.92	15.89
	101	9/12/2007 1:37:00 PM	v -7.50	v -7.50	15.91	15.88
	102	9/12/2007 1:38:00 PM	v -7.50	v -7.50	15.92	15.88
	103	9/12/2007 1:39:00 PM	v -7.50	v -7.50	15.91	15.88
	104	9/12/2007 1:40:00 PM	v -7.50	v -7.50	15.92	15.88
	105	9/12/2007 1:41:00 PM	v -7.50	v -7.50	15.92	15.87
	106	9/12/2007 1:42:00 PM	v -7.50	v -7.50	15.93	15.82
	107	9/12/2007 1:43:00 PM	v -7.50	v -7.50	15.93	15.82
	108	9/12/2007 1:44:00 PM	v -7.50	v -7.50	15.93	15.83
	109	9/12/2007 1:45:00 PM	v -7.50	v -7.50	15.93	15.82
	110	9/12/2007 1:46:00 PM	v -7.50	v -7.50	15.94	15.81
	111	9/12/2007 1:47:00 PM	v -7.50	v -7.50	15.93	15.80
	112	9/12/2007 1:48:00 PM	v -7.50	v -7.50	15.93	15.80
	113	9/12/2007 1:49:00 PM	v -7.50	v -7.50	15.93	15.83
	114	9/12/2007 1:50:00 PM	v -7.50	v -7.50	15.93	15.82
	115	9/12/2007 1:51:00 PM	v -7.50	v -7.50	15.92	15.82
	116	9/12/2007 1:52:00 PM	v -7.50	v -7.50	15.93	15.76
	117	9/12/2007 1:53:00 PM	v -7.50	v -7.50	15.93	15.81
	118	9/12/2007 1:54:00 PM	v -7.50	v -7.50	15.93	15.75
	119	9/12/2007 1:55:00 PM	v -7.50	v -7.50	15.93	15.75
	120	9/12/2007 1:56:00 PM	v -7.50	v -7.50	15.93	15.78
	121	9/12/2007 1:57:00 PM	v -7.50	v -7.50	15.92	15.77
	122	9/12/2007 1:58:00 PM	v -7.50	v -7.50	15.93	15.77
	123	9/12/2007 1:59:00 PM	v -7.50	v -7.50	15.92	15.71
	124	9/12/2007 2:00:00 PM	v -7.50	v -7.50	15.92	15.75
	125	9/12/2007 2:01:00 PM	v -7.50	v -7.50	15.92	15.74
	126	9/12/2007 2:02:00 PM	v -7.50	v -7.50	15.92	15.73
	127	9/12/2007 2:03:00 PM	v -7.50	v -7.50	15.95	15.72
	128	9/12/2007 2:04:00 PM	v -7.50	v -7.50	15.95	15.71
	129	9/12/2007 2:05:00 PM	v -7.50	v -7.50	15.95	15.70
	130	9/12/2007 2:06:00 PM	v -7.50	v -7.50	15.95	15.69

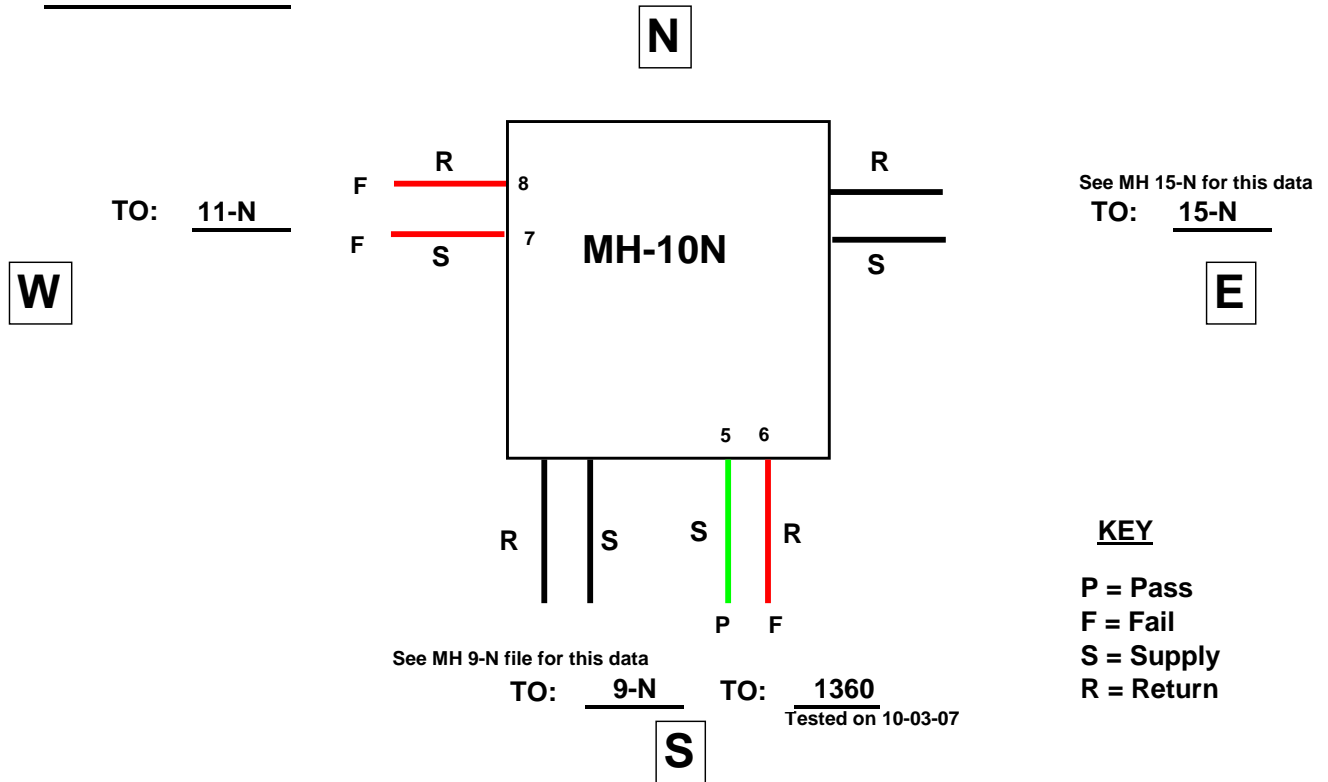
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/12/2007 2:07:00 PM	v -7.50	v -7.50	15.94	15.68
	132	9/12/2007 2:08:00 PM	v -7.50	v -7.50	15.94	15.67
	133	9/12/2007 2:09:00 PM	v -7.50	v -7.50	15.91	15.66
	134	9/12/2007 2:10:00 PM	v -7.50	v -7.50	15.91	15.66
	135	9/12/2007 2:11:00 PM	v -7.50	v -7.50	15.91	15.66
	136	9/12/2007 2:12:00 PM	v -7.50	v -7.50	15.90	15.64
	137	9/12/2007 2:13:00 PM	v -7.50	v -7.50	15.91	15.64
	138	9/12/2007 2:14:00 PM	v -7.50	v -7.50	15.91	15.63
	139	9/12/2007 2:15:00 PM	v -7.50	v -7.50	15.92	15.63
	140	9/12/2007 2:16:00 PM	v -7.50	v -7.50	15.91	15.62
	141	9/12/2007 2:17:00 PM	v -7.50	v -7.50	15.92	15.62
	142	9/12/2007 2:18:00 PM	v -7.50	v -7.50	15.92	15.61
	143	9/12/2007 2:19:00 PM	v -7.50	v -7.50	15.92	15.60
	144	9/12/2007 2:20:00 PM	v -7.50	v -7.50	15.92	15.55
	145	9/12/2007 2:20:51 PM	v -7.50	v -7.50	15.93	15.55

DATE: 9/12/2007



NOTES:

1. Gland seals to 11-N lines tightened, but not able to pressurize lines. Lines to Bldg. 1360 tested on 10-03-07
2. Supply/Return drains checked on 8/15/07: all dry

MH 10-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	3	7	Supply to 11-N	F	Gland seal tightend, but still unable to pressurize
	4	8	Return to 11-N	F	Gland seal tightend, but still unable to pressurize
2	1	5	Supply to 1360	P	Tested on 10-03-07
	2	6	Return to 1360	F	Tested on 10-03-07

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Handy logger

Name : **LOGGER 2**

LOG Name	09121532
Interval	00:01:00
Personnel	

Start	9/12/2007 3:32:28 PM
Stop	9/12/2007 3:59:31 PM
Comment	

Data	29
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			1.31	1.38
Minimum			0.08	0.03
Average			1.09	1.13
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/12/2007 3:32:28 PM	O.R.	O.R.	v 0.08	v 0.03
*	2	9/12/2007 3:33:00 PM	O.R.	O.R.	0.10	0.08
	3	9/12/2007 3:34:00 PM	O.R.	O.R.	1.22	1.29
	4	9/12/2007 3:35:00 PM	O.R.	O.R.	1.23	1.32
	5	9/12/2007 3:36:00 PM	O.R.	O.R.	1.28	1.33
	6	9/12/2007 3:37:00 PM	O.R.	O.R.	1.26	^ 1.38
	7	9/12/2007 3:38:00 PM	O.R.	O.R.	1.25	1.35
	8	9/12/2007 3:39:00 PM	O.R.	O.R.	1.25	1.30
	9	9/12/2007 3:40:00 PM	O.R.	O.R.	1.25	1.36
	10	9/12/2007 3:41:00 PM	O.R.	O.R.	1.27	1.34
	11	9/12/2007 3:42:00 PM	O.R.	O.R.	1.26	1.33
	12	9/12/2007 3:43:00 PM	O.R.	O.R.	1.28	1.33
	13	9/12/2007 3:44:00 PM	O.R.	O.R.	1.28	1.34
	14	9/12/2007 3:45:00 PM	O.R.	O.R.	1.26	1.33
	15	9/12/2007 3:46:00 PM	O.R.	O.R.	1.23	1.35
	16	9/12/2007 3:47:00 PM	O.R.	O.R.	1.20	1.33
	17	9/12/2007 3:48:00 PM	O.R.	O.R.	1.20	1.30
	18	9/12/2007 3:49:00 PM	O.R.	O.R.	1.17	1.26
	19	9/12/2007 3:50:00 PM	O.R.	O.R.	1.19	1.25
	20	9/12/2007 3:51:00 PM	O.R.	O.R.	1.19	1.27
	21	9/12/2007 3:52:00 PM	O.R.	O.R.	1.19	1.27
	22	9/12/2007 3:53:00 PM	O.R.	O.R.	1.20	1.25
	23	9/12/2007 3:54:00 PM	O.R.	O.R.	1.26	1.28
	24	9/12/2007 3:55:00 PM	O.R.	O.R.	1.29	1.25
	25	9/12/2007 3:56:00 PM	O.R.	O.R.	1.30	1.25
	26	9/12/2007 3:57:00 PM	O.R.	O.R.	1.30	1.31
	27	9/12/2007 3:58:00 PM	O.R.	O.R.	^ 1.31	1.25
	28	9/12/2007 3:59:00 PM	O.R.	O.R.	0.14	0.08
	29	9/12/2007 3:59:31 PM	O.R.	O.R.	v 0.08	0.05

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Handy logger

Name : **LOGGER 2**

LOG Name	10031116
Interval	00:01:00
Personnel	10S

Start	10/3/2007 11:16:15 AM
Stop	10/3/2007 1:19:20 PM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	18.13	17.66		
Minimum	0.10	0.02		
Average	16.00	15.15		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/3/2007 11:16:15 AM	v 0.10	v 0.02	O.R.	O.R.
	2	10/3/2007 11:17:00 AM	17.39	16.40	O.R.	O.R.
	3	10/3/2007 11:18:00 AM	^ 18.13	^ 17.66	O.R.	O.R.
	4	10/3/2007 11:19:00 AM	16.77	16.62	O.R.	O.R.
	5	10/3/2007 11:20:00 AM	16.74	16.63	O.R.	O.R.
	6	10/3/2007 11:21:00 AM	16.76	16.56	O.R.	O.R.
	7	10/3/2007 11:22:00 AM	16.74	16.53	O.R.	O.R.
	8	10/3/2007 11:23:00 AM	16.74	16.52	O.R.	O.R.
	9	10/3/2007 11:24:00 AM	16.70	16.49	O.R.	O.R.
	10	10/3/2007 11:25:00 AM	16.68	16.44	O.R.	O.R.
	11	10/3/2007 11:26:00 AM	16.70	16.42	O.R.	O.R.
	12	10/3/2007 11:27:00 AM	16.66	16.38	O.R.	O.R.
	13	10/3/2007 11:28:00 AM	16.66	16.37	O.R.	O.R.
	14	10/3/2007 11:29:00 AM	16.66	16.32	O.R.	O.R.
	15	10/3/2007 11:30:00 AM	16.64	16.29	O.R.	O.R.
	16	10/3/2007 11:31:00 AM	16.64	16.22	O.R.	O.R.
	17	10/3/2007 11:32:00 AM	16.63	16.21	O.R.	O.R.
	18	10/3/2007 11:33:00 AM	16.59	16.17	O.R.	O.R.
	19	10/3/2007 11:34:00 AM	16.57	16.14	O.R.	O.R.
	20	10/3/2007 11:35:00 AM	16.57	16.13	O.R.	O.R.
	21	10/3/2007 11:36:00 AM	16.57	16.11	O.R.	O.R.
	22	10/3/2007 11:37:00 AM	16.58	16.09	O.R.	O.R.
	23	10/3/2007 11:38:00 AM	16.55	16.08	O.R.	O.R.
	24	10/3/2007 11:39:00 AM	16.53	16.04	O.R.	O.R.
	25	10/3/2007 11:40:00 AM	16.52	16.02	O.R.	O.R.
	26	10/3/2007 11:41:00 AM	16.51	15.99	O.R.	O.R.
	27	10/3/2007 11:42:00 AM	16.49	15.98	O.R.	O.R.
	28	10/3/2007 11:43:00 AM	16.47	15.98	O.R.	O.R.
	29	10/3/2007 11:44:00 AM	16.45	15.94	O.R.	O.R.
	30	10/3/2007 11:45:00 AM	16.44	15.90	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/3/2007 11:46:00 AM	16.43	15.87	O.R.	O.R.
	32	10/3/2007 11:47:00 AM	16.45	15.85	O.R.	O.R.
	33	10/3/2007 11:48:00 AM	16.44	15.82	O.R.	O.R.
	34	10/3/2007 11:49:00 AM	16.42	15.79	O.R.	O.R.
	35	10/3/2007 11:50:00 AM	16.40	15.77	O.R.	O.R.
	36	10/3/2007 11:51:00 AM	16.38	15.73	O.R.	O.R.
	37	10/3/2007 11:52:00 AM	16.40	15.70	O.R.	O.R.
	38	10/3/2007 11:53:00 AM	16.33	15.70	O.R.	O.R.
	39	10/3/2007 11:54:00 AM	16.33	15.68	O.R.	O.R.
	40	10/3/2007 11:55:00 AM	16.34	15.61	O.R.	O.R.
	41	10/3/2007 11:56:00 AM	16.29	15.55	O.R.	O.R.
	42	10/3/2007 11:57:00 AM	16.26	15.56	O.R.	O.R.
	43	10/3/2007 11:58:00 AM	16.30	15.55	O.R.	O.R.
	44	10/3/2007 11:59:00 AM	16.28	15.52	O.R.	O.R.
	45	10/3/2007 12:00:00 PM	16.28	15.51	O.R.	O.R.
	46	10/3/2007 12:01:00 PM	16.24	15.49	O.R.	O.R.
	47	10/3/2007 12:02:00 PM	16.24	15.49	O.R.	O.R.
	48	10/3/2007 12:03:00 PM	16.22	15.46	O.R.	O.R.
	49	10/3/2007 12:04:00 PM	16.25	15.43	O.R.	O.R.
	50	10/3/2007 12:05:00 PM	16.23	15.41	O.R.	O.R.
	51	10/3/2007 12:06:00 PM	16.24	15.41	O.R.	O.R.
	52	10/3/2007 12:07:00 PM	16.22	15.38	O.R.	O.R.
	53	10/3/2007 12:08:00 PM	16.18	15.33	O.R.	O.R.
	54	10/3/2007 12:09:00 PM	16.15	15.32	O.R.	O.R.
	55	10/3/2007 12:10:00 PM	16.13	15.31	O.R.	O.R.
	56	10/3/2007 12:11:00 PM	16.14	15.27	O.R.	O.R.
	57	10/3/2007 12:12:00 PM	16.15	15.27	O.R.	O.R.
	58	10/3/2007 12:13:00 PM	16.13	15.25	O.R.	O.R.
	59	10/3/2007 12:14:00 PM	16.13	15.26	O.R.	O.R.
	60	10/3/2007 12:15:00 PM	16.13	15.23	O.R.	O.R.
	61	10/3/2007 12:16:00 PM	16.11	15.21	O.R.	O.R.
	62	10/3/2007 12:17:00 PM	16.10	15.18	O.R.	O.R.
	63	10/3/2007 12:18:00 PM	16.09	15.17	O.R.	O.R.
	64	10/3/2007 12:19:00 PM	16.10	15.14	O.R.	O.R.
	65	10/3/2007 12:20:00 PM	16.06	15.11	O.R.	O.R.
	66	10/3/2007 12:21:00 PM	16.08	15.10	O.R.	O.R.
	67	10/3/2007 12:22:00 PM	16.07	15.08	O.R.	O.R.
	68	10/3/2007 12:23:00 PM	16.07	15.06	O.R.	O.R.
	69	10/3/2007 12:24:00 PM	16.02	15.05	O.R.	O.R.
	70	10/3/2007 12:25:00 PM	16.02	15.03	O.R.	O.R.
	71	10/3/2007 12:26:00 PM	16.03	15.04	O.R.	O.R.
	72	10/3/2007 12:27:00 PM	16.02	15.04	O.R.	O.R.
	73	10/3/2007 12:28:00 PM	16.00	15.02	O.R.	O.R.
	74	10/3/2007 12:29:00 PM	16.00	15.02	O.R.	O.R.
	75	10/3/2007 12:30:00 PM	15.99	14.99	O.R.	O.R.
	76	10/3/2007 12:31:00 PM	15.98	14.96	O.R.	O.R.
	77	10/3/2007 12:32:00 PM	15.97	14.93	O.R.	O.R.
	78	10/3/2007 12:33:00 PM	15.94	14.90	O.R.	O.R.
	79	10/3/2007 12:34:00 PM	15.93	14.90	O.R.	O.R.
	80	10/3/2007 12:35:00 PM	15.91	14.87	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/3/2007 12:36:00 PM	15.90	14.86	O.R.	O.R.
	82	10/3/2007 12:37:00 PM	15.90	14.85	O.R.	O.R.
	83	10/3/2007 12:38:00 PM	15.88	14.86	O.R.	O.R.
	84	10/3/2007 12:39:00 PM	15.87	14.84	O.R.	O.R.
	85	10/3/2007 12:40:00 PM	15.87	14.78	O.R.	O.R.
	86	10/3/2007 12:41:00 PM	15.86	14.78	O.R.	O.R.
	87	10/3/2007 12:42:00 PM	15.84	14.76	O.R.	O.R.
	88	10/3/2007 12:43:00 PM	15.84	14.73	O.R.	O.R.
	89	10/3/2007 12:44:00 PM	15.83	14.73	O.R.	O.R.
	90	10/3/2007 12:45:00 PM	15.83	14.75	O.R.	O.R.
	91	10/3/2007 12:46:00 PM	15.82	14.73	O.R.	O.R.
	92	10/3/2007 12:47:00 PM	15.81	14.71	O.R.	O.R.
	93	10/3/2007 12:48:00 PM	15.80	14.69	O.R.	O.R.
	94	10/3/2007 12:49:00 PM	15.79	14.69	O.R.	O.R.
	95	10/3/2007 12:50:00 PM	15.78	14.67	O.R.	O.R.
	96	10/3/2007 12:51:00 PM	15.78	14.65	O.R.	O.R.
	97	10/3/2007 12:52:00 PM	15.74	14.62	O.R.	O.R.
	98	10/3/2007 12:53:00 PM	15.74	14.59	O.R.	O.R.
	99	10/3/2007 12:54:00 PM	15.74	14.58	O.R.	O.R.
	100	10/3/2007 12:55:00 PM	15.74	14.58	O.R.	O.R.
	101	10/3/2007 12:56:00 PM	15.70	14.57	O.R.	O.R.
	102	10/3/2007 12:57:00 PM	15.73	14.56	O.R.	O.R.
	103	10/3/2007 12:58:00 PM	15.72	14.55	O.R.	O.R.
	104	10/3/2007 12:59:00 PM	15.71	14.53	O.R.	O.R.
	105	10/3/2007 1:00:00 PM	15.67	14.52	O.R.	O.R.
	106	10/3/2007 1:01:00 PM	15.67	14.50	O.R.	O.R.
	107	10/3/2007 1:02:00 PM	15.66	14.46	O.R.	O.R.
	108	10/3/2007 1:03:00 PM	15.66	14.46	O.R.	O.R.
	109	10/3/2007 1:04:00 PM	15.66	14.45	O.R.	O.R.
	110	10/3/2007 1:05:00 PM	15.64	14.45	O.R.	O.R.
	111	10/3/2007 1:06:00 PM	15.63	14.44	O.R.	O.R.
	112	10/3/2007 1:07:00 PM	15.60	14.39	O.R.	O.R.
	113	10/3/2007 1:08:00 PM	15.63	14.39	O.R.	O.R.
	114	10/3/2007 1:09:00 PM	15.61	14.40	O.R.	O.R.
	115	10/3/2007 1:10:00 PM	15.60	14.38	O.R.	O.R.
	116	10/3/2007 1:11:00 PM	15.59	14.38	O.R.	O.R.
	117	10/3/2007 1:12:00 PM	15.58	14.39	O.R.	O.R.
	118	10/3/2007 1:13:00 PM	15.56	14.38	O.R.	O.R.
	119	10/3/2007 1:14:00 PM	15.55	14.36	O.R.	O.R.
	120	10/3/2007 1:15:00 PM	15.54	14.34	O.R.	O.R.
	121	10/3/2007 1:16:00 PM	15.56	14.34	O.R.	O.R.
	122	10/3/2007 1:17:00 PM	15.54	14.35	O.R.	O.R.
	123	10/3/2007 1:18:00 PM	15.52	14.32	O.R.	O.R.
	124	10/3/2007 1:19:00 PM	15.50	14.30	O.R.	O.R.
	125	10/3/2007 1:19:20 PM	15.50	14.30	O.R.	O.R.

DATE: 10/3/2007

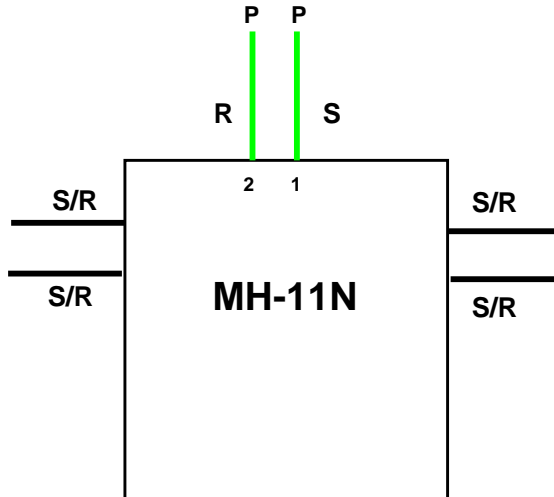
N

TO: Bldgs.1160 and 1161 (Underground Tee)

See MH 12-N file for this data

TO: 12-N

W



See MH 10-N file for this data

TO: 10-N

E

S

KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

NOTES:

1. Supply/Return drains tested on 8/15/07: all dry

MH 11-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 1160/1161	P	
	2	2	Return to 1160/1161	P	

printed 1/8/2008

Handy logger

Name : **LOGGER 1**

LOG Name	10031024
Interval	00:01:00
Personnel	

Start	10/3/2007 10:24:40 AM
Stop	10/3/2007 12:28:25 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.65	16.10		
Minimum	0.09	0.10		
Average	15.36	14.79		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/3/2007 10:24:40 AM	v 0.09	v 0.10	O.R.	O.R.
	2	10/3/2007 10:25:00 AM	2.22	2.29	O.R.	O.R.
	3	10/3/2007 10:26:00 AM	9.43	9.43	O.R.	O.R.
	4	10/3/2007 10:27:00 AM	12.91	12.47	O.R.	O.R.
	5	10/3/2007 10:28:00 AM	^ 16.65	^ 16.10	O.R.	O.R.
	6	10/3/2007 10:29:00 AM	15.54	15.44	O.R.	O.R.
	7	10/3/2007 10:30:00 AM	15.54	15.37	O.R.	O.R.
	8	10/3/2007 10:31:00 AM	15.53	15.33	O.R.	O.R.
	9	10/3/2007 10:32:00 AM	15.52	15.27	O.R.	O.R.
	10	10/3/2007 10:33:00 AM	15.54	15.26	O.R.	O.R.
	11	10/3/2007 10:34:00 AM	15.54	15.24	O.R.	O.R.
	12	10/3/2007 10:35:00 AM	15.56	15.26	O.R.	O.R.
	13	10/3/2007 10:36:00 AM	15.56	15.27	O.R.	O.R.
	14	10/3/2007 10:37:00 AM	15.59	15.28	O.R.	O.R.
	15	10/3/2007 10:38:00 AM	15.60	15.27	O.R.	O.R.
	16	10/3/2007 10:39:00 AM	15.59	15.26	O.R.	O.R.
	17	10/3/2007 10:40:00 AM	15.60	15.26	O.R.	O.R.
	18	10/3/2007 10:41:00 AM	15.61	15.26	O.R.	O.R.
	19	10/3/2007 10:42:00 AM	15.62	15.29	O.R.	O.R.
	20	10/3/2007 10:43:00 AM	15.65	15.28	O.R.	O.R.
	21	10/3/2007 10:44:00 AM	15.65	15.27	O.R.	O.R.
	22	10/3/2007 10:45:00 AM	15.66	15.30	O.R.	O.R.
	23	10/3/2007 10:46:00 AM	15.66	15.26	O.R.	O.R.
	24	10/3/2007 10:47:00 AM	15.67	15.30	O.R.	O.R.
	25	10/3/2007 10:48:00 AM	15.66	15.29	O.R.	O.R.
	26	10/3/2007 10:49:00 AM	15.69	15.32	O.R.	O.R.
	27	10/3/2007 10:50:00 AM	15.68	15.31	O.R.	O.R.
	28	10/3/2007 10:51:00 AM	15.68	15.31	O.R.	O.R.
	29	10/3/2007 10:52:00 AM	15.68	15.29	O.R.	O.R.
	30	10/3/2007 10:53:00 AM	15.72	15.28	O.R.	O.R.

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/3/2007 10:54:00 AM	15.71	15.27	O.R.	O.R.
	32	10/3/2007 10:55:00 AM	15.68	15.27	O.R.	O.R.
	33	10/3/2007 10:56:00 AM	15.71	15.27	O.R.	O.R.
	34	10/3/2007 10:57:00 AM	15.73	15.26	O.R.	O.R.
	35	10/3/2007 10:58:00 AM	15.72	15.26	O.R.	O.R.
	36	10/3/2007 10:59:00 AM	15.68	15.26	O.R.	O.R.
	37	10/3/2007 11:00:00 AM	15.67	15.27	O.R.	O.R.
	38	10/3/2007 11:01:00 AM	15.70	15.25	O.R.	O.R.
	39	10/3/2007 11:02:00 AM	15.67	15.25	O.R.	O.R.
	40	10/3/2007 11:03:00 AM	15.66	15.22	O.R.	O.R.
	41	10/3/2007 11:04:00 AM	15.67	15.22	O.R.	O.R.
	42	10/3/2007 11:05:00 AM	15.69	15.25	O.R.	O.R.
	43	10/3/2007 11:06:00 AM	15.69	15.24	O.R.	O.R.
	44	10/3/2007 11:07:00 AM	15.69	15.23	O.R.	O.R.
	45	10/3/2007 11:08:00 AM	15.70	15.15	O.R.	O.R.
	46	10/3/2007 11:09:00 AM	15.70	15.16	O.R.	O.R.
	47	10/3/2007 11:10:00 AM	15.70	15.20	O.R.	O.R.
	48	10/3/2007 11:11:00 AM	15.70	15.16	O.R.	O.R.
	49	10/3/2007 11:12:00 AM	15.70	15.23	O.R.	O.R.
	50	10/3/2007 11:13:00 AM	15.69	15.22	O.R.	O.R.
	51	10/3/2007 11:14:00 AM	15.72	15.22	O.R.	O.R.
	52	10/3/2007 11:15:00 AM	15.69	15.22	O.R.	O.R.
	53	10/3/2007 11:16:00 AM	15.68	15.13	O.R.	O.R.
	54	10/3/2007 11:17:00 AM	15.65	15.15	O.R.	O.R.
	55	10/3/2007 11:18:00 AM	15.68	15.14	O.R.	O.R.
	56	10/3/2007 11:19:00 AM	15.69	15.13	O.R.	O.R.
	57	10/3/2007 11:20:00 AM	15.71	15.15	O.R.	O.R.
	58	10/3/2007 11:21:00 AM	15.70	15.16	O.R.	O.R.
	59	10/3/2007 11:22:00 AM	15.72	15.14	O.R.	O.R.
	60	10/3/2007 11:23:00 AM	15.73	15.13	O.R.	O.R.
	61	10/3/2007 11:24:00 AM	15.74	15.10	O.R.	O.R.
	62	10/3/2007 11:25:00 AM	15.72	15.13	O.R.	O.R.
	63	10/3/2007 11:26:00 AM	15.72	15.10	O.R.	O.R.
	64	10/3/2007 11:27:00 AM	15.72	15.10	O.R.	O.R.
	65	10/3/2007 11:28:00 AM	15.71	15.09	O.R.	O.R.
	66	10/3/2007 11:29:00 AM	15.71	15.09	O.R.	O.R.
	67	10/3/2007 11:30:00 AM	15.72	15.11	O.R.	O.R.
	68	10/3/2007 11:31:00 AM	15.69	15.09	O.R.	O.R.
	69	10/3/2007 11:32:00 AM	15.69	15.04	O.R.	O.R.
	70	10/3/2007 11:33:00 AM	15.69	15.04	O.R.	O.R.
	71	10/3/2007 11:34:00 AM	15.71	15.02	O.R.	O.R.
	72	10/3/2007 11:35:00 AM	15.71	15.04	O.R.	O.R.
	73	10/3/2007 11:36:00 AM	15.69	15.02	O.R.	O.R.
	74	10/3/2007 11:37:00 AM	15.70	15.00	O.R.	O.R.
	75	10/3/2007 11:38:00 AM	15.65	14.99	O.R.	O.R.
	76	10/3/2007 11:39:00 AM	15.66	15.00	O.R.	O.R.
	77	10/3/2007 11:40:00 AM	15.67	15.02	O.R.	O.R.
	78	10/3/2007 11:41:00 AM	15.68	15.02	O.R.	O.R.
	79	10/3/2007 11:42:00 AM	15.67	15.02	O.R.	O.R.
	80	10/3/2007 11:43:00 AM	15.69	15.04	O.R.	O.R.

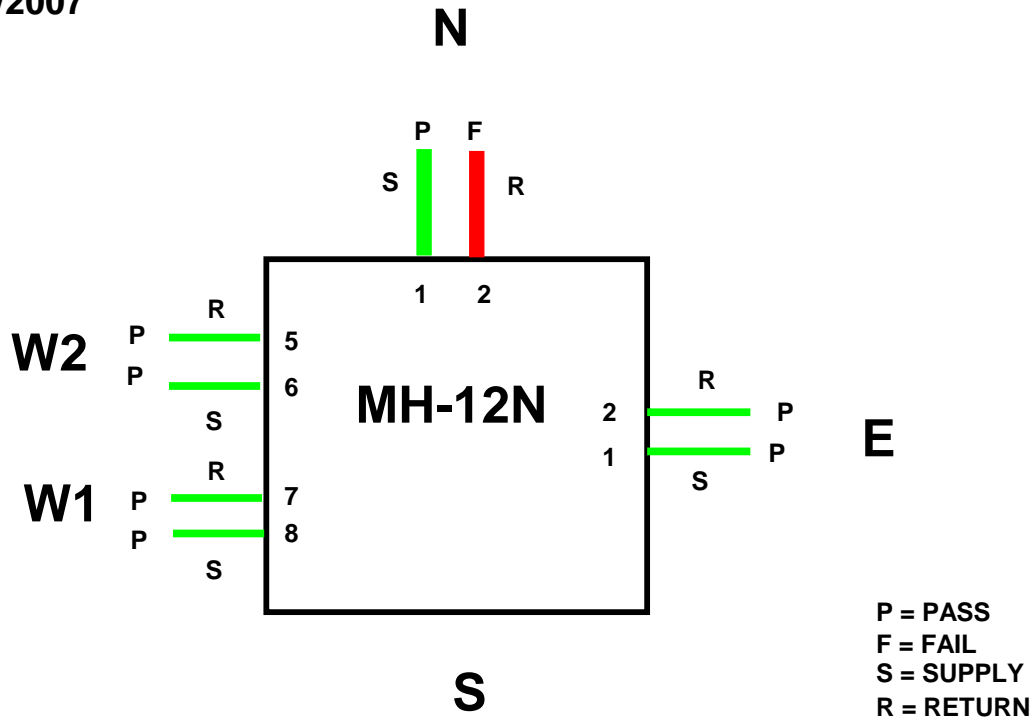
printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/3/2007 11:44:00 AM	15.72	15.02	O.R.	O.R.
	82	10/3/2007 11:45:00 AM	15.70	14.98	O.R.	O.R.
	83	10/3/2007 11:46:00 AM	15.69	15.01	O.R.	O.R.
	84	10/3/2007 11:47:00 AM	15.68	14.97	O.R.	O.R.
	85	10/3/2007 11:48:00 AM	15.68	14.95	O.R.	O.R.
	86	10/3/2007 11:49:00 AM	15.68	14.92	O.R.	O.R.
	87	10/3/2007 11:50:00 AM	15.69	14.93	O.R.	O.R.
	88	10/3/2007 11:51:00 AM	15.65	14.94	O.R.	O.R.
	89	10/3/2007 11:52:00 AM	15.63	14.92	O.R.	O.R.
	90	10/3/2007 11:53:00 AM	15.65	14.94	O.R.	O.R.
	91	10/3/2007 11:54:00 AM	15.60	14.88	O.R.	O.R.
	92	10/3/2007 11:55:00 AM	15.62	14.87	O.R.	O.R.
	93	10/3/2007 11:56:00 AM	15.64	14.89	O.R.	O.R.
	94	10/3/2007 11:57:00 AM	15.65	14.90	O.R.	O.R.
	95	10/3/2007 11:58:00 AM	15.63	14.90	O.R.	O.R.
	96	10/3/2007 11:59:00 AM	15.63	14.91	O.R.	O.R.
	97	10/3/2007 12:00:00 PM	15.63	14.90	O.R.	O.R.
	98	10/3/2007 12:01:00 PM	15.64	14.90	O.R.	O.R.
	99	10/3/2007 12:02:00 PM	15.65	14.87	O.R.	O.R.
	100	10/3/2007 12:03:00 PM	15.65	14.87	O.R.	O.R.
	101	10/3/2007 12:04:00 PM	15.65	14.87	O.R.	O.R.
	102	10/3/2007 12:05:00 PM	15.62	14.86	O.R.	O.R.
	103	10/3/2007 12:06:00 PM	15.62	14.86	O.R.	O.R.
	104	10/3/2007 12:07:00 PM	15.64	14.85	O.R.	O.R.
	105	10/3/2007 12:08:00 PM	15.64	14.87	O.R.	O.R.
	106	10/3/2007 12:09:00 PM	15.63	14.87	O.R.	O.R.
	107	10/3/2007 12:10:00 PM	15.63	14.86	O.R.	O.R.
	108	10/3/2007 12:11:00 PM	15.63	14.85	O.R.	O.R.
	109	10/3/2007 12:12:00 PM	15.61	14.81	O.R.	O.R.
	110	10/3/2007 12:13:00 PM	15.61	14.82	O.R.	O.R.
	111	10/3/2007 12:14:00 PM	15.60	14.83	O.R.	O.R.
	112	10/3/2007 12:15:00 PM	15.62	14.83	O.R.	O.R.
	113	10/3/2007 12:16:00 PM	15.62	14.82	O.R.	O.R.
	114	10/3/2007 12:17:00 PM	15.61	14.82	O.R.	O.R.
	115	10/3/2007 12:18:00 PM	15.61	14.80	O.R.	O.R.
	116	10/3/2007 12:19:00 PM	15.61	14.78	O.R.	O.R.
	117	10/3/2007 12:20:00 PM	15.60	14.78	O.R.	O.R.
	118	10/3/2007 12:21:00 PM	15.61	14.77	O.R.	O.R.
	119	10/3/2007 12:22:00 PM	15.60	14.77	O.R.	O.R.
	120	10/3/2007 12:23:00 PM	15.60	14.76	O.R.	O.R.
	121	10/3/2007 12:24:00 PM	15.59	14.79	O.R.	O.R.
	122	10/3/2007 12:25:00 PM	15.62	14.79	O.R.	O.R.
	123	10/3/2007 12:26:00 PM	15.61	14.78	O.R.	O.R.
	124	10/3/2007 12:27:00 PM	15.60	14.76	O.R.	O.R.
	125	10/3/2007 12:28:00 PM	15.59	14.79	O.R.	O.R.
	126	10/3/2007 12:28:25 PM	15.59	14.79	O.R.	O.R.

DATE: 8/22/2007



N - Main to 13-N, tested on 10-08-07 after vent plumbing modified in 13-N

E - Main to 11-N

W1 - Feeder to 1350

W2 - Feeder to Bldg. 1140

NOTES:

1. Pit wet and muddy
2. Supply/Return drains tested on 8/15/07: All Dry

MH 12-N				
Logger No.	Transducer No. (Channel No.)	Description	P/F	Comment
1	1 (1)	Supply to 11-N	P	
	2 (2)	Return to 11-N	P	
	3 (3)	Return to 13-N	See Below	Cannot pressurize, could not enter 13-N pit to seal, permit required
	4 (4)	Supply to 13-N	See Below	Cannot pressurize, could not enter 13-N pit, to seal, permit required
2	5 (1)	Return to Bldg. 1140	P	
	6 (2)	Supply to Bldg. 1140	P	
	7 (3)	Return to Bldg. 1350	P	
	8 (4)	Supply to Bldg. 1350	P	
1	1 (1)	Supply to 13-N	P	Test on 10-08-07 after vent plumbing modification on 13-N
	2 (2)	Return to 13-N	F	Test on 10-08-07 after vent plumbing modification on 13-N. Marginal failure

printed 1/8/2008

Handy logger

Name : **LOGGER 1**

LOG Name	10081451
Interval	00:01:00
Personnel	

Start	10/8/2007 2:51:27 PM
Stop	10/8/2007 4:54:27 PM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	18.27	17.77		
Minimum	-7.50	-7.50		
Average	14.91	13.63		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/8/2007 2:51:27 PM	0.02	0.08	O.R.	O.R.
	2	10/8/2007 2:52:00 PM	8.45	9.65	O.R.	O.R.
	3	10/8/2007 2:53:00 PM	13.09	13.81	O.R.	O.R.
	4	10/8/2007 2:54:00 PM	^ 18.27	^ 17.77	O.R.	O.R.
	5	10/8/2007 2:55:00 PM	15.48	15.36	O.R.	O.R.
	6	10/8/2007 2:56:00 PM	15.42	15.28	O.R.	O.R.
	7	10/8/2007 2:57:00 PM	15.43	15.25	O.R.	O.R.
	8	10/8/2007 2:58:00 PM	15.41	15.22	O.R.	O.R.
	9	10/8/2007 2:59:00 PM	15.42	15.16	O.R.	O.R.
	10	10/8/2007 3:00:00 PM	15.41	15.15	O.R.	O.R.
	11	10/8/2007 3:01:00 PM	15.38	15.10	O.R.	O.R.
	12	10/8/2007 3:02:00 PM	15.39	15.04	O.R.	O.R.
	13	10/8/2007 3:03:00 PM	15.40	15.01	O.R.	O.R.
	14	10/8/2007 3:04:00 PM	15.37	14.99	O.R.	O.R.
	15	10/8/2007 3:05:00 PM	15.39	14.94	O.R.	O.R.
	16	10/8/2007 3:06:00 PM	15.40	14.94	O.R.	O.R.
	17	10/8/2007 3:07:00 PM	15.39	14.91	O.R.	O.R.
	18	10/8/2007 3:08:00 PM	15.39	14.89	O.R.	O.R.
	19	10/8/2007 3:09:00 PM	15.40	14.83	O.R.	O.R.
	20	10/8/2007 3:10:00 PM	15.40	14.82	O.R.	O.R.
	21	10/8/2007 3:11:00 PM	15.40	14.80	O.R.	O.R.
	22	10/8/2007 3:12:00 PM	15.40	14.77	O.R.	O.R.
	23	10/8/2007 3:13:00 PM	15.38	14.76	O.R.	O.R.
	24	10/8/2007 3:14:00 PM	15.34	14.71	O.R.	O.R.
	25	10/8/2007 3:15:00 PM	15.35	14.70	O.R.	O.R.
	26	10/8/2007 3:16:00 PM	v -7.50	v -7.50	O.R.	O.R.
	27	10/8/2007 3:17:00 PM	15.34	14.60	O.R.	O.R.
	28	10/8/2007 3:18:00 PM	15.36	14.61	O.R.	O.R.
	29	10/8/2007 3:19:00 PM	15.36	14.58	O.R.	O.R.
	30	10/8/2007 3:20:00 PM	15.35	14.54	O.R.	O.R.

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/8/2007 3:21:00 PM	15.34	14.54	O.R.	O.R.
	32	10/8/2007 3:22:00 PM	15.38	14.51	O.R.	O.R.
	33	10/8/2007 3:23:00 PM	15.37	14.48	O.R.	O.R.
	34	10/8/2007 3:24:00 PM	15.33	14.44	O.R.	O.R.
	35	10/8/2007 3:25:00 PM	15.33	14.42	O.R.	O.R.
	36	10/8/2007 3:26:00 PM	15.34	14.36	O.R.	O.R.
	37	10/8/2007 3:27:00 PM	15.34	14.35	O.R.	O.R.
	38	10/8/2007 3:28:00 PM	15.34	14.33	O.R.	O.R.
	39	10/8/2007 3:29:00 PM	15.32	14.33	O.R.	O.R.
	40	10/8/2007 3:30:00 PM	15.33	14.32	O.R.	O.R.
	41	10/8/2007 3:31:00 PM	15.33	14.30	O.R.	O.R.
	42	10/8/2007 3:32:00 PM	15.32	14.29	O.R.	O.R.
	43	10/8/2007 3:33:00 PM	15.32	14.27	O.R.	O.R.
	44	10/8/2007 3:34:00 PM	15.32	14.25	O.R.	O.R.
	45	10/8/2007 3:35:00 PM	15.32	14.21	O.R.	O.R.
	46	10/8/2007 3:36:00 PM	15.33	14.24	O.R.	O.R.
	47	10/8/2007 3:37:00 PM	15.33	14.19	O.R.	O.R.
	48	10/8/2007 3:38:00 PM	15.29	14.18	O.R.	O.R.
	49	10/8/2007 3:39:00 PM	15.30	14.17	O.R.	O.R.
	50	10/8/2007 3:40:00 PM	15.30	14.16	O.R.	O.R.
	51	10/8/2007 3:41:00 PM	15.29	14.15	O.R.	O.R.
	52	10/8/2007 3:42:00 PM	15.29	14.14	O.R.	O.R.
	53	10/8/2007 3:43:00 PM	15.29	14.12	O.R.	O.R.
	54	10/8/2007 3:44:00 PM	15.28	14.06	O.R.	O.R.
	55	10/8/2007 3:45:00 PM	15.28	14.04	O.R.	O.R.
	56	10/8/2007 3:46:00 PM	15.29	14.05	O.R.	O.R.
	57	10/8/2007 3:47:00 PM	15.28	14.06	O.R.	O.R.
	58	10/8/2007 3:48:00 PM	15.27	14.03	O.R.	O.R.
	59	10/8/2007 3:49:00 PM	15.27	14.02	O.R.	O.R.
	60	10/8/2007 3:50:00 PM	15.27	13.98	O.R.	O.R.
	61	10/8/2007 3:51:00 PM	15.27	13.91	O.R.	O.R.
	62	10/8/2007 3:52:00 PM	15.27	13.92	O.R.	O.R.
	63	10/8/2007 3:53:00 PM	15.26	13.88	O.R.	O.R.
	64	10/8/2007 3:54:00 PM	15.27	13.85	O.R.	O.R.
	65	10/8/2007 3:55:00 PM	15.26	13.83	O.R.	O.R.
	66	10/8/2007 3:56:00 PM	15.26	13.79	O.R.	O.R.
	67	10/8/2007 3:57:00 PM	15.25	13.77	O.R.	O.R.
	68	10/8/2007 3:58:00 PM	15.25	13.74	O.R.	O.R.
	69	10/8/2007 3:59:00 PM	15.25	13.72	O.R.	O.R.
	70	10/8/2007 4:00:00 PM	15.25	13.70	O.R.	O.R.
	71	10/8/2007 4:01:00 PM	15.26	13.64	O.R.	O.R.
	72	10/8/2007 4:02:00 PM	15.26	13.63	O.R.	O.R.
	73	10/8/2007 4:03:00 PM	15.25	13.62	O.R.	O.R.
	74	10/8/2007 4:04:00 PM	15.24	13.61	O.R.	O.R.
	75	10/8/2007 4:05:00 PM	15.24	13.59	O.R.	O.R.
	76	10/8/2007 4:06:00 PM	15.24	13.63	O.R.	O.R.
	77	10/8/2007 4:07:00 PM	15.24	13.62	O.R.	O.R.
	78	10/8/2007 4:08:00 PM	15.23	13.60	O.R.	O.R.
	79	10/8/2007 4:09:00 PM	15.24	13.59	O.R.	O.R.
	80	10/8/2007 4:10:00 PM	15.23	13.58	O.R.	O.R.

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/8/2007 4:11:00 PM	15.21	13.56	O.R.	O.R.
	82	10/8/2007 4:12:00 PM	15.19	13.56	O.R.	O.R.
	83	10/8/2007 4:13:00 PM	15.20	13.54	O.R.	O.R.
	84	10/8/2007 4:14:00 PM	15.19	13.52	O.R.	O.R.
	85	10/8/2007 4:15:00 PM	15.18	13.50	O.R.	O.R.
	86	10/8/2007 4:16:00 PM	15.21	13.50	O.R.	O.R.
	87	10/8/2007 4:17:00 PM	15.20	13.50	O.R.	O.R.
	88	10/8/2007 4:18:00 PM	15.20	13.47	O.R.	O.R.
	89	10/8/2007 4:19:00 PM	15.20	13.44	O.R.	O.R.
	90	10/8/2007 4:20:00 PM	15.20	13.44	O.R.	O.R.
	91	10/8/2007 4:21:00 PM	15.19	13.43	O.R.	O.R.
	92	10/8/2007 4:22:00 PM	15.18	13.41	O.R.	O.R.
	93	10/8/2007 4:23:00 PM	15.21	13.39	O.R.	O.R.
	94	10/8/2007 4:24:00 PM	15.20	13.38	O.R.	O.R.
	95	10/8/2007 4:25:00 PM	15.17	13.38	O.R.	O.R.
	96	10/8/2007 4:26:00 PM	15.18	13.35	O.R.	O.R.
	97	10/8/2007 4:27:00 PM	15.18	13.37	O.R.	O.R.
	98	10/8/2007 4:28:00 PM	15.18	13.35	O.R.	O.R.
	99	10/8/2007 4:29:00 PM	15.18	13.33	O.R.	O.R.
	100	10/8/2007 4:30:00 PM	15.18	13.32	O.R.	O.R.
	101	10/8/2007 4:31:00 PM	15.18	13.30	O.R.	O.R.
	102	10/8/2007 4:32:00 PM	15.17	13.29	O.R.	O.R.
	103	10/8/2007 4:33:00 PM	15.16	13.28	O.R.	O.R.
	104	10/8/2007 4:34:00 PM	15.16	13.24	O.R.	O.R.
	105	10/8/2007 4:35:00 PM	15.16	13.23	O.R.	O.R.
	106	10/8/2007 4:36:00 PM	15.16	13.22	O.R.	O.R.
	107	10/8/2007 4:37:00 PM	15.15	13.20	O.R.	O.R.
	108	10/8/2007 4:38:00 PM	15.14	13.19	O.R.	O.R.
	109	10/8/2007 4:39:00 PM	15.14	13.18	O.R.	O.R.
	110	10/8/2007 4:40:00 PM	15.13	13.16	O.R.	O.R.
	111	10/8/2007 4:41:00 PM	15.14	13.14	O.R.	O.R.
	112	10/8/2007 4:42:00 PM	15.14	13.14	O.R.	O.R.
	113	10/8/2007 4:43:00 PM	15.13	13.12	O.R.	O.R.
	114	10/8/2007 4:44:00 PM	15.14	13.09	O.R.	O.R.
	115	10/8/2007 4:45:00 PM	15.14	13.08	O.R.	O.R.
	116	10/8/2007 4:46:00 PM	15.11	13.01	O.R.	O.R.
	117	10/8/2007 4:47:00 PM	15.12	13.01	O.R.	O.R.
	118	10/8/2007 4:48:00 PM	15.13	13.00	O.R.	O.R.
	119	10/8/2007 4:49:00 PM	15.13	12.94	O.R.	O.R.
	120	10/8/2007 4:50:00 PM	15.13	12.92	O.R.	O.R.
	121	10/8/2007 4:51:00 PM	15.10	12.90	O.R.	O.R.
	122	10/8/2007 4:52:00 PM	15.11	12.88	O.R.	O.R.
	123	10/8/2007 4:53:00 PM	15.07	12.84	O.R.	O.R.
	124	10/8/2007 4:54:00 PM	15.07	12.82	O.R.	O.R.
	125	10/8/2007 4:54:27 PM	15.07	12.80	O.R.	O.R.

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Handy logger

Name : **LOGGER 1**

LOG Name	08221519
Interval	00:01:00
Personnel	

Start	8/22/2007 3:19:24 PM
Stop	8/22/2007 5:42:52 PM
Comment	

Data	145
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.30	16.59	1.13	1.16
Minimum	-7.50	-7.50	-7.50	-7.50
Average	13.55	14.00	0.09	0.15
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/22/2007 3:19:24 PM	v -7.50	v -7.50	v -7.50	v -7.50
	2	8/22/2007 3:20:00 PM	-0.03	0.02	0.05	0.14
	3	8/22/2007 3:21:00 PM	1.19	0.04	0.08	0.17
	4	8/22/2007 3:22:00 PM	0.90	0.74	0.11	0.31
	5	8/22/2007 3:23:00 PM	1.19	1.06	0.48	0.53
	6	8/22/2007 3:24:00 PM	1.53	1.38	0.61	0.65
	7	8/22/2007 3:25:00 PM	1.86	1.71	0.66	0.72
	8	8/22/2007 3:26:00 PM	2.21	2.09	0.73	0.76
	9	8/22/2007 3:27:00 PM	2.55	2.44	0.77	0.81
	10	8/22/2007 3:28:00 PM	2.91	2.80	0.81	0.85
	11	8/22/2007 3:29:00 PM	3.27	3.15	0.86	0.90
	12	8/22/2007 3:30:00 PM	3.68	3.52	0.93	0.94
	13	8/22/2007 3:31:00 PM	4.04	3.88	0.96	0.97
	14	8/22/2007 3:32:00 PM	4.41	4.29	0.99	1.01
	15	8/22/2007 3:33:00 PM	4.79	4.66	1.01	1.04
	16	8/22/2007 3:34:00 PM	5.17	5.03	1.03	1.07
	17	8/22/2007 3:35:00 PM	5.54	5.45	1.10	1.09
	18	8/22/2007 3:36:00 PM	5.92	5.83	1.12	^ 1.16
	19	8/22/2007 3:37:00 PM	6.33	6.23	^ 1.13	0.80
	20	8/22/2007 3:38:00 PM	6.87	6.74	0.07	0.17
	21	8/22/2007 3:39:00 PM	7.39	7.30	0.06	0.17
	22	8/22/2007 3:40:00 PM	7.97	7.83	0.05	0.16
	23	8/22/2007 3:41:00 PM	8.54	8.43	0.05	0.17
	24	8/22/2007 3:42:00 PM	9.16	9.04	0.04	0.16
	25	8/22/2007 3:43:00 PM	10.07	9.88	0.08	0.16
	26	8/22/2007 3:44:00 PM	10.95	10.77	0.07	0.16
	27	8/22/2007 3:45:00 PM	11.83	11.64	0.04	0.16
	28	8/22/2007 3:46:00 PM	12.73	12.50	0.05	0.17
	29	8/22/2007 3:47:00 PM	13.58	13.39	0.05	0.17
	30	8/22/2007 3:48:00 PM	14.48	14.28	0.06	0.17

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/22/2007 3:49:00 PM	15.33	15.12	0.06	0.17
	32	8/22/2007 3:50:00 PM	16.05	16.00	0.07	0.18
	33	8/22/2007 3:51:00 PM	^ 16.30	16.53	0.08	0.17
	34	8/22/2007 3:52:00 PM	16.27	16.49	0.08	0.18
	35	8/22/2007 3:53:00 PM	16.26	16.52	0.09	0.18
	36	8/22/2007 3:54:00 PM	16.24	16.51	0.09	0.18
	37	8/22/2007 3:55:00 PM	16.23	16.51	0.11	0.19
	38	8/22/2007 3:56:00 PM	16.22	16.52	0.07	0.16
	39	8/22/2007 3:57:00 PM	16.20	16.47	0.08	0.16
	40	8/22/2007 3:58:00 PM	16.22	16.49	0.10	0.17
	41	8/22/2007 3:59:00 PM	16.20	16.49	0.11	0.17
	42	8/22/2007 4:00:00 PM	16.20	16.51	0.09	0.18
	43	8/22/2007 4:01:00 PM	16.17	16.53	0.09	0.18
	44	8/22/2007 4:02:00 PM	16.17	16.55	0.10	0.18
	45	8/22/2007 4:03:00 PM	16.18	16.53	0.11	0.15
	46	8/22/2007 4:04:00 PM	16.15	16.55	0.08	0.16
	47	8/22/2007 4:05:00 PM	16.16	16.56	0.10	0.16
	48	8/22/2007 4:06:00 PM	16.16	16.53	0.11	0.17
	49	8/22/2007 4:07:00 PM	16.16	16.55	0.08	0.17
	50	8/22/2007 4:08:00 PM	16.13	16.57	0.09	0.17
	51	8/22/2007 4:09:00 PM	16.13	16.54	0.09	0.18
	52	8/22/2007 4:10:00 PM	16.11	16.56	0.10	0.18
	53	8/22/2007 4:11:00 PM	16.11	16.57	0.11	0.19
	54	8/22/2007 4:12:00 PM	16.11	16.53	0.11	0.19
	55	8/22/2007 4:13:00 PM	16.08	16.54	0.12	0.19
	56	8/22/2007 4:14:00 PM	16.07	16.55	0.12	0.19
	57	8/22/2007 4:15:00 PM	16.07	16.56	0.09	0.20
	58	8/22/2007 4:16:00 PM	16.07	16.57	0.10	0.17
	59	8/22/2007 4:17:00 PM	16.08	16.58	0.10	0.17
	60	8/22/2007 4:18:00 PM	16.07	^ 16.59	0.11	0.17
	61	8/22/2007 4:19:00 PM	16.07	16.55	0.12	0.17
	62	8/22/2007 4:20:00 PM	16.04	16.55	0.11	0.17
	63	8/22/2007 4:21:00 PM	16.03	16.57	0.09	0.17
	64	8/22/2007 4:22:00 PM	16.03	16.53	0.10	0.18
	65	8/22/2007 4:23:00 PM	16.03	16.54	0.11	0.18
	66	8/22/2007 4:24:00 PM	16.00	16.53	0.11	0.18
	67	8/22/2007 4:25:00 PM	15.99	16.54	0.11	0.18
	68	8/22/2007 4:26:00 PM	15.99	16.53	0.11	0.19
	69	8/22/2007 4:27:00 PM	15.98	16.54	0.12	0.18
	70	8/22/2007 4:28:00 PM	15.98	16.54	0.12	0.19
	71	8/22/2007 4:29:00 PM	15.97	16.54	0.12	0.19
	72	8/22/2007 4:30:00 PM	15.96	16.54	0.12	0.19
	73	8/22/2007 4:31:00 PM	15.96	16.50	0.13	0.19
	74	8/22/2007 4:32:00 PM	15.96	16.51	0.13	0.19
	75	8/22/2007 4:33:00 PM	15.95	16.51	0.13	0.19
	76	8/22/2007 4:34:00 PM	15.95	16.52	0.13	0.19
	77	8/22/2007 4:35:00 PM	15.94	16.52	0.14	0.19
	78	8/22/2007 4:36:00 PM	15.94	16.52	0.11	0.20
	79	8/22/2007 4:37:00 PM	15.93	16.53	0.11	0.20
	80	8/22/2007 4:38:00 PM	15.93	16.47	0.12	0.20

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/22/2007 4:39:00 PM	15.93	16.48	0.12	0.20
	82	8/22/2007 4:40:00 PM	15.92	16.48	0.12	0.20
	83	8/22/2007 4:41:00 PM	15.91	16.48	0.12	0.20
	84	8/22/2007 4:42:00 PM	15.91	16.48	0.12	0.21
	85	8/22/2007 4:43:00 PM	15.90	16.48	0.13	0.20
	86	8/22/2007 4:44:00 PM	15.90	16.48	0.13	0.17
	87	8/22/2007 4:45:00 PM	15.89	16.48	0.13	0.17
	88	8/22/2007 4:46:00 PM	15.88	16.48	0.12	0.18
	89	8/22/2007 4:47:00 PM	15.87	16.48	0.13	0.17
	90	8/22/2007 4:48:00 PM	15.87	16.48	0.13	0.18
	91	8/22/2007 4:49:00 PM	15.87	16.47	0.12	0.18
	92	8/22/2007 4:50:00 PM	15.86	16.48	0.13	0.18
	93	8/22/2007 4:51:00 PM	15.84	16.48	0.13	0.18
	94	8/22/2007 4:52:00 PM	15.85	16.48	0.13	0.18
	95	8/22/2007 4:53:00 PM	15.83	16.47	0.13	0.18
	96	8/22/2007 4:54:00 PM	15.83	16.47	0.13	0.18
	97	8/22/2007 4:55:00 PM	15.82	16.47	0.13	0.18
	98	8/22/2007 4:56:00 PM	15.82	16.47	0.13	0.18
	99	8/22/2007 4:57:00 PM	15.81	16.47	0.13	0.18
	100	8/22/2007 4:58:00 PM	15.80	16.47	0.13	0.17
	101	8/22/2007 4:59:00 PM	15.80	16.46	0.13	0.18
	102	8/22/2007 5:00:00 PM	15.79	16.47	0.13	0.18
	103	8/22/2007 5:01:00 PM	15.79	16.47	0.13	0.18
	104	8/22/2007 5:02:00 PM	15.78	16.48	0.13	0.18
	105	8/22/2007 5:03:00 PM	15.77	16.48	0.13	0.18
	106	8/22/2007 5:04:00 PM	15.76	16.47	0.13	0.18
	107	8/22/2007 5:05:00 PM	15.76	16.47	0.13	0.18
	108	8/22/2007 5:06:00 PM	15.75	16.47	0.12	0.21
	109	8/22/2007 5:07:00 PM	15.74	16.47	0.12	0.21
	110	8/22/2007 5:08:00 PM	15.73	16.48	0.12	0.21
	111	8/22/2007 5:09:00 PM	15.73	16.47	0.13	0.18
	112	8/22/2007 5:10:00 PM	15.72	16.48	0.13	0.18
	113	8/22/2007 5:11:00 PM	15.71	16.47	0.13	0.20
	114	8/22/2007 5:12:00 PM	15.70	16.48	0.13	0.21
	115	8/22/2007 5:13:00 PM	15.70	16.48	0.12	0.21
	116	8/22/2007 5:14:00 PM	15.69	16.48	0.13	0.21
	117	8/22/2007 5:15:00 PM	15.67	16.48	0.13	0.17
	118	8/22/2007 5:16:00 PM	15.68	16.49	0.13	0.18
	119	8/22/2007 5:17:00 PM	15.66	16.45	0.13	0.17
	120	8/22/2007 5:18:00 PM	15.65	16.45	0.13	0.18
	121	8/22/2007 5:19:00 PM	15.65	16.45	0.13	0.18
	122	8/22/2007 5:20:00 PM	15.66	16.45	0.13	0.17
	123	8/22/2007 5:21:00 PM	15.63	16.45	0.13	0.18
	124	8/22/2007 5:22:00 PM	15.63	16.45	0.13	0.18
	125	8/22/2007 5:23:00 PM	15.63	16.46	0.13	0.17
	126	8/22/2007 5:24:00 PM	15.62	16.45	0.13	0.17
	127	8/22/2007 5:25:00 PM	15.61	16.45	0.13	0.18
	128	8/22/2007 5:26:00 PM	15.58	16.45	0.13	0.18
	129	8/22/2007 5:27:00 PM	15.57	16.45	0.14	0.18
	130	8/22/2007 5:28:00 PM	15.57	16.46	0.14	0.18

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/22/2007 5:29:00 PM	15.56	16.46	0.14	0.18
	132	8/22/2007 5:30:00 PM	15.56	16.46	0.13	0.18
	133	8/22/2007 5:31:00 PM	15.56	16.46	0.14	0.18
	134	8/22/2007 5:32:00 PM	15.55	16.46	0.14	0.18
	135	8/22/2007 5:33:00 PM	15.55	16.47	0.13	0.18
	136	8/22/2007 5:34:00 PM	15.55	16.47	0.14	0.18
	137	8/22/2007 5:35:00 PM	15.54	16.47	0.13	0.18
	138	8/22/2007 5:36:00 PM	15.54	16.47	0.14	0.18
	139	8/22/2007 5:37:00 PM	15.54	16.46	0.14	0.18
	140	8/22/2007 5:38:00 PM	15.54	16.46	0.14	0.18
	141	8/22/2007 5:39:00 PM	15.54	16.46	0.14	0.18
	142	8/22/2007 5:40:00 PM	15.53	16.47	0.14	0.18
	143	8/22/2007 5:41:00 PM	15.53	16.47	0.14	0.19
	144	8/22/2007 5:42:00 PM	15.52	16.47	0.14	0.18
	145	8/22/2007 5:42:52 PM	v -7.50	v -7.50	v -7.50	v -7.50

printed 1/8/2008

Handy logger

Name : **LOGGER 2**

LOG Name	08221519
Interval	00:01:00
Personnel	

Start	8/22/2007 3:19:21 PM
Stop	8/22/2007 5:41:25 PM
Comment	

Data	144
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.04	15.98	16.17	16.02
Minimum	-7.50	-7.50	-7.50	-7.50
Average	14.45	14.31	14.66	14.62
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/22/2007 3:19:21 PM	v -7.50	v -7.50	v -7.50	v -7.50
	2	8/22/2007 3:20:00 PM	0.15	-0.02	0.08	0.06
	3	8/22/2007 3:21:00 PM	0.23	0.04	0.11	0.08
	4	8/22/2007 3:22:00 PM	0.61	0.60	2.24	3.05
	5	8/22/2007 3:23:00 PM	1.51	1.47	3.62	4.20
	6	8/22/2007 3:24:00 PM	2.37	2.32	4.78	5.15
	7	8/22/2007 3:25:00 PM	3.22	3.14	5.68	5.87
	8	8/22/2007 3:26:00 PM	4.04	3.94	6.43	6.46
	9	8/22/2007 3:27:00 PM	4.86	4.71	7.00	7.00
	10	8/22/2007 3:28:00 PM	5.60	5.47	7.47	7.45
	11	8/22/2007 3:29:00 PM	6.30	6.17	7.91	7.87
	12	8/22/2007 3:30:00 PM	6.96	6.80	8.31	8.26
	13	8/22/2007 3:31:00 PM	7.60	7.43	8.69	8.64
	14	8/22/2007 3:32:00 PM	8.16	7.99	9.05	9.04
	15	8/22/2007 3:33:00 PM	8.68	8.51	9.41	9.41
	16	8/22/2007 3:34:00 PM	9.19	9.02	9.80	9.79
	17	8/22/2007 3:35:00 PM	9.64	9.47	10.15	10.13
	18	8/22/2007 3:36:00 PM	10.05	9.89	10.48	10.47
	19	8/22/2007 3:37:00 PM	10.53	10.37	11.05	11.04
	20	8/22/2007 3:38:00 PM	11.48	11.32	12.66	12.73
	21	8/22/2007 3:39:00 PM	12.43	12.25	14.00	14.07
	22	8/22/2007 3:40:00 PM	13.43	13.19	15.13	15.19
	23	8/22/2007 3:41:00 PM	14.38	14.14	16.12	16.01
	24	8/22/2007 3:42:00 PM	15.53	15.31	16.15	15.98
	25	8/22/2007 3:43:00 PM	16.01	^ 15.98	^ 16.17	^ 16.02
	26	8/22/2007 3:44:00 PM	15.99	15.94	16.18	16.01
	27	8/22/2007 3:45:00 PM	15.98	15.93	16.14	15.99
	28	8/22/2007 3:46:00 PM	15.99	15.94	16.14	15.98
	29	8/22/2007 3:47:00 PM	15.98	15.92	16.13	16.00
	30	8/22/2007 3:48:00 PM	15.97	15.92	16.13	16.01

printed 1/8/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/22/2007 4:39:00 PM	^ 16.04	15.89	16.01	15.95
	82	8/22/2007 4:40:00 PM	16.01	15.90	16.02	15.95
	83	8/22/2007 4:41:00 PM	16.01	15.90	15.99	15.95
	84	8/22/2007 4:42:00 PM	16.01	15.90	16.02	15.95
	85	8/22/2007 4:43:00 PM	16.01	15.90	15.99	15.95
	86	8/22/2007 4:44:00 PM	16.02	15.90	16.02	15.95
	87	8/22/2007 4:45:00 PM	16.01	15.90	16.02	15.95
	88	8/22/2007 4:46:00 PM	16.01	15.90	16.02	15.95
	89	8/22/2007 4:47:00 PM	16.01	15.90	16.01	15.95
	90	8/22/2007 4:48:00 PM	16.01	15.90	16.02	15.95
	91	8/22/2007 4:49:00 PM	16.02	15.90	16.01	15.95
	92	8/22/2007 4:50:00 PM	16.02	15.85	15.98	15.95
	93	8/22/2007 4:51:00 PM	16.02	15.85	16.01	15.96
	94	8/22/2007 4:52:00 PM	16.03	15.85	16.01	15.96
	95	8/22/2007 4:53:00 PM	16.03	15.85	16.01	15.96
	96	8/22/2007 4:54:00 PM	16.03	15.89	16.00	15.96
	97	8/22/2007 4:55:00 PM	16.03	15.85	16.01	15.96
	98	8/22/2007 4:56:00 PM	16.03	15.90	16.00	15.95
	99	8/22/2007 4:57:00 PM	16.03	15.89	16.00	15.96
	100	8/22/2007 4:58:00 PM	16.03	15.90	16.01	15.95
	101	8/22/2007 4:59:00 PM	16.03	15.88	16.00	15.95
	102	8/22/2007 5:00:00 PM	16.03	15.89	16.00	15.95
	103	8/22/2007 5:01:00 PM	16.03	15.89	16.00	15.95
	104	8/22/2007 5:02:00 PM	16.03	15.84	16.00	15.95
	105	8/22/2007 5:03:00 PM	16.03	15.84	15.99	15.95
	106	8/22/2007 5:04:00 PM	16.03	15.84	15.99	15.95
	107	8/22/2007 5:05:00 PM	16.03	15.88	15.99	15.94
	108	8/22/2007 5:06:00 PM	16.03	15.88	15.98	15.95
	109	8/22/2007 5:07:00 PM	16.03	15.88	15.98	15.95
	110	8/22/2007 5:08:00 PM	16.03	15.88	15.98	15.94
	111	8/22/2007 5:09:00 PM	16.02	15.83	15.97	15.94
	112	8/22/2007 5:10:00 PM	16.03	15.88	15.97	15.94
	113	8/22/2007 5:11:00 PM	16.03	15.88	15.97	15.94
	114	8/22/2007 5:12:00 PM	16.03	15.87	15.97	15.98
	115	8/22/2007 5:13:00 PM	16.03	15.87	15.96	15.93
	116	8/22/2007 5:14:00 PM	16.02	15.83	15.96	15.93
	117	8/22/2007 5:15:00 PM	16.03	15.82	15.97	15.93
	118	8/22/2007 5:16:00 PM	16.03	15.82	15.96	15.94
	119	8/22/2007 5:17:00 PM	^ 16.04	15.82	15.97	15.94
	120	8/22/2007 5:18:00 PM	16.03	15.83	15.96	15.93
	121	8/22/2007 5:19:00 PM	16.01	15.82	15.97	15.94
	122	8/22/2007 5:20:00 PM	^ 16.04	15.82	15.96	15.93
	123	8/22/2007 5:21:00 PM	^ 16.04	15.82	15.96	15.94
	124	8/22/2007 5:22:00 PM	^ 16.04	15.82	15.96	15.93
	125	8/22/2007 5:23:00 PM	^ 16.04	15.82	15.96	15.94
	126	8/22/2007 5:24:00 PM	^ 16.04	15.82	15.96	15.94
	127	8/22/2007 5:25:00 PM	16.03	15.82	15.96	15.94
	128	8/22/2007 5:26:00 PM	16.01	15.82	15.96	15.94
	129	8/22/2007 5:27:00 PM	16.01	15.82	15.97	15.94
	130	8/22/2007 5:28:00 PM	16.01	15.82	15.96	15.94

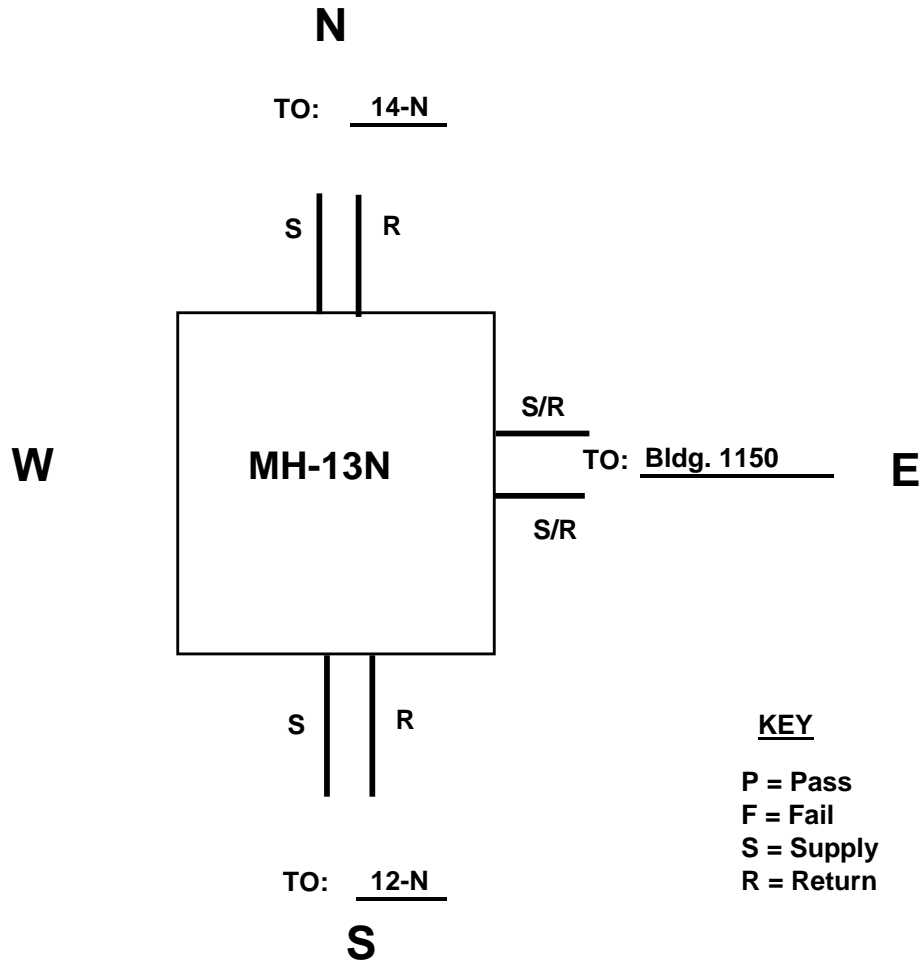
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/22/2007 5:29:00 PM	16.03	15.83	15.96	15.94
	132	8/22/2007 5:30:00 PM	16.01	15.82	15.97	15.95
	133	8/22/2007 5:31:00 PM	16.02	15.82	15.96	15.95
	134	8/22/2007 5:32:00 PM	16.01	15.82	15.96	15.94
	135	8/22/2007 5:33:00 PM	16.02	15.82	15.96	15.95
	136	8/22/2007 5:34:00 PM	16.02	15.83	15.93	15.96
	137	8/22/2007 5:35:00 PM	16.02	15.82	15.92	15.95
	138	8/22/2007 5:36:00 PM	16.02	15.79	15.96	15.96
	139	8/22/2007 5:37:00 PM	16.02	15.82	15.93	15.95
	140	8/22/2007 5:38:00 PM	16.02	15.82	15.92	15.95
	141	8/22/2007 5:39:00 PM	16.02	15.82	15.93	15.96
	142	8/22/2007 5:40:00 PM	16.02	15.82	15.92	15.95
	143	8/22/2007 5:41:00 PM	16.02	15.81	15.92	15.95
	144	8/22/2007 5:41:25 PM	16.01	15.82	15.91	15.95

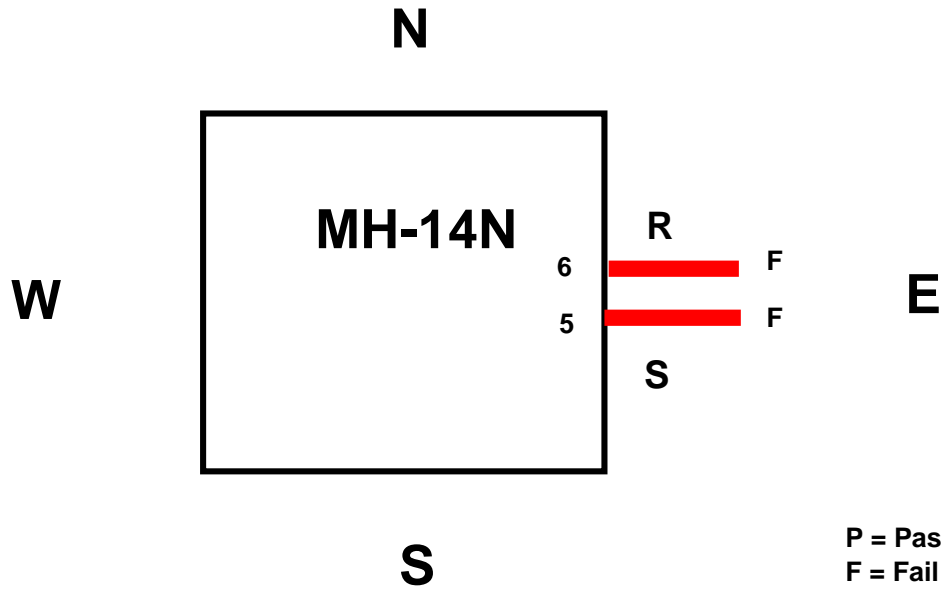
DATE: _____



NOTES:

No tests conducted from this pit. This is a restricted access, permit-required pit with vents welded together to common large vent making isolation and testing of individual lines impossible. Vent plumbing was modified to allow pressurization of main trunks by installing and closing individual ball valves on vents in 13-N. Tests conducted on 10-08-07. See 12-N and 14-N files for results. Lines to Bldg 1150 not tested.

DATE: 10/08/2007



P = Pass
F = Fail
S = Supply
R = Return

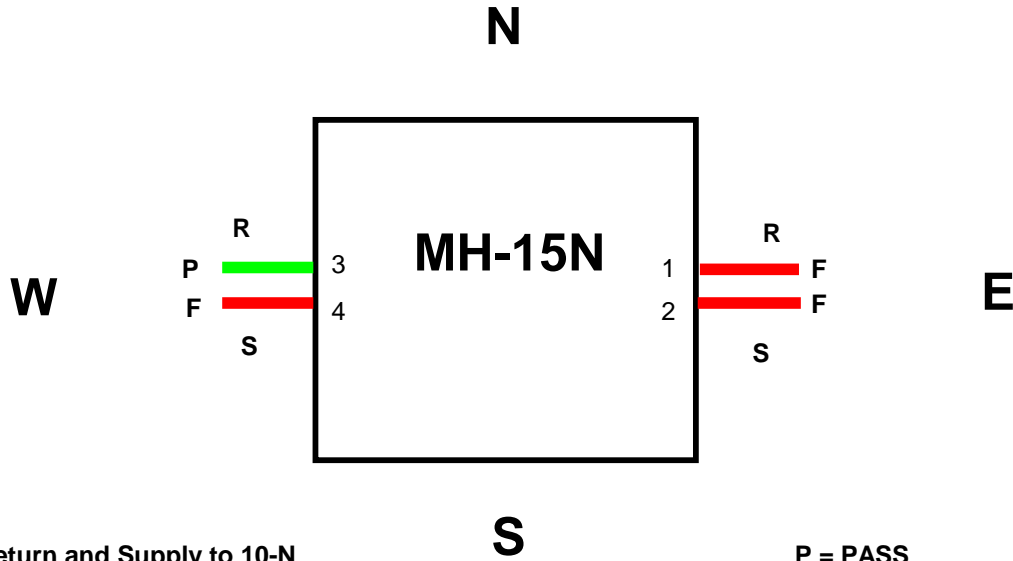
E. Feeder from 13-N

NOTES:

1. This pit is the end of the North network according to Vanguard-ICT "as built" network drawing M-12 (9/27/02). Additional feeder conduits run from north and west walls, but are not included in network defined by drawing M-12.
2. Supply/Return drains tested on 8/15/07: All Dry

MH 14-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Supply to 13-N	F	Test performed on 10-08-07 after vent plumbing modification in 13-N. Unable to pressurize, test aborted due to gland seal leaks.
	2	6	Return to 13-N	F	Test performed on 10-08-07 after vent plumbing modification in 13-N. Unable to pressurize, test aborted due to gland seal leaks.

DATE: 8/20/2007



W - Main trunk Return and Supply to 10-N

E - Main trunk Return and Supply to 16-N

P = PASS
 F = FAIL
 S = SUPPLY
 R = RETURN

NOTES:

1. Pit is dry with some loose dry soil. Sump has low level of water.
2. Supply/Return drains tested on 8/15/07: All Dry

MH 15-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	East Wall Main Return	F	Unable to pressurize
	2	2	East Wall Main Supply	F	Unable to pressurize
	3	3	West Wall Main Return	P	
	4	4	West Wall Main Supply	F	Unable to pressurize

printed 1/8/2008

Handy logger

Name : LOGGER 1

LOG Name	08201346
Interval	00:01:00
Personnel	

Start	8/20/2007 1:46:29 PM
Stop	8/20/2007 4:07:00 PM
Comment	

Data	142
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	4.03	1.16	16.24	15.77
Minimum	-7.50	-7.50	-7.50	-7.50
Average	-3.91	-4.21	13.95	5.66
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/20/2007 1:46:29 PM	0.05	0.08	0.13	0.28
	2	8/20/2007 1:47:00 PM	1.25	0.09	0.13	0.28
	3	8/20/2007 1:48:00 PM	1.51	0.11	1.51	0.27
	4	8/20/2007 1:49:00 PM	1.58	0.39	1.79	0.52
	5	8/20/2007 1:50:00 PM	1.77	0.59	2.38	1.16
	6	8/20/2007 1:51:00 PM	1.90	0.76	2.91	1.77
	7	8/20/2007 1:52:00 PM	2.03	0.83	3.48	2.42
	8	8/20/2007 1:53:00 PM	2.15	0.89	4.00	3.03
	9	8/20/2007 1:54:00 PM	2.29	0.92	4.55	3.64
	10	8/20/2007 1:55:00 PM	2.39	0.97	5.06	4.24
	11	8/20/2007 1:56:00 PM	2.49	0.97	5.60	4.83
	12	8/20/2007 1:57:00 PM	2.58	0.97	6.10	5.42
	13	8/20/2007 1:58:00 PM	2.71	1.00	6.63	6.00
	14	8/20/2007 1:59:00 PM	2.80	1.04	7.12	6.60
	15	8/20/2007 2:00:00 PM	2.89	1.02	7.63	7.16
	16	8/20/2007 2:01:00 PM	2.97	1.02	8.10	7.72
	17	8/20/2007 2:02:00 PM	3.06	1.04	8.61	8.26
	18	8/20/2007 2:03:00 PM	3.17	1.02	9.07	8.82
	19	8/20/2007 2:04:00 PM	3.26	1.05	9.55	9.34
	20	8/20/2007 2:05:00 PM	3.37	1.04	10.02	9.86
	21	8/20/2007 2:06:00 PM	3.45	1.08	10.48	10.36
	22	8/20/2007 2:07:00 PM	3.53	1.06	10.91	10.85
	23	8/20/2007 2:08:00 PM	3.64	1.10	11.38	11.38
	24	8/20/2007 2:09:00 PM	3.72	1.10	11.79	11.85
	25	8/20/2007 2:10:00 PM	3.80	1.14	12.25	12.31
	26	8/20/2007 2:11:00 PM	3.93	1.15	12.67	12.76
	27	8/20/2007 2:12:00 PM	^ 4.03	^ 1.16	13.07	13.20
	28	8/20/2007 2:13:00 PM	3.49	0.68	14.18	14.26
	29	8/20/2007 2:14:00 PM	3.10	0.35	15.07	15.24
	30	8/20/2007 2:15:00 PM	2.74	0.11	^ 16.24	^ 15.77

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/20/2007 2:16:00 PM	2.15	-0.02	15.96	15.69
	32	8/20/2007 2:17:00 PM	1.85	-0.05	15.95	15.62
	33	8/20/2007 2:18:00 PM	1.21	-0.05	15.97	15.56
	34	8/20/2007 2:19:00 PM	0.86	-0.03	15.96	15.49
	35	8/20/2007 2:20:00 PM	0.57	-0.03	15.95	15.48
	36	8/20/2007 2:21:00 PM	0.36	-0.02	15.94	15.42
	37	8/20/2007 2:22:00 PM	0.21	-0.01	15.94	15.36
	38	8/20/2007 2:23:00 PM	0.08	-0.03	15.95	15.30
	39	8/20/2007 2:24:00 PM	0.00	-0.02	15.95	15.24
	40	8/20/2007 2:25:00 PM	0.00	0.00	15.96	15.19
	41	8/20/2007 2:26:00 PM	0.01	0.02	15.97	15.09
	42	8/20/2007 2:27:00 PM	0.03	0.03	15.98	15.04
	43	8/20/2007 2:28:00 PM	0.01	0.01	15.99	14.98
	44	8/20/2007 2:29:00 PM	0.02	0.02	16.00	14.93
	45	8/20/2007 2:30:00 PM	0.00	0.04	15.97	14.88
	46	8/20/2007 2:31:00 PM	0.01	0.01	15.98	14.83
	47	8/20/2007 2:32:00 PM	0.02	0.03	15.99	14.78
	48	8/20/2007 2:33:00 PM	0.03	0.04	15.99	14.72
	49	8/20/2007 2:34:00 PM	0.03	0.06	16.00	14.67
	50	8/20/2007 2:35:00 PM	0.04	0.02	16.01	14.61
	51	8/20/2007 2:36:00 PM	0.05	0.03	16.02	14.55
	52	8/20/2007 2:37:00 PM	0.05	0.05	16.00	14.47
	53	8/20/2007 2:38:00 PM	0.06	0.06	16.00	14.41
	54	8/20/2007 2:39:00 PM	0.02	0.03	16.02	14.36
	55	8/20/2007 2:40:00 PM	0.03	0.04	16.02	14.31
	56	8/20/2007 2:41:00 PM	0.03	0.05	15.99	14.25
	57	8/20/2007 2:42:00 PM	v -7.50	0.06	16.00	14.20
	58	8/20/2007 2:43:00 PM	v -7.50	0.06	16.01	14.16
	59	8/20/2007 2:44:00 PM	v -7.50	0.08	16.02	14.10
	60	8/20/2007 2:45:00 PM	v -7.50	v -7.50	16.02	14.05
	61	8/20/2007 2:46:00 PM	v -7.50	v -7.50	16.03	14.00
	62	8/20/2007 2:47:00 PM	v -7.50	v -7.50	16.04	13.95
	63	8/20/2007 2:48:00 PM	v -7.50	v -7.50	16.06	13.89
	64	8/20/2007 2:49:00 PM	v -7.50	v -7.50	16.02	13.80
	65	8/20/2007 2:50:00 PM	v -7.50	v -7.50	16.03	13.75
	66	8/20/2007 2:51:00 PM	v -7.50	v -7.50	16.03	13.70
	67	8/20/2007 2:52:00 PM	v -7.50	v -7.50	16.04	13.65
	68	8/20/2007 2:53:00 PM	v -7.50	v -7.50	16.04	13.60
	69	8/20/2007 2:54:00 PM	v -7.50	v -7.50	16.04	13.54
	70	8/20/2007 2:55:00 PM	v -7.50	v -7.50	16.05	13.50
	71	8/20/2007 2:56:00 PM	v -7.50	v -7.50	16.06	13.44
	72	8/20/2007 2:57:00 PM	v -7.50	v -7.50	16.02	13.39
	73	8/20/2007 2:58:00 PM	v -7.50	v -7.50	16.03	13.34
	74	8/20/2007 2:59:00 PM	v -7.50	v -7.50	16.04	13.29
	75	8/20/2007 3:00:00 PM	v -7.50	v -7.50	16.04	13.24
	76	8/20/2007 3:01:00 PM	v -7.50	v -7.50	16.05	13.19
	77	8/20/2007 3:02:00 PM	v -7.50	v -7.50	16.05	13.14
	78	8/20/2007 3:03:00 PM	v -7.50	v -7.50	16.05	13.08
	79	8/20/2007 3:04:00 PM	v -7.50	v -7.50	16.05	13.02
	80	8/20/2007 3:05:00 PM	v -7.50	v -7.50	16.06	12.98

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Handy logger

Name : LOGGER 1

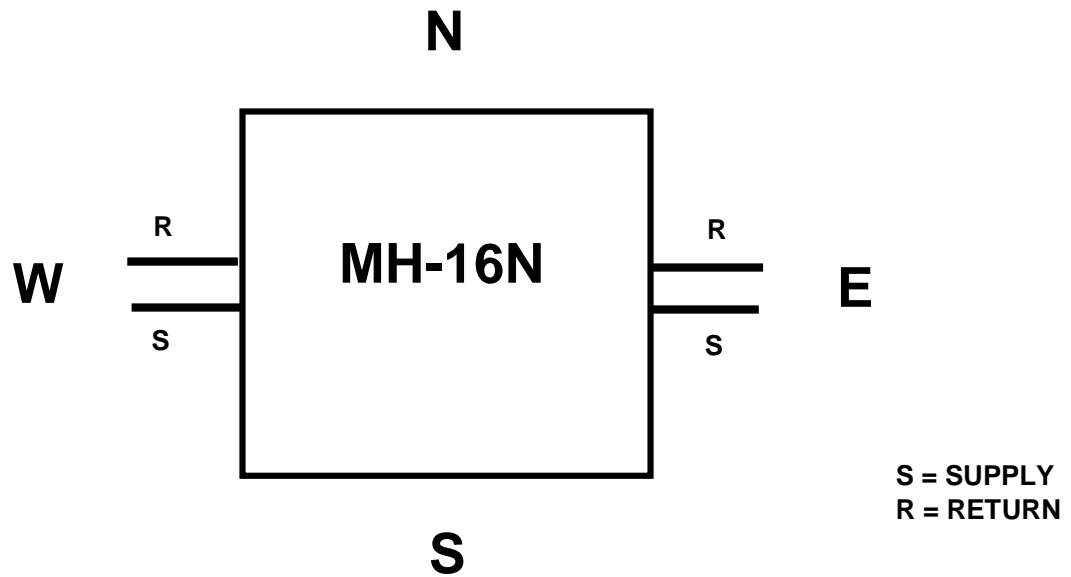
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/20/2007 3:06:00 PM	v -7.50	v -7.50	16.06	12.45
	82	8/20/2007 3:07:00 PM	v -7.50	v -7.50	16.07	11.78
	83	8/20/2007 3:08:00 PM	v -7.50	v -7.50	16.06	11.14
	84	8/20/2007 3:09:00 PM	v -7.50	v -7.50	16.07	10.53
	85	8/20/2007 3:10:00 PM	v -7.50	v -7.50	16.02	9.91
	86	8/20/2007 3:11:00 PM	v -7.50	v -7.50	16.03	9.33
	87	8/20/2007 3:12:00 PM	v -7.50	v -7.50	16.03	8.81
	88	8/20/2007 3:13:00 PM	v -7.50	v -7.50	16.03	8.29
	89	8/20/2007 3:14:00 PM	v -7.50	v -7.50	16.04	7.78
	90	8/20/2007 3:15:00 PM	v -7.50	v -7.50	16.03	7.29
	91	8/20/2007 3:16:00 PM	v -7.50	v -7.50	16.04	6.82
	92	8/20/2007 3:17:00 PM	v -7.50	v -7.50	16.04	6.38
	93	8/20/2007 3:18:00 PM	v -7.50	v -7.50	16.04	5.95
	94	8/20/2007 3:19:00 PM	v -7.50	v -7.50	16.04	5.55
	95	8/20/2007 3:20:00 PM	v -7.50	v -7.50	16.05	5.15
	96	8/20/2007 3:21:00 PM	v -7.50	v -7.50	-7.41	-7.41
	97	8/20/2007 3:22:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	98	8/20/2007 3:23:00 PM	v -7.50	v -7.50	15.94	4.03
	99	8/20/2007 3:24:00 PM	v -7.50	v -7.50	15.97	3.74
	100	8/20/2007 3:25:00 PM	v -7.50	v -7.50	16.01	3.44
	101	8/20/2007 3:26:00 PM	v -7.50	v -7.50	16.05	3.15
	102	8/20/2007 3:27:00 PM	v -7.50	v -7.50	16.05	2.87
	103	8/20/2007 3:28:00 PM	v -7.50	v -7.50	16.04	2.61
	104	8/20/2007 3:29:00 PM	v -7.50	v -7.50	16.04	2.37
	105	8/20/2007 3:30:00 PM	v -7.50	v -7.50	16.05	2.08
	106	8/20/2007 3:31:00 PM	v -7.50	v -7.50	16.05	1.77
	107	8/20/2007 3:32:00 PM	v -7.50	v -7.50	16.05	v -7.50
	108	8/20/2007 3:33:00 PM	v -7.50	v -7.50	16.04	v -7.50
	109	8/20/2007 3:34:00 PM	v -7.50	v -7.50	16.05	v -7.50
	110	8/20/2007 3:35:00 PM	v -7.50	v -7.50	16.04	v -7.50
	111	8/20/2007 3:36:00 PM	v -7.50	v -7.50	16.07	v -7.50
	112	8/20/2007 3:37:00 PM	v -7.50	v -7.50	16.08	v -7.50
	113	8/20/2007 3:38:00 PM	v -7.50	v -7.50	16.07	v -7.50
	114	8/20/2007 3:39:00 PM	v -7.50	v -7.50	16.07	v -7.50
	115	8/20/2007 3:40:00 PM	v -7.50	v -7.50	16.04	v -7.50
	116	8/20/2007 3:41:00 PM	v -7.50	v -7.50	16.07	v -7.50
	117	8/20/2007 3:42:00 PM	v -7.50	v -7.50	16.06	v -7.50
	118	8/20/2007 3:43:00 PM	v -7.50	v -7.50	16.06	v -7.50
	119	8/20/2007 3:44:00 PM	v -7.50	v -7.50	16.06	v -7.50
	120	8/20/2007 3:45:00 PM	v -7.50	v -7.50	16.06	v -7.50
	121	8/20/2007 3:46:00 PM	v -7.50	v -7.50	16.06	v -7.50
	122	8/20/2007 3:47:00 PM	v -7.50	v -7.50	16.06	v -7.50
	123	8/20/2007 3:48:00 PM	v -7.50	v -7.50	16.06	v -7.50
	124	8/20/2007 3:49:00 PM	v -7.50	v -7.50	16.06	v -7.50
	125	8/20/2007 3:50:00 PM	v -7.50	v -7.50	16.06	v -7.50
	126	8/20/2007 3:51:00 PM	v -7.50	v -7.50	16.06	v -7.50
	127	8/20/2007 3:52:00 PM	v -7.50	v -7.50	16.06	v -7.50
	128	8/20/2007 3:53:00 PM	v -7.50	v -7.50	16.05	v -7.50
	129	8/20/2007 3:54:00 PM	v -7.50	v -7.50	16.05	v -7.50
	130	8/20/2007 3:55:00 PM	v -7.50	v -7.50	16.06	v -7.50

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/20/2007 3:56:00 PM	v -7.50	v -7.50	16.06	v -7.50
	132	8/20/2007 3:57:00 PM	v -7.50	v -7.50	16.06	v -7.50
	133	8/20/2007 3:58:00 PM	v -7.50	v -7.50	16.06	v -7.50
	134	8/20/2007 3:59:00 PM	v -7.50	v -7.50	16.06	v -7.50
	135	8/20/2007 4:00:00 PM	v -7.50	v -7.50	16.06	v -7.50
	136	8/20/2007 4:01:00 PM	v -7.50	v -7.50	16.05	v -7.50
	137	8/20/2007 4:02:00 PM	v -7.50	v -7.50	16.06	v -7.50
	138	8/20/2007 4:03:00 PM	v -7.50	v -7.50	16.06	v -7.50
	139	8/20/2007 4:04:00 PM	v -7.50	v -7.50	16.06	v -7.50
	140	8/20/2007 4:05:00 PM	v -7.50	v -7.50	16.05	v -7.50
	141	8/20/2007 4:06:00 PM	v -7.50	v -7.50	16.06	v -7.50
	142	8/20/2007 4:07:00 PM	v -7.50	v -7.50	16.06	v -7.50

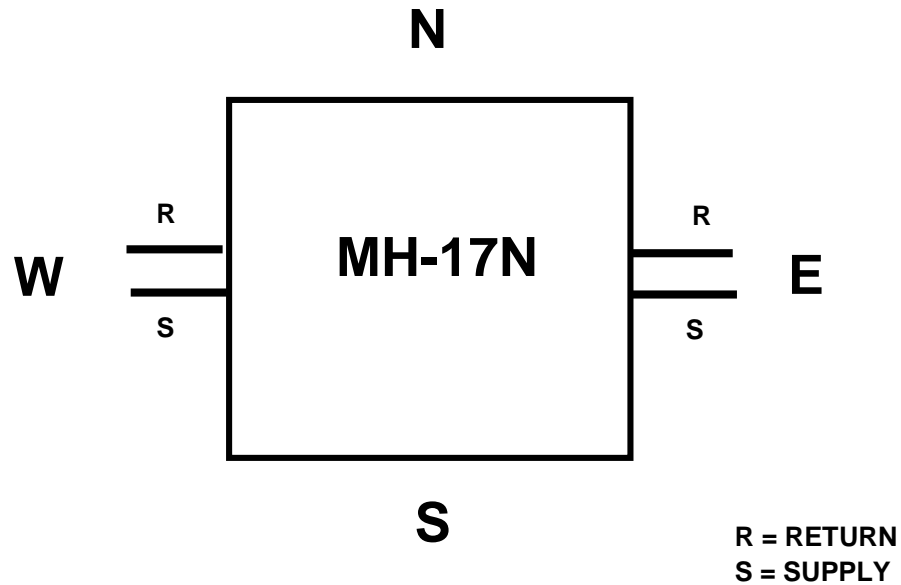


W - Main Supply and Return to 15-N (see MH 15-N file for pressure check data)

E - Main Supply and Return over creek to 17-N (above-ground)

NOTES:

1. Dry pit with some dry dirt. No pressurization tests conducted from this pit.
2. Supply/Return drains tested on 8/15/07: East wall all dry; no drains on west wall conduits (above-ground run to MH 17-N)



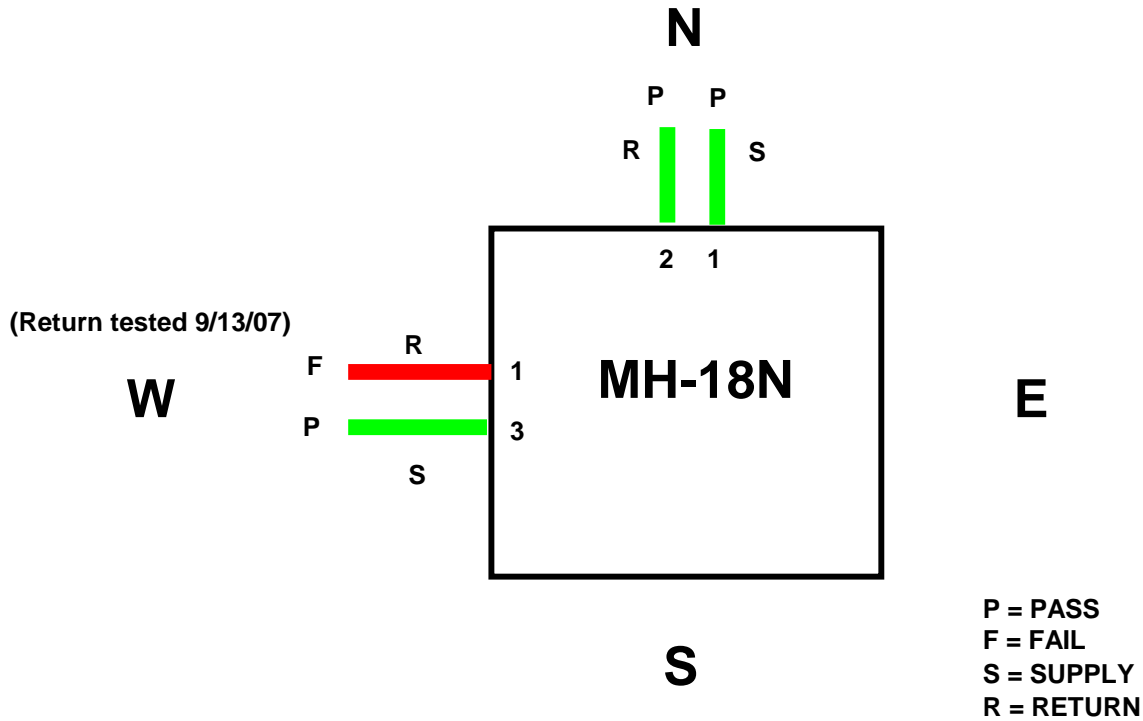
W - Main trunk lines to 16-N (above ground, over creek)

E - Feeder lines to 18-N

NOTES:

1. No pressurization tests conducted from this pit.
2. Supply/Return drain tests conducted on 8/15/07: East wall supply valve was open, drain dry when cap removed; East wall return drain cap was off and valve open, dry; no drains on west wall conduits (above-ground run to MH 16-N)

DATE: 8/21/07



N - Feeder to Bldg 8030

W - Main trunk from 17-N

NOTES:

1. Pit dry with numerous spider webs and yellow jacket nests. Some loose soil. Sheared off vent pipe on main return line entering at north end of west wall. Request Ft. Carson maintenance replace so that line can be tested. Fitting fixed and conduit tested again on 9/13/07
2. Supply/Return drains tested on 8/15/07; Both west wall drains uncapped, valves found open and drain dry; north wall Supply drain valve was frozen and inoperable, could not determine if valve was open or closed, could not remove valve; north wall Return drain valve found open, drain dry.

MH 18-N					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to Bldg 8030	P	
	2	2	Return from Bldg. 8030	P	
	3	3	Supply from 17-N	P	
	4	4	Return to 17-N	See Below	Vent pipe sheared off during removal, W/O submitted for repair, will test when fitting is repaired.
	1	1	Return to 17-N	F	Vent pipe repaired, line tested, line failed

printed 1/8/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08211002
Interval	00:01:00
Personnel	

Start	8/21/2007 10:02:55 AM
Stop	8/21/2007 12:28:18 PM
Comment	

Data	148
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.79	16.11	16.73	-7.50
Minimum	0.05	0.08	0.16	-7.50
Average	14.66	14.81	13.91	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/21/2007 10:02:55 AM	v 0.05	v 0.08	v 0.16	v -7.50
	2	8/21/2007 10:03:00 AM	v 0.05	v 0.08	0.20	v -7.50
	3	8/21/2007 10:04:00 AM	0.10	0.11	0.22	v -7.50
	4	8/21/2007 10:05:00 AM	1.74	1.07	2.31	v -7.50
	5	8/21/2007 10:06:00 AM	2.99	2.40	2.68	v -7.50
	6	8/21/2007 10:07:00 AM	4.27	3.68	3.15	v -7.50
	7	8/21/2007 10:08:00 AM	5.55	4.96	3.63	v -7.50
	8	8/21/2007 10:09:00 AM	6.79	6.27	4.15	v -7.50
	9	8/21/2007 10:10:00 AM	8.01	7.54	4.66	v -7.50
	10	8/21/2007 10:11:00 AM	9.24	8.79	5.18	v -7.50
	11	8/21/2007 10:12:00 AM	10.44	10.03	5.73	v -7.50
	12	8/21/2007 10:13:00 AM	11.63	11.22	6.30	v -7.50
	13	8/21/2007 10:14:00 AM	12.77	12.41	6.88	v -7.50
	14	8/21/2007 10:15:00 AM	13.91	13.63	7.43	v -7.50
	15	8/21/2007 10:16:00 AM	15.03	14.77	8.04	v -7.50
	16	8/21/2007 10:17:00 AM	^ 15.79	^ 16.11	9.33	v -7.50
	17	8/21/2007 10:18:00 AM	15.76	15.77	10.36	v -7.50
	18	8/21/2007 10:19:00 AM	15.73	15.80	11.09	v -7.50
	19	8/21/2007 10:20:00 AM	15.72	15.76	11.85	v -7.50
	20	8/21/2007 10:21:00 AM	15.69	15.75	12.66	v -7.50
	21	8/21/2007 10:22:00 AM	15.70	15.73	13.45	v -7.50
	22	8/21/2007 10:23:00 AM	15.72	15.75	14.22	v -7.50
	23	8/21/2007 10:24:00 AM	15.71	15.72	15.09	v -7.50
	24	8/21/2007 10:25:00 AM	15.70	15.77	15.85	v -7.50
	25	8/21/2007 10:26:00 AM	15.68	15.76	14.37	v -7.50
	26	8/21/2007 10:27:00 AM	15.67	15.76	^ 16.73	v -7.50
	27	8/21/2007 10:28:00 AM	15.69	15.76	15.34	v -7.50
	28	8/21/2007 10:29:00 AM	15.68	15.76	15.31	v -7.50
	29	8/21/2007 10:30:00 AM	15.70	15.77	15.33	v -7.50
	30	8/21/2007 10:31:00 AM	15.69	15.79	15.32	v -7.50

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/21/2007 10:32:00 AM	15.69	15.77	15.31	v -7.50
	32	8/21/2007 10:33:00 AM	15.68	15.80	15.30	v -7.50
	33	8/21/2007 10:34:00 AM	15.68	15.78	15.31	v -7.50
	34	8/21/2007 10:35:00 AM	15.67	15.79	15.31	v -7.50
	35	8/21/2007 10:36:00 AM	15.67	15.79	15.31	v -7.50
	36	8/21/2007 10:37:00 AM	15.66	15.80	15.31	v -7.50
	37	8/21/2007 10:38:00 AM	15.65	15.80	15.31	v -7.50
	38	8/21/2007 10:39:00 AM	15.65	15.81	15.32	v -7.50
	39	8/21/2007 10:40:00 AM	15.65	15.81	15.33	v -7.50
	40	8/21/2007 10:41:00 AM	15.64	15.81	15.33	v -7.50
	41	8/21/2007 10:42:00 AM	15.64	15.77	15.34	v -7.50
	42	8/21/2007 10:43:00 AM	15.64	15.78	15.31	v -7.50
	43	8/21/2007 10:44:00 AM	15.66	15.79	15.32	v -7.50
	44	8/21/2007 10:45:00 AM	15.64	15.79	15.33	v -7.50
	45	8/21/2007 10:46:00 AM	15.64	15.80	15.29	v -7.50
	46	8/21/2007 10:47:00 AM	15.64	15.80	15.30	v -7.50
	47	8/21/2007 10:48:00 AM	15.64	15.80	15.30	v -7.50
	48	8/21/2007 10:49:00 AM	15.64	15.81	15.31	v -7.50
	49	8/21/2007 10:50:00 AM	15.66	15.81	15.31	v -7.50
	50	8/21/2007 10:51:00 AM	15.64	15.82	15.32	v -7.50
	51	8/21/2007 10:52:00 AM	15.65	15.82	15.32	v -7.50
	52	8/21/2007 10:53:00 AM	15.65	15.79	15.33	v -7.50
	53	8/21/2007 10:54:00 AM	15.65	15.80	15.34	v -7.50
	54	8/21/2007 10:55:00 AM	15.66	15.80	15.34	v -7.50
	55	8/21/2007 10:56:00 AM	15.67	15.81	15.35	v -7.50
	56	8/21/2007 10:57:00 AM	15.68	15.79	15.35	v -7.50
	57	8/21/2007 10:58:00 AM	15.70	15.80	15.32	v -7.50
	58	8/21/2007 10:59:00 AM	15.66	15.81	15.32	v -7.50
	59	8/21/2007 11:00:00 AM	15.69	15.81	15.32	v -7.50
	60	8/21/2007 11:01:00 AM	15.66	15.81	15.33	v -7.50
	61	8/21/2007 11:02:00 AM	15.65	15.82	15.33	v -7.50
	62	8/21/2007 11:03:00 AM	15.67	15.82	15.33	v -7.50
	63	8/21/2007 11:04:00 AM	15.66	15.82	15.33	v -7.50
	64	8/21/2007 11:05:00 AM	15.64	15.82	15.33	v -7.50
	65	8/21/2007 11:06:00 AM	15.64	15.79	15.28	v -7.50
	66	8/21/2007 11:07:00 AM	15.64	15.79	15.30	v -7.50
	67	8/21/2007 11:08:00 AM	15.63	15.80	15.29	v -7.50
	68	8/21/2007 11:09:00 AM	15.61	15.80	15.29	v -7.50
	69	8/21/2007 11:10:00 AM	15.58	15.80	15.29	v -7.50
	70	8/21/2007 11:11:00 AM	15.60	15.79	15.29	v -7.50
	71	8/21/2007 11:12:00 AM	15.58	15.80	15.28	v -7.50
	72	8/21/2007 11:13:00 AM	15.57	15.80	15.25	v -7.50
	73	8/21/2007 11:14:00 AM	15.57	15.79	15.25	v -7.50
	74	8/21/2007 11:15:00 AM	15.56	15.79	15.25	v -7.50
	75	8/21/2007 11:16:00 AM	15.58	15.79	15.25	v -7.50
	76	8/21/2007 11:17:00 AM	15.56	15.79	15.25	v -7.50
	77	8/21/2007 11:18:00 AM	15.57	15.79	15.24	v -7.50
	78	8/21/2007 11:19:00 AM	15.54	15.80	15.24	v -7.50
	79	8/21/2007 11:20:00 AM	15.52	15.79	15.24	v -7.50
	80	8/21/2007 11:21:00 AM	15.53	15.79	15.24	v -7.50

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/21/2007 11:22:00 AM	15.54	15.79	15.23	v -7.50
	82	8/21/2007 11:23:00 AM	15.52	15.79	15.23	v -7.50
	83	8/21/2007 11:24:00 AM	15.52	15.79	15.23	v -7.50
	84	8/21/2007 11:25:00 AM	15.50	15.79	15.22	v -7.50
	85	8/21/2007 11:26:00 AM	15.51	15.79	15.22	v -7.50
	86	8/21/2007 11:27:00 AM	15.51	15.79	15.22	v -7.50
	87	8/21/2007 11:28:00 AM	15.52	15.79	15.22	v -7.50
	88	8/21/2007 11:29:00 AM	15.53	15.79	15.21	v -7.50
	89	8/21/2007 11:30:00 AM	15.53	15.79	15.21	v -7.50
	90	8/21/2007 11:31:00 AM	15.48	15.78	15.20	v -7.50
	91	8/21/2007 11:32:00 AM	15.49	15.78	15.20	v -7.50
	92	8/21/2007 11:33:00 AM	15.49	15.78	15.20	v -7.50
	93	8/21/2007 11:34:00 AM	15.50	15.77	15.19	v -7.50
	94	8/21/2007 11:35:00 AM	15.50	15.77	15.19	v -7.50
	95	8/21/2007 11:36:00 AM	15.47	15.77	15.19	v -7.50
	96	8/21/2007 11:37:00 AM	15.48	15.76	15.18	v -7.50
	97	8/21/2007 11:38:00 AM	15.48	15.76	15.18	v -7.50
	98	8/21/2007 11:39:00 AM	15.48	15.76	15.18	v -7.50
	99	8/21/2007 11:40:00 AM	15.49	15.75	15.17	v -7.50
	100	8/21/2007 11:41:00 AM	15.49	15.76	15.17	v -7.50
	101	8/21/2007 11:42:00 AM	15.46	15.75	15.17	v -7.50
	102	8/21/2007 11:43:00 AM	15.46	15.76	15.16	v -7.50
	103	8/21/2007 11:44:00 AM	15.46	15.75	15.16	v -7.50
	104	8/21/2007 11:45:00 AM	15.48	15.75	15.15	v -7.50
	105	8/21/2007 11:46:00 AM	15.46	15.74	15.15	v -7.50
	106	8/21/2007 11:47:00 AM	15.46	15.74	15.14	v -7.50
	107	8/21/2007 11:48:00 AM	15.46	15.74	15.14	v -7.50
	108	8/21/2007 11:49:00 AM	15.45	15.74	15.13	v -7.50
	109	8/21/2007 11:50:00 AM	15.46	15.73	15.13	v -7.50
	110	8/21/2007 11:51:00 AM	15.46	15.73	15.13	v -7.50
	111	8/21/2007 11:52:00 AM	15.41	15.73	15.13	v -7.50
	112	8/21/2007 11:53:00 AM	15.41	15.73	15.13	v -7.50
	113	8/21/2007 11:54:00 AM	15.41	15.73	15.12	v -7.50
	114	8/21/2007 11:55:00 AM	15.41	15.73	15.12	v -7.50
	115	8/21/2007 11:56:00 AM	15.41	15.72	15.11	v -7.50
	116	8/21/2007 11:57:00 AM	15.41	15.73	15.11	v -7.50
	117	8/21/2007 11:58:00 AM	15.41	15.72	15.11	v -7.50
	118	8/21/2007 11:59:00 AM	15.40	15.72	15.10	v -7.50
	119	8/21/2007 12:00:00 PM	15.40	15.72	15.10	v -7.50
	120	8/21/2007 12:01:00 PM	15.40	15.71	15.10	v -7.50
	121	8/21/2007 12:02:00 PM	15.40	15.70	15.09	v -7.50
	122	8/21/2007 12:03:00 PM	15.40	15.70	15.07	v -7.50
	123	8/21/2007 12:04:00 PM	15.39	15.69	15.08	v -7.50
	124	8/21/2007 12:05:00 PM	15.39	15.69	15.07	v -7.50
	125	8/21/2007 12:06:00 PM	15.39	15.69	15.06	v -7.50
	126	8/21/2007 12:07:00 PM	15.38	15.68	15.06	v -7.50
	127	8/21/2007 12:08:00 PM	15.42	15.68	15.05	v -7.50
	128	8/21/2007 12:09:00 PM	15.38	15.68	15.05	v -7.50
	129	8/21/2007 12:10:00 PM	15.38	15.68	15.04	v -7.50
	130	8/21/2007 12:11:00 PM	15.37	15.68	15.03	v -7.50

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/21/2007 12:12:00 PM	15.37	15.67	15.03	v -7.50
	132	8/21/2007 12:13:00 PM	15.37	15.66	15.03	v -7.50
	133	8/21/2007 12:14:00 PM	15.37	15.67	15.02	v -7.50
	134	8/21/2007 12:15:00 PM	15.37	15.66	15.02	v -7.50
	135	8/21/2007 12:16:00 PM	15.37	15.65	15.02	v -7.50
	136	8/21/2007 12:17:00 PM	15.36	15.65	15.01	v -7.50
	137	8/21/2007 12:18:00 PM	15.36	15.65	15.01	v -7.50
	138	8/21/2007 12:19:00 PM	15.36	15.64	15.01	v -7.50
	139	8/21/2007 12:20:00 PM	15.36	15.64	15.00	v -7.50
	140	8/21/2007 12:21:00 PM	15.36	15.64	14.99	v -7.50
	141	8/21/2007 12:22:00 PM	15.36	15.64	14.99	v -7.50
	142	8/21/2007 12:23:00 PM	15.35	15.64	14.99	v -7.50
	143	8/21/2007 12:24:00 PM	15.35	15.63	14.98	v -7.50
	144	8/21/2007 12:25:00 PM	15.38	15.64	14.98	v -7.50
	145	8/21/2007 12:26:00 PM	15.37	15.62	14.97	v -7.50
	146	8/21/2007 12:27:00 PM	15.37	15.62	14.96	v -7.50
	147	8/21/2007 12:28:00 PM	15.36	15.66	14.96	v -7.50
	148	8/21/2007 12:28:18 PM	15.37	15.61	14.96	v -7.50

printed 1/8/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09130919
Interval	00:01:00
Personnel	

Start	9/13/2007 9:19:34 AM
Stop	9/13/2007 10:38:18 AM
Comment	

Data	81
------	----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.63			
Minimum	0.05			
Average	11.68			
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/13/2007 9:19:34 AM	v 0.05	O.R.	O.R.	O.R.
	2	9/13/2007 9:20:00 AM	5.26	O.R.	O.R.	O.R.
	3	9/13/2007 9:21:00 AM	12.27	O.R.	O.R.	O.R.
	4	9/13/2007 9:22:00 AM	16.22	O.R.	O.R.	O.R.
	5	9/13/2007 9:23:00 AM	11.83	O.R.	O.R.	O.R.
	6	9/13/2007 9:24:00 AM	2.33	O.R.	O.R.	O.R.
	7	9/13/2007 9:25:00 AM	2.17	O.R.	O.R.	O.R.
	8	9/13/2007 9:26:00 AM	1.38	O.R.	O.R.	O.R.
	9	9/13/2007 9:27:00 AM	0.77	O.R.	O.R.	O.R.
	10	9/13/2007 9:28:00 AM	0.36	O.R.	O.R.	O.R.
	11	9/13/2007 9:29:00 AM	v 0.05	O.R.	O.R.	O.R.
	12	9/13/2007 9:30:00 AM	0.07	O.R.	O.R.	O.R.
	13	9/13/2007 9:31:00 AM	0.06	O.R.	O.R.	O.R.
	14	9/13/2007 9:32:00 AM	0.07	O.R.	O.R.	O.R.
	15	9/13/2007 9:33:00 AM	0.06	O.R.	O.R.	O.R.
	16	9/13/2007 9:34:00 AM	4.35	O.R.	O.R.	O.R.
	17	9/13/2007 9:35:00 AM	5.08	O.R.	O.R.	O.R.
	18	9/13/2007 9:36:00 AM	5.87	O.R.	O.R.	O.R.
	19	9/13/2007 9:37:00 AM	6.62	O.R.	O.R.	O.R.
	20	9/13/2007 9:38:00 AM	7.36	O.R.	O.R.	O.R.
	21	9/13/2007 9:39:00 AM	8.10	O.R.	O.R.	O.R.
	22	9/13/2007 9:40:00 AM	8.90	O.R.	O.R.	O.R.
	23	9/13/2007 9:41:00 AM	9.78	O.R.	O.R.	O.R.
	24	9/13/2007 9:42:00 AM	10.65	O.R.	O.R.	O.R.
	25	9/13/2007 9:43:00 AM	11.39	O.R.	O.R.	O.R.
	26	9/13/2007 9:44:00 AM	12.29	O.R.	O.R.	O.R.
	27	9/13/2007 9:45:00 AM	13.11	O.R.	O.R.	O.R.
	28	9/13/2007 9:46:00 AM	13.89	O.R.	O.R.	O.R.
	29	9/13/2007 9:47:00 AM	14.67	O.R.	O.R.	O.R.
	30	9/13/2007 9:48:00 AM	15.59	O.R.	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/13/2007 9:49:00 AM	14.21	O.R.	O.R.	O.R.
	32	9/13/2007 9:50:00 AM	16.18	O.R.	O.R.	O.R.
	33	9/13/2007 9:51:00 AM	15.10	O.R.	O.R.	O.R.
	34	9/13/2007 9:52:00 AM	[^] 16.63	O.R.	O.R.	O.R.
	35	9/13/2007 9:53:00 AM	15.73	O.R.	O.R.	O.R.
	36	9/13/2007 9:54:00 AM	15.66	O.R.	O.R.	O.R.
	37	9/13/2007 9:55:00 AM	15.63	O.R.	O.R.	O.R.
	38	9/13/2007 9:56:00 AM	15.57	O.R.	O.R.	O.R.
	39	9/13/2007 9:57:00 AM	15.51	O.R.	O.R.	O.R.
	40	9/13/2007 9:58:00 AM	15.46	O.R.	O.R.	O.R.
	41	9/13/2007 9:59:00 AM	15.40	O.R.	O.R.	O.R.
	42	9/13/2007 10:00:00 AM	15.35	O.R.	O.R.	O.R.
	43	9/13/2007 10:01:00 AM	15.29	O.R.	O.R.	O.R.
	44	9/13/2007 10:02:00 AM	15.25	O.R.	O.R.	O.R.
	45	9/13/2007 10:03:00 AM	15.19	O.R.	O.R.	O.R.
	46	9/13/2007 10:04:00 AM	15.14	O.R.	O.R.	O.R.
	47	9/13/2007 10:05:00 AM	15.09	O.R.	O.R.	O.R.
	48	9/13/2007 10:06:00 AM	15.05	O.R.	O.R.	O.R.
	49	9/13/2007 10:07:00 AM	14.99	O.R.	O.R.	O.R.
	50	9/13/2007 10:08:00 AM	14.94	O.R.	O.R.	O.R.
	51	9/13/2007 10:09:00 AM	14.89	O.R.	O.R.	O.R.
	52	9/13/2007 10:10:00 AM	14.84	O.R.	O.R.	O.R.
	53	9/13/2007 10:11:00 AM	14.80	O.R.	O.R.	O.R.
	54	9/13/2007 10:12:00 AM	14.75	O.R.	O.R.	O.R.
	55	9/13/2007 10:13:00 AM	14.70	O.R.	O.R.	O.R.
	56	9/13/2007 10:14:00 AM	14.65	O.R.	O.R.	O.R.
	57	9/13/2007 10:15:00 AM	14.60	O.R.	O.R.	O.R.
	58	9/13/2007 10:16:00 AM	14.55	O.R.	O.R.	O.R.
	59	9/13/2007 10:17:00 AM	14.50	O.R.	O.R.	O.R.
	60	9/13/2007 10:18:00 AM	14.46	O.R.	O.R.	O.R.
	61	9/13/2007 10:19:00 AM	14.41	O.R.	O.R.	O.R.
	62	9/13/2007 10:20:00 AM	14.35	O.R.	O.R.	O.R.
	63	9/13/2007 10:21:00 AM	14.28	O.R.	O.R.	O.R.
	64	9/13/2007 10:22:00 AM	14.22	O.R.	O.R.	O.R.
	65	9/13/2007 10:23:00 AM	14.18	O.R.	O.R.	O.R.
	66	9/13/2007 10:24:00 AM	14.13	O.R.	O.R.	O.R.
	67	9/13/2007 10:25:00 AM	14.03	O.R.	O.R.	O.R.
	68	9/13/2007 10:26:00 AM	13.99	O.R.	O.R.	O.R.
	69	9/13/2007 10:27:00 AM	13.94	O.R.	O.R.	O.R.
	70	9/13/2007 10:28:00 AM	13.89	O.R.	O.R.	O.R.
	71	9/13/2007 10:29:00 AM	13.84	O.R.	O.R.	O.R.
	72	9/13/2007 10:30:00 AM	13.79	O.R.	O.R.	O.R.
	73	9/13/2007 10:31:00 AM	13.75	O.R.	O.R.	O.R.
	74	9/13/2007 10:32:00 AM	13.70	O.R.	O.R.	O.R.
	75	9/13/2007 10:33:00 AM	13.65	O.R.	O.R.	O.R.
	76	9/13/2007 10:34:00 AM	13.60	O.R.	O.R.	O.R.
	77	9/13/2007 10:35:00 AM	13.55	O.R.	O.R.	O.R.
	78	9/13/2007 10:36:00 AM	13.50	O.R.	O.R.	O.R.
	79	9/13/2007 10:37:00 AM	13.45	O.R.	O.R.	O.R.
	80	9/13/2007 10:38:00 AM	13.40	O.R.	O.R.	O.R.

printed 1/8/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/13/2007 10:38:18 AM	13.39	O.R.	O.R.	O.R.

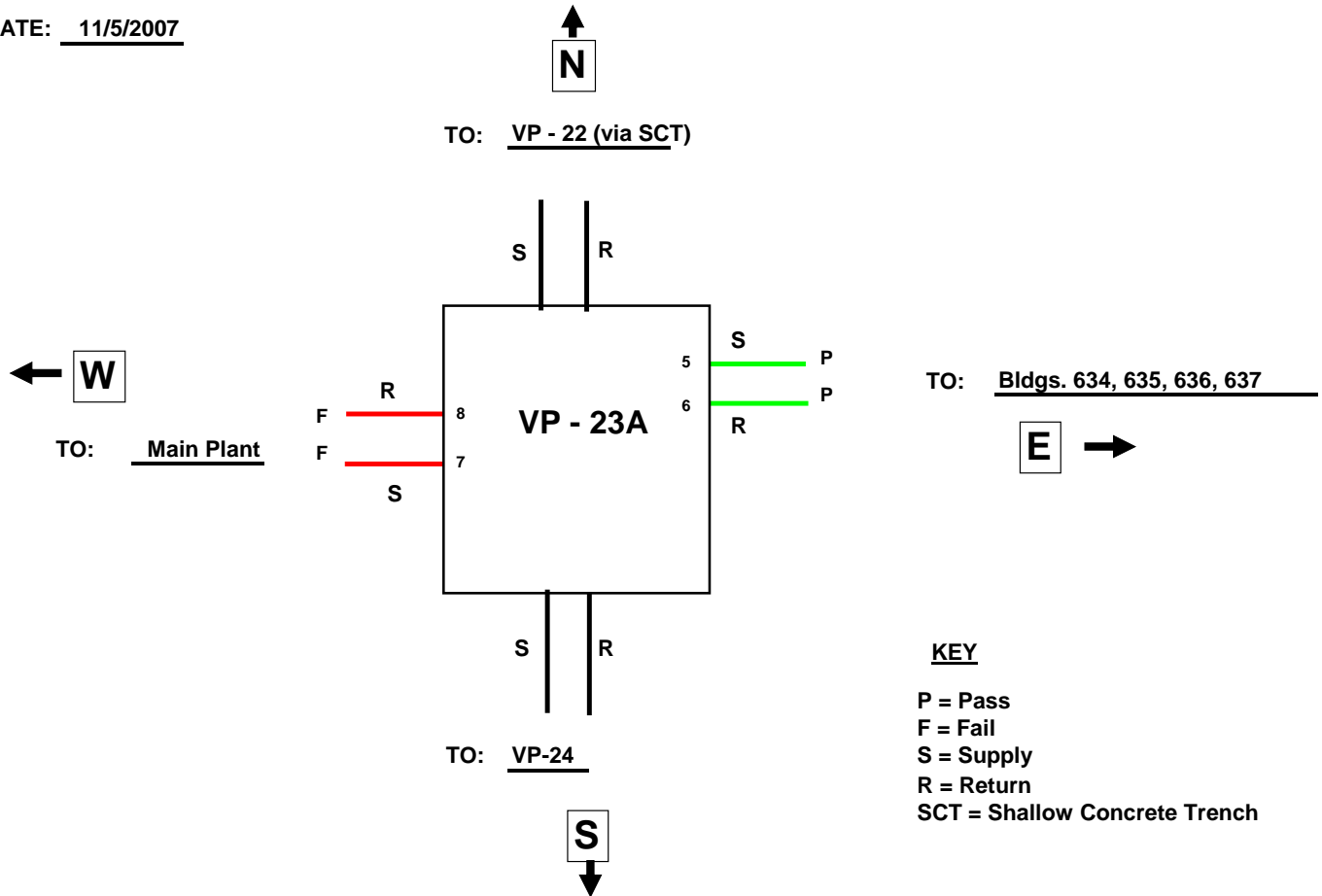
Ft. Carson Pressure Test Results

FROM	TO	S/R	P-Start	P-End	Delta P	% Drop	Pass/Fail (Current)	Pass/Fail (Change)	
NORTH LOOP									
MH-1N	MAIN PLANT	S	*				F		
		R	*				F		
MH-2N	MH-3N	S	*				F		
		R	*				F		
	1668/1669/1670	S	15.94	13.01	2.93	18.4%	F		
		R	15.99	15.52	0.47	2.9%	P		
	MH-1N	S	15.26	15.25	0.01	0.1%	P		
		R	15.51	12.44	3.07	19.8%	F		
	1667	S	15.90	11.44	4.46	28.1%	F		
		R	15.88	15.50	0.38	2.4%	P		
MH-4N	1662/1663	S	15.94	15.54	0.40	2.5%	P		
		R	15.97	15.35	0.62	3.9%	P		
	MH-3N	S	15.43	15.32	0.11	0.7%	P		
		R	15.80	15.75	0.05	0.3%	P		
	1664	S	15.86	13.18	2.68	16.9%	F		
		R	16.60	15.24	1.36	8.2%	P		
	MH-5N	S	*				F		
		R	*				F		
	MH-6N	MH-7N	S	*				F	
			R	*				F	
1368/1369/1370		S	15.88	15.50	0.38	2.4%	P		
		R	16.76	16.45	0.31	1.8%	P		
MH-5N		S	*				F		
		R	*				F		
1367		S	16.67	13.43	3.24	19.4%	P	F	
	R	17.15	16.44	0.71	4.1%	P			
MH-8N	1351/1352	S	15.82	15.23	0.59	3.7%	P		
		R	15.51	14.63	0.88	5.7%	P		
	MH-7N	S	15.67	15.53	0.14	0.9%	P		
		R	15.02	15.07	-0.05	-0.3%	P		
	1363	S	15.62	12.06	3.56	22.8%	F		
		R	16.45	14.96	1.49	9.1%	P		
MH-9N	MH-10N	S	15.69	15.67	0.02	0.1%	P		
		R	*				F		
	1361/1362	S	15.99	15.84	0.15	0.9%	P		
		R	16.08	16.01	0.07	0.4%	P		
	MH-8N	S	*				F		
		R	*				F		
	1364	S	16.22	15.63	0.59	3.6%	P		
		R	16.33	15.92	0.41	2.5%	P		
MH-10N	1360	S	16.77	15.50	1.27	7.6%	P		
		R	16.62	14.30	2.32	14.0%	P	F	
	MH-11N	S	*				F		
		R	*				F		
MH-11N	1160/1161	S	15.54	15.59	-0.05	-0.3%	P		
		R	15.44	14.79	0.65	4.2%	P		
MH-12N	MH-13N	S	15.48	15.07	0.41	2.6%	P		
		R	15.36	12.80	2.56	16.7%	F		
	MH-11N	S	16.30	15.52	0.78	4.8%	P		
		R	16.53	16.47	0.06	0.4%	P		
	1350	S	15.99	15.95	0.04	0.3%	P		
		R	16.12	15.92	0.20	1.2%	P		
	1140	S	15.94	15.82	0.12	0.8%	P		
		R	15.99	16.01	-0.02	-0.1%	P		
MH-14N	MH-13N	S	*				F		
		R	*				F		
MH-15N	MH-16N	S	*				F		
		R	*				F		
	MH-10N	S	15.77	13.50	2.27	14.4%	F		
		R	15.96	16.06	-0.10	-0.6%	P		
MH-18N	8030	S	15.79	15.36	0.43	2.7%	P		
		R	15.77	15.65	0.12	0.8%	P		
	MH-17N	S	15.34	14.96	0.38	2.5%	P		
		R	15.73	13.65	2.08	13.2%	F		
							NORTH LOOP		
							No. Passed =	37	35
							No Failed =	27	29
							Total Tested =	64	64

Fort Carson Pressure Test Results.

Fort Stewart Phase I Valve Pit and Pressure Test Data

DATE: 11/5/2007



NOTES:

1. Pit has badly leaking carrier pipe valve (steam/water) with standing water on floor. Sump operates intermittently. This pit is last (most northern) in Phase I system.
2. All conduit drains are dry at exits from pit.

VP-23					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Supply to Bldgs. 634, 635, 636, 637	P	
	2	6	Return to Bldgs. 634, 635, 636, 637	P	
	3	7	Supply to Main Plant	F	Gland seals at Main Plant leak, fail to reach pressure. Small amount of water discharged from low-point drain between Main Plant and MH-23
	4	8	Return to Main Plant	F	Gland seals at Main Plant leak, fail to reach pressure. Small amount of water discharged from low-point drain between Main Plant and MH-23

Handy logger

Name : LOGGER 2

LOG Name	11051530
Interval	00:01:00
Personnel	

Start	11/5/2007 3:30:58 PM
Stop	11/5/2007 5:34:59 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.72	15.31	19.12	18.75
Minimum	-7.44	-7.45	-7.50	-7.50
Average	14.85	14.34	6.34	4.28
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/5/2007 3:30:58 PM	-6.73	-6.81	-6.98	-7.00
	2	11/5/2007 3:31:00 PM	v -7.44	v -7.45	-7.46	-7.46
	3	11/5/2007 3:32:00 PM	8.00	7.75	0.13	0.09
	4	11/5/2007 3:33:00 PM	12.55	11.94	0.17	0.07
	5	11/5/2007 3:34:00 PM	13.47	12.68	0.17	0.07
	6	11/5/2007 3:35:00 PM	^ 15.72	^ 15.31	0.17	0.10
	7	11/5/2007 3:36:00 PM	15.68	15.25	0.18	0.09
	8	11/5/2007 3:37:00 PM	15.63	15.24	0.18	0.09
	9	11/5/2007 3:38:00 PM	15.61	15.23	0.18	0.09
	10	11/5/2007 3:39:00 PM	15.61	15.21	0.15	0.07
	11	11/5/2007 3:40:00 PM	15.58	15.20	0.15	0.07
	12	11/5/2007 3:41:00 PM	15.58	15.19	0.16	0.05
	13	11/5/2007 3:42:00 PM	15.55	15.17	0.16	0.06
	14	11/5/2007 3:43:00 PM	15.53	15.17	0.17	0.07
	15	11/5/2007 3:44:00 PM	15.52	15.16	0.15	0.09
	16	11/5/2007 3:45:00 PM	15.51	15.16	0.16	0.09
	17	11/5/2007 3:46:00 PM	15.51	15.16	10.63	0.10
	18	11/5/2007 3:47:00 PM	15.54	15.14	1.25	0.10
	19	11/5/2007 3:48:00 PM	15.55	15.14	0.46	12.25
	20	11/5/2007 3:49:00 PM	15.53	15.12	0.31	1.15
	21	11/5/2007 3:50:00 PM	15.53	15.12	0.27	1.12
	22	11/5/2007 3:51:00 PM	15.53	15.12	0.25	1.09
	23	11/5/2007 3:52:00 PM	15.52	15.11	0.24	13.35
	24	11/5/2007 3:53:00 PM	15.52	15.11	0.24	14.45
	25	11/5/2007 3:54:00 PM	15.50	15.10	0.24	5.59
	26	11/5/2007 3:55:00 PM	15.48	15.09	0.23	16.45
	27	11/5/2007 3:56:00 PM	15.49	15.10	0.23	17.60
	28	11/5/2007 3:57:00 PM	15.49	15.10	0.23	^ 18.75
	29	11/5/2007 3:58:00 PM	15.51	15.10	0.25	10.39
	30	11/5/2007 3:59:00 PM	15.50	15.02	0.25	10.25

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/5/2007 4:00:00 PM	15.47	15.04	13.13	10.14
	32	11/5/2007 4:01:00 PM	15.46	15.02	14.04	10.02
	33	11/5/2007 4:02:00 PM	15.47	15.06	15.04	9.91
	34	11/5/2007 4:03:00 PM	15.47	15.04	16.15	9.79
	35	11/5/2007 4:04:00 PM	15.46	15.04	7.76	9.70
	36	11/5/2007 4:05:00 PM	15.46	15.02	17.79	9.58
	37	11/5/2007 4:06:00 PM	15.47	15.01	^ 19.12	9.47
	38	11/5/2007 4:07:00 PM	15.46	15.01	11.97	9.36
	39	11/5/2007 4:08:00 PM	15.45	14.98	11.89	9.26
	40	11/5/2007 4:09:00 PM	15.45	14.98	11.85	9.16
	41	11/5/2007 4:10:00 PM	15.46	14.95	11.83	9.06
	42	11/5/2007 4:11:00 PM	15.41	14.93	11.80	8.96
	43	11/5/2007 4:12:00 PM	15.41	14.94	11.73	8.87
	44	11/5/2007 4:13:00 PM	15.40	14.97	11.68	8.77
	45	11/5/2007 4:14:00 PM	15.41	14.95	11.63	8.68
	46	11/5/2007 4:15:00 PM	15.43	14.94	11.62	8.57
	47	11/5/2007 4:16:00 PM	15.41	14.95	11.58	8.47
	48	11/5/2007 4:17:00 PM	15.44	14.90	11.53	8.37
	49	11/5/2007 4:18:00 PM	15.43	14.90	11.50	8.24
	50	11/5/2007 4:19:00 PM	15.43	14.90	11.46	8.16
	51	11/5/2007 4:20:00 PM	15.39	14.89	11.43	8.07
	52	11/5/2007 4:21:00 PM	15.38	14.89	11.39	7.98
	53	11/5/2007 4:22:00 PM	15.40	14.89	11.35	7.89
	54	11/5/2007 4:23:00 PM	15.39	14.87	11.31	7.80
	55	11/5/2007 4:24:00 PM	15.41	14.86	11.27	7.71
	56	11/5/2007 4:25:00 PM	15.39	14.86	11.23	7.62
	57	11/5/2007 4:26:00 PM	15.36	14.85	11.19	7.53
	58	11/5/2007 4:27:00 PM	15.38	14.85	11.15	7.44
	59	11/5/2007 4:28:00 PM	15.35	14.83	11.11	7.34
	60	11/5/2007 4:29:00 PM	15.37	14.82	11.07	7.25
	61	11/5/2007 4:30:00 PM	15.36	14.79	11.04	7.16
	62	11/5/2007 4:31:00 PM	15.36	14.78	11.01	7.08
	63	11/5/2007 4:32:00 PM	15.36	14.78	10.98	6.99
	64	11/5/2007 4:33:00 PM	15.32	14.77	10.95	6.91
	65	11/5/2007 4:34:00 PM	15.31	14.76	10.92	6.83
	66	11/5/2007 4:35:00 PM	15.31	14.76	10.88	6.74
	67	11/5/2007 4:36:00 PM	15.30	14.74	10.85	6.66
	68	11/5/2007 4:37:00 PM	15.30	14.73	10.82	6.57
	69	11/5/2007 4:38:00 PM	15.27	14.73	10.78	6.48
	70	11/5/2007 4:39:00 PM	15.29	14.72	10.74	6.39
	71	11/5/2007 4:40:00 PM	15.26	14.72	10.71	6.31
	72	11/5/2007 4:41:00 PM	15.27	14.72	10.68	6.23
	73	11/5/2007 4:42:00 PM	15.27	14.72	10.66	6.16
	74	11/5/2007 4:43:00 PM	15.28	14.71	10.62	6.07
	75	11/5/2007 4:44:00 PM	15.28	14.70	10.56	6.00
	76	11/5/2007 4:45:00 PM	15.25	14.69	10.56	5.92
	77	11/5/2007 4:46:00 PM	15.25	14.68	10.53	5.81
	78	11/5/2007 4:47:00 PM	15.25	14.69	10.50	5.76
	79	11/5/2007 4:48:00 PM	15.27	14.65	10.43	5.66
	80	11/5/2007 4:49:00 PM	15.23	14.62	10.40	5.58

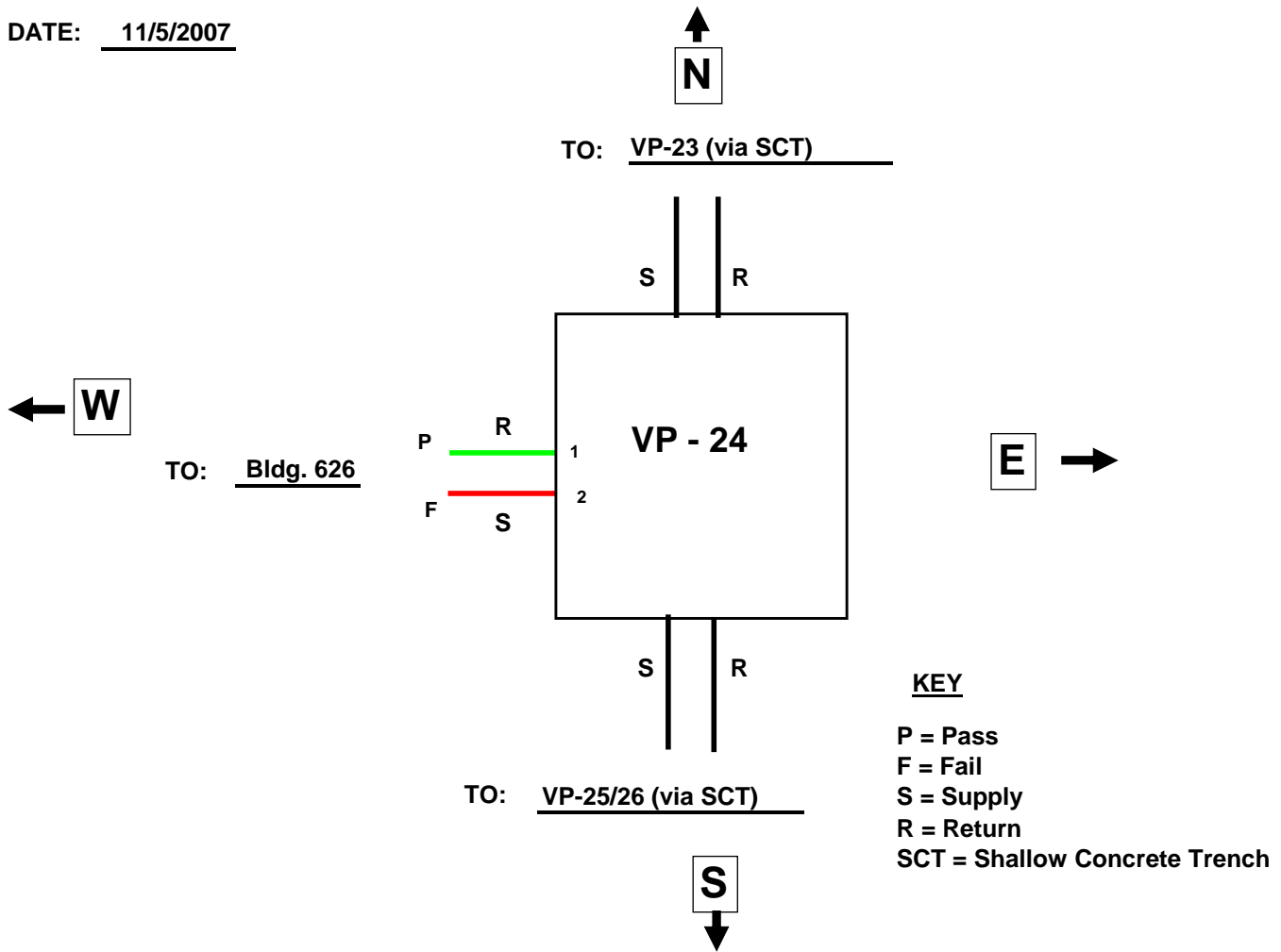
printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/5/2007 4:50:00 PM	15.21	14.62	10.37	5.51
	82	11/5/2007 4:51:00 PM	15.23	14.62	10.34	5.43
	83	11/5/2007 4:52:00 PM	15.21	14.61	10.31	5.36
	84	11/5/2007 4:53:00 PM	15.20	14.61	10.28	5.29
	85	11/5/2007 4:54:00 PM	15.18	14.60	10.24	5.18
	86	11/5/2007 4:55:00 PM	15.19	14.62	10.21	5.12
	87	11/5/2007 4:56:00 PM	15.18	14.61	10.17	5.08
	88	11/5/2007 4:57:00 PM	15.18	14.60	10.14	5.01
	89	11/5/2007 4:58:00 PM	15.18	14.59	10.10	4.94
	90	11/5/2007 4:59:00 PM	15.14	14.57	10.07	4.86
	91	11/5/2007 5:00:00 PM	15.14	14.56	10.03	4.77
	92	11/5/2007 5:01:00 PM	15.15	14.53	10.01	4.70
	93	11/5/2007 5:02:00 PM	15.15	14.55	9.97	4.63
	94	11/5/2007 5:03:00 PM	15.15	14.56	9.94	4.57
	95	11/5/2007 5:04:00 PM	15.12	14.56	9.87	4.51
	96	11/5/2007 5:05:00 PM	15.12	14.56	9.84	4.41
	97	11/5/2007 5:06:00 PM	15.11	14.51	9.81	4.39
	98	11/5/2007 5:07:00 PM	15.12	14.55	9.79	4.32
	99	11/5/2007 5:08:00 PM	15.11	14.55	9.75	4.26
	100	11/5/2007 5:09:00 PM	15.14	14.54	9.72	4.19
	101	11/5/2007 5:10:00 PM	15.10	14.50	9.69	4.10
	102	11/5/2007 5:11:00 PM	15.10	14.54	9.65	4.03
	103	11/5/2007 5:12:00 PM	15.11	14.52	9.62	3.98
	104	11/5/2007 5:13:00 PM	15.10	14.51	9.59	3.92
	105	11/5/2007 5:14:00 PM	15.10	14.49	9.56	3.83
	106	11/5/2007 5:15:00 PM	15.09	14.48	9.53	3.78
	107	11/5/2007 5:16:00 PM	15.09	14.48	9.49	3.75
	108	11/5/2007 5:17:00 PM	15.09	14.47	5.39	3.68
	109	11/5/2007 5:18:00 PM	15.08	14.48	4.71	1.71
	110	11/5/2007 5:19:00 PM	15.07	14.47	4.14	1.43
	111	11/5/2007 5:20:00 PM	15.08	14.47	3.63	1.18
	112	11/5/2007 5:21:00 PM	15.07	14.46	3.18	0.91
	113	11/5/2007 5:22:00 PM	15.07	14.46	2.75	0.70
	114	11/5/2007 5:23:00 PM	15.06	14.45	2.39	0.55
	115	11/5/2007 5:24:00 PM	15.05	14.46	2.06	v -7.50
	116	11/5/2007 5:25:00 PM	15.05	14.45	v -7.50	v -7.50
	117	11/5/2007 5:26:00 PM	15.04	14.42	v -7.50	v -7.50
	118	11/5/2007 5:27:00 PM	15.02	14.38	v -7.50	v -7.50
	119	11/5/2007 5:28:00 PM	15.02	14.38	v -7.50	v -7.50
	120	11/5/2007 5:29:00 PM	15.02	14.40	v -7.50	v -7.50
	121	11/5/2007 5:30:00 PM	15.02	14.41	v -7.50	v -7.50
	122	11/5/2007 5:31:00 PM	14.99	14.37	v -7.50	v -7.50
	123	11/5/2007 5:32:00 PM	14.99	14.39	v -7.50	v -7.50
	124	11/5/2007 5:33:00 PM	15.00	14.39	v -7.50	v -7.50
	125	11/5/2007 5:34:00 PM	15.00	14.39	v -7.50	v -7.50
	126	11/5/2007 5:34:59 PM	15.00	14.39	v -7.50	v -7.50

DATE: 11/5/2007



NOTES:

1. VP -24 is flush Confined Space, Permit-Required pit with round manhole entrance to side of shallow concrete trench mains. Pit has water on floor (~ 2" - 4", estimate). Vents plugged in manhole and conduits pressurized from Bldg. 626.
2. Drains dry at Bldg. 626.

VP - 24					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 626	P	Conduits enter building 626 mechanical room and terminate (do not connect to building heating system)
	2	2	Supply to Bldg. 626	F	Conduits enter building 626 mechanical room and terminate (do not connect to building heating system)

printed 1/14/2008

Handy logger

Name : LOGGER 1

LOG Name	11051441
Interval	00:01:00
Personnel	

Start	11/5/2007 2:41:33 PM
Stop	11/5/2007 4:47:23 PM
Comment	

Data	128
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.29	18.00	-7.50	-7.50
Minimum	0.01	0.15	-7.50	-7.50
Average	15.32	14.27	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/5/2007 2:41:33 PM	v 0.01	v 0.15	v -7.50	v -7.50
	2	11/5/2007 2:42:00 PM	0.02	0.20	v -7.50	v -7.50
	3	11/5/2007 2:43:00 PM	0.10	^ 18.00	v -7.50	v -7.50
	4	11/5/2007 2:44:00 PM	^ 16.29	16.93	v -7.50	v -7.50
	5	11/5/2007 2:45:00 PM	16.19	16.91	v -7.50	v -7.50
	6	11/5/2007 2:46:00 PM	16.18	16.82	v -7.50	v -7.50
	7	11/5/2007 2:47:00 PM	16.19	16.83	v -7.50	v -7.50
	8	11/5/2007 2:48:00 PM	16.21	16.76	v -7.50	v -7.50
	9	11/5/2007 2:49:00 PM	16.18	16.76	v -7.50	v -7.50
	10	11/5/2007 2:50:00 PM	16.17	16.89	v -7.50	v -7.50
	11	11/5/2007 2:51:00 PM	16.16	16.63	v -7.50	v -7.50
	12	11/5/2007 2:52:00 PM	16.18	16.61	v -7.50	v -7.50
	13	11/5/2007 2:53:00 PM	16.14	16.59	v -7.50	v -7.50
	14	11/5/2007 2:54:00 PM	16.14	16.52	v -7.50	v -7.50
	15	11/5/2007 2:55:00 PM	16.16	16.51	v -7.50	v -7.50
	16	11/5/2007 2:56:00 PM	16.14	16.45	v -7.50	v -7.50
	17	11/5/2007 2:57:00 PM	16.11	16.40	v -7.50	v -7.50
	18	11/5/2007 2:58:00 PM	16.11	16.38	v -7.50	v -7.50
	19	11/5/2007 2:59:00 PM	16.07	16.33	v -7.50	v -7.50
	20	11/5/2007 3:00:00 PM	16.05	16.29	v -7.50	v -7.50
	21	11/5/2007 3:01:00 PM	16.03	16.24	v -7.50	v -7.50
	22	11/5/2007 3:02:00 PM	16.04	16.20	v -7.50	v -7.50
	23	11/5/2007 3:03:00 PM	16.02	16.12	v -7.50	v -7.50
	24	11/5/2007 3:04:00 PM	16.03	16.09	v -7.50	v -7.50
	25	11/5/2007 3:05:00 PM	16.02	16.05	v -7.50	v -7.50
	26	11/5/2007 3:06:00 PM	15.97	16.02	v -7.50	v -7.50
	27	11/5/2007 3:07:00 PM	15.96	15.94	v -7.50	v -7.50
	28	11/5/2007 3:08:00 PM	15.96	15.92	v -7.50	v -7.50
	29	11/5/2007 3:09:00 PM	15.97	15.88	v -7.50	v -7.50
	30	11/5/2007 3:10:00 PM	15.96	15.84	v -7.50	v -7.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/5/2007 3:11:00 PM	15.95	15.76	v -7.50	v -7.50
	32	11/5/2007 3:12:00 PM	15.95	15.73	v -7.50	v -7.50
	33	11/5/2007 3:13:00 PM	15.94	15.69	v -7.50	v -7.50
	34	11/5/2007 3:14:00 PM	15.93	15.65	v -7.50	v -7.50
	35	11/5/2007 3:15:00 PM	15.93	15.61	v -7.50	v -7.50
	36	11/5/2007 3:16:00 PM	15.92	15.62	v -7.50	v -7.50
	37	11/5/2007 3:17:00 PM	15.90	15.57	v -7.50	v -7.50
	38	11/5/2007 3:18:00 PM	15.89	15.48	v -7.50	v -7.50
	39	11/5/2007 3:19:00 PM	15.88	15.45	v -7.50	v -7.50
	40	11/5/2007 3:20:00 PM	15.87	15.41	v -7.50	v -7.50
	41	11/5/2007 3:21:00 PM	15.86	15.34	v -7.50	v -7.50
	42	11/5/2007 3:22:00 PM	15.86	15.31	v -7.50	v -7.50
	43	11/5/2007 3:23:00 PM	15.84	15.27	v -7.50	v -7.50
	44	11/5/2007 3:24:00 PM	15.83	15.24	v -7.50	v -7.50
	45	11/5/2007 3:25:00 PM	15.82	15.20	v -7.50	v -7.50
	46	11/5/2007 3:26:00 PM	15.81	15.17	v -7.50	v -7.50
	47	11/5/2007 3:27:00 PM	15.80	15.13	v -7.50	v -7.50
	48	11/5/2007 3:28:00 PM	15.80	15.10	v -7.50	v -7.50
	49	11/5/2007 3:29:00 PM	15.79	15.05	v -7.50	v -7.50
	50	11/5/2007 3:30:00 PM	15.79	15.00	v -7.50	v -7.50
	51	11/5/2007 3:31:00 PM	15.78	14.98	v -7.50	v -7.50
	52	11/5/2007 3:32:00 PM	15.77	14.93	v -7.50	v -7.50
	53	11/5/2007 3:33:00 PM	15.77	14.89	v -7.50	v -7.50
	54	11/5/2007 3:34:00 PM	15.75	14.87	v -7.50	v -7.50
	55	11/5/2007 3:35:00 PM	15.75	14.84	v -7.50	v -7.50
	56	11/5/2007 3:36:00 PM	15.76	14.80	v -7.50	v -7.50
	57	11/5/2007 3:37:00 PM	15.75	14.74	v -7.50	v -7.50
	58	11/5/2007 3:38:00 PM	15.75	14.70	v -7.50	v -7.50
	59	11/5/2007 3:39:00 PM	15.74	14.64	v -7.50	v -7.50
	60	11/5/2007 3:40:00 PM	15.70	14.61	v -7.50	v -7.50
	61	11/5/2007 3:41:00 PM	15.73	14.58	v -7.50	v -7.50
	62	11/5/2007 3:42:00 PM	15.71	14.54	v -7.50	v -7.50
	63	11/5/2007 3:43:00 PM	15.70	14.51	v -7.50	v -7.50
	64	11/5/2007 3:44:00 PM	15.68	14.49	v -7.50	v -7.50
	65	11/5/2007 3:45:00 PM	15.67	14.42	v -7.50	v -7.50
	66	11/5/2007 3:46:00 PM	15.65	14.39	v -7.50	v -7.50
	67	11/5/2007 3:47:00 PM	15.67	14.37	v -7.50	v -7.50
	68	11/5/2007 3:48:00 PM	15.68	14.34	v -7.50	v -7.50
	69	11/5/2007 3:49:00 PM	15.66	14.30	v -7.50	v -7.50
	70	11/5/2007 3:50:00 PM	15.67	14.26	v -7.50	v -7.50
	71	11/5/2007 3:51:00 PM	15.65	14.23	v -7.50	v -7.50
	72	11/5/2007 3:52:00 PM	15.64	14.19	v -7.50	v -7.50
	73	11/5/2007 3:53:00 PM	15.64	14.16	v -7.50	v -7.50
	74	11/5/2007 3:54:00 PM	15.60	14.09	v -7.50	v -7.50
	75	11/5/2007 3:55:00 PM	15.57	14.07	v -7.50	v -7.50
	76	11/5/2007 3:56:00 PM	15.57	14.04	v -7.50	v -7.50
	77	11/5/2007 3:57:00 PM	15.58	14.01	v -7.50	v -7.50
	78	11/5/2007 3:58:00 PM	15.56	13.94	v -7.50	v -7.50
	79	11/5/2007 3:59:00 PM	15.56	13.88	v -7.50	v -7.50
	80	11/5/2007 4:00:00 PM	15.56	13.86	v -7.50	v -7.50

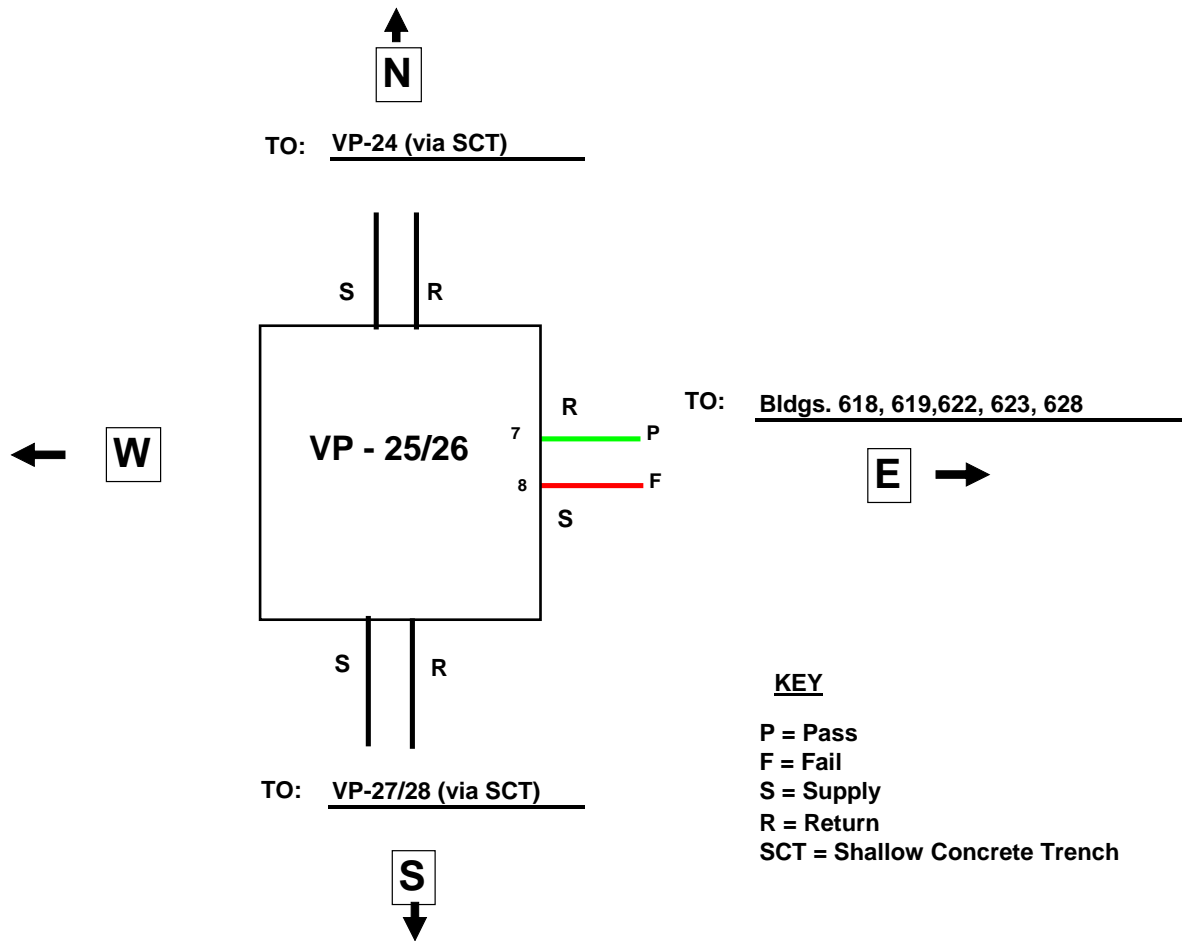
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/5/2007 4:01:00 PM	15.54	13.84	v -7.50	v -7.50
	82	11/5/2007 4:02:00 PM	15.54	13.82	v -7.50	v -7.50
	83	11/5/2007 4:03:00 PM	15.54	13.77	v -7.50	v -7.50
	84	11/5/2007 4:04:00 PM	15.53	13.74	v -7.50	v -7.50
	85	11/5/2007 4:05:00 PM	15.54	13.71	v -7.50	v -7.50
	86	11/5/2007 4:06:00 PM	15.52	13.64	v -7.50	v -7.50
	87	11/5/2007 4:07:00 PM	15.51	13.62	v -7.50	v -7.50
	88	11/5/2007 4:08:00 PM	15.49	13.58	v -7.50	v -7.50
	89	11/5/2007 4:09:00 PM	15.48	13.56	v -7.50	v -7.50
	90	11/5/2007 4:10:00 PM	15.47	13.52	v -7.50	v -7.50
	91	11/5/2007 4:11:00 PM	15.47	13.46	v -7.50	v -7.50
	92	11/5/2007 4:12:00 PM	15.47	13.43	v -7.50	v -7.50
	93	11/5/2007 4:13:00 PM	15.46	13.40	v -7.50	v -7.50
	94	11/5/2007 4:14:00 PM	15.46	13.37	v -7.50	v -7.50
	95	11/5/2007 4:15:00 PM	15.45	13.32	v -7.50	v -7.50
	96	11/5/2007 4:16:00 PM	15.47	13.30	v -7.50	v -7.50
	97	11/5/2007 4:17:00 PM	15.46	13.27	v -7.50	v -7.50
	98	11/5/2007 4:18:00 PM	15.45	13.23	v -7.50	v -7.50
	99	11/5/2007 4:19:00 PM	15.41	13.20	v -7.50	v -7.50
	100	11/5/2007 4:20:00 PM	15.41	13.17	v -7.50	v -7.50
	101	11/5/2007 4:21:00 PM	15.41	13.14	v -7.50	v -7.50
	102	11/5/2007 4:22:00 PM	15.40	13.10	v -7.50	v -7.50
	103	11/5/2007 4:23:00 PM	15.42	13.07	v -7.50	v -7.50
	104	11/5/2007 4:24:00 PM	15.41	13.03	v -7.50	v -7.50
	105	11/5/2007 4:25:00 PM	15.41	13.00	v -7.50	v -7.50
	106	11/5/2007 4:26:00 PM	15.37	12.97	v -7.50	v -7.50
	107	11/5/2007 4:27:00 PM	15.37	12.94	v -7.50	v -7.50
	108	11/5/2007 4:28:00 PM	15.37	12.90	v -7.50	v -7.50
	109	11/5/2007 4:29:00 PM	15.37	12.88	v -7.50	v -7.50
	110	11/5/2007 4:30:00 PM	15.38	12.81	v -7.50	v -7.50
	111	11/5/2007 4:31:00 PM	15.35	12.78	v -7.50	v -7.50
	112	11/5/2007 4:32:00 PM	15.34	12.76	v -7.50	v -7.50
	113	11/5/2007 4:33:00 PM	15.34	12.72	v -7.50	v -7.50
	114	11/5/2007 4:34:00 PM	15.33	12.69	v -7.50	v -7.50
	115	11/5/2007 4:35:00 PM	15.32	12.66	v -7.50	v -7.50
	116	11/5/2007 4:36:00 PM	15.31	12.63	v -7.50	v -7.50
	117	11/5/2007 4:37:00 PM	15.31	12.56	v -7.50	v -7.50
	118	11/5/2007 4:38:00 PM	15.31	12.52	v -7.50	v -7.50
	119	11/5/2007 4:39:00 PM	15.31	12.49	v -7.50	v -7.50
	120	11/5/2007 4:40:00 PM	15.30	12.47	v -7.50	v -7.50
	121	11/5/2007 4:41:00 PM	15.29	12.44	v -7.50	v -7.50
	122	11/5/2007 4:42:00 PM	15.26	12.40	v -7.50	v -7.50
	123	11/5/2007 4:43:00 PM	15.25	12.37	v -7.50	v -7.50
	124	11/5/2007 4:44:00 PM	15.25	12.35	v -7.50	v -7.50
	125	11/5/2007 4:45:00 PM	15.25	12.32	v -7.50	v -7.50
	126	11/5/2007 4:46:00 PM	15.24	12.29	v -7.50	v -7.50
	127	11/5/2007 4:47:00 PM	15.23	12.26	v -7.50	v -7.50
	128	11/5/2007 4:47:23 PM	14.99	12.24	v -7.50	v -7.50

DATE: 11/5/2007



NOTES:

1, Pit dry, clean. All conduit drains are dry at exits from pit.

VP - 25/26					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	3	7	Return to Bldgs. 618, 619, 622, 623, 628	P	
	4	8	Supply to Bldgs. 618, 619, 622, 623, 628	F	

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Handy logger

Name : LOGGER 2

LOG Name	11051139
Interval	00:01:00
Personnel	

Start	11/5/2007 11:39:12 AM
Stop	11/5/2007 2:06:31 PM
Comment	

Data	149
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			16.53	17.47
Minimum			-7.50	-7.50
Average			13.50	8.99
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/5/2007 11:39:12 AM	O.R.	O.R.	v -7.50	v -7.50
	2	11/5/2007 11:40:00 AM	O.R.	O.R.	8.78	0.13
	3	11/5/2007 11:41:00 AM	O.R.	O.R.	3.25	0.15
	4	11/5/2007 11:42:00 AM	O.R.	O.R.	9.97	0.14
	5	11/5/2007 11:43:00 AM	O.R.	O.R.	11.55	0.14
	6	11/5/2007 11:44:00 AM	O.R.	O.R.	12.57	0.15
	7	11/5/2007 11:45:00 AM	O.R.	O.R.	13.22	0.15
	8	11/5/2007 11:46:00 AM	O.R.	O.R.	13.62	0.10
	9	11/5/2007 11:47:00 AM	O.R.	O.R.	13.95	0.10
	10	11/5/2007 11:48:00 AM	O.R.	O.R.	4.14	0.10
	11	11/5/2007 11:49:00 AM	O.R.	O.R.	1.04	0.09
	12	11/5/2007 11:50:00 AM	O.R.	O.R.	0.36	0.05
	13	11/5/2007 11:51:00 AM	O.R.	O.R.	0.33	0.06
	14	11/5/2007 11:52:00 AM	O.R.	O.R.	0.32	0.07
	15	11/5/2007 11:53:00 AM	O.R.	O.R.	0.31	0.04
	16	11/5/2007 11:54:00 AM	O.R.	O.R.	0.32	0.06
	17	11/5/2007 11:55:00 AM	O.R.	O.R.	0.29	0.04
	18	11/5/2007 11:56:00 AM	O.R.	O.R.	0.31	0.04
	19	11/5/2007 11:57:00 AM	O.R.	O.R.	0.32	0.06
	20	11/5/2007 11:58:00 AM	O.R.	O.R.	0.30	0.03
	21	11/5/2007 11:59:00 AM	O.R.	O.R.	0.30	0.02
	22	11/5/2007 12:00:00 PM	O.R.	O.R.	11.39	0.00
	23	11/5/2007 12:01:00 PM	O.R.	O.R.	^ 16.53	0.03
	24	11/5/2007 12:02:00 PM	O.R.	O.R.	15.58	0.04
	25	11/5/2007 12:03:00 PM	O.R.	O.R.	15.55	6.46
	26	11/5/2007 12:04:00 PM	O.R.	O.R.	15.52	11.74
	27	11/5/2007 12:05:00 PM	O.R.	O.R.	15.54	17.42
	28	11/5/2007 12:06:00 PM	O.R.	O.R.	15.51	^ 17.47
	29	11/5/2007 12:07:00 PM	O.R.	O.R.	15.51	17.29
	30	11/5/2007 12:08:00 PM	O.R.	O.R.	15.48	17.20

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/5/2007 12:09:00 PM	O.R.	O.R.	15.47	17.03
	32	11/5/2007 12:10:00 PM	O.R.	O.R.	15.45	16.89
	33	11/5/2007 12:11:00 PM	O.R.	O.R.	15.44	16.73
	34	11/5/2007 12:12:00 PM	O.R.	O.R.	15.45	16.59
	35	11/5/2007 12:13:00 PM	O.R.	O.R.	15.45	16.50
	36	11/5/2007 12:14:00 PM	O.R.	O.R.	15.43	16.35
	37	11/5/2007 12:15:00 PM	O.R.	O.R.	15.42	16.24
	38	11/5/2007 12:16:00 PM	O.R.	O.R.	15.39	16.09
	39	11/5/2007 12:17:00 PM	O.R.	O.R.	15.39	15.95
	40	11/5/2007 12:18:00 PM	O.R.	O.R.	15.37	15.79
	41	11/5/2007 12:19:00 PM	O.R.	O.R.	15.36	15.68
	42	11/5/2007 12:20:00 PM	O.R.	O.R.	15.35	15.56
	43	11/5/2007 12:21:00 PM	O.R.	O.R.	15.33	15.45
	44	11/5/2007 12:22:00 PM	O.R.	O.R.	15.31	15.29
	45	11/5/2007 12:23:00 PM	O.R.	O.R.	15.30	15.19
	46	11/5/2007 12:24:00 PM	O.R.	O.R.	15.28	15.04
	47	11/5/2007 12:25:00 PM	O.R.	O.R.	15.27	14.93
	48	11/5/2007 12:26:00 PM	O.R.	O.R.	15.24	14.80
	49	11/5/2007 12:27:00 PM	O.R.	O.R.	15.23	14.70
	50	11/5/2007 12:28:00 PM	O.R.	O.R.	15.23	14.57
	51	11/5/2007 12:29:00 PM	O.R.	O.R.	15.20	14.44
	52	11/5/2007 12:30:00 PM	O.R.	O.R.	15.20	14.31
	53	11/5/2007 12:31:00 PM	O.R.	O.R.	15.17	14.19
	54	11/5/2007 12:32:00 PM	O.R.	O.R.	15.18	14.06
	55	11/5/2007 12:33:00 PM	O.R.	O.R.	15.18	13.93
	56	11/5/2007 12:34:00 PM	O.R.	O.R.	15.15	13.81
	57	11/5/2007 12:35:00 PM	O.R.	O.R.	15.15	13.73
	58	11/5/2007 12:36:00 PM	O.R.	O.R.	15.16	13.60
	59	11/5/2007 12:37:00 PM	O.R.	O.R.	15.15	13.47
	60	11/5/2007 12:38:00 PM	O.R.	O.R.	15.15	13.35
	61	11/5/2007 12:39:00 PM	O.R.	O.R.	15.15	13.26
	62	11/5/2007 12:40:00 PM	O.R.	O.R.	15.15	13.14
	63	11/5/2007 12:41:00 PM	O.R.	O.R.	15.14	13.01
	64	11/5/2007 12:42:00 PM	O.R.	O.R.	15.13	12.89
	65	11/5/2007 12:43:00 PM	O.R.	O.R.	15.14	12.78
	66	11/5/2007 12:44:00 PM	O.R.	O.R.	15.14	12.67
	67	11/5/2007 12:45:00 PM	O.R.	O.R.	15.09	12.56
	68	11/5/2007 12:46:00 PM	O.R.	O.R.	15.10	12.44
	69	11/5/2007 12:47:00 PM	O.R.	O.R.	15.06	12.33
	70	11/5/2007 12:48:00 PM	O.R.	O.R.	15.06	12.22
	71	11/5/2007 12:49:00 PM	O.R.	O.R.	15.06	12.11
	72	11/5/2007 12:50:00 PM	O.R.	O.R.	15.06	11.99
	73	11/5/2007 12:51:00 PM	O.R.	O.R.	15.05	11.88
	74	11/5/2007 12:52:00 PM	O.R.	O.R.	15.04	11.77
	75	11/5/2007 12:53:00 PM	O.R.	O.R.	15.04	11.67
	76	11/5/2007 12:54:00 PM	O.R.	O.R.	15.04	11.56
	77	11/5/2007 12:55:00 PM	O.R.	O.R.	15.01	11.45
	78	11/5/2007 12:56:00 PM	O.R.	O.R.	15.01	11.34
	79	11/5/2007 12:57:00 PM	O.R.	O.R.	15.00	11.23
	80	11/5/2007 12:58:00 PM	O.R.	O.R.	14.99	11.12

printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/5/2007 12:59:00 PM	O.R.	O.R.	14.98	11.01
	82	11/5/2007 1:00:00 PM	O.R.	O.R.	14.93	10.88
	83	11/5/2007 1:01:00 PM	O.R.	O.R.	14.93	10.76
	84	11/5/2007 1:02:00 PM	O.R.	O.R.	14.93	10.65
	85	11/5/2007 1:03:00 PM	O.R.	O.R.	14.93	10.54
	86	11/5/2007 1:04:00 PM	O.R.	O.R.	14.93	10.43
	87	11/5/2007 1:05:00 PM	O.R.	O.R.	14.89	10.29
	88	11/5/2007 1:06:00 PM	O.R.	O.R.	14.89	10.22
	89	11/5/2007 1:07:00 PM	O.R.	O.R.	14.90	10.16
	90	11/5/2007 1:08:00 PM	O.R.	O.R.	14.89	10.05
	91	11/5/2007 1:09:00 PM	O.R.	O.R.	14.90	9.93
	92	11/5/2007 1:10:00 PM	O.R.	O.R.	14.90	9.87
	93	11/5/2007 1:11:00 PM	O.R.	O.R.	14.89	9.71
	94	11/5/2007 1:12:00 PM	O.R.	O.R.	14.88	9.65
	95	11/5/2007 1:13:00 PM	O.R.	O.R.	14.88	9.57
	96	11/5/2007 1:14:00 PM	O.R.	O.R.	14.88	9.46
	97	11/5/2007 1:15:00 PM	O.R.	O.R.	14.87	9.39
	98	11/5/2007 1:16:00 PM	O.R.	O.R.	14.86	9.31
	99	11/5/2007 1:17:00 PM	O.R.	O.R.	14.86	9.22
	100	11/5/2007 1:18:00 PM	O.R.	O.R.	14.84	9.14
	101	11/5/2007 1:19:00 PM	O.R.	O.R.	14.85	9.02
	102	11/5/2007 1:20:00 PM	O.R.	O.R.	14.84	8.95
	103	11/5/2007 1:21:00 PM	O.R.	O.R.	14.83	8.87
	104	11/5/2007 1:22:00 PM	O.R.	O.R.	14.81	8.78
	105	11/5/2007 1:23:00 PM	O.R.	O.R.	14.80	8.70
	106	11/5/2007 1:24:00 PM	O.R.	O.R.	14.80	8.62
	107	11/5/2007 1:25:00 PM	O.R.	O.R.	14.80	8.54
	108	11/5/2007 1:26:00 PM	O.R.	O.R.	14.80	8.48
	109	11/5/2007 1:27:00 PM	O.R.	O.R.	14.80	8.41
	110	11/5/2007 1:28:00 PM	O.R.	O.R.	14.79	8.34
	111	11/5/2007 1:29:00 PM	O.R.	O.R.	14.79	8.27
	112	11/5/2007 1:30:00 PM	O.R.	O.R.	14.79	8.21
	113	11/5/2007 1:31:00 PM	O.R.	O.R.	14.80	8.14
	114	11/5/2007 1:32:00 PM	O.R.	O.R.	14.81	8.04
	115	11/5/2007 1:33:00 PM	O.R.	O.R.	14.81	7.98
	116	11/5/2007 1:34:00 PM	O.R.	O.R.	14.82	7.91
	117	11/5/2007 1:35:00 PM	O.R.	O.R.	14.82	7.85
	118	11/5/2007 1:36:00 PM	O.R.	O.R.	14.82	7.79
	119	11/5/2007 1:37:00 PM	O.R.	O.R.	14.83	7.72
	120	11/5/2007 1:38:00 PM	O.R.	O.R.	14.83	7.65
	121	11/5/2007 1:39:00 PM	O.R.	O.R.	14.82	7.62
	122	11/5/2007 1:40:00 PM	O.R.	O.R.	14.82	7.54
	123	11/5/2007 1:41:00 PM	O.R.	O.R.	14.85	7.47
	124	11/5/2007 1:42:00 PM	O.R.	O.R.	14.86	7.40
	125	11/5/2007 1:43:00 PM	O.R.	O.R.	14.86	7.34
	126	11/5/2007 1:44:00 PM	O.R.	O.R.	14.87	7.30
	127	11/5/2007 1:45:00 PM	O.R.	O.R.	14.86	7.23
	128	11/5/2007 1:46:00 PM	O.R.	O.R.	14.87	7.16
	129	11/5/2007 1:47:00 PM	O.R.	O.R.	14.88	7.09
	130	11/5/2007 1:48:00 PM	O.R.	O.R.	14.91	7.02

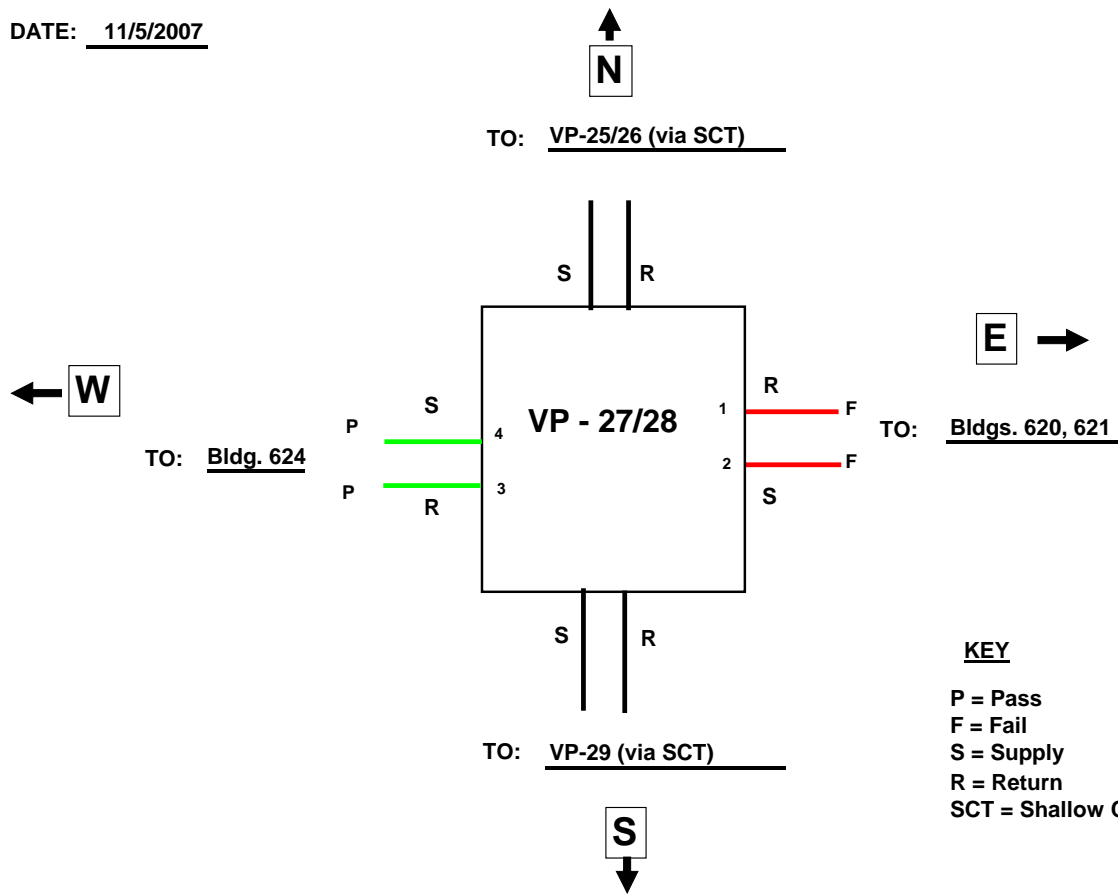
printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	11/5/2007 1:49:00 PM	O.R.	O.R.	14.92	6.94
	132	11/5/2007 1:50:00 PM	O.R.	O.R.	14.92	6.86
	133	11/5/2007 1:51:00 PM	O.R.	O.R.	14.92	6.81
	134	11/5/2007 1:52:00 PM	O.R.	O.R.	14.93	6.72
	135	11/5/2007 1:53:00 PM	O.R.	O.R.	14.92	6.66
	136	11/5/2007 1:54:00 PM	O.R.	O.R.	14.92	6.59
	137	11/5/2007 1:55:00 PM	O.R.	O.R.	14.93	6.52
	138	11/5/2007 1:56:00 PM	O.R.	O.R.	14.94	6.45
	139	11/5/2007 1:57:00 PM	O.R.	O.R.	14.94	6.38
	140	11/5/2007 1:58:00 PM	O.R.	O.R.	14.94	6.31
	141	11/5/2007 1:59:00 PM	O.R.	O.R.	14.94	6.24
	142	11/5/2007 2:00:00 PM	O.R.	O.R.	14.94	6.17
	143	11/5/2007 2:01:00 PM	O.R.	O.R.	14.94	6.10
	144	11/5/2007 2:02:00 PM	O.R.	O.R.	14.94	6.02
	145	11/5/2007 2:03:00 PM	O.R.	O.R.	14.94	5.93
	146	11/5/2007 2:04:00 PM	O.R.	O.R.	14.94	5.87
	147	11/5/2007 2:05:00 PM	O.R.	O.R.	14.95	5.76
	148	11/5/2007 2:06:00 PM	O.R.	O.R.	14.92	5.69
	149	11/5/2007 2:06:31 PM	O.R.	O.R.	14.92	5.66

DATE: 11/5/2007



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return
- SCT = Shallow Concrete Trench

NOTES:

1. Pit dry, clean. All conduit drains are dry at exits from pit.

VP - 27/28					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldgs. 620, 621	F	High volume of air/dust venting around conduit at pit wall. Immediate failure. Top of conduit exits pit @ 21" below grade.
	2	2	Supply to Bldgs. 620, 621	F	High volume of air/dust venting around conduit at pit wall. Immediate failure. Top of conduit exits pit @ 21" below grade.
	3	3	Return to Bldgs. 624	P	Top of conduit exits pit @ 17" below grade.
	4	4	Supply to Bldgs. 624	P	Top of conduit exits pit @ 17" below grade.

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Handy logger

Name : **LOGGER 1**

LOG Name	11051034
Interval	00:01:00
Personnel	

Start	11/5/2007 10:34:07 AM
Stop	11/5/2007 12:41:47 PM
Comment	

Data	129
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	9.11	11.01	15.35	16.65
Minimum	-7.50	-7.50	-7.50	-7.50
Average	-5.08	-4.81	14.38	15.70
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/5/2007 10:34:07 AM	-0.14	-0.10	0.04	0.19
	2	11/5/2007 10:35:00 AM	-0.09	-0.08	0.10	0.22
	3	11/5/2007 10:36:00 AM	^ 9.11	0.40	0.12	0.24
	4	11/5/2007 10:37:00 AM	0.73	^ 11.01	0.15	0.24
	5	11/5/2007 10:38:00 AM	0.10	9.81	0.14	0.24
	6	11/5/2007 10:39:00 AM	0.09	8.86	^ 15.35	14.48
	7	11/5/2007 10:40:00 AM	0.07	4.62	15.31	^ 16.65
	8	11/5/2007 10:41:00 AM	0.09	2.92	15.30	16.61
	9	11/5/2007 10:42:00 AM	0.11	1.66	15.27	16.63
	10	11/5/2007 10:43:00 AM	0.12	0.83	15.28	16.60
	11	11/5/2007 10:44:00 AM	0.13	0.34	15.26	16.58
	12	11/5/2007 10:45:00 AM	0.13	0.10	15.25	16.61
	13	11/5/2007 10:46:00 AM	0.13	0.10	15.26	16.61
	14	11/5/2007 10:47:00 AM	0.10	0.09	15.25	16.59
	15	11/5/2007 10:48:00 AM	0.10	0.09	15.25	16.59
	16	11/5/2007 10:49:00 AM	0.10	0.09	15.23	16.58
	17	11/5/2007 10:50:00 AM	0.12	0.08	15.24	16.58
	18	11/5/2007 10:51:00 AM	0.10	0.07	15.23	16.58
	19	11/5/2007 10:52:00 AM	0.08	0.07	15.22	16.57
	20	11/5/2007 10:53:00 AM	0.07	0.06	15.25	16.56
	21	11/5/2007 10:54:00 AM	0.06	0.06	15.25	16.56
	22	11/5/2007 10:55:00 AM	0.08	0.09	15.24	16.55
	23	11/5/2007 10:56:00 AM	0.08	0.08	15.24	16.55
	24	11/5/2007 10:57:00 AM	0.06	0.06	15.23	16.55
	25	11/5/2007 10:58:00 AM	0.04	0.05	15.22	16.54
	26	11/5/2007 10:59:00 AM	0.06	0.05	15.22	16.54
	27	11/5/2007 11:00:00 AM	0.06	0.03	15.21	16.58
	28	11/5/2007 11:01:00 AM	0.05	0.01	15.21	16.58
	29	11/5/2007 11:02:00 AM	0.03	0.04	15.23	16.58
	30	11/5/2007 11:03:00 AM	0.05	0.04	15.24	16.58

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/5/2007 11:04:00 AM	0.03	0.03	15.20	16.57
	32	11/5/2007 11:05:00 AM	0.02	0.02	15.22	16.57
	33	11/5/2007 11:06:00 AM	0.01	0.01	15.22	16.57
	34	11/5/2007 11:07:00 AM	0.00	0.04	15.21	16.56
	35	11/5/2007 11:08:00 AM	0.02	0.03	15.21	16.56
	36	11/5/2007 11:09:00 AM	-0.02	0.03	15.21	16.56
	37	11/5/2007 11:10:00 AM	-0.02	0.06	15.20	16.56
	38	11/5/2007 11:11:00 AM	-0.02	0.05	15.20	16.56
	39	11/5/2007 11:12:00 AM	-0.02	0.05	15.19	16.56
	40	11/5/2007 11:13:00 AM	-0.04	0.04	15.19	16.56
	41	11/5/2007 11:14:00 AM	v -7.50	0.03	15.18	16.56
	42	11/5/2007 11:15:00 AM	v -7.50	v -7.50	15.18	16.55
	43	11/5/2007 11:16:00 AM	v -7.50	v -7.50	15.17	16.55
	44	11/5/2007 11:17:00 AM	v -7.50	v -7.50	15.17	16.55
	45	11/5/2007 11:18:00 AM	v -7.50	v -7.50	15.17	16.55
	46	11/5/2007 11:19:00 AM	v -7.50	v -7.50	15.16	16.54
	47	11/5/2007 11:20:00 AM	v -7.50	v -7.50	15.16	16.54
	48	11/5/2007 11:21:00 AM	v -7.50	v -7.50	15.16	16.54
	49	11/5/2007 11:22:00 AM	v -7.50	v -7.50	15.15	16.53
	50	11/5/2007 11:23:00 AM	v -7.50	v -7.50	15.15	16.53
	51	11/5/2007 11:24:00 AM	v -7.50	v -7.50	15.14	16.53
	52	11/5/2007 11:25:00 AM	v -7.50	v -7.50	15.15	16.53
	53	11/5/2007 11:28:00 AM	v -7.50	v -7.50	15.15	16.52
	54	11/5/2007 11:27:00 AM	v -7.50	v -7.50	15.14	16.52
	55	11/5/2007 11:28:00 AM	v -7.50	v -7.50	15.14	16.52
	56	11/5/2007 11:29:00 AM	v -7.50	v -7.50	15.13	16.57
	57	11/5/2007 11:30:00 AM	v -7.50	v -7.50	15.13	16.57
	58	11/5/2007 11:31:00 AM	v -7.50	v -7.50	15.16	16.55
	59	11/5/2007 11:32:00 AM	v -7.50	v -7.50	15.15	16.54
	60	11/5/2007 11:33:00 AM	v -7.50	v -7.50	15.15	16.54
	61	11/5/2007 11:34:00 AM	v -7.50	v -7.50	15.14	16.53
	62	11/5/2007 11:35:00 AM	v -7.50	v -7.50	15.14	16.53
	63	11/5/2007 11:36:00 AM	v -7.50	v -7.50	15.13	16.52
	64	11/5/2007 11:37:00 AM	v -7.50	v -7.50	15.12	16.52
	65	11/5/2007 11:38:00 AM	v -7.50	v -7.50	15.15	16.52
	66	11/5/2007 11:39:00 AM	v -7.50	v -7.50	15.14	16.55
	67	11/5/2007 11:40:00 AM	v -7.50	v -7.50	15.14	16.63
	68	11/5/2007 11:41:00 AM	v -7.50	v -7.50	15.14	16.62
	69	11/5/2007 11:42:00 AM	v -7.50	v -7.50	15.14	16.62
	70	11/5/2007 11:43:00 AM	v -7.50	v -7.50	15.13	^ 16.65
	71	11/5/2007 11:44:00 AM	v -7.50	v -7.50	15.12	16.63
	72	11/5/2007 11:45:00 AM	v -7.50	v -7.50	15.14	16.62
	73	11/5/2007 11:46:00 AM	v -7.50	v -7.50	15.13	16.53
	74	11/5/2007 11:47:00 AM	v -7.50	v -7.50	15.13	16.58
	75	11/5/2007 11:48:00 AM	v -7.50	v -7.50	15.12	16.56
	76	11/5/2007 11:49:00 AM	v -7.50	v -7.50	15.11	16.55
	77	11/5/2007 11:50:00 AM	v -7.50	v -7.50	15.10	16.59
	78	11/5/2007 11:51:00 AM	v -7.50	v -7.50	15.10	16.57
	79	11/5/2007 11:52:00 AM	v -7.50	v -7.50	15.14	16.56
	80	11/5/2007 11:53:00 AM	v -7.50	v -7.50	15.12	16.56

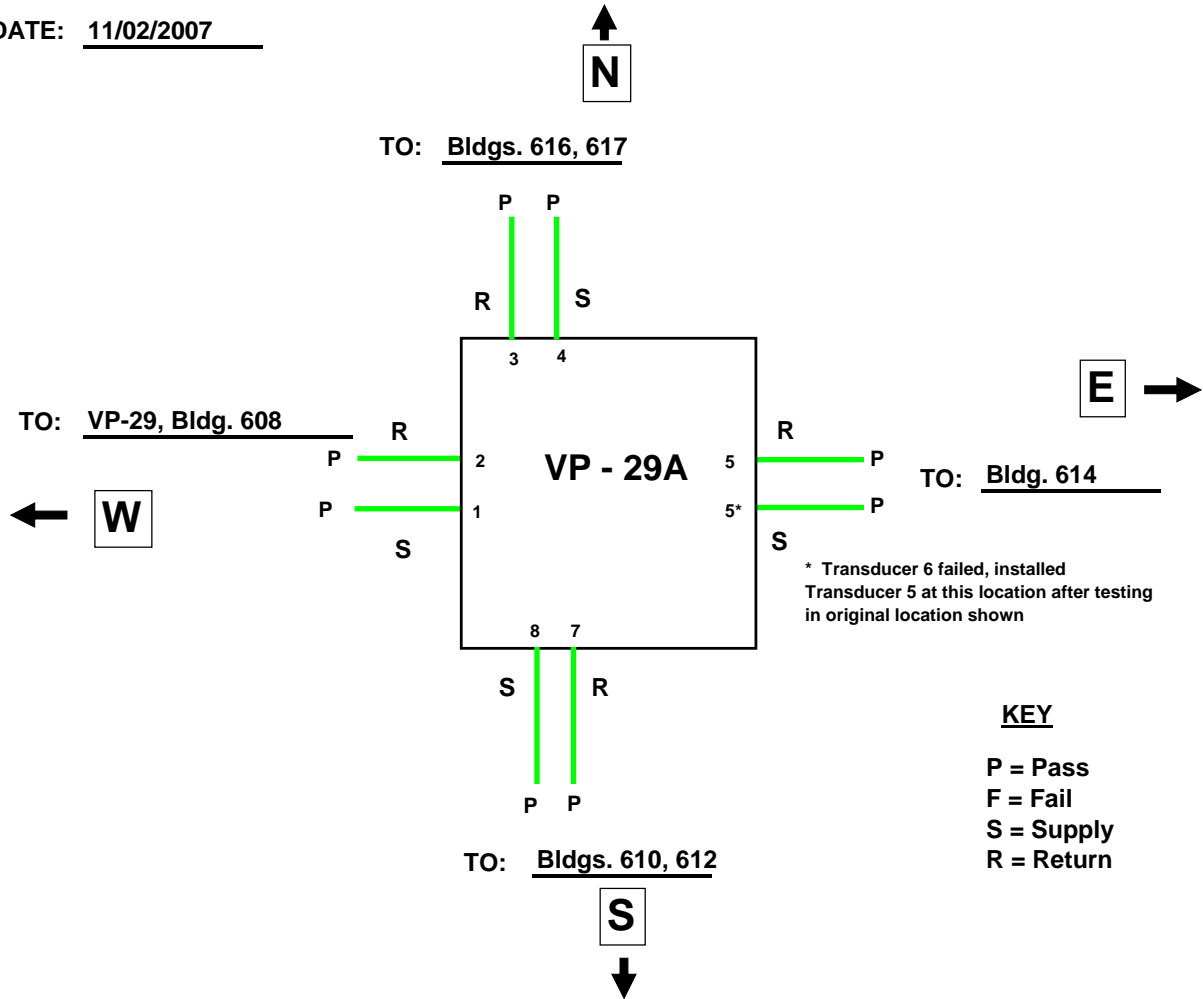
printed 1/14/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/5/2007 11:54:00 AM	v -7.50	v -7.50	15.11	16.55
	82	11/5/2007 11:55:00 AM	v -7.50	v -7.50	15.11	16.53
	83	11/5/2007 11:56:00 AM	v -7.50	v -7.50	15.10	16.57
	84	11/5/2007 11:57:00 AM	v -7.50	v -7.50	15.09	16.56
	85	11/5/2007 11:58:00 AM	v -7.50	v -7.50	15.09	16.54
	86	11/5/2007 11:59:00 AM	v -7.50	v -7.50	15.08	16.54
	87	11/5/2007 12:00:00 PM	v -7.50	v -7.50	15.08	16.54
	88	11/5/2007 12:01:00 PM	v -7.50	v -7.50	15.11	16.54
	89	11/5/2007 12:02:00 PM	v -7.50	v -7.50	15.08	16.54
	90	11/5/2007 12:03:00 PM	v -7.50	v -7.50	15.08	16.53
	91	11/5/2007 12:04:00 PM	v -7.50	v -7.50	15.09	16.53
	92	11/5/2007 12:05:00 PM	v -7.50	v -7.50	15.09	16.56
	93	11/5/2007 12:06:00 PM	v -7.50	v -7.50	15.08	16.55
	94	11/5/2007 12:07:00 PM	v -7.50	v -7.50	15.07	16.54
	95	11/5/2007 12:08:00 PM	v -7.50	v -7.50	15.09	16.53
	96	11/5/2007 12:09:00 PM	v -7.50	v -7.50	15.09	16.52
	97	11/5/2007 12:10:00 PM	v -7.50	v -7.50	15.07	16.52
	98	11/5/2007 12:11:00 PM	v -7.50	v -7.50	15.08	16.51
	99	11/5/2007 12:12:00 PM	v -7.50	v -7.50	15.06	16.51
	100	11/5/2007 12:13:00 PM	v -7.50	v -7.50	15.06	16.51
	101	11/5/2007 12:14:00 PM	v -7.50	v -7.50	15.06	16.51
	102	11/5/2007 12:15:00 PM	v -7.50	v -7.50	15.05	16.50
	103	11/5/2007 12:16:00 PM	v -7.50	v -7.50	15.04	16.49
	104	11/5/2007 12:17:00 PM	v -7.50	v -7.50	15.07	16.48
	105	11/5/2007 12:18:00 PM	v -7.50	v -7.50	15.07	16.48
	106	11/5/2007 12:19:00 PM	v -7.50	v -7.50	15.07	16.47
	107	11/5/2007 12:20:00 PM	v -7.50	v -7.50	15.06	16.46
	108	11/5/2007 12:21:00 PM	v -7.50	v -7.50	15.04	16.47
	109	11/5/2007 12:22:00 PM	v -7.50	v -7.50	15.07	16.47
	110	11/5/2007 12:23:00 PM	v -7.50	v -7.50	15.07	16.50
	111	11/5/2007 12:24:00 PM	v -7.50	v -7.50	15.06	16.49
	112	11/5/2007 12:25:00 PM	v -7.50	v -7.50	15.05	16.48
	113	11/5/2007 12:26:00 PM	v -7.50	v -7.50	15.05	16.48
	114	11/5/2007 12:27:00 PM	v -7.50	v -7.50	15.04	16.47
	115	11/5/2007 12:28:00 PM	v -7.50	v -7.50	15.05	16.47
	116	11/5/2007 12:29:00 PM	v -7.50	v -7.50	15.04	16.46
	117	11/5/2007 12:30:00 PM	v -7.50	v -7.50	15.03	16.45
	118	11/5/2007 12:31:00 PM	v -7.50	v -7.50	15.03	16.45
	119	11/5/2007 12:32:00 PM	v -7.50	v -7.50	15.03	16.46
	120	11/5/2007 12:33:00 PM	v -7.50	v -7.50	15.02	16.48
	121	11/5/2007 12:34:00 PM	v -7.50	v -7.50	15.02	16.47
	122	11/5/2007 12:35:00 PM	v -7.50	v -7.50	15.04	16.47
	123	11/5/2007 12:36:00 PM	v -7.50	v -7.50	15.03	16.45
	124	11/5/2007 12:37:00 PM	v -7.50	v -7.50	15.03	16.48
	125	11/5/2007 12:38:00 PM	v -7.50	v -7.50	15.03	16.47
	126	11/5/2007 12:39:00 PM	v -7.50	v -7.50	15.02	16.47
	127	11/5/2007 12:40:00 PM	v -7.50	v -7.50	15.02	16.44
	128	11/5/2007 12:41:00 PM	v -7.50	v -7.50	15.01	16.44
	129	11/5/2007 12:41:47 PM	v -7.50	v -7.50	v -7.50	v -7.50

DATE: 11/02/2007



NOTES:

1. Pit is wet with approx. 1 foot of stagnant water. Sump system is inoperable.
2. All conduit drains dry at exits from pit

VP - 29A					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to MH-29, Bldg. 608	P	
	2	2	Return to MH-29, Bldg. 608	P	
	3	3	Return to Bldgs. 616, 617	P	
	4	4	Supply to Bldgs. 616, 617	P	
2	1	5	Return to Bldg. 614	P	
	3	7	Return to Bldgs. 610, 612	P	
	4	8	Supply to Bldgs. 610, 612	P	
Logger 2 @ 1345	1	5	Supply to Bldg. 614	P	No. 6 pressure transducer is inoperable, ran separate test using transducer No. 5 after initial pressure test using 1, 2, 3, 4, 5, 7, 8. Test initiated at 1145 with datalogger monitoring pressure; however, logger recording not started. Problem discovered near conclusion of test and logger recording started. Data logger file shows line pressure at 1345.

printed 1/14/2008

Handy logger

Name : **LOGGER 1**

LOG Name	11020909
Interval	00:01:00
Personnel	

Start	11/2/2007 9:09:16 AM
Stop	11/2/2007 11:20:56 AM
Comment	

Data	133
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.06	18.38	15.68	17.71
Minimum	-7.50	-7.50	-7.50	-7.50
Average	13.17	12.88	12.39	14.37
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/2/2007 9:09:16 AM	-0.02	0.05	0.12	0.30
	2	11/2/2007 9:10:00 AM	0.00	0.07	0.10	0.30
	3	11/2/2007 9:11:00 AM	6.34	7.87	0.12	0.30
	4	11/2/2007 9:12:00 AM	7.56	7.37	6.61	7.43
	5	11/2/2007 9:13:00 AM	11.28	10.75	13.82	15.19
	6	11/2/2007 9:14:00 AM	14.62	^ 18.38	^ 15.68	16.02
	7	11/2/2007 9:15:00 AM	^ 16.06	15.41	15.66	16.01
	8	11/2/2007 9:16:00 AM	^ 16.06	15.34	15.67	16.05
	9	11/2/2007 9:17:00 AM	^ 16.06	15.31	15.64	16.06
	10	11/2/2007 9:18:00 AM	16.01	15.28	15.60	16.11
	11	11/2/2007 9:19:00 AM	15.98	15.28	15.60	16.13
	12	11/2/2007 9:20:00 AM	15.98	15.30	15.59	16.15
	13	11/2/2007 9:21:00 AM	15.97	15.29	15.57	16.17
	14	11/2/2007 9:22:00 AM	15.96	15.29	15.56	16.23
	15	11/2/2007 9:23:00 AM	15.99	15.29	15.55	16.26
	16	11/2/2007 9:24:00 AM	15.98	15.30	15.56	16.30
	17	11/2/2007 9:25:00 AM	15.96	15.31	15.55	16.32
	18	11/2/2007 9:26:00 AM	16.00	15.32	15.53	16.34
	19	11/2/2007 9:27:00 AM	16.00	15.33	15.52	16.37
	20	11/2/2007 9:28:00 AM	15.99	15.33	15.54	16.40
	21	11/2/2007 9:29:00 AM	16.03	15.33	15.52	16.44
	22	11/2/2007 9:30:00 AM	16.02	15.33	15.50	16.52
	23	11/2/2007 9:31:00 AM	16.02	15.33	15.49	16.55
	24	11/2/2007 9:32:00 AM	16.01	15.33	15.47	16.59
	25	11/2/2007 9:33:00 AM	16.01	15.33	15.46	16.62
	26	11/2/2007 9:34:00 AM	16.01	15.34	15.46	16.66
	27	11/2/2007 9:35:00 AM	16.01	15.34	15.44	16.70
	28	11/2/2007 9:36:00 AM	16.00	15.34	15.42	16.73
	29	11/2/2007 9:37:00 AM	16.00	15.35	15.40	16.76
	30	11/2/2007 9:38:00 AM	16.00	15.35	15.38	16.80

printed 1/14/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/2/2007 9:39:00 AM	16.00	15.36	15.37	16.83
	32	11/2/2007 9:40:00 AM	15.99	15.36	15.36	16.87
	33	11/2/2007 9:41:00 AM	16.00	15.34	15.34	16.90
	34	11/2/2007 9:42:00 AM	16.00	15.39	15.32	16.93
	35	11/2/2007 9:43:00 AM	15.95	15.36	15.27	16.96
	36	11/2/2007 9:44:00 AM	15.95	15.37	15.26	16.99
	37	11/2/2007 9:45:00 AM	15.95	15.37	15.24	17.02
	38	11/2/2007 9:46:00 AM	15.94	15.41	15.22	17.05
	39	11/2/2007 9:47:00 AM	15.93	15.42	15.21	17.12
	40	11/2/2007 9:48:00 AM	15.98	15.41	15.22	17.13
	41	11/2/2007 9:49:00 AM	15.97	15.40	15.19	17.16
	42	11/2/2007 9:50:00 AM	15.97	15.40	15.17	17.18
	43	11/2/2007 9:51:00 AM	15.93	15.40	15.16	17.20
	44	11/2/2007 9:52:00 AM	15.96	15.44	15.13	17.23
	45	11/2/2007 9:53:00 AM	15.95	15.43	15.11	17.24
	46	11/2/2007 9:54:00 AM	15.94	15.44	15.10	17.26
	47	11/2/2007 9:55:00 AM	15.93	15.43	15.08	17.28
	48	11/2/2007 9:56:00 AM	15.92	15.43	15.08	17.29
	49	11/2/2007 9:57:00 AM	15.92	15.43	15.07	17.32
	50	11/2/2007 9:58:00 AM	15.92	15.43	15.06	17.33
	51	11/2/2007 9:59:00 AM	15.91	15.43	15.03	17.35
	52	11/2/2007 10:00:00 AM	15.91	15.43	15.03	17.36
	53	11/2/2007 10:01:00 AM	15.90	15.46	15.02	17.38
	54	11/2/2007 10:02:00 AM	15.90	15.41	15.00	17.40
	55	11/2/2007 10:03:00 AM	15.90	15.46	15.00	17.42
	56	11/2/2007 10:04:00 AM	15.90	15.42	14.99	17.48
	57	11/2/2007 10:05:00 AM	15.90	15.43	14.97	17.45
	58	11/2/2007 10:06:00 AM	15.90	15.43	14.98	17.47
	59	11/2/2007 10:07:00 AM	15.90	15.44	14.97	17.49
	60	11/2/2007 10:08:00 AM	15.90	15.44	14.97	17.50
	61	11/2/2007 10:09:00 AM	15.90	15.46	14.96	17.51
	62	11/2/2007 10:10:00 AM	15.89	15.47	14.96	17.52
	63	11/2/2007 10:11:00 AM	15.88	15.42	14.95	17.58
	64	11/2/2007 10:12:00 AM	15.87	15.42	14.93	17.60
	65	11/2/2007 10:13:00 AM	15.87	15.46	14.93	17.60
	66	11/2/2007 10:14:00 AM	15.87	15.46	14.95	17.61
	67	11/2/2007 10:15:00 AM	15.89	15.50	14.94	17.61
	68	11/2/2007 10:16:00 AM	15.88	15.49	14.92	17.62
	69	11/2/2007 10:17:00 AM	15.87	15.50	14.91	17.62
	70	11/2/2007 10:18:00 AM	15.85	15.50	14.90	17.63
	71	11/2/2007 10:19:00 AM	15.87	15.50	14.88	17.64
	72	11/2/2007 10:20:00 AM	15.86	15.51	14.89	17.64
	73	11/2/2007 10:21:00 AM	15.86	15.51	14.87	17.65
	74	11/2/2007 10:22:00 AM	15.85	15.55	14.86	17.65
	75	11/2/2007 10:23:00 AM	15.85	15.51	14.85	17.66
	76	11/2/2007 10:24:00 AM	15.84	15.56	14.84	17.67
	77	11/2/2007 10:25:00 AM	15.86	15.55	14.86	17.67
	78	11/2/2007 10:26:00 AM	15.85	15.55	14.86	17.67
	79	11/2/2007 10:27:00 AM	15.84	15.55	14.84	17.68
	80	11/2/2007 10:28:00 AM	15.84	15.56	14.82	17.68

printed 1/14/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/2/2007 10:29:00 AM	15.83	15.56	14.80	17.68
	82	11/2/2007 10:30:00 AM	15.83	15.58	14.80	17.69
	83	11/2/2007 10:31:00 AM	15.83	15.59	14.78	17.69
	84	11/2/2007 10:32:00 AM	15.82	15.60	14.80	17.69
	85	11/2/2007 10:33:00 AM	15.81	15.60	14.79	17.70
	86	11/2/2007 10:34:00 AM	15.82	15.61	14.77	17.70
	87	11/2/2007 10:35:00 AM	15.82	15.61	14.76	17.70
	88	11/2/2007 10:36:00 AM	15.81	15.62	14.75	17.70
	89	11/2/2007 10:37:00 AM	15.81	15.62	14.74	17.69
	90	11/2/2007 10:38:00 AM	15.81	15.64	14.72	17.70
	91	11/2/2007 10:39:00 AM	15.81	15.63	14.73	17.70
	92	11/2/2007 10:40:00 AM	15.78	15.63	14.71	^ 17.71
	93	11/2/2007 10:41:00 AM	15.80	15.66	14.69	^ 17.71
	94	11/2/2007 10:42:00 AM	15.79	15.67	14.72	^ 17.71
	95	11/2/2007 10:43:00 AM	15.78	15.65	14.72	17.70
	96	11/2/2007 10:44:00 AM	15.78	15.65	14.70	17.70
	97	11/2/2007 10:45:00 AM	15.78	15.66	14.68	17.70
	98	11/2/2007 10:46:00 AM	15.77	15.65	14.67	17.69
	99	11/2/2007 10:47:00 AM	15.76	15.69	14.66	17.69
	100	11/2/2007 10:48:00 AM	15.75	15.71	14.63	17.68
	101	11/2/2007 10:49:00 AM	15.74	15.70	14.62	17.68
	102	11/2/2007 10:50:00 AM	15.78	15.69	14.61	17.68
	103	11/2/2007 10:51:00 AM	15.76	15.68	14.59	17.67
	104	11/2/2007 10:52:00 AM	15.79	15.67	14.57	17.68
	105	11/2/2007 10:53:00 AM	15.75	15.71	14.56	17.67
	106	11/2/2007 10:54:00 AM	15.74	15.71	14.58	17.67
	107	11/2/2007 10:55:00 AM	15.74	15.70	14.55	17.67
	108	11/2/2007 10:56:00 AM	15.74	15.70	14.56	17.67
	109	11/2/2007 10:57:00 AM	15.73	15.72	14.55	17.70
	110	11/2/2007 10:58:00 AM	15.75	15.72	14.54	17.69
	111	11/2/2007 10:59:00 AM	15.74	15.69	14.52	17.66
	112	11/2/2007 11:00:00 AM	15.74	15.69	14.51	17.65
	113	11/2/2007 11:01:00 AM	15.74	15.70	14.50	17.66
	114	11/2/2007 11:02:00 AM	15.73	15.69	14.49	17.65
	115	11/2/2007 11:03:00 AM	15.73	15.69	14.48	17.65
	116	11/2/2007 11:04:00 AM	15.69	15.73	14.47	17.64
	117	11/2/2007 11:05:00 AM	15.69	15.73	14.46	17.65
	118	11/2/2007 11:06:00 AM	15.68	15.69	14.46	17.64
	119	11/2/2007 11:07:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	120	11/2/2007 11:08:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	121	11/2/2007 11:09:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	122	11/2/2007 11:10:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	123	11/2/2007 11:11:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	124	11/2/2007 11:12:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	125	11/2/2007 11:13:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	126	11/2/2007 11:14:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	127	11/2/2007 11:15:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	128	11/2/2007 11:16:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	129	11/2/2007 11:17:00 AM	15.54	15.57	14.29	17.61
	130	11/2/2007 11:18:00 AM	15.62	15.62	14.35	17.63

printed 1/14/2008

Handy logger

Name : **LOGGER 2**

LOG Name	11020907
Interval	00:01:00
Personnel	

Start	11/2/2007 9:07:52 AM
Stop	11/2/2007 11:19:20 AM
Comment	

Data	134
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.52	-2.24	15.66	15.34
Minimum	-7.50	-7.50	-7.50	-7.50
Average	12.20	-7.42	12.35	11.82
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/2/2007 9:07:52 AM	0.12	v -7.50	0.15	0.07
	2	11/2/2007 9:08:00 AM	0.13	v -7.50	0.15	0.08
	3	11/2/2007 9:09:00 AM	0.16	v -7.50	0.18	0.14
	4	11/2/2007 9:10:00 AM	0.17	v -7.50	0.17	0.12
	5	11/2/2007 9:11:00 AM	0.15	v -7.50	0.16	0.12
	6	11/2/2007 9:12:00 AM	0.17	v -7.50	0.16	0.12
	7	11/2/2007 9:13:00 AM	0.16	v -7.50	0.19	0.12
	8	11/2/2007 9:14:00 AM	12.36	v -7.50	14.45	14.09
	9	11/2/2007 9:15:00 AM	15.26	v -7.50	^ 15.66	^ 15.34
	10	11/2/2007 9:16:00 AM	15.29	v -7.50	15.59	15.31
	11	11/2/2007 9:17:00 AM	15.28	v -7.50	15.62	15.26
	12	11/2/2007 9:18:00 AM	15.28	^ -2.24	15.58	15.25
	13	11/2/2007 9:19:00 AM	15.25	v -7.50	15.60	15.21
	14	11/2/2007 9:20:00 AM	15.28	^ -2.24	15.60	15.24
	15	11/2/2007 9:21:00 AM	15.26	v -7.50	15.58	15.25
	16	11/2/2007 9:22:00 AM	15.28	v -7.50	15.61	15.23
	17	11/2/2007 9:23:00 AM	15.28	v -7.50	15.59	15.23
	18	11/2/2007 9:24:00 AM	15.28	v -7.50	15.59	15.22
	19	11/2/2007 9:25:00 AM	15.28	v -7.50	15.59	15.21
	20	11/2/2007 9:26:00 AM	15.32	v -7.50	15.58	15.20
	21	11/2/2007 9:27:00 AM	15.32	v -7.50	15.58	15.19
	22	11/2/2007 9:28:00 AM	15.32	v -7.50	15.58	15.19
	23	11/2/2007 9:29:00 AM	15.32	v -7.50	15.58	15.18
	24	11/2/2007 9:30:00 AM	15.33	v -7.50	15.58	15.18
	25	11/2/2007 9:31:00 AM	15.33	v -7.50	15.58	15.17
	26	11/2/2007 9:32:00 AM	15.34	v -7.50	15.58	15.16
	27	11/2/2007 9:33:00 AM	15.35	v -7.50	15.59	15.17
	28	11/2/2007 9:34:00 AM	15.35	v -7.50	15.59	15.16
	29	11/2/2007 9:35:00 AM	15.35	v -7.50	15.59	15.16
	30	11/2/2007 9:36:00 AM	15.35	v -7.50	15.59	15.15

printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/2/2007 9:37:00 AM	15.35	v -7.50	15.59	15.14
	32	11/2/2007 9:38:00 AM	15.35	v -7.50	15.59	15.14
	33	11/2/2007 9:39:00 AM	15.36	v -7.50	15.60	15.13
	34	11/2/2007 9:40:00 AM	15.36	v -7.50	15.59	15.13
	35	11/2/2007 9:41:00 AM	15.36	v -7.50	15.59	15.12
	36	11/2/2007 9:42:00 AM	15.36	v -7.50	15.59	15.12
	37	11/2/2007 9:43:00 AM	15.36	v -7.50	15.59	15.11
	38	11/2/2007 9:44:00 AM	15.39	v -7.50	15.59	15.11
	39	11/2/2007 9:45:00 AM	15.39	v -7.50	15.59	15.10
	40	11/2/2007 9:46:00 AM	15.39	v -7.50	15.58	15.09
	41	11/2/2007 9:47:00 AM	15.39	v -7.50	15.58	15.08
	42	11/2/2007 9:48:00 AM	15.39	v -7.50	15.58	15.07
	43	11/2/2007 9:49:00 AM	15.40	v -7.50	15.57	15.07
	44	11/2/2007 9:50:00 AM	15.39	v -7.50	15.57	15.06
	45	11/2/2007 9:51:00 AM	15.39	v -7.50	15.58	15.05
	46	11/2/2007 9:52:00 AM	15.39	v -7.50	15.57	15.04
	47	11/2/2007 9:53:00 AM	15.39	v -7.50	15.57	15.05
	48	11/2/2007 9:54:00 AM	15.39	v -7.50	15.57	15.03
	49	11/2/2007 9:55:00 AM	15.42	v -7.50	15.57	15.03
	50	11/2/2007 9:56:00 AM	15.38	v -7.50	15.58	15.02
	51	11/2/2007 9:57:00 AM	15.41	v -7.50	15.56	15.05
	52	11/2/2007 9:58:00 AM	15.41	v -7.50	15.60	15.04
	53	11/2/2007 9:59:00 AM	15.41	v -7.50	15.62	15.03
	54	11/2/2007 10:00:00 AM	15.41	v -7.50	15.61	15.02
	55	11/2/2007 10:01:00 AM	15.41	v -7.50	15.61	15.02
	56	11/2/2007 10:02:00 AM	15.41	v -7.50	15.61	15.01
	57	11/2/2007 10:03:00 AM	15.41	v -7.50	15.60	14.99
	58	11/2/2007 10:04:00 AM	15.41	v -7.50	15.60	15.00
	59	11/2/2007 10:05:00 AM	15.42	v -7.50	15.60	14.98
	60	11/2/2007 10:06:00 AM	15.42	v -7.50	15.60	14.98
	61	11/2/2007 10:07:00 AM	15.42	v -7.50	15.59	14.97
	62	11/2/2007 10:08:00 AM	15.45	v -7.50	15.59	14.96
	63	11/2/2007 10:09:00 AM	15.44	v -7.50	15.58	14.95
	64	11/2/2007 10:10:00 AM	15.41	v -7.50	15.58	14.94
	65	11/2/2007 10:11:00 AM	15.45	v -7.50	15.58	14.94
	66	11/2/2007 10:12:00 AM	15.45	v -7.50	15.58	14.94
	67	11/2/2007 10:13:00 AM	15.45	v -7.50	15.57	14.93
	68	11/2/2007 10:14:00 AM	15.44	v -7.50	15.57	14.92
	69	11/2/2007 10:15:00 AM	15.44	v -7.50	15.56	14.94
	70	11/2/2007 10:16:00 AM	15.45	v -7.50	15.56	14.90
	71	11/2/2007 10:17:00 AM	15.44	v -7.50	15.57	14.90
	72	11/2/2007 10:18:00 AM	15.45	v -7.50	15.55	14.92
	73	11/2/2007 10:19:00 AM	15.45	v -7.50	15.56	14.91
	74	11/2/2007 10:20:00 AM	15.45	v -7.50	15.59	14.91
	75	11/2/2007 10:21:00 AM	15.44	v -7.50	15.58	14.89
	76	11/2/2007 10:22:00 AM	15.44	v -7.50	15.59	14.88
	77	11/2/2007 10:23:00 AM	15.44	v -7.50	15.58	14.88
	78	11/2/2007 10:24:00 AM	15.45	v -7.50	15.57	14.86
	79	11/2/2007 10:25:00 AM	15.44	v -7.50	15.57	14.85
	80	11/2/2007 10:26:00 AM	15.45	v -7.50	15.57	14.84

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/2/2007 10:27:00 AM	15.46	v -7.50	15.57	14.84
	82	11/2/2007 10:28:00 AM	15.46	v -7.50	15.57	14.83
	83	11/2/2007 10:29:00 AM	15.46	v -7.50	15.57	14.83
	84	11/2/2007 10:30:00 AM	15.47	v -7.50	15.57	14.82
	85	11/2/2007 10:31:00 AM	15.50	v -7.50	15.57	14.81
	86	11/2/2007 10:32:00 AM	^ 15.52	v -7.50	15.57	14.81
	87	11/2/2007 10:33:00 AM	15.51	v -7.50	15.57	14.80
	88	11/2/2007 10:34:00 AM	15.49	v -7.50	15.56	14.79
	89	11/2/2007 10:35:00 AM	15.51	v -7.50	15.56	14.79
	90	11/2/2007 10:36:00 AM	15.49	v -7.50	15.56	14.78
	91	11/2/2007 10:37:00 AM	^ 15.52	v -7.50	15.56	14.77
	92	11/2/2007 10:38:00 AM	15.48	v -7.50	15.55	14.76
	93	11/2/2007 10:39:00 AM	15.48	v -7.50	15.54	14.75
	94	11/2/2007 10:40:00 AM	15.47	v -7.50	15.54	14.74
	95	11/2/2007 10:41:00 AM	15.49	v -7.50	15.59	14.73
	96	11/2/2007 10:42:00 AM	15.48	v -7.50	15.59	14.73
	97	11/2/2007 10:43:00 AM	15.49	v -7.50	15.59	14.72
	98	11/2/2007 10:44:00 AM	15.49	v -7.50	15.58	14.71
	99	11/2/2007 10:45:00 AM	15.51	v -7.50	15.58	14.75
	100	11/2/2007 10:46:00 AM	15.49	v -7.50	15.57	14.74
	101	11/2/2007 10:47:00 AM	15.51	v -7.50	15.57	14.72
	102	11/2/2007 10:48:00 AM	15.49	v -7.50	15.56	14.72
	103	11/2/2007 10:49:00 AM	15.50	v -7.50	15.56	14.73
	104	11/2/2007 10:50:00 AM	15.48	v -7.50	15.55	14.72
	105	11/2/2007 10:51:00 AM	15.51	v -7.50	15.55	14.72
	106	11/2/2007 10:52:00 AM	15.49	v -7.50	15.55	14.70
	107	11/2/2007 10:53:00 AM	15.49	v -7.50	15.55	14.72
	108	11/2/2007 10:54:00 AM	15.48	v -7.50	15.54	14.69
	109	11/2/2007 10:55:00 AM	15.50	v -7.50	15.54	14.68
	110	11/2/2007 10:56:00 AM	15.49	v -7.50	15.53	14.67
	111	11/2/2007 10:57:00 AM	15.49	v -7.50	15.53	14.69
	112	11/2/2007 10:58:00 AM	15.48	v -7.50	15.53	14.66
	113	11/2/2007 10:59:00 AM	15.49	v -7.50	15.53	14.65
	114	11/2/2007 11:00:00 AM	15.48	v -7.50	15.53	14.65
	115	11/2/2007 11:01:00 AM	15.47	v -7.50	15.53	14.64
	116	11/2/2007 11:02:00 AM	15.47	v -7.50	15.53	14.63
	117	11/2/2007 11:03:00 AM	15.47	v -7.50	15.52	14.63
	118	11/2/2007 11:04:00 AM	15.46	v -7.50	15.52	14.62
	119	11/2/2007 11:05:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	120	11/2/2007 11:06:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	121	11/2/2007 11:07:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	122	11/2/2007 11:08:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	123	11/2/2007 11:09:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	124	11/2/2007 11:10:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	125	11/2/2007 11:11:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	126	11/2/2007 11:12:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	127	11/2/2007 11:13:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	128	11/2/2007 11:14:00 AM	v -7.50	v -7.50	v -7.50	v -7.50
	129	11/2/2007 11:15:00 AM	15.32	v -7.50	15.38	14.39
	130	11/2/2007 11:16:00 AM	15.37	v -7.50	15.45	14.47

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Handy logger

Name : **LOGGER 2**

LOG Name	11021346
Interval	00:01:00
Personnel	

Start	11/2/2007 1:46:02 PM
Stop	11/2/2007 1:46:27 PM
Comment	

Data	2
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

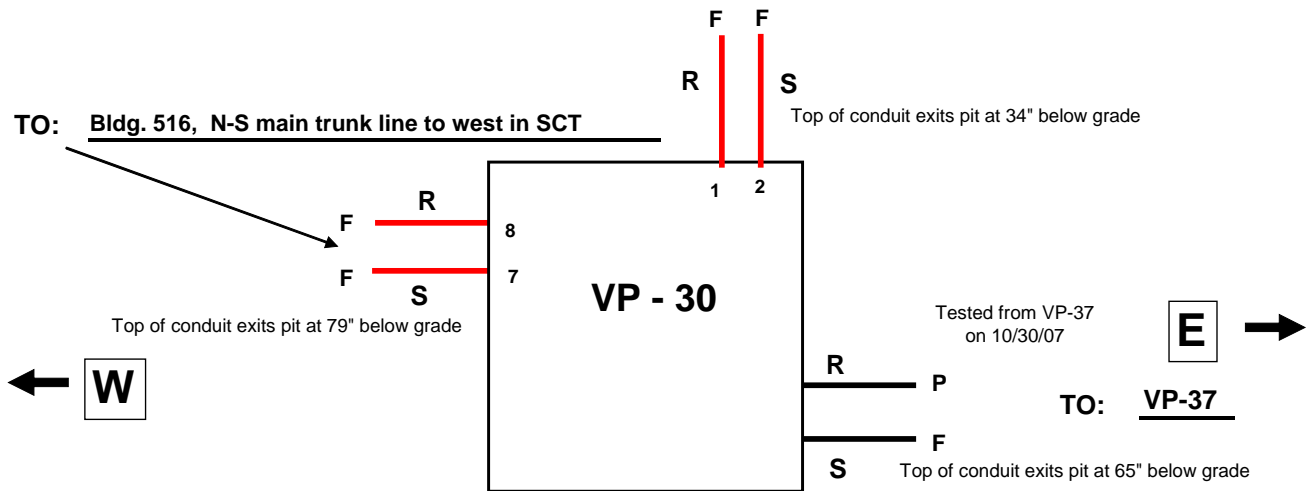
	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.46			
Minimum	15.44			
Average	15.45			
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/2/2007 1:46:02 PM	^ 15.46	O.R.	O.R.	O.R.
	2	11/2/2007 1:46:27 PM	v 15.44	O.R.	O.R.	O.R.

DATE: 10/31/2007



TO: Bldg. 440 (Dental Clinic)



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return
- SCT = Shallow Concrete Trench

NOTES:

1. Pit is clean. End plate leaks at Bldg. 516 on return side. Prior to pressure test, discharged approx. 1 gallon of water from low-point drain between VP-30 and destinations to west on supply conduit. Discharged approx. 3-4 gallons of water from low-point drain between VP-30 and destinations to west on return conduit.
2. All conduit drains dry at exits from pit.

VP - 30					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 440	F	Pressure drops quickly after termination of pressurization.
	2	2	Supply to Bldg. 440	F	Pressure fall to ambient immediately upon termination of pressurization
2	3	7	Supply to Bldg. 516, N-S main trunk in SCT	F	Excessive end-plate leakage at Bldg. 516
	4	8	Return to Bldg. 516, N-S main trunk in SCT	F	

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Handy logger

Name : **LOGGER 1**

LOG Name	10311044
Interval	00:01:00
Personnel	

Start	10/31/2007 10:44:53 AM
Stop	10/31/2007 11:01:33 AM
Comment	

Data	19
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.07	16.56		
Minimum	-7.50	-7.50		
Average	9.60	0.49		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/31/2007 10:44:53 AM	v -7.50	v -7.50	O.R.	O.R.
	2	10/31/2007 10:45:00 AM	v -7.50	v -7.50	O.R.	O.R.
	3	10/31/2007 10:46:00 AM	v -7.50	v -7.50	O.R.	O.R.
	4	10/31/2007 10:47:00 AM	^ 16.07	^ 16.56	O.R.	O.R.
	5	10/31/2007 10:48:00 AM	15.84	11.79	O.R.	O.R.
	6	10/31/2007 10:49:00 AM	v -7.50	v -7.50	O.R.	O.R.
	7	10/31/2007 10:50:00 AM	15.35	5.01	O.R.	O.R.
	8	10/31/2007 10:51:00 AM	15.11	2.73	O.R.	O.R.
	9	10/31/2007 10:52:00 AM	14.84	1.22	O.R.	O.R.
	10	10/31/2007 10:53:00 AM	14.61	0.39	O.R.	O.R.
	11	10/31/2007 10:54:00 AM	14.38	0.23	O.R.	O.R.
	12	10/31/2007 10:55:00 AM	14.11	0.20	O.R.	O.R.
	13	10/31/2007 10:56:00 AM	13.83	0.18	O.R.	O.R.
	14	10/31/2007 10:57:00 AM	13.61	0.20	O.R.	O.R.
	15	10/31/2007 10:58:00 AM	13.35	0.18	O.R.	O.R.
	16	10/31/2007 10:59:00 AM	13.14	0.16	O.R.	O.R.
	17	10/31/2007 11:00:00 AM	12.91	0.14	O.R.	O.R.
	18	10/31/2007 11:01:00 AM	12.68	0.14	O.R.	O.R.
	19	10/31/2007 11:01:33 AM	12.55	0.14	O.R.	O.R.

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Name : **LOGGER 2** **Handy logger**

LOG Name	10311318	Start	10/31/2007 1:18:43 PM	Data	155
Interval	00:01:00	Stop	10/31/2007 3:51:50 PM		
Personnel		Comment			

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			16.12	16.63
Minimum			-7.38	-7.38
Average			12.74	11.87
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/31/2007 1:18:43 PM	O.R.	O.R.	0.03	0.03
	2	10/31/2007 1:19:00 PM	O.R.	O.R.	0.07	0.05
	3	10/31/2007 1:20:00 PM	O.R.	O.R.	5.33	0.09
	4	10/31/2007 1:21:00 PM	O.R.	O.R.	6.46	0.12
	5	10/31/2007 1:22:00 PM	O.R.	O.R.	7.46	0.11
	6	10/31/2007 1:23:00 PM	O.R.	O.R.	8.13	0.10
	7	10/31/2007 1:24:00 PM	O.R.	O.R.	8.71	0.08
	8	10/31/2007 1:25:00 PM	O.R.	O.R.	9.19	0.07
	9	10/31/2007 1:26:00 PM	O.R.	O.R.	9.55	0.07
	10	10/31/2007 1:27:00 PM	O.R.	O.R.	9.44	0.07
	11	10/31/2007 1:28:00 PM	O.R.	O.R.	9.81	0.06
	12	10/31/2007 1:29:00 PM	O.R.	O.R.	10.05	0.06
	13	10/31/2007 1:30:00 PM	O.R.	O.R.	6.61	0.06
	14	10/31/2007 1:31:00 PM	O.R.	O.R.	v -7.38	v -7.38
	15	10/31/2007 1:32:00 PM	O.R.	O.R.	2.91	0.05
	16	10/31/2007 1:33:00 PM	O.R.	O.R.	2.01	0.07
	17	10/31/2007 1:34:00 PM	O.R.	O.R.	-2.06	0.07
	18	10/31/2007 1:35:00 PM	O.R.	O.R.	2.04	0.06
	19	10/31/2007 1:36:00 PM	O.R.	O.R.	6.57	0.06
	20	10/31/2007 1:37:00 PM	O.R.	O.R.	8.40	0.09
	21	10/31/2007 1:38:00 PM	O.R.	O.R.	9.13	0.08
	22	10/31/2007 1:39:00 PM	O.R.	O.R.	11.47	0.08
	23	10/31/2007 1:40:00 PM	O.R.	O.R.	13.77	0.08
	24	10/31/2007 1:41:00 PM	O.R.	O.R.	^ 16.12	0.08
	25	10/31/2007 1:42:00 PM	O.R.	O.R.	15.32	0.08
	26	10/31/2007 1:43:00 PM	O.R.	O.R.	15.25	0.07
	27	10/31/2007 1:44:00 PM	O.R.	O.R.	15.20	4.67
	28	10/31/2007 1:45:00 PM	O.R.	O.R.	15.20	6.53
	29	10/31/2007 1:46:00 PM	O.R.	O.R.	15.15	8.01
	30	10/31/2007 1:47:00 PM	O.R.	O.R.	15.10	5.40

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/31/2007 1:48:00 PM	O.R.	O.R.	15.05	9.75
	32	10/31/2007 1:49:00 PM	O.R.	O.R.	15.01	11.96
	33	10/31/2007 1:50:00 PM	O.R.	O.R.	14.97	14.29
	34	10/31/2007 1:51:00 PM	O.R.	O.R.	14.92	^ 16.63
	35	10/31/2007 1:52:00 PM	O.R.	O.R.	14.88	15.52
	36	10/31/2007 1:53:00 PM	O.R.	O.R.	14.84	15.47
	37	10/31/2007 1:54:00 PM	O.R.	O.R.	14.81	15.45
	38	10/31/2007 1:55:00 PM	O.R.	O.R.	14.80	15.42
	39	10/31/2007 1:56:00 PM	O.R.	O.R.	14.78	15.39
	40	10/31/2007 1:57:00 PM	O.R.	O.R.	14.72	15.37
	41	10/31/2007 1:58:00 PM	O.R.	O.R.	14.72	15.36
	42	10/31/2007 1:59:00 PM	O.R.	O.R.	14.70	15.37
	43	10/31/2007 2:00:00 PM	O.R.	O.R.	14.68	15.32
	44	10/31/2007 2:01:00 PM	O.R.	O.R.	14.67	15.30
	45	10/31/2007 2:02:00 PM	O.R.	O.R.	14.65	15.29
	46	10/31/2007 2:03:00 PM	O.R.	O.R.	14.64	15.27
	47	10/31/2007 2:04:00 PM	O.R.	O.R.	14.59	15.26
	48	10/31/2007 2:05:00 PM	O.R.	O.R.	14.57	15.25
	49	10/31/2007 2:06:00 PM	O.R.	O.R.	14.56	15.23
	50	10/31/2007 2:07:00 PM	O.R.	O.R.	14.54	15.23
	51	10/31/2007 2:08:00 PM	O.R.	O.R.	14.52	15.22
	52	10/31/2007 2:09:00 PM	O.R.	O.R.	14.50	15.20
	53	10/31/2007 2:10:00 PM	O.R.	O.R.	14.52	15.19
	54	10/31/2007 2:11:00 PM	O.R.	O.R.	14.50	15.16
	55	10/31/2007 2:12:00 PM	O.R.	O.R.	14.47	15.15
	56	10/31/2007 2:13:00 PM	O.R.	O.R.	14.45	15.13
	57	10/31/2007 2:14:00 PM	O.R.	O.R.	14.44	15.12
	58	10/31/2007 2:15:00 PM	O.R.	O.R.	14.41	15.11
	59	10/31/2007 2:16:00 PM	O.R.	O.R.	14.40	15.10
	60	10/31/2007 2:17:00 PM	O.R.	O.R.	14.39	15.10
	61	10/31/2007 2:18:00 PM	O.R.	O.R.	14.36	15.08
	62	10/31/2007 2:19:00 PM	O.R.	O.R.	14.34	15.06
	63	10/31/2007 2:20:00 PM	O.R.	O.R.	14.37	15.06
	64	10/31/2007 2:21:00 PM	O.R.	O.R.	14.30	15.04
	65	10/31/2007 2:22:00 PM	O.R.	O.R.	14.28	15.03
	66	10/31/2007 2:23:00 PM	O.R.	O.R.	14.31	15.02
	67	10/31/2007 2:24:00 PM	O.R.	O.R.	14.29	15.00
	68	10/31/2007 2:25:00 PM	O.R.	O.R.	14.26	14.99
	69	10/31/2007 2:26:00 PM	O.R.	O.R.	14.20	14.98
	70	10/31/2007 2:27:00 PM	O.R.	O.R.	14.23	14.96
	71	10/31/2007 2:28:00 PM	O.R.	O.R.	14.22	14.95
	72	10/31/2007 2:29:00 PM	O.R.	O.R.	14.20	14.93
	73	10/31/2007 2:30:00 PM	O.R.	O.R.	14.16	14.92
	74	10/31/2007 2:31:00 PM	O.R.	O.R.	14.16	14.91
	75	10/31/2007 2:32:00 PM	O.R.	O.R.	14.14	14.90
	76	10/31/2007 2:33:00 PM	O.R.	O.R.	14.11	14.88
	77	10/31/2007 2:34:00 PM	O.R.	O.R.	14.08	14.86
	78	10/31/2007 2:35:00 PM	O.R.	O.R.	14.07	14.84
	79	10/31/2007 2:36:00 PM	O.R.	O.R.	14.03	14.84
	80	10/31/2007 2:37:00 PM	O.R.	O.R.	14.02	14.83

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/31/2007 2:38:00 PM	O.R.	O.R.	14.00	14.80
	82	10/31/2007 2:39:00 PM	O.R.	O.R.	13.98	14.81
	83	10/31/2007 2:40:00 PM	O.R.	O.R.	13.97	14.79
	84	10/31/2007 2:41:00 PM	O.R.	O.R.	13.96	14.74
	85	10/31/2007 2:42:00 PM	O.R.	O.R.	13.95	14.72
	86	10/31/2007 2:43:00 PM	O.R.	O.R.	13.94	14.71
	87	10/31/2007 2:44:00 PM	O.R.	O.R.	13.92	14.71
	88	10/31/2007 2:45:00 PM	O.R.	O.R.	13.90	14.70
	89	10/31/2007 2:46:00 PM	O.R.	O.R.	13.90	14.68
	90	10/31/2007 2:47:00 PM	O.R.	O.R.	13.83	14.67
	91	10/31/2007 2:48:00 PM	O.R.	O.R.	13.82	14.66
	92	10/31/2007 2:49:00 PM	O.R.	O.R.	13.82	14.65
	93	10/31/2007 2:50:00 PM	O.R.	O.R.	13.80	14.63
	94	10/31/2007 2:51:00 PM	O.R.	O.R.	13.75	14.63
	95	10/31/2007 2:52:00 PM	O.R.	O.R.	13.74	14.61
	96	10/31/2007 2:53:00 PM	O.R.	O.R.	13.73	14.57
	97	10/31/2007 2:54:00 PM	O.R.	O.R.	13.71	14.55
	98	10/31/2007 2:55:00 PM	O.R.	O.R.	13.69	14.55
	99	10/31/2007 2:56:00 PM	O.R.	O.R.	13.68	14.53
	100	10/31/2007 2:57:00 PM	O.R.	O.R.	13.65	14.52
	101	10/31/2007 2:58:00 PM	O.R.	O.R.	13.64	14.51
	102	10/31/2007 2:59:00 PM	O.R.	O.R.	13.62	14.50
	103	10/31/2007 3:00:00 PM	O.R.	O.R.	13.61	14.48
	104	10/31/2007 3:01:00 PM	O.R.	O.R.	13.60	14.47
	105	10/31/2007 3:02:00 PM	O.R.	O.R.	13.58	14.45
	106	10/31/2007 3:03:00 PM	O.R.	O.R.	13.56	14.44
	107	10/31/2007 3:04:00 PM	O.R.	O.R.	13.54	14.43
	108	10/31/2007 3:05:00 PM	O.R.	O.R.	13.56	14.41
	109	10/31/2007 3:06:00 PM	O.R.	O.R.	13.54	14.39
	110	10/31/2007 3:07:00 PM	O.R.	O.R.	13.51	14.41
	111	10/31/2007 3:08:00 PM	O.R.	O.R.	13.49	14.40
	112	10/31/2007 3:09:00 PM	O.R.	O.R.	13.47	14.35
	113	10/31/2007 3:10:00 PM	O.R.	O.R.	13.46	14.34
	114	10/31/2007 3:11:00 PM	O.R.	O.R.	13.41	14.33
	115	10/31/2007 3:12:00 PM	O.R.	O.R.	13.43	14.34
	116	10/31/2007 3:13:00 PM	O.R.	O.R.	13.38	14.32
	117	10/31/2007 3:14:00 PM	O.R.	O.R.	13.35	14.31
	118	10/31/2007 3:15:00 PM	O.R.	O.R.	13.38	14.29
	119	10/31/2007 3:16:00 PM	O.R.	O.R.	13.36	14.28
	120	10/31/2007 3:17:00 PM	O.R.	O.R.	13.34	14.26
	121	10/31/2007 3:18:00 PM	O.R.	O.R.	13.29	14.25
	122	10/31/2007 3:19:00 PM	O.R.	O.R.	13.28	14.25
	123	10/31/2007 3:20:00 PM	O.R.	O.R.	13.26	14.23
	124	10/31/2007 3:21:00 PM	O.R.	O.R.	13.25	14.19
	125	10/31/2007 3:22:00 PM	O.R.	O.R.	13.24	14.18
	126	10/31/2007 3:23:00 PM	O.R.	O.R.	13.23	14.17
	127	10/31/2007 3:24:00 PM	O.R.	O.R.	13.22	14.16
	128	10/31/2007 3:25:00 PM	O.R.	O.R.	13.20	14.14
	129	10/31/2007 3:26:00 PM	O.R.	O.R.	13.19	14.13
	130	10/31/2007 3:27:00 PM	O.R.	O.R.	13.17	14.12

printed 1/14/2008

Handy logger

Name : LOGGER 2

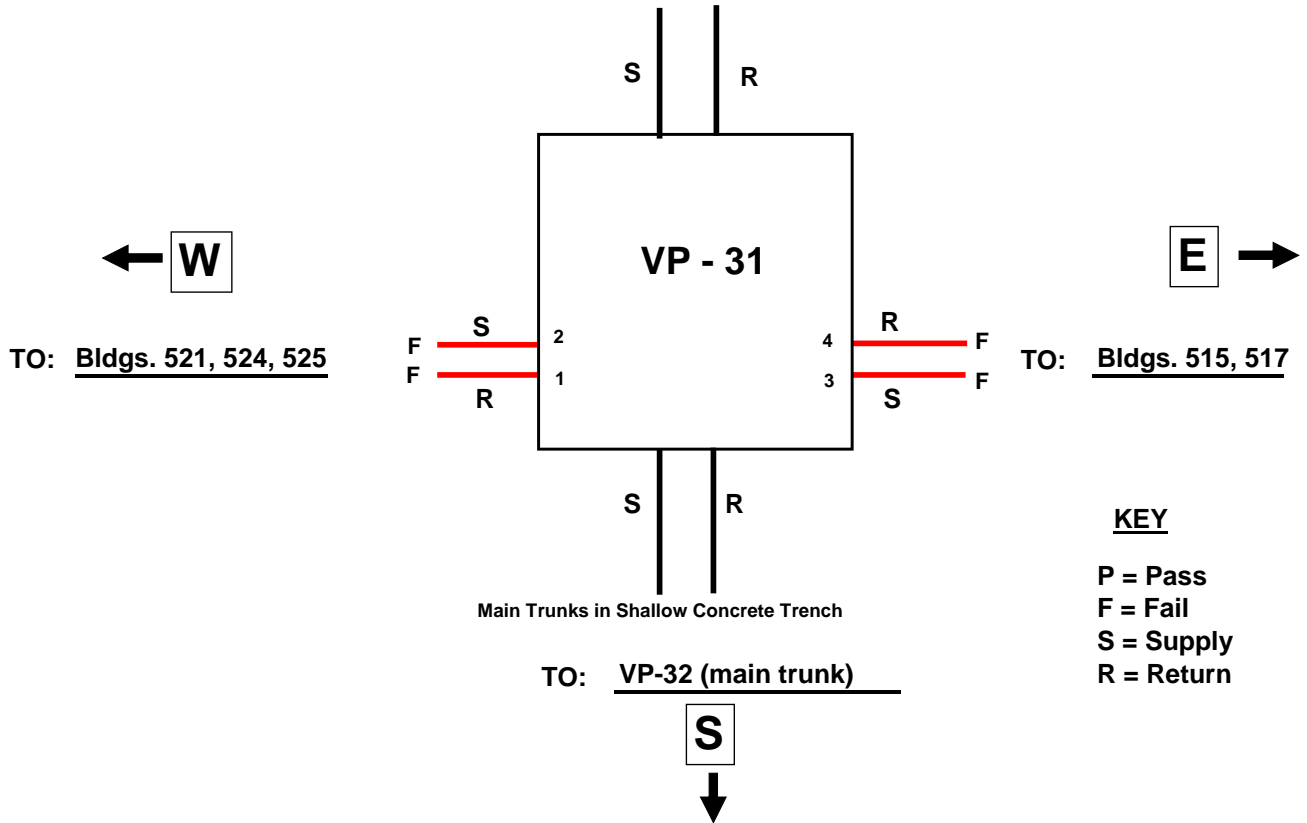
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/31/2007 3:28:00 PM	O.R.	O.R.	13.15	14.11
	132	10/31/2007 3:29:00 PM	O.R.	O.R.	13.12	14.10
	133	10/31/2007 3:30:00 PM	O.R.	O.R.	13.10	14.09
	134	10/31/2007 3:31:00 PM	O.R.	O.R.	13.09	14.08
	135	10/31/2007 3:32:00 PM	O.R.	O.R.	13.07	14.07
	136	10/31/2007 3:33:00 PM	O.R.	O.R.	13.04	14.05
	137	10/31/2007 3:34:00 PM	O.R.	O.R.	13.03	14.03
	138	10/31/2007 3:35:00 PM	O.R.	O.R.	13.01	14.02
	139	10/31/2007 3:36:00 PM	O.R.	O.R.	12.99	14.00
	140	10/31/2007 3:37:00 PM	O.R.	O.R.	12.97	13.99
	141	10/31/2007 3:38:00 PM	O.R.	O.R.	12.95	13.97
	142	10/31/2007 3:39:00 PM	O.R.	O.R.	12.93	13.97
	143	10/31/2007 3:40:00 PM	O.R.	O.R.	12.91	13.95
	144	10/31/2007 3:41:00 PM	O.R.	O.R.	12.90	13.94
	145	10/31/2007 3:42:00 PM	O.R.	O.R.	12.88	13.92
	146	10/31/2007 3:43:00 PM	O.R.	O.R.	12.86	13.90
	147	10/31/2007 3:44:00 PM	O.R.	O.R.	12.84	13.89
	148	10/31/2007 3:45:00 PM	O.R.	O.R.	12.82	13.88
	149	10/31/2007 3:46:00 PM	O.R.	O.R.	12.80	13.86
	150	10/31/2007 3:47:00 PM	O.R.	O.R.	12.78	13.84
	151	10/31/2007 3:48:00 PM	O.R.	O.R.	12.77	13.83
	152	10/31/2007 3:49:00 PM	O.R.	O.R.	12.75	13.81
	153	10/31/2007 3:50:00 PM	O.R.	O.R.	12.73	13.80
	154	10/31/2007 3:51:00 PM	O.R.	O.R.	12.71	13.78
	155	10/31/2007 3:51:50 PM	O.R.	O.R.	12.69	13.77

DATE: 10/31/2007



TO: VP-20 to north, VP-30 to east (main trunks)

Main Trunks in Shallow Concrete Trench



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

NOTES:

1. Pit in line with shallow concrete trench carrying N-S main conduits. Clean and dry. Small amount of water discharged from supply and return lines at low-point drain between pit and Bldgs. 521, 524 and 525 (also drain end plate leaked badly on one of the lines). Low-point drain between pit and Bldgs. 515 and 517 discharged approx. 2 gallons of water from one line, other line was dry.
2. All line drains at exits from pit are dry.

VP - 31					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldgs. 521, 524 and 525	F	Bad leak at end plate on Bldg. 521, also at low-point drain
	2	2	Supply to Bldgs. 521, 524 and 525	F	Bad leak at end plate on Bldg. 521, also at low-point drain
	3	3	Supply to Bldgs. 515 and 517	F	Substantial air discharge around conduit at exit of pit
	4	4	Return to Bldgs. 515 and 517	F	Substantial air discharge around conduit at exit of pit

printed 1/14/2008

Handy logger

Name : LOGGER 1

LOG Name	10311441
Interval	00:01:00
Personnel	

Start	10/31/2007 2:41:01 PM
Stop	10/31/2007 3:04:52 PM
Comment	

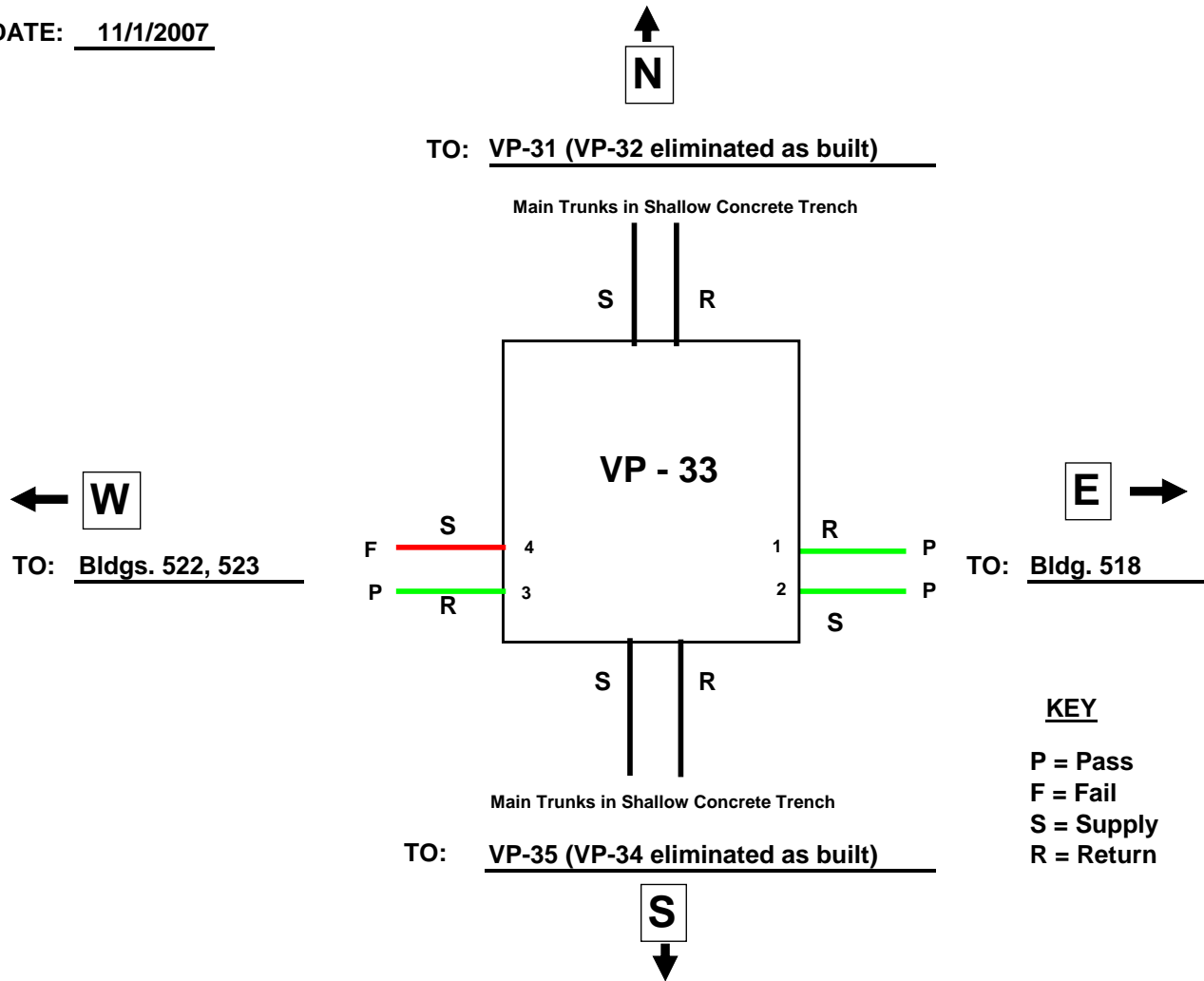
Data	25
------	----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.79	16.66	6.29	6.99
Minimum	-7.42	-7.45	-7.50	-7.45
Average	11.52	7.69	1.12	2.32
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/31/2007 2:41:01 PM	-0.06	-0.03	v -7.50	0.14
	2	10/31/2007 2:42:00 PM	v -7.42	v -7.45	O.R.	v -7.45
	3	10/31/2007 2:43:00 PM	-0.05	-0.04	v -7.50	0.13
	4	10/31/2007 2:44:00 PM	1.30	1.53	0.04	0.13
	5	10/31/2007 2:45:00 PM	6.67	6.57	2.04	2.37
	6	10/31/2007 2:46:00 PM	12.14	12.49	v -7.50	0.16
	7	10/31/2007 2:47:00 PM	^ 16.79	^ 16.66	v -7.50	0.19
	8	10/31/2007 2:48:00 PM	15.85	14.87	0.01	0.16
	9	10/31/2007 2:49:00 PM	15.64	14.02	6.17	6.80
	10	10/31/2007 2:50:00 PM	15.46	13.20	6.28	6.74
	11	10/31/2007 2:51:00 PM	15.26	12.40	6.24	6.84
	12	10/31/2007 2:52:00 PM	15.06	11.64	6.28	6.93
	13	10/31/2007 2:53:00 PM	14.90	10.94	6.21	6.82
	14	10/31/2007 2:54:00 PM	14.73	10.27	^ 6.29	^ 6.99
	15	10/31/2007 2:55:00 PM	14.56	9.63	6.23	6.93
	16	10/31/2007 2:56:00 PM	14.40	9.01	6.02	6.77
	17	10/31/2007 2:57:00 PM	14.25	8.40	6.16	6.93
	18	10/31/2007 2:58:00 PM	14.10	7.83	-0.11	0.08
	19	10/31/2007 2:59:00 PM	13.94	7.28	-0.14	0.06
	20	10/31/2007 3:00:00 PM	13.79	6.73	-0.14	0.04
	21	10/31/2007 3:01:00 PM	13.65	6.18	-0.16	0.04
	22	10/31/2007 3:02:00 PM	13.51	5.70	-0.16	0.05
	23	10/31/2007 3:03:00 PM	13.36	5.20	-0.15	0.05
	24	10/31/2007 3:04:00 PM	13.19	4.76	-0.13	0.07
	25	10/31/2007 3:04:52 PM	13.06	4.38	-0.12	0.08

DATE: 11/1/2007



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

NOTES:

1. All drains dry at pit exit.
2. No low-point drain pits associated with this valve pit.

VP - 33					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 518	P	Top of conduit exits pit at 19" below grade.
	2	2	Supply to Bldg. 518	P	Top of conduit exits pit at 19" below grade.
	3	3	Return to Bldgs. 522 and 523	P	Top of conduit exits pit at 42" below grade.
	4	4	Supply to Bldgs. 522 and 523	F	No obvious leaks at end-point vents. Top of conduit exits pit at 42" below grade.

MH-33 test on 11/01/07, initiated at 0915; terminated at 1125

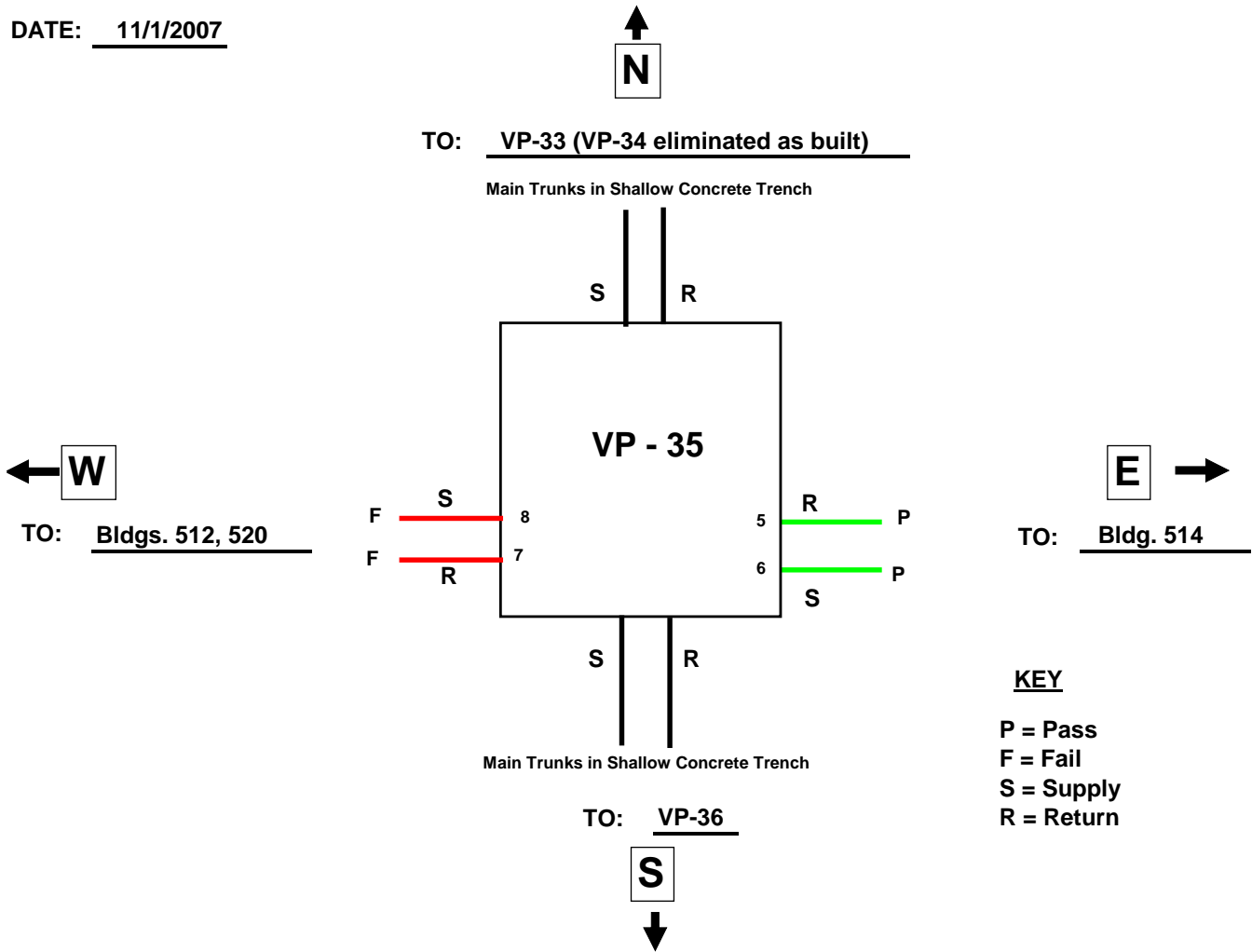
Automatic data logging not initiated (operator error). Pressure data monitored manually in real time.

Supply and return to Bldg. 518 both passed @ 120 minutes (data channels 1 and 2)

Return to Bldgs. 522 and 523 passed @ 120 minutes (data channel 3)

Supply to Bldgs. 522 and 523 failed at approximately one-hour after pressurization (data channel 4)

DATE: 11/1/2007



NOTES:

1. All conduit drains dry at exit from pit.
2. Low-point drain at NW corner of Bldg. 512 is dry.

Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Return to Bldg. 514	P	Top of conduit exits pit at 31" below grade
	2	6	Supply to Bldg. 514	P	Top of conduit exits pit at 31" below grade
	3	7	Return to Bldgs. 512, 520	F	Top of conduit exits pit at 32" below grade
	4	8	Supply to Bldgs. 512, 520	F	Top of conduit exits pit at 32" below grade

printed 1/14/2008

Handy logger

Name : LOGGER 2

LOG Name	11011054
Interval	00:01:00
Personnel	

Start	11/1/2007 10:54:53 AM
Stop	11/1/2007 1:03:32 PM
Comment	

Data	131
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.11	17.58	16.89	16.48
Minimum	0.15	0.21	0.10	0.10
Average	14.95	14.84	14.25	14.74
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/1/2007 10:54:53 AM	0.16	v 0.21	v 0.10	v 0.10
	2	11/1/2007 10:55:00 AM	0.16	v 0.21	v 0.10	v 0.10
	3	11/1/2007 10:56:00 AM	v 0.15	0.23	4.94	2.15
	4	11/1/2007 10:57:00 AM	0.17	0.25	9.22	9.98
	5	11/1/2007 10:58:00 AM	0.18	0.24	14.30	14.89
	6	11/1/2007 10:59:00 AM	v 0.15	0.26	14.81	14.69
	7	11/1/2007 11:00:00 AM	0.17	0.27	^ 16.89	^ 16.48
	8	11/1/2007 11:01:00 AM	9.43	9.18	16.81	16.41
	9	11/1/2007 11:02:00 AM	14.49	^ 17.58	16.72	16.42
	10	11/1/2007 11:03:00 AM	^ 16.11	15.83	16.71	16.33
	11	11/1/2007 11:04:00 AM	16.08	15.84	16.61	16.29
	12	11/1/2007 11:05:00 AM	16.03	15.82	16.57	16.27
	13	11/1/2007 11:06:00 AM	16.01	15.81	16.50	16.25
	14	11/1/2007 11:07:00 AM	15.99	15.79	16.49	16.21
	15	11/1/2007 11:08:00 AM	15.99	15.77	16.44	16.19
	16	11/1/2007 11:09:00 AM	15.96	15.77	16.37	16.17
	17	11/1/2007 11:10:00 AM	15.99	15.81	16.35	16.15
	18	11/1/2007 11:11:00 AM	15.98	15.80	16.31	16.13
	19	11/1/2007 11:12:00 AM	15.98	15.81	16.28	16.13
	20	11/1/2007 11:13:00 AM	15.97	15.81	16.26	16.08
	21	11/1/2007 11:14:00 AM	16.00	15.81	16.24	16.08
	22	11/1/2007 11:15:00 AM	16.00	15.82	16.20	16.09
	23	11/1/2007 11:16:00 AM	16.00	15.82	16.17	16.04
	24	11/1/2007 11:17:00 AM	15.99	15.83	16.13	16.03
	25	11/1/2007 11:18:00 AM	16.00	15.83	16.09	16.00
	26	11/1/2007 11:19:00 AM	16.00	15.80	16.05	16.00
	27	11/1/2007 11:20:00 AM	16.00	15.80	16.02	16.00
	28	11/1/2007 11:21:00 AM	15.99	15.80	15.98	15.98
	29	11/1/2007 11:22:00 AM	16.00	15.80	15.94	15.95
	30	11/1/2007 11:23:00 AM	15.99	15.81	15.90	15.93

printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/1/2007 11:24:00 AM	15.99	15.81	15.87	15.91
	32	11/1/2007 11:25:00 AM	15.99	15.81	15.83	15.89
	33	11/1/2007 11:26:00 AM	15.99	15.82	15.79	15.86
	34	11/1/2007 11:27:00 AM	15.99	15.82	15.76	15.83
	35	11/1/2007 11:28:00 AM	15.96	15.82	15.71	15.81
	36	11/1/2007 11:29:00 AM	15.98	15.82	15.68	15.79
	37	11/1/2007 11:30:00 AM	15.98	15.82	15.64	15.77
	38	11/1/2007 11:31:00 AM	15.98	15.82	15.61	15.76
	39	11/1/2007 11:32:00 AM	15.95	15.82	15.58	15.74
	40	11/1/2007 11:33:00 AM	15.98	15.82	15.54	15.71
	41	11/1/2007 11:34:00 AM	15.95	15.82	15.50	15.68
	42	11/1/2007 11:35:00 AM	15.98	15.82	15.46	15.70
	43	11/1/2007 11:36:00 AM	15.97	15.82	15.42	15.67
	44	11/1/2007 11:37:00 AM	15.97	15.82	15.38	15.66
	45	11/1/2007 11:38:00 AM	15.96	15.81	15.34	15.62
	46	11/1/2007 11:39:00 AM	15.95	15.81	15.34	15.60
	47	11/1/2007 11:40:00 AM	15.94	15.82	15.26	15.57
	48	11/1/2007 11:41:00 AM	15.94	15.82	15.23	15.55
	49	11/1/2007 11:42:00 AM	15.92	15.82	15.19	15.52
	50	11/1/2007 11:43:00 AM	15.92	15.80	15.16	15.50
	51	11/1/2007 11:44:00 AM	15.92	15.79	15.12	15.48
	52	11/1/2007 11:45:00 AM	15.91	15.80	15.09	15.46
	53	11/1/2007 11:46:00 AM	15.90	15.81	15.05	15.43
	54	11/1/2007 11:47:00 AM	15.90	15.81	15.01	15.40
	55	11/1/2007 11:48:00 AM	15.89	15.80	15.01	15.38
	56	11/1/2007 11:49:00 AM	15.89	15.80	14.97	15.36
	57	11/1/2007 11:50:00 AM	15.92	15.80	14.93	15.33
	58	11/1/2007 11:51:00 AM	15.91	15.79	14.89	15.31
	59	11/1/2007 11:52:00 AM	15.90	15.79	14.86	15.29
	60	11/1/2007 11:53:00 AM	15.90	15.78	14.82	15.28
	61	11/1/2007 11:54:00 AM	15.86	15.79	14.79	15.26
	62	11/1/2007 11:55:00 AM	15.89	15.79	14.74	15.23
	63	11/1/2007 11:56:00 AM	15.88	15.78	14.72	15.22
	64	11/1/2007 11:57:00 AM	15.88	15.78	14.67	15.21
	65	11/1/2007 11:58:00 AM	15.87	15.78	14.64	15.19
	66	11/1/2007 11:59:00 AM	15.84	15.77	14.61	15.13
	67	11/1/2007 12:00:00 PM	15.87	15.76	14.58	15.15
	68	11/1/2007 12:01:00 PM	15.86	15.77	14.54	15.10
	69	11/1/2007 12:02:00 PM	15.86	15.76	14.51	15.08
	70	11/1/2007 12:03:00 PM	15.85	15.76	14.47	15.06
	71	11/1/2007 12:04:00 PM	15.85	15.76	14.44	15.04
	72	11/1/2007 12:05:00 PM	15.84	15.77	14.40	15.02
	73	11/1/2007 12:06:00 PM	15.83	15.77	14.36	15.00
	74	11/1/2007 12:07:00 PM	15.82	15.76	14.37	15.02
	75	11/1/2007 12:08:00 PM	15.85	15.75	14.32	14.98
	76	11/1/2007 12:09:00 PM	15.84	15.75	14.28	14.96
	77	11/1/2007 12:10:00 PM	15.85	15.74	14.25	14.93
	78	11/1/2007 12:11:00 PM	15.82	15.74	14.21	14.91
	79	11/1/2007 12:12:00 PM	15.81	15.74	14.17	14.91
	80	11/1/2007 12:13:00 PM	15.83	15.73	14.12	14.88

printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/1/2007 12:14:00 PM	15.83	15.72	14.13	14.85
	82	11/1/2007 12:15:00 PM	15.82	15.72	14.06	14.81
	83	11/1/2007 12:16:00 PM	15.82	15.71	14.02	14.81
	84	11/1/2007 12:17:00 PM	15.80	15.71	14.02	14.80
	85	11/1/2007 12:18:00 PM	15.81	15.74	13.98	14.77
	86	11/1/2007 12:19:00 PM	15.80	15.73	13.95	14.75
	87	11/1/2007 12:20:00 PM	15.80	15.72	13.92	14.73
	88	11/1/2007 12:21:00 PM	15.82	15.71	13.88	14.71
	89	11/1/2007 12:22:00 PM	15.81	15.70	13.85	14.69
	90	11/1/2007 12:23:00 PM	15.80	15.70	13.82	14.67
	91	11/1/2007 12:24:00 PM	15.80	15.70	13.79	14.65
	92	11/1/2007 12:25:00 PM	15.79	15.69	13.76	14.63
	93	11/1/2007 12:26:00 PM	15.77	15.68	13.74	14.61
	94	11/1/2007 12:27:00 PM	15.76	15.67	13.67	14.57
	95	11/1/2007 12:28:00 PM	15.76	15.67	13.65	14.55
	96	11/1/2007 12:29:00 PM	15.76	15.66	13.62	14.53
	97	11/1/2007 12:30:00 PM	15.75	15.66	13.63	14.51
	98	11/1/2007 12:31:00 PM	15.75	15.65	13.61	14.49
	99	11/1/2007 12:32:00 PM	15.77	15.64	13.58	14.50
	100	11/1/2007 12:33:00 PM	15.77	15.63	13.55	14.47
	101	11/1/2007 12:34:00 PM	15.78	15.62	13.51	14.45
	102	11/1/2007 12:35:00 PM	15.75	15.63	13.51	14.45
	103	11/1/2007 12:36:00 PM	15.75	15.62	13.48	14.44
	104	11/1/2007 12:37:00 PM	15.74	15.60	13.44	14.37
	105	11/1/2007 12:38:00 PM	15.74	15.59	13.42	14.40
	106	11/1/2007 12:39:00 PM	15.73	15.59	13.37	14.40
	107	11/1/2007 12:40:00 PM	15.73	15.58	13.35	14.35
	108	11/1/2007 12:41:00 PM	15.72	15.57	13.32	14.33
	109	11/1/2007 12:42:00 PM	15.71	15.55	13.29	14.34
	110	11/1/2007 12:43:00 PM	15.71	15.55	13.25	14.32
	111	11/1/2007 12:44:00 PM	15.70	15.54	13.22	14.29
	112	11/1/2007 12:45:00 PM	15.70	15.53	13.18	14.26
	113	11/1/2007 12:46:00 PM	15.69	15.52	13.19	14.24
	114	11/1/2007 12:47:00 PM	15.72	15.51	13.15	14.21
	115	11/1/2007 12:48:00 PM	15.71	15.53	13.11	14.23
	116	11/1/2007 12:49:00 PM	15.71	15.52	13.07	14.20
	117	11/1/2007 12:50:00 PM	15.71	15.50	13.05	14.14
	118	11/1/2007 12:51:00 PM	15.70	15.49	13.01	14.16
	119	11/1/2007 12:52:00 PM	15.70	15.48	12.98	14.12
	120	11/1/2007 12:53:00 PM	15.69	15.47	12.96	14.09
	121	11/1/2007 12:54:00 PM	15.69	15.47	12.93	14.07
	122	11/1/2007 12:55:00 PM	15.66	15.46	12.88	14.07
	123	11/1/2007 12:56:00 PM	15.68	15.45	12.86	14.02
	124	11/1/2007 12:57:00 PM	15.64	15.44	12.84	14.04
	125	11/1/2007 12:58:00 PM	15.68	15.43	12.81	14.02
	126	11/1/2007 12:59:00 PM	15.68	15.42	12.79	13.96
	127	11/1/2007 1:00:00 PM	15.67	15.41	12.76	13.95
	128	11/1/2007 1:01:00 PM	15.67	15.41	12.73	13.93
	129	11/1/2007 1:02:00 PM	15.67	15.36	12.71	13.92
	130	11/1/2007 1:03:00 PM	15.64	15.36	12.65	13.86

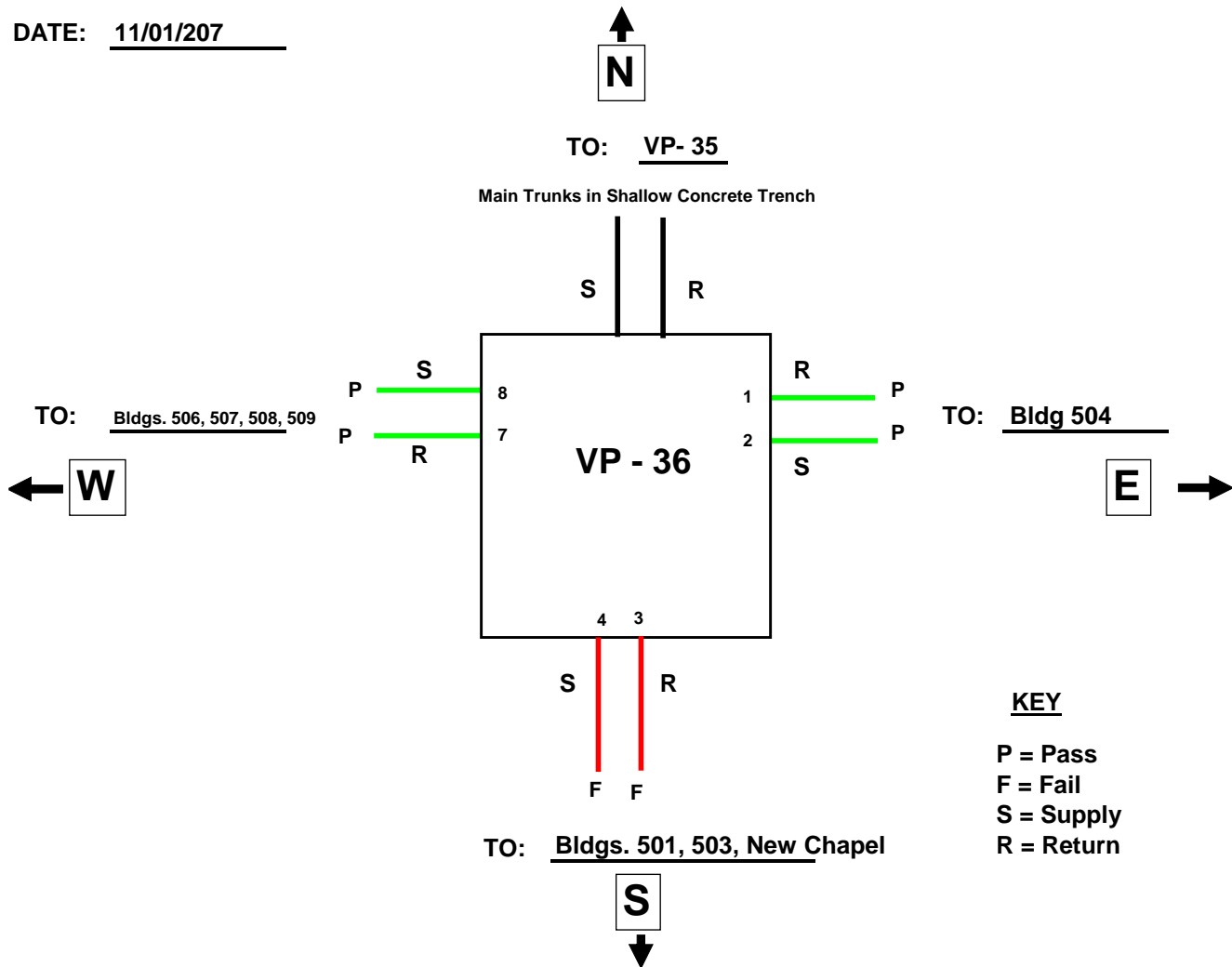
printed 1/14/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	11/1/2007 1:03:32 PM	15.64	15.35	12.67	13.85

DATE: 11/01/207



NOTES:

1. All conduit drains are dry at exits from pit.
2. Pit shows evidence of previous tanding water. Floor is wet and muddy with leaves and pine needles present. Low-point drain at SE corner of Bldg 503 discharged 1-2 gallons of water when pressurization attempted (Bldgs 501, 503, new chapel run). This pit is new and is located in new chapel construction area. The pit currently stands above current grade. Standpipes in the vertical supply and return termination conduits were loose and not threaded. Standpipes were removed and access holes in end plates were sealed with automobile freeze plugs. End plates also had secure vent plugs Termination at new chapel was inspected and it was determined that vent plugs were in place at that site. Lines were re-pressurized, but failed to maintain pressure. Vent plugs at all terminations were re-inspected while lines were still pressurized, but no leaks were identified. Evidence that standing water level at bottom of standpipes was 6 - 8".

VP - 36					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 504	P	
	2	2	Supply to Bldg. 504	P	
	3	3	Return to Bldgs. 501, 503, new chapel	F	
	4	4	Supply to Bldgs. 501, 503, new chapel	F	
2	3	7	Return to Bldgs. 506, 507, 508, 509	P	
	4	8	Supply to Bldgs. 506, 507, 508, 509	P	

printed 1/15/2008

Handy logger

Name : LOGGER 1

LOG Name	11011433
Interval	00:01:00
Personnel	

Start	11/1/2007 2:33:10 PM
Stop	11/1/2007 4:43:26 PM
Comment	

Data	132
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.03	16.37	17.63	17.70
Minimum	-7.50	-7.50	-0.20	0.06
Average	15.00	15.34	4.32	3.21
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/1/2007 2:33:10 PM	-0.01	-0.01	0.09	0.21
	2	11/1/2007 2:34:00 PM	5.02	5.72	1.01	1.33
	3	11/1/2007 2:35:00 PM	9.84	11.24	1.46	1.85
	4	11/1/2007 2:36:00 PM	14.85	15.89	1.99	2.50
	5	11/1/2007 2:37:00 PM	^ 16.03	16.33	3.01	3.66
	6	11/1/2007 2:38:00 PM	16.01	16.35	3.39	4.16
	7	11/1/2007 2:39:00 PM	16.00	16.33	3.74	4.45
	8	11/1/2007 2:40:00 PM	15.96	16.34	3.96	4.77
	9	11/1/2007 2:41:00 PM	15.96	16.32	4.15	4.97
	10	11/1/2007 2:42:00 PM	15.95	16.34	4.30	5.10
	11	11/1/2007 2:43:00 PM	15.92	^ 16.37	7.54	8.80
	12	11/1/2007 2:44:00 PM	15.93	16.32	2.45	3.23
	13	11/1/2007 2:45:00 PM	15.94	16.36	1.30	2.07
	14	11/1/2007 2:46:00 PM	15.93	16.35	0.51	1.17
	15	11/1/2007 2:47:00 PM	15.93	16.35	0.02	0.55
	16	11/1/2007 2:48:00 PM	15.91	16.34	-0.17	0.18
	17	11/1/2007 2:49:00 PM	15.91	16.33	v -0.20	v 0.06
	18	11/1/2007 2:50:00 PM	15.91	16.33	v -0.20	v 0.06
	19	11/1/2007 2:51:00 PM	15.88	16.31	-0.17	0.07
	20	11/1/2007 2:52:00 PM	15.89	16.32	-0.17	0.08
	21	11/1/2007 2:53:00 PM	15.90	16.32	-0.12	0.10
	22	11/1/2007 2:54:00 PM	15.89	16.32	-0.10	0.11
	23	11/1/2007 2:55:00 PM	15.90	16.31	-0.09	0.12
	24	11/1/2007 2:56:00 PM	15.90	16.30	-0.06	0.10
	25	11/1/2007 2:57:00 PM	15.90	16.30	-0.02	0.12
	26	11/1/2007 2:58:00 PM	15.87	16.29	-0.03	0.13
	27	11/1/2007 2:59:00 PM	15.87	16.27	-0.04	0.14
	28	11/1/2007 3:00:00 PM	15.86	16.26	-0.01	0.16
	29	11/1/2007 3:01:00 PM	15.86	16.29	0.01	0.17
	30	11/1/2007 3:02:00 PM	15.86	16.25	0.00	0.15

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/1/2007 3:03:00 PM	15.86	16.27	0.02	0.16
	32	11/1/2007 3:04:00 PM	15.85	16.25	0.04	0.16
	33	11/1/2007 3:05:00 PM	15.83	16.25	0.02	0.17
	34	11/1/2007 3:06:00 PM	15.80	16.24	0.04	0.18
	35	11/1/2007 3:07:00 PM	15.81	16.23	0.06	0.19
	36	11/1/2007 3:08:00 PM	15.81	16.25	0.03	0.19
	37	11/1/2007 3:09:00 PM	15.80	16.21	0.04	0.17
	38	11/1/2007 3:10:00 PM	15.80	16.23	0.06	0.17
	39	11/1/2007 3:11:00 PM	15.80	16.22	0.07	0.18
	40	11/1/2007 3:12:00 PM	15.80	16.22	0.08	0.20
	41	11/1/2007 3:13:00 PM	15.79	16.22	0.10	0.18
	42	11/1/2007 3:14:00 PM	15.79	16.21	0.07	0.19
	43	11/1/2007 3:15:00 PM	15.78	16.21	0.08	0.19
	44	11/1/2007 3:16:00 PM	15.78	16.20	0.08	0.20
	45	11/1/2007 3:17:00 PM	15.78	16.20	0.09	0.20
	46	11/1/2007 3:18:00 PM	15.78	16.17	0.10	0.20
	47	11/1/2007 3:19:00 PM	15.76	16.19	0.10	0.20
	48	11/1/2007 3:20:00 PM	15.75	16.19	0.11	0.21
	49	11/1/2007 3:21:00 PM	15.74	16.18	0.11	0.21
	50	11/1/2007 3:22:00 PM	15.74	16.18	0.11	0.21
	51	11/1/2007 3:23:00 PM	15.77	16.16	0.08	0.21
	52	11/1/2007 3:24:00 PM	15.75	16.15	0.09	0.21
	53	11/1/2007 3:25:00 PM	15.74	16.13	0.10	0.22
	54	11/1/2007 3:26:00 PM	15.74	16.13	0.10	0.22
	55	11/1/2007 3:27:00 PM	15.72	16.14	6.43	7.58
	56	11/1/2007 3:28:00 PM	15.73	16.14	8.01	8.99
	57	11/1/2007 3:29:00 PM	15.71	16.14	9.50	10.34
	58	11/1/2007 3:30:00 PM	15.70	16.11	9.76	10.98
	59	11/1/2007 3:31:00 PM	15.67	16.10	2.86	4.17
	60	11/1/2007 3:32:00 PM	15.67	16.10	0.40	1.40
	61	11/1/2007 3:33:00 PM	15.67	16.11	-0.04	0.22
	62	11/1/2007 3:34:00 PM	15.67	16.12	-0.10	0.12
	63	11/1/2007 3:35:00 PM	15.68	16.11	-0.10	0.10
	64	11/1/2007 3:36:00 PM	15.67	16.11	-0.12	0.12
	65	11/1/2007 3:37:00 PM	15.67	16.10	-0.08	0.12
	66	11/1/2007 3:38:00 PM	15.66	16.08	-0.08	0.11
	67	11/1/2007 3:39:00 PM	15.65	16.11	-0.07	0.11
	68	11/1/2007 3:40:00 PM	15.65	16.09	-0.05	0.11
	69	11/1/2007 3:41:00 PM	15.64	16.08	-0.03	0.12
	70	11/1/2007 3:42:00 PM	15.64	16.07	-0.04	0.13
	71	11/1/2007 3:43:00 PM	15.63	16.07	-0.01	0.11
	72	11/1/2007 3:44:00 PM	15.63	16.06	-0.02	0.13
	73	11/1/2007 3:45:00 PM	15.61	16.06	-0.01	0.13
	74	11/1/2007 3:46:00 PM	15.60	16.05	0.02	0.14
	75	11/1/2007 3:47:00 PM	15.58	16.04	0.04	0.15
	76	11/1/2007 3:48:00 PM	15.58	16.04	0.01	0.17
	77	11/1/2007 3:49:00 PM	15.57	16.02	0.03	0.18
	78	11/1/2007 3:50:00 PM	15.58	16.02	0.05	0.15
	79	11/1/2007 3:51:00 PM	15.58	16.02	0.07	0.16
	80	11/1/2007 3:52:00 PM	15.58	16.02	0.05	0.17

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/1/2007 3:53:00 PM	15.58	16.03	5.70	6.95
	82	11/1/2007 3:54:00 PM	15.58	16.04	7.26	8.39
	83	11/1/2007 3:55:00 PM	15.58	16.03	8.84	9.75
	84	11/1/2007 3:56:00 PM	15.57	16.01	10.77	11.78
	85	11/1/2007 3:57:00 PM	15.56	16.01	12.46	13.50
	86	11/1/2007 3:58:00 PM	15.55	15.99	14.22	15.28
	87	11/1/2007 3:59:00 PM	15.54	16.00	16.00	16.75
	88	11/1/2007 4:00:00 PM	15.54	15.99	^ 17.63	^ 17.70
	89	11/1/2007 4:01:00 PM	15.53	16.00	15.65	15.02
	90	11/1/2007 4:02:00 PM	15.52	15.97	15.24	14.25
	91	11/1/2007 4:03:00 PM	15.52	15.98	14.80	13.54
	92	11/1/2007 4:04:00 PM	15.51	15.98	14.43	12.82
	93	11/1/2007 4:05:00 PM	15.50	15.97	14.10	12.15
	94	11/1/2007 4:06:00 PM	15.50	15.98	13.75	11.51
	95	11/1/2007 4:07:00 PM	15.49	15.97	13.41	10.89
	96	11/1/2007 4:08:00 PM	15.50	15.97	13.04	10.30
	97	11/1/2007 4:09:00 PM	15.49	15.96	12.73	9.71
	98	11/1/2007 4:10:00 PM	15.48	15.95	12.41	9.16
	99	11/1/2007 4:11:00 PM	15.48	15.96	12.07	8.60
	100	11/1/2007 4:12:00 PM	15.47	15.94	11.77	8.07
	101	11/1/2007 4:13:00 PM	15.47	15.92	11.48	7.57
	102	11/1/2007 4:14:00 PM	15.47	15.92	11.14	7.09
	103	11/1/2007 4:15:00 PM	15.46	15.92	10.86	6.62
	104	11/1/2007 4:16:00 PM	15.46	15.92	10.55	6.16
	105	11/1/2007 4:17:00 PM	15.44	15.93	10.28	5.73
	106	11/1/2007 4:18:00 PM	15.43	15.92	9.97	5.33
	107	11/1/2007 4:19:00 PM	15.43	15.89	9.71	4.94
	108	11/1/2007 4:20:00 PM	15.43	15.89	9.42	4.53
	109	11/1/2007 4:21:00 PM	15.40	15.91	9.13	4.17
	110	11/1/2007 4:22:00 PM	15.41	15.92	8.85	3.84
	111	11/1/2007 4:23:00 PM	15.40	15.90	8.61	3.49
	112	11/1/2007 4:24:00 PM	15.37	15.86	8.33	3.19
	113	11/1/2007 4:25:00 PM	15.37	15.86	8.09	2.91
	114	11/1/2007 4:26:00 PM	15.37	15.86	7.85	2.63
	115	11/1/2007 4:27:00 PM	15.37	15.86	7.57	2.34
	116	11/1/2007 4:28:00 PM	15.37	15.86	7.35	2.10
	117	11/1/2007 4:29:00 PM	15.38	15.87	7.13	1.88
	118	11/1/2007 4:30:00 PM	15.35	15.88	6.86	1.67
	119	11/1/2007 4:31:00 PM	15.35	15.84	6.65	1.48
	120	11/1/2007 4:32:00 PM	15.35	15.84	6.40	1.31
	121	11/1/2007 4:33:00 PM	15.35	15.83	6.20	1.11
	122	11/1/2007 4:34:00 PM	15.35	15.85	6.00	0.97
	123	11/1/2007 4:35:00 PM	15.35	15.84	5.79	0.84
	124	11/1/2007 4:36:00 PM	15.34	15.86	5.59	0.72
	125	11/1/2007 4:37:00 PM	15.34	15.85	5.36	0.61
	126	11/1/2007 4:38:00 PM	15.34	15.85	5.17	0.53
	127	11/1/2007 4:39:00 PM	15.32	15.83	4.97	0.45
	128	11/1/2007 4:40:00 PM	12.07	12.11	4.78	0.39
	129	11/1/2007 4:41:00 PM	9.21	9.10	4.61	0.34
	130	11/1/2007 4:42:00 PM	6.81	6.58	4.43	0.29

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	11/1/2007 4:43:00 PM	4.83	v -7.50	4.26	0.27
	132	11/1/2007 4:43:26 PM	v -7.50	v -7.50	4.19	0.26

printed 1/15/2008

Handy logger

Name : LOGGER 2

LOG Name	11011431
Interval	00:01:00
Personnel	

Start	11/1/2007 2:31:52 PM
Stop	11/1/2007 4:46:23 PM
Comment	

Data	137
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			16.40	16.49
Minimum			0.17	0.10
Average			15.12	15.03
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/1/2007 2:31:52 PM	O.R.	O.R.	v 0.17	v 0.10
	2	11/1/2007 2:32:00 PM	O.R.	O.R.	v 0.17	v 0.10
	3	11/1/2007 2:33:00 PM	O.R.	O.R.	1.92	1.88
	4	11/1/2007 2:34:00 PM	O.R.	O.R.	3.27	3.33
	5	11/1/2007 2:35:00 PM	O.R.	O.R.	5.40	5.60
	6	11/1/2007 2:36:00 PM	O.R.	O.R.	7.29	7.48
	7	11/1/2007 2:37:00 PM	O.R.	O.R.	9.14	9.32
	8	11/1/2007 2:38:00 PM	O.R.	O.R.	10.98	11.30
	9	11/1/2007 2:39:00 PM	O.R.	O.R.	12.78	13.11
	10	11/1/2007 2:40:00 PM	O.R.	O.R.	14.68	15.04
	11	11/1/2007 2:41:00 PM	O.R.	O.R.	^ 16.40	^ 16.49
	12	11/1/2007 2:42:00 PM	O.R.	O.R.	15.82	15.75
	13	11/1/2007 2:43:00 PM	O.R.	O.R.	15.76	15.73
	14	11/1/2007 2:44:00 PM	O.R.	O.R.	15.77	15.71
	15	11/1/2007 2:45:00 PM	O.R.	O.R.	15.73	15.66
	16	11/1/2007 2:46:00 PM	O.R.	O.R.	15.73	15.69
	17	11/1/2007 2:47:00 PM	O.R.	O.R.	15.72	15.68
	18	11/1/2007 2:48:00 PM	O.R.	O.R.	15.75	15.71
	19	11/1/2007 2:49:00 PM	O.R.	O.R.	15.79	15.74
	20	11/1/2007 2:50:00 PM	O.R.	O.R.	15.79	15.75
	21	11/1/2007 2:51:00 PM	O.R.	O.R.	15.81	15.76
	22	11/1/2007 2:52:00 PM	O.R.	O.R.	15.82	15.77
	23	11/1/2007 2:53:00 PM	O.R.	O.R.	15.83	15.78
	24	11/1/2007 2:54:00 PM	O.R.	O.R.	15.81	15.76
	25	11/1/2007 2:55:00 PM	O.R.	O.R.	15.79	15.74
	26	11/1/2007 2:56:00 PM	O.R.	O.R.	15.81	15.75
	27	11/1/2007 2:57:00 PM	O.R.	O.R.	15.83	15.77
	28	11/1/2007 2:58:00 PM	O.R.	O.R.	15.85	15.78
	29	11/1/2007 2:59:00 PM	O.R.	O.R.	15.86	15.80
	30	11/1/2007 3:00:00 PM	O.R.	O.R.	15.87	15.77

printed 1/15/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/1/2007 3:01:00 PM	O.R.	O.R.	15.86	15.78
	32	11/1/2007 3:02:00 PM	O.R.	O.R.	15.85	15.79
	33	11/1/2007 3:03:00 PM	O.R.	O.R.	15.86	15.80
	34	11/1/2007 3:04:00 PM	O.R.	O.R.	15.83	15.81
	35	11/1/2007 3:05:00 PM	O.R.	O.R.	15.84	15.77
	36	11/1/2007 3:06:00 PM	O.R.	O.R.	15.85	15.78
	37	11/1/2007 3:07:00 PM	O.R.	O.R.	15.85	15.78
	38	11/1/2007 3:08:00 PM	O.R.	O.R.	15.85	15.79
	39	11/1/2007 3:09:00 PM	O.R.	O.R.	15.86	15.79
	40	11/1/2007 3:10:00 PM	O.R.	O.R.	15.87	15.79
	41	11/1/2007 3:11:00 PM	O.R.	O.R.	15.84	15.81
	42	11/1/2007 3:12:00 PM	O.R.	O.R.	15.85	15.78
	43	11/1/2007 3:13:00 PM	O.R.	O.R.	15.85	15.81
	44	11/1/2007 3:14:00 PM	O.R.	O.R.	15.85	15.78
	45	11/1/2007 3:15:00 PM	O.R.	O.R.	15.85	15.81
	46	11/1/2007 3:16:00 PM	O.R.	O.R.	15.84	15.77
	47	11/1/2007 3:17:00 PM	O.R.	O.R.	15.84	15.80
	48	11/1/2007 3:18:00 PM	O.R.	O.R.	15.87	15.80
	49	11/1/2007 3:19:00 PM	O.R.	O.R.	15.87	15.79
	50	11/1/2007 3:20:00 PM	O.R.	O.R.	15.86	15.78
	51	11/1/2007 3:21:00 PM	O.R.	O.R.	15.87	15.78
	52	11/1/2007 3:22:00 PM	O.R.	O.R.	15.86	15.77
	53	11/1/2007 3:23:00 PM	O.R.	O.R.	15.85	15.77
	54	11/1/2007 3:24:00 PM	O.R.	O.R.	15.85	15.77
	55	11/1/2007 3:25:00 PM	O.R.	O.R.	15.82	15.77
	56	11/1/2007 3:26:00 PM	O.R.	O.R.	15.84	15.71
	57	11/1/2007 3:27:00 PM	O.R.	O.R.	15.81	15.73
	58	11/1/2007 3:28:00 PM	O.R.	O.R.	15.82	15.74
	59	11/1/2007 3:29:00 PM	O.R.	O.R.	15.83	15.74
	60	11/1/2007 3:30:00 PM	O.R.	O.R.	15.84	15.74
	61	11/1/2007 3:31:00 PM	O.R.	O.R.	15.84	15.74
	62	11/1/2007 3:32:00 PM	O.R.	O.R.	15.84	15.74
	63	11/1/2007 3:33:00 PM	O.R.	O.R.	15.81	15.75
	64	11/1/2007 3:34:00 PM	O.R.	O.R.	15.81	15.76
	65	11/1/2007 3:35:00 PM	O.R.	O.R.	15.81	15.76
	66	11/1/2007 3:36:00 PM	O.R.	O.R.	15.86	15.75
	67	11/1/2007 3:37:00 PM	O.R.	O.R.	15.85	15.74
	68	11/1/2007 3:38:00 PM	O.R.	O.R.	15.85	15.73
	69	11/1/2007 3:39:00 PM	O.R.	O.R.	15.84	15.72
	70	11/1/2007 3:40:00 PM	O.R.	O.R.	15.84	15.72
	71	11/1/2007 3:41:00 PM	O.R.	O.R.	15.84	15.73
	72	11/1/2007 3:42:00 PM	O.R.	O.R.	15.79	15.74
	73	11/1/2007 3:43:00 PM	O.R.	O.R.	15.84	15.73
	74	11/1/2007 3:44:00 PM	O.R.	O.R.	15.80	15.72
	75	11/1/2007 3:45:00 PM	O.R.	O.R.	15.82	15.73
	76	11/1/2007 3:46:00 PM	O.R.	O.R.	15.79	15.72
	77	11/1/2007 3:47:00 PM	O.R.	O.R.	15.79	15.72
	78	11/1/2007 3:48:00 PM	O.R.	O.R.	15.78	15.68
	79	11/1/2007 3:49:00 PM	O.R.	O.R.	15.79	15.68
	80	11/1/2007 3:50:00 PM	O.R.	O.R.	15.79	15.68

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/1/2007 3:51:00 PM	O.R.	O.R.	15.79	15.68
	82	11/1/2007 3:52:00 PM	O.R.	O.R.	15.79	15.68
	83	11/1/2007 3:53:00 PM	O.R.	O.R.	15.79	15.65
	84	11/1/2007 3:54:00 PM	O.R.	O.R.	15.80	15.64
	85	11/1/2007 3:55:00 PM	O.R.	O.R.	15.77	15.65
	86	11/1/2007 3:56:00 PM	O.R.	O.R.	15.77	15.67
	87	11/1/2007 3:57:00 PM	O.R.	O.R.	15.77	15.66
	88	11/1/2007 3:58:00 PM	O.R.	O.R.	15.80	15.66
	89	11/1/2007 3:59:00 PM	O.R.	O.R.	15.79	15.64
	90	11/1/2007 4:00:00 PM	O.R.	O.R.	15.78	15.64
	91	11/1/2007 4:01:00 PM	O.R.	O.R.	15.78	15.68
	92	11/1/2007 4:02:00 PM	O.R.	O.R.	15.77	15.62
	93	11/1/2007 4:03:00 PM	O.R.	O.R.	15.77	15.67
	94	11/1/2007 4:04:00 PM	O.R.	O.R.	15.76	15.62
	95	11/1/2007 4:05:00 PM	O.R.	O.R.	15.76	15.62
	96	11/1/2007 4:06:00 PM	O.R.	O.R.	15.76	15.61
	97	11/1/2007 4:07:00 PM	O.R.	O.R.	15.75	15.65
	98	11/1/2007 4:08:00 PM	O.R.	O.R.	15.75	15.65
	99	11/1/2007 4:09:00 PM	O.R.	O.R.	15.79	15.64
	100	11/1/2007 4:10:00 PM	O.R.	O.R.	15.78	15.63
	101	11/1/2007 4:11:00 PM	O.R.	O.R.	15.77	15.65
	102	11/1/2007 4:12:00 PM	O.R.	O.R.	15.76	15.64
	103	11/1/2007 4:13:00 PM	O.R.	O.R.	15.76	15.63
	104	11/1/2007 4:14:00 PM	O.R.	O.R.	15.76	15.63
	105	11/1/2007 4:15:00 PM	O.R.	O.R.	15.76	15.62
	106	11/1/2007 4:16:00 PM	O.R.	O.R.	15.76	15.62
	107	11/1/2007 4:17:00 PM	O.R.	O.R.	15.76	15.62
	108	11/1/2007 4:18:00 PM	O.R.	O.R.	15.77	15.59
	109	11/1/2007 4:19:00 PM	O.R.	O.R.	15.72	15.60
	110	11/1/2007 4:20:00 PM	O.R.	O.R.	15.74	15.56
	111	11/1/2007 4:21:00 PM	O.R.	O.R.	15.71	15.57
	112	11/1/2007 4:22:00 PM	O.R.	O.R.	15.72	15.55
	113	11/1/2007 4:23:00 PM	O.R.	O.R.	15.70	15.51
	114	11/1/2007 4:24:00 PM	O.R.	O.R.	15.71	15.51
	115	11/1/2007 4:25:00 PM	O.R.	O.R.	15.71	15.56
	116	11/1/2007 4:26:00 PM	O.R.	O.R.	15.71	15.56
	117	11/1/2007 4:27:00 PM	O.R.	O.R.	15.72	15.56
	118	11/1/2007 4:28:00 PM	O.R.	O.R.	15.72	15.51
	119	11/1/2007 4:29:00 PM	O.R.	O.R.	15.72	15.51
	120	11/1/2007 4:30:00 PM	O.R.	O.R.	15.72	15.52
	121	11/1/2007 4:31:00 PM	O.R.	O.R.	15.70	15.52
	122	11/1/2007 4:32:00 PM	O.R.	O.R.	15.69	15.51
	123	11/1/2007 4:33:00 PM	O.R.	O.R.	15.69	15.52
	124	11/1/2007 4:34:00 PM	O.R.	O.R.	15.73	15.52
	125	11/1/2007 4:35:00 PM	O.R.	O.R.	15.72	15.51
	126	11/1/2007 4:36:00 PM	O.R.	O.R.	15.71	15.51
	127	11/1/2007 4:37:00 PM	O.R.	O.R.	15.71	15.50
	128	11/1/2007 4:38:00 PM	O.R.	O.R.	15.70	15.49
	129	11/1/2007 4:39:00 PM	O.R.	O.R.	15.70	15.50
	130	11/1/2007 4:40:00 PM	O.R.	O.R.	15.69	15.52

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Handy logger

Name : LOGGER 2

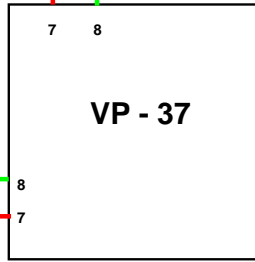
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	11/1/2007 4:41:00 PM	O.R.	O.R.	15.72	15.51
	132	11/1/2007 4:42:00 PM	O.R.	O.R.	15.71	15.54
	133	11/1/2007 4:43:00 PM	O.R.	O.R.	15.70	15.53
	134	11/1/2007 4:44:00 PM	O.R.	O.R.	15.70	15.53
	135	11/1/2007 4:45:00 PM	O.R.	O.R.	15.70	15.52
	136	11/1/2007 4:46:00 PM	O.R.	O.R.	15.69	15.52
	137	11/1/2007 4:46:23 PM	O.R.	O.R.	15.69	15.51

DATE: 10/29/2007

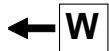


TO: Bldg. 350 (Hospital)

F P
S R
Top of conduits approx. 42" below grade (top of pit wall) at exit from pit



Tested on 10/25/07
See VP-39 Data File

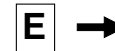


Test on 10/30/07

TO: VP-30

Top of conduits approx. 42" below grade (top of pit wall) at exit from pit

P R
F S



TO: VP-39 (VP-38 does not exist)

Top of conduits approx. 42" below grade (top of pit wall) at exit from pit

R F
S F



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

NOTES:

1. All local line drains are dry at exit from pit.
2. Pit had ~ 6" water when opened for testing. Manually triggered sump to drain. Pit floor cluttered with pine straw and mud. Inspected low-point drain between VP-37 and Bldg. 350. Found water in both center standpipe and annular space accessed by side plugs (normal vent/drain plugs). Cap on return side standpipe was wedged in place because pipe thread was severely damaged. Both supply and return passed pressure test which shed doubt on whether this drain pit is actually incorporated into the lines between VP-37 and Bldg. 350. Depth is approximately 10 feet. Re-pressurized both lines with caps/plugs removed at low-point drain (Bldg. 350 vents plugged) to determine if drains/vents are in these lines. Pressure tests on 10/31 resulted in discharge of approx. 2 gallons of water from each line. Low-point drain between VP-37 and VP-30 was inspected and found to be dry (both supply and return). Depth is approximately 10 feet. These low-point drains were checked with air flow and determined to be plumbed into the conduits. Ran air flow diagnostic with vents in old pit on NW corner of new clinic (Bldg. 412) and vents in Bldg. 412 mech. room unplugged. Air was discharging from old pit vents, but not from Bldg. 412 vents. Conclude that Bldg. 412 is fed through old pit.

VP - 37					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	3	7	Supply to Bldg. 350 (Hospital)	F	Test conducted on 10/29/07. Local drain in VP-37 dry, Low point drains (supply, return) between VP-37 and Bldg. 350 are wet. Loose cap (center standpipe) on return line probably would have blown off when pressurized which casts doubt on whether or not these drains are really plumbed into the line between VP-37 and Bldg. 350.
	4	8	Return to Bldg. 350 (Hospital)	P	Test conducted on 10/29/07. Local drains (supply and return) in VP-37 dry, Low point drains (supply and return) between VP-37 and Bldg. 350 are dry.
2	3	7	Supply to VP-30	F	Test conducted on 10/30/07. Unable to sustain line pressure due to leak at conduit seal in VP-30
	4	8	Return to VP-30	P	Test conducted on 10/30/07.

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Handy logger

Name : LOGGER 2

LOG Name	10291535
Interval	00:01:00
Personnel	

Start	10/29/2007 3:35:53 PM
Stop	10/29/2007 6:06:04 PM
Comment	

Data	153
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			16.96	16.03
Minimum			-7.50	0.05
Average			13.42	12.87
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/29/2007 3:35:53 PM	O.R.	O.R.	0.12	v 0.05
	2	10/29/2007 3:36:00 PM	O.R.	O.R.	0.12	v 0.05
	3	10/29/2007 3:37:00 PM	O.R.	O.R.	1.27	0.09
	4	10/29/2007 3:38:00 PM	O.R.	O.R.	1.26	0.08
	5	10/29/2007 3:39:00 PM	O.R.	O.R.	5.70	0.08
	6	10/29/2007 3:40:00 PM	O.R.	O.R.	6.85	0.13
	7	10/29/2007 3:41:00 PM	O.R.	O.R.	8.07	0.11
	8	10/29/2007 3:42:00 PM	O.R.	O.R.	9.26	0.14
	9	10/29/2007 3:43:00 PM	O.R.	O.R.	10.49	0.13
	10	10/29/2007 3:44:00 PM	O.R.	O.R.	11.73	0.12
	11	10/29/2007 3:45:00 PM	O.R.	O.R.	12.98	0.13
	12	10/29/2007 3:46:00 PM	O.R.	O.R.	14.09	0.13
	13	10/29/2007 3:47:00 PM	O.R.	O.R.	15.25	0.11
	14	10/29/2007 3:48:00 PM	O.R.	O.R.	14.81	0.10
	15	10/29/2007 3:49:00 PM	O.R.	O.R.	^ 16.96	0.09
	16	10/29/2007 3:50:00 PM	O.R.	O.R.	16.27	0.08
	17	10/29/2007 3:51:00 PM	O.R.	O.R.	16.26	0.11
	18	10/29/2007 3:52:00 PM	O.R.	O.R.	16.23	4.22
	19	10/29/2007 3:53:00 PM	O.R.	O.R.	16.20	5.15
	20	10/29/2007 3:54:00 PM	O.R.	O.R.	16.16	6.21
	21	10/29/2007 3:55:00 PM	O.R.	O.R.	16.17	7.26
	22	10/29/2007 3:56:00 PM	O.R.	O.R.	16.14	8.31
	23	10/29/2007 3:57:00 PM	O.R.	O.R.	16.13	9.36
	24	10/29/2007 3:58:00 PM	O.R.	O.R.	16.10	10.45
	25	10/29/2007 3:59:00 PM	O.R.	O.R.	16.08	11.53
	26	10/29/2007 4:00:00 PM	O.R.	O.R.	16.07	12.69
	27	10/29/2007 4:01:00 PM	O.R.	O.R.	16.05	13.82
	28	10/29/2007 4:02:00 PM	O.R.	O.R.	16.02	14.93
	29	10/29/2007 4:03:00 PM	O.R.	O.R.	16.01	^ 16.03
	30	10/29/2007 4:04:00 PM	O.R.	O.R.	16.04	14.82

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/29/2007 4:05:00 PM	O.R.	O.R.	16.02	15.20
	32	10/29/2007 4:06:00 PM	O.R.	O.R.	16.00	15.17
	33	10/29/2007 4:07:00 PM	O.R.	O.R.	15.98	15.16
	34	10/29/2007 4:08:00 PM	O.R.	O.R.	15.96	15.17
	35	10/29/2007 4:09:00 PM	O.R.	O.R.	15.94	15.16
	36	10/29/2007 4:10:00 PM	O.R.	O.R.	15.92	15.17
	37	10/29/2007 4:11:00 PM	O.R.	O.R.	15.95	15.16
	38	10/29/2007 4:12:00 PM	O.R.	O.R.	15.93	15.14
	39	10/29/2007 4:13:00 PM	O.R.	O.R.	15.88	15.13
	40	10/29/2007 4:14:00 PM	O.R.	O.R.	15.86	15.13
	41	10/29/2007 4:15:00 PM	O.R.	O.R.	15.85	15.12
	42	10/29/2007 4:16:00 PM	O.R.	O.R.	15.84	15.12
	43	10/29/2007 4:17:00 PM	O.R.	O.R.	15.84	15.11
	44	10/29/2007 4:18:00 PM	O.R.	O.R.	15.82	15.11
	45	10/29/2007 4:19:00 PM	O.R.	O.R.	15.80	15.10
	46	10/29/2007 4:20:00 PM	O.R.	O.R.	15.79	15.09
	47	10/29/2007 4:21:00 PM	O.R.	O.R.	15.77	15.09
	48	10/29/2007 4:22:00 PM	O.R.	O.R.	15.76	15.09
	49	10/29/2007 4:23:00 PM	O.R.	O.R.	15.74	15.08
	50	10/29/2007 4:24:00 PM	O.R.	O.R.	15.74	15.08
	51	10/29/2007 4:25:00 PM	O.R.	O.R.	15.72	15.08
	52	10/29/2007 4:26:00 PM	O.R.	O.R.	15.70	15.08
	53	10/29/2007 4:27:00 PM	O.R.	O.R.	15.70	15.08
	54	10/29/2007 4:28:00 PM	O.R.	O.R.	15.68	15.07
	55	10/29/2007 4:29:00 PM	O.R.	O.R.	15.68	15.07
	56	10/29/2007 4:30:00 PM	O.R.	O.R.	15.68	15.06
	57	10/29/2007 4:31:00 PM	O.R.	O.R.	15.66	15.06
	58	10/29/2007 4:32:00 PM	O.R.	O.R.	15.65	15.06
	59	10/29/2007 4:33:00 PM	O.R.	O.R.	15.63	15.06
	60	10/29/2007 4:34:00 PM	O.R.	O.R.	15.58	15.06
	61	10/29/2007 4:35:00 PM	O.R.	O.R.	15.57	15.06
	62	10/29/2007 4:36:00 PM	O.R.	O.R.	15.56	15.06
	63	10/29/2007 4:37:00 PM	O.R.	O.R.	15.54	15.06
	64	10/29/2007 4:38:00 PM	O.R.	O.R.	15.53	15.07
	65	10/29/2007 4:39:00 PM	O.R.	O.R.	15.51	15.05
	66	10/29/2007 4:40:00 PM	O.R.	O.R.	15.52	15.06
	67	10/29/2007 4:41:00 PM	O.R.	O.R.	15.48	15.06
	68	10/29/2007 4:42:00 PM	O.R.	O.R.	15.47	15.05
	69	10/29/2007 4:43:00 PM	O.R.	O.R.	15.49	15.05
	70	10/29/2007 4:44:00 PM	O.R.	O.R.	15.47	15.05
	71	10/29/2007 4:45:00 PM	O.R.	O.R.	15.46	15.04
	72	10/29/2007 4:46:00 PM	O.R.	O.R.	15.44	15.05
	73	10/29/2007 4:47:00 PM	O.R.	O.R.	15.40	15.04
	74	10/29/2007 4:48:00 PM	O.R.	O.R.	15.38	15.04
	75	10/29/2007 4:49:00 PM	O.R.	O.R.	15.36	15.05
	76	10/29/2007 4:50:00 PM	O.R.	O.R.	15.39	15.04
	77	10/29/2007 4:51:00 PM	O.R.	O.R.	15.37	15.04
	78	10/29/2007 4:52:00 PM	O.R.	O.R.	15.36	15.04
	79	10/29/2007 4:53:00 PM	O.R.	O.R.	15.31	15.04
	80	10/29/2007 4:54:00 PM	O.R.	O.R.	15.30	15.00

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/29/2007 4:55:00 PM	O.R.	O.R.	15.28	15.00
	82	10/29/2007 4:56:00 PM	O.R.	O.R.	15.27	15.01
	83	10/29/2007 4:57:00 PM	O.R.	O.R.	15.26	14.99
	84	10/29/2007 4:58:00 PM	O.R.	O.R.	15.25	14.99
	85	10/29/2007 4:59:00 PM	O.R.	O.R.	15.24	15.00
	86	10/29/2007 5:00:00 PM	O.R.	O.R.	15.23	15.00
	87	10/29/2007 5:01:00 PM	O.R.	O.R.	15.22	15.00
	88	10/29/2007 5:02:00 PM	O.R.	O.R.	15.21	14.99
	89	10/29/2007 5:03:00 PM	O.R.	O.R.	15.19	14.99
	90	10/29/2007 5:04:00 PM	O.R.	O.R.	15.18	14.99
	91	10/29/2007 5:05:00 PM	O.R.	O.R.	15.17	14.94
	92	10/29/2007 5:06:00 PM	O.R.	O.R.	15.15	14.93
	93	10/29/2007 5:07:00 PM	O.R.	O.R.	15.09	14.93
	94	10/29/2007 5:08:00 PM	O.R.	O.R.	15.13	14.93
	95	10/29/2007 5:09:00 PM	O.R.	O.R.	15.12	14.93
	96	10/29/2007 5:10:00 PM	O.R.	O.R.	15.10	14.92
	97	10/29/2007 5:11:00 PM	O.R.	O.R.	15.09	14.91
	98	10/29/2007 5:12:00 PM	O.R.	O.R.	15.07	14.92
	99	10/29/2007 5:13:00 PM	O.R.	O.R.	15.06	14.91
	100	10/29/2007 5:14:00 PM	O.R.	O.R.	15.03	14.91
	101	10/29/2007 5:15:00 PM	O.R.	O.R.	15.02	14.93
	102	10/29/2007 5:16:00 PM	O.R.	O.R.	15.01	14.94
	103	10/29/2007 5:17:00 PM	O.R.	O.R.	14.99	14.94
	104	10/29/2007 5:18:00 PM	O.R.	O.R.	14.98	14.94
	105	10/29/2007 5:19:00 PM	O.R.	O.R.	14.97	14.92
	106	10/29/2007 5:20:00 PM	O.R.	O.R.	14.95	14.88
	107	10/29/2007 5:21:00 PM	O.R.	O.R.	14.94	14.89
	108	10/29/2007 5:22:00 PM	O.R.	O.R.	14.93	14.88
	109	10/29/2007 5:23:00 PM	O.R.	O.R.	14.87	14.88
	110	10/29/2007 5:24:00 PM	O.R.	O.R.	14.86	14.89
	111	10/29/2007 5:25:00 PM	O.R.	O.R.	14.85	14.88
	112	10/29/2007 5:26:00 PM	O.R.	O.R.	14.84	14.89
	113	10/29/2007 5:27:00 PM	O.R.	O.R.	14.83	14.89
	114	10/29/2007 5:28:00 PM	O.R.	O.R.	14.82	14.89
	115	10/29/2007 5:29:00 PM	O.R.	O.R.	14.81	14.89
	116	10/29/2007 5:30:00 PM	O.R.	O.R.	14.79	14.88
	117	10/29/2007 5:31:00 PM	O.R.	O.R.	14.79	14.85
	118	10/29/2007 5:32:00 PM	O.R.	O.R.	14.77	14.85
	119	10/29/2007 5:33:00 PM	O.R.	O.R.	14.76	14.85
	120	10/29/2007 5:34:00 PM	O.R.	O.R.	14.75	14.85
	121	10/29/2007 5:35:00 PM	O.R.	O.R.	14.74	14.85
	122	10/29/2007 5:36:00 PM	O.R.	O.R.	14.73	14.85
	123	10/29/2007 5:37:00 PM	O.R.	O.R.	14.72	14.85
	124	10/29/2007 5:38:00 PM	O.R.	O.R.	14.71	14.85
	125	10/29/2007 5:39:00 PM	O.R.	O.R.	14.70	14.84
	126	10/29/2007 5:40:00 PM	O.R.	O.R.	14.68	14.84
	127	10/29/2007 5:41:00 PM	O.R.	O.R.	14.67	14.83
	128	10/29/2007 5:42:00 PM	O.R.	O.R.	14.65	14.83
	129	10/29/2007 5:43:00 PM	O.R.	O.R.	14.64	14.83
	130	10/29/2007 5:44:00 PM	O.R.	O.R.	14.63	14.82

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/29/2007 5:45:00 PM	O.R.	O.R.	14.61	14.82
	132	10/29/2007 5:46:00 PM	O.R.	O.R.	14.60	14.82
	133	10/29/2007 5:47:00 PM	O.R.	O.R.	14.59	14.81
	134	10/29/2007 5:48:00 PM	O.R.	O.R.	14.58	14.81
	135	10/29/2007 5:49:00 PM	O.R.	O.R.	14.57	14.81
	136	10/29/2007 5:50:00 PM	O.R.	O.R.	14.55	14.82
	137	10/29/2007 5:51:00 PM	O.R.	O.R.	11.81	14.81
	138	10/29/2007 5:52:00 PM	O.R.	O.R.	10.77	14.76
	139	10/29/2007 5:53:00 PM	O.R.	O.R.	9.76	14.77
	140	10/29/2007 5:54:00 PM	O.R.	O.R.	8.78	14.77
	141	10/29/2007 5:55:00 PM	O.R.	O.R.	7.87	14.77
	142	10/29/2007 5:56:00 PM	O.R.	O.R.	6.97	14.78
	143	10/29/2007 5:57:00 PM	O.R.	O.R.	6.18	14.78
	144	10/29/2007 5:58:00 PM	O.R.	O.R.	5.48	14.78
	145	10/29/2007 5:59:00 PM	O.R.	O.R.	4.78	14.74
	146	10/29/2007 6:00:00 PM	O.R.	O.R.	4.11	14.74
	147	10/29/2007 6:01:00 PM	O.R.	O.R.	3.18	14.71
	148	10/29/2007 6:02:00 PM	O.R.	O.R.	2.65	14.70
	149	10/29/2007 6:03:00 PM	O.R.	O.R.	2.14	14.68
	150	10/29/2007 6:04:00 PM	O.R.	O.R.	1.72	14.70
	151	10/29/2007 6:05:00 PM	O.R.	O.R.	v -7.50	14.67
	152	10/29/2007 6:06:00 PM	O.R.	O.R.	v -7.50	11.45
	153	10/29/2007 6:06:04 PM	O.R.	O.R.	v -7.50	11.43

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Handy logger

Name : LOGGER 2

LOG Name	10301057
Interval	00.01.00
Personnel	

Start	10/30/2007 10:57:32 AM
Stop	10/30/2007 1:56:02 PM
Comment	

Data	181
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum			15.29	16.71
Minimum			-7.50	-7.50
Average			2.41	11.22
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/30/2007 10:57:32 AM	O.R.	O.R.	0.07	0.06
	2	10/30/2007 10:58:00 AM	O.R.	O.R.	5.13	0.09
	3	10/30/2007 10:59:00 AM	O.R.	O.R.	5.85	0.10
	4	10/30/2007 11:00:00 AM	O.R.	O.R.	6.81	0.12
	5	10/30/2007 11:01:00 AM	O.R.	O.R.	7.48	0.11
	6	10/30/2007 11:02:00 AM	O.R.	O.R.	8.11	0.13
	7	10/30/2007 11:03:00 AM	O.R.	O.R.	8.81	0.15
	8	10/30/2007 11:04:00 AM	O.R.	O.R.	9.34	0.14
	9	10/30/2007 11:05:00 AM	O.R.	O.R.	9.44	0.13
	10	10/30/2007 11:06:00 AM	O.R.	O.R.	9.80	0.13
	11	10/30/2007 11:07:00 AM	O.R.	O.R.	10.33	0.13
	12	10/30/2007 11:08:00 AM	O.R.	O.R.	10.84	0.13
	13	10/30/2007 11:09:00 AM	O.R.	O.R.	11.37	0.13
	14	10/30/2007 11:10:00 AM	O.R.	O.R.	11.88	0.13
	15	10/30/2007 11:11:00 AM	O.R.	O.R.	12.36	0.12
	16	10/30/2007 11:12:00 AM	O.R.	O.R.	12.82	0.11
	17	10/30/2007 11:13:00 AM	O.R.	O.R.	13.27	0.11
	18	10/30/2007 11:14:00 AM	O.R.	O.R.	13.69	0.11
	19	10/30/2007 11:15:00 AM	O.R.	O.R.	14.05	0.11
	20	10/30/2007 11:16:00 AM	O.R.	O.R.	14.39	0.11
	21	10/30/2007 11:17:00 AM	O.R.	O.R.	14.58	0.11
	22	10/30/2007 11:18:00 AM	O.R.	O.R.	14.72	0.14
	23	10/30/2007 11:19:00 AM	O.R.	O.R.	14.86	0.17
	24	10/30/2007 11:20:00 AM	O.R.	O.R.	14.96	0.17
	25	10/30/2007 11:21:00 AM	O.R.	O.R.	15.05	0.15
	26	10/30/2007 11:22:00 AM	O.R.	O.R.	15.20	0.15
	27	10/30/2007 11:23:00 AM	O.R.	O.R.	15.23	0.17
	28	10/30/2007 11:24:00 AM	O.R.	O.R.	^ 15.29	0.17
	29	10/30/2007 11:25:00 AM	O.R.	O.R.	12.47	0.16
	30	10/30/2007 11:26:00 AM	O.R.	O.R.	11.77	0.15

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/30/2007 11:27:00 AM	O.R.	O.R.	11.11	0.17
	32	10/30/2007 11:28:00 AM	O.R.	O.R.	10.46	0.17
	33	10/30/2007 11:29:00 AM	O.R.	O.R.	9.85	0.17
	34	10/30/2007 11:30:00 AM	O.R.	O.R.	9.27	0.17
	35	10/30/2007 11:31:00 AM	O.R.	O.R.	8.70	0.16
	36	10/30/2007 11:32:00 AM	O.R.	O.R.	8.18	0.15
	37	10/30/2007 11:33:00 AM	O.R.	O.R.	7.63	0.15
	38	10/30/2007 11:34:00 AM	O.R.	O.R.	7.14	0.15
	39	10/30/2007 11:35:00 AM	O.R.	O.R.	6.68	4.34
	40	10/30/2007 11:36:00 AM	O.R.	O.R.	6.24	5.48
	41	10/30/2007 11:37:00 AM	O.R.	O.R.	5.81	6.18
	42	10/30/2007 11:38:00 AM	O.R.	O.R.	5.41	6.71
	43	10/30/2007 11:39:00 AM	O.R.	O.R.	5.03	7.26
	44	10/30/2007 11:40:00 AM	O.R.	O.R.	4.67	7.80
	45	10/30/2007 11:41:00 AM	O.R.	O.R.	4.28	8.41
	46	10/30/2007 11:42:00 AM	O.R.	O.R.	3.95	8.93
	47	10/30/2007 11:43:00 AM	O.R.	O.R.	3.65	9.63
	48	10/30/2007 11:44:00 AM	O.R.	O.R.	3.39	10.24
	49	10/30/2007 11:45:00 AM	O.R.	O.R.	3.11	10.88
	50	10/30/2007 11:46:00 AM	O.R.	O.R.	2.85	11.56
	51	10/30/2007 11:47:00 AM	O.R.	O.R.	2.60	12.17
	52	10/30/2007 11:48:00 AM	O.R.	O.R.	2.37	12.79
	53	10/30/2007 11:49:00 AM	O.R.	O.R.	2.14	13.47
	54	10/30/2007 11:50:00 AM	O.R.	O.R.	1.94	14.13
	55	10/30/2007 11:51:00 AM	O.R.	O.R.	1.75	14.83
	56	10/30/2007 11:52:00 AM	O.R.	O.R.	1.54	15.52
	57	10/30/2007 11:53:00 AM	O.R.	O.R.	1.37	14.15
	58	10/30/2007 11:54:00 AM	O.R.	O.R.	1.22	[^] 16.71
	59	10/30/2007 11:55:00 AM	O.R.	O.R.	1.08	15.17
	60	10/30/2007 11:56:00 AM	O.R.	O.R.	0.94	15.19
	61	10/30/2007 11:57:00 AM	O.R.	O.R.	0.83	15.18
	62	10/30/2007 11:58:00 AM	O.R.	O.R.	0.72	15.17
	63	10/30/2007 11:59:00 AM	O.R.	O.R.	0.62	15.16
	64	10/30/2007 12:00:00 PM	O.R.	O.R.	0.53	15.16
	65	10/30/2007 12:01:00 PM	O.R.	O.R.	0.46	15.16
	66	10/30/2007 12:02:00 PM	O.R.	O.R.	0.39	15.16
	67	10/30/2007 12:03:00 PM	O.R.	O.R.	0.34	15.16
	68	10/30/2007 12:04:00 PM	O.R.	O.R.	0.29	15.16
	69	10/30/2007 12:05:00 PM	O.R.	O.R.	0.24	15.16
	70	10/30/2007 12:06:00 PM	O.R.	O.R.	0.21	15.17
	71	10/30/2007 12:07:00 PM	O.R.	O.R.	0.19	15.16
	72	10/30/2007 12:08:00 PM	O.R.	O.R.	0.18	15.16
	73	10/30/2007 12:09:00 PM	O.R.	O.R.	0.16	15.14
	74	10/30/2007 12:10:00 PM	O.R.	O.R.	0.16	15.16
	75	10/30/2007 12:11:00 PM	O.R.	O.R.	0.17	15.16
	76	10/30/2007 12:12:00 PM	O.R.	O.R.	0.16	15.16
	77	10/30/2007 12:13:00 PM	O.R.	O.R.	0.15	15.17
	78	10/30/2007 12:14:00 PM	O.R.	O.R.	0.15	15.12
	79	10/30/2007 12:15:00 PM	O.R.	O.R.	0.15	15.13
	80	10/30/2007 12:16:00 PM	O.R.	O.R.	0.16	15.10

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/30/2007 12:17:00 PM	O.R.	O.R.	0.16	15.11
	82	10/30/2007 12:18:00 PM	O.R.	O.R.	0.12	15.11
	83	10/30/2007 12:19:00 PM	O.R.	O.R.	0.13	15.12
	84	10/30/2007 12:20:00 PM	O.R.	O.R.	0.13	15.11
	85	10/30/2007 12:21:00 PM	O.R.	O.R.	0.12	15.12
	86	10/30/2007 12:22:00 PM	O.R.	O.R.	0.17	15.12
	87	10/30/2007 12:23:00 PM	O.R.	O.R.	0.17	15.12
	88	10/30/2007 12:24:00 PM	O.R.	O.R.	0.17	15.12
	89	10/30/2007 12:25:00 PM	O.R.	O.R.	0.15	15.12
	90	10/30/2007 12:26:00 PM	O.R.	O.R.	0.15	15.15
	91	10/30/2007 12:27:00 PM	O.R.	O.R.	0.14	15.15
	92	10/30/2007 12:28:00 PM	O.R.	O.R.	0.14	15.14
	93	10/30/2007 12:29:00 PM	O.R.	O.R.	0.18	15.11
	94	10/30/2007 12:30:00 PM	O.R.	O.R.	0.17	15.12
	95	10/30/2007 12:31:00 PM	O.R.	O.R.	0.17	15.12
	96	10/30/2007 12:32:00 PM	O.R.	O.R.	0.16	15.12
	97	10/30/2007 12:33:00 PM	O.R.	O.R.	0.15	15.12
	98	10/30/2007 12:34:00 PM	O.R.	O.R.	0.14	15.15
	99	10/30/2007 12:35:00 PM	O.R.	O.R.	0.18	15.14
	100	10/30/2007 12:36:00 PM	O.R.	O.R.	0.17	15.13
	101	10/30/2007 12:37:00 PM	O.R.	O.R.	0.15	15.18
	102	10/30/2007 12:38:00 PM	O.R.	O.R.	0.16	15.12
	103	10/30/2007 12:39:00 PM	O.R.	O.R.	0.15	15.17
	104	10/30/2007 12:40:00 PM	O.R.	O.R.	0.14	15.17
	105	10/30/2007 12:41:00 PM	O.R.	O.R.	0.10	15.12
	106	10/30/2007 12:42:00 PM	O.R.	O.R.	0.14	15.10
	107	10/30/2007 12:43:00 PM	O.R.	O.R.	0.15	15.10
	108	10/30/2007 12:44:00 PM	O.R.	O.R.	0.14	15.11
	109	10/30/2007 12:45:00 PM	O.R.	O.R.	0.14	15.12
	110	10/30/2007 12:46:00 PM	O.R.	O.R.	0.14	15.12
	111	10/30/2007 12:47:00 PM	O.R.	O.R.	0.13	15.12
	112	10/30/2007 12:48:00 PM	O.R.	O.R.	0.14	15.13
	113	10/30/2007 12:49:00 PM	O.R.	O.R.	0.14	15.13
	114	10/30/2007 12:50:00 PM	O.R.	O.R.	0.15	15.13
	115	10/30/2007 12:51:00 PM	O.R.	O.R.	0.15	15.13
	116	10/30/2007 12:52:00 PM	O.R.	O.R.	0.16	15.12
	117	10/30/2007 12:53:00 PM	O.R.	O.R.	0.15	15.12
	118	10/30/2007 12:54:00 PM	O.R.	O.R.	0.15	15.12
	119	10/30/2007 12:55:00 PM	O.R.	O.R.	0.16	15.12
	120	10/30/2007 12:56:00 PM	O.R.	O.R.	0.16	15.12
	121	10/30/2007 12:57:00 PM	O.R.	O.R.	0.15	15.13
	122	10/30/2007 12:58:00 PM	O.R.	O.R.	0.13	15.13
	123	10/30/2007 12:59:00 PM	O.R.	O.R.	0.12	15.13
	124	10/30/2007 1:00:00 PM	O.R.	O.R.	0.12	15.12
	125	10/30/2007 1:01:00 PM	O.R.	O.R.	0.13	15.08
	126	10/30/2007 1:02:00 PM	O.R.	O.R.	0.13	15.12
	127	10/30/2007 1:03:00 PM	O.R.	O.R.	0.13	15.12
	128	10/30/2007 1:04:00 PM	O.R.	O.R.	0.13	15.11
	129	10/30/2007 1:05:00 PM	O.R.	O.R.	0.13	15.10
	130	10/30/2007 1:06:00 PM	O.R.	O.R.	0.15	15.10

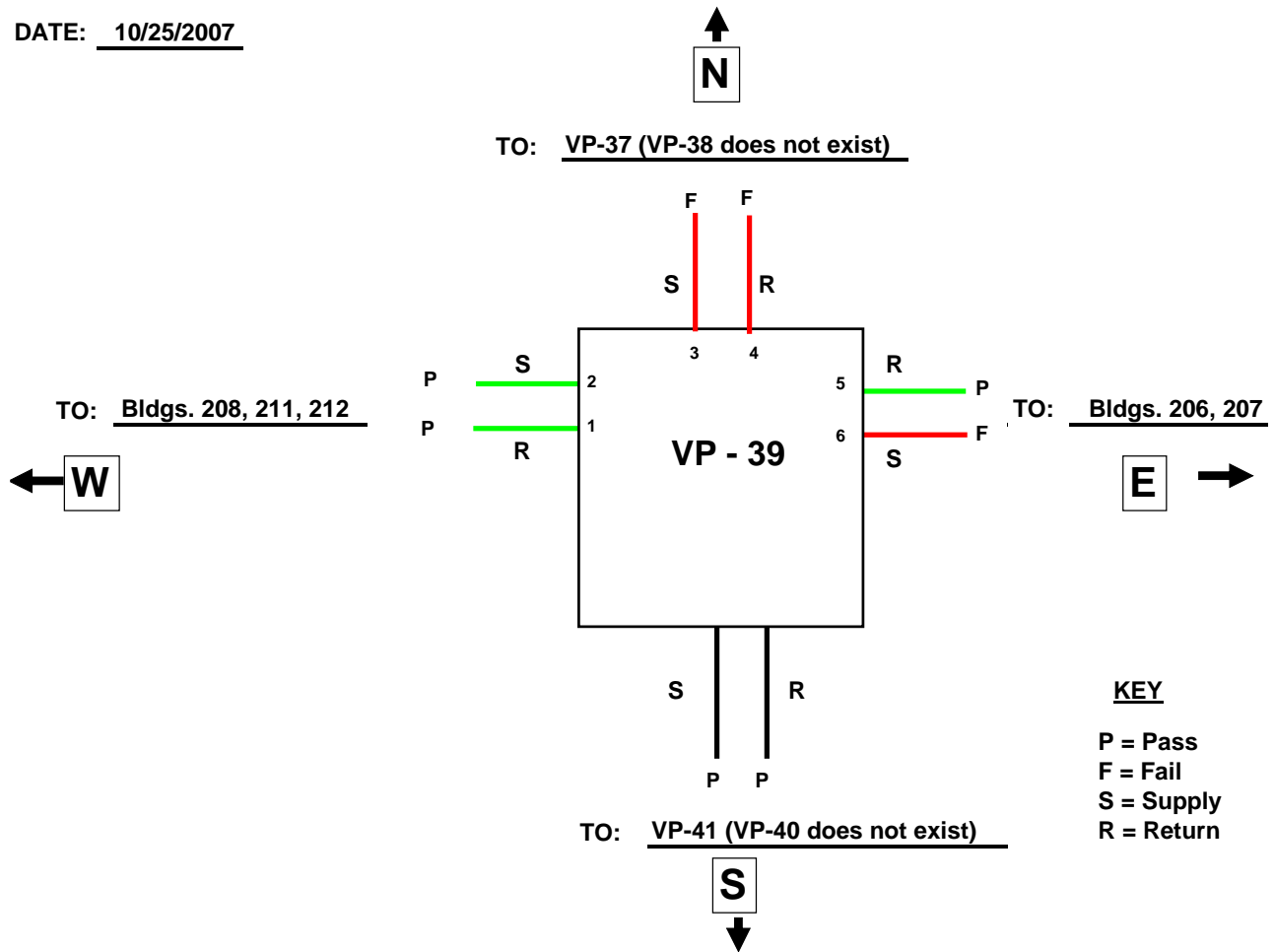
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/30/2007 1:07:00 PM	O.R.	O.R.	0.16	15.11
	132	10/30/2007 1:08:00 PM	O.R.	O.R.	0.16	15.10
	133	10/30/2007 1:09:00 PM	O.R.	O.R.	0.15	15.09
	134	10/30/2007 1:10:00 PM	O.R.	O.R.	0.15	15.09
	135	10/30/2007 1:11:00 PM	O.R.	O.R.	0.15	15.14
	136	10/30/2007 1:12:00 PM	O.R.	O.R.	0.15	15.14
	137	10/30/2007 1:13:00 PM	O.R.	O.R.	0.15	15.14
	138	10/30/2007 1:14:00 PM	O.R.	O.R.	0.14	15.12
	139	10/30/2007 1:15:00 PM	O.R.	O.R.	0.14	15.13
	140	10/30/2007 1:16:00 PM	O.R.	O.R.	0.15	15.10
	141	10/30/2007 1:17:00 PM	O.R.	O.R.	0.15	15.10
	142	10/30/2007 1:18:00 PM	O.R.	O.R.	0.15	15.08
	143	10/30/2007 1:19:00 PM	O.R.	O.R.	0.15	15.08
	144	10/30/2007 1:20:00 PM	O.R.	O.R.	0.13	15.09
	145	10/30/2007 1:21:00 PM	O.R.	O.R.	0.13	15.09
	146	10/30/2007 1:22:00 PM	O.R.	O.R.	0.13	15.10
	147	10/30/2007 1:23:00 PM	O.R.	O.R.	0.14	15.10
	148	10/30/2007 1:24:00 PM	O.R.	O.R.	0.14	15.06
	149	10/30/2007 1:25:00 PM	O.R.	O.R.	0.14	15.06
	150	10/30/2007 1:26:00 PM	O.R.	O.R.	0.14	15.07
	151	10/30/2007 1:27:00 PM	O.R.	O.R.	0.14	15.07
	152	10/30/2007 1:28:00 PM	O.R.	O.R.	0.14	15.07
	153	10/30/2007 1:29:00 PM	O.R.	O.R.	0.14	15.07
	154	10/30/2007 1:30:00 PM	O.R.	O.R.	0.14	15.06
	155	10/30/2007 1:31:00 PM	O.R.	O.R.	0.14	15.06
	156	10/30/2007 1:32:00 PM	O.R.	O.R.	0.15	15.06
	157	10/30/2007 1:33:00 PM	O.R.	O.R.	0.14	15.06
	158	10/30/2007 1:34:00 PM	O.R.	O.R.	0.14	15.06
	159	10/30/2007 1:35:00 PM	O.R.	O.R.	0.14	15.06
	160	10/30/2007 1:36:00 PM	O.R.	O.R.	0.14	15.07
	161	10/30/2007 1:37:00 PM	O.R.	O.R.	0.14	15.06
	162	10/30/2007 1:38:00 PM	O.R.	O.R.	0.14	15.06
	163	10/30/2007 1:39:00 PM	O.R.	O.R.	0.16	15.05
	164	10/30/2007 1:40:00 PM	O.R.	O.R.	0.16	15.09
	165	10/30/2007 1:41:00 PM	O.R.	O.R.	0.17	15.09
	166	10/30/2007 1:42:00 PM	O.R.	O.R.	0.16	15.09
	167	10/30/2007 1:43:00 PM	O.R.	O.R.	0.16	15.09
	168	10/30/2007 1:44:00 PM	O.R.	O.R.	0.17	15.09
	169	10/30/2007 1:45:00 PM	O.R.	O.R.	0.16	15.08
	170	10/30/2007 1:46:00 PM	O.R.	O.R.	0.15	15.07
	171	10/30/2007 1:47:00 PM	O.R.	O.R.	0.15	15.07
	172	10/30/2007 1:48:00 PM	O.R.	O.R.	0.15	15.06
	173	10/30/2007 1:49:00 PM	O.R.	O.R.	v -7.50	15.05
	174	10/30/2007 1:50:00 PM	O.R.	O.R.	v -7.50	15.08
	175	10/30/2007 1:51:00 PM	O.R.	O.R.	v -7.50	15.08
	176	10/30/2007 1:52:00 PM	O.R.	O.R.	v -7.50	15.08
	177	10/30/2007 1:53:00 PM	O.R.	O.R.	v -7.50	15.04
	178	10/30/2007 1:54:00 PM	O.R.	O.R.	v -7.50	15.05
	179	10/30/2007 1:55:00 PM	O.R.	O.R.	v -7.50	15.05
	180	10/30/2007 1:56:00 PM	O.R.	O.R.	v -7.50	v -7.50

DATE: 10/25/2007



NOTES:

1. All conduit drains were dry at exits from pit.
2. Pit has shallow water (< 1") on west side, sump in SW corner of pit. Low-point drains between VP-39 and VP-37 were unplugged during initial diagnostic air flow tests to determine conduit route. No discharge from the low-point drains was noted during these low-pressure tests. After plugging vents in VP-37 attempts to pressurization line between VP-39 and VP-37 resulted in discharge from low-point drains. When observed, one line was discharging water (approx. 1-2 gallons while observed before venting air-only). The second low-point drain was venting air. The low-point drains were plugged and pressurization was resumed. Both supply and return lines failed subsequent pressure test.

VP - 39					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldgs. 208, 211 and 212	P	Drain dry. Top of conduit exits pit @ 33" below grade
	2	2	Supply to Bldgs. 208, 211 and 212	P	Drain dry. Top of conduit exits pit @ 33" below grade
	3	3	Supply to VP-37	F	Drain dry. Top of conduit exits pit @ 30" below grade
	4	4	Return to VP-37	F	Drain dry. Top of conduit exits pit @ 30" below grade
2	1	5	Return to Bldgs. 206, 207	P	Drain dry. Top of conduit exits pit @ 64" below grade
	2	6	Supply to Bldgs. 206, 207	F	Drain dry. Top of conduit exits pit @ 64" below grade
		N/A	Return to VP-41		Drain dry. This line tested from VP-41, Top of conduit exits VP-39 @ 31" below grade.
		N/A	Supply to VP-41		Drain dry. This line tested from VP-41, Top of conduit exits VP-39 @ 31" below grade.

printed 1/15/2008

Handy logger

Name : LOGGER 1

LOG Name	10251423
Interval	00:01:00
Personnel	

Start	10/25/2007 2:23:31 PM
Stop	10/25/2007 4:36:07 PM
Comment	1N GLAND

Data	135
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.40	15.26	18.17	19.22
Minimum	0.11	0.03	0.14	2.67
Average	14.33	14.38	5.01	11.94
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/25/2007 2:23:31 PM	v 0.11	v 0.03	4.95	6.13
	2	10/25/2007 2:24:00 PM	v 0.11	v 0.03	5.35	6.52
	3	10/25/2007 2:25:00 PM	0.12	v 0.03	6.07	7.23
	4	10/25/2007 2:26:00 PM	0.13	0.05	6.82	7.98
	5	10/25/2007 2:27:00 PM	0.14	0.06	7.44	8.77
	6	10/25/2007 2:28:00 PM	4.48	5.24	5.93	7.24
	7	10/25/2007 2:29:00 PM	7.92	8.83	6.30	6.34
	8	10/25/2007 2:30:00 PM	11.44	12.21	5.42	5.63
	9	10/25/2007 2:31:00 PM	14.54	13.25	2.76	3.09
	10	10/25/2007 2:32:00 PM	14.49	13.22	1.84	2.74
	11	10/25/2007 2:33:00 PM	14.44	13.13	1.74	2.73
	12	10/25/2007 2:34:00 PM	14.41	13.11	1.64	2.72
	13	10/25/2007 2:35:00 PM	^ 15.40	14.24	1.53	2.71
	14	10/25/2007 2:36:00 PM	15.38	15.13	1.44	2.69
	15	10/25/2007 2:37:00 PM	15.36	15.13	1.40	2.68
	16	10/25/2007 2:38:00 PM	15.35	15.10	1.36	v 2.67
	17	10/25/2007 2:39:00 PM	15.34	15.11	1.28	v 2.67
	18	10/25/2007 2:40:00 PM	15.33	15.14	5.59	6.97
	19	10/25/2007 2:41:00 PM	15.34	15.16	6.40	7.73
	20	10/25/2007 2:42:00 PM	15.34	15.17	7.14	8.49
	21	10/25/2007 2:43:00 PM	15.32	15.17	7.79	9.33
	22	10/25/2007 2:44:00 PM	15.33	15.18	8.49	10.13
	23	10/25/2007 2:45:00 PM	15.34	15.19	9.20	10.99
	24	10/25/2007 2:46:00 PM	15.33	15.19	9.81	11.72
	25	10/25/2007 2:47:00 PM	15.31	15.19	10.38	12.24
	26	10/25/2007 2:48:00 PM	15.31	15.21	10.96	13.07
	27	10/25/2007 2:49:00 PM	15.29	15.23	11.55	13.87
	28	10/25/2007 2:50:00 PM	15.30	15.24	12.22	14.71
	29	10/25/2007 2:51:00 PM	15.28	15.24	12.79	15.56
	30	10/25/2007 2:52:00 PM	15.29	15.24	13.28	16.45

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/25/2007 2:53:00 PM	15.26	^ 15.26	13.87	^ 19.22
	32	10/25/2007 2:54:00 PM	15.28	15.20	14.51	17.95
	33	10/25/2007 2:55:00 PM	15.28	15.21	16.33	15.86
	34	10/25/2007 2:56:00 PM	15.24	15.22	16.95	15.79
	35	10/25/2007 2:57:00 PM	15.25	15.22	17.64	15.69
	36	10/25/2007 2:58:00 PM	15.22	15.21	^ 18.17	15.64
	37	10/25/2007 2:59:00 PM	15.23	15.19	14.70	15.58
	38	10/25/2007 3:00:00 PM	15.24	15.20	14.26	15.54
	39	10/25/2007 3:01:00 PM	15.21	15.22	13.83	15.48
	40	10/25/2007 3:02:00 PM	15.19	15.23	13.44	15.44
	41	10/25/2007 3:03:00 PM	15.17	15.19	13.06	15.36
	42	10/25/2007 3:04:00 PM	15.17	15.24	12.65	15.31
	43	10/25/2007 3:05:00 PM	15.18	15.24	12.30	15.27
	44	10/25/2007 3:06:00 PM	15.19	15.24	11.93	15.19
	45	10/25/2007 3:07:00 PM	15.19	15.23	11.55	15.15
	46	10/25/2007 3:08:00 PM	15.16	15.22	11.16	15.12
	47	10/25/2007 3:09:00 PM	15.16	15.22	10.86	15.03
	48	10/25/2007 3:10:00 PM	15.16	15.22	10.51	15.00
	49	10/25/2007 3:11:00 PM	15.16	15.21	10.17	14.95
	50	10/25/2007 3:12:00 PM	15.16	15.21	9.83	14.90
	51	10/25/2007 3:13:00 PM	15.16	15.22	9.50	14.80
	52	10/25/2007 3:14:00 PM	15.13	15.20	9.21	14.75
	53	10/25/2007 3:15:00 PM	15.13	15.20	8.93	14.70
	54	10/25/2007 3:16:00 PM	15.13	15.19	8.59	14.66
	55	10/25/2007 3:17:00 PM	15.13	15.19	8.29	14.61
	56	10/25/2007 3:18:00 PM	15.12	15.21	8.02	14.54
	57	10/25/2007 3:19:00 PM	15.12	15.22	7.76	14.51
	58	10/25/2007 3:20:00 PM	15.10	15.18	7.49	14.45
	59	10/25/2007 3:21:00 PM	15.11	15.18	7.23	14.39
	60	10/25/2007 3:22:00 PM	15.10	15.18	6.97	14.33
	61	10/25/2007 3:23:00 PM	15.09	15.20	6.72	14.27
	62	10/25/2007 3:24:00 PM	15.10	15.20	6.47	14.23
	63	10/25/2007 3:25:00 PM	15.10	15.20	6.22	14.17
	64	10/25/2007 3:26:00 PM	15.08	15.19	5.95	14.12
	65	10/25/2007 3:27:00 PM	15.08	15.19	5.74	14.07
	66	10/25/2007 3:28:00 PM	15.08	15.18	5.52	14.02
	67	10/25/2007 3:29:00 PM	15.07	15.14	5.31	13.95
	68	10/25/2007 3:30:00 PM	15.06	15.18	5.07	13.86
	69	10/25/2007 3:31:00 PM	15.06	15.19	4.84	13.82
	70	10/25/2007 3:32:00 PM	15.06	15.17	4.66	13.77
	71	10/25/2007 3:33:00 PM	15.02	15.18	4.43	13.69
	72	10/25/2007 3:34:00 PM	15.02	15.16	4.26	13.64
	73	10/25/2007 3:35:00 PM	15.02	15.17	4.08	13.59
	74	10/25/2007 3:36:00 PM	15.01	15.17	3.87	13.54
	75	10/25/2007 3:37:00 PM	15.01	15.16	3.71	13.46
	76	10/25/2007 3:38:00 PM	15.00	15.16	3.53	13.42
	77	10/25/2007 3:39:00 PM	15.00	15.15	3.35	13.38
	78	10/25/2007 3:40:00 PM	14.99	15.15	3.21	13.32
	79	10/25/2007 3:41:00 PM	14.99	15.15	3.07	13.27
	80	10/25/2007 3:42:00 PM	14.99	15.14	2.90	13.18

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/25/2007 3:43:00 PM	14.99	15.10	2.76	13.13
	82	10/25/2007 3:44:00 PM	14.99	15.11	2.60	13.07
	83	10/25/2007 3:45:00 PM	14.98	15.09	2.47	13.01
	84	10/25/2007 3:46:00 PM	14.98	15.09	2.35	12.96
	85	10/25/2007 3:47:00 PM	14.98	15.14	2.24	12.90
	86	10/25/2007 3:48:00 PM	14.98	15.13	2.11	12.84
	87	10/25/2007 3:49:00 PM	14.97	15.10	2.00	12.79
	88	10/25/2007 3:50:00 PM	14.97	15.12	1.89	12.73
	89	10/25/2007 3:51:00 PM	14.96	15.07	1.79	12.70
	90	10/25/2007 3:52:00 PM	14.96	15.09	1.68	12.65
	91	10/25/2007 3:53:00 PM	14.96	15.10	1.58	12.58
	92	10/25/2007 3:54:00 PM	14.95	15.11	1.49	12.54
	93	10/25/2007 3:55:00 PM	14.95	15.11	1.40	12.48
	94	10/25/2007 3:56:00 PM	14.94	15.10	1.32	12.43
	95	10/25/2007 3:57:00 PM	14.94	15.11	1.24	12.37
	96	10/25/2007 3:58:00 PM	14.93	15.10	1.15	12.32
	97	10/25/2007 3:59:00 PM	14.96	15.09	1.08	12.26
	98	10/25/2007 4:00:00 PM	14.95	15.14	1.01	12.22
	99	10/25/2007 4:01:00 PM	14.94	15.13	0.95	12.17
	100	10/25/2007 4:02:00 PM	14.96	15.13	0.88	12.11
	101	10/25/2007 4:03:00 PM	14.94	15.13	0.83	12.06
	102	10/25/2007 4:04:00 PM	14.93	15.13	0.74	12.02
	103	10/25/2007 4:05:00 PM	14.93	15.08	0.69	11.98
	104	10/25/2007 4:06:00 PM	14.93	15.09	0.65	11.93
	105	10/25/2007 4:07:00 PM	14.93	15.09	0.61	11.89
	106	10/25/2007 4:08:00 PM	14.92	15.08	0.56	11.84
	107	10/25/2007 4:09:00 PM	14.92	15.08	0.52	11.80
	108	10/25/2007 4:10:00 PM	14.92	15.08	0.49	11.75
	109	10/25/2007 4:11:00 PM	14.93	15.09	0.45	11.71
	110	10/25/2007 4:12:00 PM	14.91	15.08	0.41	11.66
	111	10/25/2007 4:13:00 PM	14.91	15.09	0.39	11.61
	112	10/25/2007 4:14:00 PM	14.91	15.10	0.35	11.56
	113	10/25/2007 4:15:00 PM	14.90	15.09	0.33	11.51
	114	10/25/2007 4:16:00 PM	14.91	15.09	0.30	11.47
	115	10/25/2007 4:17:00 PM	14.89	15.08	0.30	11.39
	116	10/25/2007 4:18:00 PM	14.90	15.08	0.28	11.35
	117	10/25/2007 4:19:00 PM	14.86	15.07	0.27	11.31
	118	10/25/2007 4:20:00 PM	14.87	15.07	0.25	11.26
	119	10/25/2007 4:21:00 PM	14.86	15.06	0.24	11.19
	120	10/25/2007 4:22:00 PM	14.87	15.06	0.17	11.14
	121	10/25/2007 4:23:00 PM	14.87	15.03	0.17	11.11
	122	10/25/2007 4:24:00 PM	14.86	15.04	0.16	11.08
	123	10/25/2007 4:25:00 PM	14.86	15.04	0.16	11.01
	124	10/25/2007 4:26:00 PM	14.86	15.03	0.16	10.97
	125	10/25/2007 4:27:00 PM	14.84	15.03	0.16	10.93
	126	10/25/2007 4:28:00 PM	14.82	15.03	0.17	10.89
	127	10/25/2007 4:29:00 PM	14.82	15.04	0.17	10.86
	128	10/25/2007 4:30:00 PM	14.81	15.04	0.17	10.81
	129	10/25/2007 4:31:00 PM	14.81	15.03	0.17	10.74
	130	10/25/2007 4:32:00 PM	14.81	15.04	0.17	10.71

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/25/2007 4:33:00 PM	14.80	15.04	0.17	10.65
	132	10/25/2007 4:34:00 PM	14.80	15.04	v 0.14	10.61
	133	10/25/2007 4:35:00 PM	14.80	15.04	v 0.14	10.57
	134	10/25/2007 4:36:00 PM	14.80	15.04	0.15	10.54
	135	10/25/2007 4:36:07 PM	14.80	15.04	0.15	10.53

printed 1/15/2008

Handy logger

Name : LOGGER 2

LOG Name	10251422
Interval	00.01.00
Personnel	10S

Start	10/25/2007 2:22:24 PM
Stop	10/25/2007 4:32:37 PM
Comment	

Data	132
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.71	15.86		
Minimum	0.01	-7.50		
Average	14.21	12.93		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/25/2007 2:22:24 PM	0.03	0.05	O.R.	O.R.
	2	10/25/2007 2:23:00 PM	0.02	0.04	O.R.	O.R.
	3	10/25/2007 2:24:00 PM	v 0.01	0.04	O.R.	O.R.
	4	10/25/2007 2:25:00 PM	0.02	0.03	O.R.	O.R.
	5	10/25/2007 2:26:00 PM	0.03	0.04	O.R.	O.R.
	6	10/25/2007 2:27:00 PM	0.03	0.04	O.R.	O.R.
	7	10/25/2007 2:28:00 PM	0.03	0.08	O.R.	O.R.
	8	10/25/2007 2:29:00 PM	0.05	0.08	O.R.	O.R.
	9	10/25/2007 2:30:00 PM	0.02	0.04	O.R.	O.R.
	10	10/25/2007 2:31:00 PM	9.16	8.28	O.R.	O.R.
	11	10/25/2007 2:32:00 PM	^ 15.71	^ 15.86	O.R.	O.R.
	12	10/25/2007 2:33:00 PM	15.70	15.85	O.R.	O.R.
	13	10/25/2007 2:34:00 PM	15.66	15.83	O.R.	O.R.
	14	10/25/2007 2:35:00 PM	15.68	15.78	O.R.	O.R.
	15	10/25/2007 2:36:00 PM	15.65	15.78	O.R.	O.R.
	16	10/25/2007 2:37:00 PM	15.66	15.75	O.R.	O.R.
	17	10/25/2007 2:38:00 PM	15.65	15.72	O.R.	O.R.
	18	10/25/2007 2:39:00 PM	15.64	15.71	O.R.	O.R.
	19	10/25/2007 2:40:00 PM	15.64	15.69	O.R.	O.R.
	20	10/25/2007 2:41:00 PM	15.62	15.68	O.R.	O.R.
	21	10/25/2007 2:42:00 PM	15.63	15.62	O.R.	O.R.
	22	10/25/2007 2:43:00 PM	15.63	15.62	O.R.	O.R.
	23	10/25/2007 2:44:00 PM	15.62	15.61	O.R.	O.R.
	24	10/25/2007 2:45:00 PM	15.63	15.60	O.R.	O.R.
	25	10/25/2007 2:46:00 PM	15.62	15.57	O.R.	O.R.
	26	10/25/2007 2:47:00 PM	15.62	15.55	O.R.	O.R.
	27	10/25/2007 2:48:00 PM	15.60	15.55	O.R.	O.R.
	28	10/25/2007 2:49:00 PM	15.57	15.49	O.R.	O.R.
	29	10/25/2007 2:50:00 PM	15.56	15.47	O.R.	O.R.
	30	10/25/2007 2:51:00 PM	15.55	15.46	O.R.	O.R.

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/25/2007 2:52:00 PM	15.54	15.41	O.R.	O.R.
	32	10/25/2007 2:53:00 PM	15.53	15.40	O.R.	O.R.
	33	10/25/2007 2:54:00 PM	15.51	15.38	O.R.	O.R.
	34	10/25/2007 2:55:00 PM	15.47	15.39	O.R.	O.R.
	35	10/25/2007 2:56:00 PM	15.48	15.35	O.R.	O.R.
	36	10/25/2007 2:57:00 PM	15.41	15.33	O.R.	O.R.
	37	10/25/2007 2:58:00 PM	15.42	15.29	O.R.	O.R.
	38	10/25/2007 2:59:00 PM	15.42	15.25	O.R.	O.R.
	39	10/25/2007 3:00:00 PM	15.41	15.25	O.R.	O.R.
	40	10/25/2007 3:01:00 PM	15.40	15.24	O.R.	O.R.
	41	10/25/2007 3:02:00 PM	15.40	15.24	O.R.	O.R.
	42	10/25/2007 3:03:00 PM	15.36	15.23	O.R.	O.R.
	43	10/25/2007 3:04:00 PM	15.33	15.19	O.R.	O.R.
	44	10/25/2007 3:05:00 PM	15.29	15.17	O.R.	O.R.
	45	10/25/2007 3:06:00 PM	15.30	15.17	O.R.	O.R.
	46	10/25/2007 3:07:00 PM	15.31	15.16	O.R.	O.R.
	47	10/25/2007 3:08:00 PM	15.30	15.15	O.R.	O.R.
	48	10/25/2007 3:09:00 PM	15.30	15.14	O.R.	O.R.
	49	10/25/2007 3:10:00 PM	15.29	15.12	O.R.	O.R.
	50	10/25/2007 3:11:00 PM	15.28	15.10	O.R.	O.R.
	51	10/25/2007 3:12:00 PM	15.28	15.08	O.R.	O.R.
	52	10/25/2007 3:13:00 PM	15.26	15.06	O.R.	O.R.
	53	10/25/2007 3:14:00 PM	15.25	15.06	O.R.	O.R.
	54	10/25/2007 3:15:00 PM	15.25	15.05	O.R.	O.R.
	55	10/25/2007 3:16:00 PM	15.25	15.03	O.R.	O.R.
	56	10/25/2007 3:17:00 PM	15.25	14.99	O.R.	O.R.
	57	10/25/2007 3:18:00 PM	15.24	15.00	O.R.	O.R.
	58	10/25/2007 3:19:00 PM	15.23	14.99	O.R.	O.R.
	59	10/25/2007 3:20:00 PM	15.21	14.95	O.R.	O.R.
	60	10/25/2007 3:21:00 PM	15.20	14.92	O.R.	O.R.
	61	10/25/2007 3:22:00 PM	15.20	14.92	O.R.	O.R.
	62	10/25/2007 3:23:00 PM	15.18	14.90	O.R.	O.R.
	63	10/25/2007 3:24:00 PM	15.18	14.89	O.R.	O.R.
	64	10/25/2007 3:25:00 PM	15.18	14.88	O.R.	O.R.
	65	10/25/2007 3:26:00 PM	15.17	14.86	O.R.	O.R.
	66	10/25/2007 3:27:00 PM	15.17	14.84	O.R.	O.R.
	67	10/25/2007 3:28:00 PM	15.16	14.83	O.R.	O.R.
	68	10/25/2007 3:29:00 PM	15.17	14.79	O.R.	O.R.
	69	10/25/2007 3:30:00 PM	15.15	14.80	O.R.	O.R.
	70	10/25/2007 3:31:00 PM	15.14	14.80	O.R.	O.R.
	71	10/25/2007 3:32:00 PM	15.15	14.79	O.R.	O.R.
	72	10/25/2007 3:33:00 PM	15.12	14.74	O.R.	O.R.
	73	10/25/2007 3:34:00 PM	15.14	14.71	O.R.	O.R.
	74	10/25/2007 3:35:00 PM	15.13	14.71	O.R.	O.R.
	75	10/25/2007 3:36:00 PM	15.14	14.70	O.R.	O.R.
	76	10/25/2007 3:37:00 PM	15.13	14.70	O.R.	O.R.
	77	10/25/2007 3:38:00 PM	15.16	14.70	O.R.	O.R.
	78	10/25/2007 3:39:00 PM	15.16	14.67	O.R.	O.R.
	79	10/25/2007 3:40:00 PM	15.19	14.63	O.R.	O.R.
	80	10/25/2007 3:41:00 PM	15.23	14.62	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/25/2007 3:42:00 PM	15.26	14.62	O.R.	O.R.
	82	10/25/2007 3:43:00 PM	15.25	14.61	O.R.	O.R.
	83	10/25/2007 3:44:00 PM	15.27	14.60	O.R.	O.R.
	84	10/25/2007 3:45:00 PM	15.28	14.60	O.R.	O.R.
	85	10/25/2007 3:46:00 PM	15.26	14.58	O.R.	O.R.
	86	10/25/2007 3:47:00 PM	15.29	14.56	O.R.	O.R.
	87	10/25/2007 3:48:00 PM	15.30	14.55	O.R.	O.R.
	88	10/25/2007 3:49:00 PM	15.34	14.54	O.R.	O.R.
	89	10/25/2007 3:50:00 PM	15.37	14.55	O.R.	O.R.
	90	10/25/2007 3:51:00 PM	15.37	14.51	O.R.	O.R.
	91	10/25/2007 3:52:00 PM	15.42	14.56	O.R.	O.R.
	92	10/25/2007 3:53:00 PM	15.41	14.52	O.R.	O.R.
	93	10/25/2007 3:54:00 PM	15.42	14.50	O.R.	O.R.
	94	10/25/2007 3:55:00 PM	15.41	14.50	O.R.	O.R.
	95	10/25/2007 3:56:00 PM	15.42	14.50	O.R.	O.R.
	96	10/25/2007 3:57:00 PM	15.40	14.48	O.R.	O.R.
	97	10/25/2007 3:58:00 PM	15.40	14.45	O.R.	O.R.
	98	10/25/2007 3:59:00 PM	15.38	14.42	O.R.	O.R.
	99	10/25/2007 4:00:00 PM	15.35	14.43	O.R.	O.R.
	100	10/25/2007 4:01:00 PM	15.35	14.40	O.R.	O.R.
	101	10/25/2007 4:02:00 PM	15.29	14.38	O.R.	O.R.
	102	10/25/2007 4:03:00 PM	15.27	14.36	O.R.	O.R.
	103	10/25/2007 4:04:00 PM	15.22	14.32	O.R.	O.R.
	104	10/25/2007 4:05:00 PM	15.22	14.31	O.R.	O.R.
	105	10/25/2007 4:06:00 PM	15.20	14.32	O.R.	O.R.
	106	10/25/2007 4:07:00 PM	15.20	14.30	O.R.	O.R.
	107	10/25/2007 4:08:00 PM	15.19	14.29	O.R.	O.R.
	108	10/25/2007 4:09:00 PM	15.17	14.28	O.R.	O.R.
	109	10/25/2007 4:10:00 PM	15.17	14.26	O.R.	O.R.
	110	10/25/2007 4:11:00 PM	15.16	14.21	O.R.	O.R.
	111	10/25/2007 4:12:00 PM	15.14	14.20	O.R.	O.R.
	112	10/25/2007 4:13:00 PM	15.12	14.19	O.R.	O.R.
	113	10/25/2007 4:14:00 PM	15.11	14.18	O.R.	O.R.
	114	10/25/2007 4:15:00 PM	15.11	14.16	O.R.	O.R.
	115	10/25/2007 4:16:00 PM	15.11	14.15	O.R.	O.R.
	116	10/25/2007 4:17:00 PM	15.08	14.13	O.R.	O.R.
	117	10/25/2007 4:18:00 PM	15.05	14.12	O.R.	O.R.
	118	10/25/2007 4:19:00 PM	15.04	14.07	O.R.	O.R.
	119	10/25/2007 4:20:00 PM	15.07	14.04	O.R.	O.R.
	120	10/25/2007 4:21:00 PM	15.07	14.04	O.R.	O.R.
	121	10/25/2007 4:22:00 PM	15.08	v -7.50	O.R.	O.R.
	122	10/25/2007 4:23:00 PM	15.05	v -7.50	O.R.	O.R.
	123	10/25/2007 4:24:00 PM	15.02	v -7.50	O.R.	O.R.
	124	10/25/2007 4:25:00 PM	15.03	v -7.50	O.R.	O.R.
	125	10/25/2007 4:26:00 PM	15.03	v -7.50	O.R.	O.R.
	126	10/25/2007 4:27:00 PM	15.03	13.89	O.R.	O.R.
	127	10/25/2007 4:28:00 PM	15.01	13.91	O.R.	O.R.
	128	10/25/2007 4:29:00 PM	15.02	13.93	O.R.	O.R.
	129	10/25/2007 4:30:00 PM	15.01	13.92	O.R.	O.R.
	130	10/25/2007 4:31:00 PM	15.01	13.91	O.R.	O.R.

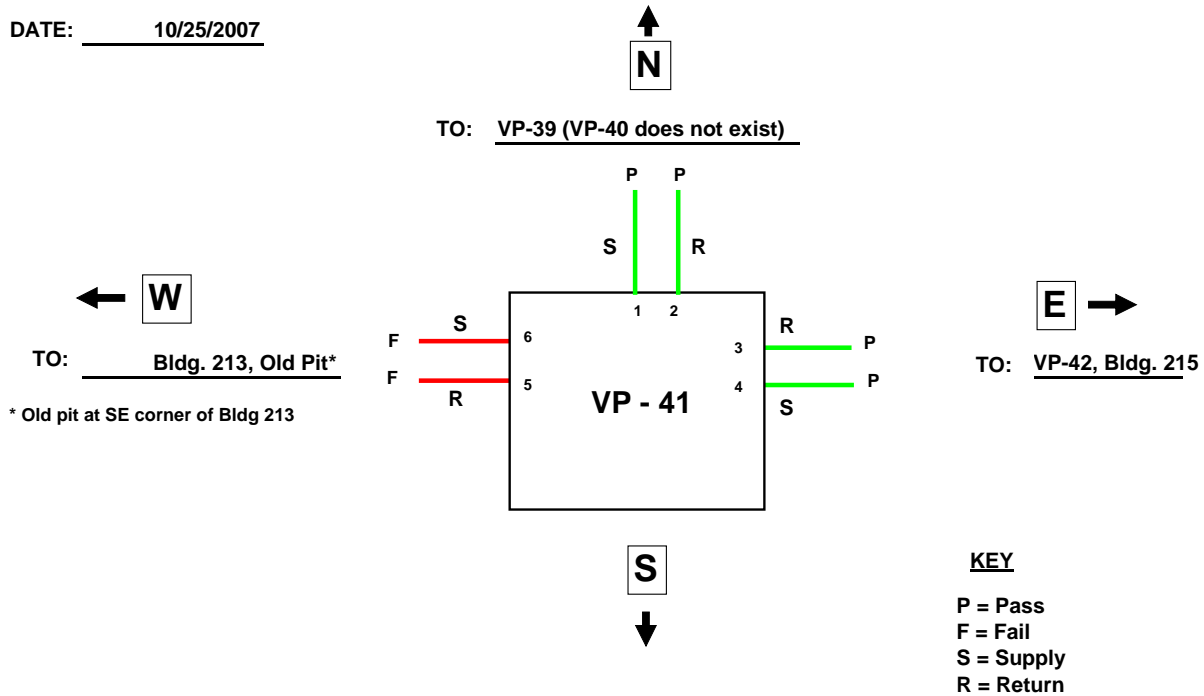
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/25/2007 4:32:00 PM	15.02	13.89	O.R.	O.R.
	132	10/25/2007 4:32:37 PM	14.99	13.88	O.R.	O.R.

DATE: 10/25/2007



NOTES:

1. All conduit drain are dry at exits from pit.
2. Pit is "clean" and dry. Goosenecks @ Bldg. 215 are somewhat loose. Line to 213 tees to old pit at SE corner of 213 - must cap vents in old pit to pressurize 213. Pressure transducer #6 failed at beginning of test. Replaced #6 with #7 transducer, but registered data on channel 7. New transducer ordered to replace #6. Low point drains between VP-41 and VP-42 are dry. There is no low-point drain between VP-41 and VP-39 (VP-40 does not exist).

VP - 41					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to VP-39	P	Drain dry. Top of conduit exits pit @ 59" below grade
	2	2	Return to VP-39	P	Drain dry. Top of conduit exits pit @ 59" below grade
	3	3	Return to VP-42, Bldg. 215	P	Drain dry. Top of conduit exits pit @ 29" below grade
	4	4	Supply to VP-42, Bldg 215	P	Drain dry. Top of conduit exits pit @ 29" below grade
2	1	5	Return to Bldg. 213, old pit at SE corner of Bldg. 213	F	Drain dry. Top of conduit exits pit @ 35" below grade
	2	6	Supply to Bldg. 213, old pit at SE corner of Bldg. 213	F	Drain dry. Top of conduit exits pit @ 35" below grade

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Handy logger

Name : LOGGER 1

LOG Name	10251025
Interval	00:01:00
Personnel	

Start	10/25/2007 10:25:37 AM
Stop	10/25/2007 12:40:23 PM
Comment	1N GLAND

Data	137
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.27	15.25	15.18	15.11
Minimum	14.79	14.79	14.20	14.59
Average	15.04	15.00	14.73	14.89
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/25/2007 10:25:37 AM	^ 15.27	^ 15.25	^ 15.18	^ 15.11
	2	10/25/2007 10:26:00 AM	15.26	15.22	15.16	15.09
	3	10/25/2007 10:27:00 AM	15.25	15.19	15.13	15.09
	4	10/25/2007 10:28:00 AM	15.25	15.15	15.10	15.05
	5	10/25/2007 10:29:00 AM	15.25	15.17	15.09	15.07
	6	10/25/2007 10:30:00 AM	15.24	15.19	15.06	15.07
	7	10/25/2007 10:31:00 AM	15.25	15.22	15.06	15.05
	8	10/25/2007 10:32:00 AM	15.24	15.19	15.08	15.07
	9	10/25/2007 10:33:00 AM	15.23	15.17	15.07	15.06
	10	10/25/2007 10:34:00 AM	15.23	15.20	15.06	15.07
	11	10/25/2007 10:35:00 AM	15.23	15.18	15.05	15.06
	12	10/25/2007 10:36:00 AM	15.23	15.17	15.05	15.06
	13	10/25/2007 10:37:00 AM	15.22	15.20	15.05	15.06
	14	10/25/2007 10:38:00 AM	15.24	15.23	15.04	15.06
	15	10/25/2007 10:39:00 AM	15.24	15.20	15.04	15.08
	16	10/25/2007 10:40:00 AM	15.22	15.19	15.03	15.08
	17	10/25/2007 10:41:00 AM	15.21	15.18	15.03	15.08
	18	10/25/2007 10:42:00 AM	15.22	15.18	15.04	15.08
	19	10/25/2007 10:43:00 AM	15.21	15.17	15.03	15.08
	20	10/25/2007 10:44:00 AM	15.20	15.15	15.03	15.07
	21	10/25/2007 10:45:00 AM	15.20	15.14	15.02	15.07
	22	10/25/2007 10:46:00 AM	15.20	15.14	15.02	15.07
	23	10/25/2007 10:47:00 AM	15.20	15.14	15.03	15.07
	24	10/25/2007 10:48:00 AM	15.21	15.14	15.04	15.07
	25	10/25/2007 10:49:00 AM	15.18	15.14	15.03	15.07
	26	10/25/2007 10:50:00 AM	15.18	15.13	14.99	15.04
	27	10/25/2007 10:51:00 AM	15.18	15.13	14.99	15.05
	28	10/25/2007 10:52:00 AM	15.19	15.10	15.00	15.04
	29	10/25/2007 10:53:00 AM	15.17	15.13	14.96	15.04
	30	10/25/2007 10:54:00 AM	15.16	15.12	14.97	15.04

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/25/2007 10:55:00 AM	15.17	15.04	14.98	15.05
	32	10/25/2007 10:56:00 AM	15.16	15.04	14.94	15.03
	33	10/25/2007 10:57:00 AM	15.14	15.03	14.95	15.03
	34	10/25/2007 10:58:00 AM	15.12	15.05	14.92	15.03
	35	10/25/2007 10:59:00 AM	15.15	15.03	14.93	15.03
	36	10/25/2007 11:00:00 AM	15.15	15.07	14.94	15.03
	37	10/25/2007 11:01:00 AM	15.16	15.08	14.94	15.03
	38	10/25/2007 11:02:00 AM	15.15	15.09	14.97	15.02
	39	10/25/2007 11:03:00 AM	15.16	15.07	14.94	15.04
	40	10/25/2007 11:04:00 AM	15.14	15.10	14.97	15.04
	41	10/25/2007 11:05:00 AM	15.13	15.11	14.96	15.03
	42	10/25/2007 11:06:00 AM	15.15	15.07	14.94	15.02
	43	10/25/2007 11:07:00 AM	15.12	15.07	14.91	15.01
	44	10/25/2007 11:08:00 AM	15.10	15.00	14.89	15.02
	45	10/25/2007 11:09:00 AM	15.11	15.02	14.90	14.99
	46	10/25/2007 11:10:00 AM	15.10	15.01	14.88	14.99
	47	10/25/2007 11:11:00 AM	15.07	14.98	14.90	15.00
	48	10/25/2007 11:12:00 AM	15.08	15.00	14.90	14.99
	49	10/25/2007 11:13:00 AM	15.12	15.03	14.89	14.99
	50	10/25/2007 11:14:00 AM	15.13	15.06	14.88	14.98
	51	10/25/2007 11:15:00 AM	15.12	15.04	14.90	14.98
	52	10/25/2007 11:16:00 AM	15.11	15.03	14.90	14.99
	53	10/25/2007 11:17:00 AM	15.12	15.09	14.92	14.98
	54	10/25/2007 11:18:00 AM	15.13	15.06	14.93	14.98
	55	10/25/2007 11:19:00 AM	15.12	15.07	14.90	15.00
	56	10/25/2007 11:20:00 AM	15.13	15.06	14.90	14.99
	57	10/25/2007 11:21:00 AM	15.13	15.08	14.90	14.98
	58	10/25/2007 11:22:00 AM	15.11	15.05	14.88	14.96
	59	10/25/2007 11:23:00 AM	15.09	15.04	14.89	14.98
	60	10/25/2007 11:24:00 AM	15.08	15.05	14.87	14.97
	61	10/25/2007 11:25:00 AM	15.10	15.07	14.85	14.96
	62	10/25/2007 11:26:00 AM	15.09	15.04	14.87	14.96
	63	10/25/2007 11:27:00 AM	15.11	15.03	14.86	14.96
	64	10/25/2007 11:28:00 AM	15.09	15.01	14.84	14.95
	65	10/25/2007 11:29:00 AM	15.07	15.04	14.83	14.94
	66	10/25/2007 11:30:00 AM	15.09	15.02	14.84	14.93
	67	10/25/2007 11:31:00 AM	15.11	15.03	14.81	14.92
	68	10/25/2007 11:32:00 AM	15.05	15.02	14.84	14.90
	69	10/25/2007 11:33:00 AM	15.05	15.00	14.81	14.89
	70	10/25/2007 11:34:00 AM	15.09	15.01	14.79	14.92
	71	10/25/2007 11:35:00 AM	15.07	15.02	14.77	14.93
	72	10/25/2007 11:36:00 AM	15.06	15.01	14.79	14.92
	73	10/25/2007 11:37:00 AM	15.04	14.99	14.78	14.91
	74	10/25/2007 11:38:00 AM	15.04	14.99	14.77	14.90
	75	10/25/2007 11:39:00 AM	15.03	14.98	14.75	14.89
	76	10/25/2007 11:40:00 AM	15.02	14.96	14.74	14.89
	77	10/25/2007 11:41:00 AM	15.03	14.95	14.74	14.89
	78	10/25/2007 11:42:00 AM	14.99	14.90	14.71	14.85
	79	10/25/2007 11:43:00 AM	14.98	14.89	14.68	14.86
	80	10/25/2007 11:44:00 AM	14.94	14.88	14.66	14.86

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/25/2007 11:45:00 AM	14.97	14.88	14.63	14.83
	82	10/25/2007 11:46:00 AM	14.99	14.91	14.64	14.83
	83	10/25/2007 11:47:00 AM	14.99	14.94	14.68	14.86
	84	10/25/2007 11:48:00 AM	14.97	14.93	14.67	14.85
	85	10/25/2007 11:49:00 AM	14.96	14.93	14.65	14.85
	86	10/25/2007 11:50:00 AM	14.96	14.96	14.64	14.84
	87	10/25/2007 11:51:00 AM	14.99	14.95	14.66	14.84
	88	10/25/2007 11:52:00 AM	15.01	14.96	14.64	14.83
	89	10/25/2007 11:53:00 AM	14.99	14.98	14.65	14.84
	90	10/25/2007 11:54:00 AM	15.00	14.96	14.66	14.84
	91	10/25/2007 11:55:00 AM	14.98	14.98	14.65	14.83
	92	10/25/2007 11:56:00 AM	14.96	14.96	14.63	14.82
	93	10/25/2007 11:57:00 AM	14.95	14.96	14.61	14.80
	94	10/25/2007 11:58:00 AM	14.99	14.91	14.60	14.80
	95	10/25/2007 11:59:00 AM	14.98	14.93	14.59	14.78
	96	10/25/2007 12:00:00 PM	14.97	14.94	14.58	14.77
	97	10/25/2007 12:01:00 PM	14.97	14.93	14.57	14.79
	98	10/25/2007 12:02:00 PM	14.96	14.90	14.53	14.79
	99	10/25/2007 12:03:00 PM	14.96	14.90	14.52	14.79
	100	10/25/2007 12:04:00 PM	14.95	14.93	14.52	14.78
	101	10/25/2007 12:05:00 PM	14.94	14.96	14.51	14.77
	102	10/25/2007 12:06:00 PM	14.93	14.93	14.53	14.76
	103	10/25/2007 12:07:00 PM	14.95	14.96	14.53	14.75
	104	10/25/2007 12:08:00 PM	14.94	14.94	14.53	14.74
	105	10/25/2007 12:09:00 PM	14.93	14.88	14.51	14.73
	106	10/25/2007 12:10:00 PM	14.92	14.88	14.50	14.77
	107	10/25/2007 12:11:00 PM	14.92	14.88	14.49	14.76
	108	10/25/2007 12:12:00 PM	14.88	14.89	14.48	14.75
	109	10/25/2007 12:13:00 PM	14.91	14.92	14.47	14.74
	110	10/25/2007 12:14:00 PM	14.90	14.91	14.44	14.73
	111	10/25/2007 12:15:00 PM	14.90	14.93	14.45	14.72
	112	10/25/2007 12:16:00 PM	14.92	14.91	14.46	14.75
	113	10/25/2007 12:17:00 PM	14.88	14.91	14.42	14.70
	114	10/25/2007 12:18:00 PM	14.86	14.88	14.39	14.71
	115	10/25/2007 12:19:00 PM	14.87	14.87	14.40	14.72
	116	10/25/2007 12:20:00 PM	14.85	14.82	14.36	14.68
	117	10/25/2007 12:21:00 PM	14.85	14.84	14.34	14.68
	118	10/25/2007 12:22:00 PM	14.80	14.83	14.32	14.68
	119	10/25/2007 12:23:00 PM	14.82	14.81	14.31	14.65
	120	10/25/2007 12:24:00 PM	14.85	14.84	14.32	14.67
	121	10/25/2007 12:25:00 PM	14.83	14.82	14.33	14.63
	122	10/25/2007 12:26:00 PM	14.84	14.81	14.27	14.65
	123	10/25/2007 12:27:00 PM	14.82	14.80	14.28	14.64
	124	10/25/2007 12:28:00 PM	14.82	v 14.79	14.25	14.62
	125	10/25/2007 12:29:00 PM	14.83	v 14.79	14.27	14.62
	126	10/25/2007 12:30:00 PM	14.83	14.82	14.25	14.63
	127	10/25/2007 12:31:00 PM	14.81	14.82	14.24	14.63
	128	10/25/2007 12:32:00 PM	14.82	v 14.79	14.24	14.64
	129	10/25/2007 12:33:00 PM	14.80	14.82	14.21	14.63
	130	10/25/2007 12:34:00 PM	14.82	14.81	14.22	14.61

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/25/2007 12:35:00 PM	14.83	14.80	v 14.20	14.61
	132	10/25/2007 12:36:00 PM	14.84	14.83	14.21	14.61
	133	10/25/2007 12:37:00 PM	14.82	14.84	v 14.20	14.60
	134	10/25/2007 12:38:00 PM	v 14.79	14.81	14.21	14.60
	135	10/25/2007 12:39:00 PM	14.80	14.81	v 14.20	14.60
	136	10/25/2007 12:40:00 PM	14.80	14.86	v 14.20	v 14.59
	137	10/25/2007 12:40:23 PM	14.84	14.85	14.21	v 14.59

printed 1/15/2008

Handy logger

Name : LOGGER 2

LOG Name	10251024
Interval	00:01:00
Personnel	10S

Start	10/25/2007 10:24:22 AM
Stop	10/25/2007 12:45:56 PM
Comment	

Data	143
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	18.15	15.67		-2.28
Minimum	-0.15	-0.07		-7.50
Average	12.78	13.04		-7.20
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/25/2007 10:24:22 AM	5.71	4.16	O.R.	O.R.
	2	10/25/2007 10:25:00 AM	5.83	4.18	O.R.	O.R.
	3	10/25/2007 10:26:00 AM	5.78	4.19	O.R.	O.R.
	4	10/25/2007 10:27:00 AM	5.72	4.19	O.R.	O.R.
	5	10/25/2007 10:28:00 AM	5.67	4.13	O.R.	O.R.
	6	10/25/2007 10:29:00 AM	5.68	4.10	O.R.	O.R.
	7	10/25/2007 10:30:00 AM	5.71	4.12	O.R.	O.R.
	8	10/25/2007 10:31:00 AM	-0.04	-0.04	O.R.	O.R.
	9	10/25/2007 10:32:00 AM	-0.07	v -0.07	O.R.	^ -2.28
	10	10/25/2007 10:33:00 AM	-0.09	v -0.07	O.R.	^ -2.28
	11	10/25/2007 10:34:00 AM	-0.11	v -0.07	O.R.	-2.29
	12	10/25/2007 10:35:00 AM	v -0.15	-0.04	O.R.	v -7.50
	13	10/25/2007 10:36:00 AM	-0.13	-0.01	O.R.	v -7.50
	14	10/25/2007 10:37:00 AM	-0.07	-0.02	O.R.	v -7.50
	15	10/25/2007 10:38:00 AM	-0.05	0.04	O.R.	v -7.50
	16	10/25/2007 10:39:00 AM	-0.04	0.06	O.R.	v -7.50
	17	10/25/2007 10:40:00 AM	-0.01	0.08	O.R.	v -7.50
	18	10/25/2007 10:41:00 AM	10.90	11.25	O.R.	O.R.
	19	10/25/2007 10:42:00 AM	^ 18.15	15.66	O.R.	O.R.
	20	10/25/2007 10:43:00 AM	15.44	15.65	O.R.	O.R.
	21	10/25/2007 10:44:00 AM	15.41	^ 15.67	O.R.	O.R.
	22	10/25/2007 10:45:00 AM	15.38	15.62	O.R.	O.R.
	23	10/25/2007 10:46:00 AM	15.38	15.62	O.R.	O.R.
	24	10/25/2007 10:47:00 AM	15.36	15.61	O.R.	O.R.
	25	10/25/2007 10:48:00 AM	15.32	15.61	O.R.	O.R.
	26	10/25/2007 10:49:00 AM	15.34	15.61	O.R.	O.R.
	27	10/25/2007 10:50:00 AM	15.30	15.56	O.R.	O.R.
	28	10/25/2007 10:51:00 AM	15.28	15.55	O.R.	O.R.
	29	10/25/2007 10:52:00 AM	15.27	15.55	O.R.	O.R.
	30	10/25/2007 10:53:00 AM	15.27	15.50	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/25/2007 10:54:00 AM	15.26	15.51	O.R.	^ -2.28
	32	10/25/2007 10:55:00 AM	15.21	15.47	O.R.	v -7.50
	33	10/25/2007 10:56:00 AM	15.20	15.48	O.R.	v -7.50
	34	10/25/2007 10:57:00 AM	15.19	15.45	O.R.	v -7.50
	35	10/25/2007 10:58:00 AM	15.18	15.44	O.R.	v -7.50
	36	10/25/2007 10:59:00 AM	15.16	15.43	O.R.	v -7.50
	37	10/25/2007 11:00:00 AM	15.13	15.41	O.R.	v -7.50
	38	10/25/2007 11:01:00 AM	15.12	15.44	O.R.	v -7.50
	39	10/25/2007 11:02:00 AM	15.10	15.41	O.R.	v -7.50
	40	10/25/2007 11:03:00 AM	15.08	15.38	O.R.	v -7.50
	41	10/25/2007 11:04:00 AM	15.05	15.40	O.R.	v -7.50
	42	10/25/2007 11:05:00 AM	15.03	15.38	O.R.	v -7.50
	43	10/25/2007 11:06:00 AM	15.01	15.35	O.R.	v -7.50
	44	10/25/2007 11:07:00 AM	15.00	15.30	O.R.	v -7.50
	45	10/25/2007 11:08:00 AM	14.98	15.27	O.R.	v -7.50
	46	10/25/2007 11:09:00 AM	14.96	15.27	O.R.	v -7.50
	47	10/25/2007 11:10:00 AM	14.95	15.26	O.R.	v -7.50
	48	10/25/2007 11:11:00 AM	14.93	15.23	O.R.	v -7.50
	49	10/25/2007 11:12:00 AM	14.90	15.20	O.R.	v -7.50
	50	10/25/2007 11:13:00 AM	14.88	15.22	O.R.	v -7.50
	51	10/25/2007 11:14:00 AM	14.86	15.18	O.R.	v -7.50
	52	10/25/2007 11:15:00 AM	14.83	15.16	O.R.	v -7.50
	53	10/25/2007 11:16:00 AM	14.82	15.17	O.R.	v -7.50
	54	10/25/2007 11:17:00 AM	14.79	15.14	O.R.	v -7.50
	55	10/25/2007 11:18:00 AM	14.77	15.14	O.R.	v -7.50
	56	10/25/2007 11:19:00 AM	14.74	15.12	O.R.	v -7.50
	57	10/25/2007 11:20:00 AM	14.72	15.10	O.R.	v -7.50
	58	10/25/2007 11:21:00 AM	14.70	15.07	O.R.	v -7.50
	59	10/25/2007 11:22:00 AM	14.68	15.03	O.R.	v -7.50
	60	10/25/2007 11:23:00 AM	14.66	15.03	O.R.	v -7.50
	61	10/25/2007 11:24:00 AM	14.64	15.00	O.R.	v -7.50
	62	10/25/2007 11:25:00 AM	14.63	15.02	O.R.	v -7.50
	63	10/25/2007 11:26:00 AM	14.60	14.99	O.R.	v -7.50
	64	10/25/2007 11:27:00 AM	14.57	14.95	O.R.	v -7.50
	65	10/25/2007 11:28:00 AM	14.56	14.92	O.R.	v -7.50
	66	10/25/2007 11:29:00 AM	14.54	14.93	O.R.	v -7.50
	67	10/25/2007 11:30:00 AM	14.51	14.89	O.R.	v -7.50
	68	10/25/2007 11:31:00 AM	14.49	14.87	O.R.	v -7.50
	69	10/25/2007 11:32:00 AM	14.47	14.83	O.R.	v -7.50
	70	10/25/2007 11:33:00 AM	14.45	14.84	O.R.	v -7.50
	71	10/25/2007 11:34:00 AM	14.42	14.80	O.R.	v -7.50
	72	10/25/2007 11:35:00 AM	14.40	14.78	O.R.	v -7.50
	73	10/25/2007 11:36:00 AM	14.39	14.75	O.R.	v -7.50
	74	10/25/2007 11:37:00 AM	14.36	14.72	O.R.	v -7.50
	75	10/25/2007 11:38:00 AM	14.36	14.73	O.R.	v -7.50
	76	10/25/2007 11:39:00 AM	14.31	14.68	O.R.	v -7.50
	77	10/25/2007 11:40:00 AM	14.29	14.67	O.R.	v -7.50
	78	10/25/2007 11:41:00 AM	14.29	14.63	O.R.	v -7.50
	79	10/25/2007 11:42:00 AM	14.27	14.63	O.R.	v -7.50
	80	10/25/2007 11:43:00 AM	14.23	14.59	O.R.	v -7.50

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/25/2007 11:44:00 AM	14.21	14.56	O.R.	v -7.50
	82	10/25/2007 11:45:00 AM	14.19	14.54	O.R.	v -7.50
	83	10/25/2007 11:46:00 AM	14.18	14.52	O.R.	v -7.50
	84	10/25/2007 11:47:00 AM	14.16	14.55	O.R.	v -7.50
	85	10/25/2007 11:48:00 AM	14.14	14.53	O.R.	v -7.50
	86	10/25/2007 11:49:00 AM	14.12	14.51	O.R.	v -7.50
	87	10/25/2007 11:50:00 AM	14.10	14.50	O.R.	v -7.50
	88	10/25/2007 11:51:00 AM	14.05	14.48	O.R.	v -7.50
	89	10/25/2007 11:52:00 AM	14.05	14.44	O.R.	v -7.50
	90	10/25/2007 11:53:00 AM	14.03	14.42	O.R.	v -7.50
	91	10/25/2007 11:54:00 AM	14.01	14.39	O.R.	v -7.50
	92	10/25/2007 11:55:00 AM	13.98	14.37	O.R.	v -7.50
	93	10/25/2007 11:56:00 AM	13.96	14.38	O.R.	v -7.50
	94	10/25/2007 11:57:00 AM	13.94	14.35	O.R.	v -7.50
	95	10/25/2007 11:58:00 AM	13.91	14.33	O.R.	v -7.50
	96	10/25/2007 11:59:00 AM	13.89	14.30	O.R.	v -7.50
	97	10/25/2007 12:00:00 PM	13.86	14.28	O.R.	v -7.50
	98	10/25/2007 12:01:00 PM	13.84	14.26	O.R.	v -7.50
	99	10/25/2007 12:02:00 PM	13.80	14.27	O.R.	v -7.50
	100	10/25/2007 12:03:00 PM	13.80	14.25	O.R.	v -7.50
	101	10/25/2007 12:04:00 PM	13.77	14.23	O.R.	v -7.50
	102	10/25/2007 12:05:00 PM	13.74	14.23	O.R.	v -7.50
	103	10/25/2007 12:06:00 PM	13.72	14.20	O.R.	v -7.50
	104	10/25/2007 12:07:00 PM	13.70	14.17	O.R.	v -7.50
	105	10/25/2007 12:08:00 PM	13.66	14.15	O.R.	v -7.50
	106	10/25/2007 12:09:00 PM	13.68	14.12	O.R.	v -7.50
	107	10/25/2007 12:10:00 PM	13.65	14.11	O.R.	v -7.50
	108	10/25/2007 12:11:00 PM	13.63	14.10	O.R.	v -7.50
	109	10/25/2007 12:12:00 PM	13.60	14.08	O.R.	v -7.50
	110	10/25/2007 12:13:00 PM	13.58	14.05	O.R.	v -7.50
	111	10/25/2007 12:14:00 PM	13.56	14.03	O.R.	v -7.50
	112	10/25/2007 12:15:00 PM	13.53	14.02	O.R.	v -7.50
	113	10/25/2007 12:16:00 PM	13.50	14.02	O.R.	v -7.50
	114	10/25/2007 12:17:00 PM	13.47	13.98	O.R.	v -7.50
	115	10/25/2007 12:18:00 PM	13.45	13.93	O.R.	v -7.50
	116	10/25/2007 12:19:00 PM	13.43	13.94	O.R.	v -7.50
	117	10/25/2007 12:20:00 PM	13.40	13.90	O.R.	^ -2.28
	118	10/25/2007 12:21:00 PM	13.39	13.87	O.R.	^ -2.28
	119	10/25/2007 12:22:00 PM	13.36	13.88	O.R.	^ -2.28
	120	10/25/2007 12:23:00 PM	13.34	13.83	O.R.	v -7.50
	121	10/25/2007 12:24:00 PM	13.31	13.82	O.R.	v -7.50
	122	10/25/2007 12:25:00 PM	13.29	13.81	O.R.	v -7.50
	123	10/25/2007 12:26:00 PM	13.29	13.77	O.R.	v -7.50
	124	10/25/2007 12:27:00 PM	13.26	13.76	O.R.	v -7.50
	125	10/25/2007 12:28:00 PM	13.23	13.75	O.R.	v -7.50
	126	10/25/2007 12:29:00 PM	13.21	13.74	O.R.	v -7.50
	127	10/25/2007 12:30:00 PM	13.19	13.73	O.R.	v -7.50
	128	10/25/2007 12:31:00 PM	13.16	13.69	O.R.	v -7.50
	129	10/25/2007 12:32:00 PM	13.14	13.69	O.R.	v -7.50
	130	10/25/2007 12:33:00 PM	13.09	13.64	O.R.	v -7.50

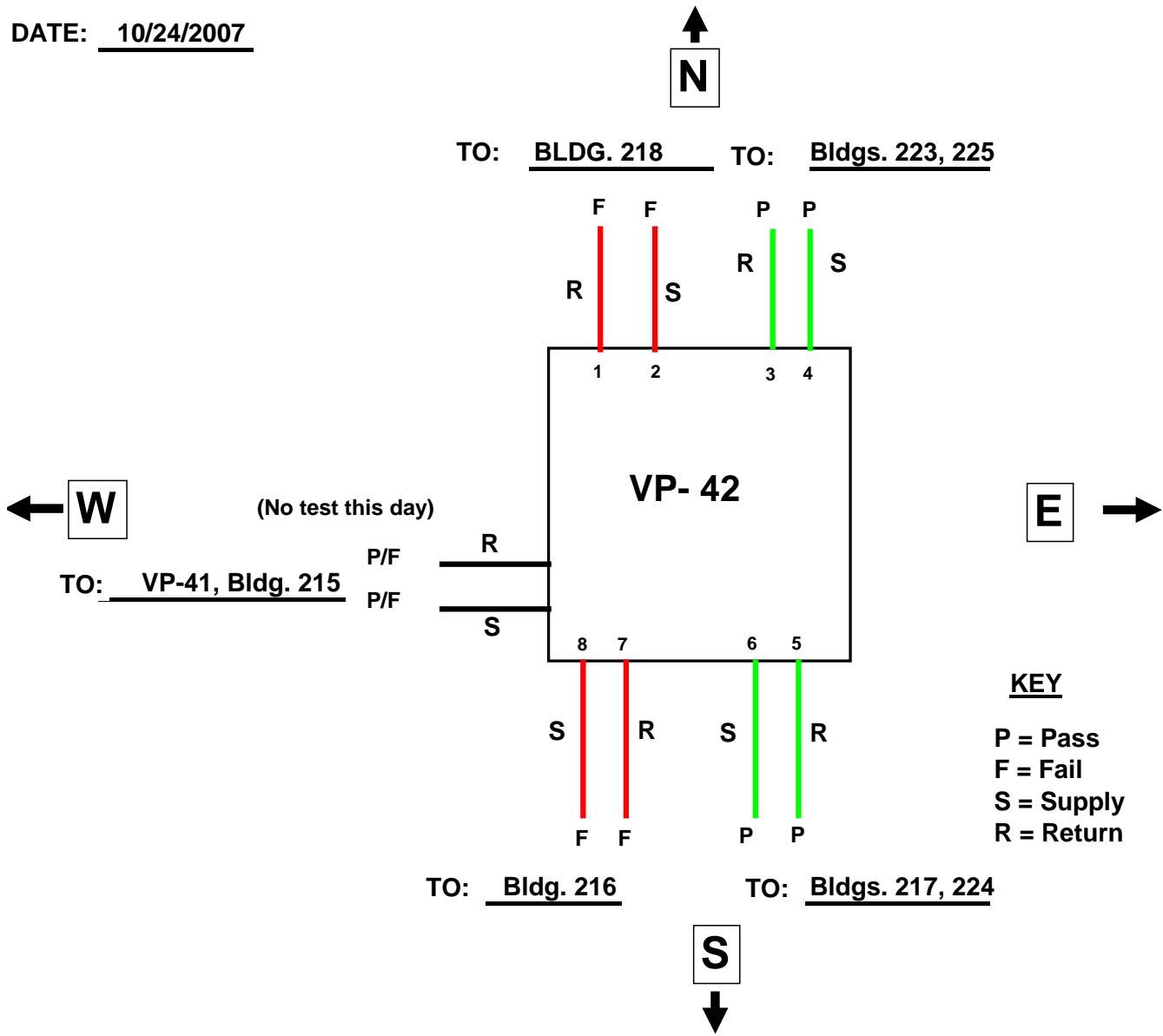
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/25/2007 12:34:00 PM	13.10	13.64	O.R.	v -7.50
	132	10/25/2007 12:35:00 PM	13.05	13.63	O.R.	v -7.50
	133	10/25/2007 12:36:00 PM	13.04	13.63	O.R.	v -7.50
	134	10/25/2007 12:37:00 PM	13.02	13.57	O.R.	v -7.50
	135	10/25/2007 12:38:00 PM	13.00	13.56	O.R.	v -7.50
	136	10/25/2007 12:39:00 PM	12.99	13.59	O.R.	v -7.50
	137	10/25/2007 12:40:00 PM	12.98	13.56	O.R.	v -7.50
	138	10/25/2007 12:41:00 PM	12.96	13.52	O.R.	v -7.50
	139	10/25/2007 12:42:00 PM	12.94	13.51	O.R.	v -7.50
	140	10/25/2007 12:43:00 PM	12.92	13.49	O.R.	v -7.50
	141	10/25/2007 12:44:00 PM	12.90	13.48	O.R.	v -7.50
	142	10/25/2007 12:45:00 PM	12.88	13.48	O.R.	v -7.50
	143	10/25/2007 12:45:56 PM	12.85	13.46	O.R.	v -7.50

DATE: 10/24/2007



NOTES:

1. All conduit drains dry at exits from pit
2. Pit dry and "clean". Low point drains between VP-42 and VP-41 are dry

VP - 42					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 218	F	Drain at exit of pit is dry
	2	2	Supply to 218	F	Drain at exit of pit is dry
	3	3	Return to 223 and 225	P	Drain at exit of pit is dry
	4	4	Supply to 223 and 225	P	Drain at exit of pit is dry
2	1	5	Return to 217 and 224	P	Drain at exit of pit is dry
	2	6	Supply to 217 and 224	P	Drain at exit of pit is dry
	3	7	Return to 216	F	Drain at exit of pit is dry
	4	8	Supply to 216	F	Drain at exit of pit is dry

printed 1/15/2008

Handy logger

Name : **LOGGER 1**

LOG Name	10240748
Interval	00:01:00
Personnel	

Start	10/24/2007 7:48:14 AM
Stop	10/24/2007 9:59:09 AM
Comment	1N GLAND

Data	133
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.37	16.05	15.20	15.52
Minimum	0.05	0.17	0.16	0.24
Average	12.16	9.43	14.44	14.84
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/24/2007 7:48:14 AM	v 0.05	v 0.17	v 0.16	v 0.24
	2	10/24/2007 7:49:00 AM	^ 15.37	15.19	v 0.16	v 0.24
	3	10/24/2007 7:50:00 AM	15.23	^ 16.05	4.58	4.85
	4	10/24/2007 7:51:00 AM	14.87	15.98	7.13	7.62
	5	10/24/2007 7:52:00 AM	14.75	15.86	9.16	9.77
	6	10/24/2007 7:53:00 AM	14.64	15.75	11.26	12.06
	7	10/24/2007 7:54:00 AM	14.56	15.65	14.20	15.36
	8	10/24/2007 7:55:00 AM	14.45	15.53	^ 15.20	^ 15.52
	9	10/24/2007 7:56:00 AM	14.34	15.42	15.19	15.49
	10	10/24/2007 7:57:00 AM	14.20	15.32	15.15	15.45
	11	10/24/2007 7:58:00 AM	14.11	15.22	15.09	15.42
	12	10/24/2007 7:59:00 AM	14.00	15.12	15.04	15.40
	13	10/24/2007 8:00:00 AM	13.90	15.01	15.04	15.38
	14	10/24/2007 8:01:00 AM	13.80	14.90	15.05	15.38
	15	10/24/2007 8:02:00 AM	13.74	14.79	15.04	15.41
	16	10/24/2007 8:03:00 AM	13.71	14.65	15.04	15.40
	17	10/24/2007 8:04:00 AM	13.67	14.52	15.03	15.39
	18	10/24/2007 8:05:00 AM	13.65	14.39	15.04	15.39
	19	10/24/2007 8:06:00 AM	13.61	14.26	15.04	15.41
	20	10/24/2007 8:07:00 AM	13.56	14.12	15.04	15.37
	21	10/24/2007 8:08:00 AM	13.54	13.99	15.01	15.39
	22	10/24/2007 8:09:00 AM	13.55	13.87	15.02	15.42
	23	10/24/2007 8:10:00 AM	13.48	13.70	15.03	15.39
	24	10/24/2007 8:11:00 AM	13.49	13.59	15.02	15.40
	25	10/24/2007 8:12:00 AM	13.43	13.52	15.02	15.37
	26	10/24/2007 8:13:00 AM	13.43	13.40	15.04	15.39
	27	10/24/2007 8:14:00 AM	13.40	13.28	15.05	15.40
	28	10/24/2007 8:15:00 AM	13.38	13.17	15.04	15.36
	29	10/24/2007 8:16:00 AM	13.33	13.05	15.04	15.38
	30	10/24/2007 8:17:00 AM	13.32	12.94	15.01	15.39

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/24/2007 8:18:00 AM	13.28	12.83	15.03	15.35
	32	10/24/2007 8:19:00 AM	13.25	12.72	15.04	15.36
	33	10/24/2007 8:20:00 AM	13.22	12.61	15.04	15.36
	34	10/24/2007 8:21:00 AM	13.20	12.49	15.04	15.35
	35	10/24/2007 8:22:00 AM	13.17	12.37	15.04	15.36
	36	10/24/2007 8:23:00 AM	13.14	12.26	15.01	15.36
	37	10/24/2007 8:24:00 AM	13.12	12.15	15.01	15.36
	38	10/24/2007 8:25:00 AM	13.09	12.04	15.01	15.36
	39	10/24/2007 8:26:00 AM	13.07	11.94	15.01	15.35
	40	10/24/2007 8:27:00 AM	13.05	11.80	15.01	15.35
	41	10/24/2007 8:28:00 AM	13.02	11.69	15.01	15.35
	42	10/24/2007 8:29:00 AM	13.01	11.59	15.02	15.35
	43	10/24/2007 8:30:00 AM	12.98	11.53	15.01	15.34
	44	10/24/2007 8:31:00 AM	12.96	11.42	15.01	15.38
	45	10/24/2007 8:32:00 AM	12.94	11.28	15.00	15.38
	46	10/24/2007 8:33:00 AM	12.91	11.18	15.00	15.38
	47	10/24/2007 8:34:00 AM	12.89	11.08	15.02	15.37
	48	10/24/2007 8:35:00 AM	12.83	10.98	15.01	15.37
	49	10/24/2007 8:36:00 AM	12.84	10.88	14.99	15.37
	50	10/24/2007 8:37:00 AM	12.81	10.78	15.02	15.36
	51	10/24/2007 8:38:00 AM	12.79	10.68	15.02	15.35
	52	10/24/2007 8:39:00 AM	12.77	10.58	15.00	15.35
	53	10/24/2007 8:40:00 AM	12.74	10.49	14.99	15.35
	54	10/24/2007 8:41:00 AM	12.72	10.39	15.02	15.34
	55	10/24/2007 8:42:00 AM	12.69	10.30	15.01	15.34
	56	10/24/2007 8:43:00 AM	12.67	10.20	14.99	15.32
	57	10/24/2007 8:44:00 AM	12.64	10.15	15.01	15.32
	58	10/24/2007 8:45:00 AM	12.62	10.05	15.01	15.36
	59	10/24/2007 8:46:00 AM	12.60	9.95	15.00	15.31
	60	10/24/2007 8:47:00 AM	12.57	9.86	14.99	15.30
	61	10/24/2007 8:48:00 AM	12.55	9.76	14.98	15.35
	62	10/24/2007 8:49:00 AM	12.52	9.67	14.97	15.34
	63	10/24/2007 8:50:00 AM	12.50	9.59	14.95	15.33
	64	10/24/2007 8:51:00 AM	12.48	9.49	14.95	15.33
	65	10/24/2007 8:52:00 AM	12.46	9.39	14.93	15.32
	66	10/24/2007 8:53:00 AM	12.43	9.30	14.95	15.32
	67	10/24/2007 8:54:00 AM	12.41	9.22	14.95	15.31
	68	10/24/2007 8:55:00 AM	12.39	9.13	14.93	15.31
	69	10/24/2007 8:56:00 AM	12.37	9.04	14.92	15.30
	70	10/24/2007 8:57:00 AM	12.35	8.95	14.94	15.29
	71	10/24/2007 8:58:00 AM	12.32	8.87	14.94	15.29
	72	10/24/2007 8:59:00 AM	12.30	8.78	14.93	15.29
	73	10/24/2007 9:00:00 AM	12.28	8.69	14.93	15.28
	74	10/24/2007 9:01:00 AM	12.26	8.61	14.92	15.28
	75	10/24/2007 9:02:00 AM	12.24	8.53	14.95	15.27
	76	10/24/2007 9:03:00 AM	12.22	8.45	14.94	15.27
	77	10/24/2007 9:04:00 AM	12.20	8.36	14.94	15.27
	78	10/24/2007 9:05:00 AM	12.17	8.28	14.92	15.26
	79	10/24/2007 9:06:00 AM	12.15	8.20	14.92	15.26
	80	10/24/2007 9:07:00 AM	12.13	8.11	14.91	15.30

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/24/2007 9:08:00 AM	12.12	8.03	14.90	15.30
	82	10/24/2007 9:09:00 AM	12.09	7.95	14.89	15.30
	83	10/24/2007 9:10:00 AM	12.07	7.87	14.89	15.30
	84	10/24/2007 9:11:00 AM	12.05	7.79	14.87	15.29
	85	10/24/2007 9:12:00 AM	12.03	7.71	14.87	15.29
	86	10/24/2007 9:13:00 AM	12.01	7.63	14.86	15.28
	87	10/24/2007 9:14:00 AM	12.00	7.56	14.86	15.29
	88	10/24/2007 9:15:00 AM	11.97	7.49	14.85	15.28
	89	10/24/2007 9:16:00 AM	11.95	7.37	14.83	15.28
	90	10/24/2007 9:17:00 AM	11.93	7.29	14.83	15.27
	91	10/24/2007 9:18:00 AM	11.92	7.22	14.82	15.27
	92	10/24/2007 9:19:00 AM	11.89	7.15	14.81	15.26
	93	10/24/2007 9:20:00 AM	11.87	7.08	14.81	15.26
	94	10/24/2007 9:21:00 AM	11.85	7.01	14.80	15.25
	95	10/24/2007 9:22:00 AM	11.83	6.96	14.82	15.25
	96	10/24/2007 9:23:00 AM	11.81	6.86	14.83	15.24
	97	10/24/2007 9:24:00 AM	11.79	6.79	14.82	15.24
	98	10/24/2007 9:25:00 AM	11.77	6.72	14.81	15.23
	99	10/24/2007 9:26:00 AM	11.75	6.65	14.80	15.23
	100	10/24/2007 9:27:00 AM	11.72	6.58	14.80	15.23
	101	10/24/2007 9:28:00 AM	11.71	6.52	14.79	15.24
	102	10/24/2007 9:29:00 AM	11.69	6.45	14.78	15.27
	103	10/24/2007 9:30:00 AM	11.67	6.38	14.81	15.26
	104	10/24/2007 9:31:00 AM	11.65	6.36	14.82	15.26
	105	10/24/2007 9:32:00 AM	11.63	6.25	14.81	15.25
	106	10/24/2007 9:33:00 AM	11.61	6.18	14.80	15.24
	107	10/24/2007 9:34:00 AM	11.59	6.11	14.79	15.24
	108	10/24/2007 9:35:00 AM	11.57	6.04	14.78	15.24
	109	10/24/2007 9:36:00 AM	11.54	5.98	14.77	15.23
	110	10/24/2007 9:37:00 AM	11.56	5.91	14.77	15.23
	111	10/24/2007 9:38:00 AM	11.51	5.86	14.77	15.22
	112	10/24/2007 9:39:00 AM	11.52	5.80	14.76	15.23
	113	10/24/2007 9:40:00 AM	11.50	5.74	14.75	15.22
	114	10/24/2007 9:41:00 AM	11.48	5.68	14.75	15.22
	115	10/24/2007 9:42:00 AM	11.46	5.63	14.75	15.22
	116	10/24/2007 9:43:00 AM	11.42	5.57	14.74	15.22
	117	10/24/2007 9:44:00 AM	11.40	5.51	14.74	15.21
	118	10/24/2007 9:45:00 AM	11.39	5.45	14.73	15.20
	119	10/24/2007 9:46:00 AM	11.37	5.39	14.73	15.20
	120	10/24/2007 9:47:00 AM	11.35	5.33	14.72	15.20
	121	10/24/2007 9:48:00 AM	11.33	5.27	14.72	15.19
	122	10/24/2007 9:49:00 AM	11.31	5.22	14.71	15.19
	123	10/24/2007 9:50:00 AM	11.30	5.16	14.70	15.18
	124	10/24/2007 9:51:00 AM	11.31	5.11	14.70	15.18
	125	10/24/2007 9:52:00 AM	11.29	5.05	14.69	15.17
	126	10/24/2007 9:53:00 AM	11.27	5.00	14.68	15.16
	127	10/24/2007 9:54:00 AM	11.25	4.94	14.68	15.16
	128	10/24/2007 9:55:00 AM	11.23	4.88	14.67	15.16
	129	10/24/2007 9:56:00 AM	8.34	3.25	14.66	15.15
	130	10/24/2007 9:57:00 AM	3.23	0.60	14.67	15.15

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/24/2007 9:58:00 AM	0.80	0.36	14.31	14.81
	132	10/24/2007 9:59:00 AM	3.04	3.25	12.89	13.26
	133	10/24/2007 9:59:09 AM	3.39	3.63	12.67	13.02

printed 1/15/2008

Handy logger

Name : LOGGER 2

LOG Name	10240747
Interval	00:01:00
Personnel	10S

Start	10/24/2007 7:47:36 AM
Stop	10/24/2007 9:58:22 AM
Comment	

Data	133
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.47	15.31	16.21	16.51
Minimum	0.16	0.10	0.13	0.11
Average	14.46	14.49	14.25	14.78
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/24/2007 7:47:36 AM	v 0.16	0.12	0.16	v 0.11
	2	10/24/2007 7:48:00 AM	v 0.16	0.13	0.16	v 0.11
	3	10/24/2007 7:49:00 AM	0.17	v 0.10	v 0.13	0.12
	4	10/24/2007 7:50:00 AM	0.17	v 0.10	v 0.13	0.13
	5	10/24/2007 7:51:00 AM	3.87	3.14	2.20	2.87
	6	10/24/2007 7:52:00 AM	6.34	5.51	9.73	11.40
	7	10/24/2007 7:53:00 AM	9.67	8.67	^ 16.21	^ 16.51
	8	10/24/2007 7:54:00 AM	15.12	13.99	16.11	16.47
	9	10/24/2007 7:55:00 AM	^ 15.47	14.50	16.11	16.46
	10	10/24/2007 7:56:00 AM	15.40	^ 15.31	16.06	16.44
	11	10/24/2007 7:57:00 AM	15.37	15.24	16.04	16.39
	12	10/24/2007 7:58:00 AM	15.33	15.23	16.00	16.40
	13	10/24/2007 7:59:00 AM	15.29	15.17	15.96	16.37
	14	10/24/2007 8:00:00 AM	15.32	15.16	15.92	16.35
	15	10/24/2007 8:01:00 AM	15.30	15.19	15.90	16.33
	16	10/24/2007 8:02:00 AM	15.28	15.17	15.88	16.31
	17	10/24/2007 8:03:00 AM	15.29	15.17	15.85	16.30
	18	10/24/2007 8:04:00 AM	15.29	15.19	15.83	16.29
	19	10/24/2007 8:05:00 AM	15.28	15.17	15.82	16.23
	20	10/24/2007 8:06:00 AM	15.29	15.18	15.81	16.23
	21	10/24/2007 8:07:00 AM	15.28	15.17	15.77	16.23
	22	10/24/2007 8:08:00 AM	15.24	15.18	15.77	16.21
	23	10/24/2007 8:09:00 AM	15.28	15.18	15.72	16.17
	24	10/24/2007 8:10:00 AM	15.27	15.22	15.72	16.17
	25	10/24/2007 8:11:00 AM	15.26	15.21	15.70	16.16
	26	10/24/2007 8:12:00 AM	15.27	15.23	15.69	16.16
	27	10/24/2007 8:13:00 AM	15.26	15.22	15.65	16.11
	28	10/24/2007 8:14:00 AM	15.27	15.23	15.64	16.08
	29	10/24/2007 8:15:00 AM	15.25	15.20	15.63	16.04
	30	10/24/2007 8:16:00 AM	15.25	15.22	15.60	16.03

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/24/2007 8:17:00 AM	15.26	15.21	15.60	16.03
	32	10/24/2007 8:18:00 AM	15.24	15.24	15.56	16.03
	33	10/24/2007 8:19:00 AM	15.25	15.21	15.56	16.00
	34	10/24/2007 8:20:00 AM	15.26	15.23	15.54	15.98
	35	10/24/2007 8:21:00 AM	15.27	15.20	15.52	15.97
	36	10/24/2007 8:22:00 AM	15.24	15.24	15.51	15.96
	37	10/24/2007 8:23:00 AM	15.25	15.25	15.50	15.95
	38	10/24/2007 8:24:00 AM	15.24	15.22	15.42	15.92
	39	10/24/2007 8:25:00 AM	15.22	15.23	15.41	15.91
	40	10/24/2007 8:26:00 AM	15.23	15.24	15.40	15.89
	41	10/24/2007 8:27:00 AM	15.23	15.24	15.37	15.89
	42	10/24/2007 8:28:00 AM	15.23	15.24	15.39	15.90
	43	10/24/2007 8:29:00 AM	15.22	15.24	15.36	15.88
	44	10/24/2007 8:30:00 AM	15.22	15.24	15.34	15.86
	45	10/24/2007 8:31:00 AM	15.21	15.23	15.32	15.84
	46	10/24/2007 8:32:00 AM	15.24	15.25	15.30	15.81
	47	10/24/2007 8:33:00 AM	15.26	15.23	15.28	15.79
	48	10/24/2007 8:34:00 AM	15.24	15.22	15.25	15.76
	49	10/24/2007 8:35:00 AM	15.23	15.26	15.23	15.75
	50	10/24/2007 8:36:00 AM	15.22	15.25	15.20	15.76
	51	10/24/2007 8:37:00 AM	15.20	15.24	15.18	15.76
	52	10/24/2007 8:38:00 AM	15.19	15.23	15.16	15.73
	53	10/24/2007 8:39:00 AM	15.18	15.25	15.14	15.71
	54	10/24/2007 8:40:00 AM	15.21	15.24	15.10	15.68
	55	10/24/2007 8:41:00 AM	15.20	15.24	15.09	15.66
	56	10/24/2007 8:42:00 AM	15.19	15.23	15.07	15.67
	57	10/24/2007 8:43:00 AM	15.18	15.22	15.05	15.66
	58	10/24/2007 8:44:00 AM	15.17	15.22	15.03	15.63
	59	10/24/2007 8:45:00 AM	15.16	15.22	15.01	15.60
	60	10/24/2007 8:46:00 AM	15.19	15.23	15.01	15.58
	61	10/24/2007 8:47:00 AM	15.18	15.23	14.99	15.55
	62	10/24/2007 8:48:00 AM	15.18	15.23	14.93	15.53
	63	10/24/2007 8:49:00 AM	15.17	15.22	14.96	15.51
	64	10/24/2007 8:50:00 AM	15.17	15.22	14.94	15.48
	65	10/24/2007 8:51:00 AM	15.16	15.23	14.92	15.46
	66	10/24/2007 8:52:00 AM	15.16	15.22	14.90	15.47
	67	10/24/2007 8:53:00 AM	15.15	15.21	14.84	15.45
	68	10/24/2007 8:54:00 AM	15.15	15.22	14.86	15.42
	69	10/24/2007 8:55:00 AM	15.14	15.21	14.84	15.40
	70	10/24/2007 8:56:00 AM	15.13	15.22	14.82	15.41
	71	10/24/2007 8:57:00 AM	15.13	15.21	14.80	15.39
	72	10/24/2007 8:58:00 AM	15.12	15.20	14.78	15.36
	73	10/24/2007 8:59:00 AM	15.12	15.20	14.76	15.34
	74	10/24/2007 9:00:00 AM	15.11	15.20	14.74	15.32
	75	10/24/2007 9:01:00 AM	15.11	15.19	14.73	15.30
	76	10/24/2007 9:02:00 AM	15.10	15.19	14.70	15.28
	77	10/24/2007 9:03:00 AM	15.09	15.21	14.68	15.26
	78	10/24/2007 9:04:00 AM	15.09	15.21	14.66	15.25
	79	10/24/2007 9:05:00 AM	15.08	15.21	14.63	15.22
	80	10/24/2007 9:06:00 AM	15.07	15.21	14.62	15.20

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/24/2007 9:07:00 AM	15.07	15.21	14.60	15.18
	82	10/24/2007 9:08:00 AM	15.11	15.20	14.58	15.17
	83	10/24/2007 9:09:00 AM	15.06	15.20	14.56	15.14
	84	10/24/2007 9:10:00 AM	15.06	15.19	14.54	15.13
	85	10/24/2007 9:11:00 AM	15.05	15.20	14.56	15.11
	86	10/24/2007 9:12:00 AM	15.08	15.19	14.50	15.10
	87	10/24/2007 9:13:00 AM	15.07	15.19	14.48	15.08
	88	10/24/2007 9:14:00 AM	15.07	15.19	14.46	15.06
	89	10/24/2007 9:15:00 AM	15.06	15.18	14.44	15.04
	90	10/24/2007 9:16:00 AM	15.05	15.18	14.47	15.02
	91	10/24/2007 9:17:00 AM	15.04	15.17	14.45	15.00
	92	10/24/2007 9:18:00 AM	15.04	15.18	14.44	14.98
	93	10/24/2007 9:19:00 AM	15.03	15.16	14.41	14.96
	94	10/24/2007 9:20:00 AM	15.03	15.19	14.40	14.95
	95	10/24/2007 9:21:00 AM	15.02	15.16	14.37	14.93
	96	10/24/2007 9:22:00 AM	15.02	15.18	14.36	14.91
	97	10/24/2007 9:23:00 AM	15.01	15.18	14.33	14.89
	98	10/24/2007 9:24:00 AM	15.00	15.17	14.31	14.87
	99	10/24/2007 9:25:00 AM	14.99	15.17	14.30	14.86
	100	10/24/2007 9:26:00 AM	14.99	15.17	14.28	14.84
	101	10/24/2007 9:27:00 AM	14.99	15.16	14.26	14.82
	102	10/24/2007 9:28:00 AM	14.99	15.16	14.24	14.81
	103	10/24/2007 9:29:00 AM	15.01	15.15	14.23	14.78
	104	10/24/2007 9:30:00 AM	14.97	15.16	14.21	14.77
	105	10/24/2007 9:31:00 AM	14.97	15.16	14.18	14.80
	106	10/24/2007 9:32:00 AM	14.96	15.15	14.16	14.78
	107	10/24/2007 9:33:00 AM	14.98	15.15	14.14	14.76
	108	10/24/2007 9:34:00 AM	14.97	15.15	14.12	14.73
	109	10/24/2007 9:35:00 AM	14.97	15.14	14.10	14.71
	110	10/24/2007 9:36:00 AM	14.96	15.14	14.07	14.69
	111	10/24/2007 9:37:00 AM	14.96	15.13	14.09	14.69
	112	10/24/2007 9:38:00 AM	14.96	15.12	14.07	14.67
	113	10/24/2007 9:39:00 AM	14.95	15.12	14.04	14.65
	114	10/24/2007 9:40:00 AM	14.93	15.11	14.02	14.63
	115	10/24/2007 9:41:00 AM	14.93	15.15	14.00	14.60
	116	10/24/2007 9:42:00 AM	14.93	15.14	13.98	14.62
	117	10/24/2007 9:43:00 AM	14.92	15.13	13.96	14.60
	118	10/24/2007 9:44:00 AM	14.92	15.13	13.94	14.58
	119	10/24/2007 9:45:00 AM	14.91	15.12	13.92	14.57
	120	10/24/2007 9:46:00 AM	14.90	15.12	13.90	14.57
	121	10/24/2007 9:47:00 AM	14.90	15.11	13.88	14.55
	122	10/24/2007 9:48:00 AM	14.90	15.11	13.86	14.53
	123	10/24/2007 9:49:00 AM	14.89	15.11	13.84	14.51
	124	10/24/2007 9:50:00 AM	14.88	15.10	13.82	14.49
	125	10/24/2007 9:51:00 AM	14.88	15.11	13.80	14.47
	126	10/24/2007 9:52:00 AM	14.89	15.10	13.78	14.45
	127	10/24/2007 9:53:00 AM	14.86	15.11	13.76	14.43
	128	10/24/2007 9:54:00 AM	14.86	15.10	13.74	14.41
	129	10/24/2007 9:55:00 AM	14.85	15.10	13.72	14.43
	130	10/24/2007 9:56:00 AM	14.85	15.12	13.74	14.41

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Handy logger

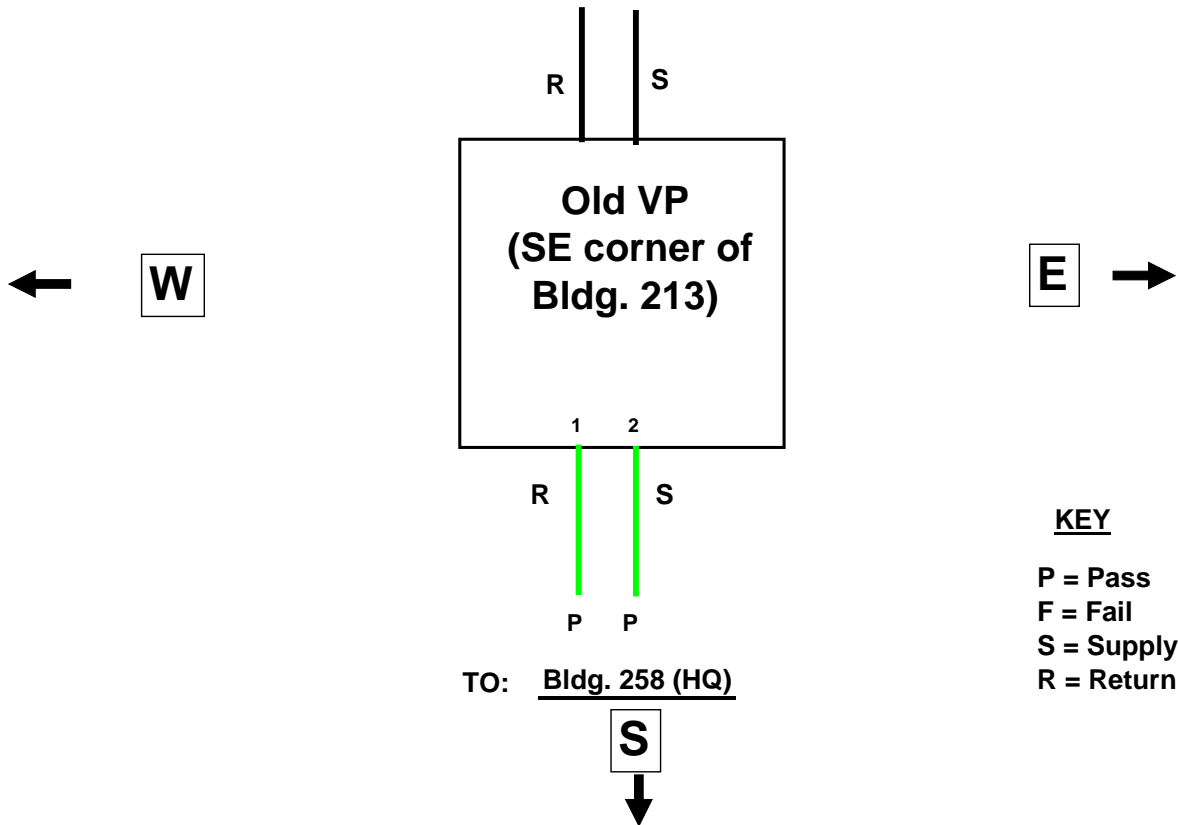
Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/24/2007 9:57:00 AM	14.87	15.12	13.72	14.39
	132	10/24/2007 9:58:00 AM	14.11	13.90	13.21	13.70
	133	10/24/2007 9:58:22 AM	13.46	13.31	11.52	11.76

DATE: 11/7/2007



TO: Tees from feeder lines running from VP-41 to Bldg. 213



NOTES:

1. Old pit with water covering conduits running low across pit (estimate 1-2 feet deep). Conduit entrances and exits from pit are elevated and well above water line. Sump pump not working, sump discharge pipe broken off at grade. Conduits to Bldg. 258 from old pit may be "old design" per Vernon Meyer.

Bldg. 258					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 258 from old pit at SE corner of Bldg. 213	P	Pressurized at Bldg 258 mechanical room with plugs installed at old pit vents. Note: data acquisition started at 0840, recording started at 0849.
	2	2	Supply to Bldg. 258 from old pit at SE corner of Bldg. 213	P	Pressurized at Bldg 258 mechanical room with plugs installed at old pit vents. Note: data acquisition started at 0840, recording started at 0849.

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Handy logger

Name : LOGGER 1

LOG Name	11070849
Interval	00:01:00
Personnel	

Start	11/7/2007 8:49:20 AM
Stop	11/7/2007 10:41:50 AM
Comment	

Data	114
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.79	16.28		
Minimum	15.53	16.13		
Average	15.67	16.24		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/7/2007 8:49:20 AM	15.72	v 16.13	O.R.	O.R.
	2	11/7/2007 8:50:00 AM	15.71	v 16.13	O.R.	O.R.
	3	11/7/2007 8:51:00 AM	15.73	16.16	O.R.	O.R.
	4	11/7/2007 8:52:00 AM	15.72	16.15	O.R.	O.R.
	5	11/7/2007 8:53:00 AM	15.75	16.19	O.R.	O.R.
	6	11/7/2007 8:54:00 AM	15.74	16.18	O.R.	O.R.
	7	11/7/2007 8:55:00 AM	15.72	16.17	O.R.	O.R.
	8	11/7/2007 8:56:00 AM	15.72	16.20	O.R.	O.R.
	9	11/7/2007 8:57:00 AM	15.71	16.19	O.R.	O.R.
	10	11/7/2007 8:58:00 AM	15.74	16.18	O.R.	O.R.
	11	11/7/2007 8:59:00 AM	15.76	16.21	O.R.	O.R.
	12	11/7/2007 9:00:00 AM	15.77	16.20	O.R.	O.R.
	13	11/7/2007 9:01:00 AM	15.75	16.22	O.R.	O.R.
	14	11/7/2007 9:02:00 AM	15.75	16.25	O.R.	O.R.
	15	11/7/2007 9:03:00 AM	^ 15.79	16.23	O.R.	O.R.
	16	11/7/2007 9:04:00 AM	15.77	16.21	O.R.	O.R.
	17	11/7/2007 9:05:00 AM	15.74	16.23	O.R.	O.R.
	18	11/7/2007 9:06:00 AM	15.77	16.21	O.R.	O.R.
	19	11/7/2007 9:07:00 AM	15.76	16.20	O.R.	O.R.
	20	11/7/2007 9:08:00 AM	15.76	16.23	O.R.	O.R.
	21	11/7/2007 9:09:00 AM	15.75	16.21	O.R.	O.R.
	22	11/7/2007 9:10:00 AM	15.72	16.24	O.R.	O.R.
	23	11/7/2007 9:11:00 AM	15.76	16.23	O.R.	O.R.
	24	11/7/2007 9:12:00 AM	15.77	16.27	O.R.	O.R.
	25	11/7/2007 9:13:00 AM	15.77	16.26	O.R.	O.R.
	26	11/7/2007 9:14:00 AM	15.75	16.25	O.R.	O.R.
	27	11/7/2007 9:15:00 AM	15.74	16.24	O.R.	O.R.
	28	11/7/2007 9:16:00 AM	15.72	16.26	O.R.	O.R.
	29	11/7/2007 9:17:00 AM	15.76	16.25	O.R.	O.R.
	30	11/7/2007 9:18:00 AM	15.74	16.24	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/7/2007 9:19:00 AM	15.73	16.23	O.R.	O.R.
	32	11/7/2007 9:20:00 AM	15.72	^ 16.28	O.R.	O.R.
	33	11/7/2007 9:21:00 AM	15.71	16.27	O.R.	O.R.
	34	11/7/2007 9:22:00 AM	15.74	16.27	O.R.	O.R.
	35	11/7/2007 9:23:00 AM	15.73	16.26	O.R.	O.R.
	36	11/7/2007 9:24:00 AM	15.75	16.25	O.R.	O.R.
	37	11/7/2007 9:25:00 AM	15.75	^ 16.28	O.R.	O.R.
	38	11/7/2007 9:26:00 AM	15.74	16.27	O.R.	O.R.
	39	11/7/2007 9:27:00 AM	15.73	16.27	O.R.	O.R.
	40	11/7/2007 9:28:00 AM	15.72	16.26	O.R.	O.R.
	41	11/7/2007 9:29:00 AM	15.71	16.26	O.R.	O.R.
	42	11/7/2007 9:30:00 AM	15.74	16.25	O.R.	O.R.
	43	11/7/2007 9:31:00 AM	15.72	16.24	O.R.	O.R.
	44	11/7/2007 9:32:00 AM	15.72	16.27	O.R.	O.R.
	45	11/7/2007 9:33:00 AM	15.71	16.26	O.R.	O.R.
	46	11/7/2007 9:34:00 AM	15.70	16.26	O.R.	O.R.
	47	11/7/2007 9:35:00 AM	15.69	16.26	O.R.	O.R.
	48	11/7/2007 9:36:00 AM	15.68	16.25	O.R.	O.R.
	49	11/7/2007 9:37:00 AM	15.68	16.24	O.R.	O.R.
	50	11/7/2007 9:38:00 AM	15.67	16.24	O.R.	O.R.
	51	11/7/2007 9:39:00 AM	15.67	16.24	O.R.	O.R.
	52	11/7/2007 9:40:00 AM	15.66	16.24	O.R.	O.R.
	53	11/7/2007 9:41:00 AM	15.65	16.23	O.R.	O.R.
	54	11/7/2007 9:42:00 AM	15.65	16.22	O.R.	O.R.
	55	11/7/2007 9:43:00 AM	15.64	16.22	O.R.	O.R.
	56	11/7/2007 9:44:00 AM	15.63	16.22	O.R.	O.R.
	57	11/7/2007 9:45:00 AM	15.63	16.25	O.R.	O.R.
	58	11/7/2007 9:46:00 AM	15.62	16.25	O.R.	O.R.
	59	11/7/2007 9:47:00 AM	15.65	16.25	O.R.	O.R.
	60	11/7/2007 9:48:00 AM	15.65	16.25	O.R.	O.R.
	61	11/7/2007 9:49:00 AM	15.64	16.24	O.R.	O.R.
	62	11/7/2007 9:50:00 AM	15.63	16.24	O.R.	O.R.
	63	11/7/2007 9:51:00 AM	15.63	16.24	O.R.	O.R.
	64	11/7/2007 9:52:00 AM	15.63	16.24	O.R.	O.R.
	65	11/7/2007 9:53:00 AM	15.63	16.23	O.R.	O.R.
	66	11/7/2007 9:54:00 AM	15.63	16.23	O.R.	O.R.
	67	11/7/2007 9:55:00 AM	15.63	16.24	O.R.	O.R.
	68	11/7/2007 9:56:00 AM	15.62	^ 16.28	O.R.	O.R.
	69	11/7/2007 9:57:00 AM	15.65	^ 16.28	O.R.	O.R.
	70	11/7/2007 9:58:00 AM	15.66	^ 16.28	O.R.	O.R.
	71	11/7/2007 9:59:00 AM	15.66	16.27	O.R.	O.R.
	72	11/7/2007 10:00:00 AM	15.66	16.27	O.R.	O.R.
	73	11/7/2007 10:01:00 AM	15.66	16.27	O.R.	O.R.
	74	11/7/2007 10:02:00 AM	15.65	16.26	O.R.	O.R.
	75	11/7/2007 10:03:00 AM	15.65	16.26	O.R.	O.R.
	76	11/7/2007 10:04:00 AM	15.65	16.25	O.R.	O.R.
	77	11/7/2007 10:05:00 AM	15.64	16.26	O.R.	O.R.
	78	11/7/2007 10:06:00 AM	15.64	16.26	O.R.	O.R.
	79	11/7/2007 10:07:00 AM	15.64	16.25	O.R.	O.R.
	80	11/7/2007 10:08:00 AM	15.63	16.25	O.R.	O.R.

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Handy logger

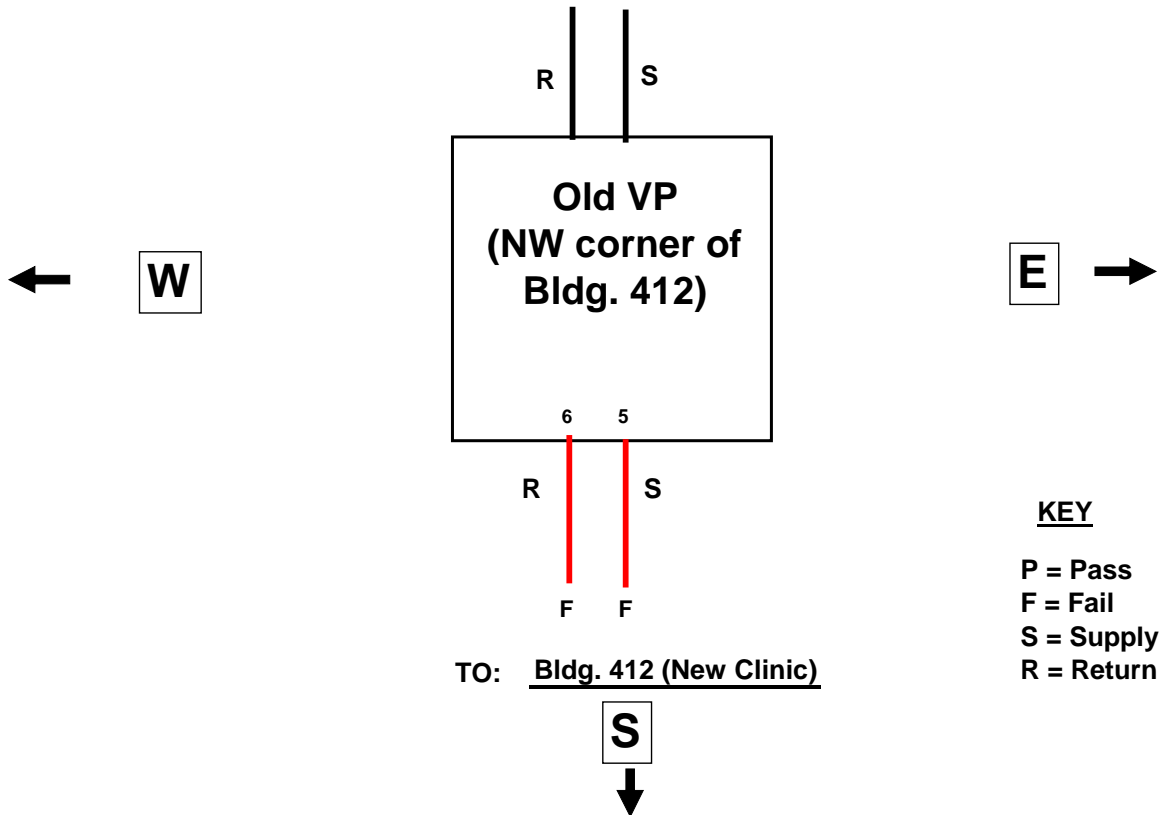
Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/7/2007 10:09:00 AM	15.62	16.25	O.R.	O.R.
	82	11/7/2007 10:10:00 AM	15.62	16.25	O.R.	O.R.
	83	11/7/2007 10:11:00 AM	15.62	16.25	O.R.	O.R.
	84	11/7/2007 10:12:00 AM	15.62	16.25	O.R.	O.R.
	85	11/7/2007 10:13:00 AM	15.64	16.24	O.R.	O.R.
	86	11/7/2007 10:14:00 AM	15.64	16.24	O.R.	O.R.
	87	11/7/2007 10:15:00 AM	15.64	16.24	O.R.	O.R.
	88	11/7/2007 10:16:00 AM	15.63	16.23	O.R.	O.R.
	89	11/7/2007 10:17:00 AM	15.62	16.23	O.R.	O.R.
	90	11/7/2007 10:18:00 AM	15.62	16.23	O.R.	O.R.
	91	11/7/2007 10:19:00 AM	15.62	16.23	O.R.	O.R.
	92	11/7/2007 10:20:00 AM	15.61	16.23	O.R.	O.R.
	93	11/7/2007 10:21:00 AM	15.60	16.23	O.R.	O.R.
	94	11/7/2007 10:22:00 AM	15.60	16.23	O.R.	O.R.
	95	11/7/2007 10:23:00 AM	15.60	16.23	O.R.	O.R.
	96	11/7/2007 10:24:00 AM	15.60	16.23	O.R.	O.R.
	97	11/7/2007 10:25:00 AM	15.60	16.23	O.R.	O.R.
	98	11/7/2007 10:26:00 AM	15.59	16.23	O.R.	O.R.
	99	11/7/2007 10:27:00 AM	15.59	16.23	O.R.	O.R.
	100	11/7/2007 10:28:00 AM	15.59	16.23	O.R.	O.R.
	101	11/7/2007 10:29:00 AM	15.59	16.23	O.R.	O.R.
	102	11/7/2007 10:30:00 AM	15.59	16.22	O.R.	O.R.
	103	11/7/2007 10:31:00 AM	15.59	16.22	O.R.	O.R.
	104	11/7/2007 10:32:00 AM	15.58	16.22	O.R.	O.R.
	105	11/7/2007 10:33:00 AM	15.58	16.25	O.R.	O.R.
	106	11/7/2007 10:34:00 AM	15.57	16.25	O.R.	O.R.
	107	11/7/2007 10:35:00 AM	15.57	16.25	O.R.	O.R.
	108	11/7/2007 10:36:00 AM	15.57	16.25	O.R.	O.R.
	109	11/7/2007 10:37:00 AM	15.56	16.26	O.R.	O.R.
	110	11/7/2007 10:38:00 AM	15.57	16.23	O.R.	O.R.
	111	11/7/2007 10:39:00 AM	15.56	16.25	O.R.	O.R.
	112	11/7/2007 10:40:00 AM	v 15.53	16.21	O.R.	O.R.
	113	11/7/2007 10:41:00 AM	15.54	16.23	O.R.	O.R.
	114	11/7/2007 10:41:50 AM	15.54	16.21	O.R.	O.R.

DATE: 11/7/2007



TO: Tees from main lines running between VP-37 and VP-30B



TO: Bldg. 412 (New Clinic)

NOTES:

1. Old pit with water (estimate 6" deep). Sump works intermittently, but cannot keep pit dry. Conduits running to Bldg. 412 from old pit may be "old design" per Vernon Meyer

Bldg. 412 (New Clinic)					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Supply to Bldg. 412 from old pit on NW corner of Bldg. 412	F	Pressurized from vents in old pit
	2	6	Return to Bldg. 412 from old pit on NW corner of Bldg. 412	F	Pressurized from vents in old pit

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Handy logger

Name : **LOGGER 2**

LOG Name	11070902
Interval	00:01:00
Personnel	

Start	11/7/2007 9:02:45 AM
Stop	11/7/2007 11:05:09 AM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.23	15.49		
Minimum	-7.50	-7.50		
Average	14.63	13.61		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/7/2007 9:02:45 AM	v -7.50	v -7.50	O.R.	O.R.
	2	11/7/2007 9:03:00 AM	v -7.50	v -7.50	O.R.	O.R.
*	3	11/7/2007 9:04:00 AM	8.09	7.60	O.R.	O.R.
	4	11/7/2007 9:05:00 AM	15.47	13.66	O.R.	O.R.
	5	11/7/2007 9:06:00 AM	^ 16.23	^ 15.49	O.R.	O.R.
	6	11/7/2007 9:07:00 AM	16.18	15.46	O.R.	O.R.
	7	11/7/2007 9:08:00 AM	16.14	15.42	O.R.	O.R.
	8	11/7/2007 9:09:00 AM	16.10	15.39	O.R.	O.R.
	9	11/7/2007 9:10:00 AM	16.09	15.34	O.R.	O.R.
	10	11/7/2007 9:11:00 AM	16.06	15.31	O.R.	O.R.
	11	11/7/2007 9:12:00 AM	16.03	15.31	O.R.	O.R.
	12	11/7/2007 9:13:00 AM	16.00	15.27	O.R.	O.R.
	13	11/7/2007 9:14:00 AM	16.00	15.23	O.R.	O.R.
	14	11/7/2007 9:15:00 AM	15.98	15.24	O.R.	O.R.
	15	11/7/2007 9:16:00 AM	15.95	15.25	O.R.	O.R.
	16	11/7/2007 9:17:00 AM	15.92	15.22	O.R.	O.R.
	17	11/7/2007 9:18:00 AM	15.89	15.18	O.R.	O.R.
	18	11/7/2007 9:19:00 AM	15.90	15.15	O.R.	O.R.
	19	11/7/2007 9:20:00 AM	15.87	15.11	O.R.	O.R.
	20	11/7/2007 9:21:00 AM	15.85	15.08	O.R.	O.R.
	21	11/7/2007 9:22:00 AM	15.82	15.05	O.R.	O.R.
	22	11/7/2007 9:23:00 AM	15.80	15.02	O.R.	O.R.
	23	11/7/2007 9:24:00 AM	15.80	14.99	O.R.	O.R.
	24	11/7/2007 9:25:00 AM	15.78	14.96	O.R.	O.R.
	25	11/7/2007 9:26:00 AM	15.76	14.97	O.R.	O.R.
	26	11/7/2007 9:27:00 AM	15.74	14.94	O.R.	O.R.
	27	11/7/2007 9:28:00 AM	15.72	14.91	O.R.	O.R.
	28	11/7/2007 9:29:00 AM	15.72	14.87	O.R.	O.R.
	29	11/7/2007 9:30:00 AM	15.71	14.85	O.R.	O.R.
	30	11/7/2007 9:31:00 AM	15.67	14.81	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/7/2007 9:32:00 AM	15.65	14.78	O.R.	O.R.
	32	11/7/2007 9:33:00 AM	15.63	14.76	O.R.	O.R.
	33	11/7/2007 9:34:00 AM	15.61	14.74	O.R.	O.R.
	34	11/7/2007 9:35:00 AM	15.57	14.71	O.R.	O.R.
	35	11/7/2007 9:36:00 AM	15.54	14.66	O.R.	O.R.
	36	11/7/2007 9:37:00 AM	15.53	14.64	O.R.	O.R.
	37	11/7/2007 9:38:00 AM	15.51	14.64	O.R.	O.R.
	38	11/7/2007 9:39:00 AM	15.47	14.62	O.R.	O.R.
	39	11/7/2007 9:40:00 AM	15.49	14.60	O.R.	O.R.
	40	11/7/2007 9:41:00 AM	15.47	14.58	O.R.	O.R.
	41	11/7/2007 9:42:00 AM	15.45	14.55	O.R.	O.R.
	42	11/7/2007 9:43:00 AM	15.40	14.54	O.R.	O.R.
	43	11/7/2007 9:44:00 AM	15.39	14.53	O.R.	O.R.
	44	11/7/2007 9:45:00 AM	15.38	14.51	O.R.	O.R.
	45	11/7/2007 9:46:00 AM	15.36	14.49	O.R.	O.R.
	46	11/7/2007 9:47:00 AM	15.36	14.47	O.R.	O.R.
	47	11/7/2007 9:48:00 AM	15.34	14.44	O.R.	O.R.
	48	11/7/2007 9:49:00 AM	15.34	14.41	O.R.	O.R.
	49	11/7/2007 9:50:00 AM	15.31	14.38	O.R.	O.R.
	50	11/7/2007 9:51:00 AM	15.28	14.37	O.R.	O.R.
	51	11/7/2007 9:52:00 AM	15.26	14.32	O.R.	O.R.
	52	11/7/2007 9:53:00 AM	15.26	14.28	O.R.	O.R.
	53	11/7/2007 9:54:00 AM	15.24	14.29	O.R.	O.R.
	54	11/7/2007 9:55:00 AM	15.20	14.26	O.R.	O.R.
	55	11/7/2007 9:56:00 AM	15.19	14.23	O.R.	O.R.
	56	11/7/2007 9:57:00 AM	15.17	14.19	O.R.	O.R.
	57	11/7/2007 9:58:00 AM	15.16	14.17	O.R.	O.R.
	58	11/7/2007 9:59:00 AM	15.14	14.15	O.R.	O.R.
	59	11/7/2007 10:00:00 AM	15.15	14.12	O.R.	O.R.
	60	11/7/2007 10:01:00 AM	15.13	14.08	O.R.	O.R.
	61	11/7/2007 10:02:00 AM	15.11	14.06	O.R.	O.R.
	62	11/7/2007 10:03:00 AM	15.09	14.04	O.R.	O.R.
	63	11/7/2007 10:04:00 AM	15.07	14.01	O.R.	O.R.
	64	11/7/2007 10:05:00 AM	15.05	13.99	O.R.	O.R.
	65	11/7/2007 10:06:00 AM	15.03	13.97	O.R.	O.R.
	66	11/7/2007 10:07:00 AM	15.00	13.95	O.R.	O.R.
	67	11/7/2007 10:08:00 AM	14.98	13.93	O.R.	O.R.
	68	11/7/2007 10:09:00 AM	14.96	13.90	O.R.	O.R.
	69	11/7/2007 10:10:00 AM	14.94	13.87	O.R.	O.R.
	70	11/7/2007 10:11:00 AM	14.92	13.85	O.R.	O.R.
	71	11/7/2007 10:12:00 AM	14.93	13.83	O.R.	O.R.
	72	11/7/2007 10:13:00 AM	14.91	13.80	O.R.	O.R.
	73	11/7/2007 10:14:00 AM	14.89	13.77	O.R.	O.R.
	74	11/7/2007 10:15:00 AM	14.87	13.74	O.R.	O.R.
	75	11/7/2007 10:16:00 AM	14.85	13.71	O.R.	O.R.
	76	11/7/2007 10:17:00 AM	14.84	13.72	O.R.	O.R.
	77	11/7/2007 10:18:00 AM	14.80	13.71	O.R.	O.R.
	78	11/7/2007 10:19:00 AM	14.77	13.68	O.R.	O.R.
	79	11/7/2007 10:20:00 AM	14.76	13.63	O.R.	O.R.
	80	11/7/2007 10:21:00 AM	14.75	13.62	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/7/2007 10:22:00 AM	14.74	13.59	O.R.	O.R.
	82	11/7/2007 10:23:00 AM	14.73	13.57	O.R.	O.R.
	83	11/7/2007 10:24:00 AM	14.70	13.58	O.R.	O.R.
	84	11/7/2007 10:25:00 AM	14.69	13.55	O.R.	O.R.
	85	11/7/2007 10:26:00 AM	14.67	13.53	O.R.	O.R.
	86	11/7/2007 10:27:00 AM	14.65	13.50	O.R.	O.R.
	87	11/7/2007 10:28:00 AM	14.66	13.47	O.R.	O.R.
	88	11/7/2007 10:29:00 AM	14.61	13.45	O.R.	O.R.
	89	11/7/2007 10:30:00 AM	14.61	13.41	O.R.	O.R.
	90	11/7/2007 10:31:00 AM	14.59	13.43	O.R.	O.R.
	91	11/7/2007 10:32:00 AM	14.56	13.40	O.R.	O.R.
	92	11/7/2007 10:33:00 AM	14.57	13.41	O.R.	O.R.
	93	11/7/2007 10:34:00 AM	14.55	13.33	O.R.	O.R.
	94	11/7/2007 10:35:00 AM	14.52	13.30	O.R.	O.R.
	95	11/7/2007 10:36:00 AM	14.50	13.33	O.R.	O.R.
	96	11/7/2007 10:37:00 AM	14.52	13.30	O.R.	O.R.
	97	11/7/2007 10:38:00 AM	14.46	13.27	O.R.	O.R.
	98	11/7/2007 10:39:00 AM	14.48	13.25	O.R.	O.R.
	99	11/7/2007 10:40:00 AM	14.46	13.22	O.R.	O.R.
	100	11/7/2007 10:41:00 AM	14.44	13.19	O.R.	O.R.
	101	11/7/2007 10:42:00 AM	14.42	13.16	O.R.	O.R.
	102	11/7/2007 10:43:00 AM	14.40	13.14	O.R.	O.R.
	103	11/7/2007 10:44:00 AM	14.38	13.12	O.R.	O.R.
	104	11/7/2007 10:45:00 AM	14.36	13.09	O.R.	O.R.
	105	11/7/2007 10:46:00 AM	14.34	13.10	O.R.	O.R.
	106	11/7/2007 10:47:00 AM	14.31	13.07	O.R.	O.R.
	107	11/7/2007 10:48:00 AM	14.28	13.08	O.R.	O.R.
	108	11/7/2007 10:49:00 AM	14.30	13.06	O.R.	O.R.
	109	11/7/2007 10:50:00 AM	14.27	13.03	O.R.	O.R.
	110	11/7/2007 10:51:00 AM	14.25	12.99	O.R.	O.R.
	111	11/7/2007 10:52:00 AM	14.23	12.97	O.R.	O.R.
	112	11/7/2007 10:53:00 AM	14.21	12.94	O.R.	O.R.
	113	11/7/2007 10:54:00 AM	14.19	12.92	O.R.	O.R.
	114	11/7/2007 10:55:00 AM	14.17	12.88	O.R.	O.R.
	115	11/7/2007 10:56:00 AM	14.15	12.86	O.R.	O.R.
	116	11/7/2007 10:57:00 AM	14.14	12.84	O.R.	O.R.
	117	11/7/2007 10:58:00 AM	14.17	12.82	O.R.	O.R.
	118	11/7/2007 10:59:00 AM	14.15	12.80	O.R.	O.R.
	119	11/7/2007 11:00:00 AM	14.13	12.80	O.R.	O.R.
	120	11/7/2007 11:01:00 AM	14.11	12.77	O.R.	O.R.
	121	11/7/2007 11:02:00 AM	14.09	12.77	O.R.	O.R.
	122	11/7/2007 11:03:00 AM	14.07	12.74	O.R.	O.R.
	123	11/7/2007 11:04:00 AM	14.05	12.71	O.R.	O.R.
	124	11/7/2007 11:05:00 AM	14.03	12.68	O.R.	O.R.
	125	11/7/2007 11:05:09 AM	14.02	12.67	O.R.	O.R.

Ft. Stewart Pressure Test Results								
NOTES: "*" = Unable to Pressurize; "**" = Dataloggers Monitored Manually, Recording Not Initiated (Operator Error)								
FROM	TO	S/R	P-Start	P-End	Delta P	% Drop	Pass/Fail (Current)	Pass/Fail (Change)
PHASE I								
VP-23A	634/635/636/637	S	15.72	15.00	0.72	4.6%	P	
		R	15.31	14.39	0.92	6.0%	P	
	MAIN PLANT	S	*				F	
		R	*				F	
VP-24	626	S	16.93	12.35	4.58	27.1%	F	
		R	16.29	15.25	1.04	6.4%	P	
VP-25/26	618/619/622/623/628	S	17.29	5.69	11.60	67.1%	F	
		R	15.51	14.92	0.59	3.8%	P	
VP-27/28	624	S	16.65	16.44	0.21	1.3%	P	
		R	15.35	15.02	0.33	2.1%	P	
	S	*				F		
	R	*				F		
VP-29A	VP-29/608	S	16.06	15.54	0.52	3.2%	P	
		R	15.41	15.57	-0.16	-1.0%	P	
	616/617	S	16.02	17.61	-1.59	-9.9%	P	
		R	15.66	14.29	1.37	8.7%	P	
	614	S	16.00	15.46	0.54	3.4%	P	
		R	15.28	15.32	-0.04	-0.3%	P	
	610/612	S	15.34	14.39	0.95	6.2%	P	
		R	15.66	15.38	0.28	1.8%	P	
VP-30	440 (DENTAL)	S	*				F	
		R	15.35	12.55	2.80	18.2%	F	
	516	S	16.12	12.90	3.22	20.0%	F	
		R	15.52	13.77	1.75	11.3%	P	F
VP-31	521/524/525	S	14.87	4.38	10.49	70.5%	F	
		R	15.85	13.08	2.77	17.5%	F	
	515/517	S	*				F	
		R	*				F	
VP-33	518	S	**				P	
		R	**				P	
	522/523	S	**				F	
		R	**				P	
VP-35	514	S	15.83	15.36	0.47	3.0%	P	
		R	16.11	15.64	0.47	2.9%	P	
	512/520	S	16.41	13.93	2.48	15.1%	P	F
		R	16.81	12.73	4.08	24.3%	F	

Fort Stewart Phase I Pressure Test Evaluation.

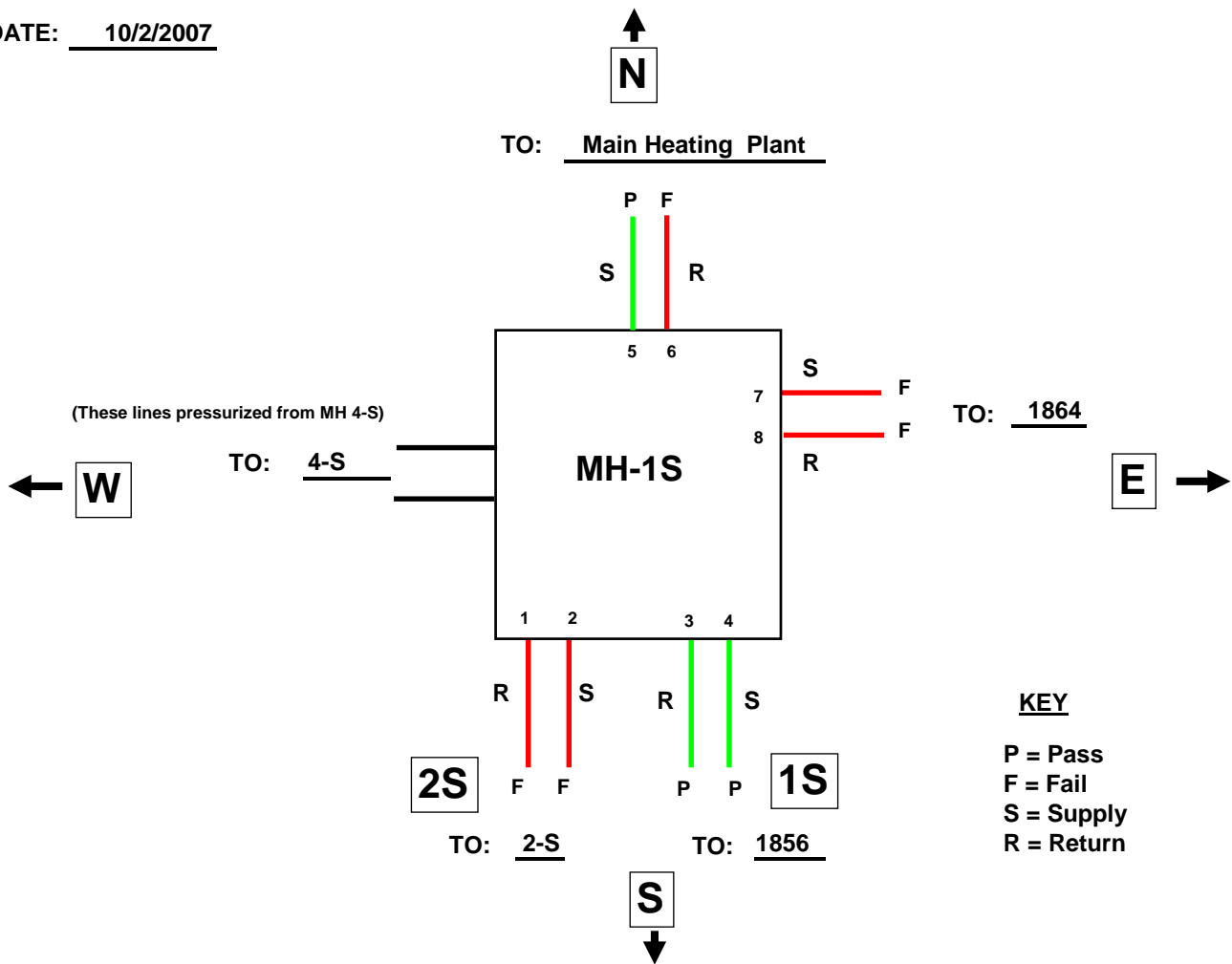
NOTES: *** = Unable to Pressurize; ** ** = Dataloggers Monitored Manually, Recording Not Initiated (Operator Error)									
FROM	TO	S/R	P-START	P-END	DELTA P	% DROP	ORIGINAL	CHANGE	
VP-36	504	S	16.33	15.85	0.48	2.9%	P		
		R	16.03	15.34	0.69	4.3%	P		
	501/503/CHAPEL	S	*				F		
		R	*				F		
	505/506/507/508	S	15.75	15.54	0.21	1.3%	P		
		R	15.82	15.71	0.11	0.7%	P		
VP-37	350	S	16.27	14.55	1.72	10.6%	P	F	
		R	14.82	14.70	0.12	0.8%	P		
	VP-30	S	15.29	10.46	4.83	31.6%	F		
		R	15.17	15.05	0.12	0.8%	P		
VP-39	208/211/212	S	15.13	15.04	0.09	0.6%	P		
		R	15.40	14.80	0.60	3.9%	P		
	VP-37	S	14.70	12.65	2.05	13.9%	F		
		R	15.86	12.48	3.38	21.3%	F		
	206/207	S	15.86	13.88	1.98	12.5%	P	F	
		R	15.71	15.01	0.70	4.5%	P		
VP-41	VP-39	S	15.27	14.83	0.44	2.9%	P		
		R	15.25	14.82	0.43	2.8%	P		
	VP-42, 215	S	15.11	14.63	0.48	3.2%	P		
		R	15.18	14.33	0.85	5.6%	P		
	213, OLD VP	S	15.66	13.51	2.15	13.7%	P	F	
		R	15.44	12.92	2.52	16.3%	F		
VP-42	218	S	15.98	12.49	3.49	21.8%	F		
		R	15.37	13.25	2.12	13.8%	F		
	223/225	S	15.52	15.16	0.36	2.3%	P		
		R	15.20	14.67	0.53	3.5%	P		
VP-42	217/224	S	15.31	15.12	0.19	1.2%	P		
		R	15.40	14.85	0.55	3.6%	P		
	216	S	16.51	14.41	2.10	12.7%	P	F	
		R	16.21	13.76	2.45	15.1%	P	F	
OLD VP	258 (HQ)	S	16.13	16.21	-0.08	-0.5%	P		
		R	15.72	15.54	0.18	1.1%	P		
OLD VP	412 (CLINIC)	S	16.23	14.02	2.21	13.6%	P	F	
		R	15.49	12.67	2.82	18.2%	F		
Phase I							No. Passed =	46	38
							No Failed =	24	32
							Total Tested =	70	70

Fort Stewart Phase I Pressure Test Results (concluded).

Appendix I: Consolidated Phase II and III Manhole and Pressure Test Data for Forts Carson and Stewart

Fort Carson Phase II and III Manhole and Pressure Test Data

DATE: 10/2/2007



NOTES:

1. Drains tested on 8/16/07: North and West wall drains all dry; East wall Supply and Return drain nipples discharged small amount (< 1 oz.) when cap removed, dry when valve opened; 1S Supply issued several drops when cap removed, drain valve dry when opened; 1S Return was dry; 2S Supply and Return drains dry.

MH 1-S					
Logger No.	Chananel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 2-S	F	
	2	2	Supply to 2-S	F	
	3	3	Return to 1856	P	
	4	4	Supply to 1856	P	
2	1	5	Supply to Main Plant	P	
	2	6	Return to Main Plant	F	
	3	7	Supply to 1864	F	
	4	8	Return to 1864	F	

printed 1/9/2008

Handy logger

Name : LOGGER 1

LOG Name	10021025
Interval	00:01:00
Personnel	

Start	10/2/2007 10:25:47 AM
Stop	10/2/2007 1:04:22 PM
Comment	12 S

Data	161
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.10	16.10	15.41	16.25
Minimum	0.07	0.22	0.18	0.29
Average	14.16	14.33	14.69	15.05
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/2/2007 10:25:47 AM	v 0.07	0.23	v 0.18	v 0.29
	2	10/2/2007 10:26:00 AM	v 0.07	v 0.22	v 0.18	v 0.29
	3	10/2/2007 10:27:00 AM	0.74	1.04	0.67	0.84
	4	10/2/2007 10:28:00 AM	3.02	3.88	2.26	2.59
	5	10/2/2007 10:29:00 AM	5.53	6.91	4.26	4.75
	6	10/2/2007 10:30:00 AM	9.46	12.00	7.11	7.87
	7	10/2/2007 10:31:00 AM	13.21	^ 16.10	10.14	11.16
	8	10/2/2007 10:32:00 AM	15.88	16.04	13.82	15.20
	9	10/2/2007 10:33:00 AM	14.84	16.00	^ 15.41	16.23
	10	10/2/2007 10:34:00 AM	13.86	16.00	^ 15.41	^ 16.25
	11	10/2/2007 10:35:00 AM	12.89	15.96	15.37	16.22
	12	10/2/2007 10:36:00 AM	11.95	15.96	15.36	16.20
	13	10/2/2007 10:37:00 AM	11.09	15.96	15.37	16.21
	14	10/2/2007 10:38:00 AM	10.24	15.95	15.37	16.23
	15	10/2/2007 10:39:00 AM	9.47	15.92	15.36	16.22
	16	10/2/2007 10:40:00 AM	8.71	15.90	15.32	16.19
	17	10/2/2007 10:41:00 AM	7.84	15.88	15.33	16.15
	18	10/2/2007 10:42:00 AM	7.81	15.88	15.34	16.14
	19	10/2/2007 10:43:00 AM	7.81	15.85	15.34	16.13
	20	10/2/2007 10:44:00 AM	7.80	15.83	15.34	16.17
	21	10/2/2007 10:45:00 AM	7.79	15.80	15.33	16.15
	22	10/2/2007 10:46:00 AM	9.37	15.80	15.38	16.13
	23	10/2/2007 10:47:00 AM	^ 16.10	15.80	15.39	16.10
	24	10/2/2007 10:48:00 AM	16.05	15.74	15.37	16.08
	25	10/2/2007 10:49:00 AM	16.02	15.72	15.36	16.07
	26	10/2/2007 10:50:00 AM	15.96	15.72	15.32	16.08
	27	10/2/2007 10:51:00 AM	15.96	15.68	15.35	16.08
	28	10/2/2007 10:52:00 AM	15.94	15.69	15.29	16.07
	29	10/2/2007 10:53:00 AM	15.92	15.65	15.32	16.07
	30	10/2/2007 10:54:00 AM	15.90	15.65	15.33	16.07

printed 1/9/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/2/2007 10:55:00 AM	15.88	15.60	15.32	16.07
	32	10/2/2007 10:56:00 AM	15.89	15.60	15.32	16.07
	33	10/2/2007 10:57:00 AM	15.87	15.58	15.33	16.06
	34	10/2/2007 10:58:00 AM	15.86	15.57	15.32	16.05
	35	10/2/2007 10:59:00 AM	15.81	15.55	15.33	16.03
	36	10/2/2007 11:00:00 AM	15.80	15.53	15.32	16.02
	37	10/2/2007 11:01:00 AM	15.79	15.50	15.32	16.02
	38	10/2/2007 11:02:00 AM	15.78	15.49	15.32	16.00
	39	10/2/2007 11:03:00 AM	15.76	15.49	15.33	16.00
	40	10/2/2007 11:04:00 AM	15.74	15.47	15.32	16.00
	41	10/2/2007 11:05:00 AM	15.74	15.45	15.32	15.98
	42	10/2/2007 11:06:00 AM	15.71	15.47	15.34	15.96
	43	10/2/2007 11:07:00 AM	15.70	15.42	15.31	15.96
	44	10/2/2007 11:08:00 AM	15.67	15.40	15.31	15.95
	45	10/2/2007 11:09:00 AM	15.66	15.37	15.31	15.95
	46	10/2/2007 11:10:00 AM	15.64	15.37	15.32	15.94
	47	10/2/2007 11:11:00 AM	15.63	15.39	15.32	15.92
	48	10/2/2007 11:12:00 AM	15.61	15.36	15.32	15.91
	49	10/2/2007 11:13:00 AM	15.59	15.35	15.30	15.90
	50	10/2/2007 11:14:00 AM	15.57	15.33	15.32	15.88
	51	10/2/2007 11:15:00 AM	15.59	15.32	15.32	15.87
	52	10/2/2007 11:16:00 AM	15.53	15.30	15.32	15.86
	53	10/2/2007 11:17:00 AM	15.52	15.25	15.29	15.86
	54	10/2/2007 11:18:00 AM	15.51	15.25	15.29	15.86
	55	10/2/2007 11:19:00 AM	15.50	15.24	15.29	15.85
	56	10/2/2007 11:20:00 AM	15.49	15.24	15.29	15.84
	57	10/2/2007 11:21:00 AM	15.48	15.22	15.30	15.83
	58	10/2/2007 11:22:00 AM	15.45	15.17	15.28	15.82
	59	10/2/2007 11:23:00 AM	15.44	15.20	15.28	15.81
	60	10/2/2007 11:24:00 AM	15.42	15.18	15.28	15.80
	61	10/2/2007 11:25:00 AM	15.41	15.12	15.28	15.79
	62	10/2/2007 11:26:00 AM	15.40	15.12	15.30	15.79
	63	10/2/2007 11:27:00 AM	15.39	15.12	15.29	15.78
	64	10/2/2007 11:28:00 AM	15.37	15.07	15.30	15.78
	65	10/2/2007 11:29:00 AM	15.36	15.06	15.29	15.76
	66	10/2/2007 11:30:00 AM	15.35	15.05	15.27	15.74
	67	10/2/2007 11:31:00 AM	15.33	15.06	15.29	15.72
	68	10/2/2007 11:32:00 AM	15.33	15.04	15.29	15.72
	69	10/2/2007 11:33:00 AM	15.32	15.02	15.28	15.70
	70	10/2/2007 11:34:00 AM	15.29	15.00	15.28	15.70
	71	10/2/2007 11:35:00 AM	15.28	14.99	15.28	15.69
	72	10/2/2007 11:36:00 AM	15.26	14.99	15.25	15.68
	73	10/2/2007 11:37:00 AM	15.26	14.97	15.25	15.68
	74	10/2/2007 11:38:00 AM	15.26	14.96	15.25	15.67
	75	10/2/2007 11:39:00 AM	15.27	14.93	15.27	15.65
	76	10/2/2007 11:40:00 AM	15.24	14.91	15.26	15.64
	77	10/2/2007 11:41:00 AM	15.25	14.88	15.25	15.61
	78	10/2/2007 11:42:00 AM	15.22	14.90	15.25	15.61
	79	10/2/2007 11:43:00 AM	15.19	14.88	15.25	15.60
	80	10/2/2007 11:44:00 AM	15.21	14.87	15.27	15.61

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/2/2007 11:45:00 AM	15.20	14.85	15.26	15.59
	82	10/2/2007 11:46:00 AM	15.18	14.81	15.25	15.58
	83	10/2/2007 11:47:00 AM	15.16	14.82	15.23	15.57
	84	10/2/2007 11:48:00 AM	15.14	14.79	15.27	15.54
	85	10/2/2007 11:49:00 AM	15.13	14.76	15.26	15.54
	86	10/2/2007 11:50:00 AM	15.11	14.79	15.25	15.53
	87	10/2/2007 11:51:00 AM	15.08	14.76	15.25	15.52
	88	10/2/2007 11:52:00 AM	15.06	14.73	15.25	15.51
	89	10/2/2007 11:53:00 AM	15.07	14.71	15.23	15.53
	90	10/2/2007 11:54:00 AM	15.05	14.67	15.24	15.50
	91	10/2/2007 11:55:00 AM	15.04	14.70	15.25	15.50
	92	10/2/2007 11:56:00 AM	15.01	14.67	15.24	15.49
	93	10/2/2007 11:57:00 AM	15.00	14.64	15.23	15.47
	94	10/2/2007 11:58:00 AM	14.99	14.58	15.21	15.46
	95	10/2/2007 11:59:00 AM	14.98	14.57	15.18	15.45
	96	10/2/2007 12:00:00 PM	14.93	14.58	15.19	15.45
	97	10/2/2007 12:01:00 PM	14.93	14.55	15.19	15.44
	98	10/2/2007 12:02:00 PM	14.93	14.53	15.19	15.43
	99	10/2/2007 12:03:00 PM	14.92	14.52	15.19	15.41
	100	10/2/2007 12:04:00 PM	14.90	14.50	15.20	15.41
	101	10/2/2007 12:05:00 PM	14.88	14.48	15.19	15.43
	102	10/2/2007 12:06:00 PM	14.89	14.36	15.18	15.33
	103	10/2/2007 12:07:00 PM	14.89	14.32	15.17	15.32
	104	10/2/2007 12:08:00 PM	14.83	14.31	15.17	15.31
	105	10/2/2007 12:09:00 PM	14.82	14.29	15.18	15.33
	106	10/2/2007 12:10:00 PM	14.82	14.29	15.19	15.32
	107	10/2/2007 12:11:00 PM	14.81	14.30	15.17	15.30
	108	10/2/2007 12:12:00 PM	14.82	14.27	15.19	15.29
	109	10/2/2007 12:13:00 PM	14.82	14.28	15.19	15.29
	110	10/2/2007 12:14:00 PM	14.80	14.24	15.16	15.29
	111	10/2/2007 12:15:00 PM	14.78	14.23	15.16	15.28
	112	10/2/2007 12:16:00 PM	14.76	14.20	15.17	15.26
	113	10/2/2007 12:17:00 PM	14.75	14.18	15.15	15.25
	114	10/2/2007 12:18:00 PM	14.72	14.15	15.17	15.23
	115	10/2/2007 12:19:00 PM	14.68	14.13	15.15	15.25
	116	10/2/2007 12:20:00 PM	14.71	14.15	15.15	15.23
	117	10/2/2007 12:21:00 PM	14.70	14.10	15.15	15.22
	118	10/2/2007 12:22:00 PM	14.68	14.06	15.12	15.20
	119	10/2/2007 12:23:00 PM	14.68	14.04	15.11	15.19
	120	10/2/2007 12:24:00 PM	14.67	14.03	15.12	15.19
	121	10/2/2007 12:25:00 PM	14.66	14.01	15.11	15.18
	122	10/2/2007 12:26:00 PM	14.63	14.02	15.12	15.19
	123	10/2/2007 12:27:00 PM	14.62	14.01	15.12	15.15
	124	10/2/2007 12:28:00 PM	14.61	13.95	15.09	15.15
	125	10/2/2007 12:29:00 PM	14.59	13.95	15.09	15.15
	126	10/2/2007 12:30:00 PM	14.57	13.93	15.08	15.13
	127	10/2/2007 12:31:00 PM	14.56	13.91	15.11	15.13
	128	10/2/2007 12:32:00 PM	14.57	13.93	15.10	15.11
	129	10/2/2007 12:33:00 PM	14.55	13.91	15.07	15.12
	130	10/2/2007 12:34:00 PM	14.54	13.85	15.04	15.11

printed 1/9/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/2/2007 12:35:00 PM	14.52	13.83	15.06	15.08
	132	10/2/2007 12:36:00 PM	14.50	13.83	15.05	15.10
	133	10/2/2007 12:37:00 PM	14.47	13.83	15.06	15.10
	134	10/2/2007 12:38:00 PM	14.47	13.81	15.06	15.09
	135	10/2/2007 12:39:00 PM	14.46	13.81	15.07	15.08
	136	10/2/2007 12:40:00 PM	14.44	13.81	15.06	15.08
	137	10/2/2007 12:41:00 PM	14.44	13.77	15.04	15.06
	138	10/2/2007 12:42:00 PM	14.43	13.78	15.04	15.07
	139	10/2/2007 12:43:00 PM	14.42	13.77	15.05	15.06
	140	10/2/2007 12:44:00 PM	14.40	13.75	15.04	15.06
	141	10/2/2007 12:45:00 PM	14.40	13.74	15.02	15.04
	142	10/2/2007 12:46:00 PM	14.39	13.70	15.01	15.04
	143	10/2/2007 12:47:00 PM	14.38	13.70	14.97	15.01
	144	10/2/2007 12:48:00 PM	14.36	13.71	15.01	15.00
	145	10/2/2007 12:49:00 PM	14.35	13.69	15.00	15.03
	146	10/2/2007 12:50:00 PM	14.34	13.67	14.97	15.02
	147	10/2/2007 12:51:00 PM	14.29	13.65	14.98	15.02
	148	10/2/2007 12:52:00 PM	14.32	13.62	14.99	15.01
	149	10/2/2007 12:53:00 PM	14.32	13.63	14.96	15.04
	150	10/2/2007 12:54:00 PM	14.30	13.60	14.97	15.05
	151	10/2/2007 12:55:00 PM	14.28	13.57	14.95	15.03
	152	10/2/2007 12:56:00 PM	14.27	13.55	14.95	15.04
	153	10/2/2007 12:57:00 PM	14.25	13.58	14.95	15.04
	154	10/2/2007 12:58:00 PM	14.26	13.59	14.94	15.04
	155	10/2/2007 12:59:00 PM	14.23	13.55	14.93	15.04
	156	10/2/2007 1:00:00 PM	14.22	13.54	14.95	15.04
	157	10/2/2007 1:01:00 PM	14.23	13.52	14.92	15.03
	158	10/2/2007 1:02:00 PM	14.21	13.50	14.94	15.00
	159	10/2/2007 1:03:00 PM	14.21	13.49	14.94	15.01
	160	10/2/2007 1:04:00 PM	14.19	13.48	14.94	15.00
	161	10/2/2007 1:04:22 PM	14.19	13.47	14.94	15.03

printed 1/9/2008

Handy logger

Name : **LOGGER 2**

LOG Name	10021025
Interval	00:01:00
Personnel	10S

Start	10/2/2007 10:25:16 AM
Stop	10/2/2007 11:53:55 AM
Comment	

Data	90
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	13.92	13.87	16.87	16.86
Minimum	0.18	0.07	0.12	0.17
Average	12.87	12.37	8.18	8.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/2/2007 10:25:16 AM	v 0.18	0.08	v 0.12	v 0.17
	2	10/2/2007 10:26:00 AM	0.20	v 0.07	^ 16.87	^ 16.86
	3	10/2/2007 10:27:00 AM	1.29	1.23	16.45	16.44
	4	10/2/2007 10:28:00 AM	2.63	2.48	16.09	16.15
	5	10/2/2007 10:29:00 AM	4.82	4.61	15.71	15.85
	6	10/2/2007 10:30:00 AM	7.25	6.96	15.33	15.53
	7	10/2/2007 10:31:00 AM	9.94	9.47	15.00	15.23
	8	10/2/2007 10:32:00 AM	^ 13.92	13.33	14.65	14.93
	9	10/2/2007 10:33:00 AM	13.91	^ 13.87	14.32	14.69
	10	10/2/2007 10:34:00 AM	13.87	13.84	14.00	14.41
	11	10/2/2007 10:35:00 AM	13.86	13.79	13.70	14.13
	12	10/2/2007 10:36:00 AM	13.85	13.76	13.45	13.89
	13	10/2/2007 10:37:00 AM	13.83	13.73	13.14	13.62
	14	10/2/2007 10:38:00 AM	13.84	13.72	12.85	13.35
	15	10/2/2007 10:39:00 AM	13.81	13.72	12.62	13.12
	16	10/2/2007 10:40:00 AM	13.83	13.70	12.35	12.87
	17	10/2/2007 10:41:00 AM	13.82	13.67	12.09	12.63
	18	10/2/2007 10:42:00 AM	13.81	13.64	11.85	12.40
	19	10/2/2007 10:43:00 AM	13.80	13.63	11.62	12.15
	20	10/2/2007 10:44:00 AM	13.79	13.65	11.39	11.93
	21	10/2/2007 10:45:00 AM	13.79	13.59	11.17	11.72
	22	10/2/2007 10:46:00 AM	13.79	13.61	10.92	11.51
*	23	10/2/2007 10:47:00 AM	13.81	13.58	10.72	11.26
	24	10/2/2007 10:48:00 AM	13.81	13.57	10.55	11.09
	25	10/2/2007 10:49:00 AM	13.81	13.55	10.33	10.93
	26	10/2/2007 10:50:00 AM	13.80	13.52	10.18	10.77
	27	10/2/2007 10:51:00 AM	13.79	13.50	9.99	10.63
	28	10/2/2007 10:52:00 AM	13.79	13.48	9.81	10.49
	29	10/2/2007 10:53:00 AM	13.78	13.47	9.64	10.35
	30	10/2/2007 10:54:00 AM	13.78	13.45	9.47	10.21

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/2/2007 10:55:00 AM	13.74	13.43	9.30	10.08
	32	10/2/2007 10:56:00 AM	13.74	13.41	9.15	9.96
	33	10/2/2007 10:57:00 AM	13.73	13.40	8.99	9.82
	34	10/2/2007 10:58:00 AM	13.73	13.34	8.86	9.64
	35	10/2/2007 10:59:00 AM	13.72	13.33	8.73	9.50
	36	10/2/2007 11:00:00 AM	13.73	13.32	8.60	9.37
	37	10/2/2007 11:01:00 AM	13.72	13.31	8.48	9.23
	38	10/2/2007 11:02:00 AM	13.71	13.29	8.35	9.08
	39	10/2/2007 11:03:00 AM	13.70	13.27	8.21	8.93
	40	10/2/2007 11:04:00 AM	13.69	13.25	8.08	8.78
	41	10/2/2007 11:05:00 AM	13.68	13.24	7.99	8.67
	42	10/2/2007 11:06:00 AM	13.68	13.26	7.86	8.52
	43	10/2/2007 11:07:00 AM	13.70	13.24	7.73	8.37
	44	10/2/2007 11:08:00 AM	13.70	13.22	7.61	8.23
	45	10/2/2007 11:09:00 AM	13.69	13.20	7.50	8.08
*	46	10/2/2007 11:10:00 AM	13.68	13.19	7.38	7.94
	47	10/2/2007 11:11:00 AM	13.68	13.16	7.27	7.81
	48	10/2/2007 11:12:00 AM	13.67	13.15	7.16	7.67
	49	10/2/2007 11:13:00 AM	13.66	13.13	7.04	7.54
	50	10/2/2007 11:14:00 AM	13.65	13.11	6.94	7.44
	51	10/2/2007 11:15:00 AM	13.64	13.09	6.83	7.30
	52	10/2/2007 11:16:00 AM	13.63	13.07	6.76	7.18
	53	10/2/2007 11:17:00 AM	13.63	13.05	6.62	7.05
	54	10/2/2007 11:18:00 AM	13.61	13.03	6.52	6.94
	55	10/2/2007 11:19:00 AM	13.61	13.01	6.43	6.78
	56	10/2/2007 11:20:00 AM	13.61	13.00	6.34	6.69
	57	10/2/2007 11:21:00 AM	13.60	12.98	6.24	6.58
	58	10/2/2007 11:22:00 AM	13.59	12.96	6.15	6.46
	59	10/2/2007 11:23:00 AM	13.59	12.94	6.06	6.35
	60	10/2/2007 11:24:00 AM	13.58	12.91	5.97	6.24
	61	10/2/2007 11:25:00 AM	13.58	12.90	5.89	6.13
	62	10/2/2007 11:26:00 AM	13.57	12.88	5.80	6.02
	63	10/2/2007 11:27:00 AM	13.56	12.86	5.72	5.92
	64	10/2/2007 11:28:00 AM	13.55	12.83	5.64	5.81
	65	10/2/2007 11:29:00 AM	13.54	12.80	5.55	5.71
	66	10/2/2007 11:30:00 AM	13.53	12.79	5.47	5.61
	67	10/2/2007 11:31:00 AM	13.52	12.77	5.40	5.49
	68	10/2/2007 11:32:00 AM	13.52	12.75	5.32	5.39
	69	10/2/2007 11:33:00 AM	13.51	12.74	5.24	5.30
	70	10/2/2007 11:34:00 AM	13.51	12.72	5.17	5.23
	71	10/2/2007 11:35:00 AM	13.50	12.70	5.09	5.14
	72	10/2/2007 11:36:00 AM	13.49	12.69	5.01	5.04
	73	10/2/2007 11:37:00 AM	13.47	12.68	4.98	4.95
	74	10/2/2007 11:38:00 AM	13.49	12.66	4.90	4.89
	75	10/2/2007 11:39:00 AM	13.48	12.67	4.82	4.79
	76	10/2/2007 11:40:00 AM	13.47	12.65	4.79	4.70
	77	10/2/2007 11:41:00 AM	13.46	12.62	4.71	4.61
	78	10/2/2007 11:42:00 AM	13.45	12.61	4.64	4.55
	79	10/2/2007 11:43:00 AM	13.44	12.60	4.57	4.46
	80	10/2/2007 11:44:00 AM	13.42	12.58	4.53	4.37

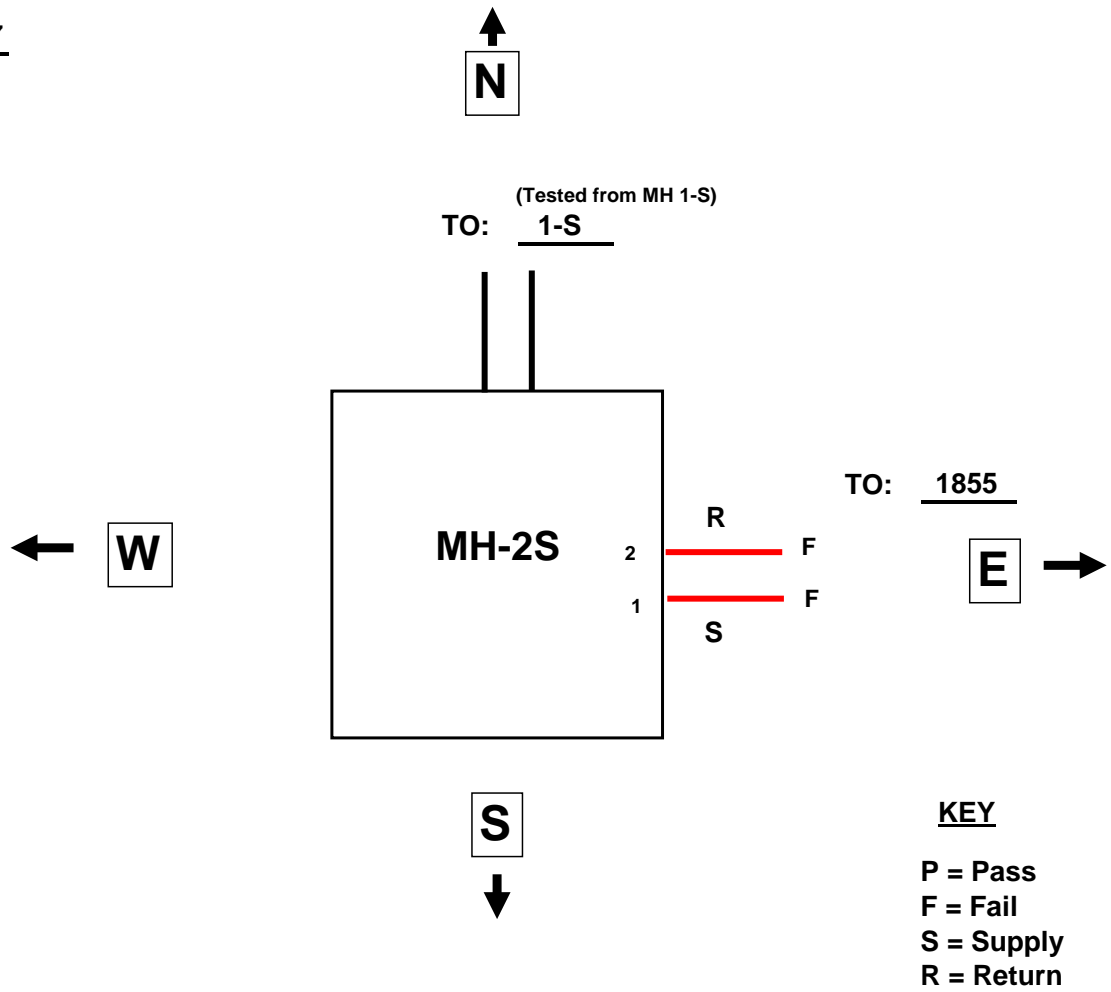
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/2/2007 11:45:00 AM	13.41	12.58	4.42	4.29
	82	10/2/2007 11:46:00 AM	13.44	12.58	4.36	4.20
	83	10/2/2007 11:47:00 AM	13.39	12.53	4.30	4.13
	84	10/2/2007 11:48:00 AM	13.37	12.54	4.23	4.05
	85	10/2/2007 11:49:00 AM	13.37	12.52	4.21	3.98
	86	10/2/2007 11:50:00 AM	13.40	12.50	4.14	3.94
	87	10/2/2007 11:51:00 AM	13.38	12.48	4.07	3.86
	88	10/2/2007 11:52:00 AM	13.37	12.46	4.03	3.78
	89	10/2/2007 11:53:00 AM	13.36	12.44	3.99	3.74
	90	10/2/2007 11:53:55 AM	13.35	12.43	3.93	3.67

DATE: 10/2/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All Dry

MH 2-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 1855	F	
	2	2	Return to 1855	F	

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Handy logger

Name : LOGGER 1

LOG Name	10021518
Interval	00:01:00
Personnel	

Start	10/2/2007 3:18:29 PM
Stop	10/2/2007 5:16:20 PM
Comment	12 S

Data	120
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.35	16.29		
Minimum	0.02	-0.02		
Average	14.73	14.31		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/2/2007 3:18:29 PM	v 0.02	v -0.02	O.R.	O.R.
	2	10/2/2007 3:19:00 PM	13.82	12.03	O.R.	O.R.
	3	10/2/2007 3:20:00 PM	^ 16.35	^ 16.29	O.R.	O.R.
	4	10/2/2007 3:21:00 PM	15.97	16.21	O.R.	O.R.
	5	10/2/2007 3:22:00 PM	15.64	16.17	O.R.	O.R.
	6	10/2/2007 3:23:00 PM	15.47	16.16	O.R.	O.R.
	7	10/2/2007 3:24:00 PM	15.44	16.08	O.R.	O.R.
	8	10/2/2007 3:25:00 PM	15.42	16.03	O.R.	O.R.
	9	10/2/2007 3:26:00 PM	15.42	15.94	O.R.	O.R.
	10	10/2/2007 3:27:00 PM	15.40	15.91	O.R.	O.R.
	11	10/2/2007 3:28:00 PM	15.38	15.88	O.R.	O.R.
	12	10/2/2007 3:29:00 PM	15.40	15.84	O.R.	O.R.
	13	10/2/2007 3:30:00 PM	15.41	15.79	O.R.	O.R.
	14	10/2/2007 3:31:00 PM	15.40	15.76	O.R.	O.R.
	15	10/2/2007 3:32:00 PM	15.40	15.72	O.R.	O.R.
	16	10/2/2007 3:33:00 PM	15.37	15.68	O.R.	O.R.
	17	10/2/2007 3:34:00 PM	15.38	15.63	O.R.	O.R.
	18	10/2/2007 3:35:00 PM	15.36	15.59	O.R.	O.R.
	19	10/2/2007 3:36:00 PM	15.34	15.56	O.R.	O.R.
	20	10/2/2007 3:37:00 PM	15.31	15.56	O.R.	O.R.
	21	10/2/2007 3:38:00 PM	15.29	15.50	O.R.	O.R.
	22	10/2/2007 3:39:00 PM	15.30	15.48	O.R.	O.R.
	23	10/2/2007 3:40:00 PM	15.30	15.44	O.R.	O.R.
	24	10/2/2007 3:41:00 PM	15.28	15.39	O.R.	O.R.
	25	10/2/2007 3:42:00 PM	15.26	15.33	O.R.	O.R.
	26	10/2/2007 3:43:00 PM	15.25	15.30	O.R.	O.R.
	27	10/2/2007 3:44:00 PM	15.25	15.28	O.R.	O.R.
	28	10/2/2007 3:45:00 PM	15.23	15.24	O.R.	O.R.
	29	10/2/2007 3:46:00 PM	15.22	15.22	O.R.	O.R.
	30	10/2/2007 3:47:00 PM	15.21	15.20	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/2/2007 3:48:00 PM	15.19	15.20	O.R.	O.R.
	32	10/2/2007 3:49:00 PM	15.19	15.15	O.R.	O.R.
	33	10/2/2007 3:50:00 PM	15.17	15.10	O.R.	O.R.
	34	10/2/2007 3:51:00 PM	15.16	15.07	O.R.	O.R.
	35	10/2/2007 3:52:00 PM	15.16	15.06	O.R.	O.R.
	36	10/2/2007 3:53:00 PM	15.14	15.01	O.R.	O.R.
	37	10/2/2007 3:54:00 PM	15.08	15.01	O.R.	O.R.
	38	10/2/2007 3:55:00 PM	15.09	14.96	O.R.	O.R.
	39	10/2/2007 3:56:00 PM	15.10	14.94	O.R.	O.R.
	40	10/2/2007 3:57:00 PM	15.09	14.93	O.R.	O.R.
	41	10/2/2007 3:58:00 PM	15.05	14.89	O.R.	O.R.
	42	10/2/2007 3:59:00 PM	15.04	14.87	O.R.	O.R.
	43	10/2/2007 4:00:00 PM	15.03	14.86	O.R.	O.R.
	44	10/2/2007 4:01:00 PM	15.03	14.84	O.R.	O.R.
	45	10/2/2007 4:02:00 PM	15.04	14.79	O.R.	O.R.
	46	10/2/2007 4:03:00 PM	15.01	14.77	O.R.	O.R.
	47	10/2/2007 4:04:00 PM	14.97	14.75	O.R.	O.R.
	48	10/2/2007 4:05:00 PM	14.97	14.74	O.R.	O.R.
	49	10/2/2007 4:06:00 PM	14.98	14.67	O.R.	O.R.
	50	10/2/2007 4:07:00 PM	14.98	14.64	O.R.	O.R.
	51	10/2/2007 4:08:00 PM	14.95	14.62	O.R.	O.R.
	52	10/2/2007 4:09:00 PM	14.95	14.58	O.R.	O.R.
	53	10/2/2007 4:10:00 PM	14.94	14.59	O.R.	O.R.
	54	10/2/2007 4:11:00 PM	14.94	14.54	O.R.	O.R.
	55	10/2/2007 4:12:00 PM	14.89	14.49	O.R.	O.R.
	56	10/2/2007 4:13:00 PM	14.91	14.49	O.R.	O.R.
	57	10/2/2007 4:14:00 PM	14.92	14.48	O.R.	O.R.
	58	10/2/2007 4:15:00 PM	14.88	14.44	O.R.	O.R.
	59	10/2/2007 4:16:00 PM	14.91	14.40	O.R.	O.R.
	60	10/2/2007 4:17:00 PM	14.88	14.36	O.R.	O.R.
	61	10/2/2007 4:18:00 PM	14.87	14.33	O.R.	O.R.
	62	10/2/2007 4:19:00 PM	14.88	14.29	O.R.	O.R.
	63	10/2/2007 4:20:00 PM	14.86	14.29	O.R.	O.R.
	64	10/2/2007 4:21:00 PM	14.84	14.26	O.R.	O.R.
	65	10/2/2007 4:22:00 PM	14.84	14.22	O.R.	O.R.
	66	10/2/2007 4:23:00 PM	14.83	14.21	O.R.	O.R.
	67	10/2/2007 4:24:00 PM	14.81	14.19	O.R.	O.R.
	68	10/2/2007 4:25:00 PM	14.80	14.17	O.R.	O.R.
	69	10/2/2007 4:26:00 PM	14.78	14.14	O.R.	O.R.
	70	10/2/2007 4:27:00 PM	14.76	14.11	O.R.	O.R.
	71	10/2/2007 4:28:00 PM	14.75	14.11	O.R.	O.R.
	72	10/2/2007 4:29:00 PM	14.74	14.08	O.R.	O.R.
	73	10/2/2007 4:30:00 PM	14.73	14.05	O.R.	O.R.
	74	10/2/2007 4:31:00 PM	14.71	14.01	O.R.	O.R.
	75	10/2/2007 4:32:00 PM	14.73	13.98	O.R.	O.R.
	76	10/2/2007 4:33:00 PM	14.72	13.95	O.R.	O.R.
	77	10/2/2007 4:34:00 PM	14.70	13.98	O.R.	O.R.
	78	10/2/2007 4:35:00 PM	14.69	13.94	O.R.	O.R.
	79	10/2/2007 4:36:00 PM	14.65	13.92	O.R.	O.R.
	80	10/2/2007 4:37:00 PM	14.65	13.90	O.R.	O.R.

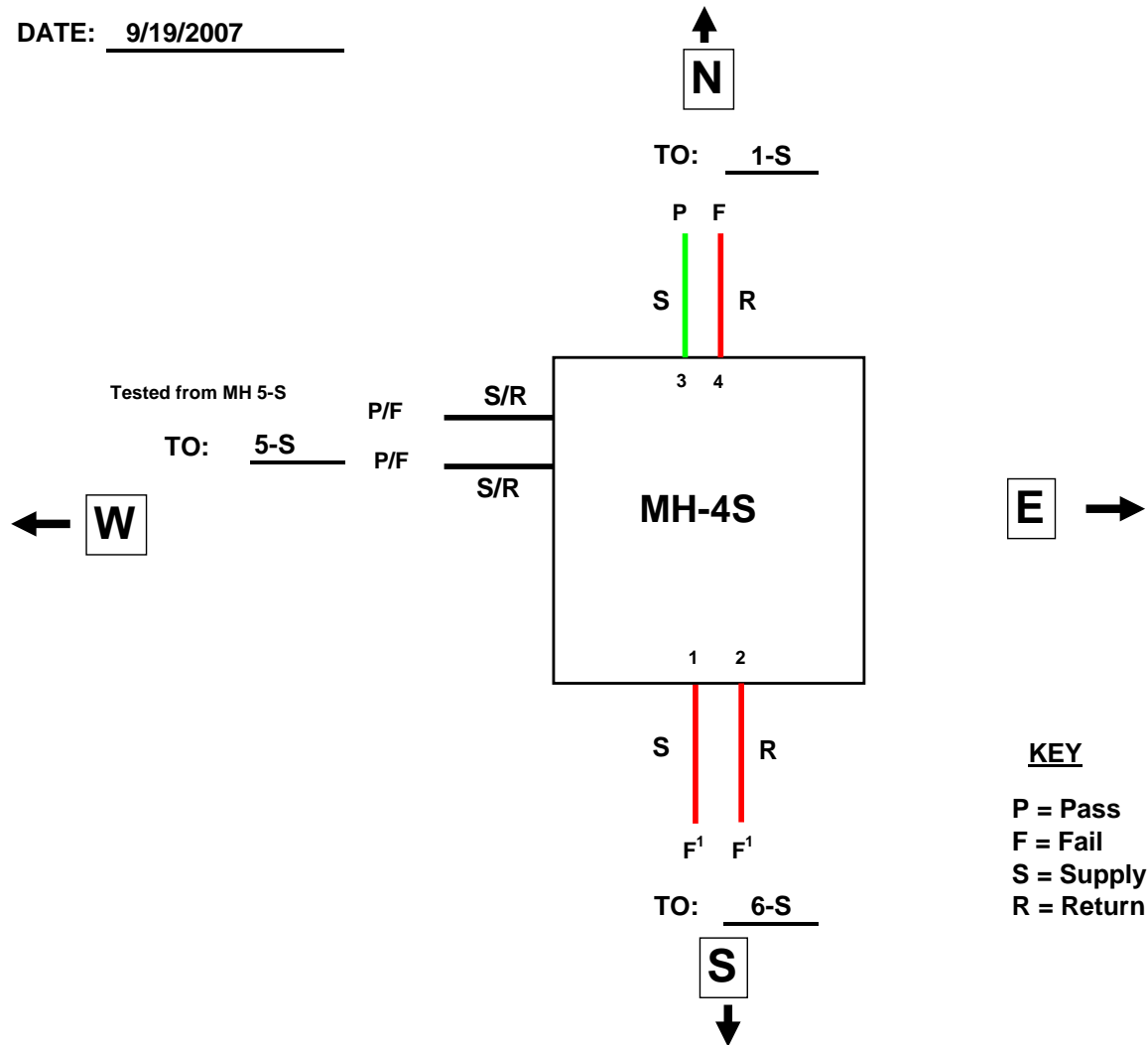
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/2/2007 4:38:00 PM	14.64	13.87	O.R.	O.R.
	82	10/2/2007 4:39:00 PM	14.62	13.84	O.R.	O.R.
	83	10/2/2007 4:40:00 PM	14.61	13.81	O.R.	O.R.
	84	10/2/2007 4:41:00 PM	14.61	13.79	O.R.	O.R.
	85	10/2/2007 4:42:00 PM	14.59	13.77	O.R.	O.R.
	86	10/2/2007 4:43:00 PM	14.59	13.75	O.R.	O.R.
	87	10/2/2007 4:44:00 PM	14.59	13.69	O.R.	O.R.
	88	10/2/2007 4:45:00 PM	14.56	13.71	O.R.	O.R.
	89	10/2/2007 4:46:00 PM	14.51	13.67	O.R.	O.R.
	90	10/2/2007 4:47:00 PM	14.52	13.68	O.R.	O.R.
	91	10/2/2007 4:48:00 PM	14.49	13.65	O.R.	O.R.
	92	10/2/2007 4:49:00 PM	14.50	13.65	O.R.	O.R.
	93	10/2/2007 4:50:00 PM	14.46	13.62	O.R.	O.R.
	94	10/2/2007 4:51:00 PM	14.47	13.58	O.R.	O.R.
	95	10/2/2007 4:52:00 PM	14.47	13.58	O.R.	O.R.
	96	10/2/2007 4:53:00 PM	14.46	13.59	O.R.	O.R.
	97	10/2/2007 4:54:00 PM	14.46	13.55	O.R.	O.R.
	98	10/2/2007 4:55:00 PM	14.43	13.55	O.R.	O.R.
	99	10/2/2007 4:56:00 PM	14.43	13.50	O.R.	O.R.
	100	10/2/2007 4:57:00 PM	14.43	13.49	O.R.	O.R.
	101	10/2/2007 4:58:00 PM	14.40	13.49	O.R.	O.R.
	102	10/2/2007 4:59:00 PM	14.40	13.49	O.R.	O.R.
	103	10/2/2007 5:00:00 PM	14.40	13.44	O.R.	O.R.
	104	10/2/2007 5:01:00 PM	14.40	13.44	O.R.	O.R.
	105	10/2/2007 5:02:00 PM	14.39	13.44	O.R.	O.R.
	106	10/2/2007 5:03:00 PM	14.36	13.43	O.R.	O.R.
	107	10/2/2007 5:04:00 PM	14.35	13.43	O.R.	O.R.
	108	10/2/2007 5:05:00 PM	14.35	13.42	O.R.	O.R.
	109	10/2/2007 5:06:00 PM	14.30	13.41	O.R.	O.R.
	110	10/2/2007 5:07:00 PM	14.30	13.38	O.R.	O.R.
	111	10/2/2007 5:08:00 PM	14.30	13.36	O.R.	O.R.
	112	10/2/2007 5:09:00 PM	14.29	13.35	O.R.	O.R.
	113	10/2/2007 5:10:00 PM	14.29	13.34	O.R.	O.R.
	114	10/2/2007 5:11:00 PM	14.25	13.28	O.R.	O.R.
	115	10/2/2007 5:12:00 PM	14.25	13.28	O.R.	O.R.
	116	10/2/2007 5:13:00 PM	14.24	13.28	O.R.	O.R.
	117	10/2/2007 5:14:00 PM	14.24	13.26	O.R.	O.R.
	118	10/2/2007 5:15:00 PM	14.23	13.25	O.R.	O.R.
	119	10/2/2007 5:16:00 PM	14.22	13.24	O.R.	O.R.
	120	10/2/2007 5:16:20 PM	14.22	13.23	O.R.	O.R.

DATE: 9/19/2007



NOTES:

1. Vent elbow at entry of conduit cracked (under insulation)
2. Supply/Return drains tested on 8/16/07: All Dry

MH 4-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 6-S	F	Vent elbow at entry of conduit is cracked under insulation, unable to pressurize
	2	2	Return to 6-S	F	Vent elbow at entry of conduit is cracked under insulation, unable to pressurize
	3	3	Supply to 1-S	P	
	4	4	Return to 1-S	F	

printed 1/9/2008

Handy logger

Name : LOGGER 1

LOG Name	09191439
Interval	00:01:00
Personnel	

Start	9/19/2007 2:39:36 PM
Stop	9/19/2007 4:47:01 PM
Comment	

Data	130
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	2.54	2.69	16.57	15.70
Minimum	0.02	0.07	0.10	0.21
Average	0.11	0.24	15.12	14.22
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 2:39:36 PM	0.08	0.12	v 0.10	v 0.21
	2	9/19/2007 2:40:00 PM	1.83	1.85	1.64	1.88
	3	9/19/2007 2:41:00 PM	^ 2.54	^ 2.69	2.94	3.07
	4	9/19/2007 2:42:00 PM	1.89	2.05	6.11	6.34
	5	9/19/2007 2:43:00 PM	0.99	1.17	8.19	8.25
	6	9/19/2007 2:44:00 PM	0.40	0.55	10.40	10.62
	7	9/19/2007 2:45:00 PM	0.13	0.21	12.86	12.96
	8	9/19/2007 2:46:00 PM	0.05	0.10	15.24	15.24
	9	9/19/2007 2:47:00 PM	0.04	0.08	^ 16.57	15.59
	10	9/19/2007 2:48:00 PM	0.04	0.08	15.93	^ 15.70
	11	9/19/2007 2:49:00 PM	0.05	v 0.07	15.89	15.65
	12	9/19/2007 2:50:00 PM	0.04	v 0.07	15.88	15.60
	13	9/19/2007 2:51:00 PM	0.05	v 0.07	15.84	15.55
	14	9/19/2007 2:52:00 PM	v 0.02	0.18	15.82	15.53
	15	9/19/2007 2:53:00 PM	0.06	0.18	15.81	15.50
	16	9/19/2007 2:54:00 PM	0.06	0.18	15.84	15.51
	17	9/19/2007 2:55:00 PM	0.06	0.19	15.84	15.49
	18	9/19/2007 2:56:00 PM	0.06	0.19	15.84	15.47
	19	9/19/2007 2:57:00 PM	0.06	0.19	15.89	15.45
	20	9/19/2007 2:58:00 PM	0.06	0.18	15.89	15.43
	21	9/19/2007 2:59:00 PM	0.06	0.18	15.85	15.41
	22	9/19/2007 3:00:00 PM	0.06	0.18	15.86	15.40
	23	9/19/2007 3:01:00 PM	0.06	0.21	15.90	15.38
	24	9/19/2007 3:02:00 PM	0.05	0.21	15.90	15.36
	25	9/19/2007 3:03:00 PM	0.06	0.20	15.86	15.34
	26	9/19/2007 3:04:00 PM	0.06	0.20	15.87	15.33
	27	9/19/2007 3:05:00 PM	0.06	0.20	15.84	15.31
	28	9/19/2007 3:06:00 PM	0.06	0.20	15.84	15.27
	29	9/19/2007 3:07:00 PM	0.06	0.20	15.86	15.26
	30	9/19/2007 3:08:00 PM	0.06	0.20	15.87	15.24

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 3:09:00 PM	0.06	0.20	15.88	15.23
	32	9/19/2007 3:10:00 PM	0.06	0.20	15.83	15.22
	33	9/19/2007 3:11:00 PM	0.06	0.20	15.83	15.20
	34	9/19/2007 3:12:00 PM	0.07	0.20	15.83	15.19
	35	9/19/2007 3:13:00 PM	0.07	0.20	15.84	15.16
	36	9/19/2007 3:14:00 PM	0.04	0.19	15.84	15.15
	37	9/19/2007 3:15:00 PM	0.04	0.17	15.82	15.11
	38	9/19/2007 3:16:00 PM	0.04	0.18	15.82	15.09
	39	9/19/2007 3:17:00 PM	0.04	0.18	15.82	15.07
	40	9/19/2007 3:18:00 PM	0.04	0.18	15.85	15.09
	41	9/19/2007 3:19:00 PM	0.07	0.17	15.84	15.08
	42	9/19/2007 3:20:00 PM	0.07	0.21	15.83	15.06
	43	9/19/2007 3:21:00 PM	0.07	0.21	15.82	15.04
	44	9/19/2007 3:22:00 PM	0.07	0.17	15.81	15.03
	45	9/19/2007 3:23:00 PM	0.07	0.17	15.81	15.01
	46	9/19/2007 3:24:00 PM	0.07	0.17	15.81	14.99
	47	9/19/2007 3:25:00 PM	0.07	0.17	15.80	14.95
	48	9/19/2007 3:26:00 PM	0.07	0.18	15.80	14.93
	49	9/19/2007 3:27:00 PM	0.07	0.18	15.80	14.92
	50	9/19/2007 3:28:00 PM	0.07	0.17	15.79	14.90
	51	9/19/2007 3:29:00 PM	0.07	0.17	15.76	14.88
	52	9/19/2007 3:30:00 PM	0.07	0.21	15.79	14.87
	53	9/19/2007 3:31:00 PM	0.06	0.21	15.77	14.89
	54	9/19/2007 3:32:00 PM	0.06	0.20	15.76	14.87
	55	9/19/2007 3:33:00 PM	0.06	0.23	15.75	14.86
	56	9/19/2007 3:34:00 PM	0.06	0.19	15.75	14.84
	57	9/19/2007 3:35:00 PM	0.06	0.19	15.75	14.80
	58	9/19/2007 3:36:00 PM	0.06	0.23	15.70	14.78
	59	9/19/2007 3:37:00 PM	0.06	0.21	15.74	14.80
	60	9/19/2007 3:38:00 PM	0.06	0.18	15.73	14.78
	61	9/19/2007 3:39:00 PM	0.06	0.19	15.72	14.76
	62	9/19/2007 3:40:00 PM	0.06	0.23	15.71	14.75
	63	9/19/2007 3:41:00 PM	0.06	0.23	15.70	14.73
	64	9/19/2007 3:42:00 PM	0.05	0.19	15.69	14.72
	65	9/19/2007 3:43:00 PM	0.05	0.19	15.68	14.70
	66	9/19/2007 3:44:00 PM	0.05	0.19	15.67	14.69
	67	9/19/2007 3:45:00 PM	0.05	0.19	15.66	14.67
	68	9/19/2007 3:46:00 PM	0.05	0.18	15.66	14.66
	69	9/19/2007 3:47:00 PM	0.05	0.18	15.65	14.64
	70	9/19/2007 3:48:00 PM	0.06	0.18	15.65	14.64
	71	9/19/2007 3:49:00 PM	0.05	0.21	15.64	14.62
	72	9/19/2007 3:50:00 PM	0.05	0.21	15.63	14.61
	73	9/19/2007 3:51:00 PM	0.05	0.21	15.62	14.60
	74	9/19/2007 3:52:00 PM	0.06	0.21	15.62	14.59
	75	9/19/2007 3:53:00 PM	0.06	0.21	15.61	14.54
	76	9/19/2007 3:54:00 PM	0.06	0.21	15.62	14.56
	77	9/19/2007 3:55:00 PM	0.06	0.21	15.61	14.51
	78	9/19/2007 3:56:00 PM	0.06	0.21	15.61	14.50
	79	9/19/2007 3:57:00 PM	0.06	0.22	15.60	14.49
	80	9/19/2007 3:58:00 PM	0.05	0.22	15.56	14.48

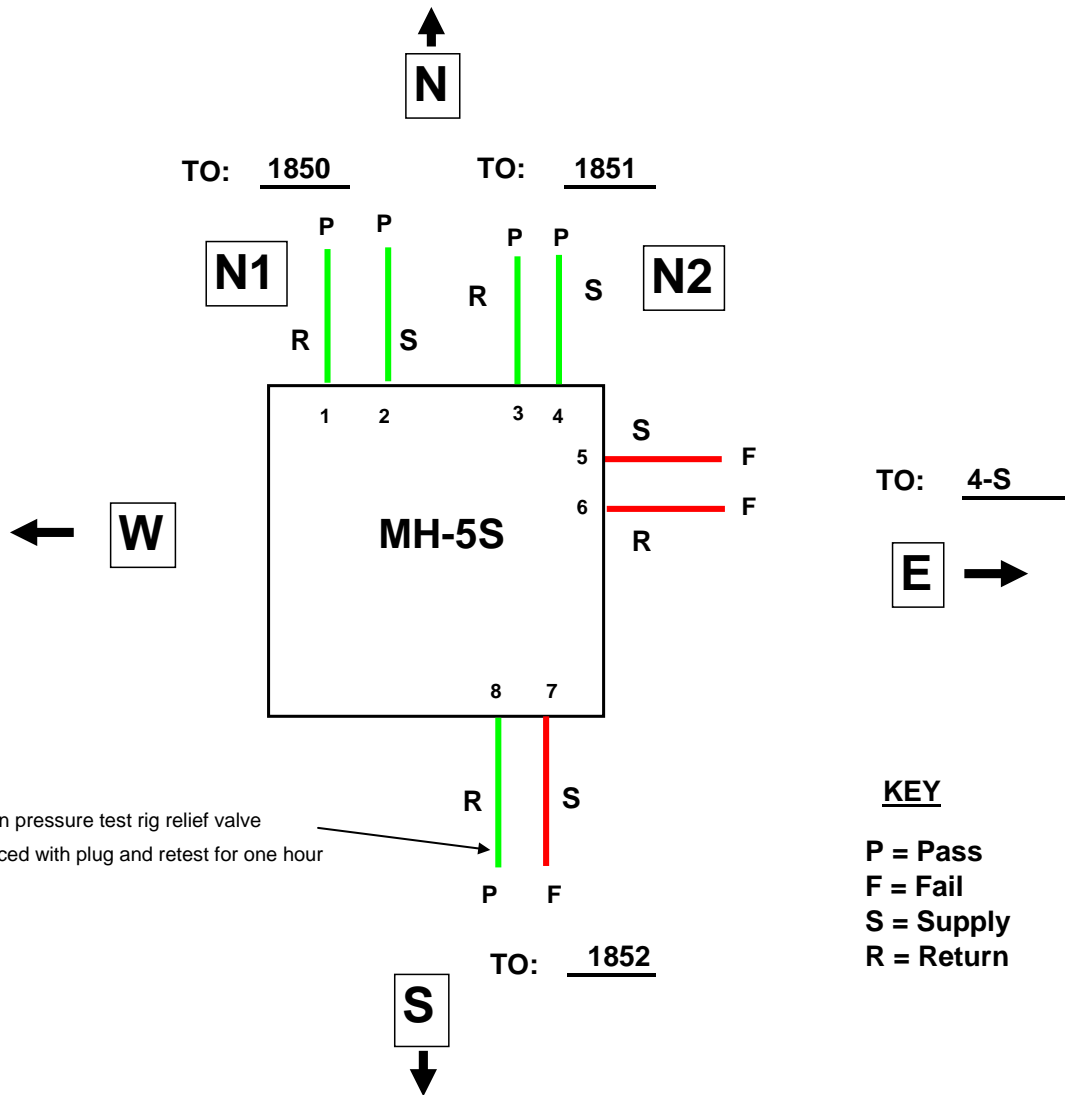
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 3:59:00 PM	0.06	0.18	15.56	14.46
	82	9/19/2007 4:00:00 PM	0.06	0.19	15.56	14.45
	83	9/19/2007 4:01:00 PM	0.05	0.19	15.56	14.45
	84	9/19/2007 4:02:00 PM	0.06	0.19	15.55	14.43
	85	9/19/2007 4:03:00 PM	0.06	0.19	15.55	14.42
	86	9/19/2007 4:04:00 PM	0.06	0.19	15.55	14.41
	87	9/19/2007 4:05:00 PM	0.06	0.19	15.54	14.40
	88	9/19/2007 4:06:00 PM	0.06	0.20	15.54	14.38
	89	9/19/2007 4:07:00 PM	0.06	0.20	15.50	14.38
	90	9/19/2007 4:08:00 PM	0.06	0.20	15.50	14.37
	91	9/19/2007 4:09:00 PM	0.06	0.19	15.49	14.35
	92	9/19/2007 4:10:00 PM	0.07	0.20	15.48	14.34
	93	9/19/2007 4:11:00 PM	0.06	0.20	15.48	14.33
	94	9/19/2007 4:12:00 PM	0.06	0.20	15.48	14.32
	95	9/19/2007 4:13:00 PM	0.06	0.17	15.47	14.30
	96	9/19/2007 4:14:00 PM	0.07	0.16	15.47	14.29
	97	9/19/2007 4:15:00 PM	0.07	0.17	15.46	14.28
	98	9/19/2007 4:16:00 PM	0.04	0.18	15.47	14.26
	99	9/19/2007 4:17:00 PM	0.05	0.18	15.46	14.24
	100	9/19/2007 4:18:00 PM	0.04	0.18	15.45	14.23
	101	9/19/2007 4:19:00 PM	0.04	0.18	15.45	14.23
	102	9/19/2007 4:20:00 PM	0.04	0.18	15.44	14.22
	103	9/19/2007 4:21:00 PM	0.04	0.19	15.43	14.19
	104	9/19/2007 4:22:00 PM	0.04	0.19	15.42	14.19
	105	9/19/2007 4:23:00 PM	0.07	0.19	15.42	14.17
	106	9/19/2007 4:24:00 PM	0.07	0.19	15.42	14.15
	107	9/19/2007 4:25:00 PM	0.07	0.19	15.44	14.14
	108	9/19/2007 4:26:00 PM	0.07	0.19	15.43	14.12
	109	9/19/2007 4:27:00 PM	0.06	0.19	15.42	14.11
	110	9/19/2007 4:28:00 PM	0.06	0.19	15.41	14.09
	111	9/19/2007 4:29:00 PM	0.06	0.18	15.41	14.08
	112	9/19/2007 4:30:00 PM	0.06	0.17	15.40	14.06
	113	9/19/2007 4:31:00 PM	0.06	0.18	15.40	14.05
	114	9/19/2007 4:32:00 PM	0.06	0.21	15.38	14.04
	115	9/19/2007 4:33:00 PM	0.06	0.21	15.38	14.02
	116	9/19/2007 4:34:00 PM	0.06	0.20	15.37	14.01
	117	9/19/2007 4:35:00 PM	0.05	0.20	15.36	13.99
	118	9/19/2007 4:36:00 PM	0.05	0.20	15.36	13.98
	119	9/19/2007 4:37:00 PM	0.05	0.19	15.36	13.96
	120	9/19/2007 4:38:00 PM	0.05	0.18	15.34	13.95
	121	9/19/2007 4:39:00 PM	0.06	0.19	15.35	13.94
	122	9/19/2007 4:40:00 PM	0.06	0.19	15.32	13.92
	123	9/19/2007 4:41:00 PM	0.06	0.20	15.31	13.91
	124	9/19/2007 4:42:00 PM	0.06	0.19	15.31	13.90
	125	9/19/2007 4:43:00 PM	0.06	0.20	15.31	13.88
	126	9/19/2007 4:44:00 PM	0.06	0.19	15.30	13.87
	127	9/19/2007 4:45:00 PM	0.05	0.19	15.29	13.86
	128	9/19/2007 4:46:00 PM	0.06	0.19	15.29	13.85
	129	9/19/2007 4:47:00 PM	0.06	0.19	15.28	13.83
	130	9/19/2007 4:47:01 PM	0.06	0.19	15.28	13.83

DATE: 8/29/2007



NOTES:

1. Supply/Return drains tested on 8/19/07: 3" standing water in NE corner of pit; East wall drains all dry; N1 Return dry, Supply discharged a few drops when cap removed, drain valve dry when opened; N2 Supply and Return discharged approx. 3 oz. when cap removed from drain nipple, drain valve dry when opened; South wall Return dry, Supply discharged approx. 1 oz when cap removed from nipple, drain valve dry when opened.

MH 5-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return Feeder from 1850	P	
	2	2	Supply Feeder to 1850	P	
	3	3	Return Feeder from 1851	P	
	4	4	Supply Feeder to 1851	P	
2	1	5	Supply from 4-S (Main)	F	
	2	6	Return to 4-S (Main)	F	
	3	7	Supply Feeder to 1852	F	Failed to hold pressure after two attempts to pressurize, Doghouse and local connections checked for leaks. No leaks at doghouse, small leak at vent pipe nipple to end plate in pit (partially buried in insulation)
	4	8	Return Feeder from 1852	P	PRV in test rig leaking, replaced with a plug and repressurized. Noted small leak at vent pipe nipple to end plate in pit (partially buried in insulation). Leak approximately the size found in channel 7, but line showed no significant loss in pressure. Doghouse fittings tight with no leaks

printed 1/9/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08291430
Interval	00:01:00
Personnel	

Start	8/29/2007 2:30:23 PM
Stop	8/29/2007 4:39:17 PM
Comment	

Data	131
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.72	15.94	16.02	16.45
Minimum	-7.50	-7.50	-7.50	-7.50
Average	14.88	15.04	15.45	15.32
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/29/2007 2:30:23 PM	v -7.50	v -7.50	v -7.50	v -7.50
	2	8/29/2007 2:31:00 PM	-0.05	0.03	0.06	0.22
	3	8/29/2007 2:32:00 PM	6.19	4.75	6.20	4.99
	4	8/29/2007 2:33:00 PM	11.92	10.85	15.85	15.66
	5	8/29/2007 2:34:00 PM	^ 15.72	15.92	^ 16.02	^ 16.45
	6	8/29/2007 2:35:00 PM	^ 15.72	^ 15.94	16.00	16.40
	7	8/29/2007 2:36:00 PM	^ 15.72	15.89	15.96	16.41
	8	8/29/2007 2:37:00 PM	15.71	15.90	15.97	16.38
	9	8/29/2007 2:38:00 PM	15.69	15.91	15.98	16.34
	10	8/29/2007 2:39:00 PM	15.70	15.88	15.96	16.32
	11	8/29/2007 2:40:00 PM	15.68	15.85	15.99	16.35
	12	8/29/2007 2:41:00 PM	15.71	15.83	15.97	16.32
	13	8/29/2007 2:42:00 PM	15.70	15.81	15.96	16.30
	14	8/29/2007 2:43:00 PM	15.70	15.83	15.95	16.28
	15	8/29/2007 2:44:00 PM	15.69	15.81	15.94	16.32
	16	8/29/2007 2:45:00 PM	15.69	15.80	15.94	16.30
	17	8/29/2007 2:46:00 PM	15.68	15.79	15.93	16.28
	18	8/29/2007 2:47:00 PM	15.67	15.78	15.93	16.27
	19	8/29/2007 2:48:00 PM	15.67	15.76	15.96	16.26
	20	8/29/2007 2:49:00 PM	15.67	15.81	15.92	16.25
	21	8/29/2007 2:50:00 PM	15.66	15.80	15.95	16.23
	22	8/29/2007 2:51:00 PM	15.65	15.79	15.94	16.22
	23	8/29/2007 2:52:00 PM	15.65	15.78	15.94	16.21
	24	8/29/2007 2:53:00 PM	15.65	15.77	15.95	16.19
	25	8/29/2007 2:54:00 PM	15.64	15.76	15.94	16.18
	26	8/29/2007 2:55:00 PM	15.64	15.76	15.95	16.17
	27	8/29/2007 2:56:00 PM	15.65	15.75	15.91	16.16
	28	8/29/2007 2:57:00 PM	15.65	15.74	15.91	16.15
	29	8/29/2007 2:58:00 PM	15.64	15.73	15.91	16.14
	30	8/29/2007 2:59:00 PM	15.63	15.73	15.92	16.13

printed 1/9/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/29/2007 3:00:00 PM	15.63	15.72	15.91	16.12
	32	8/29/2007 3:01:00 PM	15.59	15.72	15.92	16.11
	33	8/29/2007 3:02:00 PM	15.59	15.72	15.92	16.10
	34	8/29/2007 3:03:00 PM	15.59	15.71	15.92	16.09
	35	8/29/2007 3:04:00 PM	15.59	15.71	15.93	16.09
	36	8/29/2007 3:05:00 PM	15.58	15.70	15.92	16.07
	37	8/29/2007 3:06:00 PM	15.58	15.70	15.92	16.07
	38	8/29/2007 3:07:00 PM	15.58	15.70	15.92	16.06
	39	8/29/2007 3:08:00 PM	15.58	15.70	15.92	16.05
	40	8/29/2007 3:09:00 PM	15.57	15.69	15.93	16.04
	41	8/29/2007 3:10:00 PM	15.57	15.69	15.93	16.03
	42	8/29/2007 3:11:00 PM	15.57	15.68	15.92	16.02
	43	8/29/2007 3:12:00 PM	15.56	15.63	15.93	16.01
	44	8/29/2007 3:13:00 PM	15.56	15.68	15.93	16.00
	45	8/29/2007 3:14:00 PM	15.56	15.62	15.93	15.99
	46	8/29/2007 3:15:00 PM	15.55	15.64	15.93	15.99
	47	8/29/2007 3:16:00 PM	15.55	15.66	15.93	15.98
	48	8/29/2007 3:17:00 PM	15.55	15.61	15.93	15.97
	49	8/29/2007 3:18:00 PM	15.55	15.60	15.94	15.96
	50	8/29/2007 3:19:00 PM	15.55	15.59	15.93	15.95
	51	8/29/2007 3:20:00 PM	15.55	15.60	15.93	15.94
	52	8/29/2007 3:21:00 PM	15.54	15.59	15.93	15.94
	53	8/29/2007 3:22:00 PM	15.54	15.59	15.94	15.93
	54	8/29/2007 3:23:00 PM	15.54	15.59	15.94	15.91
	55	8/29/2007 3:24:00 PM	15.54	15.59	15.94	15.91
	56	8/29/2007 3:25:00 PM	15.52	15.59	15.94	15.90
	57	8/29/2007 3:26:00 PM	15.53	15.59	15.95	15.89
	58	8/29/2007 3:27:00 PM	15.52	15.59	15.95	15.89
	59	8/29/2007 3:28:00 PM	15.53	15.58	15.95	15.88
	60	8/29/2007 3:29:00 PM	15.52	15.54	15.95	15.87
	61	8/29/2007 3:30:00 PM	15.52	15.53	15.95	15.86
	62	8/29/2007 3:31:00 PM	15.52	15.54	15.95	15.85
	63	8/29/2007 3:32:00 PM	15.52	15.53	15.95	15.85
	64	8/29/2007 3:33:00 PM	15.48	15.52	15.95	15.84
	65	8/29/2007 3:34:00 PM	15.51	15.52	15.95	15.83
	66	8/29/2007 3:35:00 PM	15.48	15.52	15.96	15.83
	67	8/29/2007 3:36:00 PM	15.48	15.51	15.96	15.82
	68	8/29/2007 3:37:00 PM	15.48	15.52	15.96	15.81
	69	8/29/2007 3:38:00 PM	15.48	15.51	15.96	15.80
	70	8/29/2007 3:39:00 PM	15.48	15.51	15.96	15.75
	71	8/29/2007 3:40:00 PM	15.48	15.51	15.96	15.74
	72	8/29/2007 3:41:00 PM	15.47	15.50	15.96	15.73
	73	8/29/2007 3:42:00 PM	15.48	15.50	15.97	15.73
	74	8/29/2007 3:43:00 PM	15.48	15.50	15.97	15.71
	75	8/29/2007 3:44:00 PM	15.47	15.50	15.97	15.71
	76	8/29/2007 3:45:00 PM	15.47	15.50	15.97	15.70
	77	8/29/2007 3:46:00 PM	15.47	15.49	15.97	15.69
	78	8/29/2007 3:47:00 PM	15.47	15.49	15.96	15.69
	79	8/29/2007 3:48:00 PM	15.46	15.48	15.97	15.68
	80	8/29/2007 3:49:00 PM	15.46	15.48	15.97	15.67

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/29/2007 3:50:00 PM	15.45	15.47	15.97	15.67
	82	8/29/2007 3:51:00 PM	15.46	15.47	15.97	15.66
	83	8/29/2007 3:52:00 PM	15.43	15.47	15.97	15.65
	84	8/29/2007 3:53:00 PM	15.42	15.46	15.97	15.65
	85	8/29/2007 3:54:00 PM	15.42	15.46	15.94	15.64
	86	8/29/2007 3:55:00 PM	15.41	15.45	15.98	15.63
	87	8/29/2007 3:56:00 PM	15.41	15.44	15.94	15.62
	88	8/29/2007 3:57:00 PM	15.40	15.44	15.98	15.61
	89	8/29/2007 3:58:00 PM	15.40	15.43	15.94	15.61
	90	8/29/2007 3:59:00 PM	15.43	15.43	15.98	15.60
	91	8/29/2007 4:00:00 PM	15.42	15.42	15.98	15.59
	92	8/29/2007 4:01:00 PM	15.41	15.42	15.95	15.58
	93	8/29/2007 4:02:00 PM	15.39	15.41	15.94	15.58
	94	8/29/2007 4:03:00 PM	15.39	15.40	15.98	15.57
	95	8/29/2007 4:04:00 PM	15.37	15.39	15.97	15.56
	96	8/29/2007 4:05:00 PM	15.40	15.38	15.98	15.56
	97	8/29/2007 4:06:00 PM	15.38	15.38	15.97	15.55
	98	8/29/2007 4:07:00 PM	15.38	15.37	15.97	15.55
	99	8/29/2007 4:08:00 PM	15.36	15.37	15.98	15.54
	100	8/29/2007 4:09:00 PM	15.35	15.36	15.97	15.53
	101	8/29/2007 4:10:00 PM	15.34	15.35	15.97	15.52
	102	8/29/2007 4:11:00 PM	15.33	15.35	15.97	15.52
	103	8/29/2007 4:12:00 PM	15.33	15.34	15.96	15.51
	104	8/29/2007 4:13:00 PM	15.33	15.33	15.97	15.50
	105	8/29/2007 4:14:00 PM	15.32	15.33	15.97	15.50
	106	8/29/2007 4:15:00 PM	15.32	15.32	15.97	15.49
	107	8/29/2007 4:16:00 PM	15.32	15.31	15.96	15.48
	108	8/29/2007 4:17:00 PM	15.32	15.31	15.96	15.48
	109	8/29/2007 4:18:00 PM	15.31	15.31	15.96	15.47
	110	8/29/2007 4:19:00 PM	15.31	15.31	15.96	15.46
	111	8/29/2007 4:20:00 PM	15.30	15.30	15.96	15.45
	112	8/29/2007 4:21:00 PM	15.30	15.29	15.96	15.45
	113	8/29/2007 4:22:00 PM	15.29	15.28	15.96	15.44
	114	8/29/2007 4:23:00 PM	15.28	15.28	15.96	15.43
	115	8/29/2007 4:24:00 PM	15.28	15.27	15.96	15.43
	116	8/29/2007 4:25:00 PM	15.28	15.27	15.96	15.42
	117	8/29/2007 4:26:00 PM	15.28	15.27	15.96	15.41
	118	8/29/2007 4:27:00 PM	15.27	15.26	15.96	15.40
	119	8/29/2007 4:28:00 PM	15.27	15.25	15.96	15.40
	120	8/29/2007 4:29:00 PM	15.26	15.25	15.96	15.39
	121	8/29/2007 4:30:00 PM	15.25	15.25	15.96	15.38
	122	8/29/2007 4:31:00 PM	15.28	15.24	15.96	15.38
	123	8/29/2007 4:32:00 PM	15.28	15.23	15.96	15.37
	124	8/29/2007 4:33:00 PM	15.27	15.23	15.96	15.36
	125	8/29/2007 4:34:00 PM	15.27	15.22	15.96	15.36
	126	8/29/2007 4:35:00 PM	15.27	15.22	15.96	15.36
	127	8/29/2007 4:36:00 PM	15.26	15.21	15.95	15.35
	128	8/29/2007 4:37:00 PM	15.26	15.20	15.96	15.34
	129	8/29/2007 4:38:00 PM	15.26	15.20	15.95	15.33
	130	8/29/2007 4:39:00 PM	10.16	10.78	8.64	8.92

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Handy logger

Name : **LOGGER 2**

LOG Name	08291430
Interval	00:01:00
Personnel	

Start	8/29/2007 2:30:17 PM
Stop	8/29/2007 4:59:24 PM
Comment	

Data	151
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.77	15.61	16.33	20.00
Minimum	-7.50	-7.50	-7.50	-7.50
Average	14.27	14.31	9.07	14.19
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/29/2007 2:30:17 PM	v -7.50	v -7.50	v -7.50	v -7.50
	2	8/29/2007 2:31:00 PM	0.20	0.05	0.12	0.07
	3	8/29/2007 2:32:00 PM	0.25	0.08	0.16	0.11
	4	8/29/2007 2:33:00 PM	0.26	0.07	0.14	0.10
	5	8/29/2007 2:34:00 PM	0.26	0.09	0.14	0.13
	6	8/29/2007 2:35:00 PM	3.38	2.77	11.30	10.15
	7	8/29/2007 2:36:00 PM	7.29	6.65	^ 16.33	^ 20.00
	8	8/29/2007 2:37:00 PM	11.51	10.72	16.07	19.25
	9	8/29/2007 2:38:00 PM	15.71	14.74	15.85	18.49
	10	8/29/2007 2:39:00 PM	^ 15.77	^ 15.61	15.58	17.85
	11	8/29/2007 2:40:00 PM	^ 15.77	15.57	15.33	17.22
	12	8/29/2007 2:41:00 PM	^ 15.77	15.56	15.12	16.68
	13	8/29/2007 2:42:00 PM	^ 15.77	15.57	14.87	16.21
	14	8/29/2007 2:43:00 PM	15.73	15.54	14.64	15.81
	15	8/29/2007 2:44:00 PM	15.75	15.55	14.42	15.49
	16	8/29/2007 2:45:00 PM	15.72	15.52	14.20	15.27
	17	8/29/2007 2:46:00 PM	15.71	15.54	14.01	15.11
	18	8/29/2007 2:47:00 PM	15.69	15.53	13.80	14.96
	19	8/29/2007 2:48:00 PM	15.71	15.52	13.58	14.86
	20	8/29/2007 2:49:00 PM	15.71	15.52	13.38	14.72
	21	8/29/2007 2:50:00 PM	15.69	15.51	13.17	14.58
	22	8/29/2007 2:51:00 PM	15.69	15.51	12.97	14.45
	23	8/29/2007 2:52:00 PM	15.69	15.51	12.78	14.30
	24	8/29/2007 2:53:00 PM	15.69	15.52	12.55	14.17
	25	8/29/2007 2:54:00 PM	15.69	15.51	12.36	14.07
	26	8/29/2007 2:55:00 PM	15.69	15.50	12.17	13.97
	27	8/29/2007 2:56:00 PM	15.69	15.50	11.99	13.87
	28	8/29/2007 2:57:00 PM	15.67	15.50	11.81	13.78
	29	8/29/2007 2:58:00 PM	15.68	15.50	11.63	13.69
	30	8/29/2007 2:59:00 PM	15.67	15.51	11.45	13.60

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/29/2007 3:00:00 PM	15.67	15.51	11.28	13.51
	32	8/29/2007 3:01:00 PM	15.67	15.51	11.07	13.44
	33	8/29/2007 3:02:00 PM	15.67	15.52	10.90	13.35
	34	8/29/2007 3:03:00 PM	15.67	15.52	10.73	13.27
	35	8/29/2007 3:04:00 PM	15.67	15.52	10.57	13.19
	36	8/29/2007 3:05:00 PM	15.64	15.52	10.41	13.11
	37	8/29/2007 3:06:00 PM	15.64	15.52	10.25	13.04
	38	8/29/2007 3:07:00 PM	15.66	15.53	10.08	12.92
	39	8/29/2007 3:08:00 PM	15.63	15.53	9.92	12.90
	40	8/29/2007 3:09:00 PM	15.64	15.53	9.77	12.78
	41	8/29/2007 3:10:00 PM	15.63	15.53	9.61	12.75
	42	8/29/2007 3:11:00 PM	15.63	15.54	9.46	12.65
	43	8/29/2007 3:12:00 PM	15.63	15.54	9.31	12.59
	44	8/29/2007 3:13:00 PM	15.63	15.54	9.12	12.52
	45	8/29/2007 3:14:00 PM	15.63	15.54	8.97	12.46
	46	8/29/2007 3:15:00 PM	15.63	15.54	8.83	12.41
	47	8/29/2007 3:16:00 PM	15.62	15.54	8.69	12.35
	48	8/29/2007 3:17:00 PM	15.63	15.54	8.54	12.29
	49	8/29/2007 3:18:00 PM	15.63	15.55	8.41	12.24
	50	8/29/2007 3:19:00 PM	15.62	15.55	8.27	12.19
	51	8/29/2007 3:20:00 PM	15.62	15.52	8.12	12.15
	52	8/29/2007 3:21:00 PM	15.62	15.56	7.95	12.10
	53	8/29/2007 3:22:00 PM	15.63	15.53	7.83	12.08
	54	8/29/2007 3:23:00 PM	15.63	15.53	7.70	12.07
	55	8/29/2007 3:24:00 PM	15.62	15.53	7.57	12.06
	56	8/29/2007 3:25:00 PM	15.62	15.53	7.44	12.05
	57	8/29/2007 3:26:00 PM	15.62	15.53	7.31	12.04
	58	8/29/2007 3:27:00 PM	15.62	15.53	7.20	12.03
	59	8/29/2007 3:28:00 PM	15.62	15.53	7.07	12.02
	60	8/29/2007 3:29:00 PM	15.60	15.54	6.95	12.01
	61	8/29/2007 3:30:00 PM	15.59	15.54	6.84	12.00
	62	8/29/2007 3:31:00 PM	15.58	15.55	6.68	11.98
	63	8/29/2007 3:32:00 PM	15.58	15.55	6.55	11.98
	64	8/29/2007 3:33:00 PM	15.58	15.54	6.45	11.96
	65	8/29/2007 3:34:00 PM	15.58	15.56	6.33	11.95
	66	8/29/2007 3:35:00 PM	15.58	15.55	6.22	11.94
	67	8/29/2007 3:36:00 PM	15.57	15.55	6.11	11.93
	68	8/29/2007 3:37:00 PM	15.57	15.56	6.00	11.92
	69	8/29/2007 3:38:00 PM	15.57	15.52	5.90	11.91
	70	8/29/2007 3:39:00 PM	15.57	15.53	5.80	11.90
	71	8/29/2007 3:40:00 PM	15.57	15.53	0.31	1.13
	72	8/29/2007 3:41:00 PM	15.57	15.54	0.21	0.22
	73	8/29/2007 3:42:00 PM	15.57	15.54	0.21	0.19
	74	8/29/2007 3:43:00 PM	15.57	15.53	0.22	0.17
	75	8/29/2007 3:44:00 PM	15.56	15.54	0.18	0.17
	76	8/29/2007 3:45:00 PM	15.56	15.53	0.19	0.20
	77	8/29/2007 3:46:00 PM	15.56	15.54	0.21	0.16
	78	8/29/2007 3:47:00 PM	15.56	15.54	0.21	0.17
	79	8/29/2007 3:48:00 PM	15.56	15.54	0.21	0.16
	80	8/29/2007 3:49:00 PM	15.56	15.55	13.20	8.07

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/29/2007 3:50:00 PM	15.55	15.54	15.73	18.15
	82	8/29/2007 3:51:00 PM	15.55	15.54	15.45	18.11
	83	8/29/2007 3:52:00 PM	15.55	15.54	15.19	18.13
	84	8/29/2007 3:53:00 PM	15.55	15.54	14.99	18.10
	85	8/29/2007 3:54:00 PM	15.55	15.54	14.73	18.12
	86	8/29/2007 3:55:00 PM	15.54	15.55	14.48	18.10
	87	8/29/2007 3:56:00 PM	15.54	15.55	14.24	18.07
	88	8/29/2007 3:57:00 PM	15.54	15.55	14.04	18.06
	89	8/29/2007 3:58:00 PM	15.54	15.55	13.81	18.04
	90	8/29/2007 3:59:00 PM	15.53	15.55	13.58	18.07
	91	8/29/2007 4:00:00 PM	15.54	15.54	13.35	18.05
	92	8/29/2007 4:01:00 PM	15.53	15.55	13.13	18.04
	93	8/29/2007 4:02:00 PM	15.53	15.55	12.93	18.03
	94	8/29/2007 4:03:00 PM	15.52	15.54	12.70	18.01
	95	8/29/2007 4:04:00 PM	15.52	15.55	12.50	18.00
	96	8/29/2007 4:05:00 PM	15.52	15.55	12.29	17.99
	97	8/29/2007 4:06:00 PM	15.52	15.55	12.09	17.98
	98	8/29/2007 4:07:00 PM	15.51	15.55	11.89	17.96
	99	8/29/2007 4:08:00 PM	15.51	15.55	11.69	17.96
	100	8/29/2007 4:09:00 PM	15.50	15.55	11.50	17.94
	101	8/29/2007 4:10:00 PM	15.50	15.55	11.31	17.93
	102	8/29/2007 4:11:00 PM	15.50	15.55	11.12	17.92
	103	8/29/2007 4:12:00 PM	15.49	15.55	10.93	17.91
	104	8/29/2007 4:13:00 PM	15.49	15.54	10.75	17.90
	105	8/29/2007 4:14:00 PM	15.49	15.55	10.57	17.89
	106	8/29/2007 4:15:00 PM	15.49	15.55	10.39	17.88
	107	8/29/2007 4:16:00 PM	15.48	15.55	10.22	17.87
	108	8/29/2007 4:17:00 PM	15.48	15.55	10.04	17.90
	109	8/29/2007 4:18:00 PM	15.48	15.55	9.87	17.89
	110	8/29/2007 4:19:00 PM	15.48	15.54	9.70	17.87
	111	8/29/2007 4:20:00 PM	15.47	15.54	9.54	17.86
	112	8/29/2007 4:21:00 PM	15.47	15.55	9.37	17.85
	113	8/29/2007 4:22:00 PM	15.47	15.54	9.22	17.84
	114	8/29/2007 4:23:00 PM	15.47	15.55	9.06	17.83
	115	8/29/2007 4:24:00 PM	15.46	15.55	8.90	17.81
	116	8/29/2007 4:25:00 PM	15.46	15.55	8.71	17.78
	117	8/29/2007 4:26:00 PM	15.46	15.55	8.55	17.80
	118	8/29/2007 4:27:00 PM	15.46	15.55	8.40	17.79
	119	8/29/2007 4:28:00 PM	15.46	15.55	8.26	17.75
	120	8/29/2007 4:29:00 PM	15.45	15.55	8.12	17.78
	121	8/29/2007 4:30:00 PM	15.46	15.55	7.97	17.76
	122	8/29/2007 4:31:00 PM	15.45	15.55	7.83	17.75
	123	8/29/2007 4:32:00 PM	15.45	15.55	7.68	17.74
	124	8/29/2007 4:33:00 PM	15.44	15.55	7.56	17.73
	125	8/29/2007 4:34:00 PM	15.44	15.55	7.42	17.72
	126	8/29/2007 4:35:00 PM	15.44	15.55	7.28	17.71
	127	8/29/2007 4:36:00 PM	15.43	15.55	7.15	17.70
	128	8/29/2007 4:37:00 PM	15.43	15.54	7.02	17.69
	129	8/29/2007 4:38:00 PM	15.43	15.55	6.89	17.69
	130	8/29/2007 4:39:00 PM	13.46	13.74	5.18	17.67

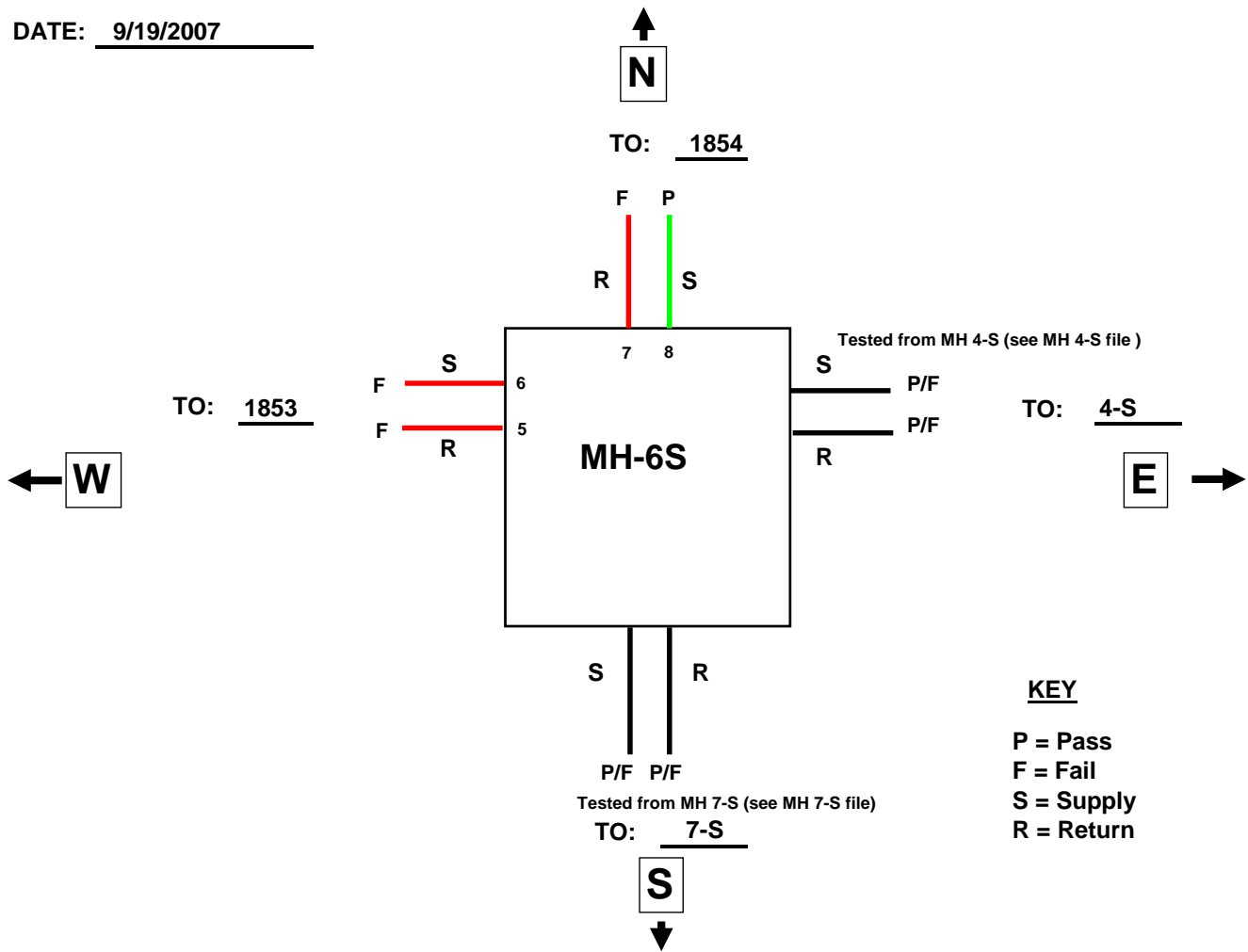
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/29/2007 4:40:00 PM	11.04	11.35	3.03	17.66
	132	8/29/2007 4:41:00 PM	8.87	9.19	1.84	17.64
	133	8/29/2007 4:42:00 PM	6.87	7.25	1.15	17.64
	134	8/29/2007 4:43:00 PM	v -7.50	5.61	0.76	17.63
	135	8/29/2007 4:44:00 PM	v -7.50	v -7.50	0.52	17.62
	136	8/29/2007 4:45:00 PM	O.R.	O.R.	O.R.	17.81
	137	8/29/2007 4:46:00 PM	O.R.	O.R.	O.R.	17.60
	138	8/29/2007 4:47:00 PM	O.R.	O.R.	O.R.	17.59
	139	8/29/2007 4:48:00 PM	O.R.	O.R.	O.R.	17.58
	140	8/29/2007 4:49:00 PM	O.R.	O.R.	O.R.	17.57
	141	8/29/2007 4:50:00 PM	O.R.	O.R.	O.R.	17.56
	142	8/29/2007 4:51:00 PM	O.R.	O.R.	O.R.	17.59
	143	8/29/2007 4:52:00 PM	O.R.	O.R.	O.R.	17.58
	144	8/29/2007 4:53:00 PM	O.R.	O.R.	O.R.	17.53
	145	8/29/2007 4:54:00 PM	O.R.	O.R.	O.R.	17.51
	146	8/29/2007 4:55:00 PM	O.R.	O.R.	O.R.	17.51
	147	8/29/2007 4:56:00 PM	O.R.	O.R.	O.R.	17.50
	148	8/29/2007 4:57:00 PM	O.R.	O.R.	O.R.	17.48
	149	8/29/2007 4:58:00 PM	O.R.	O.R.	O.R.	17.53
	150	8/29/2007 4:59:00 PM	O.R.	O.R.	O.R.	17.46
	151	8/29/2007 4:59:24 PM	O.R.	O.R.	O.R.	13.73

DATE: 9/19/2007



NOTES:

1. Supply/Return drain check attempted on 8/16/07: Pit flooded (approx 8" deep), drain check not conducted.

MH 6-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Return to 1853	F	
	2	6	Supply to 1853	F	
	3	7	Return to 1854	F	
	4	8	Supply to 1854	P	

printed 1/9/2008

Handy logger

Name : **LOGGER 2**

LOG Name	09191541
Interval	00:01:00
Personnel	

Start	9/19/2007 3:41:16 PM
Stop	9/19/2007 5:42:02 PM
Comment	

Data	123
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	17.78	16.95	15.96	15.70
Minimum	-7.50	-7.50	-7.50	-7.50
Average	11.22	5.58	14.53	15.14
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 3:41:16 PM	v -7.50	v -7.50	v -7.50	v -7.50
	2	9/19/2007 3:42:00 PM	0.14	0.08	5.30	5.54
	3	9/19/2007 3:43:00 PM	^ 17.78	^ 16.95	8.86	9.61
	4	9/19/2007 3:44:00 PM	17.41	16.38	14.43	15.58
	5	9/19/2007 3:45:00 PM	17.17	15.84	^ 15.96	^ 15.70
	6	9/19/2007 3:46:00 PM	16.00	15.39	15.90	15.66
*	7	9/19/2007 3:47:00 PM	15.95	14.95	15.89	15.68
	8	9/19/2007 3:48:00 PM	15.85	14.55	15.85	15.65
	9	9/19/2007 3:49:00 PM	15.78	14.19	15.82	15.63
	10	9/19/2007 3:50:00 PM	15.69	13.84	15.79	15.66
	11	9/19/2007 3:51:00 PM	15.61	13.53	15.78	15.67
	12	9/19/2007 3:52:00 PM	15.54	13.21	15.76	15.61
	13	9/19/2007 3:53:00 PM	15.45	12.92	15.74	15.61
	14	9/19/2007 3:54:00 PM	15.39	12.68	15.72	15.61
	15	9/19/2007 3:55:00 PM	15.32	12.44	15.70	15.61
	16	9/19/2007 3:56:00 PM	15.26	12.18	15.71	15.62
	17	9/19/2007 3:57:00 PM	15.16	11.96	15.71	15.61
	18	9/19/2007 3:58:00 PM	15.08	11.75	15.66	15.61
	19	9/19/2007 3:59:00 PM	15.02	11.54	15.63	15.61
	20	9/19/2007 4:00:00 PM	14.96	11.31	15.61	15.61
	21	9/19/2007 4:01:00 PM	14.89	11.12	15.60	15.57
	22	9/19/2007 4:02:00 PM	14.80	10.93	15.59	15.57
	23	9/19/2007 4:03:00 PM	14.73	10.74	15.58	15.57
	24	9/19/2007 4:04:00 PM	14.66	10.57	15.56	15.57
	25	9/19/2007 4:05:00 PM	14.60	10.39	15.54	15.57
	26	9/19/2007 4:06:00 PM	14.54	10.23	15.53	15.57
	27	9/19/2007 4:07:00 PM	14.48	10.06	15.51	15.57
	28	9/19/2007 4:08:00 PM	14.41	9.89	15.49	15.57
	29	9/19/2007 4:09:00 PM	14.34	9.75	15.45	15.56
	30	9/19/2007 4:10:00 PM	14.27	9.59	15.44	15.56

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 4:11:00 PM	14.20	9.47	15.42	15.56
	32	9/19/2007 4:12:00 PM	14.14	9.28	15.40	15.56
	33	9/19/2007 4:13:00 PM	14.08	9.13	15.38	15.56
	34	9/19/2007 4:14:00 PM	14.01	8.99	15.36	15.55
	35	9/19/2007 4:15:00 PM	13.92	8.82	15.35	15.55
	36	9/19/2007 4:16:00 PM	13.86	8.69	15.34	15.55
	37	9/19/2007 4:17:00 PM	13.80	8.56	15.32	15.55
	38	9/19/2007 4:18:00 PM	13.74	8.42	15.30	15.55
	39	9/19/2007 4:19:00 PM	13.67	8.28	15.29	15.54
	40	9/19/2007 4:20:00 PM	13.61	8.19	15.27	15.54
	41	9/19/2007 4:21:00 PM	13.55	8.06	15.25	15.54
	42	9/19/2007 4:22:00 PM	13.48	7.94	15.24	15.53
	43	9/19/2007 4:23:00 PM	13.42	7.82	15.22	15.52
	44	9/19/2007 4:24:00 PM	13.38	7.71	15.20	15.55
	45	9/19/2007 4:25:00 PM	13.32	7.59	15.18	15.55
	46	9/19/2007 4:26:00 PM	13.26	7.49	15.17	15.54
	47	9/19/2007 4:27:00 PM	13.19	7.37	15.16	15.53
	48	9/19/2007 4:28:00 PM	13.14	7.25	15.14	15.53
	49	9/19/2007 4:29:00 PM	13.07	7.12	15.12	15.52
	50	9/19/2007 4:30:00 PM	12.99	7.00	15.09	15.51
	51	9/19/2007 4:31:00 PM	12.94	6.91	15.07	15.51
	52	9/19/2007 4:32:00 PM	12.86	6.78	15.05	15.50
	53	9/19/2007 4:33:00 PM	12.83	6.71	15.04	15.49
	54	9/19/2007 4:34:00 PM	12.77	6.61	15.01	15.53
	55	9/19/2007 4:35:00 PM	12.71	6.51	14.99	15.51
	56	9/19/2007 4:36:00 PM	12.65	6.41	14.96	15.51
	57	9/19/2007 4:37:00 PM	12.59	6.32	14.94	15.50
	58	9/19/2007 4:38:00 PM	12.54	6.23	14.92	15.48
	59	9/19/2007 4:39:00 PM	12.48	6.14	14.91	15.49
	60	9/19/2007 4:40:00 PM	12.42	6.08	14.89	15.50
	61	9/19/2007 4:41:00 PM	12.36	5.95	14.88	15.49
	62	9/19/2007 4:42:00 PM	12.31	5.86	14.85	15.49
	63	9/19/2007 4:43:00 PM	12.25	5.77	14.84	15.48
	64	9/19/2007 4:44:00 PM	12.19	5.69	14.82	15.48
	65	9/19/2007 4:45:00 PM	12.15	5.61	14.80	15.47
	66	9/19/2007 4:46:00 PM	12.09	5.54	14.78	15.47
	67	9/19/2007 4:47:00 PM	12.00	5.45	14.76	15.46
	68	9/19/2007 4:48:00 PM	11.95	5.36	14.75	15.46
	69	9/19/2007 4:49:00 PM	11.91	5.29	14.73	15.46
	70	9/19/2007 4:50:00 PM	11.86	5.22	14.71	15.45
	71	9/19/2007 4:51:00 PM	11.80	5.14	14.70	15.44
	72	9/19/2007 4:52:00 PM	11.75	5.06	14.68	15.43
	73	9/19/2007 4:53:00 PM	11.70	4.99	14.66	15.43
	74	9/19/2007 4:54:00 PM	11.65	4.92	14.64	15.43
	75	9/19/2007 4:55:00 PM	11.60	4.85	14.63	15.42
	76	9/19/2007 4:56:00 PM	11.53	4.78	14.60	15.42
	77	9/19/2007 4:57:00 PM	11.48	4.72	14.58	15.41
	78	9/19/2007 4:58:00 PM	11.42	4.66	14.59	15.41
	79	9/19/2007 4:59:00 PM	11.34	4.59	14.54	15.40
	80	9/19/2007 5:00:00 PM	11.31	4.50	14.56	15.40

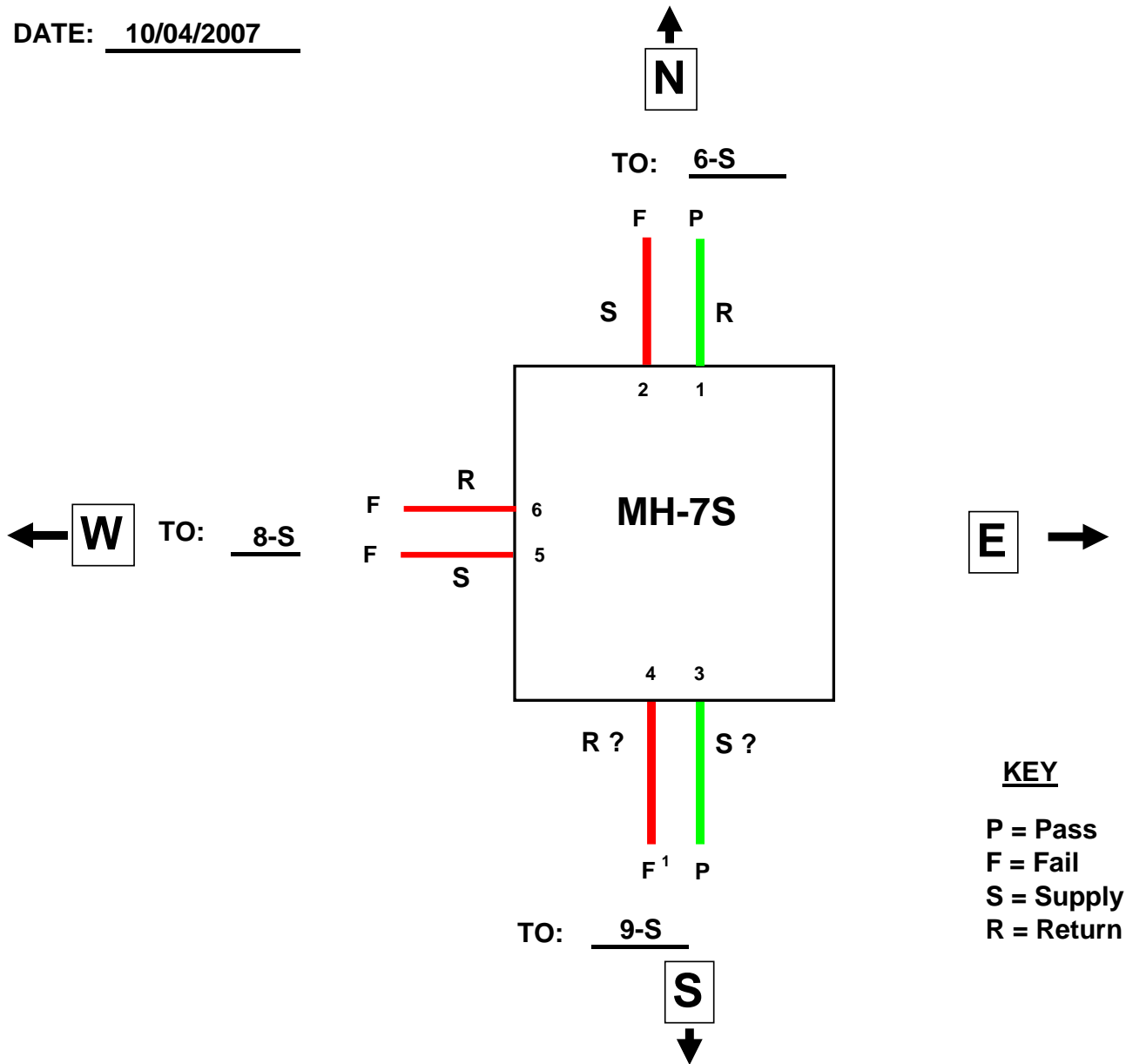
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 5:01:00 PM	11.23	4.44	14.52	15.39
	82	9/19/2007 5:02:00 PM	11.19	4.39	14.51	15.39
	83	9/19/2007 5:03:00 PM	11.15	4.33	14.48	15.38
	84	9/19/2007 5:04:00 PM	11.06	4.27	14.46	15.38
	85	9/19/2007 5:05:00 PM	11.01	4.24	14.45	15.37
	86	9/19/2007 5:06:00 PM	10.97	4.16	14.43	15.37
	87	9/19/2007 5:07:00 PM	10.92	4.10	14.45	15.37
	88	9/19/2007 5:08:00 PM	10.88	4.03	14.43	15.36
	89	9/19/2007 5:09:00 PM	10.83	3.96	14.41	15.36
	90	9/19/2007 5:10:00 PM	10.79	3.91	14.40	15.36
	91	9/19/2007 5:11:00 PM	10.72	3.85	14.34	15.33
	92	9/19/2007 5:12:00 PM	10.67	3.81	14.32	15.34
	93	9/19/2007 5:13:00 PM	10.63	3.75	14.32	15.33
	94	9/19/2007 5:14:00 PM	10.59	3.67	14.30	15.33
	95	9/19/2007 5:15:00 PM	10.54	0.06	14.33	15.34
	96	9/19/2007 5:16:00 PM	10.50	0.07	14.30	15.33
	97	9/19/2007 5:17:00 PM	10.46	0.05	14.28	15.32
	98	9/19/2007 5:18:00 PM	10.42	0.04	14.26	15.31
	99	9/19/2007 5:19:00 PM	10.37	0.05	14.24	15.30
	100	9/19/2007 5:20:00 PM	10.33	0.03	14.22	15.33
	101	9/19/2007 5:21:00 PM	10.27	0.05	14.20	15.33
	102	9/19/2007 5:22:00 PM	10.22	0.05	14.18	15.32
	103	9/19/2007 5:23:00 PM	10.17	0.04	14.17	15.31
	104	9/19/2007 5:24:00 PM	10.13	0.05	14.15	15.31
	105	9/19/2007 5:25:00 PM	10.08	0.06	14.14	15.30
	106	9/19/2007 5:26:00 PM	10.04	0.06	14.14	15.30
	107	9/19/2007 5:27:00 PM	10.00	0.07	14.10	15.29
	108	9/19/2007 5:28:00 PM	9.93	0.07	14.08	15.29
	109	9/19/2007 5:29:00 PM	9.89	0.05	14.06	15.29
	110	9/19/2007 5:30:00 PM	9.85	0.06	14.05	15.29
	111	9/19/2007 5:31:00 PM	9.81	0.07	14.03	15.28
	112	9/19/2007 5:32:00 PM	9.76	0.07	14.02	15.29
	113	9/19/2007 5:33:00 PM	9.72	0.08	14.01	15.25
	114	9/19/2007 5:34:00 PM	9.68	0.08	14.00	15.26
	115	9/19/2007 5:35:00 PM	9.65	0.09	13.99	15.27
	116	9/19/2007 5:36:00 PM	2.02	0.10	13.98	15.22
	117	9/19/2007 5:37:00 PM	0.19	0.07	13.98	15.23
	118	9/19/2007 5:38:00 PM	v -7.50	v -7.50	13.92	15.23
	119	9/19/2007 5:39:00 PM	v -7.50	v -7.50	13.91	15.23
	120	9/19/2007 5:40:00 PM	v -7.50	v -7.50	13.90	15.23
	121	9/19/2007 5:41:00 PM	v -7.50	v -7.50	13.89	15.20
	122	9/19/2007 5:42:00 PM	v -7.50	v -7.50	13.88	15.20
	123	9/19/2007 5:42:02 PM	v -7.50	v -7.50	13.88	15.20

DATE: 10/04/2007



NOTES:

1. Vent elbow in 7-S to 9-S Return is broken, unable to pressurize line
2. This pit is "Restricted Access - Permit Required"

MH 7-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 6-S	P	
	2	2	Supply to 6-S	F	
	3	3	Supply ? to 9-S	P	
	4	4	Return ? to 9-S	F	Vent elbow in 7-S broken, unable to pressurize
2	1	5	Supply to 8-S	F	
	2	6	Return to 8-S	F	

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Handy logger

Name : **LOGGER 1**

LOG Name	10041519
Interval	00:01:00
Personnel	

Start	10/4/2007 3:19:26 PM
Stop	10/4/2007 5:34:15 PM
Comment	

Data	137
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	17.51	15.68	17.51	-7.50
Minimum	-0.03	0.00	0.09	-7.50
Average	14.52	13.93	14.18	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/4/2007 3:19:26 PM	v -0.03	v 0.00	v 0.09	v -7.50
	2	10/4/2007 3:20:00 PM	0.48	0.54	0.62	v -7.50
	3	10/4/2007 3:21:00 PM	1.84	2.00	1.53	v -7.50
	4	10/4/2007 3:22:00 PM	2.77	2.96	2.10	v -7.50
	5	10/4/2007 3:23:00 PM	4.07	4.56	3.09	v -7.50
	6	10/4/2007 3:24:00 PM	6.29	6.82	4.72	v -7.50
	7	10/4/2007 3:25:00 PM	7.66	7.98	5.51	v -7.50
	8	10/4/2007 3:26:00 PM	9.04	9.49	6.42	v -7.50
	9	10/4/2007 3:27:00 PM	10.50	11.30	7.29	v -7.50
	10	10/4/2007 3:28:00 PM	11.82	12.52	8.14	v -7.50
	11	10/4/2007 3:29:00 PM	13.33	14.10	8.95	v -7.50
	12	10/4/2007 3:30:00 PM	14.74	^ 15.68	9.81	v -7.50
	13	10/4/2007 3:31:00 PM	^ 17.51	15.37	12.15	v -7.50
	14	10/4/2007 3:32:00 PM	15.45	15.34	14.85	v -7.50
	15	10/4/2007 3:33:00 PM	15.43	15.29	16.31	v -7.50
	16	10/4/2007 3:34:00 PM	15.41	15.25	^ 17.51	v -7.50
	17	10/4/2007 3:35:00 PM	15.43	15.26	15.13	v -7.50
	18	10/4/2007 3:36:00 PM	15.42	15.24	15.09	v -7.50
	19	10/4/2007 3:37:00 PM	15.42	15.24	15.10	v -7.50
	20	10/4/2007 3:38:00 PM	15.42	15.23	15.10	v -7.50
	21	10/4/2007 3:39:00 PM	15.43	15.23	15.10	v -7.50
	22	10/4/2007 3:40:00 PM	15.43	15.23	15.10	v -7.50
	23	10/4/2007 3:41:00 PM	15.44	15.23	15.11	v -7.50
	24	10/4/2007 3:42:00 PM	15.40	15.18	15.11	v -7.50
	25	10/4/2007 3:43:00 PM	15.41	15.18	15.11	v -7.50
	26	10/4/2007 3:44:00 PM	15.41	15.18	15.12	v -7.50
	27	10/4/2007 3:45:00 PM	15.41	15.18	15.10	v -7.50
	28	10/4/2007 3:46:00 PM	15.41	15.17	15.11	v -7.50
	29	10/4/2007 3:47:00 PM	15.41	15.12	15.12	v -7.50
	30	10/4/2007 3:48:00 PM	15.41	15.11	15.13	v -7.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/4/2007 3:49:00 PM	15.39	15.10	15.14	v -7.50
	32	10/4/2007 3:50:00 PM	15.40	15.09	15.15	v -7.50
	33	10/4/2007 3:51:00 PM	15.39	15.08	15.11	v -7.50
	34	10/4/2007 3:52:00 PM	15.39	15.09	15.12	v -7.50
	35	10/4/2007 3:53:00 PM	15.39	15.07	15.12	v -7.50
	36	10/4/2007 3:54:00 PM	15.39	15.06	15.13	v -7.50
	37	10/4/2007 3:55:00 PM	15.38	15.05	15.09	v -7.50
	38	10/4/2007 3:56:00 PM	15.38	15.04	15.09	v -7.50
	39	10/4/2007 3:57:00 PM	15.38	15.02	15.13	v -7.50
	40	10/4/2007 3:58:00 PM	15.39	15.04	15.15	v -7.50
	41	10/4/2007 3:59:00 PM	15.40	15.04	15.13	v -7.50
	42	10/4/2007 4:00:00 PM	15.37	15.04	15.12	v -7.50
	43	10/4/2007 4:01:00 PM	15.39	15.00	15.14	v -7.50
	44	10/4/2007 4:02:00 PM	15.37	15.00	15.14	v -7.50
	45	10/4/2007 4:03:00 PM	15.38	15.01	15.15	v -7.50
	46	10/4/2007 4:04:00 PM	15.39	15.01	15.14	v -7.50
	47	10/4/2007 4:05:00 PM	15.37	15.01	15.11	v -7.50
	48	10/4/2007 4:06:00 PM	15.38	14.97	15.13	v -7.50
	49	10/4/2007 4:07:00 PM	15.38	14.95	15.13	v -7.50
	50	10/4/2007 4:08:00 PM	15.39	14.94	15.12	v -7.50
	51	10/4/2007 4:09:00 PM	15.37	14.95	15.14	v -7.50
	52	10/4/2007 4:10:00 PM	15.35	14.92	15.12	v -7.50
	53	10/4/2007 4:11:00 PM	15.36	14.89	15.10	v -7.50
	54	10/4/2007 4:12:00 PM	15.35	14.90	15.09	v -7.50
	55	10/4/2007 4:13:00 PM	15.33	14.87	15.09	v -7.50
	56	10/4/2007 4:14:00 PM	15.34	14.84	15.10	v -7.50
	57	10/4/2007 4:15:00 PM	15.33	14.86	15.11	v -7.50
	58	10/4/2007 4:16:00 PM	15.36	14.83	15.09	v -7.50
	59	10/4/2007 4:17:00 PM	15.34	14.80	15.11	v -7.50
	60	10/4/2007 4:18:00 PM	15.32	14.81	15.11	v -7.50
	61	10/4/2007 4:19:00 PM	15.31	14.79	15.10	v -7.50
	62	10/4/2007 4:20:00 PM	15.30	14.76	15.10	v -7.50
	63	10/4/2007 4:21:00 PM	15.28	14.78	15.09	v -7.50
	64	10/4/2007 4:22:00 PM	15.27	14.76	15.08	v -7.50
	65	10/4/2007 4:23:00 PM	15.26	14.73	15.08	v -7.50
	66	10/4/2007 4:24:00 PM	15.25	14.71	15.08	v -7.50
	67	10/4/2007 4:25:00 PM	15.27	14.69	15.07	v -7.50
	68	10/4/2007 4:26:00 PM	15.26	14.69	15.07	v -7.50
	69	10/4/2007 4:27:00 PM	15.27	14.68	15.09	v -7.50
	70	10/4/2007 4:28:00 PM	15.26	14.66	15.09	v -7.50
	71	10/4/2007 4:29:00 PM	15.25	14.64	15.09	v -7.50
	72	10/4/2007 4:30:00 PM	15.24	14.62	15.10	v -7.50
	73	10/4/2007 4:31:00 PM	15.22	14.59	15.09	v -7.50
	74	10/4/2007 4:32:00 PM	15.21	14.61	15.09	v -7.50
	75	10/4/2007 4:33:00 PM	15.21	14.59	15.08	v -7.50
	76	10/4/2007 4:34:00 PM	15.21	14.57	15.08	v -7.50
	77	10/4/2007 4:35:00 PM	15.20	14.55	15.08	v -7.50
	78	10/4/2007 4:36:00 PM	15.23	14.54	15.08	v -7.50
	79	10/4/2007 4:37:00 PM	15.22	14.54	15.11	v -7.50
	80	10/4/2007 4:38:00 PM	15.22	14.54	15.10	v -7.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/4/2007 4:39:00 PM	15.21	14.52	15.13	v -7.50
	82	10/4/2007 4:40:00 PM	15.21	14.50	15.12	v -7.50
	83	10/4/2007 4:41:00 PM	15.21	14.47	15.12	v -7.50
	84	10/4/2007 4:42:00 PM	15.20	14.45	15.12	v -7.50
	85	10/4/2007 4:43:00 PM	15.19	14.44	15.12	v -7.50
	86	10/4/2007 4:44:00 PM	15.19	14.46	15.11	v -7.50
	87	10/4/2007 4:45:00 PM	15.18	14.44	15.10	v -7.50
	88	10/4/2007 4:46:00 PM	15.18	14.42	15.10	v -7.50
	89	10/4/2007 4:47:00 PM	15.20	14.39	15.09	v -7.50
	90	10/4/2007 4:48:00 PM	15.20	14.38	15.09	v -7.50
	91	10/4/2007 4:49:00 PM	15.20	14.36	15.09	v -7.50
	92	10/4/2007 4:50:00 PM	15.19	14.34	15.12	v -7.50
	93	10/4/2007 4:51:00 PM	15.19	14.37	15.12	v -7.50
	94	10/4/2007 4:52:00 PM	15.18	14.35	15.12	v -7.50
	95	10/4/2007 4:53:00 PM	15.18	14.33	15.10	v -7.50
	96	10/4/2007 4:54:00 PM	15.18	14.31	15.10	v -7.50
	97	10/4/2007 4:55:00 PM	15.17	14.30	15.09	v -7.50
	98	10/4/2007 4:56:00 PM	15.16	14.28	15.09	v -7.50
	99	10/4/2007 4:57:00 PM	15.16	14.26	15.09	v -7.50
	100	10/4/2007 4:58:00 PM	15.15	14.25	15.08	v -7.50
	101	10/4/2007 4:59:00 PM	15.15	14.24	15.07	v -7.50
	102	10/4/2007 5:00:00 PM	15.14	14.21	15.07	v -7.50
	103	10/4/2007 5:01:00 PM	15.14	14.20	15.07	v -7.50
	104	10/4/2007 5:02:00 PM	15.18	14.18	15.06	v -7.50
	105	10/4/2007 5:03:00 PM	15.17	14.17	15.05	v -7.50
	106	10/4/2007 5:04:00 PM	15.16	14.15	15.05	v -7.50
	107	10/4/2007 5:05:00 PM	15.16	14.14	15.05	v -7.50
	108	10/4/2007 5:06:00 PM	15.15	14.12	15.04	v -7.50
	109	10/4/2007 5:07:00 PM	15.14	14.10	15.04	v -7.50
	110	10/4/2007 5:08:00 PM	15.13	14.13	15.08	v -7.50
	111	10/4/2007 5:09:00 PM	15.12	14.11	15.08	v -7.50
	112	10/4/2007 5:10:00 PM	15.12	14.10	15.07	v -7.50
	113	10/4/2007 5:11:00 PM	15.12	14.08	15.07	v -7.50
	114	10/4/2007 5:12:00 PM	15.11	14.06	15.05	v -7.50
	115	10/4/2007 5:13:00 PM	15.15	14.05	15.05	v -7.50
	116	10/4/2007 5:14:00 PM	15.14	14.03	15.04	v -7.50
	117	10/4/2007 5:15:00 PM	15.13	14.01	15.07	v -7.50
	118	10/4/2007 5:16:00 PM	15.13	14.05	15.06	v -7.50
	119	10/4/2007 5:17:00 PM	15.12	13.98	15.05	v -7.50
	120	10/4/2007 5:18:00 PM	15.06	13.95	15.01	v -7.50
	121	10/4/2007 5:19:00 PM	15.01	13.92	14.99	v -7.50
	122	10/4/2007 5:20:00 PM	14.97	13.89	14.98	v -7.50
	123	10/4/2007 5:21:00 PM	14.97	13.86	14.94	v -7.50
	124	10/4/2007 5:22:00 PM	14.98	13.82	14.92	v -7.50
	125	10/4/2007 5:23:00 PM	14.96	13.82	14.95	v -7.50
	126	10/4/2007 5:24:00 PM	14.95	13.79	14.95	v -7.50
	127	10/4/2007 5:25:00 PM	14.98	13.81	14.93	v -7.50
	128	10/4/2007 5:26:00 PM	14.98	13.80	14.95	v -7.50
	129	10/4/2007 5:27:00 PM	14.97	13.80	14.93	v -7.50
	130	10/4/2007 5:28:00 PM	14.98	13.76	14.95	v -7.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/4/2007 5:29:00 PM	14.96	13.78	14.93	v -7.50
	132	10/4/2007 5:30:00 PM	14.97	13.77	14.95	v -7.50
	133	10/4/2007 5:31:00 PM	14.98	13.78	14.93	v -7.50
	134	10/4/2007 5:32:00 PM	14.95	13.74	14.94	v -7.50
	135	10/4/2007 5:33:00 PM	14.96	13.75	14.95	v -7.50
	136	10/4/2007 5:34:00 PM	14.96	13.73	14.95	v -7.50
	137	10/4/2007 5:34:15 PM	14.97	13.78	14.95	v -7.50

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Handy logger

Name : **LOGGER 2**

LOG Name	10041518
Interval	00:01:00
Personnel	10S

Start	10/4/2007 3:18:53 PM
Stop	10/4/2007 5:34:02 PM
Comment	

Data	138
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.10	15.96		
Minimum	0.14	0.04		
Average	14.52	13.20		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/4/2007 3:18:53 PM	v 0.14	v 0.04	O.R.	O.R.
*	2	10/4/2007 3:19:00 PM	v 0.14	v 0.04	O.R.	O.R.
	3	10/4/2007 3:20:00 PM	3.81	2.46	O.R.	O.R.
	4	10/4/2007 3:21:00 PM	9.17	7.47	O.R.	O.R.
	5	10/4/2007 3:22:00 PM	14.36	12.43	O.R.	O.R.
	6	10/4/2007 3:23:00 PM	^ 16.10	^ 15.96	O.R.	O.R.
	7	10/4/2007 3:24:00 PM	16.05	15.92	O.R.	O.R.
	8	10/4/2007 3:25:00 PM	16.02	15.86	O.R.	O.R.
	9	10/4/2007 3:26:00 PM	16.02	15.83	O.R.	O.R.
	10	10/4/2007 3:27:00 PM	16.02	15.78	O.R.	O.R.
	11	10/4/2007 3:28:00 PM	15.99	15.76	O.R.	O.R.
	12	10/4/2007 3:29:00 PM	15.97	15.70	O.R.	O.R.
	13	10/4/2007 3:30:00 PM	15.94	15.70	O.R.	O.R.
	14	10/4/2007 3:31:00 PM	15.92	15.65	O.R.	O.R.
	15	10/4/2007 3:32:00 PM	15.90	15.60	O.R.	O.R.
	16	10/4/2007 3:33:00 PM	15.88	15.56	O.R.	O.R.
	17	10/4/2007 3:34:00 PM	15.85	15.51	O.R.	O.R.
	18	10/4/2007 3:35:00 PM	15.84	15.47	O.R.	O.R.
	19	10/4/2007 3:36:00 PM	15.82	15.43	O.R.	O.R.
	20	10/4/2007 3:37:00 PM	15.80	15.38	O.R.	O.R.
	21	10/4/2007 3:38:00 PM	15.79	15.34	O.R.	O.R.
	22	10/4/2007 3:39:00 PM	15.77	15.31	O.R.	O.R.
	23	10/4/2007 3:40:00 PM	15.75	15.26	O.R.	O.R.
	24	10/4/2007 3:41:00 PM	15.73	15.22	O.R.	O.R.
	25	10/4/2007 3:42:00 PM	15.69	15.18	O.R.	O.R.
	26	10/4/2007 3:43:00 PM	15.68	15.15	O.R.	O.R.
	27	10/4/2007 3:44:00 PM	15.66	15.11	O.R.	O.R.
	28	10/4/2007 3:45:00 PM	15.64	15.07	O.R.	O.R.
	29	10/4/2007 3:46:00 PM	15.59	15.03	O.R.	O.R.
	30	10/4/2007 3:47:00 PM	15.57	14.98	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/4/2007 3:48:00 PM	15.56	14.95	O.R.	O.R.
	32	10/4/2007 3:49:00 PM	15.54	14.91	O.R.	O.R.
	33	10/4/2007 3:50:00 PM	15.53	14.87	O.R.	O.R.
	34	10/4/2007 3:51:00 PM	15.51	14.83	O.R.	O.R.
	35	10/4/2007 3:52:00 PM	15.49	14.79	O.R.	O.R.
	36	10/4/2007 3:53:00 PM	15.47	14.71	O.R.	O.R.
	37	10/4/2007 3:54:00 PM	15.45	14.67	O.R.	O.R.
	38	10/4/2007 3:55:00 PM	15.44	14.63	O.R.	O.R.
	39	10/4/2007 3:56:00 PM	15.42	14.64	O.R.	O.R.
	40	10/4/2007 3:57:00 PM	15.44	14.58	O.R.	O.R.
	41	10/4/2007 3:58:00 PM	15.44	14.56	O.R.	O.R.
	42	10/4/2007 3:59:00 PM	15.44	14.51	O.R.	O.R.
	43	10/4/2007 4:00:00 PM	15.39	14.50	O.R.	O.R.
	44	10/4/2007 4:01:00 PM	15.37	14.47	O.R.	O.R.
	45	10/4/2007 4:02:00 PM	15.37	14.42	O.R.	O.R.
	46	10/4/2007 4:03:00 PM	15.37	14.39	O.R.	O.R.
	47	10/4/2007 4:04:00 PM	15.33	14.35	O.R.	O.R.
	48	10/4/2007 4:05:00 PM	15.32	14.32	O.R.	O.R.
	49	10/4/2007 4:06:00 PM	15.32	14.27	O.R.	O.R.
	50	10/4/2007 4:07:00 PM	15.28	14.25	O.R.	O.R.
	51	10/4/2007 4:08:00 PM	15.27	14.19	O.R.	O.R.
	52	10/4/2007 4:09:00 PM	15.27	14.19	O.R.	O.R.
	53	10/4/2007 4:10:00 PM	15.23	14.14	O.R.	O.R.
	54	10/4/2007 4:11:00 PM	15.20	14.12	O.R.	O.R.
	55	10/4/2007 4:12:00 PM	15.20	14.06	O.R.	O.R.
	56	10/4/2007 4:13:00 PM	15.17	14.05	O.R.	O.R.
	57	10/4/2007 4:14:00 PM	15.17	14.01	O.R.	O.R.
	58	10/4/2007 4:15:00 PM	15.14	13.96	O.R.	O.R.
	59	10/4/2007 4:16:00 PM	15.13	13.94	O.R.	O.R.
	60	10/4/2007 4:17:00 PM	15.10	13.89	O.R.	O.R.
	61	10/4/2007 4:18:00 PM	15.06	13.85	O.R.	O.R.
	62	10/4/2007 4:19:00 PM	15.04	13.80	O.R.	O.R.
	63	10/4/2007 4:20:00 PM	15.05	13.79	O.R.	O.R.
	64	10/4/2007 4:21:00 PM	15.02	13.75	O.R.	O.R.
	65	10/4/2007 4:22:00 PM	14.98	13.70	O.R.	O.R.
	66	10/4/2007 4:23:00 PM	14.99	13.66	O.R.	O.R.
	67	10/4/2007 4:24:00 PM	14.99	13.62	O.R.	O.R.
	68	10/4/2007 4:25:00 PM	14.97	13.62	O.R.	O.R.
	69	10/4/2007 4:26:00 PM	14.94	13.58	O.R.	O.R.
	70	10/4/2007 4:27:00 PM	14.91	13.54	O.R.	O.R.
	71	10/4/2007 4:28:00 PM	14.89	13.50	O.R.	O.R.
	72	10/4/2007 4:29:00 PM	14.89	13.49	O.R.	O.R.
	73	10/4/2007 4:30:00 PM	14.86	13.45	O.R.	O.R.
	74	10/4/2007 4:31:00 PM	14.84	13.41	O.R.	O.R.
	75	10/4/2007 4:32:00 PM	14.82	13.36	O.R.	O.R.
	76	10/4/2007 4:33:00 PM	14.80	13.33	O.R.	O.R.
	77	10/4/2007 4:34:00 PM	14.77	13.28	O.R.	O.R.
	78	10/4/2007 4:35:00 PM	14.75	13.25	O.R.	O.R.
	79	10/4/2007 4:36:00 PM	14.71	13.21	O.R.	O.R.
	80	10/4/2007 4:37:00 PM	14.69	13.17	O.R.	O.R.

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/4/2007 4:38:00 PM	14.67	13.12	O.R.	O.R.
	82	10/4/2007 4:39:00 PM	14.67	13.14	O.R.	O.R.
	83	10/4/2007 4:40:00 PM	14.65	13.11	O.R.	O.R.
	84	10/4/2007 4:41:00 PM	14.62	13.06	O.R.	O.R.
	85	10/4/2007 4:42:00 PM	14.60	13.06	O.R.	O.R.
	86	10/4/2007 4:43:00 PM	14.58	13.03	O.R.	O.R.
	87	10/4/2007 4:44:00 PM	14.58	12.98	O.R.	O.R.
	88	10/4/2007 4:45:00 PM	14.57	12.95	O.R.	O.R.
	89	10/4/2007 4:46:00 PM	14.55	12.91	O.R.	O.R.
	90	10/4/2007 4:47:00 PM	14.52	12.87	O.R.	O.R.
	91	10/4/2007 4:48:00 PM	14.49	12.84	O.R.	O.R.
	92	10/4/2007 4:49:00 PM	14.47	12.80	O.R.	O.R.
	93	10/4/2007 4:50:00 PM	14.45	12.77	O.R.	O.R.
	94	10/4/2007 4:51:00 PM	14.46	12.76	O.R.	O.R.
	95	10/4/2007 4:52:00 PM	14.44	12.73	O.R.	O.R.
	96	10/4/2007 4:53:00 PM	14.42	12.69	O.R.	O.R.
	97	10/4/2007 4:54:00 PM	14.40	12.66	O.R.	O.R.
	98	10/4/2007 4:55:00 PM	14.38	12.63	O.R.	O.R.
	99	10/4/2007 4:56:00 PM	14.36	12.60	O.R.	O.R.
	100	10/4/2007 4:57:00 PM	14.34	12.55	O.R.	O.R.
	101	10/4/2007 4:58:00 PM	14.32	12.53	O.R.	O.R.
	102	10/4/2007 4:59:00 PM	14.30	12.50	O.R.	O.R.
	103	10/4/2007 5:00:00 PM	14.28	12.46	O.R.	O.R.
	104	10/4/2007 5:01:00 PM	14.29	12.44	O.R.	O.R.
	105	10/4/2007 5:02:00 PM	14.27	12.42	O.R.	O.R.
	106	10/4/2007 5:03:00 PM	14.25	12.40	O.R.	O.R.
	107	10/4/2007 5:04:00 PM	14.23	12.37	O.R.	O.R.
	108	10/4/2007 5:05:00 PM	14.20	12.33	O.R.	O.R.
	109	10/4/2007 5:06:00 PM	14.18	12.30	O.R.	O.R.
	110	10/4/2007 5:07:00 PM	14.16	12.26	O.R.	O.R.
	111	10/4/2007 5:08:00 PM	14.14	12.22	O.R.	O.R.
	112	10/4/2007 5:09:00 PM	14.12	12.19	O.R.	O.R.
	113	10/4/2007 5:10:00 PM	14.10	12.16	O.R.	O.R.
	114	10/4/2007 5:11:00 PM	14.08	12.13	O.R.	O.R.
	115	10/4/2007 5:12:00 PM	14.06	12.09	O.R.	O.R.
	116	10/4/2007 5:13:00 PM	14.04	12.06	O.R.	O.R.
	117	10/4/2007 5:14:00 PM	14.05	12.02	O.R.	O.R.
	118	10/4/2007 5:15:00 PM	14.04	11.99	O.R.	O.R.
	119	10/4/2007 5:16:00 PM	14.01	11.96	O.R.	O.R.
	120	10/4/2007 5:17:00 PM	13.97	11.93	O.R.	O.R.
	121	10/4/2007 5:18:00 PM	13.88	11.89	O.R.	O.R.
	122	10/4/2007 5:19:00 PM	13.89	11.78	O.R.	O.R.
	123	10/4/2007 5:20:00 PM	13.85	11.80	O.R.	O.R.
	124	10/4/2007 5:21:00 PM	13.83	11.74	O.R.	O.R.
	125	10/4/2007 5:22:00 PM	13.84	11.72	O.R.	O.R.
	126	10/4/2007 5:23:00 PM	13.81	11.70	O.R.	O.R.
	127	10/4/2007 5:24:00 PM	13.81	11.63	O.R.	O.R.
	128	10/4/2007 5:25:00 PM	13.80	11.64	O.R.	O.R.
	129	10/4/2007 5:26:00 PM	13.83	11.59	O.R.	O.R.
	130	10/4/2007 5:27:00 PM	13.82	11.55	O.R.	O.R.

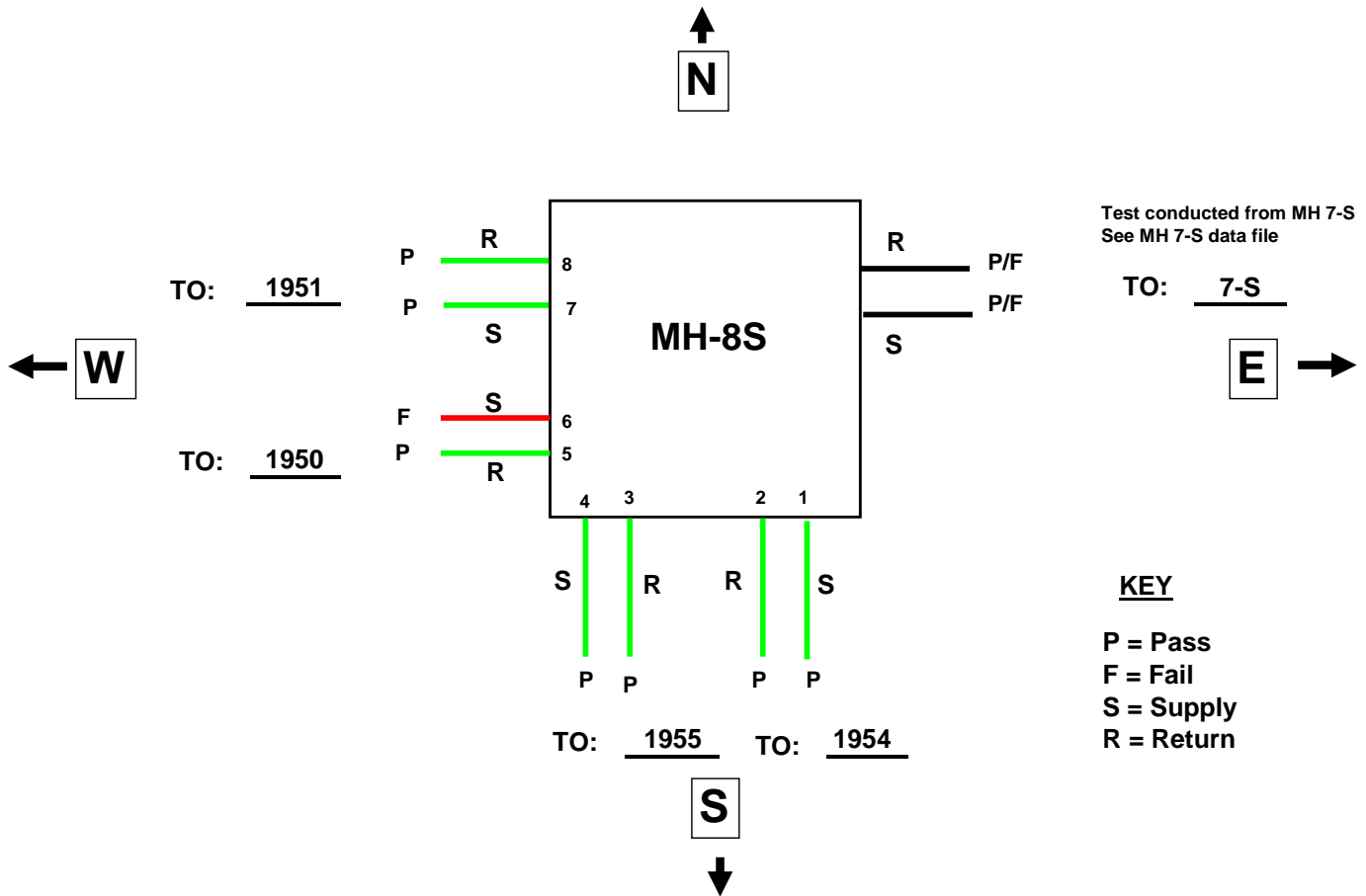
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/4/2007 5:28:00 PM	13.83	11.54	O.R.	O.R.
	132	10/4/2007 5:29:00 PM	13.81	11.48	O.R.	O.R.
	133	10/4/2007 5:30:00 PM	13.79	11.46	O.R.	O.R.
	134	10/4/2007 5:31:00 PM	13.80	11.41	O.R.	O.R.
	135	10/4/2007 5:32:00 PM	13.81	11.40	O.R.	O.R.
	136	10/4/2007 5:33:00 PM	13.81	11.37	O.R.	O.R.
	137	10/4/2007 5:34:00 PM	13.80	11.33	O.R.	O.R.
	138	10/4/2007 5:34:02 PM	13.80	11.34	O.R.	O.R.

DATE: 8/29/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All Dry

MH 8-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply Feeder to 1954	P	Pressure relief valve on test rig venting, replaced with plug and repressurized. Test continued for one hour after relief valve removal with minor pressure loss.
	2	2	Return Feeder from 1954	P	
	3	3	Return Feeder from 1955	P	
	4	4	Supply Feeder to 1955	P	
2	1	5	Return Feeder from 1950	P	
	2	6	Supply Feeder to 1950	F	
	3	7	Supply Feeder to 1951	P	
	4	8	Return Feeder from 1951	P	

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Handy logger

Name : **LOGGER 1**

LOG Name	08290930
Interval	00:01:00
Personnel	

Start	8/29/2007 9:30:59 AM
Stop	8/29/2007 11:44:27 AM
Comment	

Data	136
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.21	16.43	16.31	16.05
Minimum	-0.10	0.30	0.14	0.24
Average	14.21	15.67	15.72	15.40
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/29/2007 9:30:59 AM	0.13	v 0.30	0.15	v 0.24
	2	8/29/2007 9:31:00 AM	0.13	v 0.30	0.15	v 0.24
	3	8/29/2007 9:32:00 AM	3.68	1.65	v 0.14	v 0.24
	4	8/29/2007 9:33:00 AM	10.14	8.04	3.98	3.90
	5	8/29/2007 9:34:00 AM	14.63	13.21	8.92	9.15
	6	8/29/2007 9:35:00 AM	16.05	16.36	15.20	15.92
	7	8/29/2007 9:36:00 AM	15.95	16.33	16.29	^ 16.05
	8	8/29/2007 9:37:00 AM	15.82	16.36	^ 16.31	^ 16.05
	9	8/29/2007 9:38:00 AM	15.70	16.35	16.29	16.03
	10	8/29/2007 9:39:00 AM	15.58	16.34	16.27	16.01
	11	8/29/2007 9:40:00 AM	15.47	16.39	16.27	16.01
	12	8/29/2007 9:41:00 AM	15.39	16.40	16.29	16.00
	13	8/29/2007 9:42:00 AM	15.28	16.40	16.28	16.03
	14	8/29/2007 9:43:00 AM	15.20	16.40	16.25	16.02
	15	8/29/2007 9:44:00 AM	15.13	16.39	16.29	16.01
	16	8/29/2007 9:45:00 AM	15.08	16.39	16.29	16.01
	17	8/29/2007 9:46:00 AM	15.02	16.40	16.28	16.00
	18	8/29/2007 9:47:00 AM	14.97	^ 16.43	16.27	15.99
	19	8/29/2007 9:48:00 AM	14.91	^ 16.43	16.27	15.98
	20	8/29/2007 9:49:00 AM	14.88	16.42	16.27	15.98
	21	8/29/2007 9:50:00 AM	14.82	16.42	16.26	15.98
	22	8/29/2007 9:51:00 AM	14.77	16.42	16.25	15.97
	23	8/29/2007 9:52:00 AM	14.71	16.42	16.28	15.98
	24	8/29/2007 9:53:00 AM	14.66	16.41	16.28	15.98
	25	8/29/2007 9:54:00 AM	14.60	16.39	16.28	15.98
	26	8/29/2007 9:55:00 AM	14.55	16.40	16.27	15.97
	27	8/29/2007 9:56:00 AM	14.51	^ 16.43	16.27	15.96
	28	8/29/2007 9:57:00 AM	14.47	16.42	16.26	15.96
	29	8/29/2007 9:58:00 AM	14.40	16.41	16.26	15.96
	30	8/29/2007 9:59:00 AM	14.37	16.40	16.25	15.95

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/29/2007 10:00:00 AM	14.32	16.40	16.25	15.95
	32	8/29/2007 10:01:00 AM	14.26	16.39	16.24	15.95
	33	8/29/2007 10:02:00 AM	14.22	16.38	16.24	15.94
	34	8/29/2007 10:03:00 AM	14.18	16.37	16.23	15.94
	35	8/29/2007 10:04:00 AM	14.13	16.36	16.23	15.94
	36	8/29/2007 10:05:00 AM	14.09	16.35	16.23	15.93
	37	8/29/2007 10:06:00 AM	14.05	16.35	16.23	15.93
	38	8/29/2007 10:07:00 AM	14.01	16.34	16.24	15.93
	39	8/29/2007 10:08:00 AM	13.97	16.34	16.23	15.93
	40	8/29/2007 10:09:00 AM	13.94	16.34	16.23	15.92
	41	8/29/2007 10:10:00 AM	13.90	16.34	16.22	15.92
	42	8/29/2007 10:11:00 AM	13.86	16.32	16.23	15.92
	43	8/29/2007 10:12:00 AM	13.82	16.31	16.23	15.92
	44	8/29/2007 10:13:00 AM	13.78	16.30	16.26	15.92
	45	8/29/2007 10:14:00 AM	13.74	16.30	16.26	15.91
	46	8/29/2007 10:15:00 AM	13.71	16.29	16.24	15.91
	47	8/29/2007 10:16:00 AM	13.67	16.28	16.26	15.91
	48	8/29/2007 10:17:00 AM	13.63	16.29	16.25	15.91
	49	8/29/2007 10:18:00 AM	13.60	16.30	16.22	15.91
	50	8/29/2007 10:19:00 AM	13.56	16.30	16.24	15.90
	51	8/29/2007 10:20:00 AM	13.53	16.24	16.26	15.90
	52	8/29/2007 10:21:00 AM	13.49	16.28	16.24	15.90
	53	8/29/2007 10:22:00 AM	13.45	16.23	16.24	15.90
	54	8/29/2007 10:23:00 AM	13.41	16.27	16.24	15.89
	55	8/29/2007 10:24:00 AM	13.37	16.26	16.25	15.89
	56	8/29/2007 10:25:00 AM	13.33	16.25	16.25	15.89
	57	8/29/2007 10:26:00 AM	13.30	16.24	16.24	15.89
	58	8/29/2007 10:27:00 AM	13.26	16.24	16.24	15.89
	59	8/29/2007 10:28:00 AM	13.23	16.23	16.24	15.89
	60	8/29/2007 10:29:00 AM	13.19	16.22	16.23	15.89
	61	8/29/2007 10:30:00 AM	13.15	16.17	16.21	15.89
	62	8/29/2007 10:31:00 AM	13.12	16.18	16.21	15.88
	63	8/29/2007 10:32:00 AM	9.72	16.17	16.21	15.89
	64	8/29/2007 10:33:00 AM	4.80	16.16	16.20	15.88
	65	8/29/2007 10:34:00 AM	-0.03	16.15	16.21	15.88
	66	8/29/2007 10:35:00 AM	-0.03	16.14	16.21	15.88
	67	8/29/2007 10:36:00 AM	-0.05	16.13	16.21	15.87
	68	8/29/2007 10:37:00 AM	v -0.10	16.14	16.21	15.88
	69	8/29/2007 10:38:00 AM	1.21	16.14	16.21	15.87
	70	8/29/2007 10:39:00 AM	13.14	16.13	16.22	15.88
	71	8/29/2007 10:40:00 AM	16.15	16.13	16.21	15.88
	72	8/29/2007 10:41:00 AM	16.13	16.12	16.21	15.87
	73	8/29/2007 10:42:00 AM	16.15	16.11	16.22	15.87
	74	8/29/2007 10:43:00 AM	16.17	16.11	16.22	15.87
	75	8/29/2007 10:44:00 AM	16.19	16.10	16.21	15.87
	76	8/29/2007 10:45:00 AM	16.18	16.10	16.22	15.86
	77	8/29/2007 10:46:00 AM	16.20	16.09	16.21	15.86
	78	8/29/2007 10:47:00 AM	^ 16.21	16.09	16.21	15.86
	79	8/29/2007 10:48:00 AM	16.18	16.08	16.23	15.86
	80	8/29/2007 10:49:00 AM	16.19	16.07	16.23	15.86

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/29/2007 10:50:00 AM	16.20	16.06	16.23	15.86
	82	8/29/2007 10:51:00 AM	^ 16.21	16.06	16.23	15.86
	83	8/29/2007 10:52:00 AM	^ 16.21	16.05	16.23	15.86
	84	8/29/2007 10:53:00 AM	16.19	16.02	16.22	15.86
	85	8/29/2007 10:54:00 AM	16.20	16.00	16.23	15.86
	86	8/29/2007 10:55:00 AM	16.20	16.00	16.20	15.86
	87	8/29/2007 10:56:00 AM	16.20	15.99	16.20	15.86
	88	8/29/2007 10:57:00 AM	16.17	15.99	16.20	15.85
	89	8/29/2007 10:58:00 AM	16.17	15.98	16.20	15.86
	90	8/29/2007 10:59:00 AM	16.17	15.98	16.21	15.84
	91	8/29/2007 11:00:00 AM	16.17	15.98	16.21	15.85
	92	8/29/2007 11:01:00 AM	16.16	15.96	16.20	15.84
	93	8/29/2007 11:02:00 AM	16.16	15.95	16.20	15.84
	94	8/29/2007 11:03:00 AM	16.16	15.94	16.21	15.84
	95	8/29/2007 11:04:00 AM	16.15	15.93	16.21	15.83
	96	8/29/2007 11:05:00 AM	16.14	15.93	16.21	15.83
	97	8/29/2007 11:06:00 AM	16.14	15.93	16.21	15.84
	98	8/29/2007 11:07:00 AM	16.13	15.92	16.21	15.83
	99	8/29/2007 11:08:00 AM	16.10	15.92	16.21	15.83
	100	8/29/2007 11:09:00 AM	16.10	15.91	16.21	15.83
	101	8/29/2007 11:10:00 AM	16.10	15.86	16.21	15.83
	102	8/29/2007 11:11:00 AM	16.10	15.86	16.21	15.83
	103	8/29/2007 11:12:00 AM	16.10	15.85	16.21	15.83
	104	8/29/2007 11:13:00 AM	16.07	15.84	16.21	15.83
	105	8/29/2007 11:14:00 AM	16.06	15.84	16.21	15.83
	106	8/29/2007 11:15:00 AM	16.09	15.83	16.22	15.83
	107	8/29/2007 11:16:00 AM	16.05	15.83	16.22	15.83
	108	8/29/2007 11:17:00 AM	16.07	15.83	16.21	15.83
	109	8/29/2007 11:18:00 AM	16.06	15.78	16.21	15.82
	110	8/29/2007 11:19:00 AM	16.05	15.82	16.21	15.83
	111	8/29/2007 11:20:00 AM	16.04	15.81	16.22	15.83
	112	8/29/2007 11:21:00 AM	16.03	15.80	16.21	15.83
	113	8/29/2007 11:22:00 AM	16.03	15.75	16.17	15.82
	114	8/29/2007 11:23:00 AM	16.02	15.74	16.22	15.82
	115	8/29/2007 11:24:00 AM	16.01	15.73	16.18	15.82
	116	8/29/2007 11:25:00 AM	16.01	15.72	16.18	15.82
	117	8/29/2007 11:26:00 AM	16.00	15.72	16.18	15.83
	118	8/29/2007 11:27:00 AM	15.99	15.72	16.19	15.82
	119	8/29/2007 11:28:00 AM	15.98	15.71	16.19	15.82
	120	8/29/2007 11:29:00 AM	15.96	15.70	16.19	15.82
	121	8/29/2007 11:30:00 AM	15.96	15.69	16.19	15.82
	122	8/29/2007 11:31:00 AM	15.95	15.68	16.19	15.82
	123	8/29/2007 11:32:00 AM	15.94	15.68	16.20	15.82
	124	8/29/2007 11:33:00 AM	15.94	15.68	16.20	15.82
	125	8/29/2007 11:34:00 AM	15.93	15.68	16.20	15.81
	126	8/29/2007 11:35:00 AM	15.92	15.68	16.21	15.81
	127	8/29/2007 11:36:00 AM	15.92	15.66	16.20	15.81
	128	8/29/2007 11:37:00 AM	15.88	15.66	16.21	15.81
	129	8/29/2007 11:38:00 AM	15.87	15.65	16.21	15.81
	130	8/29/2007 11:39:00 AM	15.89	15.64	16.20	15.81

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/29/2007 11:40:00 AM	15.89	15.63	16.21	15.81
	132	8/29/2007 11:41:00 AM	15.88	15.62	16.21	15.81
	133	8/29/2007 11:42:00 AM	15.87	15.58	16.21	15.81
	134	8/29/2007 11:43:00 AM	15.86	15.57	16.22	15.78
	135	8/29/2007 11:44:00 AM	15.85	15.57	16.17	15.77
	136	8/29/2007 11:44:27 AM	15.82	15.57	16.18	15.77

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Handy logger

Name : **LOGGER 2**

LOG Name	08290930
Interval	00:01:00
Personnel	

Start	8/29/2007 9:30:56 AM
Stop	8/29/2007 11:44:42 AM
Comment	

Data	136
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.43	17.23	16.22	15.93
Minimum	0.33	0.31	0.12	0.15
Average	15.38	14.16	14.79	14.68
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/29/2007 9:30:56 AM	0.34	0.32	v 0.12	0.17
	2	8/29/2007 9:31:00 AM	0.35	0.32	v 0.12	0.17
	3	8/29/2007 9:32:00 AM	v 0.33	v 0.31	0.14	v 0.15
	4	8/29/2007 9:33:00 AM	v 0.33	0.34	0.14	0.17
	5	8/29/2007 9:34:00 AM	0.35	0.34	0.15	0.16
	6	8/29/2007 9:35:00 AM	0.35	0.34	0.14	0.18
	7	8/29/2007 9:36:00 AM	0.35	0.34	0.16	0.22
	8	8/29/2007 9:37:00 AM	16.41	^ 17.23	0.15	0.21
	9	8/29/2007 9:38:00 AM	16.42	17.04	5.58	4.15
	10	8/29/2007 9:39:00 AM	16.40	16.92	11.49	9.36
	11	8/29/2007 9:40:00 AM	16.42	16.77	^ 16.22	15.28
	12	8/29/2007 9:41:00 AM	16.40	16.69	16.16	15.79
	13	8/29/2007 9:42:00 AM	16.40	16.57	16.16	15.83
	14	8/29/2007 9:43:00 AM	16.40	16.48	16.18	15.84
	15	8/29/2007 9:44:00 AM	16.41	16.40	16.18	15.85
	16	8/29/2007 9:45:00 AM	16.41	16.31	16.18	15.85
	17	8/29/2007 9:46:00 AM	16.41	16.25	16.18	15.86
	18	8/29/2007 9:47:00 AM	^ 16.43	16.18	16.18	15.87
	19	8/29/2007 9:48:00 AM	16.42	16.10	16.18	15.87
	20	8/29/2007 9:49:00 AM	16.41	16.03	16.17	15.87
	21	8/29/2007 9:50:00 AM	16.41	15.99	16.20	15.88
	22	8/29/2007 9:51:00 AM	16.41	15.94	16.19	15.88
	23	8/29/2007 9:52:00 AM	16.41	15.89	16.18	15.88
	24	8/29/2007 9:53:00 AM	16.41	15.83	16.17	15.88
	25	8/29/2007 9:54:00 AM	16.41	15.82	16.16	^ 15.93
	26	8/29/2007 9:55:00 AM	16.41	15.77	16.15	15.92
	27	8/29/2007 9:56:00 AM	16.41	15.70	16.13	15.92
	28	8/29/2007 9:57:00 AM	16.40	15.67	16.13	15.92
	29	8/29/2007 9:58:00 AM	16.40	15.65	16.12	15.91
	30	8/29/2007 9:59:00 AM	16.40	15.61	16.11	15.90

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/29/2007 10:00:00 AM	16.39	15.59	16.09	15.92
	32	8/29/2007 10:01:00 AM	16.39	15.56	16.12	^ 15.93
	33	8/29/2007 10:02:00 AM	16.39	15.52	16.11	^ 15.93
	34	8/29/2007 10:03:00 AM	16.39	15.49	16.10	^ 15.93
	35	8/29/2007 10:04:00 AM	16.38	15.47	16.09	15.92
	36	8/29/2007 10:05:00 AM	16.38	15.44	16.09	15.91
	37	8/29/2007 10:06:00 AM	16.38	15.43	16.08	15.91
	38	8/29/2007 10:07:00 AM	16.38	15.40	16.07	15.91
	39	8/29/2007 10:08:00 AM	16.37	15.38	16.06	15.90
	40	8/29/2007 10:09:00 AM	16.37	15.36	16.05	15.89
	41	8/29/2007 10:10:00 AM	16.37	15.35	16.05	15.89
	42	8/29/2007 10:11:00 AM	16.36	15.33	16.07	15.88
	43	8/29/2007 10:12:00 AM	16.36	15.31	16.06	^ 15.93
	44	8/29/2007 10:13:00 AM	16.35	15.28	16.04	15.92
	45	8/29/2007 10:14:00 AM	16.35	15.27	16.03	15.91
	46	8/29/2007 10:15:00 AM	16.35	15.26	16.02	15.91
	47	8/29/2007 10:16:00 AM	16.35	15.25	16.02	15.90
	48	8/29/2007 10:17:00 AM	16.35	15.23	16.01	15.89
	49	8/29/2007 10:18:00 AM	16.35	15.21	16.00	15.89
	50	8/29/2007 10:19:00 AM	16.35	15.20	16.00	15.89
	51	8/29/2007 10:20:00 AM	16.34	15.18	15.98	15.88
	52	8/29/2007 10:21:00 AM	16.33	15.17	15.98	15.87
	53	8/29/2007 10:22:00 AM	16.33	15.16	15.97	15.87
	54	8/29/2007 10:23:00 AM	16.33	15.14	15.96	15.87
	55	8/29/2007 10:24:00 AM	16.32	15.13	15.95	15.87
	56	8/29/2007 10:25:00 AM	16.32	15.11	15.93	15.87
	57	8/29/2007 10:26:00 AM	16.35	15.09	15.93	15.86
	58	8/29/2007 10:27:00 AM	16.34	15.07	15.92	15.86
	59	8/29/2007 10:28:00 AM	16.33	15.06	15.92	15.84
	60	8/29/2007 10:29:00 AM	16.29	15.04	15.90	15.84
	61	8/29/2007 10:30:00 AM	16.28	14.99	15.89	15.83
	62	8/29/2007 10:31:00 AM	16.28	15.01	15.89	15.85
	63	8/29/2007 10:32:00 AM	16.28	14.98	15.88	15.82
	64	8/29/2007 10:33:00 AM	16.28	14.97	15.88	15.82
	65	8/29/2007 10:34:00 AM	16.27	14.92	15.87	15.81
	66	8/29/2007 10:35:00 AM	16.26	14.91	15.87	15.81
	67	8/29/2007 10:36:00 AM	16.26	14.90	15.86	15.80
	68	8/29/2007 10:37:00 AM	16.26	14.88	15.85	15.80
	69	8/29/2007 10:38:00 AM	16.26	14.86	15.85	15.80
	70	8/29/2007 10:39:00 AM	16.25	14.84	15.85	15.79
	71	8/29/2007 10:40:00 AM	16.25	14.82	15.85	15.79
	72	8/29/2007 10:41:00 AM	16.24	14.81	15.83	15.79
	73	8/29/2007 10:42:00 AM	16.24	14.80	15.84	15.78
	74	8/29/2007 10:43:00 AM	16.23	14.78	15.83	15.79
	75	8/29/2007 10:44:00 AM	16.24	14.76	15.82	15.78
	76	8/29/2007 10:45:00 AM	16.20	14.75	15.81	15.78
	77	8/29/2007 10:46:00 AM	16.22	14.73	15.81	15.77
	78	8/29/2007 10:47:00 AM	16.22	14.71	15.80	15.77
	79	8/29/2007 10:48:00 AM	16.18	14.69	15.79	15.77
	80	8/29/2007 10:49:00 AM	16.19	14.68	15.79	15.76

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Name : LOGGER 2

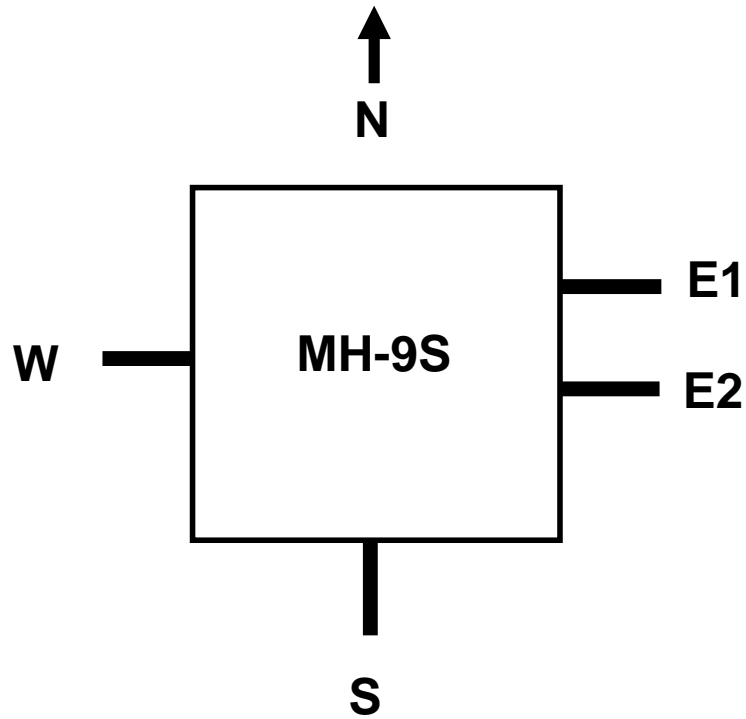
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/29/2007 10:50:00 AM	16.17	14.66	15.79	15.76
	82	8/29/2007 10:51:00 AM	16.17	14.64	15.78	15.75
	83	8/29/2007 10:52:00 AM	16.17	14.62	15.77	15.75
	84	8/29/2007 10:53:00 AM	16.17	14.61	15.77	15.75
	85	8/29/2007 10:54:00 AM	16.16	14.59	15.73	15.74
	86	8/29/2007 10:55:00 AM	16.15	14.58	15.72	15.74
	87	8/29/2007 10:56:00 AM	16.15	14.57	15.72	15.74
	88	8/29/2007 10:57:00 AM	16.14	14.55	15.71	15.69
	89	8/29/2007 10:58:00 AM	16.14	14.54	15.70	15.68
	90	8/29/2007 10:59:00 AM	16.14	14.52	15.70	15.70
	91	8/29/2007 11:00:00 AM	16.11	14.47	15.69	15.68
	92	8/29/2007 11:01:00 AM	16.11	14.49	15.68	15.67
	93	8/29/2007 11:02:00 AM	16.10	14.48	15.68	15.67
	94	8/29/2007 11:03:00 AM	16.10	14.46	15.67	15.66
	95	8/29/2007 11:04:00 AM	16.09	14.45	15.66	15.66
	96	8/29/2007 11:05:00 AM	16.09	14.42	15.65	15.65
	97	8/29/2007 11:06:00 AM	16.08	14.42	15.65	15.65
	98	8/29/2007 11:07:00 AM	16.08	14.37	15.65	15.64
	99	8/29/2007 11:08:00 AM	16.07	14.35	15.60	15.64
	100	8/29/2007 11:09:00 AM	16.06	14.33	15.62	15.63
	101	8/29/2007 11:10:00 AM	16.09	14.32	15.60	15.62
	102	8/29/2007 11:11:00 AM	16.08	14.30	15.59	15.62
	103	8/29/2007 11:12:00 AM	16.05	14.28	15.58	15.62
	104	8/29/2007 11:13:00 AM	16.04	14.27	15.58	15.61
	105	8/29/2007 11:14:00 AM	16.03	14.23	15.57	15.61
	106	8/29/2007 11:15:00 AM	16.03	14.21	15.57	15.60
	107	8/29/2007 11:16:00 AM	16.03	14.20	15.57	15.60
	108	8/29/2007 11:17:00 AM	16.03	14.18	15.57	15.60
	109	8/29/2007 11:18:00 AM	16.03	14.16	15.56	15.59
	110	8/29/2007 11:19:00 AM	15.98	14.15	15.55	15.59
	111	8/29/2007 11:20:00 AM	15.98	14.14	15.55	15.58
	112	8/29/2007 11:21:00 AM	15.98	14.12	15.54	15.58
	113	8/29/2007 11:22:00 AM	15.98	14.10	15.54	15.57
	114	8/29/2007 11:23:00 AM	15.98	14.09	15.53	15.55
	115	8/29/2007 11:24:00 AM	15.97	14.07	15.53	15.53
	116	8/29/2007 11:25:00 AM	15.97	14.06	15.52	15.52
	117	8/29/2007 11:26:00 AM	15.96	14.04	15.52	15.52
	118	8/29/2007 11:27:00 AM	15.96	14.03	15.51	15.52
	119	8/29/2007 11:28:00 AM	15.95	14.01	15.51	15.51
	120	8/29/2007 11:29:00 AM	15.95	13.99	15.50	15.50
	121	8/29/2007 11:30:00 AM	15.95	13.98	15.50	15.49
	122	8/29/2007 11:31:00 AM	15.94	13.96	15.48	15.49
	123	8/29/2007 11:32:00 AM	15.94	13.95	15.48	15.49
	124	8/29/2007 11:33:00 AM	15.93	13.93	15.48	15.48
	125	8/29/2007 11:34:00 AM	15.93	13.92	15.44	15.47
	126	8/29/2007 11:35:00 AM	15.93	13.90	15.44	15.47
	127	8/29/2007 11:36:00 AM	15.92	13.88	15.44	15.46
	128	8/29/2007 11:37:00 AM	15.92	13.87	15.42	15.46
	129	8/29/2007 11:38:00 AM	15.91	13.85	15.42	15.45
	130	8/29/2007 11:39:00 AM	15.87	13.84	15.42	15.43

printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/29/2007 11:40:00 AM	15.87	13.82	15.41	15.44
	132	8/29/2007 11:41:00 AM	15.86	13.80	15.40	15.42
	133	8/29/2007 11:42:00 AM	15.86	13.79	15.40	15.42
	134	8/29/2007 11:43:00 AM	15.86	13.77	15.39	15.41
	135	8/29/2007 11:44:00 AM	15.86	13.76	15.39	15.40
	136	8/29/2007 11:44:42 AM	15.85	13.75	15.39	15.35



E1 - Main Trunk Supply/Return from 7-S

E2 - Supply/Return feeder to 10-S

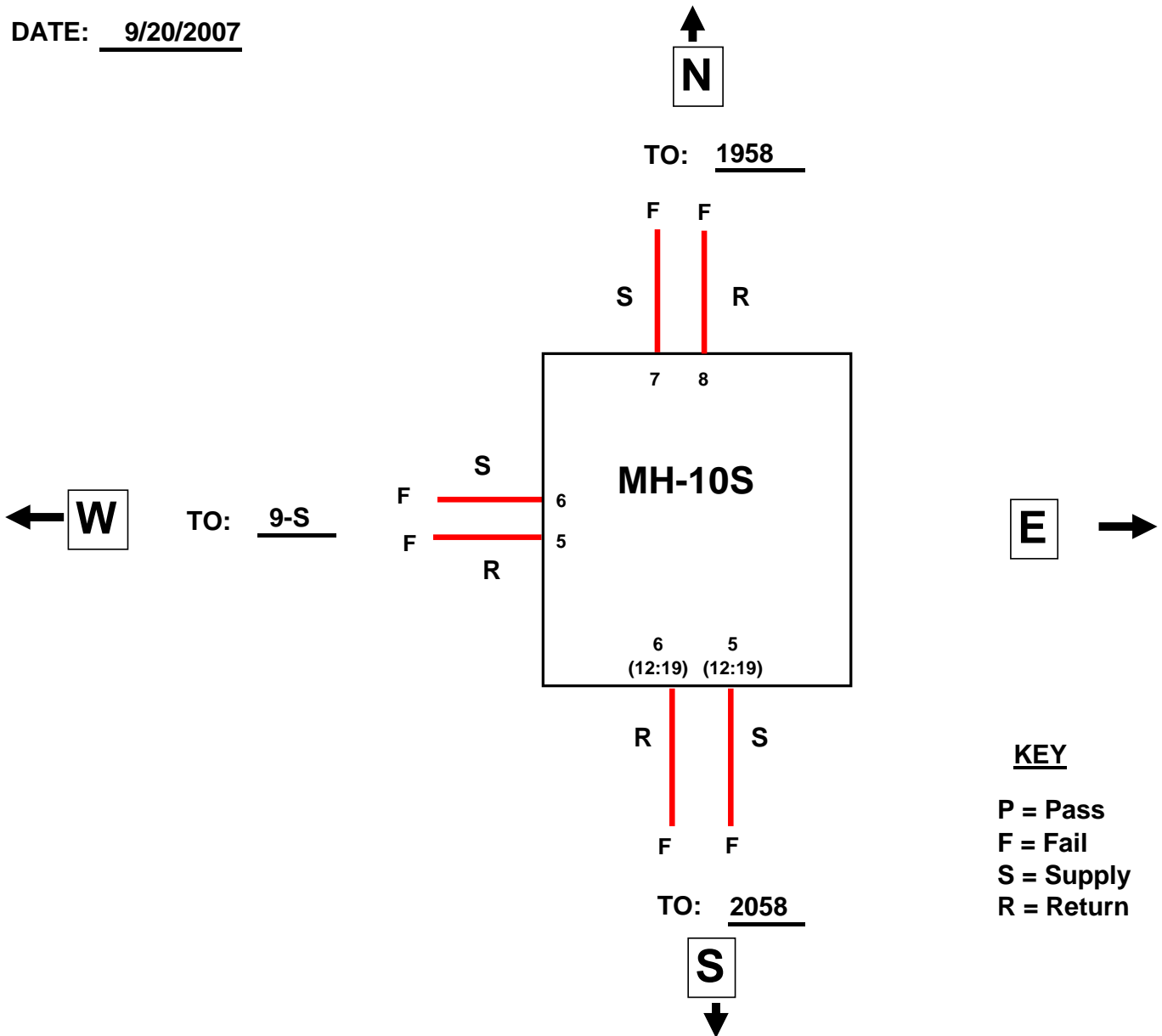
S - Main Trunk Supply/Return to 16-S

W - Supply/Return feeder to 12-S

NOTES:

1. No pressurization conducted from this pit. Pressure tests conducted from adjacent pits (7-S, 10-S and 12-S).
2. Supply/Return drains tested on 8/16/07: All dry.

DATE: 9/20/2007



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

NOTES:

1. Supply/Return drains tested on 8/16/07: North and West wall drains all dry; South wall Supply discharged approx. 1 oz black water when cap removed from nipple, drain valve dry when opened; South wall Return discharged approx. 1 oz muddy water when cap removed from nipple, approx. 1 oz of additional muddy water discharged when drain valve opened and then dry.

MH 10-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Return to 9-S	F	
	2	6	Supply to 9-S	F	
	3	7	Supply to 1958	F	
	4	8	Return to 1958	F	
2	1	5 (12:19)	Supply to 2058	F	
	2	6 (12:19)	Return to 2058	F	

printed 1/9/2008

Handy logger

Name : **LOGGER 2**

LOG Name	09200940
Interval	00:01:00
Personnel	

Start	9/20/2007 9:40:13 AM
Stop	9/20/2007 11:41:50 AM
Comment	

Data	123
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.67	15.89	16.82	16.97
Minimum	-7.50	-7.50	-7.50	-7.50
Average	12.35	10.84	13.57	15.55
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/20/2007 9:40:13 AM	v -7.50	v -7.50	v -7.50	v -7.50
*	2	9/20/2007 9:41:00 AM	0.78	0.69	1.58	1.40
	3	9/20/2007 9:42:00 AM	2.17	2.09	12.37	12.33
	4	9/20/2007 9:43:00 AM	5.66	5.34	^ 16.82	^ 16.97
	5	9/20/2007 9:44:00 AM	5.86	5.56	16.73	16.88
	6	9/20/2007 9:45:00 AM	5.83	5.56	16.63	16.84
	7	9/20/2007 9:46:00 AM	1.98	1.60	16.59	16.84
	8	9/20/2007 9:47:00 AM	0.17	0.08	16.50	16.79
	9	9/20/2007 9:48:00 AM	0.13	0.04	16.43	16.78
	10	9/20/2007 9:49:00 AM	0.13	0.05	16.41	16.75
	11	9/20/2007 9:50:00 AM	0.13	0.03	16.34	16.75
	12	9/20/2007 9:51:00 AM	0.12	0.02	16.26	16.72
	13	9/20/2007 9:52:00 AM	0.12	0.01	16.23	16.69
	14	9/20/2007 9:53:00 AM	9.88	9.86	16.16	16.66
	15	9/20/2007 9:54:00 AM	^ 15.67	15.78	16.10	16.66
	16	9/20/2007 9:55:00 AM	15.31	^ 15.89	16.03	16.64
	17	9/20/2007 9:56:00 AM	15.26	15.75	15.97	16.59
	18	9/20/2007 9:57:00 AM	15.22	15.67	15.93	16.58
	19	9/20/2007 9:58:00 AM	15.18	15.55	15.88	16.57
	20	9/20/2007 9:59:00 AM	15.15	15.44	15.79	16.55
	21	9/20/2007 10:00:00 AM	15.14	15.33	15.74	16.54
	22	9/20/2007 10:01:00 AM	15.11	15.23	15.72	16.52
	23	9/20/2007 10:02:00 AM	15.08	15.14	15.66	16.52
	24	9/20/2007 10:03:00 AM	15.04	15.04	15.60	16.50
*	25	9/20/2007 10:04:00 AM	15.01	14.95	15.55	16.48
	26	9/20/2007 10:05:00 AM	14.98	14.84	15.47	16.44
	27	9/20/2007 10:06:00 AM	14.92	14.77	15.43	16.43
	28	9/20/2007 10:07:00 AM	14.90	14.66	15.39	16.43
	29	9/20/2007 10:08:00 AM	14.88	14.58	15.34	16.41
	30	9/20/2007 10:09:00 AM	14.85	14.50	15.29	16.39

printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/20/2007 10:10:00 AM	14.82	14.42	15.23	16.37
	32	9/20/2007 10:11:00 AM	14.78	14.33	15.18	16.35
	33	9/20/2007 10:12:00 AM	14.75	14.25	15.13	16.33
	34	9/20/2007 10:13:00 AM	14.73	14.17	15.07	16.31
	35	9/20/2007 10:14:00 AM	14.70	14.09	15.02	16.30
	36	9/20/2007 10:15:00 AM	14.67	14.00	14.97	16.28
	37	9/20/2007 10:16:00 AM	14.64	13.93	14.93	16.26
	38	9/20/2007 10:17:00 AM	14.61	13.85	14.89	16.24
	39	9/20/2007 10:18:00 AM	14.57	13.77	14.85	16.23
	40	9/20/2007 10:19:00 AM	14.54	13.72	14.79	16.20
	41	9/20/2007 10:20:00 AM	14.53	13.63	14.76	16.21
	42	9/20/2007 10:21:00 AM	14.50	13.55	14.71	16.22
	43	9/20/2007 10:22:00 AM	14.46	13.46	14.66	16.20
	44	9/20/2007 10:23:00 AM	14.43	13.39	14.61	16.19
	45	9/20/2007 10:24:00 AM	14.40	13.32	14.56	16.12
	46	9/20/2007 10:25:00 AM	14.36	13.25	14.51	16.10
	47	9/20/2007 10:26:00 AM	14.33	13.21	14.46	16.13
	48	9/20/2007 10:27:00 AM	14.32	13.13	14.44	16.13
	49	9/20/2007 10:28:00 AM	14.28	13.09	14.37	16.11
	50	9/20/2007 10:29:00 AM	14.25	13.01	14.32	16.08
	51	9/20/2007 10:30:00 AM	14.22	12.94	14.28	16.06
	52	9/20/2007 10:31:00 AM	14.18	12.86	14.22	16.04
	53	9/20/2007 10:32:00 AM	14.14	12.79	14.18	16.01
	54	9/20/2007 10:33:00 AM	14.11	12.73	14.12	16.04
	55	9/20/2007 10:34:00 AM	14.09	12.66	14.08	15.98
	56	9/20/2007 10:35:00 AM	14.06	12.60	14.04	15.97
	57	9/20/2007 10:36:00 AM	14.02	12.53	13.99	15.99
	58	9/20/2007 10:37:00 AM	13.98	12.45	13.98	15.99
	59	9/20/2007 10:38:00 AM	13.95	12.38	13.93	15.96
	60	9/20/2007 10:39:00 AM	13.92	12.33	13.90	15.94
	61	9/20/2007 10:40:00 AM	13.89	12.26	13.86	15.92
	62	9/20/2007 10:41:00 AM	13.86	12.19	13.81	15.89
	63	9/20/2007 10:42:00 AM	13.82	12.13	13.77	15.87
	64	9/20/2007 10:43:00 AM	13.80	12.10	13.72	15.85
	65	9/20/2007 10:44:00 AM	13.80	12.03	13.66	15.87
	66	9/20/2007 10:45:00 AM	13.76	11.99	13.64	15.86
	67	9/20/2007 10:46:00 AM	13.73	11.92	13.59	15.83
	68	9/20/2007 10:47:00 AM	13.69	11.86	13.53	15.80
	69	9/20/2007 10:48:00 AM	13.65	11.81	13.47	15.82
	70	9/20/2007 10:49:00 AM	13.62	11.75	13.47	15.80
	71	9/20/2007 10:50:00 AM	13.59	11.68	13.42	15.78
	72	9/20/2007 10:51:00 AM	13.56	11.62	13.37	15.76
	73	9/20/2007 10:52:00 AM	13.56	11.59	13.34	15.73
	74	9/20/2007 10:53:00 AM	13.53	11.53	13.33	15.73
	75	9/20/2007 10:54:00 AM	13.49	11.46	13.26	15.70
	76	9/20/2007 10:55:00 AM	13.46	11.41	13.22	15.69
	77	9/20/2007 10:56:00 AM	13.41	11.35	13.15	15.65
	78	9/20/2007 10:57:00 AM	13.38	11.27	13.09	15.61
	79	9/20/2007 10:58:00 AM	13.36	11.22	13.06	15.61
	80	9/20/2007 10:59:00 AM	13.32	11.19	13.03	15.59

printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/20/2007 11:00:00 AM	13.32	11.14	13.01	15.61
	82	9/20/2007 11:01:00 AM	13.32	11.08	12.97	15.59
	83	9/20/2007 11:02:00 AM	13.26	11.02	12.93	15.57
	84	9/20/2007 11:03:00 AM	13.23	10.97	12.89	15.56
	85	9/20/2007 11:04:00 AM	13.22	10.91	12.86	15.54
	86	9/20/2007 11:05:00 AM	13.22	10.84	12.84	15.54
	87	9/20/2007 11:06:00 AM	13.19	10.78	12.78	15.52
	88	9/20/2007 11:07:00 AM	13.11	10.74	12.69	15.48
	89	9/20/2007 11:08:00 AM	13.06	10.67	12.67	15.45
	90	9/20/2007 11:09:00 AM	13.06	10.63	12.62	15.43
	91	9/20/2007 11:10:00 AM	13.03	10.59	12.59	15.42
	92	9/20/2007 11:11:00 AM	13.00	10.54	12.59	15.43
	93	9/20/2007 11:12:00 AM	13.00	10.51	12.54	15.44
	94	9/20/2007 11:13:00 AM	12.98	10.46	12.52	15.41
	95	9/20/2007 11:14:00 AM	12.96	10.40	12.48	15.39
	96	9/20/2007 11:15:00 AM	12.92	10.34	12.45	15.36
	97	9/20/2007 11:16:00 AM	12.88	10.29	12.40	15.35
	98	9/20/2007 11:17:00 AM	12.86	10.24	12.36	15.33
	99	9/20/2007 11:18:00 AM	12.86	10.21	12.35	15.34
	100	9/20/2007 11:19:00 AM	12.82	10.15	12.31	15.31
	101	9/20/2007 11:20:00 AM	12.78	10.10	12.26	15.33
	102	9/20/2007 11:21:00 AM	12.75	10.06	12.23	15.28
	103	9/20/2007 11:22:00 AM	12.71	9.99	12.14	15.26
	104	9/20/2007 11:23:00 AM	12.68	9.95	12.10	15.22
	105	9/20/2007 11:24:00 AM	12.64	9.89	12.08	15.20
	106	9/20/2007 11:25:00 AM	12.61	9.85	12.06	15.21
	107	9/20/2007 11:26:00 AM	12.59	9.83	12.03	15.19
	108	9/20/2007 11:27:00 AM	12.57	9.79	11.99	15.20
	109	9/20/2007 11:28:00 AM	12.54	9.74	11.99	15.18
	110	9/20/2007 11:29:00 AM	12.51	9.70	11.95	15.15
	111	9/20/2007 11:30:00 AM	12.49	9.66	11.91	15.14
	112	9/20/2007 11:31:00 AM	12.46	9.60	11.87	15.16
	113	9/20/2007 11:32:00 AM	12.43	9.55	11.83	15.14
	114	9/20/2007 11:33:00 AM	12.40	9.50	11.79	15.12
	115	9/20/2007 11:34:00 AM	12.37	9.45	11.79	15.09
	116	9/20/2007 11:35:00 AM	12.36	9.40	11.75	15.09
	117	9/20/2007 11:36:00 AM	12.33	9.34	11.73	15.07
	118	9/20/2007 11:37:00 AM	12.30	9.30	11.68	15.06
	119	9/20/2007 11:38:00 AM	12.28	9.26	11.64	15.05
	120	9/20/2007 11:39:00 AM	12.24	9.20	11.61	15.03
	121	9/20/2007 11:40:00 AM	12.22	9.19	11.62	15.01
	122	9/20/2007 11:41:00 AM	12.19	9.14	11.57	14.99
	123	9/20/2007 11:41:50 AM	12.17	9.10	11.54	14.98

printed 1/9/2008

Handy logger

Name : **LOGGER 2**

LOG Name	09201219
Interval	00:01:00
Personnel	

Start	9/20/2007 12:19:01 PM
Stop	9/20/2007 2:21:14 PM
Comment	

Data	124
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.09	16.00	-7.50	-7.50
Minimum	0.05	0.15	-7.50	-7.50
Average	12.64	14.84	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/20/2007 12:19:01 PM	v 0.05	v 0.15	v -7.50	v -7.50
	2	9/20/2007 12:20:00 PM	12.84	13.51	v -7.50	v -7.50
	3	9/20/2007 12:21:00 PM	^ 16.09	^ 16.00	v -7.50	v -7.50
	4	9/20/2007 12:22:00 PM	16.00	15.97	v -7.50	v -7.50
	5	9/20/2007 12:23:00 PM	15.90	15.93	v -7.50	v -7.50
	6	9/20/2007 12:24:00 PM	15.82	15.91	v -7.50	v -7.50
	7	9/20/2007 12:25:00 PM	15.74	15.90	v -7.50	v -7.50
	8	9/20/2007 12:26:00 PM	15.64	15.87	v -7.50	v -7.50
	9	9/20/2007 12:27:00 PM	15.54	15.86	v -7.50	v -7.50
	10	9/20/2007 12:28:00 PM	15.48	15.85	v -7.50	v -7.50
	11	9/20/2007 12:29:00 PM	15.43	15.84	v -7.50	v -7.50
	12	9/20/2007 12:30:00 PM	15.36	15.82	v -7.50	v -7.50
	13	9/20/2007 12:31:00 PM	15.31	15.78	v -7.50	v -7.50
	14	9/20/2007 12:32:00 PM	15.23	15.80	v -7.50	v -7.50
	15	9/20/2007 12:33:00 PM	15.16	15.78	v -7.50	v -7.50
	16	9/20/2007 12:34:00 PM	15.09	15.75	v -7.50	v -7.50
	17	9/20/2007 12:35:00 PM	15.02	15.73	v -7.50	v -7.50
	18	9/20/2007 12:36:00 PM	14.96	15.72	v -7.50	v -7.50
	19	9/20/2007 12:37:00 PM	14.90	15.70	v -7.50	v -7.50
	20	9/20/2007 12:38:00 PM	14.84	15.68	v -7.50	v -7.50
	21	9/20/2007 12:39:00 PM	14.79	15.68	v -7.50	v -7.50
	22	9/20/2007 12:40:00 PM	14.69	15.64	v -7.50	v -7.50
	23	9/20/2007 12:41:00 PM	14.60	15.63	v -7.50	v -7.50
*	24	9/20/2007 12:42:00 PM	14.55	15.62	v -7.50	v -7.50
	25	9/20/2007 12:43:00 PM	14.51	15.59	v -7.50	v -7.50
	26	9/20/2007 12:44:00 PM	14.45	15.57	v -7.50	v -7.50
	27	9/20/2007 12:45:00 PM	14.40	15.57	v -7.50	v -7.50
	28	9/20/2007 12:46:00 PM	14.36	15.55	v -7.50	v -7.50
	29	9/20/2007 12:47:00 PM	14.29	15.53	v -7.50	v -7.50
	30	9/20/2007 12:48:00 PM	14.23	15.53	v -7.50	v -7.50

printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/20/2007 12:49:00 PM	14.19	15.50	v -7.50	v -7.50
	32	9/20/2007 12:50:00 PM	14.13	15.47	v -7.50	v -7.50
	33	9/20/2007 12:51:00 PM	14.05	15.45	v -7.50	v -7.50
	34	9/20/2007 12:52:00 PM	14.00	15.42	v -7.50	v -7.50
	35	9/20/2007 12:53:00 PM	13.95	15.41	v -7.50	v -7.50
	36	9/20/2007 12:54:00 PM	13.90	15.40	v -7.50	v -7.50
	37	9/20/2007 12:55:00 PM	13.82	15.37	v -7.50	v -7.50
	38	9/20/2007 12:56:00 PM	13.81	15.38	v -7.50	v -7.50
	39	9/20/2007 12:57:00 PM	13.74	15.37	v -7.50	v -7.50
	40	9/20/2007 12:58:00 PM	13.68	15.35	v -7.50	v -7.50
	41	9/20/2007 12:59:00 PM	13.65	15.36	v -7.50	v -7.50
	42	9/20/2007 1:00:00 PM	13.62	15.32	v -7.50	v -7.50
	43	9/20/2007 1:01:00 PM	13.57	15.30	v -7.50	v -7.50
	44	9/20/2007 1:02:00 PM	13.47	15.29	v -7.50	v -7.50
	45	9/20/2007 1:03:00 PM	13.40	15.25	v -7.50	v -7.50
	46	9/20/2007 1:04:00 PM	13.36	15.22	v -7.50	v -7.50
*	47	9/20/2007 1:05:00 PM	13.27	15.21	v -7.50	v -7.50
	48	9/20/2007 1:06:00 PM	13.24	15.18	v -7.50	v -7.50
	49	9/20/2007 1:07:00 PM	13.18	15.16	v -7.50	v -7.50
	50	9/20/2007 1:08:00 PM	13.15	15.16	v -7.50	v -7.50
	51	9/20/2007 1:09:00 PM	13.09	15.16	v -7.50	v -7.50
	52	9/20/2007 1:10:00 PM	13.05	15.14	v -7.50	v -7.50
	53	9/20/2007 1:11:00 PM	13.01	15.13	v -7.50	v -7.50
	54	9/20/2007 1:12:00 PM	12.97	15.11	v -7.50	v -7.50
	55	9/20/2007 1:13:00 PM	12.95	15.12	v -7.50	v -7.50
	56	9/20/2007 1:14:00 PM	12.89	15.08	v -7.50	v -7.50
	57	9/20/2007 1:15:00 PM	12.83	15.09	v -7.50	v -7.50
	58	9/20/2007 1:16:00 PM	12.81	15.08	v -7.50	v -7.50
	59	9/20/2007 1:17:00 PM	12.75	15.06	v -7.50	v -7.50
	60	9/20/2007 1:18:00 PM	12.70	15.04	v -7.50	v -7.50
	61	9/20/2007 1:19:00 PM	12.66	15.01	v -7.50	v -7.50
	62	9/20/2007 1:20:00 PM	12.61	15.00	v -7.50	v -7.50
	63	9/20/2007 1:21:00 PM	12.57	14.97	v -7.50	v -7.50
	64	9/20/2007 1:22:00 PM	12.53	14.98	v -7.50	v -7.50
	65	9/20/2007 1:23:00 PM	12.51	14.94	v -7.50	v -7.50
	66	9/20/2007 1:24:00 PM	12.45	14.95	v -7.50	v -7.50
	67	9/20/2007 1:25:00 PM	12.40	14.92	v -7.50	v -7.50
	68	9/20/2007 1:26:00 PM	12.35	14.90	v -7.50	v -7.50
	69	9/20/2007 1:27:00 PM	12.30	14.88	v -7.50	v -7.50
	70	9/20/2007 1:28:00 PM	12.26	14.86	v -7.50	v -7.50
	71	9/20/2007 1:29:00 PM	12.21	14.84	v -7.50	v -7.50
	72	9/20/2007 1:30:00 PM	12.17	14.83	v -7.50	v -7.50
	73	9/20/2007 1:31:00 PM	12.13	14.81	v -7.50	v -7.50
	74	9/20/2007 1:32:00 PM	12.07	14.78	v -7.50	v -7.50
	75	9/20/2007 1:33:00 PM	12.06	14.76	v -7.50	v -7.50
	76	9/20/2007 1:34:00 PM	12.01	14.74	v -7.50	v -7.50
	77	9/20/2007 1:35:00 PM	12.00	14.75	v -7.50	v -7.50
	78	9/20/2007 1:36:00 PM	11.95	14.70	v -7.50	v -7.50
	79	9/20/2007 1:37:00 PM	11.91	14.69	v -7.50	v -7.50
	80	9/20/2007 1:38:00 PM	11.86	14.67	v -7.50	v -7.50

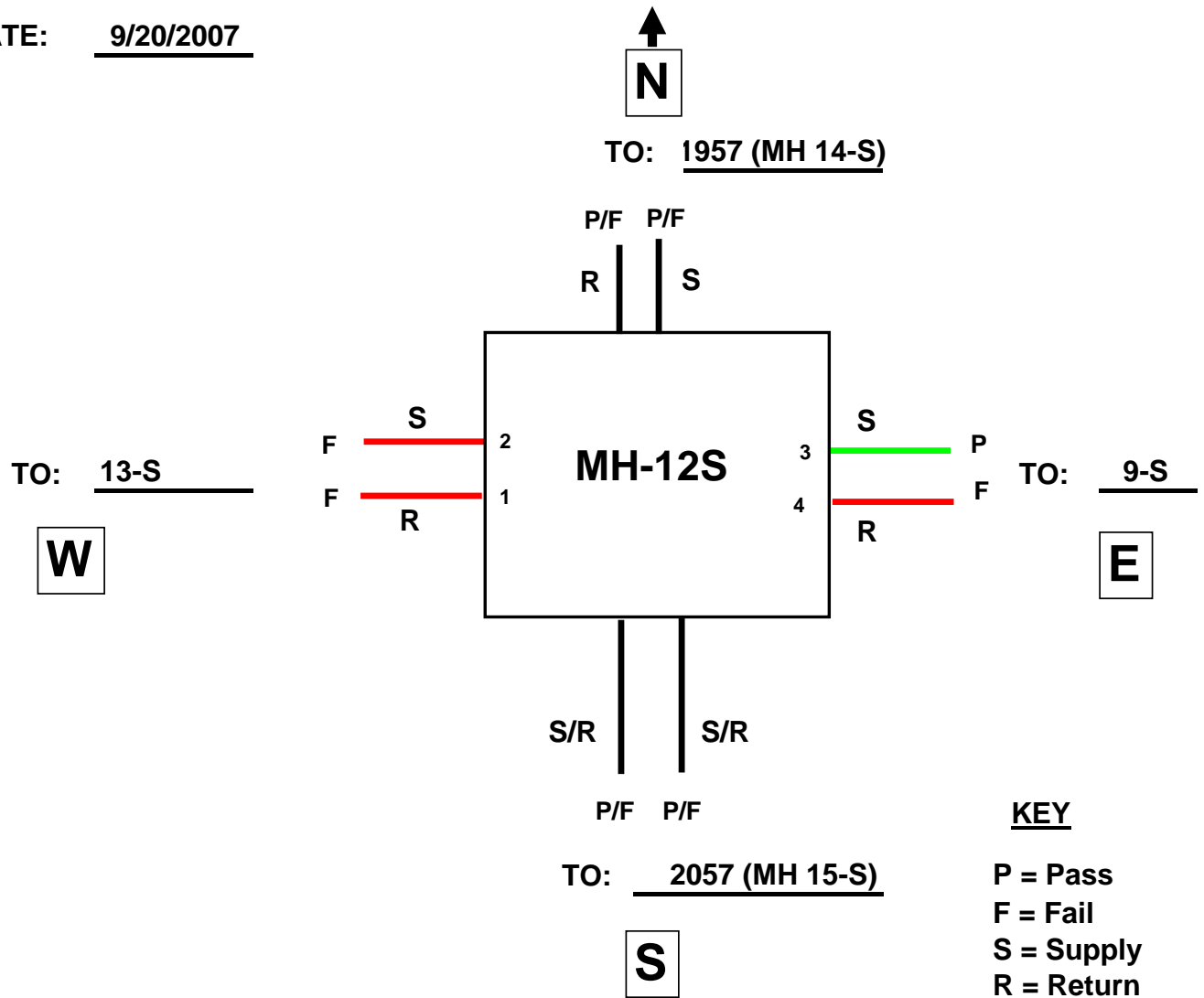
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/20/2007 1:39:00 PM	11.82	14.68	v -7.50	v -7.50
	82	9/20/2007 1:40:00 PM	11.77	14.66	v -7.50	v -7.50
	83	9/20/2007 1:41:00 PM	11.75	14.66	v -7.50	v -7.50
	84	9/20/2007 1:42:00 PM	11.88	14.62	v -7.50	v -7.50
	85	9/20/2007 1:43:00 PM	11.65	14.61	v -7.50	v -7.50
	86	9/20/2007 1:44:00 PM	11.57	14.58	v -7.50	v -7.50
	87	9/20/2007 1:45:00 PM	11.55	14.55	v -7.50	v -7.50
	88	9/20/2007 1:46:00 PM	11.52	14.54	v -7.50	v -7.50
	89	9/20/2007 1:47:00 PM	11.48	14.56	v -7.50	v -7.50
	90	9/20/2007 1:48:00 PM	11.48	14.55	v -7.50	v -7.50
	91	9/20/2007 1:49:00 PM	11.43	14.53	v -7.50	v -7.50
	92	9/20/2007 1:50:00 PM	11.39	14.50	v -7.50	v -7.50
	93	9/20/2007 1:51:00 PM	11.34	14.49	v -7.50	v -7.50
	94	9/20/2007 1:52:00 PM	11.30	14.44	v -7.50	v -7.50
	95	9/20/2007 1:53:00 PM	11.28	14.44	v -7.50	v -7.50
	96	9/20/2007 1:54:00 PM	11.21	14.41	v -7.50	v -7.50
	97	9/20/2007 1:55:00 PM	11.17	14.40	v -7.50	v -7.50
	98	9/20/2007 1:56:00 PM	11.17	14.40	v -7.50	v -7.50
	99	9/20/2007 1:57:00 PM	11.15	14.41	v -7.50	v -7.50
	100	9/20/2007 1:58:00 PM	11.13	14.37	v -7.50	v -7.50
	101	9/20/2007 1:59:00 PM	11.08	14.38	v -7.50	v -7.50
	102	9/20/2007 2:00:00 PM	11.06	14.34	v -7.50	v -7.50
	103	9/20/2007 2:01:00 PM	11.02	14.32	v -7.50	v -7.50
	104	9/20/2007 2:02:00 PM	10.98	14.31	v -7.50	v -7.50
	105	9/20/2007 2:03:00 PM	10.94	14.29	v -7.50	v -7.50
	106	9/20/2007 2:04:00 PM	10.90	14.28	v -7.50	v -7.50
	107	9/20/2007 2:05:00 PM	10.87	14.27	v -7.50	v -7.50
	108	9/20/2007 2:06:00 PM	10.83	14.23	v -7.50	v -7.50
	109	9/20/2007 2:07:00 PM	10.77	14.23	v -7.50	v -7.50
	110	9/20/2007 2:08:00 PM	10.74	14.20	v -7.50	v -7.50
	111	9/20/2007 2:09:00 PM	10.71	14.19	v -7.50	v -7.50
	112	9/20/2007 2:10:00 PM	10.69	14.17	v -7.50	v -7.50
	113	9/20/2007 2:11:00 PM	10.64	14.16	v -7.50	v -7.50
	114	9/20/2007 2:12:00 PM	10.61	14.15	v -7.50	v -7.50
	115	9/20/2007 2:13:00 PM	10.57	14.12	v -7.50	v -7.50
	116	9/20/2007 2:14:00 PM	10.53	14.11	v -7.50	v -7.50
	117	9/20/2007 2:15:00 PM	10.49	14.11	v -7.50	v -7.50
	118	9/20/2007 2:16:00 PM	10.49	14.10	v -7.50	v -7.50
	119	9/20/2007 2:17:00 PM	10.45	14.07	v -7.50	v -7.50
	120	9/20/2007 2:18:00 PM	10.44	14.05	v -7.50	v -7.50
	121	9/20/2007 2:19:00 PM	10.40	14.07	v -7.50	v -7.50
	122	9/20/2007 2:20:00 PM	10.36	14.04	v -7.50	v -7.50
	123	9/20/2007 2:21:00 PM	10.32	14.02	v -7.50	v -7.50
	124	9/20/2007 2:21:14 PM	10.30	14.02	v -7.50	v -7.50

DATE: 9/20/2007



NOTES:

- Supply/Return drain tests conducted on 8/16/07: East and West wall drains all dry; North wall Supply and Return both discharged < 1 oz muddy water from nipple when cap removed, < 1oz muddy water from drain valve when opened; South wall Supply drain discharged < 1 oz clear water from plug, < 1oz black water from valve; South wall Return drain discharged < 1 oz clear water from plug, < 1oz clear water from valve.
- Access to Bldgs. 1957 and 2057 through existing old manholes designated MH 14-S and MH 15-S on current "as built" drawings. These are restricted, permit-required pits with round iron coverplates. Pits are very congested with drains/vents not accessible. Conduits from MH 12-S to these two buildings were not pressure tested.

MH 12-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 13-S	F	
	2	2	Supply to 13-S	F	
	3	3	Supply to 9-S	P	
	4	4	Return to 9-S	F	

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Handy logger

Name : **LOGGER 1**

LOG Name	09200904
Interval	00:01:00
Personnel	

Start	9/20/2007 9:04:50 AM
Stop	9/20/2007 11:07:58 AM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.34	16.17	16.03	15.98
Minimum	0.05	0.06	0.01	0.19
Average	14.76	10.82	14.99	13.31
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/20/2007 9:04:50 AM	v 0.05	0.09	0.02	v 0.19
	2	9/20/2007 9:05:00 AM	v 0.05	0.12	v 0.01	0.22
	3	9/20/2007 9:06:00 AM	5.21	5.42	4.85	4.78
	4	9/20/2007 9:07:00 AM	^ 16.34	16.00	^ 16.03	15.63
	5	9/20/2007 9:08:00 AM	16.24	^ 16.17	16.02	^ 15.98
	6	9/20/2007 9:09:00 AM	16.22	16.08	16.01	15.90
	7	9/20/2007 9:10:00 AM	16.20	15.98	16.00	15.87
	8	9/20/2007 9:11:00 AM	16.19	15.84	15.97	15.80
	9	9/20/2007 9:12:00 AM	16.18	15.76	15.98	15.74
	10	9/20/2007 9:13:00 AM	16.15	15.65	15.97	15.66
	11	9/20/2007 9:14:00 AM	16.12	15.54	15.94	15.61
	12	9/20/2007 9:15:00 AM	16.09	15.42	15.95	15.55
	13	9/20/2007 9:16:00 AM	16.07	15.31	15.93	15.50
	14	9/20/2007 9:17:00 AM	16.09	15.20	15.91	15.49
	15	9/20/2007 9:18:00 AM	16.06	15.12	15.88	15.44
	16	9/20/2007 9:19:00 AM	16.03	15.00	15.87	15.40
	17	9/20/2007 9:20:00 AM	16.01	14.90	15.85	15.35
	18	9/20/2007 9:21:00 AM	16.02	14.79	15.83	15.31
	19	9/20/2007 9:22:00 AM	15.97	14.69	15.82	15.27
	20	9/20/2007 9:23:00 AM	15.96	14.59	15.80	15.23
	21	9/20/2007 9:24:00 AM	15.94	14.45	15.78	15.19
	22	9/20/2007 9:25:00 AM	15.91	14.41	15.77	15.15
	23	9/20/2007 9:26:00 AM	15.92	14.31	15.75	15.12
	24	9/20/2007 9:27:00 AM	15.89	14.24	15.73	15.08
	25	9/20/2007 9:28:00 AM	15.87	14.13	15.71	15.05
	26	9/20/2007 9:29:00 AM	15.84	14.04	15.70	15.03
	27	9/20/2007 9:30:00 AM	15.83	13.94	15.71	14.98
	28	9/20/2007 9:31:00 AM	15.85	13.89	15.72	14.99
	29	9/20/2007 9:32:00 AM	15.82	13.82	15.70	14.96
	30	9/20/2007 9:33:00 AM	15.82	13.72	15.68	14.92

printed 1/9/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/20/2007 9:34:00 AM	15.79	13.62	15.66	14.89
	32	9/20/2007 9:35:00 AM	15.77	13.55	15.66	14.85
	33	9/20/2007 9:36:00 AM	15.78	13.44	15.64	14.82
	34	9/20/2007 9:37:00 AM	15.75	13.37	15.62	14.78
	35	9/20/2007 9:38:00 AM	15.72	13.24	15.61	14.75
	36	9/20/2007 9:39:00 AM	15.70	13.15	15.59	14.72
	37	9/20/2007 9:40:00 AM	15.68	13.07	15.58	14.68
	38	9/20/2007 9:41:00 AM	15.64	12.96	15.57	14.65
	39	9/20/2007 9:42:00 AM	15.63	12.87	15.57	14.61
	40	9/20/2007 9:43:00 AM	15.61	12.80	15.55	14.58
	41	9/20/2007 9:44:00 AM	15.59	12.72	15.54	14.55
	42	9/20/2007 9:45:00 AM	15.56	12.64	15.53	14.51
	43	9/20/2007 9:46:00 AM	15.53	12.56	15.52	14.47
	44	9/20/2007 9:47:00 AM	15.50	12.48	15.50	14.43
	45	9/20/2007 9:48:00 AM	15.48	12.39	15.50	14.39
	46	9/20/2007 9:49:00 AM	15.48	12.34	15.49	14.37
	47	9/20/2007 9:50:00 AM	15.44	12.26	15.47	14.33
	48	9/20/2007 9:51:00 AM	15.41	12.17	15.45	14.32
	49	9/20/2007 9:52:00 AM	15.37	12.09	15.47	14.29
	50	9/20/2007 9:53:00 AM	15.33	12.01	15.46	14.25
	51	9/20/2007 9:54:00 AM	15.30	11.92	15.44	14.21
	52	9/20/2007 9:55:00 AM	15.26	11.85	15.42	14.17
	53	9/20/2007 9:56:00 AM	15.26	11.76	15.41	14.13
	54	9/20/2007 9:57:00 AM	15.23	11.69	15.39	14.10
	55	9/20/2007 9:58:00 AM	15.19	11.62	15.38	14.06
	56	9/20/2007 9:59:00 AM	15.17	11.54	15.36	14.02
	57	9/20/2007 10:00:00 AM	15.14	11.46	15.35	13.98
	58	9/20/2007 10:01:00 AM	15.10	11.39	15.34	13.95
	59	9/20/2007 10:02:00 AM	15.07	11.30	15.36	13.93
	60	9/20/2007 10:03:00 AM	15.04	11.23	15.31	13.89
	61	9/20/2007 10:04:00 AM	15.00	11.15	15.30	13.85
	62	9/20/2007 10:05:00 AM	14.98	11.08	15.29	13.82
	63	9/20/2007 10:06:00 AM	14.96	11.00	15.29	13.80
	64	9/20/2007 10:07:00 AM	14.96	10.93	15.27	13.76
	65	9/20/2007 10:08:00 AM	14.95	10.84	15.28	13.71
	66	9/20/2007 10:09:00 AM	14.97	10.77	15.27	13.64
	67	9/20/2007 10:10:00 AM	14.97	10.71	15.27	13.64
	68	9/20/2007 10:11:00 AM	14.96	10.64	15.26	13.61
	69	9/20/2007 10:12:00 AM	14.95	10.58	15.25	13.59
	70	9/20/2007 10:13:00 AM	14.95	10.52	15.24	13.58
	71	9/20/2007 10:14:00 AM	14.94	10.46	15.24	13.57
	72	9/20/2007 10:15:00 AM	14.93	10.38	15.26	13.55
	73	9/20/2007 10:16:00 AM	14.91	10.31	15.25	13.53
	74	9/20/2007 10:17:00 AM	14.89	10.25	15.23	13.51
	75	9/20/2007 10:18:00 AM	14.87	10.19	15.19	13.49
	76	9/20/2007 10:19:00 AM	14.85	10.13	15.22	13.47
	77	9/20/2007 10:20:00 AM	14.83	10.06	15.20	13.45
	78	9/20/2007 10:21:00 AM	14.80	10.00	15.19	13.42
	79	9/20/2007 10:22:00 AM	14.80	9.93	15.19	13.40
	80	9/20/2007 10:23:00 AM	14.79	9.88	15.20	13.37

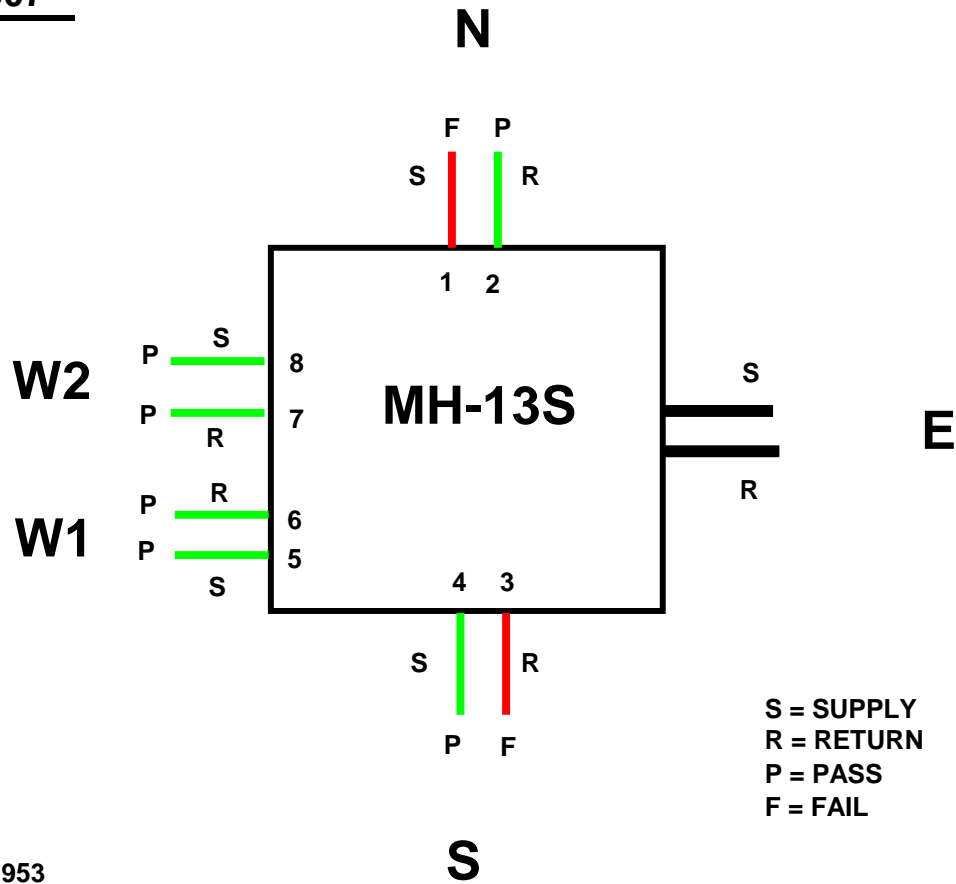
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/20/2007 10:24:00 AM	14.77	9.82	15.18	13.34
	82	9/20/2007 10:25:00 AM	14.76	9.74	15.16	13.30
	83	9/20/2007 10:26:00 AM	14.78	9.67	15.15	13.27
	84	9/20/2007 10:27:00 AM	14.77	9.60	15.14	13.24
	85	9/20/2007 10:28:00 AM	14.78	9.55	15.12	13.22
	86	9/20/2007 10:29:00 AM	14.71	9.49	15.11	13.21
	87	9/20/2007 10:30:00 AM	14.73	9.43	15.10	13.19
	88	9/20/2007 10:31:00 AM	14.70	9.36	15.08	13.19
	89	9/20/2007 10:32:00 AM	14.68	9.29	15.07	13.13
	90	9/20/2007 10:33:00 AM	14.66	9.27	15.06	13.14
	91	9/20/2007 10:34:00 AM	14.63	9.20	15.05	13.12
	92	9/20/2007 10:35:00 AM	14.61	9.14	15.03	13.06
	93	9/20/2007 10:36:00 AM	14.58	9.12	15.02	13.07
	94	9/20/2007 10:37:00 AM	14.55	9.01	15.00	13.04
	95	9/20/2007 10:38:00 AM	14.53	8.95	14.99	13.02
	96	9/20/2007 10:39:00 AM	14.51	8.85	14.99	12.96
	97	9/20/2007 10:40:00 AM	14.46	8.82	14.98	12.95
	98	9/20/2007 10:41:00 AM	14.45	8.73	14.97	12.92
	99	9/20/2007 10:42:00 AM	14.42	8.72	14.96	12.90
	100	9/20/2007 10:43:00 AM	14.42	8.66	14.95	12.87
	101	9/20/2007 10:44:00 AM	14.39	8.56	14.94	12.85
	102	9/20/2007 10:45:00 AM	14.33	8.52	14.93	12.82
	103	9/20/2007 10:46:00 AM	14.31	8.47	14.93	12.79
	104	9/20/2007 10:47:00 AM	14.28	8.43	14.91	12.77
	105	9/20/2007 10:48:00 AM	14.24	8.37	14.90	12.74
	106	9/20/2007 10:49:00 AM	14.24	8.31	14.88	12.71
	107	9/20/2007 10:50:00 AM	14.21	8.25	14.86	12.68
	108	9/20/2007 10:51:00 AM	14.17	8.20	14.85	12.66
	109	9/20/2007 10:52:00 AM	14.14	8.14	14.84	12.63
	110	9/20/2007 10:53:00 AM	14.10	8.09	14.82	12.60
	111	9/20/2007 10:54:00 AM	14.08	8.03	14.81	12.59
	112	9/20/2007 10:55:00 AM	14.06	7.97	14.80	12.52
	113	9/20/2007 10:56:00 AM	14.04	7.91	14.81	12.49
	114	9/20/2007 10:57:00 AM	14.06	7.88	14.80	12.45
	115	9/20/2007 10:58:00 AM	14.09	7.83	14.79	12.41
	116	9/20/2007 10:59:00 AM	14.08	7.78	14.78	12.38
	117	9/20/2007 11:00:00 AM	14.07	7.73	14.77	12.35
	118	9/20/2007 11:01:00 AM	14.04	7.67	14.76	12.34
	119	9/20/2007 11:02:00 AM	14.02	7.64	14.74	12.35
	120	9/20/2007 11:03:00 AM	14.04	7.58	14.73	12.33
	121	9/20/2007 11:04:00 AM	14.04	7.52	14.72	12.32
	122	9/20/2007 11:05:00 AM	14.05	6.80	14.74	8.43
	123	9/20/2007 11:06:00 AM	14.05	2.00	14.68	3.79
	124	9/20/2007 11:07:00 AM	13.98	0.15	14.69	1.17
	125	9/20/2007 11:07:58 AM	13.97	v 0.06	14.70	v 0.19

DATE: 8/24/2007



N - Feeder to Bldg. 1953

E - Feeder from 12-S

S - Feeder to Bldg. 2050

W1 - Feeder to Bldg. 2051

W2 - Feeder to Bldg. 1952

NOTES:

1. Pit dry with moderate soil on floor.
2. Supply/Return drains tested on 8/16/07: All drains dry.

MH 13-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to Bldg. 1953	F	
	2	2	Return from Bldg. 1953	P	
	3	3	Return from Bldg. 2050	F	
	4	4	Supply to Bldg. 2050	P	
2	1	5	Supply to Bldg. 2051	P	
	2	6	Return from Bldg. 2051	P	
	3	7	Return from Bldg. 1952	P	
	4	8	Supply to Bldg. 1952	P	

printed 1/9/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08241249
Interval	00:01:00
Personnel	

Start	8/24/2007 12:49:02 PM
Stop	8/24/2007 3:04:26 PM
Comment	

Data	137
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.13	16.30	16.24	16.34
Minimum	-0.12	0.05	-0.01	0.18
Average	13.26	15.41	13.97	15.23
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/24/2007 12:49:02 PM	-0.11	v 0.05	0.04	v 0.18
	2	8/24/2007 12:50:00 PM	v -0.12	0.08	0.02	v 0.18
	3	8/24/2007 12:51:00 PM	^ 16.13	0.06	0.01	0.20
	4	8/24/2007 12:52:00 PM	15.95	16.11	v -0.01	0.21
	5	8/24/2007 12:53:00 PM	15.87	16.11	13.52	0.20
	6	8/24/2007 12:54:00 PM	15.79	16.11	^ 16.24	7.63
	7	8/24/2007 12:55:00 PM	15.72	16.08	16.18	^ 16.34
	8	8/24/2007 12:56:00 PM	15.63	16.08	16.15	16.32
	9	8/24/2007 12:57:00 PM	15.58	16.05	16.13	16.30
	10	8/24/2007 12:58:00 PM	15.51	16.11	16.11	16.26
	11	8/24/2007 12:59:00 PM	15.44	16.08	16.06	16.23
	12	8/24/2007 1:00:00 PM	15.38	16.06	16.01	16.25
	13	8/24/2007 1:01:00 PM	15.32	16.04	15.96	16.22
	14	8/24/2007 1:02:00 PM	15.26	16.03	15.94	16.22
	15	8/24/2007 1:03:00 PM	15.21	16.01	15.93	16.20
	16	8/24/2007 1:04:00 PM	15.15	15.99	15.89	16.18
	17	8/24/2007 1:05:00 PM	15.11	16.01	15.85	16.16
	18	8/24/2007 1:06:00 PM	15.06	16.00	15.81	16.15
	19	8/24/2007 1:07:00 PM	15.05	15.98	15.77	16.13
	20	8/24/2007 1:08:00 PM	15.01	15.97	15.74	16.12
	21	8/24/2007 1:09:00 PM	14.96	15.95	15.74	16.13
	22	8/24/2007 1:10:00 PM	14.92	15.93	15.70	16.12
	23	8/24/2007 1:11:00 PM	14.87	15.93	15.67	16.11
	24	8/24/2007 1:12:00 PM	14.83	15.92	15.63	16.11
	25	8/24/2007 1:13:00 PM	14.78	15.92	15.61	16.09
	26	8/24/2007 1:14:00 PM	14.74	15.91	15.56	16.08
	27	8/24/2007 1:15:00 PM	14.70	15.90	15.54	16.07
	28	8/24/2007 1:16:00 PM	14.66	15.88	15.51	16.06
	29	8/24/2007 1:17:00 PM	14.62	15.87	15.48	16.06
	30	8/24/2007 1:18:00 PM	14.58	15.86	15.45	16.05

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/24/2007 1:19:00 PM	14.55	15.87	15.42	16.04
	32	8/24/2007 1:20:00 PM	14.51	15.86	15.39	16.03
	33	8/24/2007 1:21:00 PM	14.46	15.85	15.36	16.02
	34	8/24/2007 1:22:00 PM	14.42	15.84	15.33	16.02
	35	8/24/2007 1:23:00 PM	14.38	15.83	15.31	16.01
	36	8/24/2007 1:24:00 PM	14.34	15.82	15.28	16.01
	37	8/24/2007 1:25:00 PM	14.30	15.82	15.25	16.00
	38	8/24/2007 1:26:00 PM	14.27	15.79	15.22	16.00
	39	8/24/2007 1:27:00 PM	14.23	15.79	15.16	16.00
	40	8/24/2007 1:28:00 PM	14.19	15.78	15.17	16.00
	41	8/24/2007 1:29:00 PM	14.15	15.78	15.14	15.99
	42	8/24/2007 1:30:00 PM	14.11	15.78	15.11	15.98
	43	8/24/2007 1:31:00 PM	14.10	15.76	15.04	15.98
	44	8/24/2007 1:32:00 PM	14.06	15.75	15.01	15.97
	45	8/24/2007 1:33:00 PM	14.02	15.74	15.02	15.97
	46	8/24/2007 1:34:00 PM	13.97	15.73	15.00	15.96
	47	8/24/2007 1:35:00 PM	13.94	15.73	14.97	15.96
	48	8/24/2007 1:36:00 PM	13.90	15.71	14.91	15.96
	49	8/24/2007 1:37:00 PM	13.86	15.71	14.88	15.96
	50	8/24/2007 1:38:00 PM	13.82	15.70	14.85	15.95
	51	8/24/2007 1:39:00 PM	13.78	15.69	14.83	15.94
	52	8/24/2007 1:40:00 PM	13.74	15.67	14.80	15.94
	53	8/24/2007 1:41:00 PM	13.70	15.67	14.77	15.94
	54	8/24/2007 1:42:00 PM	13.66	15.68	14.75	15.93
	55	8/24/2007 1:43:00 PM	13.63	15.65	14.74	15.93
	56	8/24/2007 1:44:00 PM	13.61	15.64	14.73	15.92
	57	8/24/2007 1:45:00 PM	13.61	15.63	14.66	15.92
	58	8/24/2007 1:46:00 PM	13.57	15.62	14.68	15.91
	59	8/24/2007 1:47:00 PM	13.52	15.61	14.62	15.91
	60	8/24/2007 1:48:00 PM	13.50	15.61	14.62	15.91
	61	8/24/2007 1:49:00 PM	13.47	15.59	14.60	15.90
	62	8/24/2007 1:50:00 PM	13.42	15.59	14.57	15.89
	63	8/24/2007 1:51:00 PM	13.40	15.61	14.55	15.89
	64	8/24/2007 1:52:00 PM	13.36	15.59	14.52	15.89
	65	8/24/2007 1:53:00 PM	13.34	15.58	14.50	15.88
	66	8/24/2007 1:54:00 PM	13.30	15.57	14.47	15.88
	67	8/24/2007 1:55:00 PM	13.26	15.57	14.44	15.86
	68	8/24/2007 1:56:00 PM	13.19	15.56	14.41	15.86
	69	8/24/2007 1:57:00 PM	13.15	15.54	14.39	15.86
	70	8/24/2007 1:58:00 PM	13.11	15.54	14.36	15.85
	71	8/24/2007 1:59:00 PM	13.05	15.53	14.33	15.85
	72	8/24/2007 2:00:00 PM	13.03	15.52	14.31	15.85
	73	8/24/2007 2:01:00 PM	13.00	15.51	14.30	15.84
	74	8/24/2007 2:02:00 PM	12.97	15.51	14.23	15.84
	75	8/24/2007 2:03:00 PM	12.90	15.50	14.22	15.84
	76	8/24/2007 2:04:00 PM	12.87	15.50	14.19	15.83
	77	8/24/2007 2:05:00 PM	12.84	15.49	14.17	15.83
	78	8/24/2007 2:06:00 PM	12.81	15.48	14.15	15.82
	79	8/24/2007 2:07:00 PM	12.77	15.47	14.16	15.82
	80	8/24/2007 2:08:00 PM	12.73	15.46	14.13	15.82

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/24/2007 2:09:00 PM	12.69	15.45	14.11	15.81
	82	8/24/2007 2:10:00 PM	12.65	15.43	14.09	15.80
	83	8/24/2007 2:11:00 PM	12.61	15.43	14.06	15.80
	84	8/24/2007 2:12:00 PM	12.60	15.41	14.04	15.79
	85	8/24/2007 2:13:00 PM	12.55	15.41	14.02	15.79
	86	8/24/2007 2:14:00 PM	12.52	15.40	14.00	15.79
	87	8/24/2007 2:15:00 PM	12.48	15.44	13.96	15.78
	88	8/24/2007 2:16:00 PM	12.45	15.38	13.95	15.78
	89	8/24/2007 2:17:00 PM	12.39	15.37	13.93	15.77
	90	8/24/2007 2:18:00 PM	12.36	15.36	13.90	15.77
	91	8/24/2007 2:19:00 PM	12.33	15.36	13.88	15.77
	92	8/24/2007 2:20:00 PM	12.27	15.36	13.86	15.76
	93	8/24/2007 2:21:00 PM	12.25	15.35	13.80	15.76
	94	8/24/2007 2:22:00 PM	12.22	15.34	13.78	15.75
	95	8/24/2007 2:23:00 PM	12.19	15.34	13.76	15.75
	96	8/24/2007 2:24:00 PM	12.16	15.33	13.74	15.74
	97	8/24/2007 2:25:00 PM	12.14	15.32	13.72	15.74
	98	8/24/2007 2:26:00 PM	12.19	15.29	13.70	15.74
	99	8/24/2007 2:27:00 PM	12.28	15.22	13.67	15.73
	100	8/24/2007 2:28:00 PM	12.39	15.10	13.65	15.72
	101	8/24/2007 2:29:00 PM	12.46	15.04	13.63	15.72
	102	8/24/2007 2:30:00 PM	12.52	15.08	13.61	15.71
	103	8/24/2007 2:31:00 PM	12.55	15.12	13.59	15.71
	104	8/24/2007 2:32:00 PM	12.57	15.20	13.56	15.71
	105	8/24/2007 2:33:00 PM	12.58	15.31	13.54	15.70
	106	8/24/2007 2:34:00 PM	12.58	15.42	13.55	15.70
	107	8/24/2007 2:35:00 PM	12.59	15.53	13.53	15.69
	108	8/24/2007 2:36:00 PM	12.59	15.63	13.47	15.69
	109	8/24/2007 2:37:00 PM	12.58	15.72	13.45	15.68
	110	8/24/2007 2:38:00 PM	12.58	15.79	13.43	15.68
	111	8/24/2007 2:39:00 PM	12.58	15.84	13.41	15.67
	112	8/24/2007 2:40:00 PM	12.57	15.89	13.39	15.68
	113	8/24/2007 2:41:00 PM	12.56	15.93	13.37	15.67
	114	8/24/2007 2:42:00 PM	12.56	15.97	13.34	15.67
	115	8/24/2007 2:43:00 PM	12.55	16.00	13.32	15.66
	116	8/24/2007 2:44:00 PM	12.54	16.03	13.31	15.66
	117	8/24/2007 2:45:00 PM	12.53	16.06	13.29	15.66
	118	8/24/2007 2:46:00 PM	12.52	16.07	13.26	15.65
	119	8/24/2007 2:47:00 PM	12.51	16.06	13.24	15.65
	120	8/24/2007 2:48:00 PM	12.50	16.11	13.22	15.65
	121	8/24/2007 2:49:00 PM	12.47	16.13	13.20	15.65
	122	8/24/2007 2:50:00 PM	12.46	16.14	13.17	15.64
	123	8/24/2007 2:51:00 PM	12.44	16.16	13.14	15.63
	124	8/24/2007 2:52:00 PM	12.42	16.18	13.12	15.62
	125	8/24/2007 2:53:00 PM	12.40	16.19	13.10	15.62
	126	8/24/2007 2:54:00 PM	12.38	16.20	13.08	15.62
	127	8/24/2007 2:55:00 PM	12.37	16.21	13.05	15.61
	128	8/24/2007 2:56:00 PM	12.36	16.23	13.03	15.60
	129	8/24/2007 2:57:00 PM	12.34	16.24	13.00	15.60
	130	8/24/2007 2:58:00 PM	12.32	16.25	12.98	15.60

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/24/2007 2:59:00 PM	12.31	16.26	12.96	15.60
	132	8/24/2007 3:00:00 PM	12.29	16.27	12.93	15.59
	133	8/24/2007 3:01:00 PM	12.28	16.27	12.90	15.59
	134	8/24/2007 3:02:00 PM	12.28	16.28	12.88	15.58
	135	8/24/2007 3:03:00 PM	12.22	16.29	12.87	15.59
	136	8/24/2007 3:04:00 PM	12.22	^ 16.30	12.83	15.58
	137	8/24/2007 3:04:26 PM	12.21	^ 16.30	12.83	15.58

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Handy logger

Name : **LOGGER 2**

LOG Name	08241248
Interval	00:01:00
Personnel	

Start	8/24/2007 12:48:58 PM
Stop	8/24/2007 3:04:31 PM
Comment	

Data	138
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.53	16.13	16.34	16.40
Minimum	0.10	0.05	0.15	0.04
Average	14.41	14.38	14.30	14.26
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/24/2007 12:48:58 PM	0.12	v 0.05	0.16	v 0.04
	2	8/24/2007 12:49:00 PM	0.12	v 0.05	v 0.15	v 0.04
	3	8/24/2007 12:50:00 PM	0.11	v 0.05	0.18	0.07
	4	8/24/2007 12:51:00 PM	0.11	v 0.05	0.16	0.11
	5	8/24/2007 12:52:00 PM	v 0.10	v 0.05	0.16	0.10
	6	8/24/2007 12:53:00 PM	v 0.10	v 0.05	0.19	0.10
	7	8/24/2007 12:54:00 PM	0.14	v 0.05	0.18	0.09
	8	8/24/2007 12:55:00 PM	0.13	v 0.05	0.19	0.09
	9	8/24/2007 12:56:00 PM	11.99	v 0.05	0.19	0.08
	10	8/24/2007 12:57:00 PM	^ 16.53	v 0.05	0.18	0.08
	11	8/24/2007 12:58:00 PM	16.18	v 0.05	0.19	0.08
	12	8/24/2007 12:59:00 PM	16.05	4.60	0.18	0.08
	13	8/24/2007 1:00:00 PM	16.03	10.16	0.19	0.09
	14	8/24/2007 1:01:00 PM	16.03	12.63	5.77	5.09
	15	8/24/2007 1:02:00 PM	16.00	15.84	10.41	10.23
	16	8/24/2007 1:03:00 PM	15.98	^ 16.13	^ 16.34	^ 16.40
	17	8/24/2007 1:04:00 PM	15.95	16.11	16.02	16.11
	18	8/24/2007 1:05:00 PM	15.97	16.12	15.99	16.08
	19	8/24/2007 1:06:00 PM	15.96	^ 16.13	16.00	16.11
	20	8/24/2007 1:07:00 PM	15.94	^ 16.13	15.99	16.11
	21	8/24/2007 1:08:00 PM	15.95	16.11	15.97	16.09
	22	8/24/2007 1:09:00 PM	15.93	16.10	15.98	16.09
	23	8/24/2007 1:10:00 PM	15.92	16.09	15.98	16.10
	24	8/24/2007 1:11:00 PM	15.90	16.11	15.97	16.09
	25	8/24/2007 1:12:00 PM	15.89	16.11	15.97	16.07
	26	8/24/2007 1:13:00 PM	15.88	16.10	15.95	16.06
	27	8/24/2007 1:14:00 PM	15.86	16.09	15.98	16.06
	28	8/24/2007 1:15:00 PM	15.86	16.09	15.94	16.05
	29	8/24/2007 1:16:00 PM	15.84	16.09	15.95	16.05
	30	8/24/2007 1:17:00 PM	15.83	16.09	15.98	16.05

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/24/2007 1:18:00 PM	15.82	16.08	15.94	16.04
	32	8/24/2007 1:19:00 PM	15.81	16.08	15.97	16.04
	33	8/24/2007 1:20:00 PM	15.80	16.07	15.97	16.03
	34	8/24/2007 1:21:00 PM	15.79	16.07	15.97	16.02
	35	8/24/2007 1:22:00 PM	15.78	16.07	15.96	16.02
	36	8/24/2007 1:23:00 PM	15.77	16.06	15.96	16.02
	37	8/24/2007 1:24:00 PM	15.76	16.05	15.96	16.01
	38	8/24/2007 1:25:00 PM	15.75	16.05	15.95	16.00
	39	8/24/2007 1:26:00 PM	15.74	16.05	15.96	16.00
	40	8/24/2007 1:27:00 PM	15.73	16.04	15.95	16.00
	41	8/24/2007 1:28:00 PM	15.71	16.04	15.95	16.00
	42	8/24/2007 1:29:00 PM	15.70	16.03	15.93	16.00
	43	8/24/2007 1:30:00 PM	15.70	16.03	15.94	16.00
	44	8/24/2007 1:31:00 PM	15.68	16.02	15.94	15.99
	45	8/24/2007 1:32:00 PM	15.67	16.02	15.93	15.99
	46	8/24/2007 1:33:00 PM	15.66	16.01	15.94	16.00
	47	8/24/2007 1:34:00 PM	15.64	16.01	15.95	15.99
	48	8/24/2007 1:35:00 PM	15.64	16.00	15.95	15.99
	49	8/24/2007 1:36:00 PM	15.62	16.00	15.97	15.98
	50	8/24/2007 1:37:00 PM	15.61	15.99	15.96	15.98
	51	8/24/2007 1:38:00 PM	15.60	15.98	15.97	15.98
	52	8/24/2007 1:39:00 PM	15.58	15.99	15.97	15.97
	53	8/24/2007 1:40:00 PM	15.57	15.98	15.97	15.97
	54	8/24/2007 1:41:00 PM	15.57	15.98	15.97	15.95
	55	8/24/2007 1:42:00 PM	15.55	15.96	15.97	15.99
	56	8/24/2007 1:43:00 PM	15.53	15.96	15.97	15.94
	57	8/24/2007 1:44:00 PM	15.52	15.96	15.97	15.95
	58	8/24/2007 1:45:00 PM	15.51	15.95	15.96	15.94
	59	8/24/2007 1:46:00 PM	15.50	15.95	15.97	15.93
	60	8/24/2007 1:47:00 PM	15.49	15.94	15.97	15.93
	61	8/24/2007 1:48:00 PM	15.47	15.93	15.96	15.92
	62	8/24/2007 1:49:00 PM	15.46	15.92	15.96	15.92
	63	8/24/2007 1:50:00 PM	15.45	15.92	15.95	15.92
	64	8/24/2007 1:51:00 PM	15.45	15.91	15.94	15.91
	65	8/24/2007 1:52:00 PM	15.43	15.90	15.97	15.93
	66	8/24/2007 1:53:00 PM	15.42	15.90	15.96	15.94
	67	8/24/2007 1:54:00 PM	15.41	15.89	15.96	15.94
	68	8/24/2007 1:55:00 PM	15.39	15.88	15.96	15.94
	69	8/24/2007 1:56:00 PM	15.39	15.87	15.97	15.95
	70	8/24/2007 1:57:00 PM	15.37	15.86	15.97	15.94
	71	8/24/2007 1:58:00 PM	15.35	15.85	15.98	15.94
	72	8/24/2007 1:59:00 PM	15.35	15.85	15.95	15.92
	73	8/24/2007 2:00:00 PM	15.33	15.84	15.95	15.91
	74	8/24/2007 2:01:00 PM	15.32	15.84	15.96	15.91
	75	8/24/2007 2:02:00 PM	15.30	15.83	15.96	15.91
	76	8/24/2007 2:03:00 PM	15.30	15.83	15.95	15.91
	77	8/24/2007 2:04:00 PM	15.29	15.79	15.95	15.91
	78	8/24/2007 2:05:00 PM	15.27	15.78	15.95	15.90
	79	8/24/2007 2:06:00 PM	15.26	15.81	15.95	15.89
	80	8/24/2007 2:07:00 PM	15.25	15.79	15.95	15.89

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/24/2007 2:08:00 PM	15.23	15.79	15.95	15.88
	82	8/24/2007 2:09:00 PM	15.22	15.78	15.95	15.87
	83	8/24/2007 2:10:00 PM	15.22	15.77	15.95	15.87
	84	8/24/2007 2:11:00 PM	15.21	15.76	15.94	15.86
	85	8/24/2007 2:12:00 PM	15.18	15.76	15.94	15.88
	86	8/24/2007 2:13:00 PM	15.18	15.75	15.93	15.83
	87	8/24/2007 2:14:00 PM	15.16	15.74	15.93	15.86
	88	8/24/2007 2:15:00 PM	15.16	15.73	15.95	15.82
	89	8/24/2007 2:16:00 PM	15.14	15.73	15.92	15.82
	90	8/24/2007 2:17:00 PM	15.14	15.72	15.92	15.81
	91	8/24/2007 2:18:00 PM	15.12	15.71	15.91	15.80
	92	8/24/2007 2:19:00 PM	15.10	15.70	15.91	15.80
	93	8/24/2007 2:20:00 PM	15.09	15.69	15.91	15.79
	94	8/24/2007 2:21:00 PM	15.08	15.69	15.90	15.79
	95	8/24/2007 2:22:00 PM	15.06	15.68	15.89	15.78
	96	8/24/2007 2:23:00 PM	15.06	15.64	15.89	15.78
	97	8/24/2007 2:24:00 PM	15.05	15.64	15.89	15.77
	98	8/24/2007 2:25:00 PM	15.04	15.63	15.88	15.77
	99	8/24/2007 2:26:00 PM	15.00	15.63	15.87	15.76
	100	8/24/2007 2:27:00 PM	14.99	15.62	15.88	15.75
	101	8/24/2007 2:28:00 PM	14.97	15.61	15.87	15.74
	102	8/24/2007 2:29:00 PM	14.97	15.60	15.87	15.74
	103	8/24/2007 2:30:00 PM	14.95	15.60	15.86	15.73
	104	8/24/2007 2:31:00 PM	14.94	15.59	15.86	15.72
	105	8/24/2007 2:32:00 PM	14.96	15.57	15.85	15.71
	106	8/24/2007 2:33:00 PM	14.95	15.56	15.86	15.69
	107	8/24/2007 2:34:00 PM	14.93	15.59	15.84	15.68
	108	8/24/2007 2:35:00 PM	14.92	15.55	15.84	15.68
	109	8/24/2007 2:36:00 PM	14.91	15.57	15.83	15.67
	110	8/24/2007 2:37:00 PM	14.89	15.56	15.82	15.66
	111	8/24/2007 2:38:00 PM	14.88	15.56	15.82	15.66
	112	8/24/2007 2:39:00 PM	14.87	15.51	15.81	15.64
	113	8/24/2007 2:40:00 PM	14.85	15.51	15.82	15.64
	114	8/24/2007 2:41:00 PM	14.85	15.50	15.80	15.63
	115	8/24/2007 2:42:00 PM	14.81	15.49	15.78	15.64
	116	8/24/2007 2:43:00 PM	14.82	15.49	15.74	15.65
	117	8/24/2007 2:44:00 PM	14.79	15.49	15.75	15.65
	118	8/24/2007 2:45:00 PM	14.78	15.48	15.75	15.66
	119	8/24/2007 2:46:00 PM	14.77	15.47	15.75	15.68
	120	8/24/2007 2:47:00 PM	14.75	15.46	15.75	15.69
	121	8/24/2007 2:48:00 PM	14.75	15.46	15.75	15.69
	122	8/24/2007 2:49:00 PM	14.73	15.45	15.76	15.70
	123	8/24/2007 2:50:00 PM	14.71	15.44	15.75	15.70
	124	8/24/2007 2:51:00 PM	14.71	15.43	15.75	15.70
	125	8/24/2007 2:52:00 PM	14.73	15.42	15.75	15.70
	126	8/24/2007 2:53:00 PM	14.68	15.42	15.74	15.69
	127	8/24/2007 2:54:00 PM	14.70	15.41	15.73	15.69
	128	8/24/2007 2:55:00 PM	14.68	15.40	15.73	15.68
	129	8/24/2007 2:56:00 PM	14.68	15.38	15.73	15.68
	130	8/24/2007 2:57:00 PM	14.63	15.37	15.72	15.67

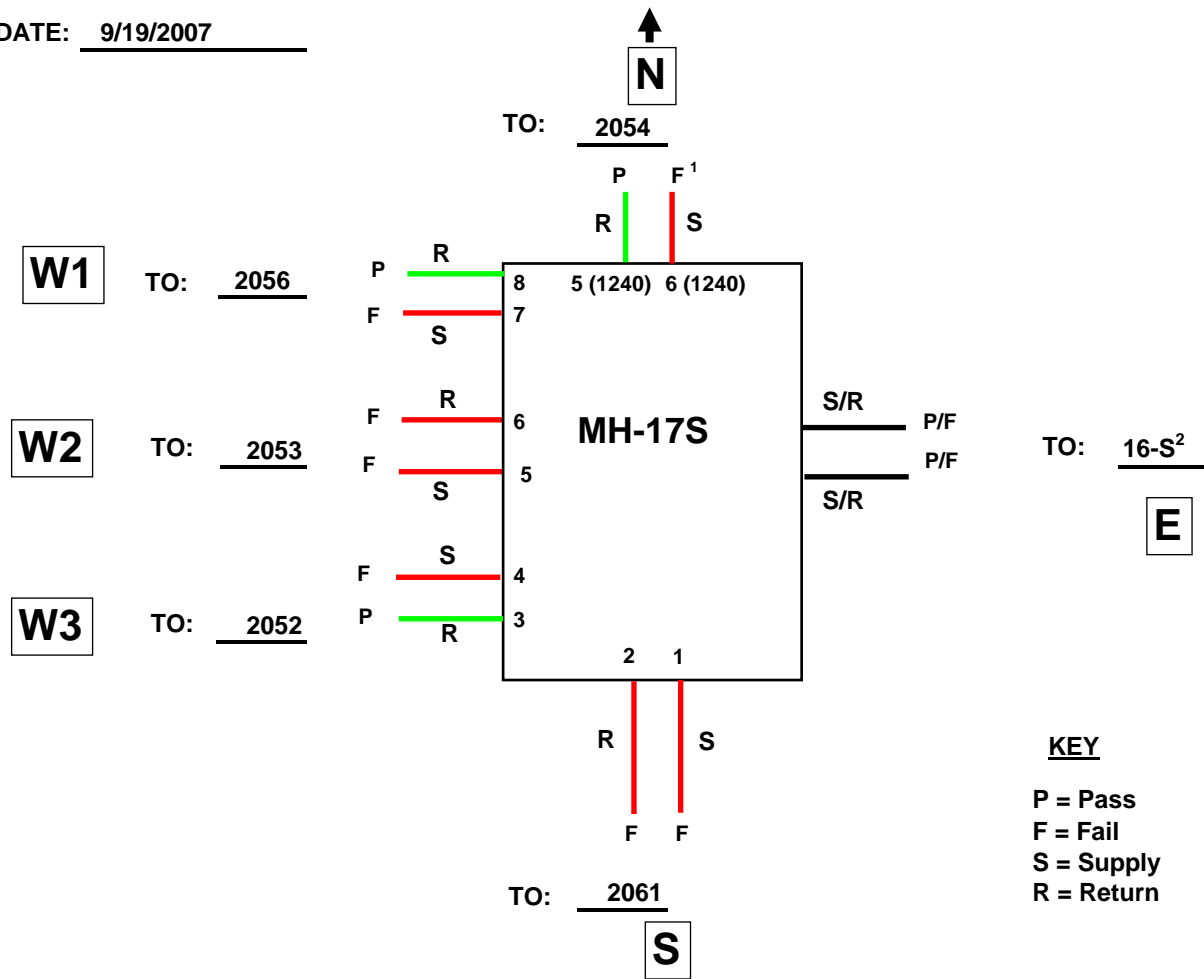
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/24/2007 2:58:00 PM	14.65	15.37	15.73	15.67
	132	8/24/2007 2:59:00 PM	14.64	15.36	15.72	15.67
	133	8/24/2007 3:00:00 PM	14.63	15.36	15.71	15.65
	134	8/24/2007 3:01:00 PM	14.61	15.35	15.71	15.66
	135	8/24/2007 3:02:00 PM	14.61	15.34	15.71	15.65
	136	8/24/2007 3:03:00 PM	14.57	15.33	15.70	15.65
	137	8/24/2007 3:04:00 PM	14.56	15.33	15.70	15.64
	138	8/24/2007 3:04:31 PM	14.55	15.32	15.70	15.64

DATE: 9/19/2007



NOTES:

1. Weld failed at drain
2. MH 16-S is "restricted access - permit required" pit, no testing conducted in MH 16-S
3. Supply/Return drain tests conducted on 8/16/07: All drains on North, East and West walls dry; South wall Supply drain - few black drops from nipple when cap removed, valve dry; South wall Return drain - < 1 oz black water from plug, few black drops from valve.

MH 17-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 2061	F	
	2	2	Return to 2061	F	
	3	3	Return to 2052	P	
	4	4	Supply to 2052	F	
2	1	5	Supply to 2053	F	
	2	6	Return to 2053	F	
	3	7	Supply to 2056	F	
	4	8	Return to 2056	P	
2	1	5 (1240)	Return to 2054	P	
	2	6 (1240)	Supply to 2054	F	Drain weld failed

printed 1/9/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09191139
Interval	00:01:00
Personnel	

Start	9/19/2007 11:39:47 AM
Stop	9/19/2007 1:44:49 PM
Comment	

Data	127
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.18	16.30	16.95	16.50
Minimum	0.06	0.07	0.09	0.19
Average	13.96	14.11	16.21	15.23
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 11:39:47 AM	v 0.06	v 0.07	v 0.09	0.20
	2	9/19/2007 11:40:00 AM	0.09	v 0.07	v 0.09	v 0.19
	3	9/19/2007 11:41:00 AM	5.83	5.80	5.04	5.64
	4	9/19/2007 11:42:00 AM	12.07	11.48	10.16	11.26
	5	9/19/2007 11:43:00 AM	^ 16.18	15.70	14.59	15.95
	6	9/19/2007 11:44:00 AM	16.13	^ 16.30	16.20	^ 16.50
	7	9/19/2007 11:45:00 AM	16.09	16.19	16.20	16.46
	8	9/19/2007 11:46:00 AM	16.04	16.08	16.15	16.41
	9	9/19/2007 11:47:00 AM	16.01	16.07	16.17	16.40
	10	9/19/2007 11:48:00 AM	15.98	15.97	16.13	16.35
	11	9/19/2007 11:49:00 AM	15.93	15.90	16.11	16.32
	12	9/19/2007 11:50:00 AM	15.88	15.82	16.04	16.30
	13	9/19/2007 11:51:00 AM	15.82	15.76	16.03	16.30
	14	9/19/2007 11:52:00 AM	15.81	15.70	16.03	16.29
	15	9/19/2007 11:53:00 AM	15.78	15.65	16.03	16.28
	16	9/19/2007 11:54:00 AM	15.73	15.59	16.02	16.28
	17	9/19/2007 11:55:00 AM	15.69	15.57	16.05	16.28
	18	9/19/2007 11:56:00 AM	15.68	15.49	16.03	16.27
	19	9/19/2007 11:57:00 AM	15.64	15.47	16.03	16.28
	20	9/19/2007 11:58:00 AM	15.62	15.42	16.02	16.29
	21	9/19/2007 11:59:00 AM	15.60	15.37	16.02	16.29
	22	9/19/2007 12:00:00 PM	15.58	15.33	16.02	16.29
	23	9/19/2007 12:01:00 PM	15.57	15.30	16.04	16.29
	24	9/19/2007 12:02:00 PM	15.56	15.27	16.06	16.29
	25	9/19/2007 12:03:00 PM	15.54	15.26	16.12	16.31
	26	9/19/2007 12:04:00 PM	15.53	15.23	16.18	16.30
	27	9/19/2007 12:05:00 PM	15.51	15.21	16.20	16.29
	28	9/19/2007 12:06:00 PM	15.48	15.18	16.24	16.28
	29	9/19/2007 12:07:00 PM	15.49	15.16	16.28	16.28
	30	9/19/2007 12:08:00 PM	15.47	15.13	16.35	16.26

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 12:09:00 PM	15.44	15.13	16.39	16.25
	32	9/19/2007 12:10:00 PM	15.42	15.07	16.42	16.23
	33	9/19/2007 12:11:00 PM	15.39	15.05	16.46	16.22
	34	9/19/2007 12:12:00 PM	15.36	15.03	16.50	16.21
	35	9/19/2007 12:13:00 PM	15.34	14.99	16.53	16.19
	36	9/19/2007 12:14:00 PM	15.31	15.00	16.56	16.17
	37	9/19/2007 12:15:00 PM	15.27	14.97	16.59	16.16
	38	9/19/2007 12:16:00 PM	15.24	14.94	16.62	16.13
	39	9/19/2007 12:17:00 PM	15.20	14.91	16.65	16.11
	40	9/19/2007 12:18:00 PM	15.16	14.88	16.71	16.10
	41	9/19/2007 12:19:00 PM	15.13	14.84	16.73	16.08
	42	9/19/2007 12:20:00 PM	15.11	14.81	16.75	16.06
	43	9/19/2007 12:21:00 PM	15.08	14.79	16.76	16.04
	44	9/19/2007 12:22:00 PM	15.04	14.77	16.77	16.05
	45	9/19/2007 12:23:00 PM	15.00	14.75	16.79	16.04
	46	9/19/2007 12:24:00 PM	14.97	14.72	16.85	16.04
	47	9/19/2007 12:25:00 PM	14.93	14.70	16.85	16.01
	48	9/19/2007 12:26:00 PM	14.89	14.65	16.87	15.99
	49	9/19/2007 12:27:00 PM	14.86	14.62	16.87	15.97
	50	9/19/2007 12:28:00 PM	14.82	14.60	16.87	15.95
	51	9/19/2007 12:29:00 PM	14.79	14.58	16.89	15.89
	52	9/19/2007 12:30:00 PM	14.75	14.56	16.90	15.87
	53	9/19/2007 12:31:00 PM	14.72	14.54	16.86	15.85
	54	9/19/2007 12:32:00 PM	14.68	14.49	16.87	15.84
	55	9/19/2007 12:33:00 PM	14.64	14.48	16.89	15.83
	56	9/19/2007 12:34:00 PM	14.61	14.47	16.90	15.81
	57	9/19/2007 12:35:00 PM	14.58	14.45	16.87	15.79
	58	9/19/2007 12:36:00 PM	14.54	14.43	16.91	15.78
	59	9/19/2007 12:37:00 PM	14.50	14.41	16.92	15.76
	60	9/19/2007 12:38:00 PM	14.47	14.40	16.89	15.73
	61	9/19/2007 12:39:00 PM	14.43	14.39	16.90	15.72
	62	9/19/2007 12:40:00 PM	14.40	14.37	16.90	15.71
	63	9/19/2007 12:41:00 PM	14.37	14.35	16.94	15.69
	64	9/19/2007 12:42:00 PM	14.33	14.32	16.90	15.67
	65	9/19/2007 12:43:00 PM	14.29	14.31	16.94	15.64
	66	9/19/2007 12:44:00 PM	14.26	14.28	16.91	15.62
	67	9/19/2007 12:45:00 PM	14.23	14.27	16.92	15.60
	68	9/19/2007 12:46:00 PM	14.19	14.25	16.92	15.58
	69	9/19/2007 12:47:00 PM	14.15	14.24	16.92	15.56
	70	9/19/2007 12:48:00 PM	14.12	14.22	16.92	15.54
	71	9/19/2007 12:49:00 PM	14.08	14.20	16.92	15.52
	72	9/19/2007 12:50:00 PM	14.05	14.18	^ 16.95	15.50
	73	9/19/2007 12:51:00 PM	14.01	14.16	^ 16.95	15.50
	74	9/19/2007 12:52:00 PM	13.97	14.13	16.94	15.47
	75	9/19/2007 12:53:00 PM	13.97	14.11	16.93	15.45
	76	9/19/2007 12:54:00 PM	13.93	14.08	16.93	15.43
	77	9/19/2007 12:55:00 PM	13.89	14.06	16.92	15.41
	78	9/19/2007 12:56:00 PM	13.86	14.05	16.92	15.39
	79	9/19/2007 12:57:00 PM	13.79	14.03	16.92	15.37
	80	9/19/2007 12:58:00 PM	13.76	14.01	16.91	15.35

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 12:59:00 PM	13.73	13.99	16.91	15.33
	82	9/19/2007 1:00:00 PM	13.71	13.97	16.91	15.32
	83	9/19/2007 1:01:00 PM	13.68	13.96	16.91	15.30
	84	9/19/2007 1:02:00 PM	13.69	13.95	16.89	15.28
	85	9/19/2007 1:03:00 PM	13.66	13.95	16.90	15.26
	86	9/19/2007 1:04:00 PM	13.63	13.94	16.89	15.24
	87	9/19/2007 1:05:00 PM	13.61	13.93	16.86	15.22
	88	9/19/2007 1:06:00 PM	13.57	13.91	16.86	15.20
	89	9/19/2007 1:07:00 PM	13.54	13.91	16.86	15.18
	90	9/19/2007 1:08:00 PM	13.52	13.89	16.87	15.17
	91	9/19/2007 1:09:00 PM	13.49	13.91	16.86	15.15
	92	9/19/2007 1:10:00 PM	13.45	13.90	16.90	15.13
	93	9/19/2007 1:11:00 PM	13.43	13.88	16.88	15.11
	94	9/19/2007 1:12:00 PM	13.39	13.85	16.87	15.09
	95	9/19/2007 1:13:00 PM	13.36	13.84	16.81	15.08
	96	9/19/2007 1:14:00 PM	13.35	13.82	16.85	15.06
	97	9/19/2007 1:15:00 PM	13.31	13.81	16.85	15.04
	98	9/19/2007 1:16:00 PM	13.27	13.80	16.83	15.02
	99	9/19/2007 1:17:00 PM	13.24	13.78	16.78	15.00
	100	9/19/2007 1:18:00 PM	13.21	13.77	16.82	14.99
	101	9/19/2007 1:19:00 PM	13.19	13.75	16.80	14.97
	102	9/19/2007 1:20:00 PM	13.15	13.73	16.78	14.95
	103	9/19/2007 1:21:00 PM	13.12	13.71	16.73	14.94
	104	9/19/2007 1:22:00 PM	13.09	13.70	16.73	14.93
	105	9/19/2007 1:23:00 PM	13.06	13.68	16.72	14.91
	106	9/19/2007 1:24:00 PM	13.02	13.67	16.71	14.89
	107	9/19/2007 1:25:00 PM	12.99	13.66	16.70	14.89
	108	9/19/2007 1:26:00 PM	12.95	13.65	16.68	14.87
	109	9/19/2007 1:27:00 PM	12.92	13.63	16.67	14.85
	110	9/19/2007 1:28:00 PM	12.89	13.62	16.65	14.83
	111	9/19/2007 1:29:00 PM	12.86	13.61	16.64	14.82
	112	9/19/2007 1:30:00 PM	12.83	13.60	16.63	14.80
	113	9/19/2007 1:31:00 PM	12.79	13.57	16.62	14.79
	114	9/19/2007 1:32:00 PM	12.76	13.56	16.61	14.76
	115	9/19/2007 1:33:00 PM	12.73	13.54	16.59	14.75
	116	9/19/2007 1:34:00 PM	12.69	13.54	16.54	14.73
	117	9/19/2007 1:35:00 PM	12.66	13.49	16.56	14.72
	118	9/19/2007 1:36:00 PM	12.64	13.48	16.55	14.71
	119	9/19/2007 1:37:00 PM	12.60	13.46	16.53	14.69
	120	9/19/2007 1:38:00 PM	12.57	13.45	16.50	14.68
	121	9/19/2007 1:39:00 PM	12.54	13.44	16.48	14.66
	122	9/19/2007 1:40:00 PM	12.50	13.43	16.46	14.62
	123	9/19/2007 1:41:00 PM	12.47	13.42	16.45	14.61
	124	9/19/2007 1:42:00 PM	12.44	13.41	16.45	14.60
	125	9/19/2007 1:43:00 PM	12.41	13.39	16.42	14.61
	126	9/19/2007 1:44:00 PM	12.38	13.38	16.41	14.56
	127	9/19/2007 1:44:49 PM	12.36	13.37	16.39	14.55

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Handy logger

Name : **LOGGER 2**

LOG Name	09191011
Interval	00:01:00
Personnel	

Start	9/19/2007 10:11:07 AM
Stop	9/19/2007 12:30:23 PM
Comment	

Data	141
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.09	16.73	16.51	16.13
Minimum	13.36	4.84	0.18	0.14
Average	14.64	11.91	13.52	15.46
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 10:11:07 AM	15.25	v 4.84	v 0.18	v 0.14
	2	9/19/2007 10:12:00 AM	^ 16.09	^ 16.73	6.87	13.74
	3	9/19/2007 10:13:00 AM	16.03	16.56	^ 16.51	^ 16.13
	4	9/19/2007 10:14:00 AM	16.01	16.35	16.48	16.12
	5	9/19/2007 10:15:00 AM	15.99	16.17	16.42	16.11
	6	9/19/2007 10:16:00 AM	15.99	16.03	16.35	16.09
	7	9/19/2007 10:17:00 AM	15.95	15.87	16.30	16.08
	8	9/19/2007 10:18:00 AM	15.91	15.71	16.25	16.05
	9	9/19/2007 10:19:00 AM	15.88	15.62	16.23	16.07
	10	9/19/2007 10:20:00 AM	15.89	15.47	16.17	16.09
	11	9/19/2007 10:21:00 AM	15.85	15.34	16.11	16.10
	12	9/19/2007 10:22:00 AM	15.82	15.24	16.07	16.08
	13	9/19/2007 10:23:00 AM	15.81	15.13	16.01	16.07
	14	9/19/2007 10:24:00 AM	15.79	15.01	15.98	16.06
	15	9/19/2007 10:25:00 AM	15.77	14.89	15.93	16.05
	16	9/19/2007 10:26:00 AM	15.74	14.83	15.89	16.07
	17	9/19/2007 10:27:00 AM	15.72	14.73	15.84	16.05
	18	9/19/2007 10:28:00 AM	15.69	14.63	15.79	16.07
	19	9/19/2007 10:29:00 AM	15.67	14.54	15.72	16.06
	20	9/19/2007 10:30:00 AM	15.65	14.41	15.67	15.98
	21	9/19/2007 10:31:00 AM	15.63	14.31	15.63	16.02
	22	9/19/2007 10:32:00 AM	15.60	14.28	15.58	16.01
	23	9/19/2007 10:33:00 AM	15.60	14.18	15.53	16.02
	24	9/19/2007 10:34:00 AM	15.59	14.10	15.51	16.01
	25	9/19/2007 10:35:00 AM	15.55	14.02	15.43	16.00
	26	9/19/2007 10:36:00 AM	15.54	13.94	15.42	15.99
	27	9/19/2007 10:37:00 AM	15.52	13.85	15.36	15.98
	28	9/19/2007 10:38:00 AM	15.49	13.78	15.32	15.94
	29	9/19/2007 10:39:00 AM	15.47	13.71	15.27	15.93
	30	9/19/2007 10:40:00 AM	15.46	13.64	15.23	15.93

printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 10:41:00 AM	15.43	13.57	15.18	15.89
	32	9/19/2007 10:42:00 AM	15.41	13.51	15.13	15.88
	33	9/19/2007 10:43:00 AM	15.39	13.44	15.09	15.89
	34	9/19/2007 10:44:00 AM	15.37	13.37	15.05	15.88
	35	9/19/2007 10:45:00 AM	15.35	13.31	15.00	15.91
	36	9/19/2007 10:46:00 AM	15.33	13.25	14.96	15.86
	37	9/19/2007 10:47:00 AM	15.29	13.19	14.89	15.87
	38	9/19/2007 10:48:00 AM	15.27	13.09	14.85	15.83
	39	9/19/2007 10:49:00 AM	15.25	13.03	14.81	15.86
	40	9/19/2007 10:50:00 AM	15.23	13.02	14.76	15.84
	41	9/19/2007 10:51:00 AM	15.23	12.95	14.74	15.87
	42	9/19/2007 10:52:00 AM	15.21	12.90	14.70	15.88
	43	9/19/2007 10:53:00 AM	15.19	12.83	14.64	15.86
	44	9/19/2007 10:54:00 AM	15.16	12.78	14.61	15.83
	45	9/19/2007 10:55:00 AM	15.12	12.70	14.56	15.77
	46	9/19/2007 10:56:00 AM	15.11	12.63	14.50	15.73
	47	9/19/2007 10:57:00 AM	15.10	12.60	14.48	15.75
	48	9/19/2007 10:58:00 AM	15.05	12.55	14.44	15.77
	49	9/19/2007 10:59:00 AM	15.06	12.51	14.43	15.75
	50	9/19/2007 11:00:00 AM	15.05	12.46	14.38	15.77
	51	9/19/2007 11:01:00 AM	15.02	12.40	14.33	15.75
	52	9/19/2007 11:02:00 AM	15.00	12.37	14.29	15.80
	53	9/19/2007 11:03:00 AM	14.98	12.33	14.24	15.79
	54	9/19/2007 11:04:00 AM	14.96	12.26	14.21	15.71
	55	9/19/2007 11:05:00 AM	14.94	12.21	14.15	15.70
	56	9/19/2007 11:06:00 AM	14.92	12.17	14.10	15.67
	57	9/19/2007 11:07:00 AM	14.90	12.13	14.10	15.71
	58	9/19/2007 11:08:00 AM	14.88	12.08	14.05	15.70
	59	9/19/2007 11:09:00 AM	14.86	12.06	14.00	15.68
	60	9/19/2007 11:10:00 AM	14.82	12.01	13.96	15.66
	61	9/19/2007 11:11:00 AM	14.81	11.96	13.92	15.66
	62	9/19/2007 11:12:00 AM	14.79	11.90	13.87	15.67
	63	9/19/2007 11:13:00 AM	14.77	11.87	13.85	15.66
	64	9/19/2007 11:14:00 AM	14.76	11.83	13.82	15.64
	65	9/19/2007 11:15:00 AM	14.74	11.78	13.78	15.64
	66	9/19/2007 11:16:00 AM	14.72	11.75	13.73	15.62
	67	9/19/2007 11:17:00 AM	14.69	11.70	13.69	15.63
	68	9/19/2007 11:18:00 AM	14.67	11.69	13.66	15.66
	69	9/19/2007 11:19:00 AM	14.65	11.62	13.62	15.60
	70	9/19/2007 11:20:00 AM	14.64	11.59	13.58	15.58
	71	9/19/2007 11:21:00 AM	14.59	11.53	13.50	15.55
	72	9/19/2007 11:22:00 AM	14.58	11.49	13.51	15.60
	73	9/19/2007 11:23:00 AM	14.58	11.47	13.48	15.59
	74	9/19/2007 11:24:00 AM	14.57	11.43	13.45	15.55
	75	9/19/2007 11:25:00 AM	14.52	11.39	13.41	15.55
	76	9/19/2007 11:26:00 AM	14.50	11.36	13.38	15.54
	77	9/19/2007 11:27:00 AM	14.49	11.33	13.31	15.52
	78	9/19/2007 11:28:00 AM	14.49	11.27	13.28	15.52
	79	9/19/2007 11:29:00 AM	14.45	11.24	13.24	15.54
	80	9/19/2007 11:30:00 AM	14.44	11.23	13.20	15.53

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 11:31:00 AM	14.42	11.17	13.16	15.51
	82	9/19/2007 11:32:00 AM	14.41	11.14	13.13	15.48
	83	9/19/2007 11:33:00 AM	14.40	11.10	13.10	15.47
	84	9/19/2007 11:34:00 AM	14.37	11.08	13.06	15.50
	85	9/19/2007 11:35:00 AM	14.35	11.04	13.07	15.48
	86	9/19/2007 11:36:00 AM	14.33	11.04	12.99	15.48
*	87	9/19/2007 11:37:00 AM	14.32	10.97	12.98	15.47
	88	9/19/2007 11:38:00 AM	14.27	10.95	12.96	15.45
	89	9/19/2007 11:39:00 AM	14.27	10.93	12.90	15.40
	90	9/19/2007 11:40:00 AM	14.24	10.89	12.88	15.45
	91	9/19/2007 11:41:00 AM	14.21	10.86	12.82	15.40
	92	9/19/2007 11:42:00 AM	14.17	10.83	12.80	15.40
	93	9/19/2007 11:43:00 AM	14.16	10.82	12.76	15.39
	94	9/19/2007 11:44:00 AM	14.14	10.79	12.74	15.38
	95	9/19/2007 11:45:00 AM	14.16	10.76	12.71	15.42
	96	9/19/2007 11:46:00 AM	14.14	10.73	12.67	15.40
	97	9/19/2007 11:47:00 AM	14.11	10.69	12.64	15.39
	98	9/19/2007 11:48:00 AM	14.09	10.66	12.60	15.38
	99	9/19/2007 11:49:00 AM	14.07	10.62	12.57	15.37
	100	9/19/2007 11:50:00 AM	14.07	10.60	12.57	15.32
	101	9/19/2007 11:51:00 AM	14.05	10.57	12.54	15.31
	102	9/19/2007 11:52:00 AM	14.02	10.54	12.49	15.32
	103	9/19/2007 11:53:00 AM	14.01	10.50	12.47	15.31
	104	9/19/2007 11:54:00 AM	14.02	10.51	12.44	15.30
	105	9/19/2007 11:55:00 AM	13.99	10.47	12.40	15.33
	106	9/19/2007 11:56:00 AM	13.98	10.44	12.37	15.32
	107	9/19/2007 11:57:00 AM	13.95	10.42	12.34	15.30
	108	9/19/2007 11:58:00 AM	13.94	10.39	12.31	15.25
	109	9/19/2007 11:59:00 AM	13.92	10.35	12.28	15.25
	110	9/19/2007 12:00:00 PM	13.90	10.33	12.25	15.28
	111	9/19/2007 12:01:00 PM	13.88	10.30	12.22	15.27
	112	9/19/2007 12:02:00 PM	13.85	10.26	12.18	15.25
	113	9/19/2007 12:03:00 PM	13.82	10.22	12.18	15.27
	114	9/19/2007 12:04:00 PM	13.84	10.19	12.14	15.25
	115	9/19/2007 12:05:00 PM	13.82	10.15	12.11	15.23
	116	9/19/2007 12:06:00 PM	13.79	10.15	12.06	15.22
	117	9/19/2007 12:07:00 PM	13.79	10.11	12.07	15.24
	118	9/19/2007 12:08:00 PM	13.76	10.12	12.03	15.22
	119	9/19/2007 12:09:00 PM	13.74	10.09	12.00	15.21
	120	9/19/2007 12:10:00 PM	13.72	10.01	11.98	15.21
	121	9/19/2007 12:11:00 PM	13.71	9.99	11.95	15.16
	122	9/19/2007 12:12:00 PM	13.68	9.97	11.92	15.21
	123	9/19/2007 12:13:00 PM	13.67	9.95	11.89	15.19
	124	9/19/2007 12:14:00 PM	13.65	9.94	11.85	15.17
	125	9/19/2007 12:15:00 PM	13.62	9.91	11.82	15.16
	126	9/19/2007 12:16:00 PM	13.60	9.89	11.79	15.16
	127	9/19/2007 12:17:00 PM	13.58	9.85	11.79	15.14
	128	9/19/2007 12:18:00 PM	13.56	9.82	11.77	15.15
	129	9/19/2007 12:19:00 PM	13.57	9.79	11.73	15.13
	130	9/19/2007 12:20:00 PM	13.54	9.79	11.70	15.15

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/19/2007 12:21:00 PM	13.52	9.76	11.67	15.14
	132	9/19/2007 12:22:00 PM	13.51	9.73	11.64	15.09
	133	9/19/2007 12:23:00 PM	13.48	9.71	11.61	15.08
	134	9/19/2007 12:24:00 PM	13.47	9.68	11.57	15.11
	135	9/19/2007 12:25:00 PM	13.44	9.65	11.55	15.05
	136	9/19/2007 12:26:00 PM	13.42	9.63	11.52	15.05
	137	9/19/2007 12:27:00 PM	13.44	9.60	11.50	15.04
	138	9/19/2007 12:28:00 PM	13.39	9.58	11.47	15.04
	139	9/19/2007 12:29:00 PM	13.38	9.53	11.46	15.01
	140	9/19/2007 12:30:00 PM	13.37	9.51	11.40	15.02
	141	9/19/2007 12:30:23 PM	v 13.36	9.50	11.39	15.02

Handy logger

Name : **LOGGER 2**

LOG Name	09191240
Interval	00:01:00
Personnel	

Start	9/19/2007 12:40:33 PM
Stop	9/19/2007 3:03:31 PM
Comment	

Data	145
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.64	16.64	-7.50	-7.50
Minimum	0.23	-7.50	-7.50	-7.50
Average	15.99	-0.52	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 12:40:33 PM	v 0.23	0.16	v -7.50	v -7.50
	2	9/19/2007 12:41:00 PM	3.52	3.05	v -7.50	v -7.50
	3	9/19/2007 12:42:00 PM	10.63	10.25	v -7.50	v -7.50
	4	9/19/2007 12:43:00 PM	16.50	^ 16.64	v -7.50	v -7.50
*	5	9/19/2007 12:44:00 PM	16.46	15.91	v -7.50	v -7.50
	6	9/19/2007 12:45:00 PM	16.49	15.39	v -7.50	v -7.50
	7	9/19/2007 12:46:00 PM	16.51	14.89	v -7.50	v -7.50
	8	9/19/2007 12:47:00 PM	16.54	14.43	v -7.50	v -7.50
	9	9/19/2007 12:48:00 PM	16.57	13.94	v -7.50	v -7.50
	10	9/19/2007 12:49:00 PM	16.56	13.50	v -7.50	v -7.50
	11	9/19/2007 12:50:00 PM	16.59	13.05	v -7.50	v -7.50
	12	9/19/2007 12:51:00 PM	16.61	12.64	v -7.50	v -7.50
	13	9/19/2007 12:52:00 PM	16.62	12.21	v -7.50	v -7.50
	14	9/19/2007 12:53:00 PM	16.63	11.82	v -7.50	v -7.50
	15	9/19/2007 12:54:00 PM	16.61	11.42	v -7.50	v -7.50
	16	9/19/2007 12:55:00 PM	16.60	11.02	v -7.50	v -7.50
	17	9/19/2007 12:56:00 PM	16.60	10.65	v -7.50	v -7.50
	18	9/19/2007 12:57:00 PM	16.61	10.28	v -7.50	v -7.50
	19	9/19/2007 12:58:00 PM	16.61	9.93	v -7.50	v -7.50
	20	9/19/2007 12:59:00 PM	16.61	9.58	v -7.50	v -7.50
	21	9/19/2007 1:00:00 PM	16.62	9.23	v -7.50	v -7.50
	22	9/19/2007 1:01:00 PM	^ 16.64	8.92	v -7.50	v -7.50
	23	9/19/2007 1:02:00 PM	^ 16.64	8.59	v -7.50	v -7.50
	24	9/19/2007 1:03:00 PM	16.61	8.28	v -7.50	v -7.50
	25	9/19/2007 1:04:00 PM	16.62	7.97	v -7.50	v -7.50
	26	9/19/2007 1:05:00 PM	16.61	7.66	v -7.50	v -7.50
	27	9/19/2007 1:06:00 PM	16.61	7.36	v -7.50	v -7.50
	28	9/19/2007 1:07:00 PM	16.60	7.07	v -7.50	v -7.50
	29	9/19/2007 1:08:00 PM	16.60	6.83	v -7.50	v -7.50
	30	9/19/2007 1:09:00 PM	16.60	6.55	v -7.50	v -7.50

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 1:10:00 PM	16.59	6.29	v -7.50	v -7.50
	32	9/19/2007 1:11:00 PM	16.58	6.02	v -7.50	v -7.50
	33	9/19/2007 1:12:00 PM	16.58	5.77	v -7.50	v -7.50
	34	9/19/2007 1:13:00 PM	16.58	5.53	v -7.50	v -7.50
	35	9/19/2007 1:14:00 PM	16.58	5.28	v -7.50	v -7.50
	36	9/19/2007 1:15:00 PM	16.57	5.05	v -7.50	v -7.50
	37	9/19/2007 1:16:00 PM	16.55	4.79	v -7.50	v -7.50
	38	9/19/2007 1:17:00 PM	16.55	4.58	v -7.50	v -7.50
	39	9/19/2007 1:18:00 PM	16.57	4.38	v -7.50	v -7.50
	40	9/19/2007 1:19:00 PM	16.56	4.17	v -7.50	v -7.50
	41	9/19/2007 1:20:00 PM	16.55	3.96	v -7.50	v -7.50
	42	9/19/2007 1:21:00 PM	16.54	3.75	v -7.50	v -7.50
	43	9/19/2007 1:22:00 PM	16.56	3.57	v -7.50	v -7.50
	44	9/19/2007 1:23:00 PM	16.55	3.37	v -7.50	v -7.50
	45	9/19/2007 1:24:00 PM	16.50	3.21	v -7.50	v -7.50
	46	9/19/2007 1:25:00 PM	16.50	3.02	v -7.50	v -7.50
	47	9/19/2007 1:26:00 PM	16.50	2.90	v -7.50	v -7.50
	48	9/19/2007 1:27:00 PM	16.50	2.74	v -7.50	v -7.50
	49	9/19/2007 1:28:00 PM	16.50	2.55	v -7.50	v -7.50
	50	9/19/2007 1:29:00 PM	16.49	2.44	v -7.50	v -7.50
	51	9/19/2007 1:30:00 PM	16.49	2.29	v -7.50	v -7.50
	52	9/19/2007 1:31:00 PM	16.47	2.14	v -7.50	v -7.50
	53	9/19/2007 1:32:00 PM	16.46	2.00	v -7.50	v -7.50
	54	9/19/2007 1:33:00 PM	16.45	1.87	v -7.50	v -7.50
	55	9/19/2007 1:34:00 PM	16.46	1.75	v -7.50	v -7.50
	56	9/19/2007 1:35:00 PM	16.45	1.63	v -7.50	v -7.50
	57	9/19/2007 1:36:00 PM	16.44	1.52	v -7.50	v -7.50
	58	9/19/2007 1:37:00 PM	16.44	1.40	v -7.50	v -7.50
	59	9/19/2007 1:38:00 PM	16.42	1.31	v -7.50	v -7.50
	60	9/19/2007 1:39:00 PM	16.43	1.19	v -7.50	v -7.50
	61	9/19/2007 1:40:00 PM	16.43	1.09	v -7.50	v -7.50
	62	9/19/2007 1:41:00 PM	16.41	1.01	v -7.50	v -7.50
	63	9/19/2007 1:42:00 PM	16.40	0.94	v -7.50	v -7.50
	64	9/19/2007 1:43:00 PM	16.39	0.85	v -7.50	v -7.50
	65	9/19/2007 1:44:00 PM	16.38	0.77	v -7.50	v -7.50
	66	9/19/2007 1:45:00 PM	16.37	0.70	v -7.50	v -7.50
	67	9/19/2007 1:46:00 PM	16.36	0.62	v -7.50	v -7.50
	68	9/19/2007 1:47:00 PM	16.36	0.55	v -7.50	v -7.50
	69	9/19/2007 1:48:00 PM	16.35	0.50	v -7.50	v -7.50
	70	9/19/2007 1:49:00 PM	16.34	0.44	v -7.50	v -7.50
	71	9/19/2007 1:50:00 PM	16.32	0.39	v -7.50	v -7.50
	72	9/19/2007 1:51:00 PM	16.32	0.35	v -7.50	v -7.50
	73	9/19/2007 1:52:00 PM	16.31	0.29	v -7.50	v -7.50
	74	9/19/2007 1:53:00 PM	16.29	0.25	v -7.50	v -7.50
	75	9/19/2007 1:54:00 PM	16.30	0.24	v -7.50	v -7.50
	76	9/19/2007 1:55:00 PM	16.32	0.22	v -7.50	v -7.50
	77	9/19/2007 1:56:00 PM	16.30	0.18	v -7.50	v -7.50
	78	9/19/2007 1:57:00 PM	16.27	0.13	v -7.50	v -7.50
	79	9/19/2007 1:58:00 PM	16.27	0.11	v -7.50	v -7.50
	80	9/19/2007 1:59:00 PM	16.23	v -7.50	v -7.50	v -7.50

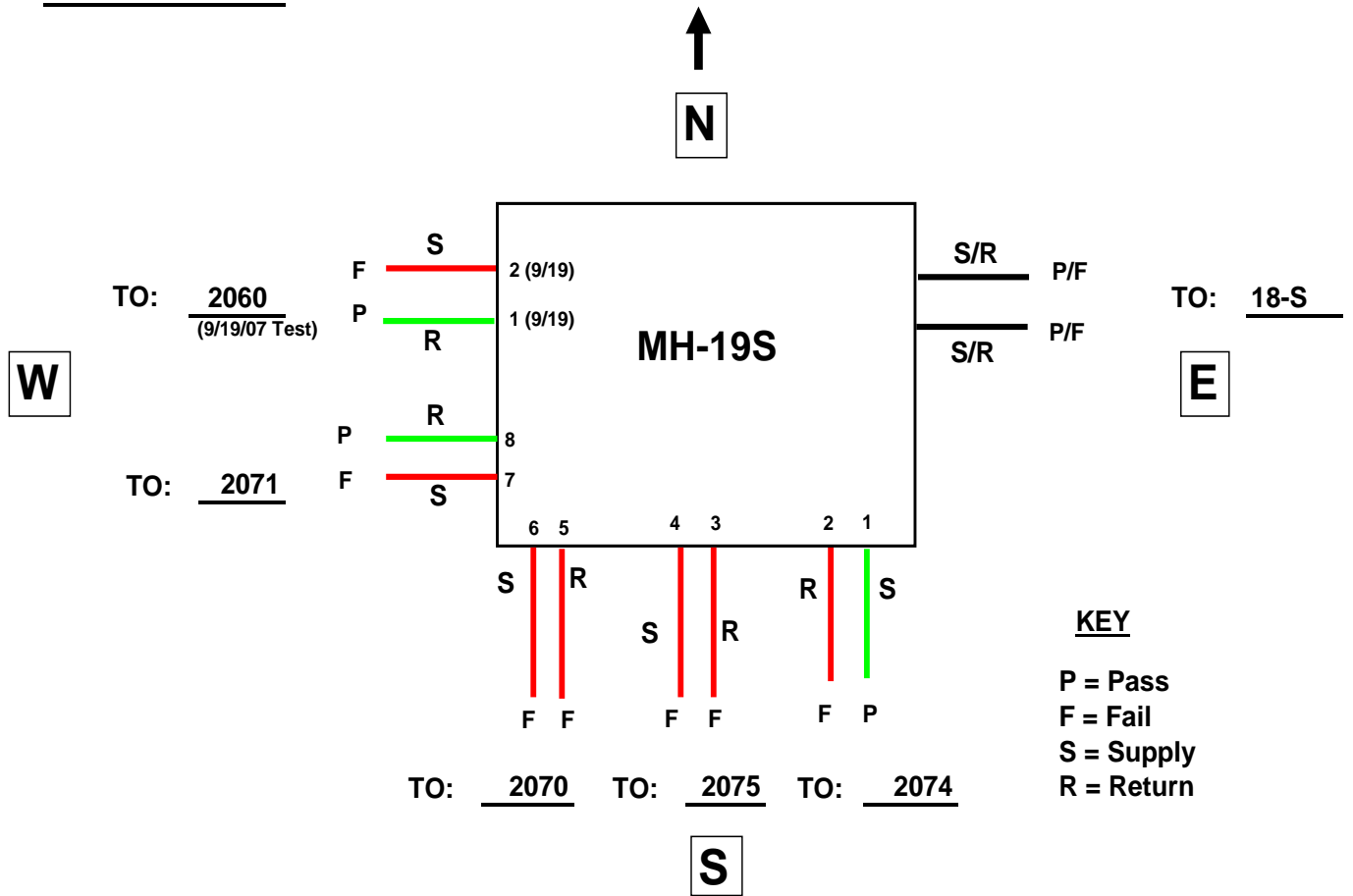
printed 1/9/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 2:00:00 PM	16.23	v -7.50	v -7.50	v -7.50
	82	9/19/2007 2:01:00 PM	16.23	v -7.50	v -7.50	v -7.50
	83	9/19/2007 2:02:00 PM	16.23	v -7.50	v -7.50	v -7.50
	84	9/19/2007 2:03:00 PM	16.21	v -7.50	v -7.50	v -7.50
	85	9/19/2007 2:04:00 PM	16.18	v -7.50	v -7.50	v -7.50
	86	9/19/2007 2:05:00 PM	16.19	v -7.50	v -7.50	v -7.50
	87	9/19/2007 2:06:00 PM	16.19	v -7.50	v -7.50	v -7.50
	88	9/19/2007 2:07:00 PM	16.19	v -7.50	v -7.50	v -7.50
	89	9/19/2007 2:08:00 PM	16.15	v -7.50	v -7.50	v -7.50
	90	9/19/2007 2:09:00 PM	16.15	v -7.50	v -7.50	v -7.50
	91	9/19/2007 2:10:00 PM	16.14	v -7.50	v -7.50	v -7.50
	92	9/19/2007 2:11:00 PM	16.13	v -7.50	v -7.50	v -7.50
	93	9/19/2007 2:12:00 PM	16.12	v -7.50	v -7.50	v -7.50
	94	9/19/2007 2:13:00 PM	16.11	v -7.50	v -7.50	v -7.50
	95	9/19/2007 2:14:00 PM	16.10	v -7.50	v -7.50	v -7.50
	96	9/19/2007 2:15:00 PM	16.08	v -7.50	v -7.50	v -7.50
	97	9/19/2007 2:16:00 PM	16.07	v -7.50	v -7.50	v -7.50
	98	9/19/2007 2:17:00 PM	16.07	v -7.50	v -7.50	v -7.50
	99	9/19/2007 2:18:00 PM	16.09	v -7.50	v -7.50	v -7.50
	100	9/19/2007 2:19:00 PM	16.07	v -7.50	v -7.50	v -7.50
	101	9/19/2007 2:20:00 PM	16.06	v -7.50	v -7.50	v -7.50
	102	9/19/2007 2:21:00 PM	16.05	v -7.50	v -7.50	v -7.50
	103	9/19/2007 2:22:00 PM	16.02	v -7.50	v -7.50	v -7.50
	104	9/19/2007 2:23:00 PM	16.02	v -7.50	v -7.50	v -7.50
	105	9/19/2007 2:24:00 PM	16.02	v -7.50	v -7.50	v -7.50
	106	9/19/2007 2:25:00 PM	15.99	v -7.50	v -7.50	v -7.50
	107	9/19/2007 2:26:00 PM	15.97	v -7.50	v -7.50	v -7.50
	108	9/19/2007 2:27:00 PM	15.97	v -7.50	v -7.50	v -7.50
	109	9/19/2007 2:28:00 PM	15.96	v -7.50	v -7.50	v -7.50
	110	9/19/2007 2:29:00 PM	15.97	v -7.50	v -7.50	v -7.50
	111	9/19/2007 2:30:00 PM	15.95	v -7.50	v -7.50	v -7.50
	112	9/19/2007 2:31:00 PM	15.97	v -7.50	v -7.50	v -7.50
	113	9/19/2007 2:32:00 PM	15.94	v -7.50	v -7.50	v -7.50
	114	9/19/2007 2:33:00 PM	15.90	v -7.50	v -7.50	v -7.50
	115	9/19/2007 2:34:00 PM	15.91	v -7.50	v -7.50	v -7.50
	116	9/19/2007 2:35:00 PM	15.87	v -7.50	v -7.50	v -7.50
	117	9/19/2007 2:36:00 PM	15.87	v -7.50	v -7.50	v -7.50
	118	9/19/2007 2:37:00 PM	15.86	v -7.50	v -7.50	v -7.50
	119	9/19/2007 2:38:00 PM	15.85	v -7.50	v -7.50	v -7.50
	120	9/19/2007 2:39:00 PM	15.86	v -7.50	v -7.50	v -7.50
	121	9/19/2007 2:40:00 PM	15.83	v -7.50	v -7.50	v -7.50
	122	9/19/2007 2:41:00 PM	15.84	v -7.50	v -7.50	v -7.50
	123	9/19/2007 2:42:00 PM	15.82	v -7.50	v -7.50	v -7.50
	124	9/19/2007 2:43:00 PM	15.80	v -7.50	v -7.50	v -7.50
	125	9/19/2007 2:44:00 PM	15.79	v -7.50	v -7.50	v -7.50
	126	9/19/2007 2:45:00 PM	15.79	v -7.50	v -7.50	v -7.50
	127	9/19/2007 2:46:00 PM	15.78	v -7.50	v -7.50	v -7.50
	128	9/19/2007 2:47:00 PM	15.76	v -7.50	v -7.50	v -7.50
	129	9/19/2007 2:48:00 PM	15.75	v -7.50	v -7.50	v -7.50
	130	9/19/2007 2:49:00 PM	15.74	v -7.50	v -7.50	v -7.50

DATE: 9/18/2007 - 9/19/07



NOTES:

1. Supply/Return drains tested on 8/16/2007 - all drains dry except Supply to Bldg. 2075 (< 1oz clear water discharged from nipple when cap removed, valve dry when opened)

MH 19-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 2074	P	9/18/2007
	2	2	Return to 2074	F	9/18/2007
	3	3	Return to 2075	F	9/18/2007
	4	4	Supply to 2075	F	9/18/2007
2	1	5	Return to 2070	F	9/18/2007
	2	6	Supply to 2070	F	9/18/2007
	3	7	Supply to 2071	F	9/18/2007
	4	8	Return to 2071	P	9/18/2007
1	1	1 (9/19)	Return to 2060	P	9/19/2007
	2	2 (9/19)	Supply to 2060	F	9/19/2007

printed 1/10/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09181447
Interval	00:01:00
Personnel	

Start	9/18/2007 2:47:22 PM
Stop	9/18/2007 5:11:52 PM
Comment	

Data	146
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.59	16.59	16.10	16.94
Minimum	-7.50	-7.50	-7.50	-7.50
Average	15.37	8.82	14.72	15.06
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 2:47:22 PM	-0.04	-0.03	0.03	0.21
	2	9/18/2007 2:48:00 PM	3.40	3.23	2.18	2.42
	3	9/18/2007 2:49:00 PM	10.67	10.21	6.77	7.10
	4	9/18/2007 2:50:00 PM	^ 16.59	^ 16.59	12.68	13.19
	5	9/18/2007 2:51:00 PM	16.57	16.45	^ 16.10	^ 16.94
	6	9/18/2007 2:52:00 PM	16.55	16.34	16.08	16.90
	7	9/18/2007 2:53:00 PM	16.56	16.25	16.09	16.83
	8	9/18/2007 2:54:00 PM	16.55	16.12	16.08	16.79
	9	9/18/2007 2:55:00 PM	16.58	16.03	16.03	16.74
	10	9/18/2007 2:56:00 PM	16.58	15.92	16.04	16.73
	11	9/18/2007 2:57:00 PM	16.58	15.81	16.02	16.69
	12	9/18/2007 2:58:00 PM	16.57	15.71	15.99	16.66
	13	9/18/2007 2:59:00 PM	16.56	15.64	15.96	16.62
	14	9/18/2007 3:00:00 PM	16.55	15.54	15.98	16.59
	15	9/18/2007 3:01:00 PM	16.54	15.46	15.96	16.56
	16	9/18/2007 3:02:00 PM	16.56	15.40	15.93	16.53
	17	9/18/2007 3:03:00 PM	16.55	15.30	15.95	16.49
	18	9/18/2007 3:04:00 PM	16.53	15.20	15.93	16.50
	19	9/18/2007 3:05:00 PM	16.53	15.11	15.91	16.47
	20	9/18/2007 3:06:00 PM	16.52	15.01	15.90	16.44
	21	9/18/2007 3:07:00 PM	16.50	14.92	15.89	16.42
	22	9/18/2007 3:08:00 PM	16.48	14.84	15.87	16.39
	23	9/18/2007 3:09:00 PM	16.47	14.74	15.85	16.35
	24	9/18/2007 3:10:00 PM	16.49	14.65	15.84	16.33
	25	9/18/2007 3:11:00 PM	16.47	14.56	15.82	16.30
	26	9/18/2007 3:12:00 PM	16.46	14.48	15.81	16.28
	27	9/18/2007 3:13:00 PM	16.45	14.39	15.80	16.26
	28	9/18/2007 3:14:00 PM	16.43	14.30	15.78	16.23
	29	9/18/2007 3:15:00 PM	16.42	14.22	15.77	16.20
	30	9/18/2007 3:16:00 PM	16.40	14.13	15.76	16.18

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 3:17:00 PM	16.38	14.05	15.75	16.16
	32	9/18/2007 3:18:00 PM	16.37	13.97	15.73	16.13
	33	9/18/2007 3:19:00 PM	16.35	13.89	15.72	16.11
	34	9/18/2007 3:20:00 PM	16.35	13.81	15.71	16.09
	35	9/18/2007 3:21:00 PM	16.33	13.73	15.69	16.07
	36	9/18/2007 3:22:00 PM	16.31	13.65	15.68	16.04
	37	9/18/2007 3:23:00 PM	16.30	13.57	15.67	16.03
	38	9/18/2007 3:24:00 PM	16.29	13.49	15.65	16.00
	39	9/18/2007 3:25:00 PM	16.29	13.42	15.64	15.98
	40	9/18/2007 3:26:00 PM	16.32	13.35	15.62	15.96
	41	9/18/2007 3:27:00 PM	16.32	13.29	15.61	15.93
	42	9/18/2007 3:28:00 PM	16.32	13.22	15.60	15.92
	43	9/18/2007 3:29:00 PM	16.32	13.16	15.58	15.90
	44	9/18/2007 3:30:00 PM	16.31	13.10	15.57	15.88
	45	9/18/2007 3:31:00 PM	16.31	13.02	15.55	15.85
	46	9/18/2007 3:32:00 PM	16.27	12.96	15.55	15.81
	47	9/18/2007 3:33:00 PM	16.30	12.89	15.54	15.79
	48	9/18/2007 3:34:00 PM	16.29	12.82	15.49	15.78
	49	9/18/2007 3:35:00 PM	16.24	12.75	15.52	15.76
	50	9/18/2007 3:36:00 PM	16.23	12.68	15.50	15.74
	51	9/18/2007 3:37:00 PM	16.26	12.61	15.49	15.72
	52	9/18/2007 3:38:00 PM	16.24	12.53	15.44	15.70
	53	9/18/2007 3:39:00 PM	16.23	12.47	15.46	15.68
	54	9/18/2007 3:40:00 PM	16.22	12.40	15.43	15.67
	55	9/18/2007 3:41:00 PM	16.21	12.33	15.43	15.65
	56	9/18/2007 3:42:00 PM	16.20	12.26	15.41	15.63
	57	9/18/2007 3:43:00 PM	16.18	12.19	15.40	15.61
	58	9/18/2007 3:44:00 PM	16.17	12.12	15.38	15.60
	59	9/18/2007 3:45:00 PM	16.15	12.04	15.37	15.58
	60	9/18/2007 3:46:00 PM	16.14	11.98	15.36	15.56
	61	9/18/2007 3:47:00 PM	16.13	11.91	15.35	15.54
	62	9/18/2007 3:48:00 PM	16.11	11.85	15.30	15.52
	63	9/18/2007 3:49:00 PM	16.10	11.78	15.29	15.52
	64	9/18/2007 3:50:00 PM	16.09	11.71	15.28	15.50
	65	9/18/2007 3:51:00 PM	16.08	11.64	15.26	15.49
	66	9/18/2007 3:52:00 PM	16.07	11.58	15.25	15.47
	67	9/18/2007 3:53:00 PM	16.05	11.51	15.24	15.46
	68	9/18/2007 3:54:00 PM	16.04	11.45	15.22	15.44
	69	9/18/2007 3:55:00 PM	16.03	11.38	15.21	15.43
	70	9/18/2007 3:56:00 PM	16.02	11.31	15.23	15.41
	71	9/18/2007 3:57:00 PM	16.00	11.25	15.21	15.39
	72	9/18/2007 3:58:00 PM	15.99	11.18	15.19	15.41
	73	9/18/2007 3:59:00 PM	15.98	11.11	15.18	15.39
	74	9/18/2007 4:00:00 PM	15.95	11.04	15.16	15.38
	75	9/18/2007 4:01:00 PM	15.98	10.98	15.14	15.37
	76	9/18/2007 4:02:00 PM	15.93	10.91	15.13	15.35
	77	9/18/2007 4:03:00 PM	15.94	10.85	15.12	15.34
	78	9/18/2007 4:04:00 PM	15.93	10.78	15.10	15.32
	79	9/18/2007 4:05:00 PM	15.94	10.72	15.08	15.31
	80	9/18/2007 4:06:00 PM	15.92	10.66	15.07	15.29

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/18/2007 4:07:00 PM	15.90	10.59	15.05	15.28
	82	9/18/2007 4:08:00 PM	15.88	10.52	15.04	15.26
	83	9/18/2007 4:09:00 PM	15.87	10.46	15.02	15.26
	84	9/18/2007 4:10:00 PM	15.85	10.44	15.01	15.25
	85	9/18/2007 4:11:00 PM	15.84	10.38	14.99	15.23
	86	9/18/2007 4:12:00 PM	15.82	10.31	14.97	15.22
	87	9/18/2007 4:13:00 PM	15.81	10.25	14.96	15.21
	88	9/18/2007 4:14:00 PM	15.79	10.18	14.95	15.20
	89	9/18/2007 4:15:00 PM	15.78	10.13	14.93	15.19
	90	9/18/2007 4:16:00 PM	15.77	10.07	14.91	15.16
	91	9/18/2007 4:17:00 PM	15.76	9.97	14.91	15.15
	92	9/18/2007 4:18:00 PM	15.75	9.91	14.90	15.15
	93	9/18/2007 4:19:00 PM	15.73	9.85	14.88	15.13
	94	9/18/2007 4:20:00 PM	15.72	9.80	14.87	15.12
	95	9/18/2007 4:21:00 PM	15.71	9.75	14.86	15.11
	96	9/18/2007 4:22:00 PM	15.70	9.69	14.85	15.10
	97	9/18/2007 4:23:00 PM	15.69	9.63	14.84	15.09
	98	9/18/2007 4:24:00 PM	15.68	9.56	14.82	15.08
	99	9/18/2007 4:25:00 PM	15.66	9.50	14.80	15.06
	100	9/18/2007 4:26:00 PM	15.65	9.45	14.79	15.05
	101	9/18/2007 4:27:00 PM	15.63	9.40	14.78	15.04
	102	9/18/2007 4:28:00 PM	15.62	9.34	14.77	15.03
	103	9/18/2007 4:29:00 PM	15.61	9.27	14.74	15.02
	104	9/18/2007 4:30:00 PM	15.59	9.22	14.73	15.01
	105	9/18/2007 4:31:00 PM	15.58	9.16	14.72	15.00
	106	9/18/2007 4:32:00 PM	15.57	9.12	14.71	14.99
	107	9/18/2007 4:33:00 PM	15.56	9.06	14.70	14.98
	108	9/18/2007 4:34:00 PM	15.54	9.00	14.68	14.97
	109	9/18/2007 4:35:00 PM	15.53	8.95	14.67	14.96
	110	9/18/2007 4:36:00 PM	15.51	8.89	14.65	14.95
	111	9/18/2007 4:37:00 PM	15.50	8.84	14.64	14.94
	112	9/18/2007 4:38:00 PM	15.49	8.79	14.62	14.92
	113	9/18/2007 4:39:00 PM	15.47	8.73	14.62	14.92
	114	9/18/2007 4:40:00 PM	15.46	8.68	14.60	14.91
	115	9/18/2007 4:41:00 PM	15.45	8.63	14.59	14.90
	116	9/18/2007 4:42:00 PM	15.44	8.57	14.58	14.89
	117	9/18/2007 4:43:00 PM	15.42	8.52	14.56	14.88
	118	9/18/2007 4:44:00 PM	15.41	8.46	14.55	14.87
	119	9/18/2007 4:45:00 PM	15.39	8.41	14.53	14.87
	120	9/18/2007 4:46:00 PM	15.38	8.36	14.53	14.86
	121	9/18/2007 4:47:00 PM	15.38	6.59	14.51	14.84
	122	9/18/2007 4:48:00 PM	15.36	3.09	14.50	14.84
	123	9/18/2007 4:49:00 PM	15.35	1.01	14.49	14.83
	124	9/18/2007 4:50:00 PM	15.33	0.22	14.47	14.79
	125	9/18/2007 4:51:00 PM	15.31	0.15	14.47	14.79
	126	9/18/2007 4:52:00 PM	15.30	0.10	14.46	14.77
	127	9/18/2007 4:53:00 PM	15.28	0.07	14.45	14.77
	128	9/18/2007 4:54:00 PM	15.27	v -7.50	14.44	14.76
	129	9/18/2007 4:55:00 PM	15.23	v -7.50	14.43	14.75
	130	9/18/2007 4:56:00 PM	15.22	v -7.50	14.41	14.74

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/18/2007 4:57:00 PM	15.21	v -7.50	14.36	14.74
	132	9/18/2007 4:58:00 PM	15.20	v -7.50	14.39	14.73
	133	9/18/2007 4:59:00 PM	15.19	v -7.50	14.38	14.72
	134	9/18/2007 5:00:00 PM	15.18	v -7.50	14.37	14.72
	135	9/18/2007 5:01:00 PM	15.17	v -7.50	14.35	14.71
	136	9/18/2007 5:02:00 PM	15.15	v -7.50	14.34	14.70
	137	9/18/2007 5:03:00 PM	15.14	v -7.50	14.33	14.69
	138	9/18/2007 5:04:00 PM	15.13	v -7.50	14.31	14.68
	139	9/18/2007 5:05:00 PM	15.11	v -7.50	14.26	14.68
	140	9/18/2007 5:06:00 PM	15.10	v -7.50	14.25	14.67
	141	9/18/2007 5:07:00 PM	15.09	v -7.50	14.24	14.66
	142	9/18/2007 5:08:00 PM	15.08	v -7.50	14.26	14.65
	143	9/18/2007 5:09:00 PM	15.06	v -7.50	14.22	14.65
	144	9/18/2007 5:10:00 PM	15.05	v -7.50	14.24	14.63
	145	9/18/2007 5:11:00 PM	v -7.50	v -7.50	13.49	14.63
	146	9/18/2007 5:11:52 PM	v -7.50	v -7.50	v -7.50	v -7.50

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Handy logger

Name : **LOGGER 2**

LOG Name	09181446
Interval	00:01:00
Personnel	

Start	9/18/2007 2:46:59 PM
Stop	9/18/2007 5:11:26 PM
Comment	

Data	147
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.28	16.37	16.99	17.03
Minimum	-7.50	-7.50	-7.50	-7.50
Average	10.88	7.78	11.32	15.28
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 2:46:59 PM	0.09	-0.04	0.08	0.02
	2	9/18/2007 2:47:00 PM	0.09	-0.04	0.08	0.02
	3	9/18/2007 2:48:00 PM	10.01	11.13	3.09	3.13
	4	9/18/2007 2:49:00 PM	^ 16.28	^ 16.37	6.27	6.23
	5	9/18/2007 2:50:00 PM	16.23	16.09	10.62	10.49
	6	9/18/2007 2:51:00 PM	16.20	15.90	^ 16.99	^ 17.03
	7	9/18/2007 2:52:00 PM	16.15	15.68	16.12	15.99
	8	9/18/2007 2:53:00 PM	16.10	15.49	16.08	15.98
	9	9/18/2007 2:54:00 PM	16.09	15.30	16.01	16.01
	10	9/18/2007 2:55:00 PM	16.04	15.12	15.99	16.00
	11	9/18/2007 2:56:00 PM	16.00	14.94	15.98	15.97
	12	9/18/2007 2:57:00 PM	16.00	14.77	15.92	16.00
	13	9/18/2007 2:58:00 PM	15.96	14.60	15.88	15.97
	14	9/18/2007 2:59:00 PM	15.92	14.45	15.83	16.00
	15	9/18/2007 3:00:00 PM	15.88	14.29	15.83	15.99
	16	9/18/2007 3:01:00 PM	15.87	14.18	15.79	15.98
	17	9/18/2007 3:02:00 PM	15.83	14.04	15.76	15.97
	18	9/18/2007 3:03:00 PM	15.80	13.89	15.72	15.96
	19	9/18/2007 3:04:00 PM	15.77	13.76	15.68	15.96
	20	9/18/2007 3:05:00 PM	15.74	13.65	15.65	15.96
	21	9/18/2007 3:06:00 PM	15.70	13.52	15.61	15.96
	22	9/18/2007 3:07:00 PM	15.67	13.43	15.58	15.95
	23	9/18/2007 3:08:00 PM	15.63	13.29	15.55	15.96
	24	9/18/2007 3:09:00 PM	15.59	13.20	15.51	15.95
	25	9/18/2007 3:10:00 PM	15.59	13.08	15.48	15.95
	26	9/18/2007 3:11:00 PM	15.54	12.98	15.45	15.95
	27	9/18/2007 3:12:00 PM	15.52	12.87	15.41	15.95
	28	9/18/2007 3:13:00 PM	15.49	12.78	15.39	15.95
	29	9/18/2007 3:14:00 PM	15.43	12.68	15.35	15.95
	30	9/18/2007 3:15:00 PM	15.43	12.58	15.32	15.95

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 3:16:00 PM	15.40	12.48	15.30	15.96
	32	9/18/2007 3:17:00 PM	15.36	12.38	15.27	15.96
	33	9/18/2007 3:18:00 PM	15.33	12.29	15.24	15.95
	34	9/18/2007 3:19:00 PM	15.30	12.21	15.20	15.96
	35	9/18/2007 3:20:00 PM	15.27	12.12	15.18	15.95
	36	9/18/2007 3:21:00 PM	15.24	12.04	15.15	15.95
	37	9/18/2007 3:22:00 PM	15.21	11.95	15.12	15.95
	38	9/18/2007 3:23:00 PM	15.18	11.87	15.09	15.95
	39	9/18/2007 3:24:00 PM	15.14	11.79	15.06	15.95
	40	9/18/2007 3:25:00 PM	15.11	11.72	15.03	15.95
	41	9/18/2007 3:26:00 PM	15.08	11.64	15.00	15.95
	42	9/18/2007 3:27:00 PM	15.05	11.56	14.97	15.95
	43	9/18/2007 3:28:00 PM	15.02	11.49	14.94	15.95
	44	9/18/2007 3:29:00 PM	14.99	11.39	14.92	15.94
	45	9/18/2007 3:30:00 PM	14.95	11.34	14.89	15.94
	46	9/18/2007 3:31:00 PM	14.92	11.27	14.85	15.95
	47	9/18/2007 3:32:00 PM	14.89	11.17	14.82	15.94
	48	9/18/2007 3:33:00 PM	14.85	11.09	14.80	15.95
	49	9/18/2007 3:34:00 PM	14.82	11.03	14.74	15.94
	50	9/18/2007 3:35:00 PM	14.79	10.99	14.72	15.93
	51	9/18/2007 3:36:00 PM	14.76	10.90	14.68	15.91
	52	9/18/2007 3:37:00 PM	14.73	10.86	14.65	15.90
	53	9/18/2007 3:38:00 PM	14.70	10.76	14.66	15.92
	54	9/18/2007 3:39:00 PM	14.67	10.69	14.62	15.93
	55	9/18/2007 3:40:00 PM	14.64	10.66	14.59	15.93
	56	9/18/2007 3:41:00 PM	14.61	10.60	14.53	15.92
	57	9/18/2007 3:42:00 PM	14.58	10.53	14.54	15.91
	58	9/18/2007 3:43:00 PM	14.56	10.47	14.51	15.91
	59	9/18/2007 3:44:00 PM	14.52	10.41	14.44	15.91
	60	9/18/2007 3:45:00 PM	14.49	10.35	14.42	15.91
	61	9/18/2007 3:46:00 PM	14.47	10.25	14.40	15.91
	62	9/18/2007 3:47:00 PM	14.44	10.19	14.37	15.89
	63	9/18/2007 3:48:00 PM	14.41	10.14	14.33	15.88
	64	9/18/2007 3:49:00 PM	14.38	10.07	14.30	15.88
	65	9/18/2007 3:50:00 PM	14.36	10.02	14.28	15.88
	66	9/18/2007 3:51:00 PM	14.33	9.97	14.25	15.88
	67	9/18/2007 3:52:00 PM	14.30	9.90	14.22	15.86
	68	9/18/2007 3:53:00 PM	14.27	9.88	14.19	15.89
	69	9/18/2007 3:54:00 PM	14.24	9.79	14.17	15.89
	70	9/18/2007 3:55:00 PM	14.21	9.73	14.14	15.88
	71	9/18/2007 3:56:00 PM	14.18	9.71	14.11	15.88
	72	9/18/2007 3:57:00 PM	14.15	9.65	14.11	15.87
	73	9/18/2007 3:58:00 PM	14.11	9.59	14.09	15.87
	74	9/18/2007 3:59:00 PM	14.09	9.54	14.06	15.86
	75	9/18/2007 4:00:00 PM	14.05	9.48	14.03	15.86
	76	9/18/2007 4:01:00 PM	14.02	9.42	13.99	15.85
	77	9/18/2007 4:02:00 PM	13.99	9.38	13.97	15.85
	78	9/18/2007 4:03:00 PM	13.97	9.32	13.95	15.85
	79	9/18/2007 4:04:00 PM	13.94	9.27	13.92	15.85
	80	9/18/2007 4:05:00 PM	13.91	9.22	13.89	15.84

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/18/2007 4:06:00 PM	13.88	9.16	13.86	15.84
	82	9/18/2007 4:07:00 PM	13.85	9.11	13.83	15.83
	83	9/18/2007 4:08:00 PM	13.82	9.06	13.81	15.83
	84	9/18/2007 4:09:00 PM	13.79	9.00	13.77	15.82
	85	9/18/2007 4:10:00 PM	13.75	8.95	13.75	15.82
	86	9/18/2007 4:11:00 PM	13.73	8.90	13.73	15.81
	87	9/18/2007 4:12:00 PM	13.70	8.85	13.70	15.81
	88	9/18/2007 4:13:00 PM	13.66	8.80	13.66	15.81
	89	9/18/2007 4:14:00 PM	13.66	8.75	13.65	15.80
	90	9/18/2007 4:15:00 PM	13.62	8.70	13.62	15.80
	91	9/18/2007 4:16:00 PM	13.59	8.66	13.59	15.79
	92	9/18/2007 4:17:00 PM	13.56	8.61	13.57	15.79
	93	9/18/2007 4:18:00 PM	13.54	8.56	13.55	15.79
	94	9/18/2007 4:19:00 PM	13.51	8.52	13.53	15.80
	95	9/18/2007 4:20:00 PM	13.48	8.48	13.50	15.79
	96	9/18/2007 4:21:00 PM	13.46	8.43	13.48	15.79
	97	9/18/2007 4:22:00 PM	13.43	8.39	13.45	15.79
	98	9/18/2007 4:23:00 PM	13.40	8.34	13.43	15.78
	99	9/18/2007 4:24:00 PM	13.38	8.30	13.40	15.77
	100	9/18/2007 4:25:00 PM	13.34	8.25	13.38	15.77
	101	9/18/2007 4:26:00 PM	13.32	8.20	13.35	15.77
	102	9/18/2007 4:27:00 PM	13.29	8.16	13.33	15.77
	103	9/18/2007 4:28:00 PM	13.26	8.12	13.30	15.76
	104	9/18/2007 4:29:00 PM	13.24	8.07	13.27	15.76
	105	9/18/2007 4:30:00 PM	13.21	8.03	13.26	15.76
	106	9/18/2007 4:31:00 PM	13.19	7.98	13.23	15.75
	107	9/18/2007 4:32:00 PM	13.16	7.94	13.21	15.75
	108	9/18/2007 4:33:00 PM	13.14	7.90	13.19	15.75
	109	9/18/2007 4:34:00 PM	13.11	7.86	13.16	15.75
*	110	9/18/2007 4:35:00 PM	13.08	7.81	13.14	15.74
	111	9/18/2007 4:36:00 PM	13.05	7.77	13.11	15.74
	112	9/18/2007 4:37:00 PM	13.03	7.73	13.09	15.74
	113	9/18/2007 4:38:00 PM	13.00	7.69	13.06	15.74
	114	9/18/2007 4:39:00 PM	12.98	7.65	13.05	15.74
	115	9/18/2007 4:40:00 PM	12.95	7.61	13.02	15.74
	116	9/18/2007 4:41:00 PM	12.93	7.57	13.00	15.73
	117	9/18/2007 4:42:00 PM	12.90	7.53	12.99	15.73
	118	9/18/2007 4:43:00 PM	12.88	7.49	12.95	15.72
	119	9/18/2007 4:44:00 PM	12.85	7.43	12.93	15.72
	120	9/18/2007 4:45:00 PM	12.82	7.37	12.91	15.72
	121	9/18/2007 4:46:00 PM	12.79	7.34	12.86	15.71
	122	9/18/2007 4:47:00 PM	7.54	4.27	12.04	15.71
	123	9/18/2007 4:48:00 PM	1.40	0.76	9.66	15.71
	124	9/18/2007 4:49:00 PM	0.37	0.29	7.64	15.70
	125	9/18/2007 4:50:00 PM	0.27	0.19	5.89	15.71
	126	9/18/2007 4:51:00 PM	0.22	0.12	4.41	15.70
	127	9/18/2007 4:52:00 PM	0.19	0.08	3.18	15.70
	128	9/18/2007 4:53:00 PM	0.14	0.07	2.17	15.71
	129	9/18/2007 4:54:00 PM	0.15	0.04	1.38	15.70
	130	9/18/2007 4:55:00 PM	0.14	0.03	0.80	15.70

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/18/2007 4:56:00 PM	v -7.50	v -7.50	0.40	15.69
	132	9/18/2007 4:57:00 PM	v -7.50	v -7.50	0.18	15.69
	133	9/18/2007 4:58:00 PM	v -7.50	v -7.50	0.13	15.69
	134	9/18/2007 4:59:00 PM	v -7.50	v -7.50	0.12	15.69
	135	9/18/2007 5:00:00 PM	v -7.50	v -7.50	0.12	15.69
	136	9/18/2007 5:01:00 PM	v -7.50	v -7.50	0.12	15.66
	137	9/18/2007 5:02:00 PM	v -7.50	v -7.50	0.12	15.65
	138	9/18/2007 5:03:00 PM	v -7.50	v -7.50	v -7.50	15.65
	139	9/18/2007 5:04:00 PM	v -7.50	v -7.50	v -7.50	15.65
	140	9/18/2007 5:05:00 PM	v -7.50	v -7.50	v -7.50	15.64
	141	9/18/2007 5:06:00 PM	v -7.50	v -7.50	v -7.50	15.65
	142	9/18/2007 5:07:00 PM	v -7.50	v -7.50	v -7.50	15.64
	143	9/18/2007 5:08:00 PM	v -7.50	v -7.50	v -7.50	15.63
	144	9/18/2007 5:09:00 PM	v -7.50	v -7.50	v -7.50	15.63
	145	9/18/2007 5:10:00 PM	v -7.50	v -7.50	v -7.50	15.63
	146	9/18/2007 5:11:00 PM	v -7.50	v -7.50	v -7.50	15.63
	147	9/18/2007 5:11:26 PM	v -7.50	v -7.50	v -7.50	v -7.50

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Handy logger

Name : **LOGGER 1**

LOG Name	09190914
Interval	00:01:00
Personnel	

Start	9/19/2007 9:14:26 AM
Stop	9/19/2007 11:16:08 AM
Comment	

Data	124
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.42	16.33		
Minimum	1.67	1.74		
Average	15.99	14.26		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/19/2007 9:14:26 AM	v 1.67	v 1.74	O.R.	O.R.
	2	9/19/2007 9:15:00 AM	8.55	9.52	O.R.	O.R.
	3	9/19/2007 9:16:00 AM	15.27	15.37	O.R.	O.R.
	4	9/19/2007 9:17:00 AM	16.41	^ 16.33	O.R.	O.R.
	5	9/19/2007 9:18:00 AM	16.38	16.30	O.R.	O.R.
	6	9/19/2007 9:19:00 AM	16.40	16.24	O.R.	O.R.
	7	9/19/2007 9:20:00 AM	16.38	16.23	O.R.	O.R.
	8	9/19/2007 9:21:00 AM	16.37	16.16	O.R.	O.R.
	9	9/19/2007 9:22:00 AM	16.40	16.15	O.R.	O.R.
	10	9/19/2007 9:23:00 AM	16.38	16.08	O.R.	O.R.
	11	9/19/2007 9:24:00 AM	16.37	16.05	O.R.	O.R.
	12	9/19/2007 9:25:00 AM	16.41	15.99	O.R.	O.R.
	13	9/19/2007 9:26:00 AM	16.41	15.93	O.R.	O.R.
	14	9/19/2007 9:27:00 AM	16.39	15.90	O.R.	O.R.
	15	9/19/2007 9:28:00 AM	^ 16.42	15.85	O.R.	O.R.
	16	9/19/2007 9:29:00 AM	16.40	15.81	O.R.	O.R.
	17	9/19/2007 9:30:00 AM	16.40	15.75	O.R.	O.R.
	18	9/19/2007 9:31:00 AM	16.38	15.71	O.R.	O.R.
	19	9/19/2007 9:32:00 AM	16.39	15.66	O.R.	O.R.
	20	9/19/2007 9:33:00 AM	16.38	15.62	O.R.	O.R.
	21	9/19/2007 9:34:00 AM	16.37	15.57	O.R.	O.R.
	22	9/19/2007 9:35:00 AM	16.36	15.53	O.R.	O.R.
	23	9/19/2007 9:36:00 AM	16.36	15.48	O.R.	O.R.
	24	9/19/2007 9:37:00 AM	16.35	15.44	O.R.	O.R.
	25	9/19/2007 9:38:00 AM	16.34	15.40	O.R.	O.R.
	26	9/19/2007 9:39:00 AM	16.33	15.40	O.R.	O.R.
	27	9/19/2007 9:40:00 AM	16.32	15.37	O.R.	O.R.
	28	9/19/2007 9:41:00 AM	16.32	15.34	O.R.	O.R.
	29	9/19/2007 9:42:00 AM	16.31	15.31	O.R.	O.R.
	30	9/19/2007 9:43:00 AM	16.34	15.27	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/19/2007 9:44:00 AM	16.33	15.25	O.R.	O.R.
	32	9/19/2007 9:45:00 AM	16.31	15.21	O.R.	O.R.
	33	9/19/2007 9:46:00 AM	16.31	15.21	O.R.	O.R.
	34	9/19/2007 9:47:00 AM	16.31	15.17	O.R.	O.R.
	35	9/19/2007 9:48:00 AM	16.30	15.14	O.R.	O.R.
	36	9/19/2007 9:49:00 AM	16.30	15.09	O.R.	O.R.
	37	9/19/2007 9:50:00 AM	16.30	15.05	O.R.	O.R.
	38	9/19/2007 9:51:00 AM	16.28	15.01	O.R.	O.R.
	39	9/19/2007 9:52:00 AM	16.27	14.97	O.R.	O.R.
	40	9/19/2007 9:53:00 AM	16.26	14.97	O.R.	O.R.
	41	9/19/2007 9:54:00 AM	16.26	14.93	O.R.	O.R.
	42	9/19/2007 9:55:00 AM	16.26	14.88	O.R.	O.R.
	43	9/19/2007 9:56:00 AM	16.25	14.88	O.R.	O.R.
	44	9/19/2007 9:57:00 AM	16.24	14.84	O.R.	O.R.
	45	9/19/2007 9:58:00 AM	16.27	14.81	O.R.	O.R.
	46	9/19/2007 9:59:00 AM	16.24	14.78	O.R.	O.R.
	47	9/19/2007 10:00:00 AM	16.23	14.74	O.R.	O.R.
	48	9/19/2007 10:01:00 AM	16.25	14.72	O.R.	O.R.
	49	9/19/2007 10:02:00 AM	16.25	14.70	O.R.	O.R.
	50	9/19/2007 10:03:00 AM	16.23	14.68	O.R.	O.R.
	51	9/19/2007 10:04:00 AM	16.24	14.65	O.R.	O.R.
	52	9/19/2007 10:05:00 AM	16.23	14.62	O.R.	O.R.
	53	9/19/2007 10:06:00 AM	16.22	14.58	O.R.	O.R.
	54	9/19/2007 10:07:00 AM	16.22	14.56	O.R.	O.R.
	55	9/19/2007 10:08:00 AM	16.23	14.52	O.R.	O.R.
	56	9/19/2007 10:09:00 AM	16.21	14.52	O.R.	O.R.
	57	9/19/2007 10:10:00 AM	16.21	14.50	O.R.	O.R.
	58	9/19/2007 10:11:00 AM	16.20	14.46	O.R.	O.R.
	59	9/19/2007 10:12:00 AM	16.20	14.42	O.R.	O.R.
	60	9/19/2007 10:13:00 AM	16.19	14.39	O.R.	O.R.
	61	9/19/2007 10:14:00 AM	16.19	14.37	O.R.	O.R.
	62	9/19/2007 10:15:00 AM	16.18	14.34	O.R.	O.R.
	63	9/19/2007 10:16:00 AM	16.18	14.31	O.R.	O.R.
	64	9/19/2007 10:17:00 AM	16.17	14.29	O.R.	O.R.
	65	9/19/2007 10:18:00 AM	16.17	14.26	O.R.	O.R.
	66	9/19/2007 10:19:00 AM	16.16	14.23	O.R.	O.R.
	67	9/19/2007 10:20:00 AM	16.15	14.21	O.R.	O.R.
	68	9/19/2007 10:21:00 AM	16.14	14.22	O.R.	O.R.
	69	9/19/2007 10:22:00 AM	16.14	14.20	O.R.	O.R.
	70	9/19/2007 10:23:00 AM	16.13	14.17	O.R.	O.R.
	71	9/19/2007 10:24:00 AM	16.13	14.14	O.R.	O.R.
	72	9/19/2007 10:25:00 AM	16.12	14.11	O.R.	O.R.
	73	9/19/2007 10:26:00 AM	16.12	14.08	O.R.	O.R.
	74	9/19/2007 10:27:00 AM	16.14	14.05	O.R.	O.R.
	75	9/19/2007 10:28:00 AM	16.11	14.02	O.R.	O.R.
	76	9/19/2007 10:29:00 AM	16.14	13.99	O.R.	O.R.
	77	9/19/2007 10:30:00 AM	16.13	13.97	O.R.	O.R.
	78	9/19/2007 10:31:00 AM	16.13	13.95	O.R.	O.R.
	79	9/19/2007 10:32:00 AM	16.13	13.93	O.R.	O.R.
	80	9/19/2007 10:33:00 AM	16.12	13.90	O.R.	O.R.

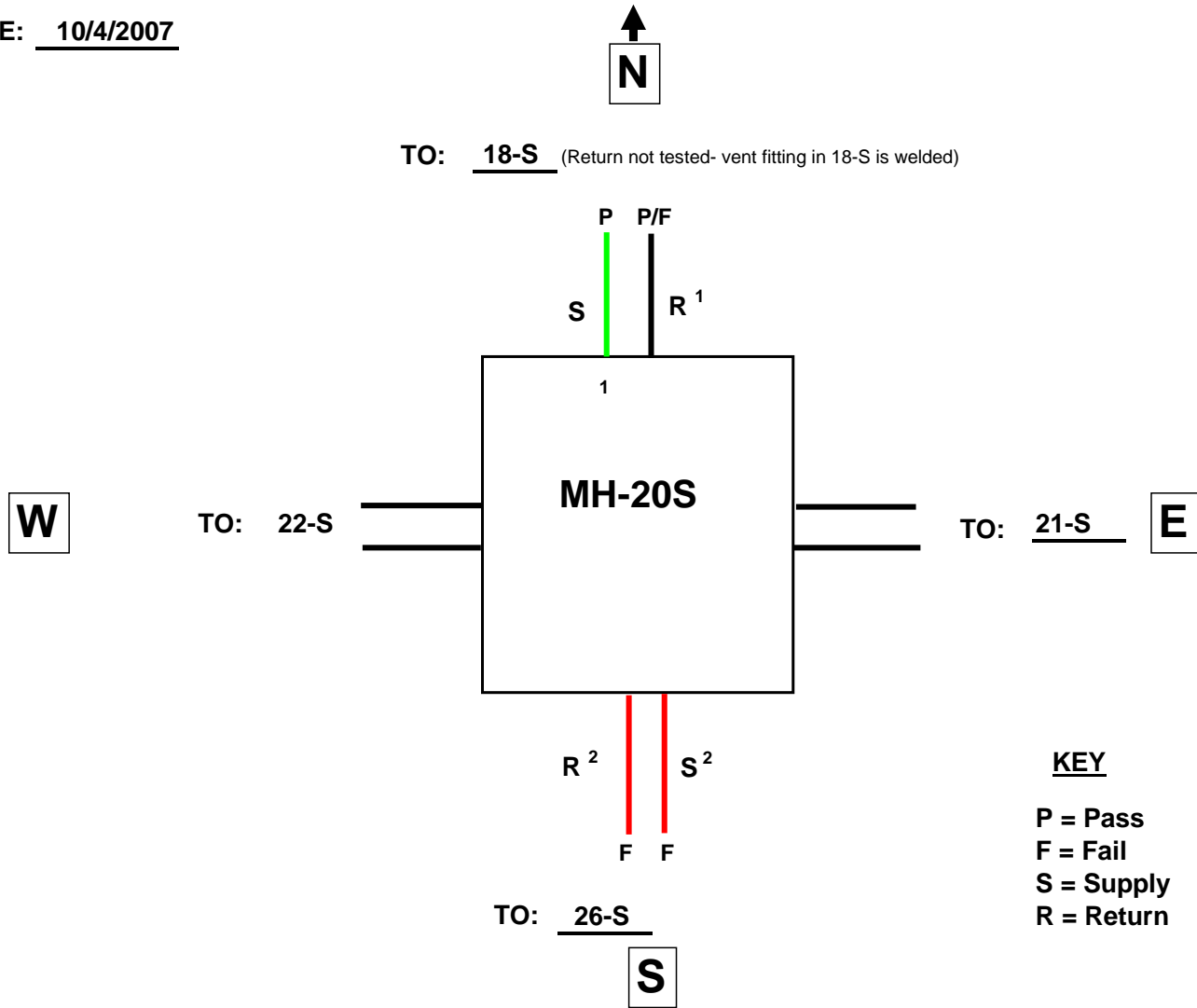
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/19/2007 10:34:00 AM	16.11	13.90	O.R.	O.R.
	82	9/19/2007 10:35:00 AM	16.11	13.84	O.R.	O.R.
	83	9/19/2007 10:36:00 AM	16.11	13.85	O.R.	O.R.
	84	9/19/2007 10:37:00 AM	16.10	13.81	O.R.	O.R.
	85	9/19/2007 10:38:00 AM	16.10	13.79	O.R.	O.R.
	86	9/19/2007 10:39:00 AM	16.09	13.77	O.R.	O.R.
	87	9/19/2007 10:40:00 AM	16.09	13.74	O.R.	O.R.
	88	9/19/2007 10:41:00 AM	16.08	13.72	O.R.	O.R.
	89	9/19/2007 10:42:00 AM	16.07	13.70	O.R.	O.R.
	90	9/19/2007 10:43:00 AM	16.06	13.67	O.R.	O.R.
	91	9/19/2007 10:44:00 AM	16.06	13.66	O.R.	O.R.
	92	9/19/2007 10:45:00 AM	16.05	13.62	O.R.	O.R.
	93	9/19/2007 10:46:00 AM	16.04	13.62	O.R.	O.R.
	94	9/19/2007 10:47:00 AM	16.04	13.60	O.R.	O.R.
	95	9/19/2007 10:48:00 AM	16.04	13.57	O.R.	O.R.
	96	9/19/2007 10:49:00 AM	16.04	13.55	O.R.	O.R.
	97	9/19/2007 10:50:00 AM	16.03	13.52	O.R.	O.R.
	98	9/19/2007 10:51:00 AM	16.03	13.50	O.R.	O.R.
	99	9/19/2007 10:52:00 AM	16.03	13.47	O.R.	O.R.
	100	9/19/2007 10:53:00 AM	16.02	13.46	O.R.	O.R.
	101	9/19/2007 10:54:00 AM	16.05	13.40	O.R.	O.R.
	102	9/19/2007 10:55:00 AM	16.04	13.38	O.R.	O.R.
	103	9/19/2007 10:56:00 AM	16.04	13.36	O.R.	O.R.
	104	9/19/2007 10:57:00 AM	16.01	13.37	O.R.	O.R.
	105	9/19/2007 10:58:00 AM	16.00	13.34	O.R.	O.R.
	106	9/19/2007 10:59:00 AM	16.02	13.31	O.R.	O.R.
	107	9/19/2007 11:00:00 AM	16.02	13.28	O.R.	O.R.
	108	9/19/2007 11:01:00 AM	16.02	13.25	O.R.	O.R.
	109	9/19/2007 11:02:00 AM	16.01	13.22	O.R.	O.R.
	110	9/19/2007 11:03:00 AM	16.00	13.26	O.R.	O.R.
	111	9/19/2007 11:04:00 AM	16.00	13.19	O.R.	O.R.
	112	9/19/2007 11:05:00 AM	15.99	13.16	O.R.	O.R.
	113	9/19/2007 11:06:00 AM	15.99	13.14	O.R.	O.R.
	114	9/19/2007 11:07:00 AM	15.99	13.11	O.R.	O.R.
	115	9/19/2007 11:08:00 AM	15.98	13.13	O.R.	O.R.
	116	9/19/2007 11:09:00 AM	15.97	13.11	O.R.	O.R.
	117	9/19/2007 11:10:00 AM	15.97	13.07	O.R.	O.R.
	118	9/19/2007 11:11:00 AM	15.97	13.05	O.R.	O.R.
	119	9/19/2007 11:12:00 AM	15.96	13.03	O.R.	O.R.
	120	9/19/2007 11:13:00 AM	15.95	13.01	O.R.	O.R.
	121	9/19/2007 11:14:00 AM	15.95	12.99	O.R.	O.R.
	122	9/19/2007 11:15:00 AM	15.94	12.97	O.R.	O.R.
	123	9/19/2007 11:16:00 AM	15.94	12.95	O.R.	O.R.
	124	9/19/2007 11:16:08 AM	15.94	12.90	O.R.	O.R.

DATE: 10/4/2007



NOTES:

1. Return conduit not pressure tested, Return vent in MH 18-S is weld fitting, not possible to cap or plug
2. Supply and Return vent elbows on conduits to MH 26-S are broken, unable to pressurize.
3. Supply/Return drains tested on 8/16/07: All dry.

MH 20-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 18-S	P	
	2		Return to 18-S		No test, vent in 18-S is weld fitting, cannot cap and pressurize
	3		Supply to 26-S	F	Vent elbows in 20-S are broken - cannot pressurize
	4		Return to 26-S	F	Vent elbows in 20-S are broken - cannot pressurize

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Handy logger

Name : **LOGGER 1**

LOG Name	10041024
Interval	00:01:00
Personnel	

Start	10/4/2007 10:24:28 AM
Stop	10/4/2007 12:33:14 PM
Comment	

Data	131
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.78			
Minimum	5.64			
Average	15.18			
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	10/4/2007 10:24:28 AM	v 5.64	O.R.	O.R.	O.R.
	2	10/4/2007 10:25:00 AM	8.27	O.R.	O.R.	O.R.
	3	10/4/2007 10:26:00 AM	8.89	O.R.	O.R.	O.R.
	4	10/4/2007 10:27:00 AM	9.84	O.R.	O.R.	O.R.
	5	10/4/2007 10:28:00 AM	11.04	O.R.	O.R.	O.R.
	6	10/4/2007 10:29:00 AM	12.60	O.R.	O.R.	O.R.
	7	10/4/2007 10:30:00 AM	9.83	O.R.	O.R.	O.R.
	8	10/4/2007 10:31:00 AM	15.35	O.R.	O.R.	O.R.
	9	10/4/2007 10:32:00 AM	^A 16.78	O.R.	O.R.	O.R.
	10	10/4/2007 10:33:00 AM	14.89	O.R.	O.R.	O.R.
	11	10/4/2007 10:34:00 AM	15.91	O.R.	O.R.	O.R.
	12	10/4/2007 10:35:00 AM	15.86	O.R.	O.R.	O.R.
	13	10/4/2007 10:36:00 AM	15.86	O.R.	O.R.	O.R.
	14	10/4/2007 10:37:00 AM	15.83	O.R.	O.R.	O.R.
	15	10/4/2007 10:38:00 AM	15.84	O.R.	O.R.	O.R.
	16	10/4/2007 10:39:00 AM	15.82	O.R.	O.R.	O.R.
	17	10/4/2007 10:40:00 AM	15.80	O.R.	O.R.	O.R.
	18	10/4/2007 10:41:00 AM	15.79	O.R.	O.R.	O.R.
	19	10/4/2007 10:42:00 AM	15.78	O.R.	O.R.	O.R.
	20	10/4/2007 10:43:00 AM	15.76	O.R.	O.R.	O.R.
	21	10/4/2007 10:44:00 AM	15.77	O.R.	O.R.	O.R.
	22	10/4/2007 10:45:00 AM	15.79	O.R.	O.R.	O.R.
	23	10/4/2007 10:46:00 AM	15.74	O.R.	O.R.	O.R.
	24	10/4/2007 10:47:00 AM	15.74	O.R.	O.R.	O.R.
	25	10/4/2007 10:48:00 AM	15.78	O.R.	O.R.	O.R.
	26	10/4/2007 10:49:00 AM	15.77	O.R.	O.R.	O.R.
	27	10/4/2007 10:50:00 AM	15.76	O.R.	O.R.	O.R.
	28	10/4/2007 10:51:00 AM	15.75	O.R.	O.R.	O.R.
	29	10/4/2007 10:52:00 AM	15.75	O.R.	O.R.	O.R.
	30	10/4/2007 10:53:00 AM	15.75	O.R.	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	10/4/2007 10:54:00 AM	15.74	O.R.	O.R.	O.R.
	32	10/4/2007 10:55:00 AM	15.72	O.R.	O.R.	O.R.
	33	10/4/2007 10:56:00 AM	15.71	O.R.	O.R.	O.R.
	34	10/4/2007 10:57:00 AM	15.68	O.R.	O.R.	O.R.
	35	10/4/2007 10:58:00 AM	15.68	O.R.	O.R.	O.R.
	36	10/4/2007 10:59:00 AM	15.69	O.R.	O.R.	O.R.
	37	10/4/2007 11:00:00 AM	15.66	O.R.	O.R.	O.R.
	38	10/4/2007 11:01:00 AM	15.70	O.R.	O.R.	O.R.
	39	10/4/2007 11:02:00 AM	15.68	O.R.	O.R.	O.R.
	40	10/4/2007 11:03:00 AM	15.70	O.R.	O.R.	O.R.
	41	10/4/2007 11:04:00 AM	15.69	O.R.	O.R.	O.R.
	42	10/4/2007 11:05:00 AM	15.68	O.R.	O.R.	O.R.
	43	10/4/2007 11:06:00 AM	15.67	O.R.	O.R.	O.R.
	44	10/4/2007 11:07:00 AM	15.66	O.R.	O.R.	O.R.
	45	10/4/2007 11:08:00 AM	15.65	O.R.	O.R.	O.R.
	46	10/4/2007 11:09:00 AM	15.64	O.R.	O.R.	O.R.
	47	10/4/2007 11:10:00 AM	15.65	O.R.	O.R.	O.R.
	48	10/4/2007 11:11:00 AM	15.64	O.R.	O.R.	O.R.
	49	10/4/2007 11:12:00 AM	15.63	O.R.	O.R.	O.R.
	50	10/4/2007 11:13:00 AM	15.63	O.R.	O.R.	O.R.
	51	10/4/2007 11:14:00 AM	15.62	O.R.	O.R.	O.R.
	52	10/4/2007 11:15:00 AM	15.61	O.R.	O.R.	O.R.
	53	10/4/2007 11:16:00 AM	15.59	O.R.	O.R.	O.R.
	54	10/4/2007 11:17:00 AM	15.63	O.R.	O.R.	O.R.
	55	10/4/2007 11:18:00 AM	15.62	O.R.	O.R.	O.R.
	56	10/4/2007 11:19:00 AM	15.60	O.R.	O.R.	O.R.
	57	10/4/2007 11:20:00 AM	15.59	O.R.	O.R.	O.R.
	58	10/4/2007 11:21:00 AM	15.57	O.R.	O.R.	O.R.
	59	10/4/2007 11:22:00 AM	15.56	O.R.	O.R.	O.R.
	60	10/4/2007 11:23:00 AM	15.58	O.R.	O.R.	O.R.
	61	10/4/2007 11:24:00 AM	15.58	O.R.	O.R.	O.R.
	62	10/4/2007 11:25:00 AM	15.57	O.R.	O.R.	O.R.
	63	10/4/2007 11:26:00 AM	15.54	O.R.	O.R.	O.R.
	64	10/4/2007 11:27:00 AM	15.55	O.R.	O.R.	O.R.
	65	10/4/2007 11:28:00 AM	15.55	O.R.	O.R.	O.R.
	66	10/4/2007 11:29:00 AM	15.54	O.R.	O.R.	O.R.
	67	10/4/2007 11:30:00 AM	15.53	O.R.	O.R.	O.R.
	68	10/4/2007 11:31:00 AM	15.52	O.R.	O.R.	O.R.
	69	10/4/2007 11:32:00 AM	15.52	O.R.	O.R.	O.R.
	70	10/4/2007 11:33:00 AM	15.53	O.R.	O.R.	O.R.
	71	10/4/2007 11:34:00 AM	15.52	O.R.	O.R.	O.R.
	72	10/4/2007 11:35:00 AM	15.51	O.R.	O.R.	O.R.
	73	10/4/2007 11:36:00 AM	15.47	O.R.	O.R.	O.R.
	74	10/4/2007 11:37:00 AM	15.50	O.R.	O.R.	O.R.
	75	10/4/2007 11:38:00 AM	15.48	O.R.	O.R.	O.R.
	76	10/4/2007 11:39:00 AM	15.47	O.R.	O.R.	O.R.
	77	10/4/2007 11:40:00 AM	15.48	O.R.	O.R.	O.R.
	78	10/4/2007 11:41:00 AM	15.44	O.R.	O.R.	O.R.
	79	10/4/2007 11:42:00 AM	15.44	O.R.	O.R.	O.R.
	80	10/4/2007 11:43:00 AM	15.46	O.R.	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	10/4/2007 11:44:00 AM	15.45	O.R.	O.R.	O.R.
	82	10/4/2007 11:45:00 AM	15.42	O.R.	O.R.	O.R.
	83	10/4/2007 11:46:00 AM	15.41	O.R.	O.R.	O.R.
	84	10/4/2007 11:47:00 AM	15.41	O.R.	O.R.	O.R.
	85	10/4/2007 11:48:00 AM	15.41	O.R.	O.R.	O.R.
	86	10/4/2007 11:49:00 AM	15.42	O.R.	O.R.	O.R.
	87	10/4/2007 11:50:00 AM	15.40	O.R.	O.R.	O.R.
	88	10/4/2007 11:51:00 AM	15.42	O.R.	O.R.	O.R.
	89	10/4/2007 11:52:00 AM	15.40	O.R.	O.R.	O.R.
	90	10/4/2007 11:53:00 AM	15.38	O.R.	O.R.	O.R.
	91	10/4/2007 11:54:00 AM	15.37	O.R.	O.R.	O.R.
	92	10/4/2007 11:55:00 AM	15.36	O.R.	O.R.	O.R.
	93	10/4/2007 11:56:00 AM	15.36	O.R.	O.R.	O.R.
	94	10/4/2007 11:57:00 AM	15.35	O.R.	O.R.	O.R.
	95	10/4/2007 11:58:00 AM	15.34	O.R.	O.R.	O.R.
	96	10/4/2007 11:59:00 AM	15.34	O.R.	O.R.	O.R.
	97	10/4/2007 12:00:00 PM	15.34	O.R.	O.R.	O.R.
	98	10/4/2007 12:01:00 PM	15.32	O.R.	O.R.	O.R.
	99	10/4/2007 12:02:00 PM	15.32	O.R.	O.R.	O.R.
	100	10/4/2007 12:03:00 PM	15.32	O.R.	O.R.	O.R.
	101	10/4/2007 12:04:00 PM	15.31	O.R.	O.R.	O.R.
	102	10/4/2007 12:05:00 PM	15.33	O.R.	O.R.	O.R.
	103	10/4/2007 12:06:00 PM	15.32	O.R.	O.R.	O.R.
	104	10/4/2007 12:07:00 PM	15.30	O.R.	O.R.	O.R.
	105	10/4/2007 12:08:00 PM	15.29	O.R.	O.R.	O.R.
	106	10/4/2007 12:09:00 PM	15.30	O.R.	O.R.	O.R.
	107	10/4/2007 12:10:00 PM	15.29	O.R.	O.R.	O.R.
	108	10/4/2007 12:11:00 PM	15.27	O.R.	O.R.	O.R.
	109	10/4/2007 12:12:00 PM	15.27	O.R.	O.R.	O.R.
	110	10/4/2007 12:13:00 PM	15.27	O.R.	O.R.	O.R.
	111	10/4/2007 12:14:00 PM	15.26	O.R.	O.R.	O.R.
	112	10/4/2007 12:15:00 PM	15.27	O.R.	O.R.	O.R.
	113	10/4/2007 12:16:00 PM	15.26	O.R.	O.R.	O.R.
	114	10/4/2007 12:17:00 PM	15.25	O.R.	O.R.	O.R.
	115	10/4/2007 12:18:00 PM	15.23	O.R.	O.R.	O.R.
	116	10/4/2007 12:19:00 PM	15.24	O.R.	O.R.	O.R.
	117	10/4/2007 12:20:00 PM	15.23	O.R.	O.R.	O.R.
	118	10/4/2007 12:21:00 PM	15.19	O.R.	O.R.	O.R.
	119	10/4/2007 12:22:00 PM	15.19	O.R.	O.R.	O.R.
	120	10/4/2007 12:23:00 PM	15.19	O.R.	O.R.	O.R.
	121	10/4/2007 12:24:00 PM	15.21	O.R.	O.R.	O.R.
	122	10/4/2007 12:25:00 PM	15.21	O.R.	O.R.	O.R.
	123	10/4/2007 12:26:00 PM	15.20	O.R.	O.R.	O.R.
	124	10/4/2007 12:27:00 PM	15.19	O.R.	O.R.	O.R.
	125	10/4/2007 12:28:00 PM	15.19	O.R.	O.R.	O.R.
	126	10/4/2007 12:29:00 PM	15.18	O.R.	O.R.	O.R.
	127	10/4/2007 12:30:00 PM	15.15	O.R.	O.R.	O.R.
	128	10/4/2007 12:31:00 PM	15.16	O.R.	O.R.	O.R.
	129	10/4/2007 12:32:00 PM	15.14	O.R.	O.R.	O.R.
	130	10/4/2007 12:33:00 PM	15.15	O.R.	O.R.	O.R.

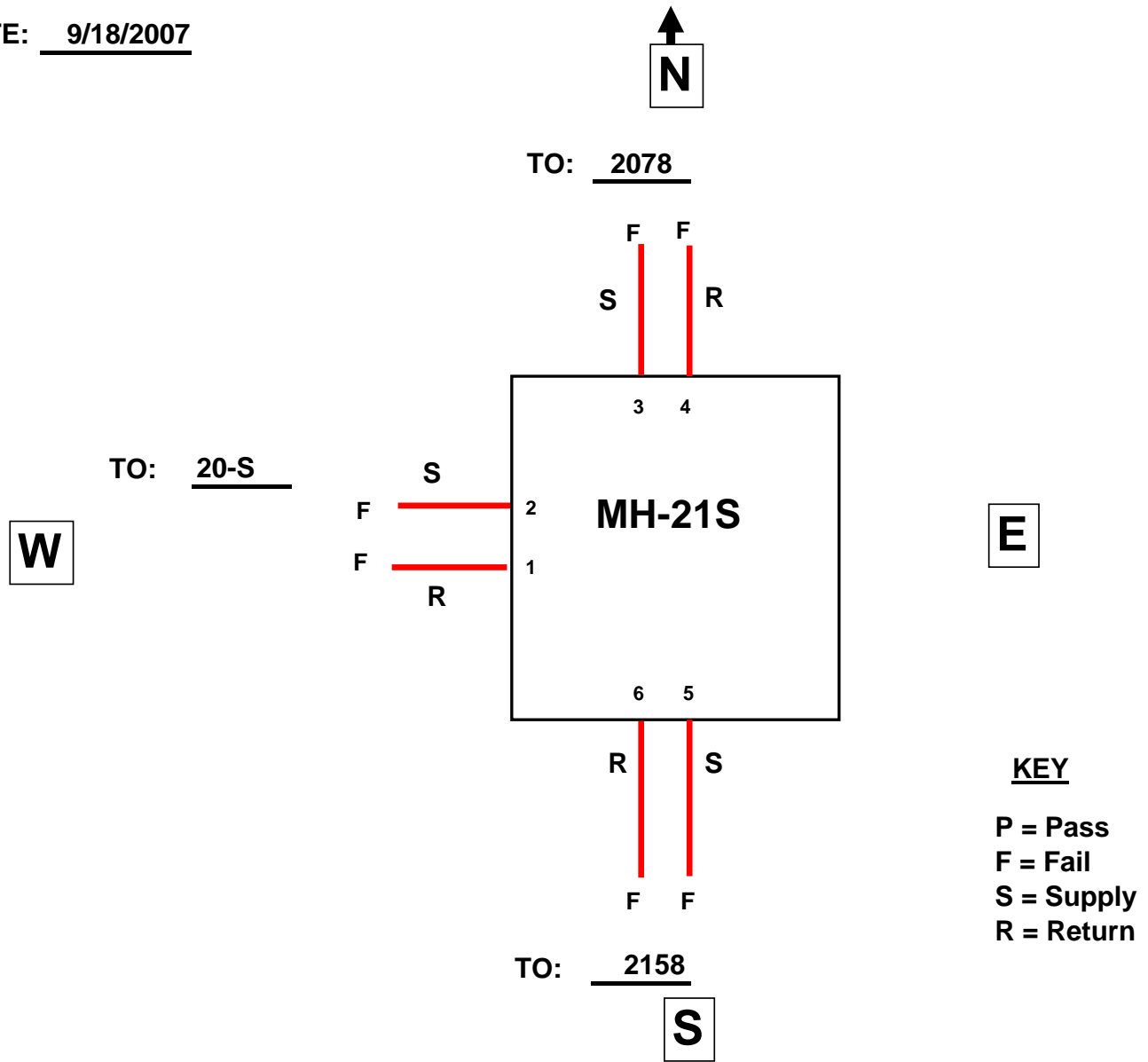
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Name : LOGGER 1

Handy logger

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	10/4/2007 12:33:14 PM	15.15	O.R.	O.R.	O.R.

DATE: 9/18/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: South wall and West wall conduit drains all dry; North wall Return discharged < 1 oz. water from nipple when cap removed, drain valve dry when opened; North wall Supply discharged < 1 oz. water from nipple when cap removed, additional < 1oz. discharged when drain valve opened.

MH 21-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 20-S	F	
	2	2	Supply to 20-S	F	
	3	3	Supply to 2078	F	
	4	4	Return to 2078	F	
2	1	5	Supply to 2158	F	
	2	6	Return to 2158	F	

printed 1/10/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09181156
Interval	00:01:00
Personnel	

Start	9/18/2007 11:56:47 AM
Stop	9/18/2007 1:28:39 PM
Comment	

Data	94
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.97	16.30	16.29	16.56
Minimum	-7.50	-7.50	-7.50	-7.50
Average	12.73	12.95	9.06	10.23
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 11:56:47 AM	0.01	0.00	0.05	0.17
	2	9/18/2007 11:57:00 AM	3.68	2.89	2.25	2.37
	3	9/18/2007 11:58:00 AM	12.82	13.58	12.41	12.47
	4	9/18/2007 11:59:00 AM	^ 15.97	^ 16.30	^ 16.29	^ 16.56
	5	9/18/2007 12:00:00 PM	15.93	16.22	16.07	16.30
	6	9/18/2007 12:01:00 PM	15.87	16.12	15.89	16.07
	7	9/18/2007 12:02:00 PM	15.78	16.07	15.71	15.88
	8	9/18/2007 12:03:00 PM	15.73	16.01	15.54	15.69
	9	9/18/2007 12:04:00 PM	15.68	15.93	15.32	15.50
	10	9/18/2007 12:05:00 PM	15.61	15.84	15.12	15.31
	11	9/18/2007 12:06:00 PM	15.55	15.77	14.97	15.12
	12	9/18/2007 12:07:00 PM	15.48	15.71	14.77	14.98
	13	9/18/2007 12:08:00 PM	15.42	15.65	14.60	14.79
	14	9/18/2007 12:09:00 PM	15.36	15.58	14.42	14.66
	15	9/18/2007 12:10:00 PM	15.29	15.48	14.20	14.48
	16	9/18/2007 12:11:00 PM	15.25	15.43	14.04	14.35
	17	9/18/2007 12:12:00 PM	15.18	15.37	13.91	14.20
	18	9/18/2007 12:13:00 PM	15.13	15.32	13.72	14.09
	19	9/18/2007 12:14:00 PM	15.07	15.25	13.54	13.95
	20	9/18/2007 12:15:00 PM	15.01	15.21	13.37	13.83
	21	9/18/2007 12:16:00 PM	14.95	15.14	13.20	13.68
	22	9/18/2007 12:17:00 PM	14.89	15.05	13.04	13.55
	23	9/18/2007 12:18:00 PM	14.82	14.99	12.87	13.43
	24	9/18/2007 12:19:00 PM	14.78	14.96	12.72	13.30
	25	9/18/2007 12:20:00 PM	14.71	14.90	12.54	13.17
	26	9/18/2007 12:21:00 PM	14.67	14.84	12.37	13.05
	27	9/18/2007 12:22:00 PM	14.60	14.76	12.21	12.92
	28	9/18/2007 12:23:00 PM	14.54	14.70	12.08	12.80
	29	9/18/2007 12:24:00 PM	14.50	14.68	11.92	12.67
	30	9/18/2007 12:25:00 PM	14.43	14.61	11.75	12.55

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 12:26:00 PM	14.38	14.51	11.60	12.43
	32	9/18/2007 12:27:00 PM	14.32	14.49	11.45	12.31
	33	9/18/2007 12:28:00 PM	14.27	14.43	11.29	12.20
	34	9/18/2007 12:29:00 PM	14.21	14.37	11.17	12.07
	35	9/18/2007 12:30:00 PM	14.15	14.31	11.02	11.99
	36	9/18/2007 12:31:00 PM	14.09	14.24	10.87	11.87
	37	9/18/2007 12:32:00 PM	14.04	14.18	10.73	11.75
	38	9/18/2007 12:33:00 PM	13.95	14.13	10.58	11.64
	39	9/18/2007 12:34:00 PM	13.90	14.07	10.40	11.52
	40	9/18/2007 12:35:00 PM	13.84	14.02	10.26	11.38
	41	9/18/2007 12:36:00 PM	13.82	13.96	10.12	11.28
	42	9/18/2007 12:37:00 PM	13.76	13.90	9.98	11.17
	43	9/18/2007 12:38:00 PM	13.70	13.85	9.84	11.06
	44	9/18/2007 12:39:00 PM	13.63	13.78	9.73	10.97
	45	9/18/2007 12:40:00 PM	13.58	13.74	9.60	10.86
	46	9/18/2007 12:41:00 PM	13.52	13.67	9.46	10.76
	47	9/18/2007 12:42:00 PM	13.49	13.64	9.33	10.64
	48	9/18/2007 12:43:00 PM	13.42	13.57	9.18	10.53
	49	9/18/2007 12:44:00 PM	13.38	13.51	9.08	10.42
	50	9/18/2007 12:45:00 PM	13.29	13.44	8.94	10.35
	51	9/18/2007 12:46:00 PM	13.24	13.38	8.81	10.20
	52	9/18/2007 12:47:00 PM	13.18	13.34	8.65	10.10
	53	9/18/2007 12:48:00 PM	13.12	13.28	8.53	10.00
	54	9/18/2007 12:49:00 PM	13.03	13.23	8.41	9.90
	55	9/18/2007 12:50:00 PM	13.02	13.19	8.29	9.80
	56	9/18/2007 12:51:00 PM	12.99	13.12	8.15	9.70
	57	9/18/2007 12:52:00 PM	12.90	13.07	8.07	9.59
	58	9/18/2007 12:53:00 PM	12.87	13.01	7.94	9.52
	59	9/18/2007 12:54:00 PM	12.79	12.97	7.78	9.40
	60	9/18/2007 12:55:00 PM	12.73	12.94	7.68	9.31
	61	9/18/2007 12:56:00 PM	12.69	12.88	7.54	9.21
	62	9/18/2007 12:57:00 PM	12.62	12.83	7.46	9.11
	63	9/18/2007 12:58:00 PM	12.55	12.79	7.34	9.02
	64	9/18/2007 12:59:00 PM	12.50	12.75	7.23	8.92
	65	9/18/2007 1:00:00 PM	12.45	12.70	7.11	8.82
	66	9/18/2007 1:01:00 PM	12.40	12.65	7.00	8.73
	67	9/18/2007 1:02:00 PM	12.35	12.57	6.88	8.64
	68	9/18/2007 1:03:00 PM	12.31	12.56	6.77	8.54
	69	9/18/2007 1:04:00 PM	12.26	12.48	6.62	8.46
	70	9/18/2007 1:05:00 PM	12.21	12.46	6.55	8.36
	71	9/18/2007 1:06:00 PM	12.15	12.42	6.44	8.27
	72	9/18/2007 1:07:00 PM	12.10	12.37	6.36	8.22
	73	9/18/2007 1:08:00 PM	12.05	12.32	6.22	8.09
	74	9/18/2007 1:09:00 PM	12.00	12.28	6.13	8.01
	75	9/18/2007 1:10:00 PM	11.96	12.24	6.01	7.93
	76	9/18/2007 1:11:00 PM	11.90	12.17	5.90	7.82
	77	9/18/2007 1:12:00 PM	11.83	12.14	5.79	7.72
	78	9/18/2007 1:13:00 PM	11.76	12.11	5.69	7.64
	79	9/18/2007 1:14:00 PM	11.72	12.05	5.60	7.56
	80	9/18/2007 1:15:00 PM	11.69	12.00	5.51	7.50

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/18/2007 1:16:00 PM	11.66	11.96	5.40	7.39
	82	9/18/2007 1:17:00 PM	11.60	11.93	5.30	7.32
	83	9/18/2007 1:18:00 PM	11.54	11.89	5.20	7.22
	84	9/18/2007 1:19:00 PM	11.51	11.81	5.10	7.15
	85	9/18/2007 1:20:00 PM	11.44	11.79	4.99	7.06
	86	9/18/2007 1:21:00 PM	11.40	11.74	4.92	6.98
	87	9/18/2007 1:22:00 PM	11.37	11.71	4.82	6.91
	88	9/18/2007 1:23:00 PM	11.30	11.67	4.74	6.81
	89	9/18/2007 1:24:00 PM	11.26	11.63	4.63	6.73
	90	9/18/2007 1:25:00 PM	11.22	11.60	4.56	6.67
	91	9/18/2007 1:26:00 PM	11.14	11.56	4.49	6.59
	92	9/18/2007 1:27:00 PM	9.31	10.09	4.42	6.52
	93	9/18/2007 1:28:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	94	9/18/2007 1:28:39 PM	v -7.50	v -7.50	v -7.50	v -7.50

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Handy logger

Name : **LOGGER 2**

LOG Name	09181239
Interval	00:01:00
Personnel	

Start	9/18/2007 12:39:49 PM
Stop	9/18/2007 1:36:34 PM
Comment	

Data	59
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.18	16.49		
Minimum	0.15	0.02		
Average	14.14	8.08		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 12:39:49 PM	v 0.15	v 0.02	O.R.	O.R.
	2	9/18/2007 12:40:00 PM	1.90	1.85	O.R.	O.R.
	3	9/18/2007 12:41:00 PM	12.42	13.01	O.R.	O.R.
	4	9/18/2007 12:42:00 PM	^ 16.18	^ 16.49	O.R.	O.R.
	5	9/18/2007 12:43:00 PM	16.10	15.98	O.R.	O.R.
	6	9/18/2007 12:44:00 PM	16.02	15.59	O.R.	O.R.
	7	9/18/2007 12:45:00 PM	15.96	15.15	O.R.	O.R.
	8	9/18/2007 12:46:00 PM	15.90	14.75	O.R.	O.R.
	9	9/18/2007 12:47:00 PM	15.84	14.34	O.R.	O.R.
	10	9/18/2007 12:48:00 PM	15.77	13.97	O.R.	O.R.
	11	9/18/2007 12:49:00 PM	15.73	13.59	O.R.	O.R.
	12	9/18/2007 12:50:00 PM	15.65	13.28	O.R.	O.R.
	13	9/18/2007 12:51:00 PM	15.62	12.91	O.R.	O.R.
	14	9/18/2007 12:52:00 PM	15.55	12.57	O.R.	O.R.
	15	9/18/2007 12:53:00 PM	15.50	12.23	O.R.	O.R.
	16	9/18/2007 12:54:00 PM	15.44	11.90	O.R.	O.R.
	17	9/18/2007 12:55:00 PM	15.38	11.58	O.R.	O.R.
	18	9/18/2007 12:56:00 PM	15.33	11.29	O.R.	O.R.
	19	9/18/2007 12:57:00 PM	15.28	10.96	O.R.	O.R.
	20	9/18/2007 12:58:00 PM	15.20	10.67	O.R.	O.R.
	21	9/18/2007 12:59:00 PM	15.15	10.40	O.R.	O.R.
	22	9/18/2007 1:00:00 PM	15.10	10.07	O.R.	O.R.
	23	9/18/2007 1:01:00 PM	15.05	9.80	O.R.	O.R.
	24	9/18/2007 1:02:00 PM	15.03	9.56	O.R.	O.R.
	25	9/18/2007 1:03:00 PM	14.97	9.29	O.R.	O.R.
	26	9/18/2007 1:04:00 PM	14.90	9.02	O.R.	O.R.
	27	9/18/2007 1:05:00 PM	14.86	8.76	O.R.	O.R.
	28	9/18/2007 1:06:00 PM	14.81	8.50	O.R.	O.R.
	29	9/18/2007 1:07:00 PM	14.76	8.23	O.R.	O.R.
	30	9/18/2007 1:08:00 PM	14.68	8.00	O.R.	O.R.

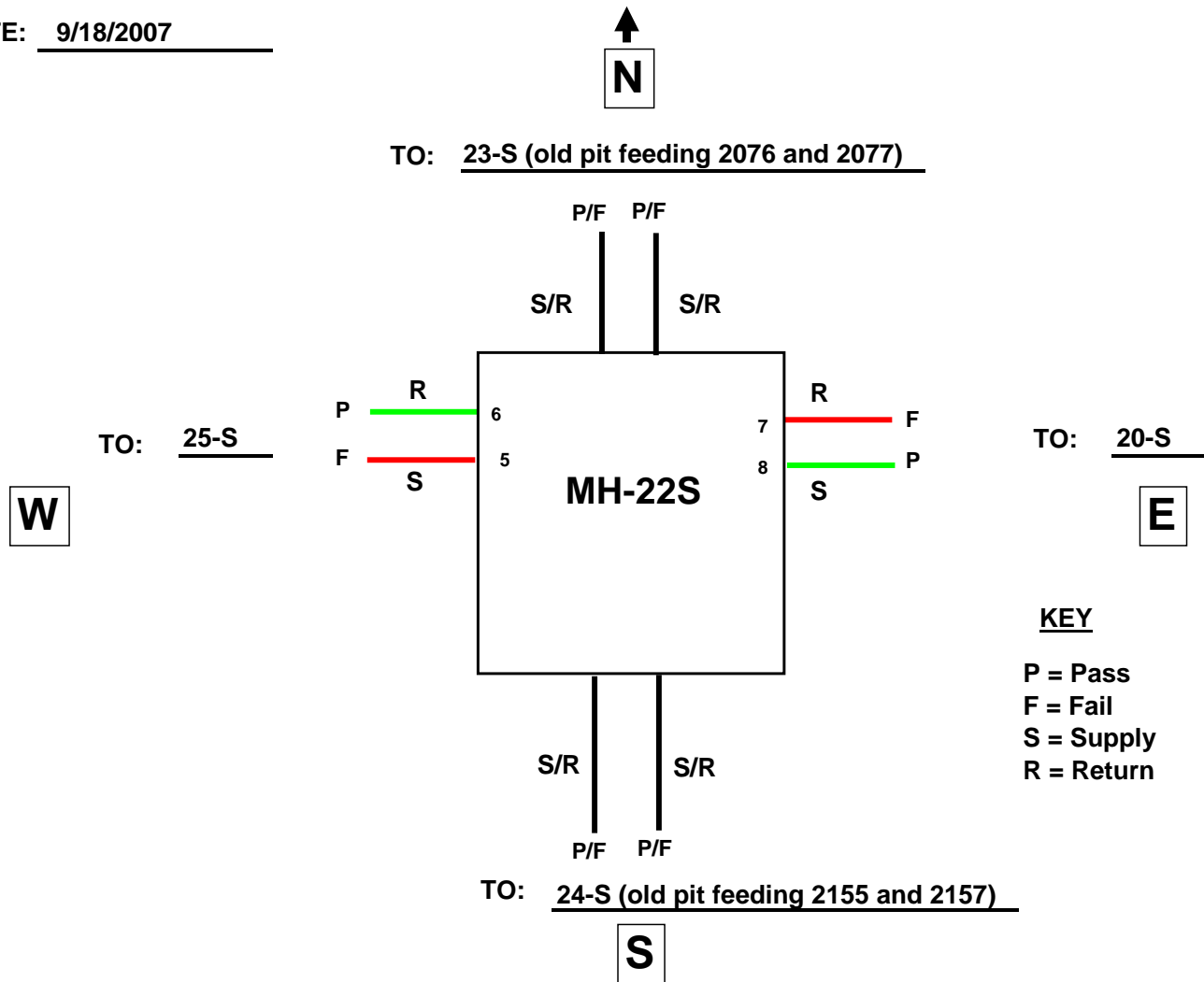
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 1:09:00 PM	14.63	7.75	O.R.	O.R.
	32	9/18/2007 1:10:00 PM	14.56	7.48	O.R.	O.R.
	33	9/18/2007 1:11:00 PM	14.51	7.25	O.R.	O.R.
	34	9/18/2007 1:12:00 PM	14.46	7.00	O.R.	O.R.
	35	9/18/2007 1:13:00 PM	14.40	6.77	O.R.	O.R.
	36	9/18/2007 1:14:00 PM	14.37	6.57	O.R.	O.R.
	37	9/18/2007 1:15:00 PM	14.33	6.37	O.R.	O.R.
	38	9/18/2007 1:16:00 PM	14.26	6.14	O.R.	O.R.
	39	9/18/2007 1:17:00 PM	14.19	5.90	O.R.	O.R.
	40	9/18/2007 1:18:00 PM	14.13	5.70	O.R.	O.R.
	41	9/18/2007 1:19:00 PM	14.09	5.54	O.R.	O.R.
	42	9/18/2007 1:20:00 PM	14.03	5.33	O.R.	O.R.
	43	9/18/2007 1:21:00 PM	14.01	5.12	O.R.	O.R.
	44	9/18/2007 1:22:00 PM	13.96	4.93	O.R.	O.R.
	45	9/18/2007 1:23:00 PM	13.90	4.79	O.R.	O.R.
	46	9/18/2007 1:24:00 PM	13.87	4.59	O.R.	O.R.
	47	9/18/2007 1:25:00 PM	13.83	4.44	O.R.	O.R.
	48	9/18/2007 1:26:00 PM	13.79	4.28	O.R.	O.R.
	49	9/18/2007 1:27:00 PM	13.76	4.10	O.R.	O.R.
	50	9/18/2007 1:28:00 PM	13.72	3.92	O.R.	O.R.
	51	9/18/2007 1:29:00 PM	13.67	3.77	O.R.	O.R.
	52	9/18/2007 1:30:00 PM	13.65	3.63	O.R.	O.R.
	53	9/18/2007 1:31:00 PM	13.57	3.49	O.R.	O.R.
	54	9/18/2007 1:32:00 PM	13.51	3.36	O.R.	O.R.
	55	9/18/2007 1:33:00 PM	13.47	3.20	O.R.	O.R.
	56	9/18/2007 1:34:00 PM	13.42	3.09	O.R.	O.R.
	57	9/18/2007 1:35:00 PM	13.35	2.93	O.R.	O.R.
	58	9/18/2007 1:36:00 PM	13.29	2.80	O.R.	O.R.
	59	9/18/2007 1:36:34 PM	13.25	2.74	O.R.	O.R.

DATE: 9/18/2007



NOTES:

1. Conduits to Bldgs. 2076/2077 and Bldgs. 2155/2157 from MH 22-S connect in old pits ("Permit Required" with round iron access covers) designated "MH 23-S" and "MH 24-S" respectively on current "as built" drawings. Access to drains and vents in these old pits is very restricted.
2. Supply/Return drains tested on 8/16/07: All dry.

MH 22-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5	Supply to 25-S	F	
	2	6	Return to 25-S	P	
	3	7	Return to 20-S	F	
	4	8	Supply to 20-S	P	

printed 1/10/2008

Handy logger

Name : **LOGGER 2**

LOG Name	09181015
Interval	00:01:00
Personnel	

Start	9/18/2007 10:15:15 AM
Stop	9/18/2007 12:17:26 PM
Comment	

Data	124
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.05	16.06	16.42	16.33
Minimum	0.10	0.18	0.14	0.22
Average	12.41	14.90	10.56	15.29
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 10:15:15 AM	0.18	v 0.18	0.29	v 0.22
	2	9/18/2007 10:16:00 AM	6.93	6.20	3.29	3.13
	3	9/18/2007 10:17:00 AM	^ 16.05	^ 16.06	^ 16.42	15.94
	4	9/18/2007 10:18:00 AM	16.00	16.02	16.33	^ 16.33
	5	9/18/2007 10:19:00 AM	15.97	15.99	16.22	16.31
	6	9/18/2007 10:20:00 AM	15.97	15.97	16.12	16.29
	7	9/18/2007 10:21:00 AM	15.91	15.96	15.96	16.27
	8	9/18/2007 10:22:00 AM	15.87	15.97	15.83	16.27
	9	9/18/2007 10:23:00 AM	15.82	15.93	15.69	16.26
	10	9/18/2007 10:24:00 AM	15.76	15.94	15.61	16.23
	11	9/18/2007 10:25:00 AM	15.75	15.90	15.49	16.23
	12	9/18/2007 10:26:00 AM	15.70	15.87	15.38	16.22
	13	9/18/2007 10:27:00 AM	15.65	15.88	15.26	16.19
	14	9/18/2007 10:28:00 AM	15.80	15.85	15.14	16.19
	15	9/18/2007 10:29:00 AM	15.56	15.85	15.05	16.16
	16	9/18/2007 10:30:00 AM	15.49	15.83	14.92	16.13
	17	9/18/2007 10:31:00 AM	15.48	15.80	14.86	16.10
	18	9/18/2007 10:32:00 AM	15.43	15.79	14.74	16.12
	19	9/18/2007 10:33:00 AM	15.38	15.80	14.64	16.05
	20	9/18/2007 10:34:00 AM	15.34	15.78	14.54	16.08
	21	9/18/2007 10:35:00 AM	15.29	15.73	14.44	16.05
	22	9/18/2007 10:36:00 AM	15.25	15.71	14.35	16.03
	23	9/18/2007 10:37:00 AM	15.21	15.70	14.26	16.01
	24	9/18/2007 10:38:00 AM	15.16	15.70	14.17	16.00
	25	9/18/2007 10:39:00 AM	15.12	15.69	14.07	16.01
	26	9/18/2007 10:40:00 AM	15.07	15.71	13.99	16.00
	27	9/18/2007 10:41:00 AM	15.03	15.69	13.90	15.95
	28	9/18/2007 10:42:00 AM	14.99	15.66	13.81	15.94
	29	9/18/2007 10:43:00 AM	14.93	15.63	13.74	15.94
	30	9/18/2007 10:44:00 AM	14.89	15.61	13.65	15.93

printed 1/10/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 10:45:00 AM	14.84	15.60	13.57	15.91
	32	9/18/2007 10:46:00 AM	14.82	15.58	13.48	15.89
	33	9/18/2007 10:47:00 AM	14.78	15.57	13.40	15.88
	34	9/18/2007 10:48:00 AM	14.73	15.56	13.31	15.87
	35	9/18/2007 10:49:00 AM	14.69	15.54	13.23	15.85
	36	9/18/2007 10:50:00 AM	14.63	15.56	13.14	15.87
	37	9/18/2007 10:51:00 AM	14.57	15.54	13.06	15.81
	38	9/18/2007 10:52:00 AM	14.53	15.52	12.98	15.80
	39	9/18/2007 10:53:00 AM	14.49	15.51	12.88	15.80
	40	9/18/2007 10:54:00 AM	14.46	15.48	12.79	15.77
	41	9/18/2007 10:55:00 AM	14.42	15.48	12.73	15.76
	42	9/18/2007 10:56:00 AM	14.37	15.47	12.66	15.74
	43	9/18/2007 10:57:00 AM	14.34	15.45	12.60	15.72
	44	9/18/2007 10:58:00 AM	14.27	15.45	12.50	15.72
	45	9/18/2007 10:59:00 AM	14.22	15.44	12.43	15.71
	46	9/18/2007 11:00:00 AM	14.20	15.43	12.39	15.70
	47	9/18/2007 11:01:00 AM	14.16	15.41	12.31	15.70
	48	9/18/2007 11:02:00 AM	14.11	15.43	12.25	15.69
	49	9/18/2007 11:03:00 AM	14.08	15.42	12.18	15.67
	50	9/18/2007 11:04:00 AM	14.03	15.42	12.10	15.70
	51	9/18/2007 11:05:00 AM	14.01	15.40	12.01	15.68
	52	9/18/2007 11:06:00 AM	13.96	15.39	11.95	15.66
	53	9/18/2007 11:07:00 AM	13.91	15.37	11.88	15.60
	54	9/18/2007 11:08:00 AM	13.88	15.38	11.83	15.58
	55	9/18/2007 11:09:00 AM	13.81	15.35	11.75	15.61
	56	9/18/2007 11:10:00 AM	13.76	15.35	11.68	15.60
	57	9/18/2007 11:11:00 AM	13.72	15.33	11.62	15.55
	58	9/18/2007 11:12:00 AM	13.69	15.33	11.53	15.51
	59	9/18/2007 11:13:00 AM	13.65	15.31	11.48	15.51
	60	9/18/2007 11:14:00 AM	13.61	15.29	11.41	15.50
	61	9/18/2007 11:15:00 AM	13.56	15.32	11.35	15.49
	62	9/18/2007 11:16:00 AM	13.52	15.26	11.28	15.53
	63	9/18/2007 11:17:00 AM	13.47	15.27	11.22	15.47
	64	9/18/2007 11:18:00 AM	13.44	15.23	11.16	15.45
	65	9/18/2007 11:19:00 AM	13.39	15.25	11.10	15.48
	66	9/18/2007 11:20:00 AM	13.28	15.14	10.95	15.46
	67	9/18/2007 11:21:00 AM	13.22	15.16	10.88	15.45
	68	9/18/2007 11:22:00 AM	13.18	15.12	10.82	15.43
	69	9/18/2007 11:23:00 AM	13.14	15.12	10.77	15.42
	70	9/18/2007 11:24:00 AM	13.13	15.12	10.71	15.42
	71	9/18/2007 11:25:00 AM	13.08	15.12	10.65	15.39
	72	9/18/2007 11:26:00 AM	13.02	15.11	10.59	15.38
	73	9/18/2007 11:27:00 AM	12.98	15.07	10.54	15.37
	74	9/18/2007 11:28:00 AM	12.96	15.06	10.46	15.31
	75	9/18/2007 11:29:00 AM	12.93	15.03	10.44	15.30
	76	9/18/2007 11:30:00 AM	12.89	15.05	10.38	15.30
	77	9/18/2007 11:31:00 AM	12.85	15.05	10.33	15.28
	78	9/18/2007 11:32:00 AM	12.80	15.05	10.27	15.33
	79	9/18/2007 11:33:00 AM	12.76	15.03	10.20	15.30
	80	9/18/2007 11:34:00 AM	12.74	15.00	10.14	15.29

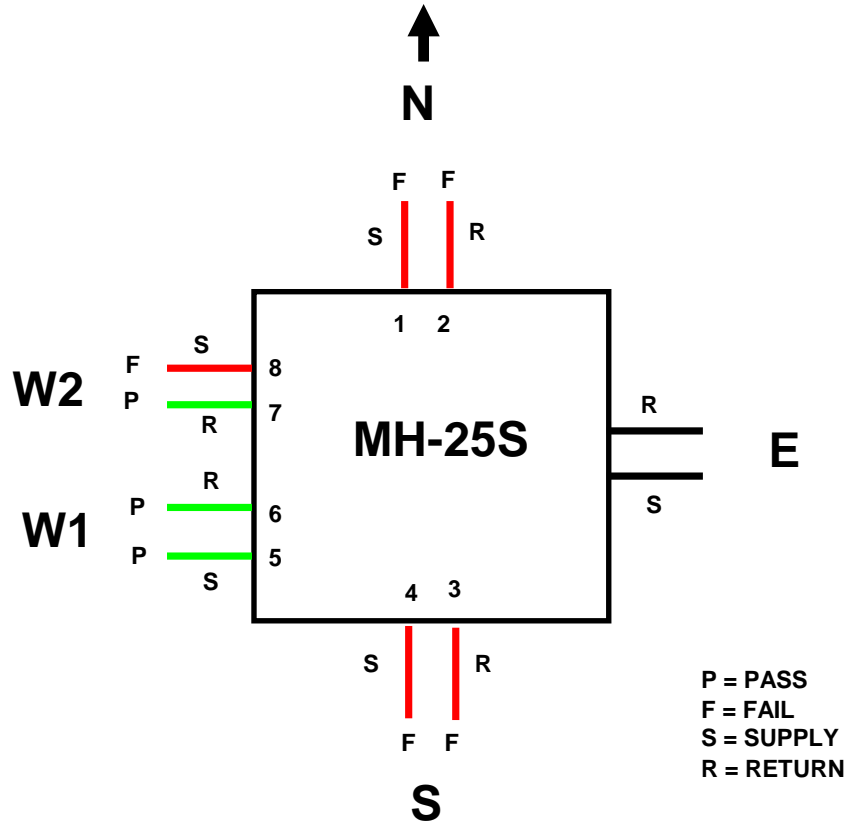
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/18/2007 11:35:00 AM	12.69	14.99	10.06	15.27
	82	9/18/2007 11:36:00 AM	12.67	14.93	10.00	15.26
	83	9/18/2007 11:37:00 AM	12.65	14.86	9.92	15.25
	84	9/18/2007 11:38:00 AM	12.63	14.82	9.85	15.25
	85	9/18/2007 11:39:00 AM	12.64	14.76	9.77	15.25
	86	9/18/2007 11:40:00 AM	12.59	14.70	9.71	15.19
	87	9/18/2007 11:41:00 AM	12.57	14.64	9.63	15.23
	88	9/18/2007 11:42:00 AM	12.56	14.59	9.56	15.21
	89	9/18/2007 11:43:00 AM	12.58	14.53	9.48	15.20
	90	9/18/2007 11:44:00 AM	12.55	14.48	9.41	15.19
	91	9/18/2007 11:45:00 AM	12.52	14.44	9.34	15.18
	92	9/18/2007 11:46:00 AM	12.50	14.39	9.27	15.12
	93	9/18/2007 11:47:00 AM	12.48	14.29	9.20	15.12
	94	9/18/2007 11:48:00 AM	12.46	14.24	9.14	15.12
	95	9/18/2007 11:49:00 AM	12.43	14.14	9.03	15.11
	96	9/18/2007 11:50:00 AM	12.40	14.08	9.00	15.11
	97	9/18/2007 11:51:00 AM	12.38	14.04	8.89	15.11
	98	9/18/2007 11:52:00 AM	12.36	14.01	8.82	15.09
	99	9/18/2007 11:53:00 AM	12.34	13.99	8.75	15.08
	100	9/18/2007 11:54:00 AM	12.31	13.97	8.67	15.07
	101	9/18/2007 11:55:00 AM	12.29	13.99	8.59	15.06
	102	9/18/2007 11:56:00 AM	12.27	13.97	8.53	15.06
	103	9/18/2007 11:57:00 AM	12.24	13.97	8.48	15.05
	104	9/18/2007 11:58:00 AM	12.21	13.99	8.40	15.01
	105	9/18/2007 11:59:00 AM	12.20	14.02	8.34	15.01
	106	9/18/2007 12:00:00 PM	12.17	14.01	8.32	15.02
	107	9/18/2007 12:01:00 PM	12.14	14.02	8.26	15.01
	108	9/18/2007 12:02:00 PM	12.11	14.06	8.20	14.99
	109	9/18/2007 12:03:00 PM	12.07	14.06	8.14	14.97
	110	9/18/2007 12:04:00 PM	12.04	14.10	8.09	14.95
	111	9/18/2007 12:05:00 PM	12.03	14.15	8.04	14.93
	112	9/18/2007 12:06:00 PM	12.02	14.22	7.99	14.92
	113	9/18/2007 12:07:00 PM	10.04	14.27	7.94	14.90
	114	9/18/2007 12:08:00 PM	2.03	14.33	3.33	14.89
	115	9/18/2007 12:09:00 PM	0.18	14.40	0.79	14.88
	116	9/18/2007 12:10:00 PM	0.15	14.41	0.17	14.87
	117	9/18/2007 12:11:00 PM	0.13	14.47	0.16	14.87
	118	9/18/2007 12:12:00 PM	0.12	14.50	0.15	14.86
	119	9/18/2007 12:13:00 PM	0.12	14.54	v 0.14	14.85
	120	9/18/2007 12:14:00 PM	0.13	14.61	v 0.14	14.84
	121	9/18/2007 12:15:00 PM	0.12	14.69	0.16	14.82
	122	9/18/2007 12:16:00 PM	v 0.10	14.70	0.16	14.81
	123	9/18/2007 12:17:00 PM	v 0.10	14.72	0.15	14.80
	124	9/18/2007 12:17:26 PM	v 0.10	14.76	0.16	14.79

DATE: 8/25/2007



N - Feeder to Bldg. 2073

E - Feeder from Pit 22-S, No test, all transducers used for other lines, test conducted from 22-N

S - Feeder to Bldg. 2150

W1 - Feeder to Bldg. 2151

W2 - Feeder to Bldg. 2072

NOTES:

1. Pit dry with moderate soil.
2. Supply/Return drains tested on 8/16/07: All dry.

MH 25-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to Bldg. 2073	F	
	2	2	Return from Bldg. 2073	F	
	3	3	Return from Bldg. 2150	F	
	4	4	Supply to Bldg. 2150	F	
2	1	5	Supply to Bldg. 2151	P	
	2	6	Return from Bldg. 2151	P	
	3	7	Return from Bldg. 2072	P	
	4	8	Supply to Bldg. 2072	F	

printed 1/10/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08251009
Interval	00:01:00
Personnel	

Start	8/25/2007 10:09:15 AM
Stop	8/25/2007 12:11:06 PM
Comment	

Data	124
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.06	16.25	15.55	15.27
Minimum	-7.50	-7.50	-7.50	-7.50
Average	7.88	11.97	12.42	11.21
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/25/2007 10:09:15 AM	0.08	0.13	0.20	0.23
	2	8/25/2007 10:10:00 AM	0.05	0.13	0.24	0.23
	3	8/25/2007 10:11:00 AM	^ 16.06	14.48	0.23	0.22
	4	8/25/2007 10:12:00 AM	15.68	^ 16.25	9.10	0.16
	5	8/25/2007 10:13:00 AM	15.43	16.23	^ 15.55	7.57
	6	8/25/2007 10:14:00 AM	15.19	16.19	15.51	^ 15.27
	7	8/25/2007 10:15:00 AM	15.02	16.12	15.47	15.17
	8	8/25/2007 10:16:00 AM	14.82	16.11	15.40	15.09
	9	8/25/2007 10:17:00 AM	14.64	16.06	15.38	15.03
	10	8/25/2007 10:18:00 AM	14.49	16.04	15.31	14.95
	11	8/25/2007 10:19:00 AM	14.32	15.99	15.29	14.88
	12	8/25/2007 10:20:00 AM	14.17	15.92	15.23	14.81
	13	8/25/2007 10:21:00 AM	14.01	15.91	15.20	14.75
	14	8/25/2007 10:22:00 AM	13.86	15.87	15.11	14.77
	15	8/25/2007 10:23:00 AM	13.74	15.82	15.01	14.79
	16	8/25/2007 10:24:00 AM	13.60	15.81	14.92	14.82
	17	8/25/2007 10:25:00 AM	13.46	15.76	14.85	14.89
	18	8/25/2007 10:26:00 AM	13.33	15.71	14.80	14.93
	19	8/25/2007 10:27:00 AM	13.20	15.67	14.77	14.98
	20	8/25/2007 10:28:00 AM	13.07	15.63	14.76	15.02
	21	8/25/2007 10:29:00 AM	12.94	15.58	14.76	15.04
	22	8/25/2007 10:30:00 AM	12.81	15.54	14.81	15.05
	23	8/25/2007 10:31:00 AM	12.68	15.49	14.85	15.05
	24	8/25/2007 10:32:00 AM	12.56	15.45	14.89	15.04
	25	8/25/2007 10:33:00 AM	12.43	15.41	14.96	15.03
	26	8/25/2007 10:34:00 AM	12.32	15.37	15.02	15.01
	27	8/25/2007 10:35:00 AM	12.19	15.33	15.09	14.99
	28	8/25/2007 10:36:00 AM	12.08	15.29	15.14	14.97
	29	8/25/2007 10:37:00 AM	11.96	15.25	15.20	14.94
	30	8/25/2007 10:38:00 AM	11.84	15.21	15.23	14.91

printed 1/10/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/25/2007 10:39:00 AM	11.73	15.17	15.28	14.88
	32	8/25/2007 10:40:00 AM	11.62	15.12	15.30	14.84
	33	8/25/2007 10:41:00 AM	11.50	15.08	15.32	14.80
	34	8/25/2007 10:42:00 AM	11.39	15.04	15.34	14.76
	35	8/25/2007 10:43:00 AM	11.28	15.04	15.34	14.72
	36	8/25/2007 10:44:00 AM	11.17	15.00	15.35	14.68
	37	8/25/2007 10:45:00 AM	11.06	14.95	15.39	14.64
	38	8/25/2007 10:46:00 AM	10.96	14.91	15.35	14.60
	39	8/25/2007 10:47:00 AM	10.85	14.87	15.38	14.55
	40	8/25/2007 10:48:00 AM	10.75	14.83	15.36	14.51
	41	8/25/2007 10:49:00 AM	10.64	14.79	15.35	14.46
	42	8/25/2007 10:50:00 AM	10.54	14.76	15.35	14.41
	43	8/25/2007 10:51:00 AM	10.44	14.71	15.33	14.37
	44	8/25/2007 10:52:00 AM	10.33	14.68	15.31	14.33
	45	8/25/2007 10:53:00 AM	10.23	14.63	15.29	14.31
	46	8/25/2007 10:54:00 AM	10.14	14.60	15.27	14.26
	47	8/25/2007 10:55:00 AM	10.04	14.56	15.25	14.22
	48	8/25/2007 10:56:00 AM	9.94	14.51	15.23	14.17
	49	8/25/2007 10:57:00 AM	9.84	14.48	15.21	14.12
	50	8/25/2007 10:58:00 AM	9.74	14.44	15.23	14.08
	51	8/25/2007 10:59:00 AM	9.65	14.39	15.21	14.04
	52	8/25/2007 11:00:00 AM	9.55	14.35	15.19	13.99
	53	8/25/2007 11:01:00 AM	9.46	14.32	15.17	13.95
	54	8/25/2007 11:02:00 AM	9.37	14.27	15.09	13.90
	55	8/25/2007 11:03:00 AM	9.29	14.24	15.09	13.85
	56	8/25/2007 11:04:00 AM	9.19	14.20	15.10	13.81
	57	8/25/2007 11:05:00 AM	9.10	14.17	15.03	13.76
	58	8/25/2007 11:06:00 AM	9.02	14.12	15.05	13.72
	59	8/25/2007 11:07:00 AM	8.93	14.09	15.02	13.67
	60	8/25/2007 11:08:00 AM	8.84	14.05	15.00	13.62
	61	8/25/2007 11:09:00 AM	8.76	14.02	14.98	13.58
	62	8/25/2007 11:10:00 AM	8.67	13.99	14.96	13.54
	63	8/25/2007 11:11:00 AM	8.59	13.96	14.93	13.50
	64	8/25/2007 11:12:00 AM	8.50	13.92	14.90	13.45
	65	8/25/2007 11:13:00 AM	8.42	13.89	14.87	13.40
	66	8/25/2007 11:14:00 AM	8.35	13.85	14.85	13.35
	67	8/25/2007 11:15:00 AM	8.26	13.80	14.83	13.30
	68	8/25/2007 11:16:00 AM	8.19	13.76	14.79	13.26
	69	8/25/2007 11:17:00 AM	8.11	13.73	14.76	13.21
	70	8/25/2007 11:18:00 AM	8.03	13.69	14.74	13.16
	71	8/25/2007 11:19:00 AM	7.95	13.66	14.71	13.11
	72	8/25/2007 11:20:00 AM	7.88	13.62	14.68	13.05
	73	8/25/2007 11:21:00 AM	7.80	13.59	14.65	13.01
	74	8/25/2007 11:22:00 AM	7.72	13.56	14.61	12.95
	75	8/25/2007 11:23:00 AM	7.65	13.53	14.59	12.91
	76	8/25/2007 11:24:00 AM	7.58	13.49	14.56	12.86
	77	8/25/2007 11:25:00 AM	7.50	13.46	14.53	12.80
	78	8/25/2007 11:26:00 AM	7.43	13.42	14.50	12.73
	79	8/25/2007 11:27:00 AM	7.36	13.38	14.47	12.67
	80	8/25/2007 11:28:00 AM	7.29	13.35	14.44	12.62

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/25/2007 11:29:00 AM	7.22	13.32	14.41	12.61
	82	8/25/2007 11:30:00 AM	7.14	13.29	14.38	12.56
	83	8/25/2007 11:31:00 AM	7.07	13.25	14.34	12.50
	84	8/25/2007 11:32:00 AM	7.01	13.22	14.31	12.45
	85	8/25/2007 11:33:00 AM	6.94	13.18	14.27	12.40
	86	8/25/2007 11:34:00 AM	6.87	13.14	14.24	12.35
	87	8/25/2007 11:35:00 AM	6.80	13.11	14.21	12.30
	88	8/25/2007 11:36:00 AM	6.73	13.07	14.18	12.25
	89	8/25/2007 11:37:00 AM	6.67	13.04	14.15	12.20
	90	8/25/2007 11:38:00 AM	6.60	13.01	14.12	12.15
	91	8/25/2007 11:39:00 AM	6.54	12.97	14.08	12.10
	92	8/25/2007 11:40:00 AM	6.47	12.94	14.05	12.04
	93	8/25/2007 11:41:00 AM	6.40	12.90	14.02	11.99
	94	8/25/2007 11:42:00 AM	6.34	12.86	13.98	11.95
	95	8/25/2007 11:43:00 AM	6.28	12.84	13.95	11.90
	96	8/25/2007 11:44:00 AM	6.21	12.80	13.92	11.85
	97	8/25/2007 11:45:00 AM	6.15	12.77	13.88	11.80
	98	8/25/2007 11:46:00 AM	6.09	12.74	13.85	11.75
	99	8/25/2007 11:47:00 AM	6.06	12.70	13.82	11.70
	100	8/25/2007 11:48:00 AM	6.07	12.61	13.78	11.64
	101	8/25/2007 11:49:00 AM	6.07	12.54	13.75	11.59
	102	8/25/2007 11:50:00 AM	6.06	12.51	13.72	11.54
	103	8/25/2007 11:51:00 AM	6.04	12.53	13.68	11.49
	104	8/25/2007 11:52:00 AM	6.02	12.57	13.65	11.45
	105	8/25/2007 11:53:00 AM	6.00	12.60	13.61	11.40
	106	8/25/2007 11:54:00 AM	5.97	12.64	13.58	11.35
	107	8/25/2007 11:55:00 AM	5.94	12.67	13.55	11.28
	108	8/25/2007 11:56:00 AM	5.92	12.69	13.53	11.22
	109	8/25/2007 11:57:00 AM	5.89	12.69	13.50	11.18
	110	8/25/2007 11:58:00 AM	5.86	12.70	13.46	11.13
	111	8/25/2007 11:59:00 AM	5.82	12.71	13.43	11.08
	112	8/25/2007 12:00:00 PM	5.78	12.71	13.39	11.03
	113	8/25/2007 12:01:00 PM	0.08	4.29	12.69	11.02
	114	8/25/2007 12:02:00 PM	0.06	v -7.50	3.21	2.70
	115	8/25/2007 12:03:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	116	8/25/2007 12:04:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	117	8/25/2007 12:05:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	118	8/25/2007 12:06:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	119	8/25/2007 12:07:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	120	8/25/2007 12:08:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	121	8/25/2007 12:09:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	122	8/25/2007 12:10:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	123	8/25/2007 12:11:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	124	8/25/2007 12:11:06 PM	v -7.50	v -7.50	v -7.50	v -7.50

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Handy logger

Name : **LOGGER 2**

LOG Name	08251009
Interval	00:01:00
Personnel	

Start	8/25/2007 10:09:11 AM
Stop	8/25/2007 12:14:56 PM
Comment	

Data	127
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.06	15.65	16.59	15.93
Minimum	0.16	0.08	0.15	0.05
Average	14.55	14.39	14.86	13.95
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/25/2007 10:09:11 AM	v 0.16	0.09	v 0.15	0.09
	2	8/25/2007 10:10:00 AM	0.18	v 0.08	0.19	0.09
	3	8/25/2007 10:11:00 AM	0.18	v 0.08	0.18	0.08
	4	8/25/2007 10:12:00 AM	0.18	v 0.08	v 0.15	0.08
	5	8/25/2007 10:13:00 AM	0.18	v 0.08	0.18	0.08
	6	8/25/2007 10:14:00 AM	2.72	1.44	0.18	v 0.05
	7	8/25/2007 10:15:00 AM	5.78	4.42	2.07	1.80
	8	8/25/2007 10:16:00 AM	8.26	6.98	5.69	5.80
	9	8/25/2007 10:17:00 AM	10.74	9.54	9.26	9.66
	10	8/25/2007 10:18:00 AM	13.25	12.19	12.75	13.32
	11	8/25/2007 10:19:00 AM	^ 16.06	15.03	16.28	^ 15.93
	12	8/25/2007 10:20:00 AM	15.88	^ 15.65	^ 16.59	15.86
	13	8/25/2007 10:21:00 AM	15.87	15.62	16.54	15.86
	14	8/25/2007 10:22:00 AM	15.85	15.61	16.54	15.85
	15	8/25/2007 10:23:00 AM	15.84	15.63	16.54	15.80
	16	8/25/2007 10:24:00 AM	15.82	15.59	16.50	15.76
	17	8/25/2007 10:25:00 AM	15.83	15.60	16.47	15.72
	18	8/25/2007 10:26:00 AM	15.81	15.58	16.44	15.75
	19	8/25/2007 10:27:00 AM	15.80	15.57	16.41	15.72
	20	8/25/2007 10:28:00 AM	15.79	15.60	16.43	15.69
	21	8/25/2007 10:29:00 AM	15.78	15.60	16.41	15.68
	22	8/25/2007 10:30:00 AM	15.79	15.59	16.40	15.69
	23	8/25/2007 10:31:00 AM	15.79	15.58	16.37	15.67
	24	8/25/2007 10:32:00 AM	15.77	15.57	16.36	15.65
	25	8/25/2007 10:33:00 AM	15.77	15.56	16.35	15.63
	26	8/25/2007 10:34:00 AM	15.76	15.56	16.33	15.61
	27	8/25/2007 10:35:00 AM	15.75	15.55	16.31	15.59
	28	8/25/2007 10:36:00 AM	15.75	15.54	16.30	15.57
	29	8/25/2007 10:37:00 AM	15.74	15.54	16.28	15.55
	30	8/25/2007 10:38:00 AM	15.74	15.53	16.27	15.53

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/25/2007 10:39:00 AM	15.73	15.53	16.26	15.51
	32	8/25/2007 10:40:00 AM	15.72	15.52	16.24	15.50
	33	8/25/2007 10:41:00 AM	15.71	15.52	16.23	15.47
	34	8/25/2007 10:42:00 AM	15.71	15.51	16.25	15.46
	35	8/25/2007 10:43:00 AM	15.70	15.51	16.20	15.44
	36	8/25/2007 10:44:00 AM	15.69	15.50	16.18	15.42
	37	8/25/2007 10:45:00 AM	15.67	15.49	16.21	15.40
	38	8/25/2007 10:46:00 AM	15.68	15.49	16.20	15.39
	39	8/25/2007 10:47:00 AM	15.67	15.48	16.18	15.36
	40	8/25/2007 10:48:00 AM	15.66	15.48	16.17	15.35
	41	8/25/2007 10:49:00 AM	15.65	15.47	16.16	15.33
	42	8/25/2007 10:50:00 AM	15.65	15.47	16.14	15.31
	43	8/25/2007 10:51:00 AM	15.64	15.46	16.13	15.30
	44	8/25/2007 10:52:00 AM	15.63	15.45	16.12	15.28
	45	8/25/2007 10:53:00 AM	15.62	15.44	16.10	15.29
	46	8/25/2007 10:54:00 AM	15.61	15.47	16.09	15.25
	47	8/25/2007 10:55:00 AM	15.60	15.44	16.08	15.27
	48	8/25/2007 10:56:00 AM	15.60	15.43	16.08	15.25
	49	8/25/2007 10:57:00 AM	15.59	15.42	16.06	15.24
	50	8/25/2007 10:58:00 AM	15.58	15.41	16.04	15.21
	51	8/25/2007 10:59:00 AM	15.57	15.44	16.03	15.19
	52	8/25/2007 11:00:00 AM	15.56	15.40	16.03	15.17
	53	8/25/2007 11:01:00 AM	15.55	15.40	16.02	15.16
	54	8/25/2007 11:02:00 AM	15.55	15.39	16.01	15.14
	55	8/25/2007 11:03:00 AM	15.55	15.39	15.99	15.12
	56	8/25/2007 11:04:00 AM	15.53	15.41	15.98	15.10
	57	8/25/2007 11:05:00 AM	15.53	15.41	15.97	15.08
	58	8/25/2007 11:06:00 AM	15.52	15.37	15.96	15.06
	59	8/25/2007 11:07:00 AM	15.52	15.40	15.94	15.05
	60	8/25/2007 11:08:00 AM	15.51	15.39	15.94	15.03
	61	8/25/2007 11:09:00 AM	15.50	15.39	15.92	15.01
	62	8/25/2007 11:10:00 AM	15.49	15.35	15.91	15.00
	63	8/25/2007 11:11:00 AM	15.48	15.37	15.90	14.98
	64	8/25/2007 11:12:00 AM	15.47	15.34	15.89	14.96
	65	8/25/2007 11:13:00 AM	15.47	15.33	15.87	14.95
	66	8/25/2007 11:14:00 AM	15.46	15.36	15.87	14.93
	67	8/25/2007 11:15:00 AM	15.45	15.36	15.86	14.91
	68	8/25/2007 11:16:00 AM	15.45	15.31	15.84	14.89
	69	8/25/2007 11:17:00 AM	15.44	15.31	15.83	14.88
	70	8/25/2007 11:18:00 AM	15.43	15.34	15.82	14.86
	71	8/25/2007 11:19:00 AM	15.42	15.33	15.81	14.85
	72	8/25/2007 11:20:00 AM	15.41	15.29	15.80	14.83
	73	8/25/2007 11:21:00 AM	15.41	15.32	15.79	14.81
	74	8/25/2007 11:22:00 AM	15.40	15.31	15.78	14.80
	75	8/25/2007 11:23:00 AM	15.39	15.30	15.77	14.78
	76	8/25/2007 11:24:00 AM	15.39	15.30	15.76	14.77
	77	8/25/2007 11:25:00 AM	15.38	15.29	15.75	14.74
	78	8/25/2007 11:26:00 AM	15.37	15.29	15.75	14.72
	79	8/25/2007 11:27:00 AM	15.37	15.25	15.73	14.71
	80	8/25/2007 11:28:00 AM	15.37	15.25	15.73	14.69

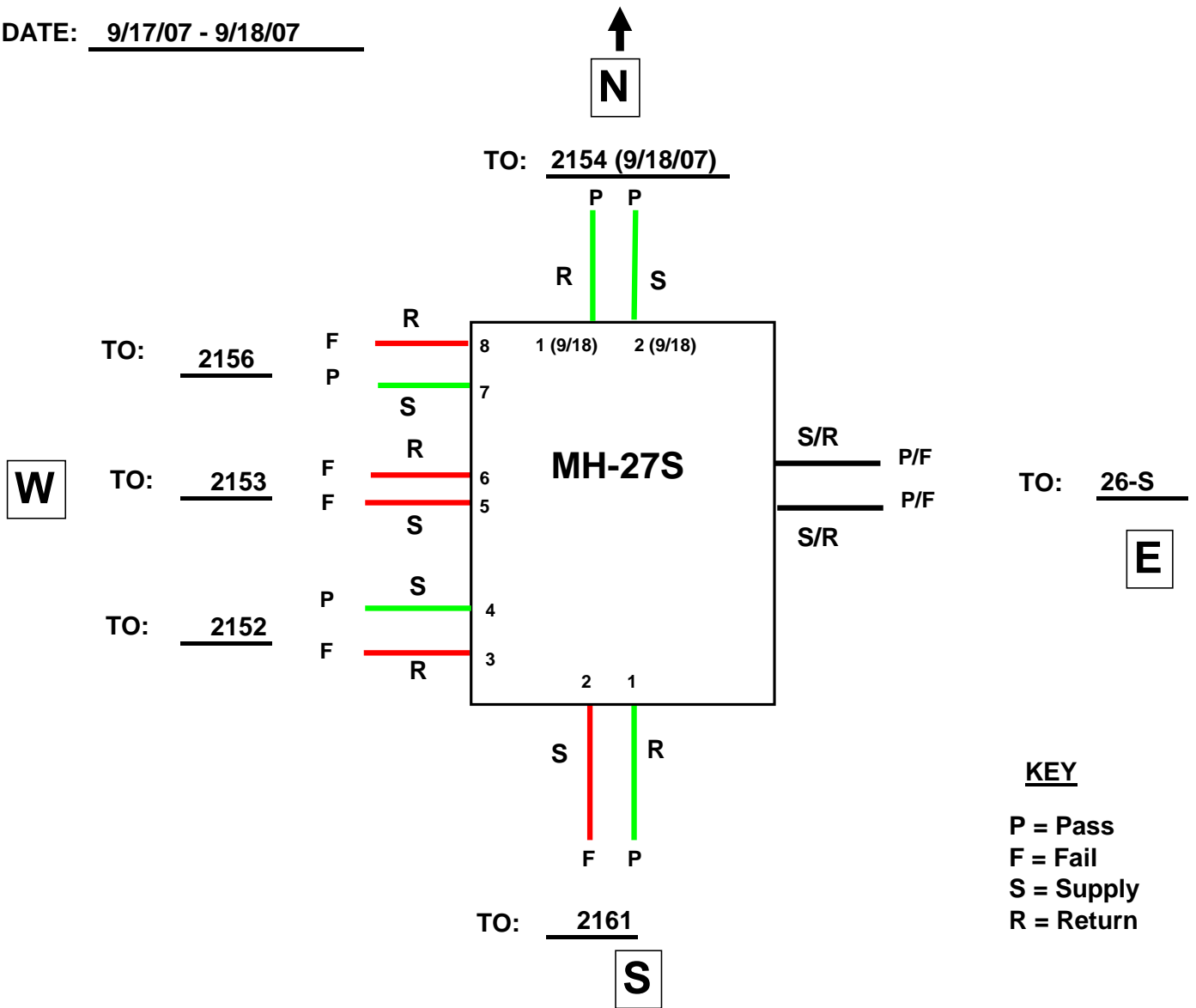
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/25/2007 11:29:00 AM	15.36	15.24	15.70	14.68
	82	8/25/2007 11:30:00 AM	15.35	15.27	15.70	14.66
	83	8/25/2007 11:31:00 AM	15.34	15.23	15.69	14.64
	84	8/25/2007 11:32:00 AM	15.33	15.22	15.69	14.63
	85	8/25/2007 11:33:00 AM	15.32	15.22	15.67	14.61
	86	8/25/2007 11:34:00 AM	15.31	15.21	15.66	14.60
	87	8/25/2007 11:35:00 AM	15.30	15.24	15.65	14.58
	88	8/25/2007 11:36:00 AM	15.29	15.23	15.64	14.56
	89	8/25/2007 11:37:00 AM	15.29	15.23	15.63	14.55
	90	8/25/2007 11:38:00 AM	15.28	15.22	15.62	14.53
	91	8/25/2007 11:39:00 AM	15.27	15.21	15.61	14.51
	92	8/25/2007 11:40:00 AM	15.26	15.18	15.60	14.49
	93	8/25/2007 11:41:00 AM	15.26	15.21	15.61	14.47
	94	8/25/2007 11:42:00 AM	15.25	15.19	15.58	14.45
	95	8/25/2007 11:43:00 AM	15.23	15.18	15.61	14.43
	96	8/25/2007 11:44:00 AM	15.23	15.18	15.60	14.42
	97	8/25/2007 11:45:00 AM	15.22	15.17	15.59	14.40
	98	8/25/2007 11:46:00 AM	15.24	15.16	15.57	14.38
	99	8/25/2007 11:47:00 AM	15.23	15.16	15.56	14.36
	100	8/25/2007 11:48:00 AM	15.22	15.15	15.55	14.34
	101	8/25/2007 11:49:00 AM	15.21	15.14	15.54	14.33
	102	8/25/2007 11:50:00 AM	15.20	15.14	15.53	14.35
	103	8/25/2007 11:51:00 AM	15.20	15.16	15.51	14.32
	104	8/25/2007 11:52:00 AM	15.19	15.14	15.51	14.30
	105	8/25/2007 11:53:00 AM	15.18	15.13	15.50	14.29
	106	8/25/2007 11:54:00 AM	15.14	15.11	15.49	14.27
	107	8/25/2007 11:55:00 AM	15.14	15.11	15.49	14.22
	108	8/25/2007 11:56:00 AM	15.14	15.10	15.47	14.21
	109	8/25/2007 11:57:00 AM	15.13	15.10	15.47	14.19
	110	8/25/2007 11:58:00 AM	15.12	15.10	15.47	14.18
	111	8/25/2007 11:59:00 AM	15.12	15.10	15.45	14.17
	112	8/25/2007 12:00:00 PM	15.12	15.09	15.45	14.15
	113	8/25/2007 12:01:00 PM	15.12	15.08	15.44	14.13
	114	8/25/2007 12:02:00 PM	15.12	15.08	15.42	14.11
	115	8/25/2007 12:03:00 PM	15.11	15.08	15.41	14.10
	116	8/25/2007 12:04:00 PM	15.10	15.09	15.40	14.08
	117	8/25/2007 12:05:00 PM	15.09	15.05	15.39	14.09
	118	8/25/2007 12:06:00 PM	15.09	15.08	15.38	14.08
	119	8/25/2007 12:07:00 PM	15.05	15.07	15.37	14.05
	120	8/25/2007 12:08:00 PM	15.07	15.03	15.36	14.04
	121	8/25/2007 12:09:00 PM	15.07	15.03	15.36	14.02
	122	8/25/2007 12:10:00 PM	15.06	15.06	15.36	14.00
	123	8/25/2007 12:11:00 PM	15.05	15.02	15.35	13.99
	124	8/25/2007 12:12:00 PM	15.02	15.01	15.33	13.97
	125	8/25/2007 12:13:00 PM	15.04	15.01	15.33	13.95
	126	8/25/2007 12:14:00 PM	15.03	15.03	15.31	13.94
	127	8/25/2007 12:14:56 PM	15.02	15.03	15.30	13.92

DATE: 9/17/07 - 9/18/07



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry except for South wall conduits. South wall Return discharged a few drops when plug removed, drain valve dry when opened. Plug on South Supply frozen, unable to break free.

MH 27-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 2161	P	9/17/2007
	2	2	Supply to 2161	F	9/17/2007
	3	3	Return to 2152	F	9/17/2007
	4	4	Supply to 2152	P	9/17/2007
2	1	5	Supply to 2153	F	9/17/2007
	2	6	Return to 2153	F	9/17/2007
	3	7	Supply to 2156	P	9/17/2007
	4	8	Return to 2156	F	9/17/2007
1	1	1 (9/18)	Return to 2154	P	9/18/2007
	2	2 (9/18)	Supply to 2154	P	9/18/2007

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Handy logger

Name : **LOGGER 1**

LOG Name	09171507
Interval	00:01:00
Personnel	

Start	9/17/2007 3:07:07 PM
Stop	9/17/2007 5:11:14 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.55	13.43	14.89	14.72
Minimum	0.10	-7.50	-7.50	0.23
Average	15.37	-0.60	9.97	14.04
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 3:07:07 PM	v 0.10	0.10	0.13	v 0.23
	2	9/17/2007 3:08:00 PM	2.13	^ 13.43	1.72	1.89
	3	9/17/2007 3:09:00 PM	6.54	10.02	5.25	5.55
	4	9/17/2007 3:10:00 PM	12.07	7.50	9.80	10.28
	5	9/17/2007 3:11:00 PM	^ 16.55	5.51	^ 14.89	^ 14.72
	6	9/17/2007 3:12:00 PM	16.50	8.98	14.78	14.70
	7	9/17/2007 3:13:00 PM	16.49	2.43	14.75	14.68
	8	9/17/2007 3:14:00 PM	16.49	0.93	14.67	14.66
	9	9/17/2007 3:15:00 PM	16.46	0.15	14.66	14.63
	10	9/17/2007 3:16:00 PM	16.43	11.12	14.60	14.65
	11	9/17/2007 3:17:00 PM	16.41	5.00	14.57	14.63
	12	9/17/2007 3:18:00 PM	16.43	2.12	14.53	14.63
	13	9/17/2007 3:19:00 PM	16.43	1.36	14.48	14.61
	14	9/17/2007 3:20:00 PM	16.41	1.35	14.49	14.60
	15	9/17/2007 3:21:00 PM	16.39	1.34	14.46	14.59
	16	9/17/2007 3:22:00 PM	16.37	1.33	14.42	14.58
	17	9/17/2007 3:23:00 PM	16.36	1.32	14.37	14.57
	18	9/17/2007 3:24:00 PM	16.33	1.31	14.33	14.56
	19	9/17/2007 3:25:00 PM	16.32	1.30	14.30	14.55
	20	9/17/2007 3:26:00 PM	16.32	1.23	14.26	14.55
	21	9/17/2007 3:27:00 PM	16.25	0.87	14.23	14.55
	22	9/17/2007 3:28:00 PM	16.21	0.17	14.17	14.53
	23	9/17/2007 3:29:00 PM	16.13	0.14	14.11	14.52
	24	9/17/2007 3:30:00 PM	16.12	0.14	14.09	14.50
	25	9/17/2007 3:31:00 PM	16.11	0.14	14.03	14.49
	26	9/17/2007 3:32:00 PM	16.10	0.14	13.98	14.49
	27	9/17/2007 3:33:00 PM	16.08	0.13	13.96	14.45
	28	9/17/2007 3:34:00 PM	16.07	0.12	v -7.50	14.45
	29	9/17/2007 3:35:00 PM	16.06	0.12	13.88	14.45
	30	9/17/2007 3:36:00 PM	16.04	0.12	13.86	14.44

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/17/2007 3:37:00 PM	16.03	0.11	13.86	14.41
	32	9/17/2007 3:38:00 PM	16.01	0.12	13.86	14.40
	33	9/17/2007 3:39:00 PM	16.01	0.12	13.85	14.41
	34	9/17/2007 3:40:00 PM	16.00	0.13	13.85	14.40
	35	9/17/2007 3:41:00 PM	15.99	0.12	13.85	14.40
	36	9/17/2007 3:42:00 PM	15.96	0.09	13.81	14.41
	37	9/17/2007 3:43:00 PM	15.95	0.09	13.80	14.37
	38	9/17/2007 3:44:00 PM	15.95	0.12	13.81	14.37
	39	9/17/2007 3:45:00 PM	15.93	0.08	13.82	14.36
	40	9/17/2007 3:46:00 PM	15.92	0.08	13.77	14.36
	41	9/17/2007 3:47:00 PM	15.91	0.12	13.76	14.35
	42	9/17/2007 3:48:00 PM	15.90	0.07	13.79	14.35
	43	9/17/2007 3:49:00 PM	15.89	0.08	13.78	14.35
	44	9/17/2007 3:50:00 PM	15.89	0.08	13.76	14.34
	45	9/17/2007 3:51:00 PM	15.89	0.09	13.75	14.33
	46	9/17/2007 3:52:00 PM	15.87	0.10	13.74	14.30
	47	9/17/2007 3:53:00 PM	15.86	0.11	13.74	14.30
	48	9/17/2007 3:54:00 PM	15.85	0.11	13.72	14.29
	49	9/17/2007 3:55:00 PM	15.85	0.11	13.70	14.29
	50	9/17/2007 3:56:00 PM	15.82	0.12	13.70	14.29
	51	9/17/2007 3:57:00 PM	15.82	0.09	13.72	14.29
	52	9/17/2007 3:58:00 PM	15.81	0.11	13.67	14.29
	53	9/17/2007 3:59:00 PM	15.76	0.08	13.67	14.29
	54	9/17/2007 4:00:00 PM	15.80	0.12	13.67	14.28
	55	9/17/2007 4:01:00 PM	15.78	0.11	13.65	14.29
	56	9/17/2007 4:02:00 PM	15.77	0.15	13.67	14.28
	57	9/17/2007 4:03:00 PM	15.75	0.11	13.69	14.28
	58	9/17/2007 4:04:00 PM	15.75	0.11	13.68	14.28
	59	9/17/2007 4:05:00 PM	15.74	0.13	13.66	14.28
	60	9/17/2007 4:06:00 PM	15.72	0.12	13.65	14.27
	61	9/17/2007 4:07:00 PM	15.74	0.12	13.64	14.22
	62	9/17/2007 4:08:00 PM	15.72	0.11	13.64	14.22
	63	9/17/2007 4:09:00 PM	15.71	0.14	13.57	14.21
	64	9/17/2007 4:10:00 PM	15.69	0.13	13.59	14.21
	65	9/17/2007 4:11:00 PM	15.68	0.12	13.61	14.20
	66	9/17/2007 4:12:00 PM	15.67	0.10	13.60	14.19
	67	9/17/2007 4:13:00 PM	15.65	0.10	13.60	14.22
	68	9/17/2007 4:14:00 PM	15.64	0.11	13.59	14.21
	69	9/17/2007 4:15:00 PM	15.63	0.15	13.59	14.20
	70	9/17/2007 4:16:00 PM	15.63	0.12	13.57	14.20
	71	9/17/2007 4:17:00 PM	15.62	0.15	13.54	14.18
	72	9/17/2007 4:18:00 PM	15.61	0.16	13.51	14.16
	73	9/17/2007 4:19:00 PM	15.60	0.16	13.50	14.15
	74	9/17/2007 4:20:00 PM	15.59	0.16	13.50	14.15
	75	9/17/2007 4:21:00 PM	15.57	0.16	13.48	14.14
	76	9/17/2007 4:22:00 PM	15.56	0.16	13.53	14.12
	77	9/17/2007 4:23:00 PM	15.55	0.17	13.50	14.11
	78	9/17/2007 4:24:00 PM	15.54	0.16	13.49	14.09
	79	9/17/2007 4:25:00 PM	15.53	0.16	13.47	14.08
	80	9/17/2007 4:26:00 PM	15.52	0.17	13.46	14.07

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/17/2007 4:27:00 PM	15.52	0.16	13.44	14.06
	82	9/17/2007 4:28:00 PM	15.51	0.16	13.40	14.06
	83	9/17/2007 4:29:00 PM	15.51	0.12	13.37	14.06
	84	9/17/2007 4:30:00 PM	15.47	0.13	13.36	14.08
	85	9/17/2007 4:31:00 PM	15.47	0.14	13.35	14.09
	86	9/17/2007 4:32:00 PM	15.46	0.14	13.33	14.10
	87	9/17/2007 4:33:00 PM	15.46	0.15	13.30	14.12
	88	9/17/2007 4:34:00 PM	15.44	0.15	13.29	14.13
	89	9/17/2007 4:35:00 PM	15.43	0.15	13.27	14.16
	90	9/17/2007 4:36:00 PM	15.42	0.15	13.27	14.18
	91	9/17/2007 4:37:00 PM	15.40	0.11	13.27	14.21
	92	9/17/2007 4:38:00 PM	15.42	0.12	13.24	14.24
	93	9/17/2007 4:39:00 PM	15.38	0.11	13.27	14.28
	94	9/17/2007 4:40:00 PM	15.37	0.11	13.27	14.30
	95	9/17/2007 4:41:00 PM	15.37	0.11	13.29	14.33
	96	9/17/2007 4:42:00 PM	15.36	0.12	13.28	14.35
	97	9/17/2007 4:43:00 PM	15.35	0.12	13.32	14.37
	98	9/17/2007 4:44:00 PM	15.34	0.12	13.34	14.38
	99	9/17/2007 4:45:00 PM	15.32	0.12	13.41	14.40
	100	9/17/2007 4:46:00 PM	15.28	0.12	13.44	14.41
	101	9/17/2007 4:47:00 PM	15.32	0.12	13.46	14.42
	102	9/17/2007 4:48:00 PM	15.31	0.12	13.49	14.43
	103	9/17/2007 4:49:00 PM	15.29	0.11	11.77	14.44
	104	9/17/2007 4:50:00 PM	15.28	0.11	9.04	14.44
	105	9/17/2007 4:51:00 PM	15.27	v -7.50	6.74	14.45
	106	9/17/2007 4:52:00 PM	15.25	v -7.50	4.82	14.46
	107	9/17/2007 4:53:00 PM	15.26	v -7.50	3.27	14.47
	108	9/17/2007 4:54:00 PM	15.25	v -7.50	2.06	14.43
	109	9/17/2007 4:55:00 PM	15.24	v -7.50	1.14	14.45
	110	9/17/2007 4:56:00 PM	15.23	v -7.50	v -7.50	14.46
	111	9/17/2007 4:57:00 PM	15.18	v -7.50	v -7.50	14.42
	112	9/17/2007 4:58:00 PM	15.17	v -7.50	v -7.50	14.42
	113	9/17/2007 4:59:00 PM	15.16	v -7.50	v -7.50	14.43
	114	9/17/2007 5:00:00 PM	15.20	v -7.50	v -7.50	14.42
	115	9/17/2007 5:01:00 PM	15.14	v -7.50	v -7.50	14.47
	116	9/17/2007 5:02:00 PM	15.13	v -7.50	v -7.50	14.46
	117	9/17/2007 5:03:00 PM	15.12	v -7.50	v -7.50	14.46
	118	9/17/2007 5:04:00 PM	15.12	v -7.50	v -7.50	14.46
	119	9/17/2007 5:05:00 PM	15.10	v -7.50	v -7.50	14.46
	120	9/17/2007 5:06:00 PM	15.09	v -7.50	v -7.50	14.41
	121	9/17/2007 5:07:00 PM	15.08	v -7.50	v -7.50	14.42
	122	9/17/2007 5:08:00 PM	15.08	v -7.50	v -7.50	14.42
	123	9/17/2007 5:09:00 PM	15.07	v -7.50	v -7.50	14.42
	124	9/17/2007 5:10:00 PM	15.05	v -7.50	v -7.50	14.42
	125	9/17/2007 5:11:00 PM	15.04	v -7.50	v -7.50	14.42
	126	9/17/2007 5:11:14 PM	15.04	v -7.50	v -7.50	14.41

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Handy logger

Name : **LOGGER 2**

LOG Name	09171506
Interval	00:01:00
Personnel	

Start	9/17/2007 3:06:54 PM
Stop	9/17/2007 5:10:42 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.37	16.67	16.26	16.29
Minimum	-7.50	0.10	0.20	0.17
Average	9.40	15.02	15.30	14.94
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 3:06:54 PM	0.18	v 0.10	v 0.20	v 0.17
	2	9/17/2007 3:07:00 PM	0.18	v 0.10	v 0.20	v 0.17
	3	9/17/2007 3:08:00 PM	9.12	8.66	3.18	3.25
	4	9/17/2007 3:09:00 PM	^ 16.37	^ 16.67	8.35	8.56
	5	9/17/2007 3:10:00 PM	16.25	16.59	14.17	14.54
	6	9/17/2007 3:11:00 PM	16.20	16.54	^ 16.26	16.27
	7	9/17/2007 3:12:00 PM	16.14	16.52	16.25	^ 16.29
	8	9/17/2007 3:13:00 PM	16.05	16.52	16.24	16.25
	9	9/17/2007 3:14:00 PM	15.96	16.47	16.21	16.22
	10	9/17/2007 3:15:00 PM	15.87	16.45	16.18	16.19
	11	9/17/2007 3:16:00 PM	15.82	16.41	16.19	16.20
	12	9/17/2007 3:17:00 PM	15.76	16.39	16.15	16.17
	13	9/17/2007 3:18:00 PM	15.66	16.34	16.16	16.17
	14	9/17/2007 3:19:00 PM	15.60	16.30	16.13	16.12
	15	9/17/2007 3:20:00 PM	15.52	16.27	16.12	16.10
	16	9/17/2007 3:21:00 PM	15.44	16.28	16.12	16.11
	17	9/17/2007 3:22:00 PM	15.34	16.23	16.09	16.10
	18	9/17/2007 3:23:00 PM	15.27	16.19	16.05	16.06
	19	9/17/2007 3:24:00 PM	15.19	16.15	16.04	16.04
	20	9/17/2007 3:25:00 PM	15.12	16.15	16.03	16.03
	21	9/17/2007 3:26:00 PM	15.05	16.12	16.06	16.03
	22	9/17/2007 3:27:00 PM	14.97	16.06	16.01	16.00
	23	9/17/2007 3:28:00 PM	14.88	16.06	16.01	15.98
	24	9/17/2007 3:29:00 PM	14.79	16.01	16.00	15.94
	25	9/17/2007 3:30:00 PM	14.75	15.99	16.01	15.92
	26	9/17/2007 3:31:00 PM	14.67	15.91	15.98	15.91
	27	9/17/2007 3:32:00 PM	14.60	15.92	15.98	15.85
	28	9/17/2007 3:33:00 PM	14.50	15.90	15.99	15.85
	29	9/17/2007 3:34:00 PM	14.45	15.86	15.99	15.84
	30	9/17/2007 3:35:00 PM	14.37	15.87	15.94	15.84

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/17/2007 3:36:00 PM	14.31	15.79	15.95	15.84
	32	9/17/2007 3:37:00 PM	14.24	15.79	15.92	15.81
	33	9/17/2007 3:38:00 PM	14.19	15.75	15.93	15.77
	34	9/17/2007 3:39:00 PM	14.10	15.71	15.94	15.79
	35	9/17/2007 3:40:00 PM	14.05	15.71	15.90	15.74
	36	9/17/2007 3:41:00 PM	13.97	15.71	15.90	15.74
	37	9/17/2007 3:42:00 PM	13.92	15.71	15.91	15.74
	38	9/17/2007 3:43:00 PM	13.86	15.67	15.90	15.68
	39	9/17/2007 3:44:00 PM	13.80	15.65	15.89	15.66
	40	9/17/2007 3:45:00 PM	13.71	15.65	15.89	15.65
	41	9/17/2007 3:46:00 PM	13.66	15.64	15.88	15.65
	42	9/17/2007 3:47:00 PM	13.57	15.60	15.89	15.64
	43	9/17/2007 3:48:00 PM	13.51	15.56	15.89	15.62
	44	9/17/2007 3:49:00 PM	13.45	15.55	15.88	15.61
	45	9/17/2007 3:50:00 PM	13.40	15.55	15.87	15.60
	46	9/17/2007 3:51:00 PM	13.33	15.54	15.85	15.59
	47	9/17/2007 3:52:00 PM	13.26	15.49	15.82	15.58
	48	9/17/2007 3:53:00 PM	13.20	15.47	15.82	15.57
	49	9/17/2007 3:54:00 PM	13.13	15.51	15.86	15.56
	50	9/17/2007 3:55:00 PM	13.07	15.45	15.80	15.55
	51	9/17/2007 3:56:00 PM	13.02	15.44	15.80	15.55
	52	9/17/2007 3:57:00 PM	12.93	15.44	15.77	15.54
	53	9/17/2007 3:58:00 PM	12.88	15.43	15.78	15.48
	54	9/17/2007 3:59:00 PM	12.82	15.39	15.78	15.45
	55	9/17/2007 4:00:00 PM	12.77	15.39	15.78	15.48
	56	9/17/2007 4:01:00 PM	12.70	15.37	15.77	15.46
	57	9/17/2007 4:02:00 PM	12.64	15.34	15.78	15.45
	58	9/17/2007 4:03:00 PM	12.58	15.32	15.77	15.43
	59	9/17/2007 4:04:00 PM	12.53	15.28	15.76	15.42
	60	9/17/2007 4:05:00 PM	12.47	15.27	15.75	15.40
	61	9/17/2007 4:06:00 PM	12.41	15.26	15.74	15.38
	62	9/17/2007 4:07:00 PM	12.34	15.28	15.74	15.40
	63	9/17/2007 4:08:00 PM	12.28	15.26	15.74	15.39
	64	9/17/2007 4:09:00 PM	12.20	15.23	15.72	15.37
	65	9/17/2007 4:10:00 PM	12.14	15.23	15.72	15.32
	66	9/17/2007 4:11:00 PM	12.12	15.22	15.71	15.31
	67	9/17/2007 4:12:00 PM	12.06	15.19	15.71	15.29
	68	9/17/2007 4:13:00 PM	12.02	15.18	15.70	15.29
	69	9/17/2007 4:14:00 PM	11.95	15.18	15.69	15.27
	70	9/17/2007 4:15:00 PM	11.88	15.16	15.68	15.26
	71	9/17/2007 4:16:00 PM	11.85	15.20	15.70	15.29
	72	9/17/2007 4:17:00 PM	11.78	15.20	15.68	15.25
	73	9/17/2007 4:18:00 PM	11.73	15.18	15.66	15.23
	74	9/17/2007 4:19:00 PM	11.64	15.11	15.66	15.22
	75	9/17/2007 4:20:00 PM	11.60	15.10	15.66	15.22
	76	9/17/2007 4:21:00 PM	11.54	15.08	15.65	15.20
	77	9/17/2007 4:22:00 PM	11.49	15.07	15.64	15.16
	78	9/17/2007 4:23:00 PM	11.44	15.06	15.60	15.16
	79	9/17/2007 4:24:00 PM	11.38	15.01	15.61	15.12
	80	9/17/2007 4:25:00 PM	11.33	15.01	15.62	15.13

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/17/2007 4:26:00 PM	11.27	15.01	15.59	15.07
	82	9/17/2007 4:27:00 PM	11.22	14.97	15.59	15.07
	83	9/17/2007 4:28:00 PM	11.15	14.97	15.59	15.07
	84	9/17/2007 4:29:00 PM	11.07	14.95	15.59	15.06
	85	9/17/2007 4:30:00 PM	11.00	14.94	15.59	15.05
	86	9/17/2007 4:31:00 PM	10.96	14.92	15.56	15.04
	87	9/17/2007 4:32:00 PM	10.92	14.88	15.56	15.01
	88	9/17/2007 4:33:00 PM	10.86	14.86	15.57	15.01
	89	9/17/2007 4:34:00 PM	10.81	14.86	15.57	15.02
	90	9/17/2007 4:35:00 PM	10.78	14.86	15.53	15.02
	91	9/17/2007 4:36:00 PM	10.72	14.86	15.52	15.02
	92	9/17/2007 4:37:00 PM	10.67	14.85	15.53	14.98
	93	9/17/2007 4:38:00 PM	10.62	14.82	15.53	14.97
	94	9/17/2007 4:39:00 PM	10.57	14.83	15.51	14.96
	95	9/17/2007 4:40:00 PM	10.51	14.82	15.55	14.94
	96	9/17/2007 4:41:00 PM	10.48	14.81	15.54	14.94
	97	9/17/2007 4:42:00 PM	10.40	14.77	15.49	14.93
	98	9/17/2007 4:43:00 PM	10.37	14.75	15.48	14.92
	99	9/17/2007 4:44:00 PM	10.29	14.74	15.48	14.86
	100	9/17/2007 4:45:00 PM	10.24	14.74	15.48	14.83
	101	9/17/2007 4:46:00 PM	10.19	14.72	15.48	14.83
	102	9/17/2007 4:47:00 PM	10.14	14.71	15.45	14.82
	103	9/17/2007 4:48:00 PM	9.84	14.71	15.46	14.82
	104	9/17/2007 4:49:00 PM	2.73	14.67	15.43	14.77
	105	9/17/2007 4:50:00 PM	0.37	14.67	15.39	14.76
	106	9/17/2007 4:51:00 PM	0.28	14.67	15.40	14.77
	107	9/17/2007 4:52:00 PM	0.25	14.63	15.41	14.74
	108	9/17/2007 4:53:00 PM	0.19	14.62	15.37	14.74
	109	9/17/2007 4:54:00 PM	0.16	14.62	15.37	14.68
	110	9/17/2007 4:55:00 PM	v -7.50	14.59	15.38	14.69
	111	9/17/2007 4:56:00 PM	v -7.50	14.58	15.36	14.66
	112	9/17/2007 4:57:00 PM	v -7.50	14.56	15.36	14.66
	113	9/17/2007 4:58:00 PM	v -7.50	14.56	15.37	14.66
	114	9/17/2007 4:59:00 PM	v -7.50	14.55	15.37	14.65
	115	9/17/2007 5:00:00 PM	v -7.50	14.53	15.37	14.64
	116	9/17/2007 5:01:00 PM	v -7.50	14.52	15.36	14.63
	117	9/17/2007 5:02:00 PM	v -7.50	14.53	15.36	14.62
	118	9/17/2007 5:03:00 PM	v -7.50	14.51	15.36	14.61
	119	9/17/2007 5:04:00 PM	v -7.50	14.49	15.36	14.59
	120	9/17/2007 5:05:00 PM	v -7.50	14.48	15.36	14.58
	121	9/17/2007 5:06:00 PM	v -7.50	14.50	15.35	14.57
	122	9/17/2007 5:07:00 PM	v -7.50	14.46	15.34	14.56
	123	9/17/2007 5:08:00 PM	v -7.50	14.46	15.33	14.51
	124	9/17/2007 5:09:00 PM	v -7.50	14.42	15.32	14.53
	125	9/17/2007 5:10:00 PM	v -7.50	14.43	15.32	14.51
	126	9/17/2007 5:10:42 PM	v -7.50	14.42	15.32	14.46

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Handy logger

Name : **LOGGER 1**

LOG Name	09180848
Interval	00:01:00
Personnel	

Start	9/18/2007 8:48:38 AM
Stop	9/18/2007 10:51:43 AM
Comment	

Data	125
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.68	16.33		
Minimum	0.02	0.01		
Average	16.02	15.35		
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/18/2007 8:48:38 AM	v 0.02	v 0.01	O.R.	O.R.
	2	9/18/2007 8:49:00 AM	0.11	0.15	O.R.	O.R.
	3	9/18/2007 8:50:00 AM	11.47	12.02	O.R.	O.R.
	4	9/18/2007 8:51:00 AM	^ 16.68	^ 16.33	O.R.	O.R.
	5	9/18/2007 8:52:00 AM	16.66	16.31	O.R.	O.R.
	6	9/18/2007 8:53:00 AM	16.65	^ 16.33	O.R.	O.R.
	7	9/18/2007 8:54:00 AM	16.65	^ 16.33	O.R.	O.R.
	8	9/18/2007 8:55:00 AM	16.64	16.31	O.R.	O.R.
	9	9/18/2007 8:56:00 AM	16.64	16.26	O.R.	O.R.
	10	9/18/2007 8:57:00 AM	16.61	16.26	O.R.	O.R.
	11	9/18/2007 8:58:00 AM	16.61	16.25	O.R.	O.R.
	12	9/18/2007 8:59:00 AM	16.58	16.21	O.R.	O.R.
	13	9/18/2007 9:00:00 AM	16.61	16.23	O.R.	O.R.
	14	9/18/2007 9:01:00 AM	16.62	16.18	O.R.	O.R.
	15	9/18/2007 9:02:00 AM	16.59	16.18	O.R.	O.R.
	16	9/18/2007 9:03:00 AM	16.57	16.14	O.R.	O.R.
	17	9/18/2007 9:04:00 AM	16.55	16.11	O.R.	O.R.
	18	9/18/2007 9:05:00 AM	16.55	16.06	O.R.	O.R.
	19	9/18/2007 9:06:00 AM	16.53	16.03	O.R.	O.R.
	20	9/18/2007 9:07:00 AM	16.54	15.99	O.R.	O.R.
	21	9/18/2007 9:08:00 AM	16.53	15.98	O.R.	O.R.
	22	9/18/2007 9:09:00 AM	16.52	15.96	O.R.	O.R.
	23	9/18/2007 9:10:00 AM	16.49	15.93	O.R.	O.R.
	24	9/18/2007 9:11:00 AM	16.51	15.94	O.R.	O.R.
	25	9/18/2007 9:12:00 AM	16.49	15.92	O.R.	O.R.
	26	9/18/2007 9:13:00 AM	16.46	15.90	O.R.	O.R.
	27	9/18/2007 9:14:00 AM	16.46	15.90	O.R.	O.R.
	28	9/18/2007 9:15:00 AM	16.48	15.89	O.R.	O.R.
	29	9/18/2007 9:16:00 AM	16.45	15.85	O.R.	O.R.
	30	9/18/2007 9:17:00 AM	16.44	15.79	O.R.	O.R.

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/18/2007 9:18:00 AM	16.42	15.82	O.R.	O.R.
	32	9/18/2007 9:19:00 AM	16.40	15.80	O.R.	O.R.
	33	9/18/2007 9:20:00 AM	16.42	15.77	O.R.	O.R.
	34	9/18/2007 9:21:00 AM	16.40	15.75	O.R.	O.R.
	35	9/18/2007 9:22:00 AM	16.35	15.73	O.R.	O.R.
	36	9/18/2007 9:23:00 AM	16.34	15.76	O.R.	O.R.
	37	9/18/2007 9:24:00 AM	16.33	15.73	O.R.	O.R.
	38	9/18/2007 9:25:00 AM	16.31	15.72	O.R.	O.R.
	39	9/18/2007 9:26:00 AM	16.27	15.72	O.R.	O.R.
	40	9/18/2007 9:27:00 AM	16.25	15.72	O.R.	O.R.
	41	9/18/2007 9:28:00 AM	16.22	15.78	O.R.	O.R.
	42	9/18/2007 9:29:00 AM	16.23	15.78	O.R.	O.R.
	43	9/18/2007 9:30:00 AM	16.22	15.79	O.R.	O.R.
	44	9/18/2007 9:31:00 AM	16.25	15.81	O.R.	O.R.
	45	9/18/2007 9:32:00 AM	16.25	15.81	O.R.	O.R.
	46	9/18/2007 9:33:00 AM	16.25	15.78	O.R.	O.R.
	47	9/18/2007 9:34:00 AM	16.27	15.78	O.R.	O.R.
	48	9/18/2007 9:35:00 AM	16.30	15.76	O.R.	O.R.
	49	9/18/2007 9:36:00 AM	16.31	15.79	O.R.	O.R.
	50	9/18/2007 9:37:00 AM	16.33	15.75	O.R.	O.R.
	51	9/18/2007 9:38:00 AM	16.35	15.73	O.R.	O.R.
	52	9/18/2007 9:39:00 AM	16.36	15.76	O.R.	O.R.
	53	9/18/2007 9:40:00 AM	16.35	15.76	O.R.	O.R.
	54	9/18/2007 9:41:00 AM	16.35	15.78	O.R.	O.R.
	55	9/18/2007 9:42:00 AM	16.38	15.75	O.R.	O.R.
	56	9/18/2007 9:43:00 AM	16.38	15.74	O.R.	O.R.
	57	9/18/2007 9:44:00 AM	16.39	15.76	O.R.	O.R.
	58	9/18/2007 9:45:00 AM	16.38	15.72	O.R.	O.R.
	59	9/18/2007 9:46:00 AM	16.38	15.72	O.R.	O.R.
	60	9/18/2007 9:47:00 AM	16.38	15.70	O.R.	O.R.
	61	9/18/2007 9:48:00 AM	16.33	15.69	O.R.	O.R.
	62	9/18/2007 9:49:00 AM	16.34	15.69	O.R.	O.R.
	63	9/18/2007 9:50:00 AM	16.37	15.68	O.R.	O.R.
	64	9/18/2007 9:51:00 AM	16.37	15.67	O.R.	O.R.
	65	9/18/2007 9:52:00 AM	16.34	15.67	O.R.	O.R.
	66	9/18/2007 9:53:00 AM	16.36	15.64	O.R.	O.R.
	67	9/18/2007 9:54:00 AM	16.33	15.66	O.R.	O.R.
	68	9/18/2007 9:55:00 AM	16.35	15.69	O.R.	O.R.
	69	9/18/2007 9:56:00 AM	16.33	15.67	O.R.	O.R.
	70	9/18/2007 9:57:00 AM	16.34	15.63	O.R.	O.R.
	71	9/18/2007 9:58:00 AM	16.33	15.60	O.R.	O.R.
	72	9/18/2007 9:59:00 AM	16.32	15.58	O.R.	O.R.
	73	9/18/2007 10:00:00 AM	16.31	15.56	O.R.	O.R.
	74	9/18/2007 10:01:00 AM	16.29	15.56	O.R.	O.R.
	75	9/18/2007 10:02:00 AM	16.29	15.56	O.R.	O.R.
	76	9/18/2007 10:03:00 AM	16.30	15.56	O.R.	O.R.
	77	9/18/2007 10:04:00 AM	16.29	15.53	O.R.	O.R.
	78	9/18/2007 10:05:00 AM	16.31	15.54	O.R.	O.R.
	79	9/18/2007 10:06:00 AM	16.29	15.52	O.R.	O.R.
	80	9/18/2007 10:07:00 AM	16.27	15.53	O.R.	O.R.

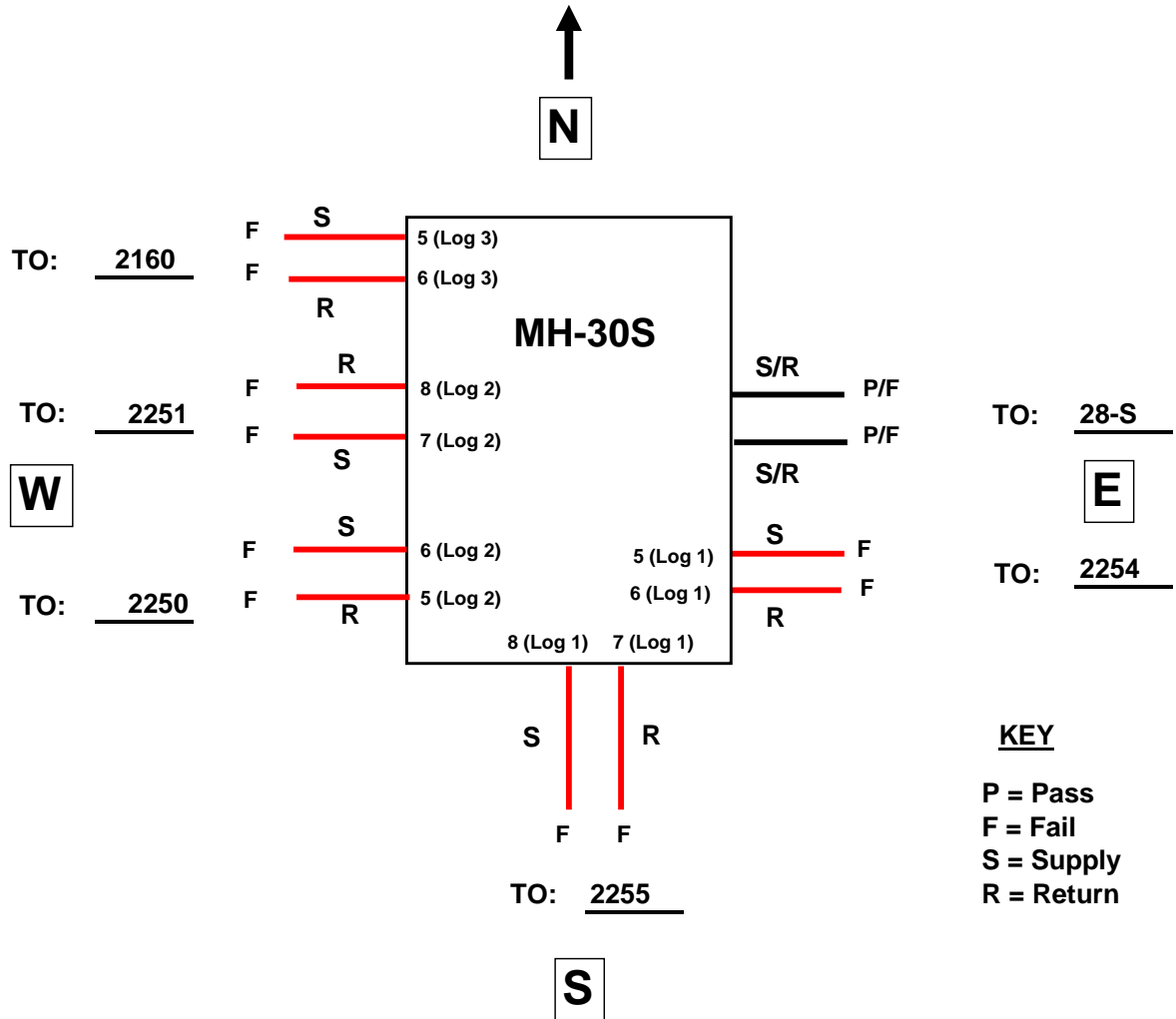
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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/18/2007 10:08:00 AM	16.30	15.49	O.R.	O.R.
	82	9/18/2007 10:09:00 AM	16.32	15.50	O.R.	O.R.
	83	9/18/2007 10:10:00 AM	16.30	15.48	O.R.	O.R.
	84	9/18/2007 10:11:00 AM	16.29	15.45	O.R.	O.R.
	85	9/18/2007 10:12:00 AM	16.28	15.45	O.R.	O.R.
	86	9/18/2007 10:13:00 AM	16.26	15.44	O.R.	O.R.
	87	9/18/2007 10:14:00 AM	16.26	15.43	O.R.	O.R.
	88	9/18/2007 10:15:00 AM	16.25	15.41	O.R.	O.R.
	89	9/18/2007 10:16:00 AM	16.26	15.36	O.R.	O.R.
	90	9/18/2007 10:17:00 AM	16.26	15.34	O.R.	O.R.
	91	9/18/2007 10:18:00 AM	16.25	15.35	O.R.	O.R.
	92	9/18/2007 10:19:00 AM	16.25	15.35	O.R.	O.R.
	93	9/18/2007 10:20:00 AM	16.22	15.32	O.R.	O.R.
	94	9/18/2007 10:21:00 AM	16.25	15.33	O.R.	O.R.
	95	9/18/2007 10:22:00 AM	16.21	15.31	O.R.	O.R.
	96	9/18/2007 10:23:00 AM	16.24	15.34	O.R.	O.R.
	97	9/18/2007 10:24:00 AM	16.21	15.29	O.R.	O.R.
	98	9/18/2007 10:25:00 AM	16.20	15.28	O.R.	O.R.
	99	9/18/2007 10:26:00 AM	16.22	15.28	O.R.	O.R.
	100	9/18/2007 10:27:00 AM	16.19	15.32	O.R.	O.R.
	101	9/18/2007 10:28:00 AM	16.18	15.30	O.R.	O.R.
	102	9/18/2007 10:29:00 AM	16.15	15.29	O.R.	O.R.
	103	9/18/2007 10:30:00 AM	16.15	15.27	O.R.	O.R.
	104	9/18/2007 10:31:00 AM	16.14	15.27	O.R.	O.R.
	105	9/18/2007 10:32:00 AM	16.13	15.25	O.R.	O.R.
	106	9/18/2007 10:33:00 AM	16.13	15.24	O.R.	O.R.
	107	9/18/2007 10:34:00 AM	16.13	15.23	O.R.	O.R.
	108	9/18/2007 10:35:00 AM	16.13	15.23	O.R.	O.R.
	109	9/18/2007 10:36:00 AM	16.12	15.25	O.R.	O.R.
	110	9/18/2007 10:37:00 AM	16.12	15.20	O.R.	O.R.
	111	9/18/2007 10:38:00 AM	16.12	15.21	O.R.	O.R.
	112	9/18/2007 10:39:00 AM	16.12	15.21	O.R.	O.R.
	113	9/18/2007 10:40:00 AM	16.13	15.21	O.R.	O.R.
	114	9/18/2007 10:41:00 AM	16.10	15.20	O.R.	O.R.
	115	9/18/2007 10:42:00 AM	16.13	15.20	O.R.	O.R.
	116	9/18/2007 10:43:00 AM	16.12	15.19	O.R.	O.R.
	117	9/18/2007 10:44:00 AM	16.11	15.16	O.R.	O.R.
	118	9/18/2007 10:45:00 AM	16.10	15.16	O.R.	O.R.
	119	9/18/2007 10:46:00 AM	16.08	15.14	O.R.	O.R.
	120	9/18/2007 10:47:00 AM	16.08	15.16	O.R.	O.R.
	121	9/18/2007 10:48:00 AM	16.07	15.11	O.R.	O.R.
	122	9/18/2007 10:49:00 AM	16.08	15.09	O.R.	O.R.
	123	9/18/2007 10:50:00 AM	16.08	15.10	O.R.	O.R.
	124	9/18/2007 10:51:00 AM	16.08	15.10	O.R.	O.R.
	125	9/18/2007 10:51:43 AM	16.07	15.10	O.R.	O.R.

DATE: 9/17/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.

MH 30-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
2	1	5 (Log 1)	Supply to 2254	F	Logger 2, Log 1
	2	6 (Log 1)	Return to 2254	F	Logger 2, Log 1
	3	7 (Log 1)	Return to 2255	F	Logger 2, Log 1
	4	8 (Log 1)	Supply to 2255	F	Logger 2, Log 1
2	1	5 (Log 2)	Return to 2250	F	Logger 2, Log 2
	2	6 (Log 2)	Supply to 2250	F	Logger 2, Log 2
	3	7 (Log 2)	Supply to 2251	F	Logger 2, Log 2
	4	8 (Log 2)	Return to 2251	F	Logger 2, Log 2
2	1	5 (Log 3)	Supply ot 2160	F	Logger 2, Log 3
	2	6 (Log 3)	Return to 2160	F	Logger 2, Log 3

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Handy logger

Name : **LOGGER 2, Log 1**

LOG Name	09171111
Interval	00:01:00
Personnel	

Start	9/17/2007 11:11:05 AM
Stop	9/17/2007 11:28:04 AM
Comment	

Data	19
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.38	16.79	14.49	15.34
Minimum	0.22	0.13	0.15	0.11
Average	10.83	7.77	5.68	8.22
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 11:11:05 AM	v 0.22	v 0.13	v 0.15	v 0.11
	2	9/17/2007 11:12:00 AM	6.41	5.98	4.94	5.28
	3	9/17/2007 11:13:00 AM	^ 16.38	^ 16.79	13.74	14.56
	4	9/17/2007 11:14:00 AM	15.64	14.91	^ 14.49	^ 15.34
	5	9/17/2007 11:15:00 AM	15.02	13.66	12.75	14.17
	6	9/17/2007 11:16:00 AM	14.38	12.54	11.10	13.10
	7	9/17/2007 11:17:00 AM	13.79	11.44	9.61	12.05
	8	9/17/2007 11:18:00 AM	13.22	10.39	8.24	11.06
	9	9/17/2007 11:19:00 AM	12.64	9.41	7.00	10.15
	10	9/17/2007 11:20:00 AM	12.07	8.48	5.87	9.26
	11	9/17/2007 11:21:00 AM	11.51	7.61	4.86	8.41
	12	9/17/2007 11:22:00 AM	10.98	6.82	3.96	7.62
	13	9/17/2007 11:23:00 AM	10.46	6.06	3.17	6.86
	14	9/17/2007 11:24:00 AM	9.95	5.34	2.48	6.16
	15	9/17/2007 11:25:00 AM	9.46	4.68	1.89	5.49
	16	9/17/2007 11:26:00 AM	8.99	4.03	1.36	4.84
	17	9/17/2007 11:27:00 AM	8.53	3.47	0.96	4.26
	18	9/17/2007 11:28:00 AM	8.09	2.96	0.66	3.72
	19	9/17/2007 11:28:04 AM	8.06	2.92	0.64	3.69

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Handy logger

Name : **LOGGER 2, Log 2**

LOG Name	09171143
Interval	00:01:00
Personnel	

Start	9/17/2007 11:43:47 AM
Stop	9/17/2007 11:55:42 AM
Comment	

Data	14
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.09	14.87	16.52	16.49
Minimum	0.09	0.09	0.17	0.14
Average	6.59	3.47	11.50	11.60
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 11:43:47 AM	v 0.09	v 0.09	v 0.17	v 0.14
	2	9/17/2007 11:44:00 AM	3.23	3.00	0.80	0.79
	3	9/17/2007 11:45:00 AM	^ 16.09	^ 14.87	5.34	5.25
	4	9/17/2007 11:46:00 AM	13.92	11.05	^ 16.52	^ 16.49
	5	9/17/2007 11:47:00 AM	11.93	7.86	15.08	14.93
	6	9/17/2007 11:48:00 AM	10.17	5.28	14.80	14.68
	7	9/17/2007 11:49:00 AM	8.57	3.25	14.50	14.47
	8	9/17/2007 11:50:00 AM	7.13	1.75	14.21	14.28
	9	9/17/2007 11:51:00 AM	5.86	0.77	13.93	14.07
	10	9/17/2007 11:52:00 AM	4.71	0.25	13.63	13.86
	11	9/17/2007 11:53:00 AM	3.74	0.10	13.37	13.66
	12	9/17/2007 11:54:00 AM	2.90	0.10	13.10	13.45
	13	9/17/2007 11:55:00 AM	2.15	0.11	12.83	13.26
	14	9/17/2007 11:55:42 AM	1.72	0.10	12.67	13.12

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Handy logger

Name : **LOGGER 2, Log 3**

LOG Name	09171204
Interval	00:01:00
Personnel	

Start	9/17/2007 12:04:32 PM
Stop	9/17/2007 12:28:12 PM
Comment	

Data	26
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

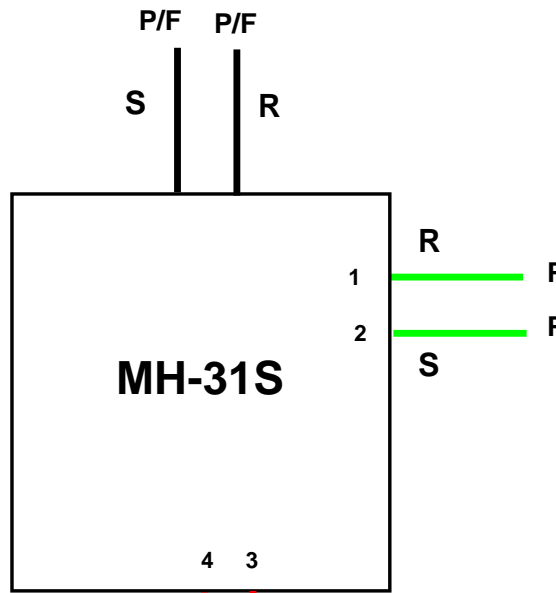
	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.71	16.42	1.94	1.86
Minimum	0.33	0.25	0.15	0.16
Average	9.19	13.35	0.97	1.13
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 12:04:32 PM	v 0.33	v 0.25	v 0.15	v 0.16
	2	9/17/2007 12:05:00 PM	2.28	2.12	^ 1.94	^ 1.86
	3	9/17/2007 12:06:00 PM	8.89	8.70	1.69	1.64
	4	9/17/2007 12:07:00 PM	14.99	15.05	1.59	1.61
	5	9/17/2007 12:08:00 PM	^ 15.71	^ 16.42	1.51	1.53
	6	9/17/2007 12:09:00 PM	15.01	16.24	1.44	1.45
	7	9/17/2007 12:10:00 PM	14.33	16.04	1.36	1.41
	8	9/17/2007 12:11:00 PM	13.68	15.85	1.30	1.36
	9	9/17/2007 12:12:00 PM	13.05	15.66	1.23	1.31
	10	9/17/2007 12:13:00 PM	12.41	15.49	1.15	1.28
	11	9/17/2007 12:14:00 PM	11.79	15.32	1.11	1.26
	12	9/17/2007 12:15:00 PM	11.21	15.15	1.04	1.21
	13	9/17/2007 12:16:00 PM	10.66	14.97	0.99	1.18
	14	9/17/2007 12:17:00 PM	10.11	14.81	0.95	1.15
	15	9/17/2007 12:18:00 PM	9.57	14.64	0.91	1.10
	16	9/17/2007 12:19:00 PM	9.06	14.46	0.86	1.07
	17	9/17/2007 12:20:00 PM	8.56	14.31	0.79	1.04
	18	9/17/2007 12:21:00 PM	8.05	14.12	0.74	1.01
	19	9/17/2007 12:22:00 PM	7.60	13.96	0.71	0.95
	20	9/17/2007 12:23:00 PM	7.14	13.80	0.68	0.94
	21	9/17/2007 12:24:00 PM	6.71	13.65	0.62	0.91
	22	9/17/2007 12:25:00 PM	6.29	13.49	0.58	0.86
	23	9/17/2007 12:26:00 PM	5.85	13.34	0.54	0.83
	24	9/17/2007 12:27:00 PM	5.46	13.18	0.51	0.81
	25	9/17/2007 12:28:00 PM	5.08	13.03	0.45	0.78
	26	9/17/2007 12:28:12 PM	5.01	12.99	0.44	0.78

DATE: 9/17/2007



TO: 28-S (Permit Required)



TO: 2258



KEY

- P = Pass
- F = Fail
- S = Supply
- R = Return

TO: 32-S



NOTES:

1. Attempt to test Supply/Return drains on 8/16/07 failed: 5" deep standing water on pit floor, North wall drains submerged.

MH 31-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 2258	P	
	2	2	Supply to 2258	P	
	3	3	Return to 32-S	F	
	4	4	Supply to 32-S	F	

printed 1/10/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09170956
Interval	00:01:00
Personnel	

Start	9/17/2007 9:56:07 AM
Stop	9/17/2007 12:13:40 PM
Comment	

Data	139
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.97	15.89	16.39	15.32
Minimum	0.10	0.17	0.12	0.27
Average	15.31	15.48	4.39	12.61
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/17/2007 9:56:07 AM	v 0.10	v 0.17	2.11	v 0.27
	2	9/17/2007 9:57:00 AM	3.58	4.17	1.69	1.30
	3	9/17/2007 9:58:00 AM	8.05	8.65	2.00	2.52
	4	9/17/2007 9:59:00 AM	13.94	14.71	3.99	4.76
	5	9/17/2007 10:00:00 AM	^ 15.97	^ 15.89	7.75	8.99
	6	9/17/2007 10:01:00 AM	^ 15.97	15.86	10.43	11.91
	7	9/17/2007 10:02:00 AM	15.94	15.83	13.21	15.06
	8	9/17/2007 10:03:00 AM	15.95	15.84	^ 16.39	^ 15.32
	9	9/17/2007 10:04:00 AM	15.93	15.82	14.47	15.26
	10	9/17/2007 10:05:00 AM	15.94	15.84	14.17	15.20
	11	9/17/2007 10:06:00 AM	15.92	15.84	13.88	15.14
	12	9/17/2007 10:07:00 AM	15.92	15.82	13.62	15.12
	13	9/17/2007 10:08:00 AM	15.91	15.84	13.32	15.09
	14	9/17/2007 10:09:00 AM	15.89	15.83	13.06	15.04
	15	9/17/2007 10:10:00 AM	15.87	15.81	12.79	14.99
	16	9/17/2007 10:11:00 AM	15.90	15.80	12.56	14.95
	17	9/17/2007 10:12:00 AM	15.89	15.79	12.30	14.90
	18	9/17/2007 10:13:00 AM	15.88	15.78	12.04	14.90
	19	9/17/2007 10:14:00 AM	15.86	15.83	11.83	14.85
	20	9/17/2007 10:15:00 AM	15.86	15.82	11.59	14.79
	21	9/17/2007 10:16:00 AM	15.85	15.82	11.36	14.75
	22	9/17/2007 10:17:00 AM	15.84	15.82	11.12	14.75
	23	9/17/2007 10:18:00 AM	15.83	15.81	10.90	14.68
	24	9/17/2007 10:19:00 AM	15.82	15.80	10.67	14.65
	25	9/17/2007 10:20:00 AM	15.81	15.80	10.45	14.61
	26	9/17/2007 10:21:00 AM	15.80	15.80	10.23	14.58
	27	9/17/2007 10:22:00 AM	15.80	15.80	10.01	14.55
	28	9/17/2007 10:23:00 AM	15.79	15.79	9.79	14.51
	29	9/17/2007 10:24:00 AM	15.78	15.79	9.57	14.48
	30	9/17/2007 10:25:00 AM	15.78	15.79	9.36	14.44

printed 1/10/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/17/2007 10:26:00 AM	15.77	15.79	9.12	14.38
	32	9/17/2007 10:27:00 AM	15.77	15.79	8.92	14.35
	33	9/17/2007 10:28:00 AM	15.76	15.78	8.73	14.32
	34	9/17/2007 10:29:00 AM	15.75	15.78	8.50	14.28
	35	9/17/2007 10:30:00 AM	15.75	15.75	8.31	14.25
	36	9/17/2007 10:31:00 AM	15.75	15.73	8.12	14.22
	37	9/17/2007 10:32:00 AM	15.75	15.73	7.94	14.15
	38	9/17/2007 10:33:00 AM	15.75	15.74	7.75	14.12
	39	9/17/2007 10:34:00 AM	15.72	15.73	7.56	14.09
	40	9/17/2007 10:35:00 AM	15.70	15.74	7.38	14.06
	41	9/17/2007 10:36:00 AM	15.69	15.73	7.20	14.03
	42	9/17/2007 10:37:00 AM	15.69	15.73	7.03	13.99
	43	9/17/2007 10:38:00 AM	15.68	15.73	6.85	13.95
	44	9/17/2007 10:39:00 AM	15.71	15.73	6.68	13.91
	45	9/17/2007 10:40:00 AM	15.71	15.73	6.51	13.89
	46	9/17/2007 10:41:00 AM	15.70	15.72	6.35	13.86
	47	9/17/2007 10:42:00 AM	15.70	15.72	6.18	13.82
	48	9/17/2007 10:43:00 AM	15.69	15.72	6.01	13.78
	49	9/17/2007 10:44:00 AM	15.69	15.76	5.86	13.74
	50	9/17/2007 10:45:00 AM	15.68	15.76	5.70	13.72
	51	9/17/2007 10:46:00 AM	15.67	15.75	5.51	13.67
	52	9/17/2007 10:47:00 AM	15.67	15.75	5.36	13.64
	53	9/17/2007 10:48:00 AM	15.66	15.75	5.23	13.61
	54	9/17/2007 10:49:00 AM	15.66	15.74	5.08	13.58
	55	9/17/2007 10:50:00 AM	15.65	15.74	4.95	13.54
	56	9/17/2007 10:51:00 AM	15.64	15.74	4.77	13.50
	57	9/17/2007 10:52:00 AM	15.64	15.74	4.65	13.48
	58	9/17/2007 10:53:00 AM	15.59	15.74	4.51	13.41
	59	9/17/2007 10:54:00 AM	15.59	15.74	4.34	13.39
	60	9/17/2007 10:55:00 AM	15.59	15.74	4.22	13.34
	61	9/17/2007 10:56:00 AM	15.59	15.69	4.11	13.32
	62	9/17/2007 10:57:00 AM	15.60	15.70	3.95	13.30
	63	9/17/2007 10:58:00 AM	15.59	15.71	3.85	13.24
	64	9/17/2007 10:59:00 AM	15.80	15.72	3.70	13.20
	65	9/17/2007 11:00:00 AM	15.57	15.72	3.59	13.18
	66	9/17/2007 11:01:00 AM	15.57	15.72	3.48	13.14
	67	9/17/2007 11:02:00 AM	15.56	15.69	3.37	13.11
	68	9/17/2007 11:03:00 AM	15.57	15.70	3.26	13.08
	69	9/17/2007 11:04:00 AM	15.54	15.71	3.13	13.06
	70	9/17/2007 11:05:00 AM	15.54	15.67	3.03	13.03
	71	9/17/2007 11:06:00 AM	15.54	15.67	2.93	13.00
	72	9/17/2007 11:07:00 AM	15.54	15.68	2.83	12.97
	73	9/17/2007 11:08:00 AM	15.54	15.68	2.73	12.93
	74	9/17/2007 11:09:00 AM	15.53	15.69	2.63	12.90
	75	9/17/2007 11:10:00 AM	15.53	15.69	2.53	12.86
	76	9/17/2007 11:11:00 AM	15.53	15.69	2.44	12.83
	77	9/17/2007 11:12:00 AM	15.52	15.69	2.34	12.80
	78	9/17/2007 11:13:00 AM	15.52	15.70	2.26	12.77
	79	9/17/2007 11:14:00 AM	15.52	15.70	2.17	12.73
	80	9/17/2007 11:15:00 AM	15.52	15.69	2.08	12.70

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Handy logger

Name : LOGGER 1

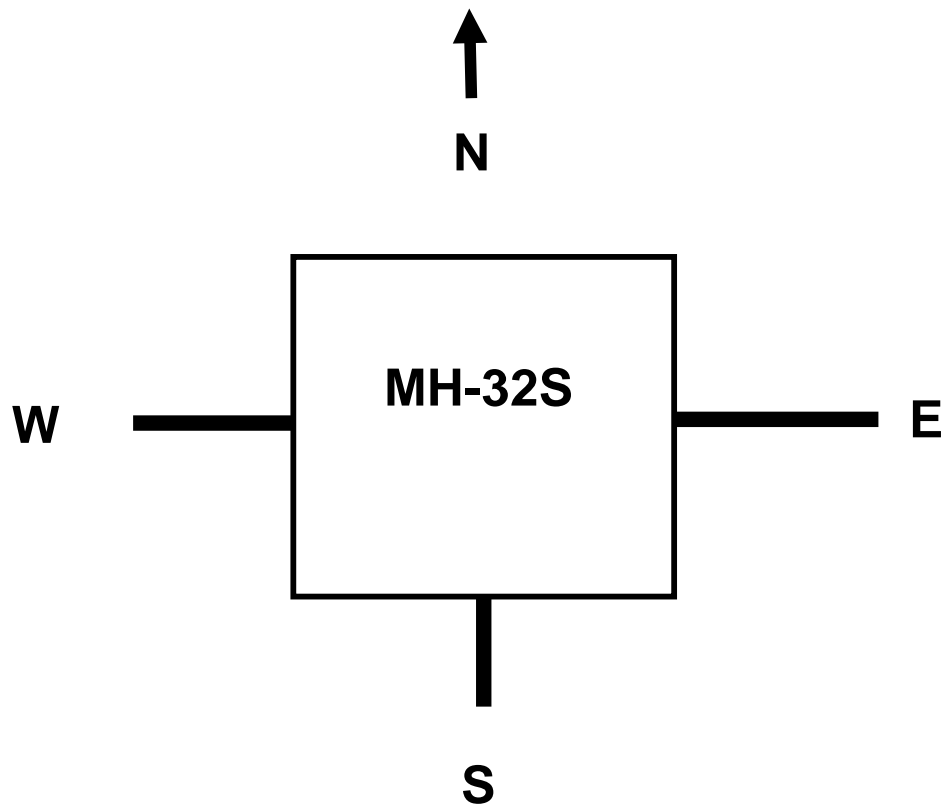
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/17/2007 11:16:00 AM	15.51	15.71	2.00	12.66
	82	9/17/2007 11:17:00 AM	15.50	15.70	1.91	12.63
	83	9/17/2007 11:18:00 AM	15.50	15.70	1.83	12.59
	84	9/17/2007 11:19:00 AM	15.49	15.71	1.74	12.56
	85	9/17/2007 11:20:00 AM	15.49	15.70	1.67	12.53
	86	9/17/2007 11:21:00 AM	15.48	15.70	1.60	12.49
	87	9/17/2007 11:22:00 AM	15.48	15.70	1.54	12.46
	88	9/17/2007 11:23:00 AM	15.48	15.70	1.46	12.43
	89	9/17/2007 11:24:00 AM	15.48	15.70	1.40	12.40
	90	9/17/2007 11:25:00 AM	15.47	15.70	1.31	12.37
	91	9/17/2007 11:26:00 AM	15.47	15.71	1.25	12.34
	92	9/17/2007 11:27:00 AM	15.46	15.70	1.19	12.30
	93	9/17/2007 11:28:00 AM	15.46	15.70	1.13	12.28
	94	9/17/2007 11:29:00 AM	15.45	15.70	1.04	12.25
	95	9/17/2007 11:30:00 AM	15.46	15.71	0.99	12.22
	96	9/17/2007 11:31:00 AM	15.46	15.71	0.94	12.19
	97	9/17/2007 11:32:00 AM	15.42	15.71	0.89	12.16
	98	9/17/2007 11:33:00 AM	15.42	15.68	0.85	12.13
	99	9/17/2007 11:34:00 AM	15.42	15.72	0.80	12.09
	100	9/17/2007 11:35:00 AM	15.45	15.72	0.75	12.06
	101	9/17/2007 11:36:00 AM	15.41	15.68	0.71	12.02
	102	9/17/2007 11:37:00 AM	15.40	15.68	0.67	11.99
	103	9/17/2007 11:38:00 AM	15.40	15.68	0.63	11.95
	104	9/17/2007 11:39:00 AM	15.43	15.68	0.59	11.91
	105	9/17/2007 11:40:00 AM	15.42	15.67	0.55	11.88
	106	9/17/2007 11:41:00 AM	15.41	15.71	0.55	11.84
	107	9/17/2007 11:42:00 AM	15.40	15.72	0.51	11.80
	108	9/17/2007 11:43:00 AM	15.40	15.71	0.48	11.77
	109	9/17/2007 11:44:00 AM	15.39	15.70	0.45	11.73
	110	9/17/2007 11:45:00 AM	15.39	15.67	0.42	11.69
	111	9/17/2007 11:46:00 AM	15.39	15.67	0.39	11.66
	112	9/17/2007 11:47:00 AM	15.38	15.68	0.40	11.62
	113	9/17/2007 11:48:00 AM	15.37	15.68	0.37	11.58
	114	9/17/2007 11:49:00 AM	15.36	15.68	0.34	11.55
	115	9/17/2007 11:50:00 AM	15.36	15.67	0.32	11.51
	116	9/17/2007 11:51:00 AM	15.36	15.67	0.30	11.48
	117	9/17/2007 11:52:00 AM	15.34	15.67	0.28	11.44
	118	9/17/2007 11:53:00 AM	15.34	15.70	0.26	11.41
	119	9/17/2007 11:54:00 AM	15.33	15.70	0.24	11.38
	120	9/17/2007 11:55:00 AM	15.32	15.69	0.23	11.35
	121	9/17/2007 11:56:00 AM	15.31	15.69	0.21	11.32
	122	9/17/2007 11:57:00 AM	15.33	15.68	0.20	11.28
	123	9/17/2007 11:58:00 AM	15.32	15.67	0.19	11.25
	124	9/17/2007 11:59:00 AM	15.31	15.66	0.17	11.21
	125	9/17/2007 12:00:00 PM	15.30	15.71	0.17	11.19
	126	9/17/2007 12:01:00 PM	15.29	15.70	0.15	11.14
	127	9/17/2007 12:02:00 PM	15.28	15.71	0.14	11.11
	128	9/17/2007 12:03:00 PM	15.28	15.70	0.13	11.08
	129	9/17/2007 12:04:00 PM	15.27	15.70	v 0.12	11.05
	130	9/17/2007 12:05:00 PM	15.26	15.70	0.16	11.02

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/17/2007 12:06:00 PM	15.29	15.69	0.15	10.99
	132	9/17/2007 12:07:00 PM	15.28	15.69	0.14	10.95
	133	9/17/2007 12:08:00 PM	15.28	15.69	0.13	10.92
	134	9/17/2007 12:09:00 PM	15.27	15.69	v 0.12	10.90
	135	9/17/2007 12:10:00 PM	15.27	15.68	v 0.12	10.86
	136	9/17/2007 12:11:00 PM	15.26	15.69	v 0.12	10.84
	137	9/17/2007 12:12:00 PM	15.25	15.68	v 0.12	10.80
	138	9/17/2007 12:13:00 PM	15.25	15.68	v 0.12	10.77
	139	9/17/2007 12:13:40 PM	15.24	15.68	v 0.12	10.75



E - Main trunk from 31-S

S - Main trunk to 35-S

W - Feeder to 33-S

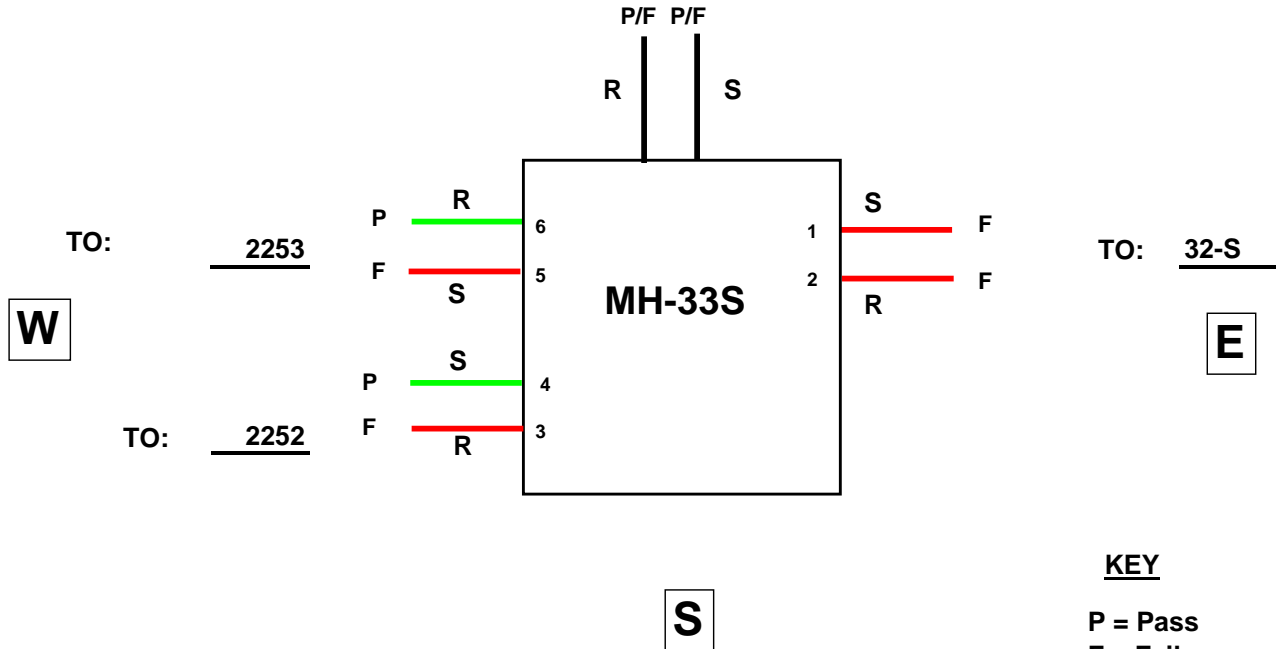
NOTES:

1. No pressure testing conducted from this pit.
2. Supply/Return drains tested on 8/16/07: All drains dry except Return on East wall - few drops when cap removed, drain valve dry when opened.

DATE: 9/15/2007



TO: 34-S, 2256, 2257 (old pit with round manhole, permit-required)



KEY

P = Pass
 F = Fail
 S = Supply
 R = Return

NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.

MH 33-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 32-S	F	
	2	2	Return to 32-S	F	
	3	3	Return to 2252	F	
	4	4	Supply to 2252	P	
2	1	5	Supply to 2253	F	
	2	6	Return to 2253	P	

printed 1/10/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09151226
Interval	00.01:00
Personnel	

Start	9/15/2007 12:26:47 PM
Stop	9/15/2007 2:30:41 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	17.99	17.89	15.36	17.46
Minimum	-7.50	0.13	-7.50	0.20
Average	2.42	15.01	4.65	14.52
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/15/2007 12:26:47 PM	0.00	v 0.13	0.09	v 0.20
	2	9/15/2007 12:27:00 PM	0.00	v 0.13	0.12	v 0.20
	3	9/15/2007 12:28:00 PM	0.00	0.16	4.00	5.11
	4	9/15/2007 12:29:00 PM	7.10	7.63	9.69	11.51
	5	9/15/2007 12:30:00 PM	^ 17.99	^ 17.89	14.77	^ 17.46
	6	9/15/2007 12:31:00 PM	17.59	17.69	^ 15.36	15.83
	7	9/15/2007 12:32:00 PM	17.22	17.52	15.23	15.82
	8	9/15/2007 12:33:00 PM	16.82	17.39	15.11	15.77
	9	9/15/2007 12:34:00 PM	16.49	17.26	15.01	15.75
	10	9/15/2007 12:35:00 PM	16.11	17.15	14.88	15.72
	11	9/15/2007 12:36:00 PM	15.74	17.03	14.73	15.68
	12	9/15/2007 12:37:00 PM	15.37	16.96	14.64	15.64
	13	9/15/2007 12:38:00 PM	15.02	16.86	14.52	15.64
	14	9/15/2007 12:39:00 PM	14.71	16.78	14.45	15.62
	15	9/15/2007 12:40:00 PM	14.37	16.74	14.33	15.60
	16	9/15/2007 12:41:00 PM	14.04	16.68	14.21	15.57
	17	9/15/2007 12:42:00 PM	13.72	16.63	14.09	15.55
	18	9/15/2007 12:43:00 PM	13.43	16.63	13.98	15.53
	19	9/15/2007 12:44:00 PM	13.12	16.59	13.87	15.51
	20	9/15/2007 12:45:00 PM	12.81	16.54	13.76	15.49
	21	9/15/2007 12:46:00 PM	12.51	16.50	13.70	15.48
	22	9/15/2007 12:47:00 PM	12.22	16.48	13.59	15.46
	23	9/15/2007 12:48:00 PM	11.93	16.44	13.48	15.44
	24	9/15/2007 12:49:00 PM	11.65	16.40	13.39	15.42
	25	9/15/2007 12:50:00 PM	11.35	16.38	13.28	15.40
	26	9/15/2007 12:51:00 PM	11.07	16.34	13.17	15.38
	27	9/15/2007 12:52:00 PM	10.81	16.32	13.07	15.36
	28	9/15/2007 12:53:00 PM	10.55	16.28	12.97	15.33
	29	9/15/2007 12:54:00 PM	10.29	16.29	12.87	15.32
	30	9/15/2007 12:55:00 PM	10.03	16.27	12.77	15.33

printed 1/10/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/15/2007 12:56:00 PM	9.79	16.23	12.66	15.31
	32	9/15/2007 12:57:00 PM	9.54	16.21	12.56	15.29
	33	9/15/2007 12:58:00 PM	9.30	16.18	12.48	15.26
	34	9/15/2007 12:59:00 PM	9.07	16.11	12.37	15.25
	35	9/15/2007 1:00:00 PM	8.84	16.09	12.28	15.23
	36	9/15/2007 1:01:00 PM	8.61	16.06	12.17	15.21
	37	9/15/2007 1:02:00 PM	8.39	16.08	12.08	15.18
	38	9/15/2007 1:03:00 PM	8.17	16.05	11.99	15.16
	39	9/15/2007 1:04:00 PM	7.96	15.99	11.89	15.14
	40	9/15/2007 1:05:00 PM	7.75	16.00	11.79	15.12
	41	9/15/2007 1:06:00 PM	7.55	15.98	11.70	15.10
	42	9/15/2007 1:07:00 PM	7.31	15.95	11.61	15.08
	43	9/15/2007 1:08:00 PM	7.12	15.93	11.52	15.06
	44	9/15/2007 1:09:00 PM	6.92	15.90	11.43	15.04
	45	9/15/2007 1:10:00 PM	6.73	15.87	11.34	15.03
	46	9/15/2007 1:11:00 PM	6.54	15.85	11.26	15.01
	47	9/15/2007 1:12:00 PM	6.36	15.82	11.17	14.99
	48	9/15/2007 1:13:00 PM	6.18	15.81	11.08	14.97
	49	9/15/2007 1:14:00 PM	6.00	15.79	10.98	14.94
	50	9/15/2007 1:15:00 PM	5.83	15.76	10.90	14.93
	51	9/15/2007 1:16:00 PM	5.66	15.73	10.81	14.91
	52	9/15/2007 1:17:00 PM	5.50	15.71	10.73	14.89
	53	9/15/2007 1:18:00 PM	5.34	15.68	10.64	14.87
	54	9/15/2007 1:19:00 PM	5.18	15.66	10.55	14.85
	55	9/15/2007 1:20:00 PM	5.02	15.64	10.47	14.84
	56	9/15/2007 1:21:00 PM	4.87	15.61	10.39	14.82
	57	9/15/2007 1:22:00 PM	4.73	15.55	10.30	14.80
	58	9/15/2007 1:23:00 PM	4.58	15.53	10.22	14.78
	59	9/15/2007 1:24:00 PM	4.44	15.51	10.14	14.82
	60	9/15/2007 1:25:00 PM	4.30	15.49	10.06	14.80
	61	9/15/2007 1:26:00 PM	4.16	15.47	9.98	14.74
	62	9/15/2007 1:27:00 PM	4.03	15.45	9.91	14.73
	63	9/15/2007 1:28:00 PM	3.91	15.43	9.80	14.72
	64	9/15/2007 1:29:00 PM	3.78	15.40	9.72	14.72
	65	9/15/2007 1:30:00 PM	3.67	15.37	9.64	14.71
	66	9/15/2007 1:31:00 PM	3.55	15.32	9.57	14.70
	67	9/15/2007 1:32:00 PM	3.44	15.30	9.50	14.70
	68	9/15/2007 1:33:00 PM	3.33	15.28	9.42	14.69
	69	9/15/2007 1:34:00 PM	3.22	15.26	9.34	14.68
	70	9/15/2007 1:35:00 PM	3.12	15.24	9.26	14.66
	71	9/15/2007 1:36:00 PM	3.01	15.22	9.19	14.65
	72	9/15/2007 1:37:00 PM	2.91	15.19	9.11	14.65
	73	9/15/2007 1:38:00 PM	2.81	15.18	9.03	14.63
	74	9/15/2007 1:39:00 PM	2.71	15.15	8.95	14.62
	75	9/15/2007 1:40:00 PM	2.62	15.13	8.88	14.61
	76	9/15/2007 1:41:00 PM	2.53	15.10	8.80	14.59
	77	9/15/2007 1:42:00 PM	2.44	15.07	8.72	14.58
	78	9/15/2007 1:43:00 PM	2.99	15.04	7.43	14.57
	79	9/15/2007 1:44:00 PM	0.90	15.02	5.62	14.55
	80	9/15/2007 1:45:00 PM	0.14	14.99	4.05	14.54

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/15/2007 1:46:00 PM	0.05	14.98	2.77	14.52
	82	9/15/2007 1:47:00 PM	0.01	14.95	1.78	14.51
	83	9/15/2007 1:48:00 PM	-0.03	14.93	1.02	14.54
	84	9/15/2007 1:49:00 PM	v -7.50	14.90	0.44	14.53
	85	9/15/2007 1:50:00 PM	v -7.50	14.88	v -7.50	14.52
	86	9/15/2007 1:51:00 PM	v -7.50	14.86	v -7.50	14.51
	87	9/15/2007 1:52:00 PM	v -7.50	14.84	v -7.50	14.52
	88	9/15/2007 1:53:00 PM	v -7.50	14.83	v -7.50	14.53
	89	9/15/2007 1:54:00 PM	v -7.50	14.79	v -7.50	14.48
	90	9/15/2007 1:55:00 PM	v -7.50	14.77	v -7.50	14.49
	91	9/15/2007 1:56:00 PM	v -7.50	14.74	v -7.50	14.50
	92	9/15/2007 1:57:00 PM	v -7.50	14.72	v -7.50	14.49
	93	9/15/2007 1:58:00 PM	v -7.50	14.69	v -7.50	14.49
	94	9/15/2007 1:59:00 PM	v -7.50	14.71	v -7.50	14.49
	95	9/15/2007 2:00:00 PM	v -7.50	14.64	v -7.50	14.49
	96	9/15/2007 2:01:00 PM	v -7.50	14.62	v -7.50	14.48
	97	9/15/2007 2:02:00 PM	v -7.50	14.60	v -7.50	14.48
	98	9/15/2007 2:03:00 PM	v -7.50	14.58	v -7.50	14.47
	99	9/15/2007 2:04:00 PM	v -7.50	14.56	v -7.50	14.47
	100	9/15/2007 2:05:00 PM	v -7.50	14.53	v -7.50	14.46
	101	9/15/2007 2:06:00 PM	v -7.50	14.51	v -7.50	14.45
	102	9/15/2007 2:07:00 PM	v -7.50	14.49	v -7.50	14.45
	103	9/15/2007 2:08:00 PM	v -7.50	14.47	v -7.50	14.44
	104	9/15/2007 2:09:00 PM	v -7.50	14.45	v -7.50	14.43
	105	9/15/2007 2:10:00 PM	v -7.50	14.43	v -7.50	14.43
	106	9/15/2007 2:11:00 PM	v -7.50	14.41	v -7.50	14.42
	107	9/15/2007 2:12:00 PM	v -7.50	14.39	v -7.50	14.40
	108	9/15/2007 2:13:00 PM	v -7.50	14.38	v -7.50	14.39
	109	9/15/2007 2:14:00 PM	v -7.50	14.35	v -7.50	14.35
	110	9/15/2007 2:15:00 PM	v -7.50	14.33	v -7.50	14.34
	111	9/15/2007 2:16:00 PM	v -7.50	14.30	v -7.50	14.34
	112	9/15/2007 2:17:00 PM	v -7.50	14.28	v -7.50	14.33
	113	9/15/2007 2:18:00 PM	v -7.50	14.27	v -7.50	14.32
	114	9/15/2007 2:19:00 PM	v -7.50	14.25	v -7.50	14.32
	115	9/15/2007 2:20:00 PM	v -7.50	14.24	v -7.50	14.31
	116	9/15/2007 2:21:00 PM	v -7.50	14.22	v -7.50	14.31
	117	9/15/2007 2:22:00 PM	v -7.50	14.20	v -7.50	14.31
	118	9/15/2007 2:23:00 PM	v -7.50	14.19	v -7.50	14.30
	119	9/15/2007 2:24:00 PM	v -7.50	14.18	v -7.50	14.30
	120	9/15/2007 2:25:00 PM	v -7.50	14.17	v -7.50	14.29
	121	9/15/2007 2:26:00 PM	v -7.50	14.15	v -7.50	14.29
	122	9/15/2007 2:27:00 PM	v -7.50	14.13	v -7.50	14.28
	123	9/15/2007 2:28:00 PM	v -7.50	14.12	v -7.50	14.27
	124	9/15/2007 2:29:00 PM	v -7.50	14.06	v -7.50	14.26
	125	9/15/2007 2:30:00 PM	v -7.50	14.05	v -7.50	14.30
	126	9/15/2007 2:30:41 PM	v -7.50	14.03	v -7.50	14.29

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Handy logger

Name : **LOGGER 2**

LOG Name	09151226
Interval	00:01:00
Personnel	

Start	9/15/2007 12:26:28 PM
Stop	9/15/2007 2:30:34 PM
Comment	

Data	126
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.64	15.55	-7.50	-7.50
Minimum	-7.50	0.11	-7.50	-7.50
Average	4.47	15.21	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/15/2007 12:26:28 PM	0.15	v 0.11	v -7.50	v -7.50
	2	9/15/2007 12:27:00 PM	4.10	4.15	v -7.50	v -7.50
	3	9/15/2007 12:28:00 PM	^ 15.64	15.52	v -7.50	v -7.50
	4	9/15/2007 12:29:00 PM	15.48	15.37	v -7.50	v -7.50
	5	9/15/2007 12:30:00 PM	15.34	15.34	v -7.50	v -7.50
	6	9/15/2007 12:31:00 PM	15.22	15.33	v -7.50	v -7.50
*	7	9/15/2007 12:32:00 PM	15.10	15.32	v -7.50	v -7.50
	8	9/15/2007 12:33:00 PM	14.96	15.33	v -7.50	v -7.50
	9	9/15/2007 12:34:00 PM	14.85	15.31	v -7.50	v -7.50
	10	9/15/2007 12:35:00 PM	14.71	15.33	v -7.50	v -7.50
	11	9/15/2007 12:36:00 PM	14.62	15.34	v -7.50	v -7.50
	12	9/15/2007 12:37:00 PM	14.49	15.36	v -7.50	v -7.50
	13	9/15/2007 12:38:00 PM	14.36	15.36	v -7.50	v -7.50
	14	9/15/2007 12:39:00 PM	14.24	15.36	v -7.50	v -7.50
	15	9/15/2007 12:40:00 PM	14.15	15.39	v -7.50	v -7.50
	16	9/15/2007 12:41:00 PM	14.03	15.40	v -7.50	v -7.50
	17	9/15/2007 12:42:00 PM	13.91	15.41	v -7.50	v -7.50
	18	9/15/2007 12:43:00 PM	13.79	15.42	v -7.50	v -7.50
	19	9/15/2007 12:44:00 PM	13.67	15.42	v -7.50	v -7.50
	20	9/15/2007 12:45:00 PM	13.55	15.42	v -7.50	v -7.50
	21	9/15/2007 12:46:00 PM	13.44	15.45	v -7.50	v -7.50
	22	9/15/2007 12:47:00 PM	13.37	15.46	v -7.50	v -7.50
	23	9/15/2007 12:48:00 PM	13.25	15.47	v -7.50	v -7.50
	24	9/15/2007 12:49:00 PM	13.13	15.47	v -7.50	v -7.50
	25	9/15/2007 12:50:00 PM	13.03	15.47	v -7.50	v -7.50
	26	9/15/2007 12:51:00 PM	12.90	15.47	v -7.50	v -7.50
	27	9/15/2007 12:52:00 PM	12.80	15.48	v -7.50	v -7.50
	28	9/15/2007 12:53:00 PM	12.68	15.47	v -7.50	v -7.50
	29	9/15/2007 12:54:00 PM	12.57	15.48	v -7.50	v -7.50
	30	9/15/2007 12:55:00 PM	12.46	15.48	v -7.50	v -7.50

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/15/2007 12:56:00 PM	12.35	15.49	v -7.50	v -7.50
	32	9/15/2007 12:57:00 PM	12.25	15.50	v -7.50	v -7.50
	33	9/15/2007 12:58:00 PM	12.14	15.51	v -7.50	v -7.50
	34	9/15/2007 12:59:00 PM	12.04	15.50	v -7.50	v -7.50
	35	9/15/2007 1:00:00 PM	11.93	15.51	v -7.50	v -7.50
	36	9/15/2007 1:01:00 PM	11.83	15.51	v -7.50	v -7.50
	37	9/15/2007 1:02:00 PM	11.72	15.50	v -7.50	v -7.50
	38	9/15/2007 1:03:00 PM	11.62	15.51	v -7.50	v -7.50
	39	9/15/2007 1:04:00 PM	11.51	15.51	v -7.50	v -7.50
	40	9/15/2007 1:05:00 PM	11.42	^ 15.55	v -7.50	v -7.50
	41	9/15/2007 1:06:00 PM	11.29	15.54	v -7.50	v -7.50
	42	9/15/2007 1:07:00 PM	11.22	15.54	v -7.50	v -7.50
	43	9/15/2007 1:08:00 PM	11.10	15.50	v -7.50	v -7.50
	44	9/15/2007 1:09:00 PM	11.02	15.50	v -7.50	v -7.50
	45	9/15/2007 1:10:00 PM	10.89	15.50	v -7.50	v -7.50
	46	9/15/2007 1:11:00 PM	10.82	15.50	v -7.50	v -7.50
	47	9/15/2007 1:12:00 PM	10.70	15.49	v -7.50	v -7.50
	48	9/15/2007 1:13:00 PM	10.63	15.49	v -7.50	v -7.50
	49	9/15/2007 1:14:00 PM	10.53	15.49	v -7.50	v -7.50
	50	9/15/2007 1:15:00 PM	10.41	15.54	v -7.50	v -7.50
	51	9/15/2007 1:16:00 PM	10.34	15.49	v -7.50	v -7.50
	52	9/15/2007 1:17:00 PM	10.24	15.48	v -7.50	v -7.50
	53	9/15/2007 1:18:00 PM	10.15	15.48	v -7.50	v -7.50
	54	9/15/2007 1:19:00 PM	10.05	15.48	v -7.50	v -7.50
	55	9/15/2007 1:20:00 PM	9.95	15.48	v -7.50	v -7.50
	56	9/15/2007 1:21:00 PM	9.87	15.50	v -7.50	v -7.50
	57	9/15/2007 1:22:00 PM	9.77	15.51	v -7.50	v -7.50
	58	9/15/2007 1:23:00 PM	9.69	15.51	v -7.50	v -7.50
	59	9/15/2007 1:24:00 PM	9.59	15.50	v -7.50	v -7.50
	60	9/15/2007 1:25:00 PM	9.50	15.51	v -7.50	v -7.50
	61	9/15/2007 1:26:00 PM	9.42	15.46	v -7.50	v -7.50
	62	9/15/2007 1:27:00 PM	9.30	15.46	v -7.50	v -7.50
	63	9/15/2007 1:28:00 PM	9.22	15.46	v -7.50	v -7.50
	64	9/15/2007 1:29:00 PM	9.13	15.45	v -7.50	v -7.50
	65	9/15/2007 1:30:00 PM	9.05	15.45	v -7.50	v -7.50
	66	9/15/2007 1:31:00 PM	8.97	15.45	v -7.50	v -7.50
	67	9/15/2007 1:32:00 PM	8.88	15.44	v -7.50	v -7.50
	68	9/15/2007 1:33:00 PM	8.80	15.47	v -7.50	v -7.50
	69	9/15/2007 1:34:00 PM	8.72	15.46	v -7.50	v -7.50
	70	9/15/2007 1:35:00 PM	8.64	15.43	v -7.50	v -7.50
	71	9/15/2007 1:36:00 PM	8.57	15.41	v -7.50	v -7.50
	72	9/15/2007 1:37:00 PM	8.50	15.40	v -7.50	v -7.50
	73	9/15/2007 1:38:00 PM	8.41	15.39	v -7.50	v -7.50
	74	9/15/2007 1:39:00 PM	8.34	15.39	v -7.50	v -7.50
	75	9/15/2007 1:40:00 PM	8.26	15.40	v -7.50	v -7.50
	76	9/15/2007 1:41:00 PM	8.19	15.40	v -7.50	v -7.50
	77	9/15/2007 1:42:00 PM	8.11	15.41	v -7.50	v -7.50
	78	9/15/2007 1:43:00 PM	4.56	15.42	v -7.50	v -7.50
	79	9/15/2007 1:44:00 PM	1.55	15.43	v -7.50	v -7.50
	80	9/15/2007 1:45:00 PM	0.30	15.44	v -7.50	v -7.50

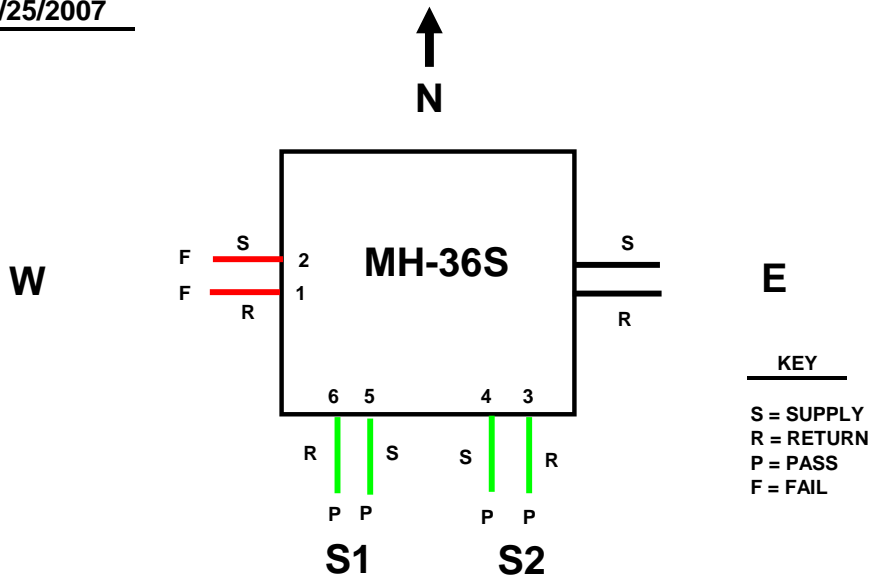
printed 1/10/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/15/2007 1:46:00 PM	0.15	15.44	v -7.50	v -7.50
	82	9/15/2007 1:47:00 PM	0.12	15.44	v -7.50	v -7.50
	83	9/15/2007 1:48:00 PM	0.10	15.44	v -7.50	v -7.50
	84	9/15/2007 1:49:00 PM	0.05	15.43	v -7.50	v -7.50
	85	9/15/2007 1:50:00 PM	v -7.50	15.43	v -7.50	v -7.50
	86	9/15/2007 1:51:00 PM	v -7.50	15.43	v -7.50	v -7.50
	87	9/15/2007 1:52:00 PM	v -7.50	15.43	v -7.50	v -7.50
	88	9/15/2007 1:53:00 PM	v -7.50	15.43	v -7.50	v -7.50
	89	9/15/2007 1:54:00 PM	v -7.50	15.43	v -7.50	v -7.50
	90	9/15/2007 1:55:00 PM	v -7.50	15.44	v -7.50	v -7.50
	91	9/15/2007 1:56:00 PM	v -7.50	15.43	v -7.50	v -7.50
	92	9/15/2007 1:57:00 PM	v -7.50	15.44	v -7.50	v -7.50
	93	9/15/2007 1:58:00 PM	v -7.50	15.43	v -7.50	v -7.50
	94	9/15/2007 1:59:00 PM	v -7.50	15.43	v -7.50	v -7.50
	95	9/15/2007 2:00:00 PM	v -7.50	15.43	v -7.50	v -7.50
	96	9/15/2007 2:01:00 PM	v -7.50	15.43	v -7.50	v -7.50
	97	9/15/2007 2:02:00 PM	v -7.50	15.42	v -7.50	v -7.50
	98	9/15/2007 2:03:00 PM	v -7.50	15.43	v -7.50	v -7.50
	99	9/15/2007 2:04:00 PM	v -7.50	15.43	v -7.50	v -7.50
	100	9/15/2007 2:05:00 PM	v -7.50	15.43	v -7.50	v -7.50
	101	9/15/2007 2:06:00 PM	v -7.50	15.43	v -7.50	v -7.50
	102	9/15/2007 2:07:00 PM	v -7.50	15.38	v -7.50	v -7.50
	103	9/15/2007 2:08:00 PM	v -7.50	15.38	v -7.50	v -7.50
	104	9/15/2007 2:09:00 PM	v -7.50	15.38	v -7.50	v -7.50
	105	9/15/2007 2:10:00 PM	v -7.50	15.38	v -7.50	v -7.50
	106	9/15/2007 2:11:00 PM	v -7.50	15.38	v -7.50	v -7.50
	107	9/15/2007 2:12:00 PM	v -7.50	15.38	v -7.50	v -7.50
	108	9/15/2007 2:13:00 PM	v -7.50	15.38	v -7.50	v -7.50
	109	9/15/2007 2:14:00 PM	v -7.50	15.38	v -7.50	v -7.50
	110	9/15/2007 2:15:00 PM	v -7.50	15.37	v -7.50	v -7.50
	111	9/15/2007 2:16:00 PM	v -7.50	15.38	v -7.50	v -7.50
	112	9/15/2007 2:17:00 PM	v -7.50	15.37	v -7.50	v -7.50
	113	9/15/2007 2:18:00 PM	v -7.50	15.34	v -7.50	v -7.50
	114	9/15/2007 2:19:00 PM	v -7.50	15.38	v -7.50	v -7.50
	115	9/15/2007 2:20:00 PM	v -7.50	15.37	v -7.50	v -7.50
	116	9/15/2007 2:21:00 PM	v -7.50	15.32	v -7.50	v -7.50
	117	9/15/2007 2:22:00 PM	v -7.50	15.32	v -7.50	v -7.50
	118	9/15/2007 2:23:00 PM	v -7.50	15.32	v -7.50	v -7.50
	119	9/15/2007 2:24:00 PM	v -7.50	15.32	v -7.50	v -7.50
	120	9/15/2007 2:25:00 PM	v -7.50	15.31	v -7.50	v -7.50
	121	9/15/2007 2:26:00 PM	v -7.50	15.30	v -7.50	v -7.50
	122	9/15/2007 2:27:00 PM	v -7.50	15.30	v -7.50	v -7.50
	123	9/15/2007 2:28:00 PM	v -7.50	15.29	v -7.50	v -7.50
	124	9/15/2007 2:29:00 PM	v -7.50	15.28	v -7.50	v -7.50
	125	9/15/2007 2:30:00 PM	v -7.50	15.28	v -7.50	v -7.50
	126	9/15/2007 2:30:34 PM	v -7.50	15.28	v -7.50	v -7.50

DATE: 8/25/2007



E - Feeder from 35-S, tested but could not pressurize due to uncapped vents in 35-S (Permit-Required)

S2 - Feeder to Bldg. 2354

S1 - Feeder to Bldg. 2351

W - Feeder to Bldg. 2350

NOTES:

1. Pit dry with moderate soil on floor
2. Supply/Return drains tested on 8/16/07: East wall and S1 drains dry; S2 Return dry, S2 Supply discharged < 1 oz. muddy water when plug removed, drain valve dry when opened; West wall drains both discharged < 1 oz when plugs removed, drain valves were both dry when opened.

MH 36-S				
Channel No.	Transducer No.	Description	P/F	Comment
1	1	Return from Bldg. 2350	F	
2	2	Supply to Bldg. 2350	F	
3	3	Return from Bldg. 2354	P	
4	4	Supply to Bldg. 2354	P	
1	5	Supply to Bldg. 2351	P	
2	6	Return from Bldg 2351	P	
	7	Supply from 35-S		Attempt to pressurize to 35-S failed, vents unplugged at 35-S (Confined Space, Permit Required pit)
	8	Return to 35-S		Attempt to pressurize to 35-S failed, vents unplugged at 35-S (Confined Space, Permit Required pit)

printed 1/11/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08251345
Interval	00:01:00
Personnel	

Start	8/25/2007 1:45:09 PM
Stop	8/25/2007 3:49:48 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.91	15.99	15.81	16.11
Minimum	0.06	0.11	0.14	0.22
Average	14.36	14.39	15.02	15.34
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/25/2007 1:45:09 PM	v 0.06	v 0.11	v 0.14	v 0.22
	2	8/25/2007 1:46:00 PM	0.42	v 0.11	v 0.14	v 0.22
	3	8/25/2007 1:47:00 PM	^ 15.91	v 0.11	v 0.14	v 0.22
	4	8/25/2007 1:48:00 PM	15.80	^ 15.99	0.69	v 0.22
	5	8/25/2007 1:49:00 PM	15.78	15.94	^ 15.81	6.62
	6	8/25/2007 1:50:00 PM	15.71	15.93	15.68	^ 16.11
	7	8/25/2007 1:51:00 PM	15.67	15.92	15.68	16.01
	8	8/25/2007 1:52:00 PM	15.63	15.88	15.67	16.01
	9	8/25/2007 1:53:00 PM	15.59	15.83	15.67	15.99
	10	8/25/2007 1:54:00 PM	15.54	15.85	15.65	15.97
	11	8/25/2007 1:55:00 PM	15.50	15.81	15.62	15.95
	12	8/25/2007 1:56:00 PM	15.46	15.78	15.64	15.96
	13	8/25/2007 1:57:00 PM	15.42	15.78	15.67	15.97
	14	8/25/2007 1:58:00 PM	15.44	15.75	15.65	15.97
	15	8/25/2007 1:59:00 PM	15.40	15.72	15.64	15.96
	16	8/25/2007 2:00:00 PM	15.36	15.70	15.63	15.95
	17	8/25/2007 2:01:00 PM	15.33	15.67	15.62	15.94
	18	8/25/2007 2:02:00 PM	15.30	15.64	15.61	15.94
	19	8/25/2007 2:03:00 PM	15.27	15.62	15.60	15.94
	20	8/25/2007 2:04:00 PM	15.25	15.59	15.59	15.94
	21	8/25/2007 2:05:00 PM	15.22	15.57	15.59	15.93
	22	8/25/2007 2:06:00 PM	15.19	15.58	15.58	15.93
	23	8/25/2007 2:07:00 PM	15.17	15.57	15.62	15.93
	24	8/25/2007 2:08:00 PM	15.14	15.51	15.62	15.92
	25	8/25/2007 2:09:00 PM	15.12	15.48	15.62	15.92
	26	8/25/2007 2:10:00 PM	15.10	15.50	15.61	15.92
	27	8/25/2007 2:11:00 PM	15.10	15.48	15.61	15.92
	28	8/25/2007 2:12:00 PM	15.04	15.46	15.60	15.92
	29	8/25/2007 2:13:00 PM	15.06	15.44	15.60	15.91
	30	8/25/2007 2:14:00 PM	15.01	15.42	15.61	15.91

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/25/2007 2:15:00 PM	14.98	15.40	15.59	15.91
	32	8/25/2007 2:16:00 PM	14.96	15.38	15.59	15.92
	33	8/25/2007 2:17:00 PM	14.98	15.36	15.58	15.91
	34	8/25/2007 2:18:00 PM	14.95	15.34	15.59	15.91
	35	8/25/2007 2:19:00 PM	14.92	15.32	15.58	15.91
	36	8/25/2007 2:20:00 PM	14.92	15.28	15.57	15.91
	37	8/25/2007 2:21:00 PM	14.90	15.28	15.57	15.91
	38	8/25/2007 2:22:00 PM	14.85	15.27	15.57	15.91
	39	8/25/2007 2:23:00 PM	14.87	15.25	15.56	15.91
	40	8/25/2007 2:24:00 PM	14.85	15.19	15.56	15.91
	41	8/25/2007 2:25:00 PM	14.83	15.21	15.56	15.91
	42	8/25/2007 2:26:00 PM	14.82	15.15	15.56	15.91
	43	8/25/2007 2:27:00 PM	14.80	15.14	15.56	15.91
	44	8/25/2007 2:28:00 PM	14.75	15.12	15.56	15.91
	45	8/25/2007 2:29:00 PM	14.77	15.10	15.55	15.91
	46	8/25/2007 2:30:00 PM	14.72	15.08	15.55	15.92
	47	8/25/2007 2:31:00 PM	14.71	15.06	15.54	15.91
	48	8/25/2007 2:32:00 PM	14.72	15.04	15.54	15.92
	49	8/25/2007 2:33:00 PM	14.67	15.03	15.53	15.91
	50	8/25/2007 2:34:00 PM	14.66	15.00	15.53	15.91
	51	8/25/2007 2:35:00 PM	14.64	14.98	15.52	15.91
	52	8/25/2007 2:36:00 PM	14.63	14.96	15.52	15.91
	53	8/25/2007 2:37:00 PM	14.61	14.95	15.51	15.91
	54	8/25/2007 2:38:00 PM	14.60	14.93	15.55	15.91
	55	8/25/2007 2:39:00 PM	14.59	14.91	15.54	15.90
	56	8/25/2007 2:40:00 PM	14.57	14.90	15.51	15.89
	57	8/25/2007 2:41:00 PM	14.56	14.88	15.52	15.90
	58	8/25/2007 2:42:00 PM	14.57	14.85	15.53	15.90
	59	8/25/2007 2:43:00 PM	14.56	14.84	15.53	15.90
	60	8/25/2007 2:44:00 PM	14.52	14.82	15.53	15.91
	61	8/25/2007 2:45:00 PM	14.53	14.80	15.52	15.91
	62	8/25/2007 2:46:00 PM	14.52	14.78	15.52	15.91
	63	8/25/2007 2:47:00 PM	14.51	14.76	15.52	15.91
	64	8/25/2007 2:48:00 PM	14.50	14.75	15.52	15.90
	65	8/25/2007 2:49:00 PM	14.48	14.73	15.52	15.90
	66	8/25/2007 2:50:00 PM	14.47	14.71	15.52	15.90
	67	8/25/2007 2:51:00 PM	14.46	14.69	15.51	15.90
	68	8/25/2007 2:52:00 PM	14.44	14.67	15.51	15.91
	69	8/25/2007 2:53:00 PM	14.43	14.65	15.48	15.90
	70	8/25/2007 2:54:00 PM	14.42	14.63	15.47	15.90
	71	8/25/2007 2:55:00 PM	14.41	14.62	15.47	15.91
	72	8/25/2007 2:56:00 PM	14.40	14.60	15.47	15.89
	73	8/25/2007 2:57:00 PM	14.39	14.58	15.50	15.92
	74	8/25/2007 2:58:00 PM	14.37	14.56	15.49	15.91
	75	8/25/2007 2:59:00 PM	14.36	14.54	15.49	15.91
	76	8/25/2007 3:00:00 PM	14.35	14.52	15.49	15.91
	77	8/25/2007 3:01:00 PM	14.34	14.50	15.48	15.91
	78	8/25/2007 3:02:00 PM	14.33	14.48	15.48	15.91
	79	8/25/2007 3:03:00 PM	14.31	14.46	15.48	15.91
	80	8/25/2007 3:04:00 PM	14.30	14.44	15.47	15.91

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/25/2007 3:05:00 PM	14.29	14.42	15.47	15.91
	82	8/25/2007 3:06:00 PM	14.28	14.40	15.46	15.90
	83	8/25/2007 3:07:00 PM	14.27	14.38	15.46	15.90
	84	8/25/2007 3:08:00 PM	14.26	14.36	15.45	15.90
	85	8/25/2007 3:09:00 PM	14.24	14.35	15.46	15.90
	86	8/25/2007 3:10:00 PM	14.24	14.33	15.45	15.90
	87	8/25/2007 3:11:00 PM	14.22	14.31	15.45	15.90
	88	8/25/2007 3:12:00 PM	14.21	14.29	15.46	15.90
	89	8/25/2007 3:13:00 PM	14.20	14.28	15.44	15.90
	90	8/25/2007 3:14:00 PM	14.19	14.26	15.44	15.90
	91	8/25/2007 3:15:00 PM	14.18	14.24	15.44	15.89
	92	8/25/2007 3:16:00 PM	14.17	14.22	15.44	15.89
	93	8/25/2007 3:17:00 PM	14.16	14.19	15.43	15.89
	94	8/25/2007 3:18:00 PM	14.15	14.18	15.43	15.89
	95	8/25/2007 3:19:00 PM	14.14	14.17	15.43	15.89
	96	8/25/2007 3:20:00 PM	14.13	14.15	15.42	15.89
	97	8/25/2007 3:21:00 PM	14.12	14.13	15.43	15.89
	98	8/25/2007 3:22:00 PM	14.11	14.11	15.43	15.89
	99	8/25/2007 3:23:00 PM	14.09	14.09	15.42	15.89
	100	8/25/2007 3:24:00 PM	14.08	14.08	15.41	15.89
	101	8/25/2007 3:25:00 PM	14.08	14.06	15.42	15.89
	102	8/25/2007 3:26:00 PM	14.07	14.04	15.42	15.89
	103	8/25/2007 3:27:00 PM	14.06	14.02	15.39	15.88
	104	8/25/2007 3:28:00 PM	14.05	14.00	15.38	15.88
	105	8/25/2007 3:29:00 PM	14.04	13.95	15.38	15.88
	106	8/25/2007 3:30:00 PM	14.03	13.96	15.37	15.88
	107	8/25/2007 3:31:00 PM	14.02	13.95	15.37	15.88
	108	8/25/2007 3:32:00 PM	14.02	13.90	15.38	15.89
	109	8/25/2007 3:33:00 PM	14.01	13.88	15.38	15.88
	110	8/25/2007 3:34:00 PM	14.00	13.87	15.38	15.88
	111	8/25/2007 3:35:00 PM	13.99	13.85	15.38	15.88
	112	8/25/2007 3:36:00 PM	13.98	13.84	15.37	15.89
	113	8/25/2007 3:37:00 PM	13.97	13.82	15.38	15.89
	114	8/25/2007 3:38:00 PM	13.96	13.80	15.38	15.89
	115	8/25/2007 3:39:00 PM	13.96	13.78	15.37	15.89
	116	8/25/2007 3:40:00 PM	13.95	13.77	15.37	15.89
	117	8/25/2007 3:41:00 PM	13.94	13.75	15.38	15.89
	118	8/25/2007 3:42:00 PM	13.93	13.73	15.36	15.87
	119	8/25/2007 3:43:00 PM	13.92	13.71	15.36	15.86
	120	8/25/2007 3:44:00 PM	13.92	13.70	15.35	15.86
	121	8/25/2007 3:45:00 PM	13.91	13.68	15.35	15.86
	122	8/25/2007 3:46:00 PM	13.91	13.65	15.32	15.86
	123	8/25/2007 3:47:00 PM	13.90	13.65	15.32	15.86
	124	8/25/2007 3:48:00 PM	13.89	13.63	15.32	15.85
	125	8/25/2007 3:49:00 PM	13.89	13.57	15.33	15.85
	126	8/25/2007 3:49:48 PM	13.89	13.56	15.33	15.85

printed 1/11/2008

Handy logger

Name : **LOGGER 2**

LOG Name	08251345
Interval	00:01:00
Personnel	

Start	8/25/2007 1:45:04 PM
Stop	8/25/2007 3:49:50 PM
Comment	

Data	126
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.01	15.79	2.53	2.62
Minimum	0.20	0.08	-7.50	-7.50
Average	14.81	14.83	-6.46	-6.40
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/25/2007 1:45:04 PM	0.21	0.09	O.R.	O.R.
	2	8/25/2007 1:46:00 PM	v 0.20	0.09	O.R.	O.R.
	3	8/25/2007 1:47:00 PM	v 0.20	v 0.08	O.R.	O.R.
	4	8/25/2007 1:48:00 PM	v 0.20	v 0.08	O.R.	O.R.
	5	8/25/2007 1:49:00 PM	v 0.20	0.12	O.R.	O.R.
	6	8/25/2007 1:50:00 PM	v 0.20	v 0.08	O.R.	O.R.
	7	8/25/2007 1:51:00 PM	7.15	4.63	O.R.	O.R.
	8	8/25/2007 1:52:00 PM	13.20	10.82	O.R.	O.R.
	9	8/25/2007 1:53:00 PM	^ 16.01	^ 15.79	O.R.	O.R.
	10	8/25/2007 1:54:00 PM	15.95	15.73	O.R.	O.R.
	11	8/25/2007 1:55:00 PM	15.93	15.74	O.R.	O.R.
	12	8/25/2007 1:56:00 PM	15.90	15.73	O.R.	O.R.
	13	8/25/2007 1:57:00 PM	15.86	15.73	v -7.50	v -7.50
	14	8/25/2007 1:58:00 PM	15.87	15.70	v -7.50	v -7.50
	15	8/25/2007 1:59:00 PM	15.84	15.73	v -7.50	v -7.50
	16	8/25/2007 2:00:00 PM	15.83	15.71	v -7.50	v -7.50
	17	8/25/2007 2:01:00 PM	15.85	15.70	0.08	0.08
	18	8/25/2007 2:02:00 PM	15.83	15.69	0.13	0.09
	19	8/25/2007 2:03:00 PM	15.82	15.69	2.30	2.40
	20	8/25/2007 2:04:00 PM	15.83	15.68	2.50	2.58
	21	8/25/2007 2:05:00 PM	15.83	15.68	^ 2.53	^ 2.62
	22	8/25/2007 2:06:00 PM	15.82	15.68	2.51	2.54
	23	8/25/2007 2:07:00 PM	15.79	15.67	2.50	2.57
	24	8/25/2007 2:08:00 PM	15.79	15.68	0.11	0.07
	25	8/25/2007 2:09:00 PM	15.79	15.68	0.09	0.06
	26	8/25/2007 2:10:00 PM	15.78	15.69	0.08	0.05
	27	8/25/2007 2:11:00 PM	15.78	15.68	0.07	0.05
	28	8/25/2007 2:12:00 PM	15.78	15.69	0.08	0.05
	29	8/25/2007 2:13:00 PM	15.78	15.69	0.10	0.05
	30	8/25/2007 2:14:00 PM	15.78	15.69	0.08	0.06

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Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/25/2007 2:15:00 PM	15.77	15.70	v -7.50	0.07
	32	8/25/2007 2:16:00 PM	15.77	15.70	v -7.50	v -7.50
	33	8/25/2007 2:17:00 PM	15.77	15.71	v -7.50	v -7.50
	34	8/25/2007 2:18:00 PM	15.74	15.71	v -7.50	v -7.50
	35	8/25/2007 2:19:00 PM	15.73	15.71	v -7.50	v -7.50
	36	8/25/2007 2:20:00 PM	15.73	15.72	v -7.50	v -7.50
	37	8/25/2007 2:21:00 PM	15.73	15.72	v -7.50	v -7.50
	38	8/25/2007 2:22:00 PM	15.73	15.72	v -7.50	v -7.50
	39	8/25/2007 2:23:00 PM	15.73	15.70	v -7.50	v -7.50
	40	8/25/2007 2:24:00 PM	15.72	15.70	v -7.50	v -7.50
	41	8/25/2007 2:25:00 PM	15.73	15.71	v -7.50	v -7.50
	42	8/25/2007 2:26:00 PM	15.72	15.70	v -7.50	v -7.50
	43	8/25/2007 2:27:00 PM	15.72	15.70	v -7.50	v -7.50
	44	8/25/2007 2:28:00 PM	15.73	15.71	v -7.50	v -7.50
	45	8/25/2007 2:29:00 PM	15.72	15.71	v -7.50	v -7.50
	46	8/25/2007 2:30:00 PM	15.72	15.71	v -7.50	v -7.50
	47	8/25/2007 2:31:00 PM	15.72	15.71	v -7.50	v -7.50
	48	8/25/2007 2:32:00 PM	15.72	15.72	v -7.50	v -7.50
	49	8/25/2007 2:33:00 PM	15.72	15.72	v -7.50	v -7.50
	50	8/25/2007 2:34:00 PM	15.68	15.72	v -7.50	v -7.50
	51	8/25/2007 2:35:00 PM	15.67	15.73	v -7.50	v -7.50
	52	8/25/2007 2:36:00 PM	15.67	15.73	v -7.50	v -7.50
	53	8/25/2007 2:37:00 PM	15.67	15.73	v -7.50	v -7.50
	54	8/25/2007 2:38:00 PM	15.67	15.70	v -7.50	v -7.50
	55	8/25/2007 2:39:00 PM	15.67	15.70	v -7.50	v -7.50
	56	8/25/2007 2:40:00 PM	15.66	15.71	v -7.50	v -7.50
	57	8/25/2007 2:41:00 PM	15.67	15.71	v -7.50	v -7.50
	58	8/25/2007 2:42:00 PM	15.66	15.71	v -7.50	v -7.50
	59	8/25/2007 2:43:00 PM	15.66	15.69	v -7.50	v -7.50
	60	8/25/2007 2:44:00 PM	15.66	15.72	v -7.50	v -7.50
	61	8/25/2007 2:45:00 PM	15.66	15.72	v -7.50	v -7.50
	62	8/25/2007 2:46:00 PM	15.66	15.69	v -7.50	v -7.50
	63	8/25/2007 2:47:00 PM	15.65	15.69	v -7.50	v -7.50
	64	8/25/2007 2:48:00 PM	15.65	15.69	v -7.50	v -7.50
	65	8/25/2007 2:49:00 PM	15.65	15.69	v -7.50	v -7.50
	66	8/25/2007 2:50:00 PM	15.64	15.69	v -7.50	v -7.50
	67	8/25/2007 2:51:00 PM	15.63	15.70	v -7.50	v -7.50
	68	8/25/2007 2:52:00 PM	15.63	15.70	v -7.50	v -7.50
	69	8/25/2007 2:53:00 PM	15.63	15.70	v -7.50	v -7.50
	70	8/25/2007 2:54:00 PM	15.63	15.69	v -7.50	v -7.50
	71	8/25/2007 2:55:00 PM	15.62	15.70	v -7.50	v -7.50
	72	8/25/2007 2:56:00 PM	15.62	15.70	v -7.50	v -7.50
	73	8/25/2007 2:57:00 PM	15.61	15.70	v -7.50	v -7.50
	74	8/25/2007 2:58:00 PM	15.60	15.70	v -7.50	v -7.50
	75	8/25/2007 2:59:00 PM	15.61	15.70	v -7.50	v -7.50
	76	8/25/2007 3:00:00 PM	15.61	15.70	v -7.50	v -7.50
	77	8/25/2007 3:01:00 PM	15.61	15.70	v -7.50	v -7.50
	78	8/25/2007 3:02:00 PM	15.59	15.70	v -7.50	v -7.50
	79	8/25/2007 3:03:00 PM	15.59	15.70	v -7.50	v -7.50
	80	8/25/2007 3:04:00 PM	15.59	15.71	v -7.50	v -7.50

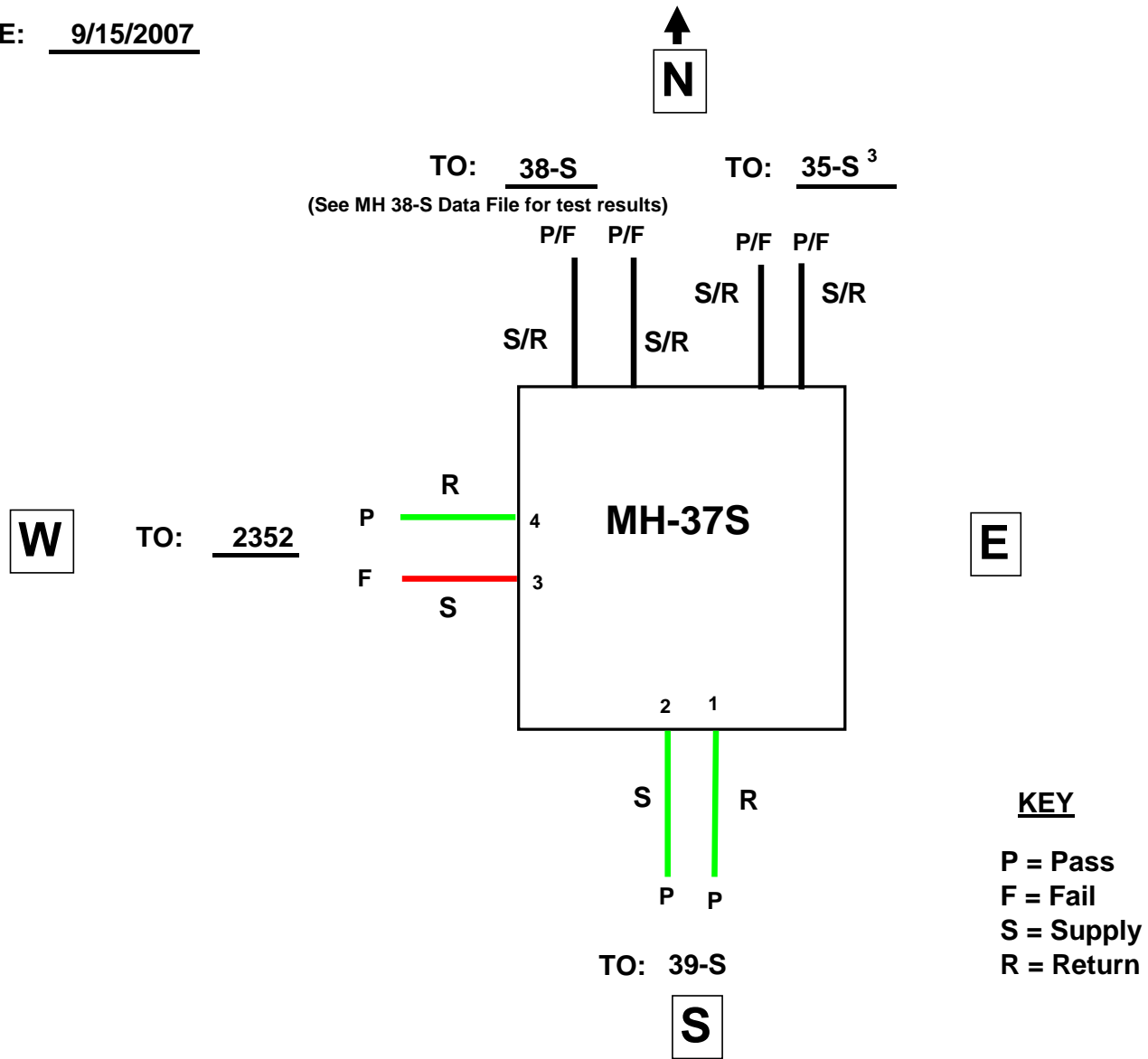
printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/25/2007 3:05:00 PM	15.58	15.70	v -7.50	v -7.50
	82	8/25/2007 3:06:00 PM	15.58	15.70	v -7.50	v -7.50
	83	8/25/2007 3:07:00 PM	15.57	15.70	v -7.50	v -7.50
	84	8/25/2007 3:08:00 PM	15.57	15.70	v -7.50	v -7.50
	85	8/25/2007 3:09:00 PM	15.56	15.70	v -7.50	v -7.50
	86	8/25/2007 3:10:00 PM	15.56	15.70	v -7.50	v -7.50
	87	8/25/2007 3:11:00 PM	15.56	15.70	v -7.50	v -7.50
	88	8/25/2007 3:12:00 PM	15.55	15.70	v -7.50	v -7.50
	89	8/25/2007 3:13:00 PM	15.55	15.70	v -7.50	v -7.50
	90	8/25/2007 3:14:00 PM	15.55	15.71	v -7.50	v -7.50
	91	8/25/2007 3:15:00 PM	15.54	15.71	v -7.50	v -7.50
	92	8/25/2007 3:16:00 PM	15.53	15.71	v -7.50	v -7.50
	93	8/25/2007 3:17:00 PM	15.53	15.71	v -7.50	v -7.50
	94	8/25/2007 3:18:00 PM	15.52	15.71	v -7.50	v -7.50
	95	8/25/2007 3:19:00 PM	15.52	15.71	v -7.50	v -7.50
	96	8/25/2007 3:20:00 PM	15.52	15.71	v -7.50	v -7.50
	97	8/25/2007 3:21:00 PM	15.52	15.71	v -7.50	v -7.50
	98	8/25/2007 3:22:00 PM	15.51	15.71	v -7.50	v -7.50
	99	8/25/2007 3:23:00 PM	15.51	15.71	v -7.50	v -7.50
	100	8/25/2007 3:24:00 PM	15.47	15.71	v -7.50	v -7.50
	101	8/25/2007 3:25:00 PM	15.48	15.72	v -7.50	v -7.50
	102	8/25/2007 3:26:00 PM	15.47	15.72	v -7.50	v -7.50
	103	8/25/2007 3:27:00 PM	15.50	15.72	v -7.50	v -7.50
	104	8/25/2007 3:28:00 PM	15.47	15.72	v -7.50	v -7.50
	105	8/25/2007 3:29:00 PM	15.47	15.68	v -7.50	v -7.50
	106	8/25/2007 3:30:00 PM	15.46	15.72	v -7.50	v -7.50
	107	8/25/2007 3:31:00 PM	15.46	15.72	v -7.50	v -7.50
	108	8/25/2007 3:32:00 PM	15.45	15.68	v -7.50	v -7.50
	109	8/25/2007 3:33:00 PM	15.46	15.68	v -7.50	v -7.50
	110	8/25/2007 3:34:00 PM	15.45	15.69	v -7.50	v -7.50
	111	8/25/2007 3:35:00 PM	15.45	15.69	v -7.50	v -7.50
	112	8/25/2007 3:36:00 PM	15.45	15.68	v -7.50	v -7.50
	113	8/25/2007 3:37:00 PM	15.44	15.69	v -7.50	v -7.50
	114	8/25/2007 3:38:00 PM	15.44	15.69	v -7.50	v -7.50
	115	8/25/2007 3:39:00 PM	15.44	15.69	v -7.50	v -7.50
	116	8/25/2007 3:40:00 PM	15.44	15.69	v -7.50	v -7.50
	117	8/25/2007 3:41:00 PM	15.43	15.69	v -7.50	v -7.50
	118	8/25/2007 3:42:00 PM	15.44	15.69	v -7.50	v -7.50
	119	8/25/2007 3:43:00 PM	15.39	15.69	v -7.50	v -7.50
	120	8/25/2007 3:44:00 PM	15.39	15.69	v -7.50	v -7.50
	121	8/25/2007 3:45:00 PM	15.38	15.70	v -7.50	v -7.50
	122	8/25/2007 3:46:00 PM	15.39	15.69	v -7.50	v -7.50
	123	8/25/2007 3:47:00 PM	15.38	15.70	v -7.50	v -7.50
	124	8/25/2007 3:48:00 PM	15.39	15.70	v -7.50	v -7.50
	125	8/25/2007 3:49:00 PM	15.38	15.70	v -7.50	v -7.50
	126	8/25/2007 3:49:50 PM	15.38	15.70	v -7.50	v -7.50

DATE: 9/15/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.
2. "As built" drawing erroneously shows feed to 2352 exiting South wall.
3. MH 35-S is Confined Space, Permit-Required pit

MH 37-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 39-S	P	
	2	2	Supply to 39-S	P	
	3	3	Supply to 2352	F	
	4	4	Retrun to 2352	P	

printed 1/11/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09150911
Interval	00:01:00
Personnel	

Start	9/15/2007 9:11:01 AM
Stop	9/15/2007 11:20:50 AM
Comment	

Data	131
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.46	15.99	16.12	16.19
Minimum	0.04	0.02	0.07	0.23
Average	14.60	14.98	13.38	15.10
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/15/2007 9:11:01 AM	v 0.04	v 0.02	v 0.07	v 0.23
	2	9/15/2007 9:12:00 AM	1.42	1.10	2.01	1.92
	3	9/15/2007 9:13:00 AM	3.32	3.19	7.00	7.06
	4	9/15/2007 9:14:00 AM	5.20	4.98	13.96	14.23
	5	9/15/2007 9:15:00 AM	8.06	8.19	^ 16.12	^ 16.19
	6	9/15/2007 9:16:00 AM	10.48	10.94	16.08	^ 16.19
	7	9/15/2007 9:17:00 AM	12.95	13.41	16.05	16.14
	8	9/15/2007 9:18:00 AM	15.42	^ 15.99	16.00	16.10
	9	9/15/2007 9:19:00 AM	^ 15.46	15.81	15.94	16.12
	10	9/15/2007 9:20:00 AM	15.42	15.75	15.90	16.09
	11	9/15/2007 9:21:00 AM	15.38	15.70	15.88	16.06
	12	9/15/2007 9:22:00 AM	15.37	15.71	15.83	16.04
	13	9/15/2007 9:23:00 AM	15.36	15.70	15.77	16.08
	14	9/15/2007 9:24:00 AM	15.34	15.70	15.75	16.06
	15	9/15/2007 9:25:00 AM	15.31	15.65	15.69	16.03
	16	9/15/2007 9:26:00 AM	15.33	15.62	15.67	16.02
	17	9/15/2007 9:27:00 AM	15.32	15.64	15.63	16.00
	18	9/15/2007 9:28:00 AM	15.30	15.63	15.58	15.99
	19	9/15/2007 9:29:00 AM	15.28	15.67	15.53	15.96
	20	9/15/2007 9:30:00 AM	15.31	15.65	15.48	15.95
	21	9/15/2007 9:31:00 AM	15.30	15.64	15.44	15.94
	22	9/15/2007 9:32:00 AM	15.29	15.64	15.39	15.93
	23	9/15/2007 9:33:00 AM	15.28	15.67	15.34	15.91
	24	9/15/2007 9:34:00 AM	15.27	15.67	15.28	15.90
	25	9/15/2007 9:35:00 AM	15.26	15.67	15.23	15.89
	26	9/15/2007 9:36:00 AM	15.24	15.66	15.21	15.88
	27	9/15/2007 9:37:00 AM	15.24	15.66	15.19	15.86
	28	9/15/2007 9:38:00 AM	15.22	15.66	15.14	15.85
	29	9/15/2007 9:39:00 AM	15.21	15.65	15.12	15.84
	30	9/15/2007 9:40:00 AM	15.21	15.65	15.07	15.82

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/15/2007 9:41:00 AM	15.22	15.64	15.02	15.81
	32	9/15/2007 9:42:00 AM	15.21	15.64	14.97	15.80
	33	9/15/2007 9:43:00 AM	15.20	15.63	14.93	15.78
	34	9/15/2007 9:44:00 AM	15.19	15.64	14.89	15.77
	35	9/15/2007 9:45:00 AM	15.19	15.63	14.85	15.75
	36	9/15/2007 9:46:00 AM	15.18	15.63	14.82	15.74
	37	9/15/2007 9:47:00 AM	15.17	15.63	14.78	15.73
	38	9/15/2007 9:48:00 AM	15.16	15.62	14.75	15.72
	39	9/15/2007 9:49:00 AM	15.15	15.61	14.70	15.70
	40	9/15/2007 9:50:00 AM	15.15	15.61	14.67	15.69
	41	9/15/2007 9:51:00 AM	15.15	15.61	14.63	15.69
	42	9/15/2007 9:52:00 AM	15.14	15.61	14.59	15.67
	43	9/15/2007 9:53:00 AM	15.14	15.60	14.55	15.65
	44	9/15/2007 9:54:00 AM	15.13	15.60	14.51	15.69
	45	9/15/2007 9:55:00 AM	15.12	15.59	14.47	15.67
	46	9/15/2007 9:56:00 AM	15.12	15.59	14.43	15.65
	47	9/15/2007 9:57:00 AM	15.11	15.59	14.39	15.64
	48	9/15/2007 9:58:00 AM	15.11	15.63	14.35	15.63
	49	9/15/2007 9:59:00 AM	15.10	15.62	14.31	15.62
	50	9/15/2007 10:00:00 AM	15.11	15.61	14.27	15.60
	51	9/15/2007 10:01:00 AM	15.10	15.60	14.23	15.59
	52	9/15/2007 10:02:00 AM	15.10	15.60	14.19	15.57
	53	9/15/2007 10:03:00 AM	15.10	15.59	14.15	15.56
	54	9/15/2007 10:04:00 AM	15.10	15.59	14.11	15.54
	55	9/15/2007 10:05:00 AM	15.09	15.59	14.07	15.54
	56	9/15/2007 10:06:00 AM	15.08	15.58	14.02	15.52
	57	9/15/2007 10:07:00 AM	15.08	15.58	13.98	15.50
	58	9/15/2007 10:08:00 AM	15.08	15.57	13.95	15.50
	59	9/15/2007 10:09:00 AM	15.07	15.56	13.91	15.53
	60	9/15/2007 10:10:00 AM	15.07	15.56	13.87	15.46
	61	9/15/2007 10:11:00 AM	15.07	15.55	13.83	15.45
	62	9/15/2007 10:12:00 AM	15.07	15.54	13.79	15.44
	63	9/15/2007 10:13:00 AM	15.06	15.54	13.75	15.48
	64	9/15/2007 10:14:00 AM	15.06	15.53	13.71	15.47
	65	9/15/2007 10:15:00 AM	15.05	15.53	13.67	15.45
	66	9/15/2007 10:16:00 AM	15.05	15.53	13.63	15.44
	67	9/15/2007 10:17:00 AM	15.05	15.52	13.59	15.43
	68	9/15/2007 10:18:00 AM	15.05	15.52	13.55	15.41
	69	9/15/2007 10:19:00 AM	15.04	15.50	13.52	15.40
	70	9/15/2007 10:20:00 AM	15.08	15.49	13.48	15.38
	71	9/15/2007 10:21:00 AM	15.08	15.52	13.43	15.37
	72	9/15/2007 10:22:00 AM	15.07	15.52	13.39	15.36
	73	9/15/2007 10:23:00 AM	15.07	15.51	13.36	15.35
	74	9/15/2007 10:24:00 AM	15.06	15.50	13.32	15.33
	75	9/15/2007 10:25:00 AM	15.06	15.49	13.28	15.32
	76	9/15/2007 10:26:00 AM	15.05	15.48	13.24	15.30
	77	9/15/2007 10:27:00 AM	15.05	15.48	13.21	15.29
	78	9/15/2007 10:28:00 AM	15.07	15.47	13.16	15.28
	79	9/15/2007 10:29:00 AM	15.07	15.46	13.12	15.26
	80	9/15/2007 10:30:00 AM	15.06	15.45	13.08	15.25

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/15/2007 10:31:00 AM	15.05	15.44	13.04	15.24
	82	9/15/2007 10:32:00 AM	15.05	15.47	13.00	15.22
	83	9/15/2007 10:33:00 AM	15.04	15.46	12.96	15.21
	84	9/15/2007 10:34:00 AM	15.04	15.45	12.95	15.20
	85	9/15/2007 10:35:00 AM	15.03	15.44	12.92	15.18
	86	9/15/2007 10:36:00 AM	15.03	15.43	12.87	15.17
	87	9/15/2007 10:37:00 AM	15.02	15.43	12.84	15.16
	88	9/15/2007 10:38:00 AM	15.01	15.43	12.80	15.15
	89	9/15/2007 10:39:00 AM	15.01	15.42	12.77	15.14
	90	9/15/2007 10:40:00 AM	15.00	15.41	12.73	15.12
	91	9/15/2007 10:41:00 AM	14.99	15.40	12.73	15.11
	92	9/15/2007 10:42:00 AM	14.99	15.38	12.70	15.10
	93	9/15/2007 10:43:00 AM	14.99	15.38	12.66	15.08
	94	9/15/2007 10:44:00 AM	15.01	15.37	12.62	15.07
	95	9/15/2007 10:45:00 AM	15.01	15.36	12.58	15.06
	96	9/15/2007 10:46:00 AM	15.00	15.35	12.55	15.04
	97	9/15/2007 10:47:00 AM	15.00	15.34	12.50	15.04
	98	9/15/2007 10:48:00 AM	15.00	15.36	12.46	15.02
	99	9/15/2007 10:49:00 AM	14.99	15.36	12.43	15.02
	100	9/15/2007 10:50:00 AM	14.98	15.35	12.40	15.00
	101	9/15/2007 10:51:00 AM	14.98	15.35	12.36	14.99
	102	9/15/2007 10:52:00 AM	14.97	15.33	12.33	14.98
	103	9/15/2007 10:53:00 AM	14.97	15.33	12.29	14.97
	104	9/15/2007 10:54:00 AM	14.96	15.32	12.25	14.96
	105	9/15/2007 10:55:00 AM	14.96	15.30	12.22	14.94
	106	9/15/2007 10:56:00 AM	14.96	15.31	12.18	14.93
	107	9/15/2007 10:57:00 AM	14.95	15.29	12.15	14.91
	108	9/15/2007 10:58:00 AM	14.98	15.28	12.11	14.91
	109	9/15/2007 10:59:00 AM	14.98	15.28	12.07	14.89
	110	9/15/2007 11:00:00 AM	14.97	15.27	12.03	14.88
	111	9/15/2007 11:01:00 AM	14.96	15.26	12.03	14.88
	112	9/15/2007 11:02:00 AM	14.96	15.26	12.00	14.87
	113	9/15/2007 11:03:00 AM	14.97	15.24	11.96	14.86
	114	9/15/2007 11:04:00 AM	14.97	15.28	11.93	14.84
	115	9/15/2007 11:05:00 AM	14.96	15.27	11.89	14.83
	116	9/15/2007 11:06:00 AM	14.95	15.27	11.86	14.85
	117	9/15/2007 11:07:00 AM	14.95	15.26	11.82	14.84
	118	9/15/2007 11:08:00 AM	14.94	15.25	11.79	14.83
	119	9/15/2007 11:09:00 AM	14.94	15.28	11.75	14.82
	120	9/15/2007 11:10:00 AM	14.97	15.27	11.72	14.80
	121	9/15/2007 11:11:00 AM	14.95	15.26	11.68	14.79
	122	9/15/2007 11:12:00 AM	14.95	15.28	11.65	14.78
	123	9/15/2007 11:13:00 AM	14.94	15.26	11.61	14.76
	124	9/15/2007 11:14:00 AM	14.94	15.24	11.57	14.75
	125	9/15/2007 11:15:00 AM	14.93	15.23	11.54	14.74
	126	9/15/2007 11:16:00 AM	14.92	15.22	11.51	14.73
	127	9/15/2007 11:17:00 AM	14.91	15.21	11.47	14.72
	128	9/15/2007 11:18:00 AM	14.90	15.20	11.44	14.71
	129	9/15/2007 11:19:00 AM	14.90	15.20	11.41	14.69
	130	9/15/2007 11:20:00 AM	14.90	15.23	11.37	14.68

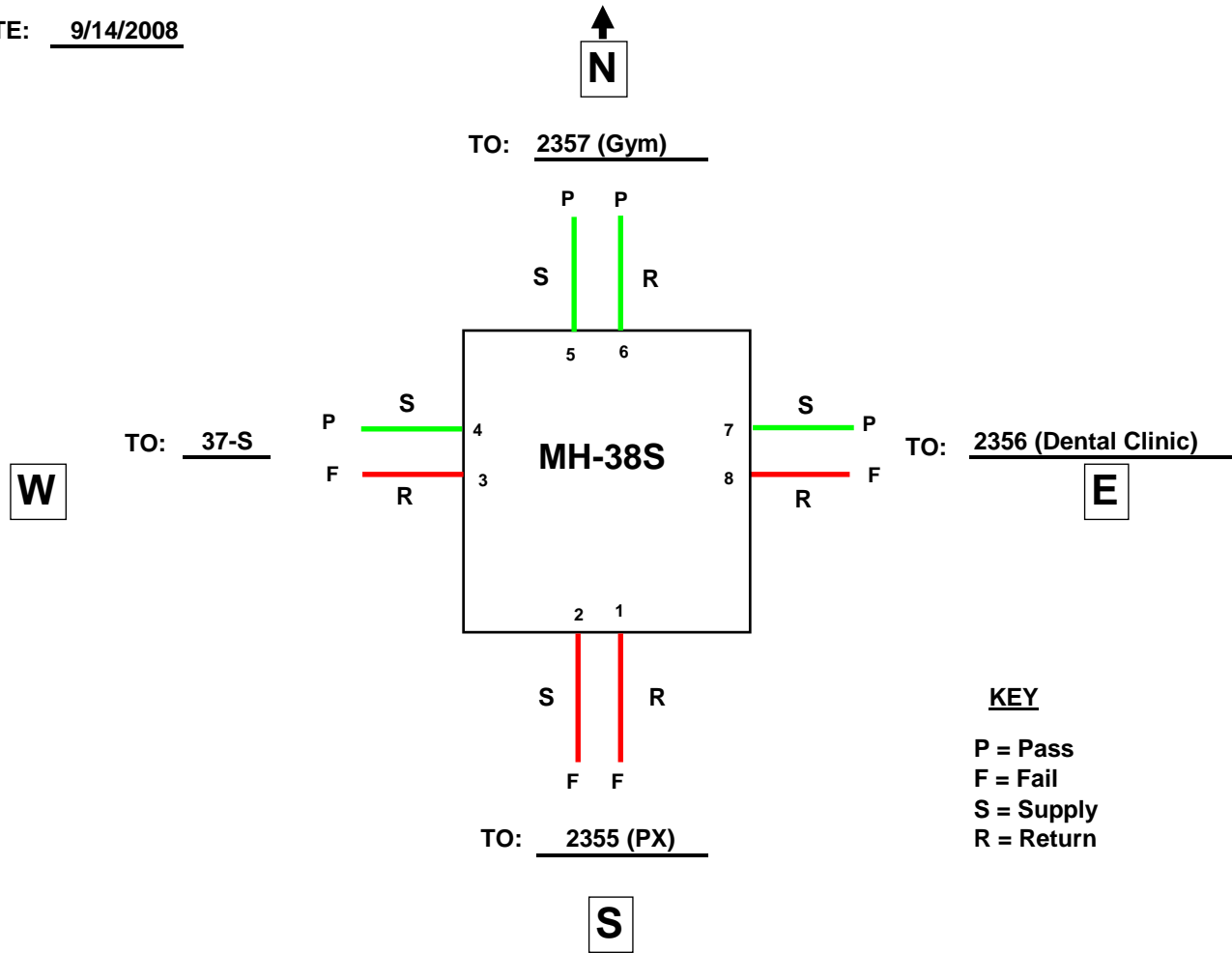
printed 1/11/2008

Name : LOGGER 1

Handy logger

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/15/2007 11:20:50 AM	14.90	15.22	11.33	14.67

DATE: 9/14/2008



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.

MH 38-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 2355	F	
	2	2	Supply to 2355	F	
	3	3	Retrun to 37-S	F	
	4	4	Supply to 37-S	P	
2	1	5	Supply to 2357	P	
	2	6	Return to 2357	P	
	3	7	Supply to 2356	P	
	4	8	Return to 2356	F	

printed 1/11/2008

Handy logger

Name : **LOGGER 1**

LOG Name	09141511
Interval	00:01:00
Personnel	

Start	9/14/2007 3:11:36 PM
Stop	9/14/2007 5:22:49 PM
Comment	

Data	133
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.24	16.33	16.10	16.25
Minimum	-7.50	-7.50	-7.50	0.21
Average	1.98	0.04	5.68	14.97
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/14/2007 3:11:36 PM	0.04	0.15	0.14	0.22
*	2	9/14/2007 3:12:00 PM	0.04	0.16	0.14	v 0.21
	3	9/14/2007 3:13:00 PM	13.03	12.68	0.14	v 0.21
	4	9/14/2007 3:14:00 PM	^ 16.24	^ 16.33	3.24	3.50
	5	9/14/2007 3:15:00 PM	15.93	15.82	5.96	6.57
	6	9/14/2007 3:16:00 PM	15.66	15.28	9.35	10.39
	7	9/14/2007 3:17:00 PM	15.36	14.80	12.73	14.07
	8	9/14/2007 3:18:00 PM	15.09	14.30	^ 16.10	^ 16.25
	9	9/14/2007 3:19:00 PM	14.84	13.87	16.01	16.22
	10	9/14/2007 3:20:00 PM	14.59	13.41	15.96	16.19
*	11	9/14/2007 3:21:00 PM	14.33	12.95	15.92	16.19
	12	9/14/2007 3:22:00 PM	14.07	12.51	15.87	16.20
	13	9/14/2007 3:23:00 PM	13.82	12.07	15.80	16.18
	14	9/14/2007 3:24:00 PM	13.56	11.65	15.79	16.16
	15	9/14/2007 3:25:00 PM	13.32	11.27	15.73	16.14
	16	9/14/2007 3:26:00 PM	13.07	10.87	15.72	16.12
	17	9/14/2007 3:27:00 PM	12.83	10.47	15.68	16.11
	18	9/14/2007 3:28:00 PM	12.59	10.09	15.64	16.10
	19	9/14/2007 3:29:00 PM	12.36	9.72	15.59	16.08
	20	9/14/2007 3:30:00 PM	12.12	9.35	15.55	16.07
	21	9/14/2007 3:31:00 PM	11.89	8.99	15.51	16.05
	22	9/14/2007 3:32:00 PM	11.67	8.64	15.47	16.04
	23	9/14/2007 3:33:00 PM	11.45	8.30	15.43	16.03
	24	9/14/2007 3:34:00 PM	11.23	7.97	15.39	16.01
	25	9/14/2007 3:35:00 PM	11.01	7.65	15.35	16.00
	26	9/14/2007 3:36:00 PM	10.80	7.33	15.32	15.98
	27	9/14/2007 3:37:00 PM	10.58	7.02	15.28	15.97
	28	9/14/2007 3:38:00 PM	10.38	6.69	15.24	15.95
	29	9/14/2007 3:39:00 PM	10.17	6.39	15.20	15.94
	30	9/14/2007 3:40:00 PM	9.97	6.11	15.17	15.93

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/14/2007 3:41:00 PM	9.78	5.84	15.14	15.91
	32	9/14/2007 3:42:00 PM	9.57	5.57	15.10	15.92
	33	9/14/2007 3:43:00 PM	9.38	5.32	15.07	15.89
	34	9/14/2007 3:44:00 PM	9.19	5.06	15.04	15.88
	35	9/14/2007 3:45:00 PM	9.00	4.77	15.01	15.87
	36	9/14/2007 3:46:00 PM	8.82	4.53	14.97	15.86
	37	9/14/2007 3:47:00 PM	8.63	4.30	14.93	15.85
	38	9/14/2007 3:48:00 PM	8.44	4.07	14.90	15.83
	39	9/14/2007 3:49:00 PM	8.26	3.86	14.86	15.82
	40	9/14/2007 3:50:00 PM	8.08	3.64	14.83	15.80
	41	9/14/2007 3:51:00 PM	7.91	3.44	14.79	15.80
	42	9/14/2007 3:52:00 PM	7.74	3.25	14.76	15.79
	43	9/14/2007 3:53:00 PM	7.57	3.05	14.72	15.77
	44	9/14/2007 3:54:00 PM	7.40	2.87	14.68	15.76
	45	9/14/2007 3:55:00 PM	7.23	2.70	14.65	15.75
	46	9/14/2007 3:56:00 PM	7.07	2.53	14.62	15.74
	47	9/14/2007 3:57:00 PM	6.90	2.38	14.58	15.73
	48	9/14/2007 3:58:00 PM	6.74	2.20	14.54	15.72
	49	9/14/2007 3:59:00 PM	6.59	2.05	14.51	15.74
	50	9/14/2007 4:00:00 PM	6.43	1.90	14.48	15.73
	51	9/14/2007 4:01:00 PM	6.28	1.77	14.44	15.72
	52	9/14/2007 4:02:00 PM	6.13	1.60	14.41	15.71
	53	9/14/2007 4:03:00 PM	5.98	1.48	14.38	15.70
	54	9/14/2007 4:04:00 PM	5.83	1.36	14.34	15.69
	55	9/14/2007 4:05:00 PM	5.69	1.25	14.32	15.68
	56	9/14/2007 4:06:00 PM	5.55	1.14	14.28	15.66
	57	9/14/2007 4:07:00 PM	5.41	1.04	14.25	15.65
	58	9/14/2007 4:08:00 PM	5.27	0.94	14.22	15.64
	59	9/14/2007 4:09:00 PM	5.14	0.85	14.19	15.63
	60	9/14/2007 4:10:00 PM	4.98	0.77	14.15	15.61
	61	9/14/2007 4:11:00 PM	4.85	0.70	14.12	15.61
	62	9/14/2007 4:12:00 PM	4.72	0.62	14.05	15.59
	63	9/14/2007 4:13:00 PM	4.59	0.55	14.02	15.58
	64	9/14/2007 4:14:00 PM	4.47	0.50	14.02	15.57
	65	9/14/2007 4:15:00 PM	4.35	0.44	13.94	15.56
	66	9/14/2007 4:16:00 PM	4.23	0.38	13.92	15.54
	67	9/14/2007 4:17:00 PM	4.11	0.35	13.87	15.54
	68	9/14/2007 4:18:00 PM	4.00	0.31	13.84	15.53
	69	9/14/2007 4:19:00 PM	3.88	0.27	13.81	15.51
	70	9/14/2007 4:20:00 PM	3.77	0.25	13.77	15.50
	71	9/14/2007 4:21:00 PM	3.66	0.22	13.74	15.49
	72	9/14/2007 4:22:00 PM	3.52	0.21	13.71	15.49
	73	9/14/2007 4:23:00 PM	3.43	0.19	13.68	15.47
	74	9/14/2007 4:24:00 PM	3.34	0.19	13.65	15.46
	75	9/14/2007 4:25:00 PM	3.21	0.18	13.61	15.45
	76	9/14/2007 4:26:00 PM	3.11	0.19	13.59	15.44
	77	9/14/2007 4:27:00 PM	3.01	0.19	13.55	15.42
	78	9/14/2007 4:28:00 PM	2.91	0.19	13.52	15.41
	79	9/14/2007 4:29:00 PM	2.82	0.15	13.49	15.40
	80	9/14/2007 4:30:00 PM	1.91	0.41	13.45	15.39

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/14/2007 4:31:00 PM	0.09	0.19	10.81	15.38
	82	9/14/2007 4:32:00 PM	v -7.50	v -7.50	8.33	15.37
	83	9/14/2007 4:33:00 PM	v -7.50	v -7.50	6.24	15.36
	84	9/14/2007 4:34:00 PM	v -7.50	v -7.50	v -7.50	15.35
	85	9/14/2007 4:35:00 PM	v -7.50	v -7.50	v -7.50	15.34
	86	9/14/2007 4:36:00 PM	v -7.50	v -7.50	v -7.50	15.33
	87	9/14/2007 4:37:00 PM	v -7.50	v -7.50	v -7.50	15.33
	88	9/14/2007 4:38:00 PM	v -7.50	v -7.50	v -7.50	15.32
	89	9/14/2007 4:39:00 PM	v -7.50	v -7.50	v -7.50	15.31
	90	9/14/2007 4:40:00 PM	v -7.50	v -7.50	v -7.50	15.30
	91	9/14/2007 4:41:00 PM	v -7.50	v -7.50	v -7.50	15.29
	92	9/14/2007 4:42:00 PM	v -7.50	v -7.50	v -7.50	15.28
	93	9/14/2007 4:43:00 PM	v -7.50	v -7.50	v -7.50	15.27
	94	9/14/2007 4:44:00 PM	v -7.50	v -7.50	v -7.50	15.27
	95	9/14/2007 4:45:00 PM	v -7.50	v -7.50	v -7.50	15.25
	96	9/14/2007 4:46:00 PM	v -7.50	v -7.50	v -7.50	15.25
	97	9/14/2007 4:47:00 PM	v -7.50	v -7.50	v -7.50	15.24
	98	9/14/2007 4:48:00 PM	v -7.50	v -7.50	v -7.50	15.23
	99	9/14/2007 4:49:00 PM	v -7.50	v -7.50	v -7.50	15.23
	100	9/14/2007 4:50:00 PM	v -7.50	v -7.50	v -7.50	15.22
	101	9/14/2007 4:51:00 PM	v -7.50	v -7.50	v -7.50	15.22
	102	9/14/2007 4:52:00 PM	v -7.50	v -7.50	v -7.50	15.20
	103	9/14/2007 4:53:00 PM	v -7.50	v -7.50	v -7.50	15.19
	104	9/14/2007 4:54:00 PM	v -7.50	v -7.50	v -7.50	15.16
	105	9/14/2007 4:55:00 PM	v -7.50	v -7.50	v -7.50	15.15
	106	9/14/2007 4:56:00 PM	v -7.50	v -7.50	v -7.50	15.14
	107	9/14/2007 4:57:00 PM	v -7.50	v -7.50	v -7.50	15.16
	108	9/14/2007 4:58:00 PM	v -7.50	v -7.50	v -7.50	15.15
	109	9/14/2007 4:59:00 PM	v -7.50	v -7.50	v -7.50	15.15
	110	9/14/2007 5:00:00 PM	v -7.50	v -7.50	v -7.50	15.14
	111	9/14/2007 5:01:00 PM	v -7.50	v -7.50	v -7.50	15.13
	112	9/14/2007 5:02:00 PM	v -7.50	v -7.50	v -7.50	15.11
	113	9/14/2007 5:03:00 PM	v -7.50	v -7.50	v -7.50	15.11
	114	9/14/2007 5:04:00 PM	v -7.50	v -7.50	v -7.50	15.10
	115	9/14/2007 5:05:00 PM	v -7.50	v -7.50	v -7.50	15.09
	116	9/14/2007 5:06:00 PM	v -7.50	v -7.50	v -7.50	15.09
	117	9/14/2007 5:07:00 PM	v -7.50	v -7.50	v -7.50	15.08
	118	9/14/2007 5:08:00 PM	v -7.50	v -7.50	v -7.50	15.08
	119	9/14/2007 5:09:00 PM	v -7.50	v -7.50	v -7.50	15.07
	120	9/14/2007 5:10:00 PM	v -7.50	v -7.50	v -7.50	15.06
	121	9/14/2007 5:11:00 PM	v -7.50	v -7.50	v -7.50	15.05
	122	9/14/2007 5:12:00 PM	v -7.50	v -7.50	v -7.50	15.05
	123	9/14/2007 5:13:00 PM	v -7.50	v -7.50	v -7.50	15.01
	124	9/14/2007 5:14:00 PM	v -7.50	v -7.50	v -7.50	15.00
	125	9/14/2007 5:15:00 PM	v -7.50	v -7.50	v -7.50	15.00
	126	9/14/2007 5:16:00 PM	v -7.50	v -7.50	v -7.50	14.99
	127	9/14/2007 5:17:00 PM	v -7.50	v -7.50	v -7.50	14.99
	128	9/14/2007 5:18:00 PM	v -7.50	v -7.50	v -7.50	14.98
	129	9/14/2007 5:19:00 PM	v -7.50	v -7.50	v -7.50	14.97
	130	9/14/2007 5:20:00 PM	v -7.50	v -7.50	v -7.50	14.96

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/14/2007 5:21:00 PM	v -7.50	v -7.50	v -7.50	14.96
	132	9/14/2007 5:22:00 PM	v -7.50	v -7.50	v -7.50	14.95
	133	9/14/2007 5:22:49 PM	v -7.50	v -7.50	v -7.50	14.94

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Handy logger

Name : **LOGGER 2**

LOG Name	09141511
Interval	00:01:00
Personnel	

Start	9/14/2007 3:11:29 PM
Stop	9/14/2007 5:22:45 PM
Comment	

Data	133
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.39	16.27	16.49	16.05
Minimum	0.16	0.08	0.21	-7.50
Average	15.20	15.21	15.42	-0.28
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/14/2007 3:11:29 PM	v 0.16	v 0.08	0.22	0.13
	2	9/14/2007 3:12:00 PM	0.19	v 0.08	0.22	0.13
	3	9/14/2007 3:13:00 PM	0.17	0.09	v 0.21	0.12
	4	9/14/2007 3:14:00 PM	v 0.16	0.09	0.24	0.11
	5	9/14/2007 3:15:00 PM	2.47	1.94	4.15	3.99
	6	9/14/2007 3:16:00 PM	4.81	3.93	10.07	9.17
	7	9/14/2007 3:17:00 PM	7.24	6.06	15.53	14.09
	8	9/14/2007 3:18:00 PM	11.69	9.84	^ 16.49	^ 16.05
	9	9/14/2007 3:19:00 PM	15.87	13.50	16.46	15.32
*	10	9/14/2007 3:20:00 PM	^ 16.39	^ 16.27	16.46	14.61
	11	9/14/2007 3:21:00 PM	16.37	16.18	16.44	13.94
	12	9/14/2007 3:22:00 PM	16.37	16.17	16.42	13.28
	13	9/14/2007 3:23:00 PM	16.35	16.17	16.46	12.68
	14	9/14/2007 3:24:00 PM	16.33	16.13	16.44	12.07
	15	9/14/2007 3:25:00 PM	16.32	16.12	16.42	11.48
	16	9/14/2007 3:26:00 PM	16.30	16.13	16.41	10.91
	17	9/14/2007 3:27:00 PM	16.30	16.14	16.40	10.36
	18	9/14/2007 3:28:00 PM	16.30	16.13	16.38	9.82
	19	9/14/2007 3:29:00 PM	16.29	16.13	16.37	9.32
	20	9/14/2007 3:30:00 PM	16.27	16.13	16.36	8.81
	21	9/14/2007 3:31:00 PM	16.26	16.16	16.38	8.38
	22	9/14/2007 3:32:00 PM	16.27	16.15	16.37	7.88
	23	9/14/2007 3:33:00 PM	16.28	16.16	16.36	7.43
	24	9/14/2007 3:34:00 PM	16.24	16.13	16.34	7.00
	25	9/14/2007 3:35:00 PM	16.25	16.12	16.33	6.58
	26	9/14/2007 3:36:00 PM	16.24	16.13	16.32	6.17
	27	9/14/2007 3:37:00 PM	16.23	16.12	16.31	5.78
	28	9/14/2007 3:38:00 PM	16.23	16.13	16.30	5.42
	29	9/14/2007 3:39:00 PM	16.22	16.13	16.30	5.06
	30	9/14/2007 3:40:00 PM	16.23	16.13	16.29	4.72

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/14/2007 3:41:00 PM	16.23	16.13	16.28	4.39
	32	9/14/2007 3:42:00 PM	16.22	16.14	16.27	4.07
	33	9/14/2007 3:43:00 PM	16.18	16.14	16.26	3.78
	34	9/14/2007 3:44:00 PM	16.19	16.14	16.25	3.46
	35	9/14/2007 3:45:00 PM	16.19	16.13	16.24	3.18
	36	9/14/2007 3:46:00 PM	16.19	16.13	16.24	2.92
	37	9/14/2007 3:47:00 PM	16.19	16.14	16.22	2.66
	38	9/14/2007 3:48:00 PM	16.18	16.11	16.21	2.43
	39	9/14/2007 3:49:00 PM	16.19	16.12	16.21	2.20
	40	9/14/2007 3:50:00 PM	16.19	16.09	16.19	1.99
	41	9/14/2007 3:51:00 PM	16.15	16.12	16.18	1.79
	42	9/14/2007 3:52:00 PM	16.15	16.09	16.18	1.60
	43	9/14/2007 3:53:00 PM	16.15	16.10	16.16	1.43
	44	9/14/2007 3:54:00 PM	16.14	16.10	16.15	1.26
	45	9/14/2007 3:55:00 PM	16.14	16.10	16.15	1.11
	46	9/14/2007 3:56:00 PM	16.14	16.10	16.14	0.97
	47	9/14/2007 3:57:00 PM	16.13	16.11	16.14	0.85
	48	9/14/2007 3:58:00 PM	16.12	16.10	16.13	0.73
	49	9/14/2007 3:59:00 PM	16.11	16.11	16.12	0.62
	50	9/14/2007 4:00:00 PM	16.10	16.11	16.11	0.52
	51	9/14/2007 4:01:00 PM	16.09	16.06	16.11	0.45
	52	9/14/2007 4:02:00 PM	16.10	16.07	16.10	0.37
	53	9/14/2007 4:03:00 PM	16.09	16.07	16.10	0.31
	54	9/14/2007 4:04:00 PM	16.07	16.07	16.09	0.27
	55	9/14/2007 4:05:00 PM	16.08	16.08	16.09	0.23
	56	9/14/2007 4:06:00 PM	16.04	16.05	16.09	0.17
	57	9/14/2007 4:07:00 PM	16.07	16.05	16.08	0.15
	58	9/14/2007 4:08:00 PM	16.06	16.05	16.07	0.13
	59	9/14/2007 4:09:00 PM	16.05	16.04	16.06	0.14
	60	9/14/2007 4:10:00 PM	16.05	16.08	16.06	0.13
	61	9/14/2007 4:11:00 PM	16.03	16.08	16.05	0.14
	62	9/14/2007 4:12:00 PM	16.02	16.07	16.05	0.14
	63	9/14/2007 4:13:00 PM	16.03	16.07	16.04	0.14
	64	9/14/2007 4:14:00 PM	16.01	16.07	15.99	0.15
	65	9/14/2007 4:15:00 PM	16.00	16.06	15.99	0.15
	66	9/14/2007 4:16:00 PM	16.00	16.07	15.98	0.15
	67	9/14/2007 4:17:00 PM	15.99	16.02	15.97	0.15
	68	9/14/2007 4:18:00 PM	15.98	16.02	15.97	0.15
	69	9/14/2007 4:19:00 PM	15.97	16.06	15.96	0.15
	70	9/14/2007 4:20:00 PM	15.96	16.03	15.95	0.15
	71	9/14/2007 4:21:00 PM	15.96	16.02	15.95	0.15
	72	9/14/2007 4:22:00 PM	15.96	16.02	15.95	0.16
	73	9/14/2007 4:23:00 PM	15.95	16.05	15.94	0.16
	74	9/14/2007 4:24:00 PM	15.95	16.04	15.93	0.16
	75	9/14/2007 4:25:00 PM	15.93	16.04	15.92	0.16
	76	9/14/2007 4:26:00 PM	15.92	16.03	15.91	0.14
	77	9/14/2007 4:27:00 PM	15.93	16.03	15.91	0.16
	78	9/14/2007 4:28:00 PM	15.91	16.03	15.90	0.16
	79	9/14/2007 4:29:00 PM	15.90	16.02	15.89	0.16
	80	9/14/2007 4:30:00 PM	15.91	16.01	15.88	0.31

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Handy logger

Name : LOGGER 2

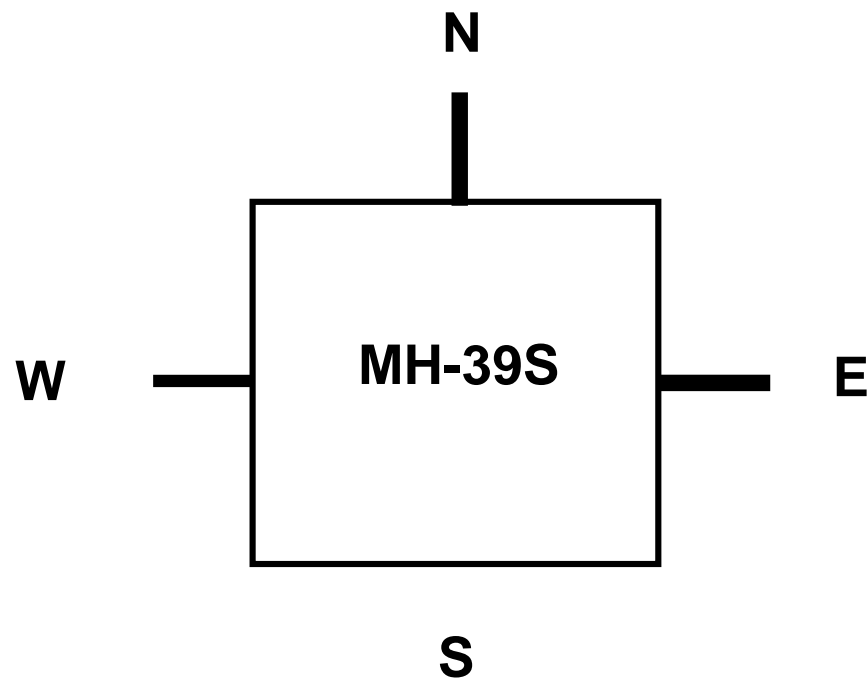
Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/14/2007 4:31:00 PM	15.90	16.02	15.87	0.35
	82	9/14/2007 4:32:00 PM	15.89	16.01	15.87	0.30
	83	9/14/2007 4:33:00 PM	15.89	16.00	15.86	0.26
	84	9/14/2007 4:34:00 PM	15.90	16.04	15.89	0.22
	85	9/14/2007 4:35:00 PM	15.90	16.03	15.87	0.19
	86	9/14/2007 4:36:00 PM	15.90	16.03	15.86	0.18
	87	9/14/2007 4:37:00 PM	15.86	16.02	15.85	0.16
	88	9/14/2007 4:38:00 PM	15.86	16.02	15.84	0.15
	89	9/14/2007 4:39:00 PM	15.86	16.01	15.84	v -7.50
	90	9/14/2007 4:40:00 PM	15.87	16.00	15.83	v -7.50
	91	9/14/2007 4:41:00 PM	15.86	16.00	15.82	v -7.50
	92	9/14/2007 4:42:00 PM	15.83	16.00	15.81	v -7.50
	93	9/14/2007 4:43:00 PM	15.83	16.01	15.82	v -7.50
	94	9/14/2007 4:44:00 PM	15.82	16.01	15.82	v -7.50
	95	9/14/2007 4:45:00 PM	15.81	15.96	15.84	v -7.50
	96	9/14/2007 4:46:00 PM	15.80	15.96	15.85	v -7.50
	97	9/14/2007 4:47:00 PM	15.80	15.96	15.87	v -7.50
	98	9/14/2007 4:48:00 PM	15.79	15.96	15.89	v -7.50
	99	9/14/2007 4:49:00 PM	15.79	15.96	15.90	v -7.50
	100	9/14/2007 4:50:00 PM	15.78	15.96	15.90	v -7.50
	101	9/14/2007 4:51:00 PM	15.78	15.95	15.91	v -7.50
	102	9/14/2007 4:52:00 PM	15.79	16.00	15.91	v -7.50
	103	9/14/2007 4:53:00 PM	15.78	15.98	15.91	v -7.50
	104	9/14/2007 4:54:00 PM	15.71	15.92	15.90	v -7.50
	105	9/14/2007 4:55:00 PM	15.71	15.90	15.88	v -7.50
	106	9/14/2007 4:56:00 PM	15.73	15.94	15.88	v -7.50
	107	9/14/2007 4:57:00 PM	15.72	15.93	15.89	v -7.50
	108	9/14/2007 4:58:00 PM	15.72	15.93	15.91	v -7.50
	109	9/14/2007 4:59:00 PM	15.72	15.92	15.88	v -7.50
	110	9/14/2007 5:00:00 PM	15.71	15.92	15.87	v -7.50
	111	9/14/2007 5:01:00 PM	15.71	15.91	15.87	v -7.50
	112	9/14/2007 5:02:00 PM	15.70	15.95	15.87	v -7.50
	113	9/14/2007 5:03:00 PM	15.69	15.95	15.89	v -7.50
	114	9/14/2007 5:04:00 PM	15.69	15.90	15.89	v -7.50
	115	9/14/2007 5:05:00 PM	15.69	15.90	15.88	v -7.50
	116	9/14/2007 5:06:00 PM	15.68	15.90	15.88	v -7.50
	117	9/14/2007 5:07:00 PM	15.68	15.90	15.87	v -7.50
	118	9/14/2007 5:08:00 PM	15.67	15.94	15.86	v -7.50
	119	9/14/2007 5:09:00 PM	15.67	15.94	15.86	v -7.50
	120	9/14/2007 5:10:00 PM	15.66	15.90	15.85	v -7.50
	121	9/14/2007 5:11:00 PM	15.65	15.90	15.81	v -7.50
	122	9/14/2007 5:12:00 PM	15.65	15.91	15.81	v -7.50
	123	9/14/2007 5:13:00 PM	15.62	15.88	15.81	v -7.50
	124	9/14/2007 5:14:00 PM	15.63	15.87	15.81	v -7.50
	125	9/14/2007 5:15:00 PM	15.61	15.88	15.81	v -7.50
	126	9/14/2007 5:16:00 PM	15.62	15.88	15.81	v -7.50
	127	9/14/2007 5:17:00 PM	15.62	15.89	15.81	v -7.50
	128	9/14/2007 5:18:00 PM	15.58	15.89	15.81	v -7.50
	129	9/14/2007 5:19:00 PM	15.58	15.89	15.81	v -7.50
	130	9/14/2007 5:20:00 PM	15.61	15.88	15.80	v -7.50

printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	9/14/2007 5:21:00 PM	15.60	15.88	15.79	v -7.50
	132	9/14/2007 5:22:00 PM	15.59	15.87	15.79	v -7.50
	133	9/14/2007 5:22:45 PM	15.58	15.87	15.79	v -7.50



N - Main trunk from 37-S

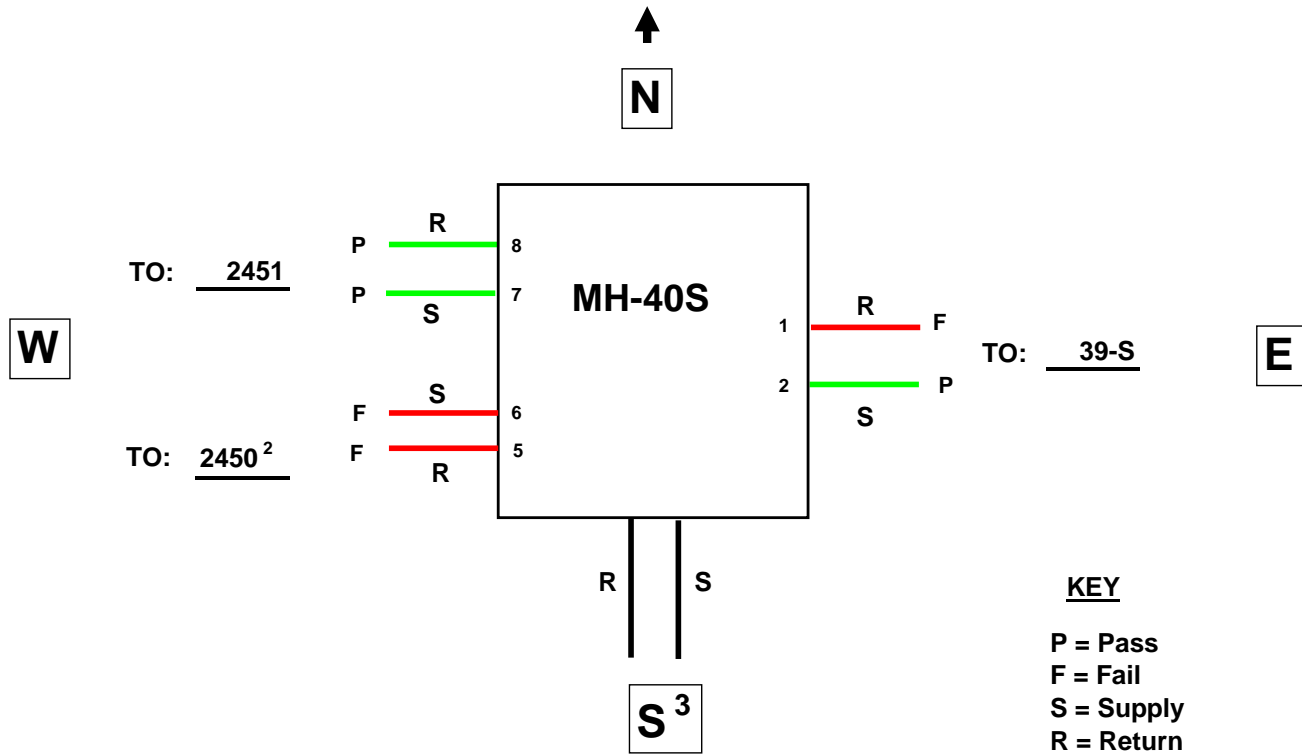
E - Main trunk to 42-S (Confined Space, Permit-Required)

W - Feeders to 40-S

NOTES:

1. No pressure tests conducted from this pit, see appropriate pit data files for test results.
2. Supply/Return drains tested on 8/16/07: All dry.

DATE: 8/27/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.
2. Doghouse at Bldg. 2450 set in concrete, could not check vent/drain plugs
3. This line feeds 41-S (old pit, Confined Space, Permit-Required). Bldgs. 2457 and 2455 fed from 41-S

MH 40-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 39-S	F	
	2	2	Supply to 39-S	P	
	3	N/A	Supply to 41-S, 2457 and 2455	No Test	41-S is old pit, Confined Space, Permit Required
	4	N/A	Supply to 41-S, 2457 and 2455	No Test	41-S is old pit, Confined Space, Permit Required
2	1	5	Return from 2450	F	
	2	6	Supply to 2450	F	
	3	7	Supply to 2451	P	
	4	8	Return from 2451	P	

printed 1/11/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08270936
Interval	00:01:00
Personnel	

Start	8/27/2007 9:36:49 AM
Stop	8/27/2007 11:48:50 AM
Comment	

Data	134
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.18	16.20	1.22	1.25
Minimum	0.04	0.12	-7.50	-7.50
Average	14.16	15.41	-1.60	-1.54
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/27/2007 9:36:49 AM	v 0.04	v 0.12	0.13	0.22
	2	8/27/2007 9:37:00 AM	0.05	v 0.12	0.12	0.22
	3	8/27/2007 9:38:00 AM	8.47	3.91	0.70	0.21
	4	8/27/2007 9:39:00 AM	13.32	10.59	0.63	0.75
	5	8/27/2007 9:40:00 AM	^ 16.18	^ 16.20	1.15	1.15
	6	8/27/2007 9:41:00 AM	16.15	16.18	0.13	0.21
	7	8/27/2007 9:42:00 AM	16.10	16.14	0.12	0.20
	8	8/27/2007 9:43:00 AM	16.05	16.16	0.14	0.22
	9	8/27/2007 9:44:00 AM	16.01	16.14	0.13	0.22
	10	8/27/2007 9:45:00 AM	16.00	16.13	0.13	0.22
	11	8/27/2007 9:46:00 AM	15.95	16.13	0.11	0.22
	12	8/27/2007 9:47:00 AM	15.92	16.11	0.11	0.21
	13	8/27/2007 9:48:00 AM	15.87	16.13	0.11	0.21
	14	8/27/2007 9:49:00 AM	15.83	16.12	^ 1.22	^ 1.25
	15	8/27/2007 9:50:00 AM	15.80	16.11	1.19	1.21
	16	8/27/2007 9:51:00 AM	15.77	16.11	1.18	1.21
	17	8/27/2007 9:52:00 AM	15.73	16.09	1.19	1.23
	18	8/27/2007 9:53:00 AM	15.69	16.08	0.09	0.19
	19	8/27/2007 9:54:00 AM	15.70	16.12	0.10	0.19
	20	8/27/2007 9:55:00 AM	15.66	16.10	0.11	0.20
	21	8/27/2007 9:56:00 AM	15.63	16.10	0.08	0.19
	22	8/27/2007 9:57:00 AM	15.60	16.09	0.06	0.19
	23	8/27/2007 9:58:00 AM	15.56	16.05	0.05	0.18
	24	8/27/2007 9:59:00 AM	15.53	16.04	0.08	0.18
	25	8/27/2007 10:00:00 AM	15.49	16.04	0.08	0.18
	26	8/27/2007 10:01:00 AM	15.46	16.03	0.07	0.18
	27	8/27/2007 10:02:00 AM	15.44	16.03	0.07	0.17
	28	8/27/2007 10:03:00 AM	15.40	16.02	0.08	0.17
	29	8/27/2007 10:04:00 AM	15.36	16.01	0.07	0.18
	30	8/27/2007 10:05:00 AM	15.33	16.05	0.07	0.18

printed 1/11/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/27/2007 10:06:00 AM	15.30	16.04	0.08	0.18
	32	8/27/2007 10:07:00 AM	15.27	16.03	0.08	0.18
	33	8/27/2007 10:08:00 AM	15.25	16.02	0.08	0.18
	34	8/27/2007 10:09:00 AM	15.22	16.01	0.08	0.18
	35	8/27/2007 10:10:00 AM	15.19	16.01	0.09	0.19
	36	8/27/2007 10:11:00 AM	15.17	16.01	0.10	0.18
	37	8/27/2007 10:12:00 AM	15.14	16.01	0.10	0.18
	38	8/27/2007 10:13:00 AM	15.12	16.00	0.10	0.19
	39	8/27/2007 10:14:00 AM	15.10	15.99	0.10	0.19
	40	8/27/2007 10:15:00 AM	15.07	15.99	0.10	0.19
	41	8/27/2007 10:16:00 AM	15.05	15.97	0.11	0.19
	42	8/27/2007 10:17:00 AM	15.03	15.93	0.11	0.19
	43	8/27/2007 10:18:00 AM	15.00	15.93	0.11	0.19
	44	8/27/2007 10:19:00 AM	14.98	15.96	0.12	0.20
	45	8/27/2007 10:20:00 AM	14.95	15.96	0.12	0.19
	46	8/27/2007 10:21:00 AM	14.93	15.95	0.13	0.20
	47	8/27/2007 10:22:00 AM	14.90	15.94	0.13	0.19
	48	8/27/2007 10:23:00 AM	14.88	15.94	0.09	0.20
	49	8/27/2007 10:24:00 AM	14.85	15.93	0.13	0.20
	50	8/27/2007 10:25:00 AM	14.82	15.91	0.14	0.20
	51	8/27/2007 10:26:00 AM	14.80	15.91	0.14	0.20
	52	8/27/2007 10:27:00 AM	14.78	15.89	0.10	0.20
	53	8/27/2007 10:28:00 AM	14.76	15.85	0.11	0.20
	54	8/27/2007 10:29:00 AM	14.73	15.90	0.11	0.20
	55	8/27/2007 10:30:00 AM	14.71	15.88	0.11	0.21
	56	8/27/2007 10:31:00 AM	14.68	15.88	0.11	0.20
	57	8/27/2007 10:32:00 AM	14.66	15.87	0.11	0.20
	58	8/27/2007 10:33:00 AM	14.64	15.86	0.11	0.20
	59	8/27/2007 10:34:00 AM	14.62	15.85	0.12	0.20
	60	8/27/2007 10:35:00 AM	14.60	15.85	0.11	0.20
	61	8/27/2007 10:36:00 AM	14.58	15.84	0.12	0.20
	62	8/27/2007 10:37:00 AM	14.56	15.84	0.12	0.20
	63	8/27/2007 10:38:00 AM	14.53	15.82	0.12	0.20
	64	8/27/2007 10:39:00 AM	14.51	15.81	0.12	0.21
	65	8/27/2007 10:40:00 AM	14.48	15.81	0.12	0.20
	66	8/27/2007 10:41:00 AM	14.46	15.83	0.12	0.21
	67	8/27/2007 10:42:00 AM	14.42	15.78	0.12	0.20
	68	8/27/2007 10:43:00 AM	14.40	15.81	0.12	0.20
	69	8/27/2007 10:44:00 AM	14.37	15.79	0.12	0.20
	70	8/27/2007 10:45:00 AM	14.34	15.78	0.12	0.20
	71	8/27/2007 10:46:00 AM	14.32	15.77	0.12	0.20
	72	8/27/2007 10:47:00 AM	14.30	15.76	0.12	0.20
	73	8/27/2007 10:48:00 AM	14.27	15.78	0.12	0.20
	74	8/27/2007 10:49:00 AM	14.25	15.77	0.13	0.21
	75	8/27/2007 10:50:00 AM	14.23	15.72	0.12	0.20
	76	8/27/2007 10:51:00 AM	14.20	15.72	0.12	0.20
	77	8/27/2007 10:52:00 AM	14.21	15.73	0.12	0.20
	78	8/27/2007 10:53:00 AM	14.18	15.74	0.13	0.20
	79	8/27/2007 10:54:00 AM	14.16	15.73	0.12	0.20
	80	8/27/2007 10:55:00 AM	14.13	15.71	0.12	0.20

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/27/2007 10:56:00 AM	14.10	15.69	0.12	0.21
	82	8/27/2007 10:57:00 AM	14.11	15.68	0.12	0.20
	83	8/27/2007 10:58:00 AM	14.08	15.71	0.12	0.21
	84	8/27/2007 10:59:00 AM	14.06	15.70	0.11	0.20
	85	8/27/2007 11:00:00 AM	14.02	15.68	0.15	0.20
	86	8/27/2007 11:01:00 AM	14.01	15.67	0.15	0.20
	87	8/27/2007 11:02:00 AM	13.98	15.66	0.15	0.20
	88	8/27/2007 11:03:00 AM	13.95	15.64	0.15	0.20
	89	8/27/2007 11:04:00 AM	13.93	15.66	0.15	0.20
	90	8/27/2007 11:05:00 AM	13.91	15.66	0.14	0.20
	91	8/27/2007 11:06:00 AM	13.89	15.64	0.15	0.20
	92	8/27/2007 11:07:00 AM	13.87	15.63	0.15	0.20
	93	8/27/2007 11:08:00 AM	13.85	15.62	0.14	0.20
	94	8/27/2007 11:09:00 AM	13.82	15.61	0.15	0.20
	95	8/27/2007 11:10:00 AM	13.80	15.61	0.14	0.20
	96	8/27/2007 11:11:00 AM	13.77	15.61	0.14	0.23
	97	8/27/2007 11:12:00 AM	13.75	15.58	0.14	0.23
	98	8/27/2007 11:13:00 AM	13.75	15.55	0.14	0.23
	99	8/27/2007 11:14:00 AM	13.73	15.55	0.14	0.23
	100	8/27/2007 11:15:00 AM	13.70	15.57	0.14	0.23
	101	8/27/2007 11:16:00 AM	13.67	15.56	0.13	0.23
	102	8/27/2007 11:17:00 AM	13.66	15.54	0.13	0.23
	103	8/27/2007 11:18:00 AM	13.64	15.54	0.13	0.23
	104	8/27/2007 11:19:00 AM	13.61	15.52	v -7.50	v -7.50
	105	8/27/2007 11:20:00 AM	13.60	15.52	v -7.50	v -7.50
	106	8/27/2007 11:21:00 AM	13.58	15.51	v -7.50	v -7.50
	107	8/27/2007 11:22:00 AM	13.56	15.50	v -7.50	v -7.50
	108	8/27/2007 11:23:00 AM	13.53	15.48	v -7.50	v -7.50
	109	8/27/2007 11:24:00 AM	13.54	15.51	v -7.50	v -7.50
	110	8/27/2007 11:25:00 AM	13.52	15.50	v -7.50	v -7.50
	111	8/27/2007 11:26:00 AM	13.46	15.49	v -7.50	v -7.50
	112	8/27/2007 11:27:00 AM	13.48	15.48	v -7.50	v -7.50
	113	8/27/2007 11:28:00 AM	13.46	15.47	v -7.50	v -7.50
	114	8/27/2007 11:29:00 AM	13.41	15.46	v -7.50	v -7.50
	115	8/27/2007 11:30:00 AM	13.39	15.45	v -7.50	v -7.50
	116	8/27/2007 11:31:00 AM	13.37	15.44	v -7.50	v -7.50
	117	8/27/2007 11:32:00 AM	13.35	15.44	v -7.50	v -7.50
	118	8/27/2007 11:33:00 AM	13.32	15.43	v -7.50	v -7.50
	119	8/27/2007 11:34:00 AM	13.30	15.42	v -7.50	v -7.50
	120	8/27/2007 11:35:00 AM	13.29	15.40	v -7.50	v -7.50
	121	8/27/2007 11:36:00 AM	13.28	15.40	v -7.50	v -7.50
	122	8/27/2007 11:37:00 AM	13.26	15.42	v -7.50	v -7.50
	123	8/27/2007 11:38:00 AM	13.23	15.42	v -7.50	v -7.50
	124	8/27/2007 11:39:00 AM	13.21	15.41	v -7.50	v -7.50
	125	8/27/2007 11:40:00 AM	13.20	15.40	v -7.50	v -7.50
	126	8/27/2007 11:41:00 AM	13.18	15.39	v -7.50	v -7.50
	127	8/27/2007 11:42:00 AM	13.15	15.37	v -7.50	v -7.50
	128	8/27/2007 11:43:00 AM	13.12	15.37	v -7.50	v -7.50
	129	8/27/2007 11:44:00 AM	13.11	15.37	v -7.50	v -7.50
	130	8/27/2007 11:45:00 AM	13.09	15.37	v -7.50	v -7.50

printed 1/11/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/27/2007 11:46:00 AM	13.10	15.37	v -7.50	v -7.50
	132	8/27/2007 11:47:00 AM	13.07	15.37	v -7.50	v -7.50
	133	8/27/2007 11:48:00 AM	13.04	15.36	v -7.50	v -7.50
	134	8/27/2007 11:48:50 AM	13.02	15.37	v -7.50	v -7.50

printed 1/11/2008

Handy logger

Name : **LOGGER 2**

LOG Name	08270936
Interval	00:01:00
Personnel	

Start	8/27/2007 9:36:43 AM
Stop	8/27/2007 11:48:45 AM
Comment	

Data	134
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.13	16.12	15.79	15.87
Minimum	0.16	0.07	0.14	0.12
Average	14.14	14.10	14.49	14.76
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/27/2007 9:36:43 AM	v 0.16	v 0.07	0.15	0.13
	2	8/27/2007 9:37:00 AM	v 0.16	v 0.07	0.15	v 0.12
	3	8/27/2007 9:38:00 AM	0.19	0.09	v 0.14	0.14
	4	8/27/2007 9:39:00 AM	0.18	0.08	0.18	0.13
	5	8/27/2007 9:40:00 AM	0.20	0.08	0.18	0.16
	6	8/27/2007 9:41:00 AM	4.14	2.98	0.74	0.74
	7	8/27/2007 9:42:00 AM	8.72	7.86	2.43	2.40
	8	8/27/2007 9:43:00 AM	12.73	12.19	4.26	4.27
	9	8/27/2007 9:44:00 AM	^ 16.13	15.83	6.24	6.18
	10	8/27/2007 9:45:00 AM	16.09	^ 16.12	9.03	8.99
	11	8/27/2007 9:46:00 AM	16.05	16.09	11.63	11.63
	12	8/27/2007 9:47:00 AM	16.04	16.09	14.19	14.16
	13	8/27/2007 9:48:00 AM	16.02	16.07	^ 15.79	15.59
	14	8/27/2007 9:49:00 AM	15.99	16.04	15.78	15.74
	15	8/27/2007 9:50:00 AM	16.01	16.04	^ 15.79	15.76
	16	8/27/2007 9:51:00 AM	15.98	16.02	15.77	15.77
	17	8/27/2007 9:52:00 AM	15.96	15.99	15.75	15.75
	18	8/27/2007 9:53:00 AM	15.94	15.96	15.76	15.75
	19	8/27/2007 9:54:00 AM	15.94	15.93	15.76	15.79
	20	8/27/2007 9:55:00 AM	15.92	15.91	15.77	15.81
	21	8/27/2007 9:56:00 AM	15.91	15.93	15.75	15.81
	22	8/27/2007 9:57:00 AM	15.89	15.90	15.76	15.80
	23	8/27/2007 9:58:00 AM	15.86	15.87	15.75	15.81
	24	8/27/2007 9:59:00 AM	15.84	15.85	15.76	15.81
	25	8/27/2007 10:00:00 AM	15.85	15.82	15.78	15.81
	26	8/27/2007 10:01:00 AM	15.83	15.80	15.77	15.81
	27	8/27/2007 10:02:00 AM	15.80	15.78	15.77	15.81
	28	8/27/2007 10:03:00 AM	15.78	15.75	15.77	15.81
	29	8/27/2007 10:04:00 AM	15.76	15.72	15.76	15.81
	30	8/27/2007 10:05:00 AM	15.74	15.70	15.76	15.81

printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/27/2007 10:06:00 AM	15.71	15.67	15.76	15.81
	32	8/27/2007 10:07:00 AM	15.70	15.65	15.76	15.82
	33	8/27/2007 10:08:00 AM	15.67	15.63	15.75	15.82
	34	8/27/2007 10:09:00 AM	15.65	15.60	15.74	15.83
	35	8/27/2007 10:10:00 AM	15.63	15.61	15.74	15.82
	36	8/27/2007 10:11:00 AM	15.60	15.55	15.74	15.83
	37	8/27/2007 10:12:00 AM	15.58	15.56	15.74	15.83
	38	8/27/2007 10:13:00 AM	15.56	15.54	15.73	15.83
	39	8/27/2007 10:14:00 AM	15.54	15.51	15.73	15.83
	40	8/27/2007 10:15:00 AM	15.52	15.48	15.73	15.84
	41	8/27/2007 10:16:00 AM	15.49	15.46	15.72	15.84
	42	8/27/2007 10:17:00 AM	15.47	15.44	15.72	15.83
	43	8/27/2007 10:18:00 AM	15.44	15.42	15.71	15.83
	44	8/27/2007 10:19:00 AM	15.43	15.39	15.70	15.84
	45	8/27/2007 10:20:00 AM	15.41	15.37	15.70	15.83
	46	8/27/2007 10:21:00 AM	15.39	15.35	15.69	15.83
	47	8/27/2007 10:22:00 AM	15.37	15.33	15.69	15.83
	48	8/27/2007 10:23:00 AM	15.34	15.30	15.69	15.84
	49	8/27/2007 10:24:00 AM	15.32	15.28	15.68	15.83
	50	8/27/2007 10:25:00 AM	15.30	15.25	15.67	15.83
	51	8/27/2007 10:26:00 AM	15.27	15.23	15.66	15.83
	52	8/27/2007 10:27:00 AM	15.26	15.21	15.66	15.83
	53	8/27/2007 10:28:00 AM	15.22	15.18	15.66	15.82
	54	8/27/2007 10:29:00 AM	15.23	15.21	15.65	^ 15.87
	55	8/27/2007 10:30:00 AM	15.20	15.16	15.64	^ 15.87
	56	8/27/2007 10:31:00 AM	15.16	15.16	15.64	15.86
	57	8/27/2007 10:32:00 AM	15.14	15.14	15.63	^ 15.87
	58	8/27/2007 10:33:00 AM	15.12	15.11	15.63	15.86
	59	8/27/2007 10:34:00 AM	15.12	15.08	15.62	15.86
	60	8/27/2007 10:35:00 AM	15.07	15.07	15.61	15.86
	61	8/27/2007 10:36:00 AM	15.08	15.05	15.60	15.86
	62	8/27/2007 10:37:00 AM	15.03	15.03	15.60	15.86
	63	8/27/2007 10:38:00 AM	15.03	15.00	15.59	15.85
	64	8/27/2007 10:39:00 AM	15.01	14.98	15.58	15.85
	65	8/27/2007 10:40:00 AM	14.99	14.95	15.57	15.84
	66	8/27/2007 10:41:00 AM	14.96	14.93	15.57	15.85
	67	8/27/2007 10:42:00 AM	14.95	14.90	15.56	^ 15.87
	68	8/27/2007 10:43:00 AM	14.95	14.88	15.59	15.86
	69	8/27/2007 10:44:00 AM	14.90	14.86	15.58	15.86
	70	8/27/2007 10:45:00 AM	14.90	14.83	15.57	15.86
	71	8/27/2007 10:46:00 AM	14.85	14.81	15.56	15.86
	72	8/27/2007 10:47:00 AM	14.83	14.79	15.56	15.86
	73	8/27/2007 10:48:00 AM	14.81	14.77	15.55	15.86
	74	8/27/2007 10:49:00 AM	14.82	14.75	15.54	15.86
	75	8/27/2007 10:50:00 AM	14.77	14.73	15.54	15.85
	76	8/27/2007 10:51:00 AM	14.75	14.71	15.53	15.86
	77	8/27/2007 10:52:00 AM	14.73	14.69	15.52	15.85
	78	8/27/2007 10:53:00 AM	14.73	14.67	15.51	15.85
	79	8/27/2007 10:54:00 AM	14.71	14.64	15.51	15.85
	80	8/27/2007 10:55:00 AM	14.69	14.62	15.50	15.84

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/27/2007 10:56:00 AM	14.66	14.60	15.50	15.84
	82	8/27/2007 10:57:00 AM	14.60	14.57	15.49	15.84
	83	8/27/2007 10:58:00 AM	14.61	14.55	15.48	15.83
	84	8/27/2007 10:59:00 AM	14.59	14.52	15.47	15.83
	85	8/27/2007 11:00:00 AM	14.57	14.50	15.46	15.83
	86	8/27/2007 11:01:00 AM	14.54	14.50	15.46	15.82
	87	8/27/2007 11:02:00 AM	14.52	14.45	15.44	15.82
	88	8/27/2007 11:03:00 AM	14.50	14.43	15.44	15.81
	89	8/27/2007 11:04:00 AM	14.48	14.41	15.43	15.86
	90	8/27/2007 11:05:00 AM	14.45	14.42	15.42	15.83
	91	8/27/2007 11:06:00 AM	14.43	14.40	15.40	15.81
	92	8/27/2007 11:07:00 AM	14.40	14.38	15.40	15.80
	93	8/27/2007 11:08:00 AM	14.39	14.35	15.40	15.85
	94	8/27/2007 11:09:00 AM	14.35	14.32	15.39	15.85
	95	8/27/2007 11:10:00 AM	14.34	14.30	15.41	15.84
	96	8/27/2007 11:11:00 AM	14.32	14.28	15.40	15.83
	97	8/27/2007 11:12:00 AM	14.29	14.26	15.39	15.83
	98	8/27/2007 11:13:00 AM	14.27	14.23	15.38	15.82
	99	8/27/2007 11:14:00 AM	14.25	14.22	15.37	15.82
	100	8/27/2007 11:15:00 AM	14.22	14.19	15.37	15.82
	101	8/27/2007 11:16:00 AM	14.20	14.17	15.36	15.81
	102	8/27/2007 11:17:00 AM	14.18	14.15	15.36	15.81
	103	8/27/2007 11:18:00 AM	14.15	14.13	15.34	15.80
	104	8/27/2007 11:19:00 AM	14.13	14.10	15.33	15.80
	105	8/27/2007 11:20:00 AM	14.12	14.08	15.32	15.80
	106	8/27/2007 11:21:00 AM	14.08	14.06	15.32	15.80
	107	8/27/2007 11:22:00 AM	14.07	14.03	15.31	15.79
	108	8/27/2007 11:23:00 AM	14.03	14.01	15.29	15.78
	109	8/27/2007 11:24:00 AM	14.03	13.99	15.29	15.78
	110	8/27/2007 11:25:00 AM	13.98	13.97	15.28	15.78
	111	8/27/2007 11:26:00 AM	13.98	13.95	15.27	15.77
	112	8/27/2007 11:27:00 AM	13.96	13.92	15.26	15.77
	113	8/27/2007 11:28:00 AM	13.93	13.90	15.25	15.77
	114	8/27/2007 11:29:00 AM	13.91	13.88	15.25	15.77
	115	8/27/2007 11:30:00 AM	13.89	13.86	15.24	15.77
	116	8/27/2007 11:31:00 AM	13.87	13.84	15.23	15.77
	117	8/27/2007 11:32:00 AM	13.84	13.82	15.23	15.76
	118	8/27/2007 11:33:00 AM	13.82	13.83	15.21	15.76
	119	8/27/2007 11:34:00 AM	13.79	13.80	15.21	15.77
	120	8/27/2007 11:35:00 AM	13.77	13.78	15.19	15.76
	121	8/27/2007 11:36:00 AM	13.74	13.76	15.18	15.75
	122	8/27/2007 11:37:00 AM	13.72	13.73	15.17	15.75
	123	8/27/2007 11:38:00 AM	13.69	13.71	15.17	15.74
	124	8/27/2007 11:39:00 AM	13.67	13.69	15.16	15.74
	125	8/27/2007 11:40:00 AM	13.65	13.67	15.15	15.73
	126	8/27/2007 11:41:00 AM	13.62	13.65	15.14	15.73
	127	8/27/2007 11:42:00 AM	13.63	13.63	15.14	15.73
	128	8/27/2007 11:43:00 AM	13.57	13.60	15.13	15.72
	129	8/27/2007 11:44:00 AM	13.58	13.59	15.16	15.71
	130	8/27/2007 11:45:00 AM	13.56	13.60	15.12	15.70

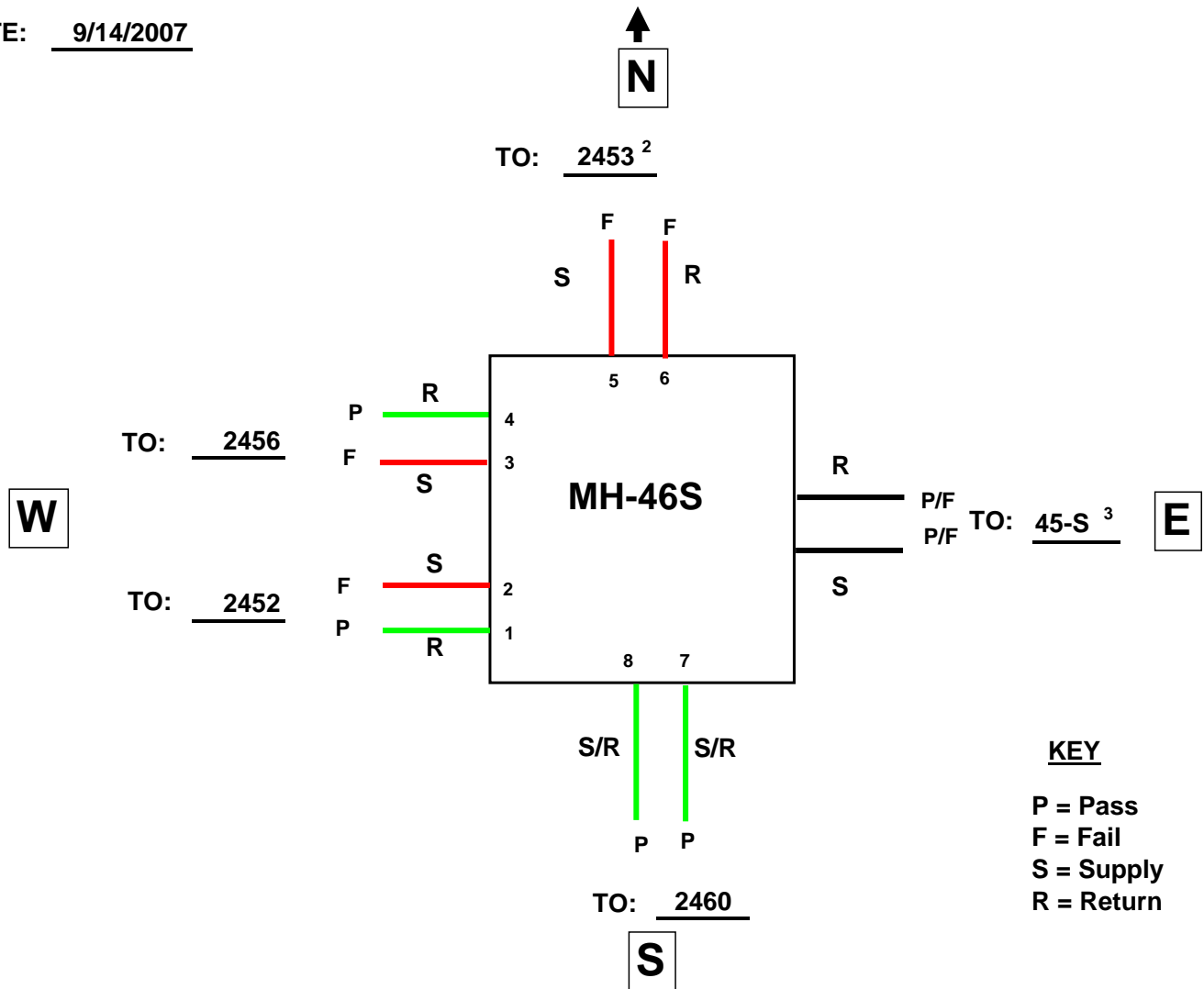
printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/27/2007 11:46:00 AM	13.53	13.59	15.15	15.70
	132	8/27/2007 11:47:00 AM	13.50	13.56	15.14	15.69
	133	8/27/2007 11:48:00 AM	13.47	13.54	15.13	15.72
	134	8/27/2007 11:48:45 AM	13.45	13.52	15.12	15.71

DATE: 9/14/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.
2. "As built" drawings incorrectly show this line runs from East wall.
3. MH 45-S is Confined Space, Permit-Required pit.

MH 46-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to 2452	P	
	2	2	Supply to 2452	F	
	3	3	Supply to 2456	F	
	4	4	Return to 2456	P	
2	1	5	Supply to 2453	F	
	2	6	Return to 2453	F	
	3	7	Supply/Return to 2460	P	Supply/Return designation not clear in field notes
	4	8	Supply/Return to 2460	P	Supply/Return designation not clear in field notes

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Handy logger

Name : **LOGGER 1**

LOG Name	09141110
Interval	00:01:00
Personnel	

Start	9/14/2007 11:10:48 AM
Stop	9/14/2007 1:18:23 PM
Comment	

Data	130
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.97	15.35	17.13	16.11
Minimum	0.02	0.17	0.11	0.23
Average	14.68	13.14	13.81	15.13
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/14/2007 11:10:48 AM	0.03	v 0.17	0.16	v 0.23
*	2	9/14/2007 11:11:00 AM	0.03	v 0.17	0.15	v 0.23
	3	9/14/2007 11:12:00 AM	0.03	0.18	v 0.11	0.24
	4	9/14/2007 11:13:00 AM	v 0.02	v 0.17	0.15	v 0.23
	5	9/14/2007 11:14:00 AM	0.85	0.18	4.10	4.35
	6	9/14/2007 11:15:00 AM	2.11	2.77	6.54	6.88
	7	9/14/2007 11:16:00 AM	4.72	6.22	8.90	9.25
	8	9/14/2007 11:17:00 AM	7.92	9.40	12.14	12.51
	9	9/14/2007 11:18:00 AM	12.25	^ 15.35	^ 17.13	^ 16.11
	10	9/14/2007 11:19:00 AM	^ 15.97	15.13	15.97	16.05
	11	9/14/2007 11:20:00 AM	^ 15.97	15.10	15.94	16.02
	12	9/14/2007 11:21:00 AM	15.95	15.05	15.92	16.04
	13	9/14/2007 11:22:00 AM	15.92	15.03	15.86	16.02
	14	9/14/2007 11:23:00 AM	15.91	14.98	15.83	16.01
	15	9/14/2007 11:24:00 AM	15.90	14.93	15.82	16.00
	16	9/14/2007 11:25:00 AM	15.88	14.92	15.78	15.98
	17	9/14/2007 11:26:00 AM	15.89	14.88	15.78	16.02
	18	9/14/2007 11:27:00 AM	15.88	14.90	15.73	16.01
	19	9/14/2007 11:28:00 AM	15.87	14.86	15.69	16.00
	20	9/14/2007 11:29:00 AM	15.86	14.83	15.67	15.99
	21	9/14/2007 11:30:00 AM	15.86	14.85	15.63	15.99
	22	9/14/2007 11:31:00 AM	15.85	14.83	15.62	15.98
	23	9/14/2007 11:32:00 AM	15.90	14.80	15.58	15.97
	24	9/14/2007 11:33:00 AM	15.84	14.78	15.55	15.97
	25	9/14/2007 11:34:00 AM	15.84	14.76	15.52	15.97
	26	9/14/2007 11:35:00 AM	15.84	14.73	15.50	15.97
	27	9/14/2007 11:36:00 AM	15.84	14.72	15.48	15.97
	28	9/14/2007 11:37:00 AM	15.84	14.69	15.45	15.97
	29	9/14/2007 11:38:00 AM	15.82	14.67	15.43	15.96
	30	9/14/2007 11:39:00 AM	15.84	14.65	15.40	15.96

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/14/2007 11:40:00 AM	15.81	14.63	15.37	15.96
	32	9/14/2007 11:41:00 AM	15.80	14.60	15.35	15.95
	33	9/14/2007 11:42:00 AM	15.80	14.58	15.32	15.95
	34	9/14/2007 11:43:00 AM	15.82	14.56	15.28	15.95
	35	9/14/2007 11:44:00 AM	15.82	14.55	15.26	15.95
	36	9/14/2007 11:45:00 AM	15.81	14.53	15.25	15.94
	37	9/14/2007 11:46:00 AM	15.80	14.50	15.22	15.93
	38	9/14/2007 11:47:00 AM	15.84	14.48	15.22	15.92
	39	9/14/2007 11:48:00 AM	15.83	14.45	15.19	15.92
	40	9/14/2007 11:49:00 AM	15.82	14.44	15.16	15.92
	41	9/14/2007 11:50:00 AM	15.84	14.42	15.13	15.91
	42	9/14/2007 11:51:00 AM	15.83	14.39	15.13	15.90
	43	9/14/2007 11:52:00 AM	15.82	14.36	15.10	15.90
	44	9/14/2007 11:53:00 AM	15.81	14.33	15.03	15.90
	45	9/14/2007 11:54:00 AM	15.80	14.32	15.05	15.89
	46	9/14/2007 11:55:00 AM	15.80	14.29	14.99	15.89
	47	9/14/2007 11:56:00 AM	15.79	14.27	14.97	15.89
	48	9/14/2007 11:57:00 AM	15.78	14.25	14.97	15.88
	49	9/14/2007 11:58:00 AM	15.77	14.23	14.94	15.88
	50	9/14/2007 11:59:00 AM	15.76	14.21	14.92	15.87
	51	9/14/2007 12:00:00 PM	15.75	14.18	14.90	15.87
	52	9/14/2007 12:01:00 PM	15.73	14.21	14.87	15.91
	53	9/14/2007 12:02:00 PM	15.72	14.19	14.83	15.90
	54	9/14/2007 12:03:00 PM	15.70	14.15	14.81	15.90
	55	9/14/2007 12:04:00 PM	15.69	14.13	14.78	15.89
	56	9/14/2007 12:05:00 PM	15.71	14.11	14.77	15.89
	57	9/14/2007 12:06:00 PM	15.70	14.09	14.72	15.88
	58	9/14/2007 12:07:00 PM	15.68	14.06	14.69	15.88
	59	9/14/2007 12:08:00 PM	15.68	14.08	14.66	15.88
	60	9/14/2007 12:09:00 PM	15.66	14.05	14.64	15.87
	61	9/14/2007 12:10:00 PM	15.66	14.03	14.61	15.86
	62	9/14/2007 12:11:00 PM	15.64	14.01	14.62	15.86
	63	9/14/2007 12:12:00 PM	15.63	13.99	14.56	15.86
	64	9/14/2007 12:13:00 PM	15.62	13.92	14.54	15.86
	65	9/14/2007 12:14:00 PM	15.62	13.92	14.51	15.86
	66	9/14/2007 12:15:00 PM	15.60	13.91	14.49	15.85
	67	9/14/2007 12:16:00 PM	15.59	13.86	14.49	15.85
	68	9/14/2007 12:17:00 PM	15.58	13.84	14.43	15.84
	69	9/14/2007 12:18:00 PM	15.57	13.83	14.41	15.84
	70	9/14/2007 12:19:00 PM	15.56	13.80	14.42	15.83
	71	9/14/2007 12:20:00 PM	15.55	13.82	14.39	15.83
	72	9/14/2007 12:21:00 PM	15.53	13.80	14.36	15.82
	73	9/14/2007 12:22:00 PM	15.55	13.78	14.34	15.81
	74	9/14/2007 12:23:00 PM	15.54	13.75	14.30	15.81
	75	9/14/2007 12:24:00 PM	15.52	13.73	14.28	15.81
	76	9/14/2007 12:25:00 PM	15.51	13.70	14.24	15.80
	77	9/14/2007 12:26:00 PM	15.50	13.69	14.25	15.84
	78	9/14/2007 12:27:00 PM	15.49	13.67	14.23	15.84
	79	9/14/2007 12:28:00 PM	15.48	13.65	14.21	15.84
	80	9/14/2007 12:29:00 PM	15.46	13.62	14.18	15.83

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/14/2007 12:30:00 PM	15.47	13.60	14.15	15.83
	82	9/14/2007 12:31:00 PM	15.46	13.58	14.12	15.82
	83	9/14/2007 12:32:00 PM	15.45	13.56	14.11	15.82
	84	9/14/2007 12:33:00 PM	15.44	13.54	14.09	15.82
	85	9/14/2007 12:34:00 PM	15.43	13.52	14.06	15.81
	86	9/14/2007 12:35:00 PM	15.42	13.50	14.04	15.81
	87	9/14/2007 12:36:00 PM	15.41	13.49	14.01	15.81
	88	9/14/2007 12:37:00 PM	15.40	13.46	13.97	15.80
	89	9/14/2007 12:38:00 PM	15.38	13.45	13.93	15.76
	90	9/14/2007 12:39:00 PM	15.37	13.44	13.90	15.76
	91	9/14/2007 12:40:00 PM	15.37	13.41	13.88	15.76
	92	9/14/2007 12:41:00 PM	15.36	13.39	13.86	15.76
	93	9/14/2007 12:42:00 PM	15.35	13.37	13.84	15.79
	94	9/14/2007 12:43:00 PM	15.34	13.36	13.82	15.79
	95	9/14/2007 12:44:00 PM	15.33	13.33	13.79	15.79
	96	9/14/2007 12:45:00 PM	15.32	13.31	13.77	15.79
	97	9/14/2007 12:46:00 PM	15.31	13.28	13.74	15.78
	98	9/14/2007 12:47:00 PM	15.31	13.27	13.75	15.78
	99	9/14/2007 12:48:00 PM	15.29	13.24	13.72	15.77
	100	9/14/2007 12:49:00 PM	15.29	13.22	13.70	15.77
	101	9/14/2007 12:50:00 PM	15.28	13.20	13.66	15.77
	102	9/14/2007 12:51:00 PM	15.27	13.18	13.65	15.76
	103	9/14/2007 12:52:00 PM	15.26	13.15	13.62	15.77
	104	9/14/2007 12:53:00 PM	15.25	13.14	13.57	15.71
	105	9/14/2007 12:54:00 PM	15.25	13.12	13.55	15.72
	106	9/14/2007 12:55:00 PM	15.24	13.11	13.53	15.73
	107	9/14/2007 12:56:00 PM	15.24	13.09	13.50	15.75
	108	9/14/2007 12:57:00 PM	15.20	13.07	13.48	15.71
	109	9/14/2007 12:58:00 PM	15.20	13.05	13.46	15.71
	110	9/14/2007 12:59:00 PM	15.19	13.04	13.44	15.70
	111	9/14/2007 1:00:00 PM	15.18	13.02	13.41	15.70
	112	9/14/2007 1:01:00 PM	15.17	13.01	13.39	15.72
	113	9/14/2007 1:02:00 PM	15.19	12.99	13.36	15.74
	114	9/14/2007 1:03:00 PM	15.18	12.97	13.37	15.73
	115	9/14/2007 1:04:00 PM	15.17	12.95	13.35	15.73
	116	9/14/2007 1:05:00 PM	15.16	12.92	13.32	15.72
	117	9/14/2007 1:06:00 PM	15.16	12.90	13.30	15.71
	118	9/14/2007 1:07:00 PM	15.15	12.88	13.27	15.71
	119	9/14/2007 1:08:00 PM	15.14	12.86	13.25	15.70
	120	9/14/2007 1:09:00 PM	15.14	12.84	13.22	15.70
	121	9/14/2007 1:10:00 PM	15.12	12.81	13.19	15.69
	122	9/14/2007 1:11:00 PM	15.11	12.79	13.17	15.69
	123	9/14/2007 1:12:00 PM	15.10	12.77	13.14	15.69
	124	9/14/2007 1:13:00 PM	15.10	12.75	13.12	15.68
	125	9/14/2007 1:14:00 PM	15.09	12.73	13.09	15.68
	126	9/14/2007 1:15:00 PM	15.08	12.71	13.08	15.68
	127	9/14/2007 1:16:00 PM	15.08	12.73	13.05	15.68
	128	9/14/2007 1:17:00 PM	15.07	12.67	13.03	15.68
	129	9/14/2007 1:18:00 PM	15.06	12.65	13.01	15.68
	130	9/14/2007 1:18:23 PM	15.06	12.64	13.00	15.67

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Handy logger

Name : **LOGGER 2**

LOG Name	09141110
Interval	00:01:00
Personnel	

Start	9/14/2007 11:10:36 AM
Stop	9/14/2007 1:18:19 PM
Comment	

Data	130
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.82	16.81	16.22	16.55
Minimum	0.17	0.10	0.15	0.13
Average	10.61	6.81	15.28	15.32
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	9/14/2007 11:10:36 AM	v 0.17	0.11	0.16	v 0.13
*	2	9/14/2007 11:11:00 AM	v 0.17	0.11	v 0.15	v 0.13
	3	9/14/2007 11:12:00 AM	16.32	v 0.10	v 0.15	v 0.13
	4	9/14/2007 11:13:00 AM	^ 16.82	^ 16.81	v 0.15	0.14
	5	9/14/2007 11:14:00 AM	16.65	16.49	0.19	v 0.13
	6	9/14/2007 11:15:00 AM	16.49	16.20	2.57	2.97
	7	9/14/2007 11:16:00 AM	16.39	15.89	8.91	9.38
	8	9/14/2007 11:17:00 AM	16.28	15.64	15.18	15.70
	9	9/14/2007 11:18:00 AM	16.14	15.36	16.21	^ 16.55
	10	9/14/2007 11:19:00 AM	16.05	15.11	^ 16.22	^ 16.55
	11	9/14/2007 11:20:00 AM	15.93	14.89	16.19	16.51
	12	9/14/2007 11:21:00 AM	15.80	14.64	16.21	16.50
	13	9/14/2007 11:22:00 AM	15.68	14.40	16.19	16.51
	14	9/14/2007 11:23:00 AM	15.56	14.15	16.17	16.52
	15	9/14/2007 11:24:00 AM	15.46	13.91	16.16	16.50
	16	9/14/2007 11:25:00 AM	15.34	13.69	16.20	16.48
	17	9/14/2007 11:26:00 AM	15.22	13.48	16.18	16.46
	18	9/14/2007 11:27:00 AM	15.11	13.26	16.17	16.49
	19	9/14/2007 11:28:00 AM	14.99	13.03	16.16	16.43
	20	9/14/2007 11:29:00 AM	14.87	12.81	16.15	16.42
	21	9/14/2007 11:30:00 AM	14.76	12.60	16.14	16.41
	22	9/14/2007 11:31:00 AM	14.67	12.39	16.14	16.39
	23	9/14/2007 11:32:00 AM	14.55	12.18	16.13	16.44
	24	9/14/2007 11:33:00 AM	14.44	11.98	16.12	16.42
	25	9/14/2007 11:34:00 AM	14.32	11.78	16.11	16.41
	26	9/14/2007 11:35:00 AM	14.22	11.58	16.11	16.35
	27	9/14/2007 11:36:00 AM	14.11	11.39	16.11	16.40
	28	9/14/2007 11:37:00 AM	14.00	11.20	16.11	16.39
	29	9/14/2007 11:38:00 AM	13.89	11.01	16.11	16.39
	30	9/14/2007 11:39:00 AM	13.78	10.82	16.11	16.38

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	9/14/2007 11:40:00 AM	13.68	10.64	16.11	16.37
	32	9/14/2007 11:41:00 AM	13.57	10.46	16.11	16.37
	33	9/14/2007 11:42:00 AM	13.47	10.28	16.10	16.35
	34	9/14/2007 11:43:00 AM	13.37	10.10	16.11	16.34
	35	9/14/2007 11:44:00 AM	13.27	9.93	16.09	16.33
	36	9/14/2007 11:45:00 AM	13.17	9.76	16.13	16.32
	37	9/14/2007 11:46:00 AM	13.06	9.59	16.12	16.34
	38	9/14/2007 11:47:00 AM	12.96	9.43	16.11	16.33
	39	9/14/2007 11:48:00 AM	12.86	9.26	16.11	16.32
	40	9/14/2007 11:49:00 AM	12.76	9.10	16.11	16.31
	41	9/14/2007 11:50:00 AM	12.66	8.95	16.10	16.30
	42	9/14/2007 11:51:00 AM	12.59	8.79	16.10	16.28
	43	9/14/2007 11:52:00 AM	12.46	8.64	16.09	16.27
	44	9/14/2007 11:53:00 AM	12.36	8.49	16.09	16.27
	45	9/14/2007 11:54:00 AM	12.29	8.34	16.08	16.26
	46	9/14/2007 11:55:00 AM	12.17	8.20	16.08	16.26
	47	9/14/2007 11:56:00 AM	12.10	8.06	16.08	16.25
	48	9/14/2007 11:57:00 AM	12.01	7.92	16.07	16.23
	49	9/14/2007 11:58:00 AM	11.92	7.78	16.07	16.23
	50	9/14/2007 11:59:00 AM	11.79	7.68	16.07	16.21
	51	9/14/2007 12:00:00 PM	11.73	7.52	16.06	16.20
	52	9/14/2007 12:01:00 PM	11.63	7.41	16.05	16.19
	53	9/14/2007 12:02:00 PM	11.54	7.28	16.05	16.23
	54	9/14/2007 12:03:00 PM	11.44	7.15	16.07	16.22
	55	9/14/2007 12:04:00 PM	11.34	7.03	16.09	16.21
	56	9/14/2007 12:05:00 PM	11.25	6.91	16.08	16.20
	57	9/14/2007 12:06:00 PM	11.16	6.80	16.08	16.19
	58	9/14/2007 12:07:00 PM	11.07	6.67	16.08	16.18
	59	9/14/2007 12:08:00 PM	10.98	6.56	16.07	16.17
	60	9/14/2007 12:09:00 PM	10.89	6.45	16.07	16.15
	61	9/14/2007 12:10:00 PM	10.80	6.33	16.07	16.17
	62	9/14/2007 12:11:00 PM	10.72	6.22	16.06	16.17
	63	9/14/2007 12:12:00 PM	10.64	6.11	16.05	16.16
	64	9/14/2007 12:13:00 PM	10.55	6.00	16.06	16.13
	65	9/14/2007 12:14:00 PM	10.47	5.90	16.05	16.11
	66	9/14/2007 12:15:00 PM	10.39	5.80	16.05	16.11
	67	9/14/2007 12:16:00 PM	10.31	5.69	16.04	16.13
	68	9/14/2007 12:17:00 PM	10.23	5.59	16.04	16.13
	69	9/14/2007 12:18:00 PM	10.14	5.50	16.04	16.11
	70	9/14/2007 12:19:00 PM	10.06	5.40	16.03	16.11
	71	9/14/2007 12:20:00 PM	9.98	5.31	16.04	16.09
	72	9/14/2007 12:21:00 PM	9.89	5.21	16.06	16.07
	73	9/14/2007 12:22:00 PM	9.81	5.12	16.05	16.06
	74	9/14/2007 12:23:00 PM	9.73	5.03	16.05	16.05
	75	9/14/2007 12:24:00 PM	9.65	4.94	16.04	16.04
	76	9/14/2007 12:25:00 PM	9.58	4.85	16.04	16.03
	77	9/14/2007 12:26:00 PM	9.50	4.77	16.04	16.03
	78	9/14/2007 12:27:00 PM	9.42	4.69	16.04	16.02
	79	9/14/2007 12:28:00 PM	9.35	4.61	16.03	16.01
	80	9/14/2007 12:29:00 PM	9.27	4.52	16.03	16.00

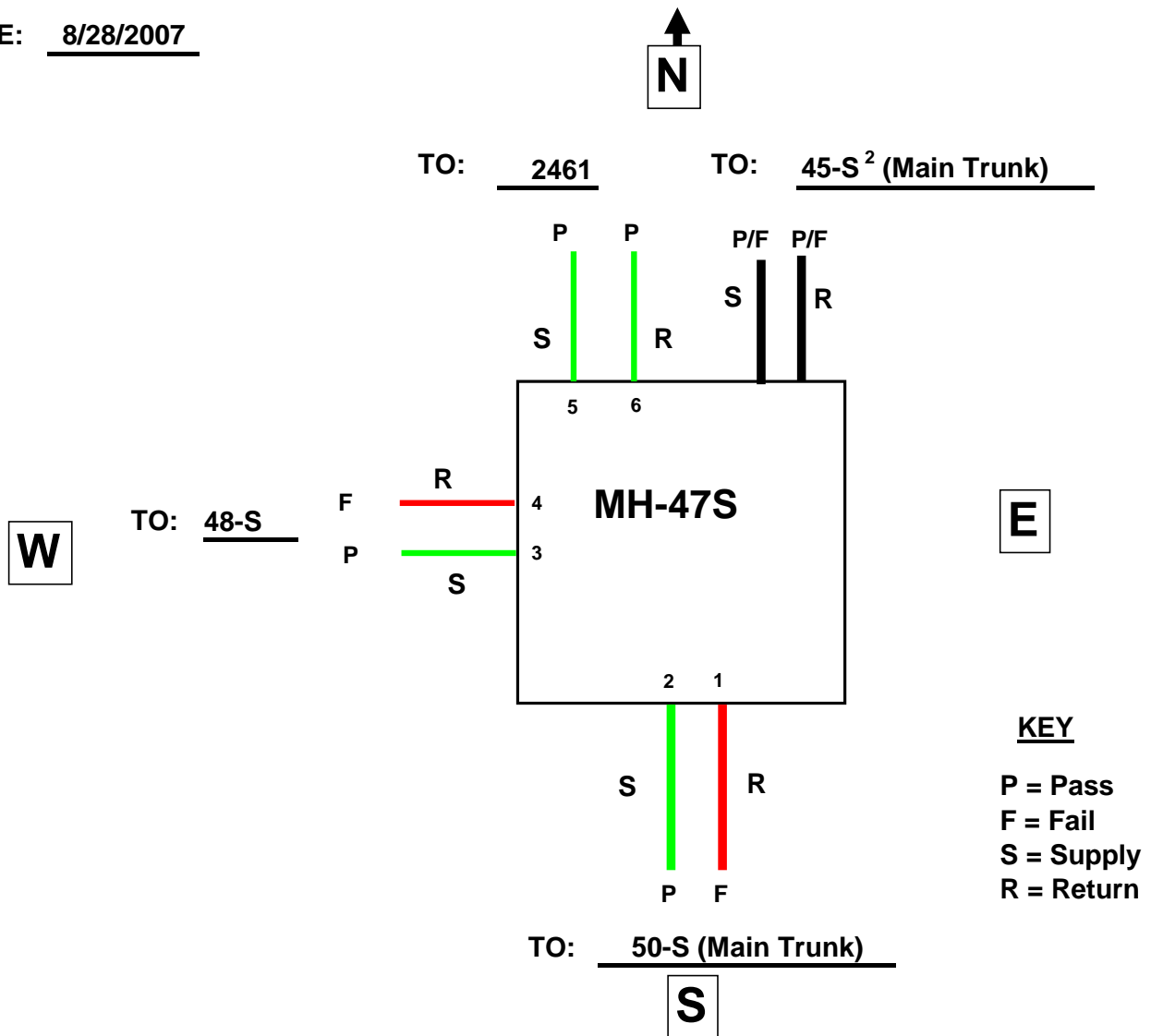
printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	9/14/2007 12:30:00 PM	9.19	4.45	16.02	15.99
	82	9/14/2007 12:31:00 PM	9.14	4.37	16.07	15.99
	83	9/14/2007 12:32:00 PM	9.05	4.29	16.02	15.97
	84	9/14/2007 12:33:00 PM	8.97	4.21	16.03	15.97
	85	9/14/2007 12:34:00 PM	8.90	4.15	16.06	15.99
	86	9/14/2007 12:35:00 PM	8.83	4.07	16.06	15.99
	87	9/14/2007 12:36:00 PM	8.77	4.00	16.06	15.95
	88	9/14/2007 12:37:00 PM	8.70	3.92	16.00	15.93
	89	9/14/2007 12:38:00 PM	8.63	3.86	16.00	15.93
	90	9/14/2007 12:39:00 PM	8.57	3.80	16.01	15.92
	91	9/14/2007 12:40:00 PM	8.49	3.73	16.01	15.92
	92	9/14/2007 12:41:00 PM	8.43	3.67	16.06	15.90
	93	9/14/2007 12:42:00 PM	8.36	3.60	16.00	15.91
	94	9/14/2007 12:43:00 PM	8.29	3.53	16.00	15.90
	95	9/14/2007 12:44:00 PM	8.21	3.47	16.00	15.89
	96	9/14/2007 12:45:00 PM	8.15	3.41	16.00	15.88
	97	9/14/2007 12:46:00 PM	8.09	3.35	16.00	15.87
	98	9/14/2007 12:47:00 PM	8.01	3.29	15.99	15.87
	99	9/14/2007 12:48:00 PM	7.95	3.23	16.04	15.90
	100	9/14/2007 12:49:00 PM	7.88	3.17	16.04	15.90
	101	9/14/2007 12:50:00 PM	7.81	3.12	16.01	15.89
	102	9/14/2007 12:51:00 PM	7.75	3.06	16.03	15.88
	103	9/14/2007 12:52:00 PM	7.69	3.01	15.99	15.83
	104	9/14/2007 12:53:00 PM	7.63	2.95	15.98	15.82
	105	9/14/2007 12:54:00 PM	7.57	2.90	15.98	15.82
	106	9/14/2007 12:55:00 PM	7.53	2.85	15.98	15.81
	107	9/14/2007 12:56:00 PM	7.49	2.86	15.98	15.80
	108	9/14/2007 12:57:00 PM	7.45	2.89	15.99	15.80
	109	9/14/2007 12:58:00 PM	7.40	2.90	15.98	15.80
	110	9/14/2007 12:59:00 PM	7.35	2.91	15.99	15.80
	111	9/14/2007 1:00:00 PM	7.31	2.91	15.99	15.79
	112	9/14/2007 1:01:00 PM	7.26	2.91	15.98	15.77
	113	9/14/2007 1:02:00 PM	7.21	2.90	15.98	15.77
	114	9/14/2007 1:03:00 PM	7.16	2.88	16.02	15.75
	115	9/14/2007 1:04:00 PM	7.10	2.87	16.02	15.79
	116	9/14/2007 1:05:00 PM	7.05	2.86	16.01	15.78
	117	9/14/2007 1:06:00 PM	7.00	2.84	16.01	15.77
	118	9/14/2007 1:07:00 PM	6.98	2.82	16.00	15.76
	119	9/14/2007 1:08:00 PM	6.93	2.79	16.00	15.75
	120	9/14/2007 1:09:00 PM	6.88	2.77	16.00	15.73
	121	9/14/2007 1:10:00 PM	6.83	2.75	15.99	15.73
	122	9/14/2007 1:11:00 PM	6.78	2.75	15.99	15.72
	123	9/14/2007 1:12:00 PM	6.74	2.70	15.99	15.71
	124	9/14/2007 1:13:00 PM	6.70	2.69	15.98	15.70
	125	9/14/2007 1:14:00 PM	6.65	2.67	15.98	15.70
	126	9/14/2007 1:15:00 PM	6.61	2.64	15.98	15.69
	127	9/14/2007 1:16:00 PM	6.55	2.59	15.98	15.68
	128	9/14/2007 1:17:00 PM	6.50	2.59	15.97	15.68
	129	9/14/2007 1:18:00 PM	6.49	2.57	15.98	15.67
	130	9/14/2007 1:18:19 PM	6.47	2.56	15.98	15.67

DATE: 8/28/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry except Supply to Bldg. 2461 - discharged < 1 oz water from plug when removed, drain valve dry when opened.
2. MH 45-S is Confined Space, Permit-Required pit.

MH 47-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return from 50-S (Main)	F	
	2	2	Supply to 50-S (Main)	P	
	3	3	Supply feeder to 48-S	P	
	4	4	Return feeder from 48-S	F	Leak observed in vent plug, not able to seal
2	1	5	Supply feeder to Bldg. 2461	P	
	2	6	Return feeder from Bldg. 2461	P	
	N/A	N/A	Supply from 45-S (Main)	N/A	MH 45-S is Confined Space, Permit-Required pit.
	N/A	N/A	Return to 45-S (Main)	N/A	MH 45-S is Confined Space, Permit-Required pit.

printed 1/11/2008

Handy logger

Name : **LOGGER 1**

LOG Name	08280928
Interval	00:01:00
Personnel	

Start	8/28/2007 9:28:07 AM
Stop	8/28/2007 11:45:00 AM
Comment	

Data	139
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	17.17	16.18	16.27	17.09
Minimum	0.04	0.06	0.11	0.23
Average	13.55	14.68	14.33	13.40
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/28/2007 9:28:07 AM	v 0.04	v 0.06	v 0.11	v 0.23
	2	8/28/2007 9:29:00 AM	0.08	0.07	0.12	0.26
	3	8/28/2007 9:30:00 AM	0.07	0.10	0.18	0.25
	4	8/28/2007 9:31:00 AM	0.08	0.12	0.17	0.28
	5	8/28/2007 9:32:00 AM	0.10	0.13	0.19	0.27
	6	8/28/2007 9:33:00 AM	5.06	5.14	0.17	0.27
	7	8/28/2007 9:34:00 AM	7.31	7.28	0.16	0.27
	8	8/28/2007 9:35:00 AM	9.69	9.36	0.16	0.26
	9	8/28/2007 9:36:00 AM	11.81	11.51	0.18	0.26
	10	8/28/2007 9:37:00 AM	13.89	13.89	0.17	0.29
	11	8/28/2007 9:38:00 AM	15.90	^ 16.18	0.16	0.30
	12	8/28/2007 9:39:00 AM	^ 17.17	14.73	0.19	0.30
	13	8/28/2007 9:40:00 AM	15.19	15.47	0.18	0.30
	14	8/28/2007 9:41:00 AM	15.12	15.42	15.31	0.31
	15	8/28/2007 9:42:00 AM	15.09	15.43	16.24	^ 17.09
	16	8/28/2007 9:43:00 AM	15.07	15.37	16.26	16.54
	17	8/28/2007 9:44:00 AM	15.06	15.37	^ 16.27	16.50
	18	8/28/2007 9:45:00 AM	15.02	15.38	16.23	16.45
	19	8/28/2007 9:46:00 AM	14.99	15.37	16.26	16.42
	20	8/28/2007 9:47:00 AM	15.02	15.40	16.23	16.38
	21	8/28/2007 9:48:00 AM	15.00	15.43	16.21	16.38
	22	8/28/2007 9:49:00 AM	14.98	15.42	16.19	16.35
	23	8/28/2007 9:50:00 AM	14.96	15.42	16.17	16.32
	24	8/28/2007 9:51:00 AM	14.94	15.41	16.19	16.28
	25	8/28/2007 9:52:00 AM	14.93	15.42	16.18	16.25
	26	8/28/2007 9:53:00 AM	14.90	15.41	16.20	16.22
	27	8/28/2007 9:54:00 AM	14.89	15.41	16.18	16.23
	28	8/28/2007 9:55:00 AM	14.90	15.42	16.18	16.20
	29	8/28/2007 9:56:00 AM	14.88	15.42	16.16	16.17
	30	8/28/2007 9:57:00 AM	14.87	15.43	16.15	16.15

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/28/2007 9:58:00 AM	14.85	15.43	16.14	16.11
	32	8/28/2007 9:59:00 AM	14.83	15.44	16.14	16.08
	33	8/28/2007 10:00:00 AM	14.82	15.45	16.13	16.06
	34	8/28/2007 10:01:00 AM	14.80	15.45	16.12	16.03
	35	8/28/2007 10:02:00 AM	14.79	15.46	16.12	16.00
	36	8/28/2007 10:03:00 AM	14.77	15.46	16.11	15.97
	37	8/28/2007 10:04:00 AM	14.75	15.47	16.09	15.94
	38	8/28/2007 10:05:00 AM	14.73	15.46	16.12	15.91
	39	8/28/2007 10:06:00 AM	14.71	15.47	16.10	15.88
	40	8/28/2007 10:07:00 AM	14.69	15.47	16.09	15.85
	41	8/28/2007 10:08:00 AM	14.67	15.47	16.08	15.82
	42	8/28/2007 10:09:00 AM	14.68	15.47	16.07	15.84
	43	8/28/2007 10:10:00 AM	14.66	15.48	16.06	15.81
	44	8/28/2007 10:11:00 AM	14.64	15.48	16.05	15.77
	45	8/28/2007 10:12:00 AM	14.62	15.47	16.03	15.75
	46	8/28/2007 10:13:00 AM	14.60	15.47	16.02	15.71
	47	8/28/2007 10:14:00 AM	14.59	15.47	16.05	15.68
	48	8/28/2007 10:15:00 AM	14.57	15.49	16.03	15.65
	49	8/28/2007 10:16:00 AM	14.56	15.49	16.03	15.62
	50	8/28/2007 10:17:00 AM	14.54	15.49	16.02	15.59
	51	8/28/2007 10:18:00 AM	14.52	15.50	16.00	15.56
	52	8/28/2007 10:19:00 AM	14.50	15.50	15.99	15.52
	53	8/28/2007 10:20:00 AM	14.50	15.50	15.98	15.50
	54	8/28/2007 10:21:00 AM	14.48	15.49	15.97	15.47
	55	8/28/2007 10:22:00 AM	14.47	15.50	15.96	15.44
	56	8/28/2007 10:23:00 AM	14.45	15.50	15.95	15.41
	57	8/28/2007 10:24:00 AM	14.42	15.51	15.94	15.38
	58	8/28/2007 10:25:00 AM	14.41	15.52	15.93	15.35
	59	8/28/2007 10:26:00 AM	14.40	15.52	15.92	15.32
	60	8/28/2007 10:27:00 AM	14.38	15.51	15.91	15.30
	61	8/28/2007 10:28:00 AM	14.37	15.51	15.90	15.27
	62	8/28/2007 10:29:00 AM	14.35	15.51	15.93	15.24
	63	8/28/2007 10:30:00 AM	14.35	15.50	15.92	15.22
	64	8/28/2007 10:31:00 AM	14.32	15.50	15.91	15.19
	65	8/28/2007 10:32:00 AM	14.31	15.49	15.89	15.15
	66	8/28/2007 10:33:00 AM	14.29	15.50	15.88	15.13
	67	8/28/2007 10:34:00 AM	14.28	15.49	15.87	15.09
	68	8/28/2007 10:35:00 AM	14.26	15.48	15.86	15.07
	69	8/28/2007 10:36:00 AM	14.24	15.48	15.86	15.04
	70	8/28/2007 10:37:00 AM	14.23	15.48	15.85	15.01
	71	8/28/2007 10:38:00 AM	14.21	15.48	15.83	14.98
	72	8/28/2007 10:39:00 AM	14.22	15.47	15.82	14.95
	73	8/28/2007 10:40:00 AM	14.19	15.47	15.80	14.93
	74	8/28/2007 10:41:00 AM	14.18	15.47	15.80	14.90
	75	8/28/2007 10:42:00 AM	14.16	15.47	15.79	14.87
	76	8/28/2007 10:43:00 AM	14.15	15.46	15.81	14.84
	77	8/28/2007 10:44:00 AM	14.13	15.46	15.80	14.82
	78	8/28/2007 10:45:00 AM	14.11	15.45	15.79	14.79
	79	8/28/2007 10:46:00 AM	14.11	15.45	15.78	14.76
	80	8/28/2007 10:47:00 AM	14.09	15.46	15.77	14.73

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/28/2007 10:48:00 AM	14.08	15.47	15.76	14.70
	82	8/28/2007 10:49:00 AM	14.06	15.46	15.75	14.68
	83	8/28/2007 10:50:00 AM	14.05	15.47	15.74	14.65
	84	8/28/2007 10:51:00 AM	14.04	15.46	15.73	14.62
	85	8/28/2007 10:52:00 AM	14.02	15.45	15.72	14.59
	86	8/28/2007 10:53:00 AM	14.03	15.45	15.71	14.57
	87	8/28/2007 10:54:00 AM	14.01	15.50	15.70	14.54
	88	8/28/2007 10:55:00 AM	13.98	15.44	15.69	14.51
	89	8/28/2007 10:56:00 AM	13.97	15.44	15.68	14.49
	90	8/28/2007 10:57:00 AM	13.95	15.44	15.67	14.46
	91	8/28/2007 10:58:00 AM	13.94	15.43	15.67	14.43
	92	8/28/2007 10:59:00 AM	13.93	15.44	15.66	14.41
	93	8/28/2007 11:00:00 AM	13.92	15.43	15.65	14.38
	94	8/28/2007 11:01:00 AM	13.90	15.48	15.64	14.36
	95	8/28/2007 11:02:00 AM	13.89	15.48	15.64	14.33
	96	8/28/2007 11:03:00 AM	13.88	15.43	15.63	14.31
	97	8/28/2007 11:04:00 AM	13.87	15.43	15.62	14.28
	98	8/28/2007 11:05:00 AM	13.87	15.43	15.62	14.26
	99	8/28/2007 11:06:00 AM	13.85	15.44	15.62	14.24
	100	8/28/2007 11:07:00 AM	13.84	15.43	15.61	14.21
	101	8/28/2007 11:08:00 AM	13.83	15.44	15.60	14.19
	102	8/28/2007 11:09:00 AM	13.82	15.43	15.59	14.16
	103	8/28/2007 11:10:00 AM	13.80	15.43	15.58	14.14
	104	8/28/2007 11:11:00 AM	13.79	15.42	15.57	14.12
	105	8/28/2007 11:12:00 AM	13.77	15.47	15.56	14.09
	106	8/28/2007 11:13:00 AM	13.75	15.46	15.56	14.07
	107	8/28/2007 11:14:00 AM	13.73	15.45	15.54	14.04
	108	8/28/2007 11:15:00 AM	13.72	15.44	15.54	14.02
	109	8/28/2007 11:16:00 AM	13.70	15.44	15.53	13.99
	110	8/28/2007 11:17:00 AM	13.70	15.45	15.52	13.97
	111	8/28/2007 11:18:00 AM	13.69	15.44	15.52	13.94
	112	8/28/2007 11:19:00 AM	13.68	15.45	15.51	13.92
	113	8/28/2007 11:20:00 AM	13.67	15.45	15.50	13.89
	114	8/28/2007 11:21:00 AM	13.66	15.45	15.50	13.87
	115	8/28/2007 11:22:00 AM	13.65	15.39	15.49	13.84
	116	8/28/2007 11:23:00 AM	13.64	15.45	15.48	13.82
	117	8/28/2007 11:24:00 AM	13.63	15.45	15.47	13.79
	118	8/28/2007 11:25:00 AM	13.61	15.42	15.47	13.77
	119	8/28/2007 11:26:00 AM	13.61	15.40	15.45	13.75
	120	8/28/2007 11:27:00 AM	13.60	15.40	15.45	13.72
	121	8/28/2007 11:28:00 AM	13.58	15.45	15.44	13.70
	122	8/28/2007 11:29:00 AM	13.56	15.40	15.44	13.67
	123	8/28/2007 11:30:00 AM	13.55	15.40	15.43	13.65
	124	8/28/2007 11:31:00 AM	13.54	15.39	15.41	13.62
	125	8/28/2007 11:32:00 AM	13.53	15.39	15.41	13.61
	126	8/28/2007 11:33:00 AM	13.52	15.44	15.45	13.58
	127	8/28/2007 11:34:00 AM	13.51	15.43	15.44	13.56
	128	8/28/2007 11:35:00 AM	13.49	15.42	15.43	13.54
	129	8/28/2007 11:36:00 AM	13.47	15.42	15.42	13.53
	130	8/28/2007 11:37:00 AM	13.47	15.41	15.42	13.51

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/28/2007 11:38:00 AM	13.45	15.41	15.40	13.51
	132	8/28/2007 11:39:00 AM	13.44	15.41	15.39	13.49
	133	8/28/2007 11:40:00 AM	13.43	15.41	15.39	13.48
	134	8/28/2007 11:41:00 AM	13.42	15.41	15.38	13.46
	135	8/28/2007 11:42:00 AM	13.41	15.40	15.37	13.45
	136	8/28/2007 11:43:00 AM	13.40	15.39	15.36	13.44
	137	8/28/2007 11:44:00 AM	13.39	15.40	15.35	13.43
	138	8/28/2007 11:45:00 AM	13.38	15.39	15.35	13.43
	139	8/28/2007 11:45:00 AM	13.37	15.39	15.35	13.42

printed 1/11/2008

Handy logger

Name : **LOGGER 2**

LOG Name	08280928
Interval	00:01:00
Personnel	

Start	8/28/2007 9:28:01 AM
Stop	8/28/2007 11:44:59 AM
Comment	

Data	138
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.17	15.62	0.13	7.84
Minimum	0.13	0.16	-7.50	-7.50
Average	13.50	13.67	-7.22	-0.77
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/28/2007 9:28:01 AM	v 0.13	v 0.16	v -7.50	0.06
*	2	8/28/2007 9:29:00 AM	0.18	0.17	v -7.50	0.11
	3	8/28/2007 9:30:00 AM	0.19	0.20	v -7.50	0.11
	4	8/28/2007 9:31:00 AM	0.21	0.22	v -7.50	0.14
	5	8/28/2007 9:32:00 AM	0.19	0.21	v -7.50	0.12
	6	8/28/2007 9:33:00 AM	0.21	0.19	-7.49	0.15
	7	8/28/2007 9:34:00 AM	0.21	0.22	v -7.50	0.14
	8	8/28/2007 9:35:00 AM	0.23	0.22	v -7.50	0.14
	9	8/28/2007 9:36:00 AM	0.22	0.25	v -7.50	0.15
	10	8/28/2007 9:37:00 AM	0.21	0.24	v -7.50	0.14
	11	8/28/2007 9:38:00 AM	0.20	0.24	v -7.50	0.13
	12	8/28/2007 9:39:00 AM	0.23	0.23	v -7.50	0.12
	13	8/28/2007 9:40:00 AM	0.22	0.25	v -7.50	0.11
	14	8/28/2007 9:41:00 AM	0.22	0.24	-7.49	0.11
	15	8/28/2007 9:42:00 AM	0.21	0.24	v -7.50	0.11
	16	8/28/2007 9:43:00 AM	14.82	0.23	-7.49	0.14
	17	8/28/2007 9:44:00 AM	15.15	15.59	-7.49	0.12
	18	8/28/2007 9:45:00 AM	15.15	15.49	-7.49	0.12
	19	8/28/2007 9:46:00 AM	15.16	15.49	-7.48	6.48
	20	8/28/2007 9:47:00 AM	15.15	15.48	-7.48	7.35
	21	8/28/2007 9:48:00 AM	15.14	15.46	-7.47	7.53
	22	8/28/2007 9:49:00 AM	15.15	15.43	-7.49	7.73
	23	8/28/2007 9:50:00 AM	15.15	15.45	v -7.50	^ 7.84
	24	8/28/2007 9:51:00 AM	15.16	15.42	v -7.50	^ 7.84
	25	8/28/2007 9:52:00 AM	15.15	15.39	v -7.50	^ 7.84
	26	8/28/2007 9:53:00 AM	15.15	15.41	-7.49	2.82
	27	8/28/2007 9:54:00 AM	15.14	15.39	-7.48	0.66
	28	8/28/2007 9:55:00 AM	15.13	15.38	v -7.50	0.00
	29	8/28/2007 9:56:00 AM	15.13	15.35	v -7.50	-0.03
	30	8/28/2007 9:57:00 AM	15.13	15.34	v -7.50	-0.03

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/28/2007 9:58:00 AM	15.13	15.34	v -7.50	-0.04
	32	8/28/2007 9:59:00 AM	15.12	15.32	v -7.50	-0.03
	33	8/28/2007 10:00:00 AM	15.12	15.36	v -7.50	-0.02
	34	8/28/2007 10:01:00 AM	15.12	15.34	v -7.50	0.00
	35	8/28/2007 10:02:00 AM	15.14	15.34	v -7.50	0.02
	36	8/28/2007 10:03:00 AM	15.10	15.32	v -7.50	0.03
	37	8/28/2007 10:04:00 AM	15.13	15.31	v -7.50	0.04
	38	8/28/2007 10:05:00 AM	15.13	15.29	v -7.50	0.05
	39	8/28/2007 10:06:00 AM	15.11	15.28	v -7.50	0.07
	40	8/28/2007 10:07:00 AM	15.13	15.28	0.11	0.05
	41	8/28/2007 10:08:00 AM	15.14	15.25	0.09	0.05
	42	8/28/2007 10:09:00 AM	15.13	15.27	0.11	0.05
	43	8/28/2007 10:10:00 AM	15.12	15.25	0.12	0.06
	44	8/28/2007 10:11:00 AM	15.12	15.24	^ 0.13	0.07
	45	8/28/2007 10:12:00 AM	15.12	15.23	v -7.50	0.08
	46	8/28/2007 10:13:00 AM	15.12	15.21	v -7.50	0.08
	47	8/28/2007 10:14:00 AM	15.12	15.25	v -7.50	0.09
	48	8/28/2007 10:15:00 AM	15.12	15.28	v -7.50	0.09
	49	8/28/2007 10:16:00 AM	15.11	15.30	v -7.50	0.06
	50	8/28/2007 10:17:00 AM	15.12	15.32	v -7.50	0.07
	51	8/28/2007 10:18:00 AM	15.12	15.34	v -7.50	0.08
	52	8/28/2007 10:19:00 AM	15.13	15.36	v -7.50	0.08
	53	8/28/2007 10:20:00 AM	15.13	15.36	v -7.50	0.08
	54	8/28/2007 10:21:00 AM	15.12	15.37	v -7.50	0.08
	55	8/28/2007 10:22:00 AM	15.12	15.38	v -7.50	0.08
	56	8/28/2007 10:23:00 AM	15.13	15.40	v -7.50	0.09
	57	8/28/2007 10:24:00 AM	15.12	15.42	v -7.50	0.08
	58	8/28/2007 10:25:00 AM	15.13	15.44	v -7.50	0.09
	59	8/28/2007 10:26:00 AM	15.13	15.45	v -7.50	0.09
	60	8/28/2007 10:27:00 AM	15.12	15.46	v -7.50	0.09
	61	8/28/2007 10:28:00 AM	15.12	15.47	v -7.50	0.09
	62	8/28/2007 10:29:00 AM	15.14	15.48	v -7.50	0.09
	63	8/28/2007 10:30:00 AM	15.15	15.52	v -7.50	0.09
	64	8/28/2007 10:31:00 AM	15.15	15.52	v -7.50	0.09
	65	8/28/2007 10:32:00 AM	15.14	15.53	v -7.50	0.12
	66	8/28/2007 10:33:00 AM	^ 15.17	15.53	v -7.50	0.11
	67	8/28/2007 10:34:00 AM	^ 15.17	15.57	v -7.50	0.11
	68	8/28/2007 10:35:00 AM	^ 15.17	15.58	v -7.50	0.11
	69	8/28/2007 10:36:00 AM	15.16	15.57	v -7.50	0.10
	70	8/28/2007 10:37:00 AM	15.16	15.58	v -7.50	0.13
	71	8/28/2007 10:38:00 AM	15.16	15.59	v -7.50	0.14
	72	8/28/2007 10:39:00 AM	15.16	15.59	v -7.50	0.13
	73	8/28/2007 10:40:00 AM	15.16	15.59	v -7.50	0.13
	74	8/28/2007 10:41:00 AM	15.16	15.59	v -7.50	0.13
	75	8/28/2007 10:42:00 AM	15.16	15.60	v -7.50	0.12
	76	8/28/2007 10:43:00 AM	15.15	15.59	v -7.50	0.12
	77	8/28/2007 10:44:00 AM	15.16	15.60	v -7.50	0.12
	78	8/28/2007 10:45:00 AM	15.15	15.59	v -7.50	0.11
	79	8/28/2007 10:46:00 AM	15.15	15.60	v -7.50	0.11
	80	8/28/2007 10:47:00 AM	15.15	15.60	v -7.50	0.11

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/28/2007 10:48:00 AM	15.14	15.61	v -7.50	0.11
	82	8/28/2007 10:49:00 AM	15.15	15.60	v -7.50	0.11
	83	8/28/2007 10:50:00 AM	15.15	15.60	v -7.50	0.10
	84	8/28/2007 10:51:00 AM	15.14	15.60	v -7.50	0.10
	85	8/28/2007 10:52:00 AM	15.13	^ 15.62	v -7.50	0.10
	86	8/28/2007 10:53:00 AM	15.14	^ 15.62	v -7.50	0.10
	87	8/28/2007 10:54:00 AM	15.13	15.60	v -7.50	0.09
	88	8/28/2007 10:55:00 AM	15.13	15.58	v -7.50	0.09
	89	8/28/2007 10:56:00 AM	15.13	15.56	v -7.50	0.09
	90	8/28/2007 10:57:00 AM	15.12	15.55	v -7.50	0.09
	91	8/28/2007 10:58:00 AM	15.12	15.53	v -7.50	0.10
	92	8/28/2007 10:59:00 AM	15.12	15.51	v -7.50	0.10
	93	8/28/2007 11:00:00 AM	15.12	15.49	v -7.50	0.10
	94	8/28/2007 11:01:00 AM	15.11	15.48	v -7.50	0.10
	95	8/28/2007 11:02:00 AM	15.12	15.45	v -7.50	0.10
	96	8/28/2007 11:03:00 AM	15.12	15.41	v -7.50	0.11
	97	8/28/2007 11:04:00 AM	15.12	15.40	v -7.50	0.11
	98	8/28/2007 11:05:00 AM	15.12	15.37	v -7.50	0.12
	99	8/28/2007 11:06:00 AM	15.12	15.36	v -7.50	0.11
	100	8/28/2007 11:07:00 AM	15.13	15.35	v -7.50	0.08
	101	8/28/2007 11:08:00 AM	15.13	15.34	v -7.50	0.09
	102	8/28/2007 11:09:00 AM	15.13	15.32	v -7.50	0.09
	103	8/28/2007 11:10:00 AM	15.12	15.31	v -7.50	0.13
	104	8/28/2007 11:11:00 AM	15.12	15.29	v -7.50	0.12
	105	8/28/2007 11:12:00 AM	15.12	15.27	v -7.50	0.12
	106	8/28/2007 11:13:00 AM	15.12	15.25	v -7.50	0.11
	107	8/28/2007 11:14:00 AM	15.11	15.24	v -7.50	0.11
	108	8/28/2007 11:15:00 AM	15.11	15.26	v -7.50	0.11
	109	8/28/2007 11:16:00 AM	15.10	15.22	v -7.50	0.10
	110	8/28/2007 11:17:00 AM	15.10	15.21	v -7.50	0.10
	111	8/28/2007 11:18:00 AM	15.11	15.20	v -7.50	0.10
	112	8/28/2007 11:19:00 AM	15.10	15.22	v -7.50	0.10
	113	8/28/2007 11:20:00 AM	15.10	15.27	v -7.50	0.10
	114	8/28/2007 11:21:00 AM	15.10	15.31	v -7.50	0.10
	115	8/28/2007 11:22:00 AM	15.11	15.33	v -7.50	0.10
	116	8/28/2007 11:23:00 AM	15.10	15.36	v -7.50	v -7.50
	117	8/28/2007 11:24:00 AM	15.11	15.39	v -7.50	v -7.50
	118	8/28/2007 11:25:00 AM	15.11	15.41	v -7.50	v -7.50
	119	8/28/2007 11:26:00 AM	15.10	15.44	v -7.50	v -7.50
	120	8/28/2007 11:27:00 AM	15.11	15.45	v -7.50	v -7.50
	121	8/28/2007 11:28:00 AM	15.13	15.47	v -7.50	v -7.50
	122	8/28/2007 11:29:00 AM	15.10	15.49	v -7.50	v -7.50
	123	8/28/2007 11:30:00 AM	15.13	15.50	v -7.50	v -7.50
	124	8/28/2007 11:31:00 AM	15.12	15.50	v -7.50	v -7.50
	125	8/28/2007 11:32:00 AM	15.12	15.55	v -7.50	v -7.50
	126	8/28/2007 11:33:00 AM	15.11	15.55	v -7.50	v -7.50
	127	8/28/2007 11:34:00 AM	15.11	15.55	v -7.50	v -7.50
	128	8/28/2007 11:35:00 AM	15.11	15.55	v -7.50	v -7.50
	129	8/28/2007 11:36:00 AM	15.14	15.56	v -7.50	v -7.50
	130	8/28/2007 11:37:00 AM	15.14	15.55	v -7.50	v -7.50

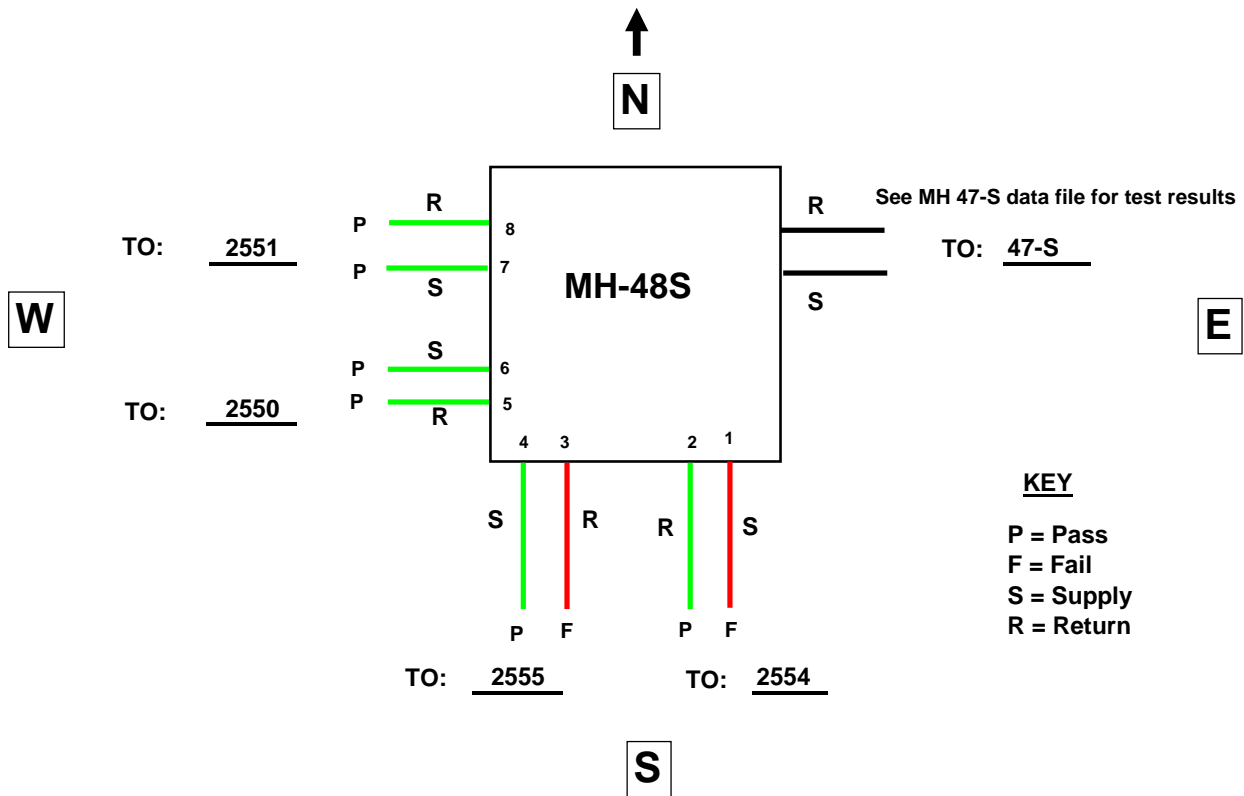
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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/28/2007 11:38:00 AM	15.12	15.55	v -7.50	v -7.50
	132	8/28/2007 11:39:00 AM	15.13	15.54	v -7.50	v -7.50
	133	8/28/2007 11:40:00 AM	15.13	15.52	v -7.50	v -7.50
	134	8/28/2007 11:41:00 AM	15.12	15.50	v -7.50	v -7.50
	135	8/28/2007 11:42:00 AM	15.12	15.47	v -7.50	v -7.50
	136	8/28/2007 11:43:00 AM	15.11	15.46	v -7.50	v -7.50
	137	8/28/2007 11:44:00 AM	15.11	15.43	v -7.50	v -7.50
	138	8/28/2007 11:44:59 AM	15.10	15.44	v -7.50	v -7.50

DATE: 8/27/2007



NOTES:

1. Supply/Return drains tested on 8/16/07: All dry.

MH 48-S					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to 2554	F	
	2	2	Return from 2554	P	
	3	3	Return from 2555	F	
	4	4	Supply to 2555	P	Welded nipple leaking at Bldg. 2555
2	1	5	Return from 2550	P	
	2	6	Supply to 2550	P	
	3	7	Supply to 2551	P	
	4	8	Return from 2551	P	

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Handy logger

Name : **LOGGER 1**

LOG Name	08271444
Interval	00:01:00
Personnel	

Start	8/27/2007 2:44:41 PM
Stop	8/27/2007 4:54:07 PM
Comment	

Data	132
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.93	16.66	16.05	16.14
Minimum	-0.01	0.04	0.15	0.21
Average	14.36	15.44	14.37	15.58
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/27/2007 2:44:41 PM	v -0.01	v 0.04	v 0.15	0.22
	2	8/27/2007 2:45:00 PM	v -0.01	v 0.04	v 0.15	v 0.21
	3	8/27/2007 2:46:00 PM	3.82	3.26	2.86	2.91
	4	8/27/2007 2:47:00 PM	6.75	6.22	6.60	7.03
	5	8/27/2007 2:48:00 PM	9.68	9.21	10.27	10.91
	6	8/27/2007 2:49:00 PM	12.64	12.26	13.81	14.49
	7	8/27/2007 2:50:00 PM	^ 15.93	^ 16.66	^ 16.05	^ 16.14
	8	8/27/2007 2:51:00 PM	15.86	16.13	16.01	16.12
	9	8/27/2007 2:52:00 PM	15.82	16.10	16.01	16.12
	10	8/27/2007 2:53:00 PM	15.79	16.07	15.98	16.11
	11	8/27/2007 2:54:00 PM	15.79	16.05	15.95	16.10
	12	8/27/2007 2:55:00 PM	15.75	16.05	15.93	16.10
	13	8/27/2007 2:56:00 PM	15.72	16.08	15.91	16.09
	14	8/27/2007 2:57:00 PM	15.73	16.06	15.93	16.13
	15	8/27/2007 2:58:00 PM	15.70	16.05	15.91	16.13
	16	8/27/2007 2:59:00 PM	15.67	16.05	15.88	16.13
	17	8/27/2007 3:00:00 PM	15.65	16.04	15.86	16.12
	18	8/27/2007 3:01:00 PM	15.63	16.07	15.83	16.12
	19	8/27/2007 3:02:00 PM	15.61	16.06	15.82	16.11
	20	8/27/2007 3:03:00 PM	15.59	16.06	15.83	16.11
	21	8/27/2007 3:04:00 PM	15.56	16.05	15.80	16.11
	22	8/27/2007 3:05:00 PM	15.54	16.05	15.78	16.11
	23	8/27/2007 3:06:00 PM	15.51	16.09	15.76	16.11
	24	8/27/2007 3:07:00 PM	15.49	16.09	15.73	16.10
	25	8/27/2007 3:08:00 PM	15.47	16.09	15.71	16.10
	26	8/27/2007 3:09:00 PM	15.45	16.08	15.69	16.10
	27	8/27/2007 3:10:00 PM	15.46	16.03	15.67	16.10
	28	8/27/2007 3:11:00 PM	15.41	16.02	15.66	16.10
	29	8/27/2007 3:12:00 PM	15.42	16.07	15.64	16.09
	30	8/27/2007 3:13:00 PM	15.41	16.07	15.62	16.09

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/27/2007 3:14:00 PM	15.39	16.01	15.60	16.09
	32	8/27/2007 3:15:00 PM	15.37	16.05	15.57	16.09
	33	8/27/2007 3:16:00 PM	15.34	16.05	15.59	16.08
	34	8/27/2007 3:17:00 PM	15.33	16.04	15.57	16.08
	35	8/27/2007 3:18:00 PM	15.31	16.04	15.54	16.08
	36	8/27/2007 3:19:00 PM	15.29	16.03	15.52	16.08
	37	8/27/2007 3:20:00 PM	15.26	16.03	15.49	16.07
	38	8/27/2007 3:21:00 PM	15.25	16.02	15.48	16.07
	39	8/27/2007 3:22:00 PM	15.23	16.02	15.46	16.07
	40	8/27/2007 3:23:00 PM	15.20	16.01	15.43	16.07
	41	8/27/2007 3:24:00 PM	15.18	16.01	15.37	16.07
	42	8/27/2007 3:25:00 PM	15.16	16.00	15.35	16.08
	43	8/27/2007 3:26:00 PM	15.15	16.01	15.34	16.08
	44	8/27/2007 3:27:00 PM	15.13	16.01	15.33	16.08
	45	8/27/2007 3:28:00 PM	15.11	15.97	15.32	16.08
	46	8/27/2007 3:29:00 PM	15.09	15.97	15.27	16.09
	47	8/27/2007 3:30:00 PM	15.08	15.97	15.25	16.09
	48	8/27/2007 3:31:00 PM	15.06	15.98	15.23	16.10
	49	8/27/2007 3:32:00 PM	15.05	15.97	15.21	16.08
	50	8/27/2007 3:33:00 PM	15.03	15.96	15.19	16.09
	51	8/27/2007 3:34:00 PM	15.02	15.96	15.17	16.09
	52	8/27/2007 3:35:00 PM	15.00	15.96	15.15	16.06
	53	8/27/2007 3:36:00 PM	14.98	15.96	15.13	16.04
	54	8/27/2007 3:37:00 PM	14.96	15.96	15.11	16.04
	55	8/27/2007 3:38:00 PM	14.94	15.92	15.10	16.04
	56	8/27/2007 3:39:00 PM	14.93	15.92	15.08	16.04
	57	8/27/2007 3:40:00 PM	14.91	15.92	15.06	16.04
	58	8/27/2007 3:41:00 PM	14.89	15.93	15.00	16.05
	59	8/27/2007 3:42:00 PM	14.87	15.94	14.99	16.05
	60	8/27/2007 3:43:00 PM	14.86	15.94	14.97	16.04
	61	8/27/2007 3:44:00 PM	14.84	15.94	14.95	16.05
	62	8/27/2007 3:45:00 PM	14.82	15.89	14.93	16.04
	63	8/27/2007 3:46:00 PM	14.81	15.93	14.91	16.04
	64	8/27/2007 3:47:00 PM	14.79	15.93	14.89	16.04
	65	8/27/2007 3:48:00 PM	14.77	15.92	14.87	16.04
	66	8/27/2007 3:49:00 PM	14.75	15.92	14.85	16.04
	67	8/27/2007 3:50:00 PM	14.71	15.91	14.83	16.03
	68	8/27/2007 3:51:00 PM	14.73	15.91	14.81	16.03
	69	8/27/2007 3:52:00 PM	14.68	15.91	14.82	16.03
	70	8/27/2007 3:53:00 PM	14.66	15.90	14.76	16.03
	71	8/27/2007 3:54:00 PM	14.65	15.90	14.74	16.03
	72	8/27/2007 3:55:00 PM	14.63	15.89	14.76	16.02
	73	8/27/2007 3:56:00 PM	14.62	15.89	14.74	16.02
	74	8/27/2007 3:57:00 PM	14.60	15.88	14.71	16.06
	75	8/27/2007 3:58:00 PM	14.58	15.87	14.69	16.00
	76	8/27/2007 3:59:00 PM	14.57	15.88	14.67	16.01
	77	8/27/2007 4:00:00 PM	14.56	15.87	14.65	16.01
	78	8/27/2007 4:01:00 PM	14.53	15.87	14.63	16.01
	79	8/27/2007 4:02:00 PM	14.52	15.86	14.61	16.00
	80	8/27/2007 4:03:00 PM	14.51	15.86	14.58	16.00

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/27/2007 4:04:00 PM	14.49	15.85	14.56	16.00
	82	8/27/2007 4:05:00 PM	14.48	15.85	14.53	16.05
	83	8/27/2007 4:06:00 PM	14.46	15.84	14.50	16.03
	84	8/27/2007 4:07:00 PM	14.45	15.87	14.51	16.03
	85	8/27/2007 4:08:00 PM	14.43	15.83	14.49	16.03
	86	8/27/2007 4:09:00 PM	14.42	15.87	14.46	16.02
	87	8/27/2007 4:10:00 PM	14.41	15.86	14.43	16.02
	88	8/27/2007 4:11:00 PM	14.39	15.86	14.41	16.01
	89	8/27/2007 4:12:00 PM	14.38	15.82	14.38	16.01
	90	8/27/2007 4:13:00 PM	14.36	15.85	14.36	16.00
	91	8/27/2007 4:14:00 PM	14.35	15.81	14.34	16.01
	92	8/27/2007 4:15:00 PM	14.34	15.82	14.31	16.00
	93	8/27/2007 4:16:00 PM	14.32	15.81	14.29	16.00
	94	8/27/2007 4:17:00 PM	14.31	15.80	14.27	16.00
	95	8/27/2007 4:18:00 PM	14.29	15.80	14.25	16.00
	96	8/27/2007 4:19:00 PM	14.28	15.80	14.23	16.00
	97	8/27/2007 4:20:00 PM	14.26	15.80	14.21	16.00
	98	8/27/2007 4:21:00 PM	14.25	15.80	14.18	15.99
	99	8/27/2007 4:22:00 PM	14.24	15.79	14.17	15.99
	100	8/27/2007 4:23:00 PM	14.22	15.79	14.15	15.99
	101	8/27/2007 4:24:00 PM	14.21	15.79	14.13	15.99
	102	8/27/2007 4:25:00 PM	14.17	15.79	14.10	15.99
	103	8/27/2007 4:26:00 PM	14.19	15.78	14.09	15.99
	104	8/27/2007 4:27:00 PM	14.18	15.76	14.07	15.99
	105	8/27/2007 4:28:00 PM	14.17	15.76	14.02	15.99
	106	8/27/2007 4:29:00 PM	14.17	15.75	14.00	15.99
	107	8/27/2007 4:30:00 PM	14.16	15.75	13.97	15.98
	108	8/27/2007 4:31:00 PM	14.16	15.75	13.95	15.98
	109	8/27/2007 4:32:00 PM	14.16	15.75	13.94	15.98
	110	8/27/2007 4:33:00 PM	14.16	15.75	13.92	15.99
	111	8/27/2007 4:34:00 PM	14.18	15.74	13.90	15.99
	112	8/27/2007 4:35:00 PM	14.18	15.75	13.88	15.98
	113	8/27/2007 4:36:00 PM	14.18	15.75	13.86	15.94
	114	8/27/2007 4:37:00 PM	14.20	15.76	13.84	15.94
	115	8/27/2007 4:38:00 PM	14.18	15.77	13.82	15.94
	116	8/27/2007 4:39:00 PM	14.18	15.77	13.80	15.96
	117	8/27/2007 4:40:00 PM	14.19	15.79	13.78	15.94
	118	8/27/2007 4:41:00 PM	14.20	15.80	13.76	15.94
	119	8/27/2007 4:42:00 PM	14.21	15.82	13.74	15.94
	120	8/27/2007 4:43:00 PM	14.21	15.78	13.72	15.94
	121	8/27/2007 4:44:00 PM	14.22	15.81	13.70	15.94
	122	8/27/2007 4:45:00 PM	14.22	15.82	13.69	15.95
	123	8/27/2007 4:46:00 PM	14.22	15.84	13.67	15.95
	124	8/27/2007 4:47:00 PM	14.22	15.86	13.64	15.95
	125	8/27/2007 4:48:00 PM	14.23	15.88	13.63	15.95
	126	8/27/2007 4:49:00 PM	14.22	15.89	13.60	15.95
	127	8/27/2007 4:50:00 PM	14.22	15.93	13.58	15.95
	128	8/27/2007 4:51:00 PM	14.21	15.99	13.56	15.95
	129	8/27/2007 4:52:00 PM	14.22	16.00	13.54	15.95
	130	8/27/2007 4:53:00 PM	14.21	16.02	13.52	15.95

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/27/2007 4:54:00 PM	14.20	16.03	13.50	15.95
	132	8/27/2007 4:54:07 PM	14.20	16.03	13.48	15.95

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Handy logger

Name : **LOGGER 2**

LOG Name	08271444
Interval	00:01:00
Personnel	

Start	8/27/2007 2:44:44 PM
Stop	8/27/2007 4:53:58 PM
Comment	

Data	131
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.10	16.22	15.96	15.79
Minimum	0.07	-0.01	0.09	0.06
Average	14.88	14.77	14.48	14.32
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/27/2007 2:44:44 PM	0.08	0.01	0.13	v 0.06
	2	8/27/2007 2:45:00 PM	0.08	0.01	v 0.09	0.10
	3	8/27/2007 2:46:00 PM	0.08	0.00	0.13	0.09
	4	8/27/2007 2:47:00 PM	0.08	0.00	0.12	0.09
	5	8/27/2007 2:48:00 PM	v 0.07	v -0.01	0.11	0.08
	6	8/27/2007 2:49:00 PM	v 0.07	v -0.01	0.12	0.08
	7	8/27/2007 2:50:00 PM	v 0.07	0.01	0.12	0.08
	8	8/27/2007 2:51:00 PM	4.32	3.08	1.12	0.97
	9	8/27/2007 2:52:00 PM	8.46	7.42	2.78	2.64
	10	8/27/2007 2:53:00 PM	12.10	11.31	4.56	4.33
	11	8/27/2007 2:54:00 PM	15.25	14.71	6.44	6.16
	12	8/27/2007 2:55:00 PM	16.09	16.21	8.93	8.64
	13	8/27/2007 2:56:00 PM	16.09	16.18	11.50	11.15
	14	8/27/2007 2:57:00 PM	^ 16.10	16.19	14.03	13.65
	15	8/27/2007 2:58:00 PM	16.08	^ 16.22	^ 15.96	^ 15.79
	16	8/27/2007 2:59:00 PM	16.07	16.19	15.95	15.74
	17	8/27/2007 3:00:00 PM	16.09	16.17	15.92	15.73
	18	8/27/2007 3:01:00 PM	16.08	16.15	15.94	15.70
	19	8/27/2007 3:02:00 PM	16.06	16.16	15.93	15.73
	20	8/27/2007 3:03:00 PM	16.06	16.16	15.94	15.71
	21	8/27/2007 3:04:00 PM	16.08	16.14	15.95	15.69
	22	8/27/2007 3:05:00 PM	16.08	16.13	15.94	15.72
	23	8/27/2007 3:06:00 PM	16.07	16.11	15.93	15.71
	24	8/27/2007 3:07:00 PM	16.06	16.11	15.93	15.70
	25	8/27/2007 3:08:00 PM	16.07	16.10	15.92	15.70
	26	8/27/2007 3:09:00 PM	16.06	16.09	15.93	15.71
	27	8/27/2007 3:10:00 PM	16.05	16.08	15.93	15.70
	28	8/27/2007 3:11:00 PM	16.05	16.07	15.92	15.71
	29	8/27/2007 3:12:00 PM	16.04	16.07	15.91	15.71
	30	8/27/2007 3:13:00 PM	16.04	16.05	15.91	15.70

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/27/2007 3:14:00 PM	16.04	16.05	15.91	15.70
	32	8/27/2007 3:15:00 PM	16.03	16.04	15.91	15.70
	33	8/27/2007 3:16:00 PM	16.03	16.03	^ 15.96	15.69
	34	8/27/2007 3:17:00 PM	16.02	16.02	15.95	15.69
	35	8/27/2007 3:18:00 PM	16.01	16.04	^ 15.96	15.69
	36	8/27/2007 3:19:00 PM	16.01	16.03	15.95	15.69
	37	8/27/2007 3:20:00 PM	16.00	16.02	15.94	15.69
	38	8/27/2007 3:21:00 PM	15.99	16.03	15.95	15.68
	39	8/27/2007 3:22:00 PM	16.00	16.01	15.94	15.69
	40	8/27/2007 3:23:00 PM	15.99	16.01	15.94	15.68
	41	8/27/2007 3:24:00 PM	15.99	16.01	15.93	15.68
	42	8/27/2007 3:25:00 PM	15.99	15.98	15.94	15.68
	43	8/27/2007 3:26:00 PM	15.98	15.97	15.93	15.68
	44	8/27/2007 3:27:00 PM	15.97	15.97	15.93	15.69
	45	8/27/2007 3:28:00 PM	15.97	15.96	15.88	15.69
	46	8/27/2007 3:29:00 PM	15.97	15.96	15.88	15.69
	47	8/27/2007 3:30:00 PM	15.98	15.93	15.87	15.69
	48	8/27/2007 3:31:00 PM	15.97	15.95	15.88	15.70
	49	8/27/2007 3:32:00 PM	15.97	15.94	15.87	15.69
	50	8/27/2007 3:33:00 PM	15.97	15.93	15.87	15.67
	51	8/27/2007 3:34:00 PM	15.97	15.93	15.87	15.69
	52	8/27/2007 3:35:00 PM	15.96	15.92	15.86	15.70
	53	8/27/2007 3:36:00 PM	15.96	15.89	15.86	15.67
	54	8/27/2007 3:37:00 PM	15.96	15.88	15.87	15.67
	55	8/27/2007 3:38:00 PM	15.95	15.87	15.87	15.66
	56	8/27/2007 3:39:00 PM	15.96	15.88	15.86	15.67
	57	8/27/2007 3:40:00 PM	15.96	15.86	15.86	15.67
	58	8/27/2007 3:41:00 PM	15.96	15.87	15.86	15.67
	59	8/27/2007 3:42:00 PM	15.96	15.86	15.85	15.67
	60	8/27/2007 3:43:00 PM	15.96	15.86	15.85	15.68
	61	8/27/2007 3:44:00 PM	15.95	15.85	15.85	15.67
	62	8/27/2007 3:45:00 PM	15.95	15.85	15.85	15.67
	63	8/27/2007 3:46:00 PM	15.94	15.84	15.84	15.67
	64	8/27/2007 3:47:00 PM	15.95	15.84	15.84	15.66
	65	8/27/2007 3:48:00 PM	15.90	15.83	15.84	15.66
	66	8/27/2007 3:49:00 PM	15.90	15.83	15.84	15.65
	67	8/27/2007 3:50:00 PM	15.90	15.82	15.83	15.66
	68	8/27/2007 3:51:00 PM	15.90	15.81	15.82	15.65
	69	8/27/2007 3:52:00 PM	15.89	15.81	15.82	15.65
	70	8/27/2007 3:53:00 PM	15.89	15.81	15.82	15.65
	71	8/27/2007 3:54:00 PM	15.89	15.80	15.82	15.64
	72	8/27/2007 3:55:00 PM	15.93	15.79	15.81	15.64
	73	8/27/2007 3:56:00 PM	15.88	15.78	15.80	15.64
	74	8/27/2007 3:57:00 PM	15.92	15.78	15.80	15.64
	75	8/27/2007 3:58:00 PM	15.87	15.77	15.80	15.64
	76	8/27/2007 3:59:00 PM	15.92	15.77	15.79	15.64
	77	8/27/2007 4:00:00 PM	15.87	15.77	15.79	15.64
	78	8/27/2007 4:01:00 PM	15.90	15.77	15.78	15.63
	79	8/27/2007 4:02:00 PM	15.87	15.76	15.78	15.62
	80	8/27/2007 4:03:00 PM	15.90	15.76	15.78	15.62

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/27/2007 4:04:00 PM	15.85	15.75	15.77	15.62
	82	8/27/2007 4:05:00 PM	15.89	15.74	15.77	15.62
	83	8/27/2007 4:06:00 PM	15.89	15.74	15.77	15.62
	84	8/27/2007 4:07:00 PM	15.88	15.73	15.76	15.61
	85	8/27/2007 4:08:00 PM	15.88	15.73	15.76	15.61
	86	8/27/2007 4:09:00 PM	15.88	15.72	15.75	15.60
	87	8/27/2007 4:10:00 PM	15.83	15.72	15.76	15.60
	88	8/27/2007 4:11:00 PM	15.87	15.71	15.75	15.60
	89	8/27/2007 4:12:00 PM	15.83	15.71	15.74	15.60
	90	8/27/2007 4:13:00 PM	15.86	15.71	15.73	15.59
	91	8/27/2007 4:14:00 PM	15.82	15.70	15.74	15.60
	92	8/27/2007 4:15:00 PM	15.85	15.70	15.73	15.60
	93	8/27/2007 4:16:00 PM	15.83	15.70	15.69	15.59
	94	8/27/2007 4:17:00 PM	15.82	15.70	15.69	15.60
	95	8/27/2007 4:18:00 PM	15.82	15.69	15.68	15.59
	96	8/27/2007 4:19:00 PM	15.81	15.69	15.68	15.59
	97	8/27/2007 4:20:00 PM	15.82	15.68	15.68	15.59
	98	8/27/2007 4:21:00 PM	15.82	15.65	15.67	15.60
	99	8/27/2007 4:22:00 PM	15.82	15.65	15.67	15.59
	100	8/27/2007 4:23:00 PM	15.79	15.64	15.67	15.55
	101	8/27/2007 4:24:00 PM	15.81	15.64	15.67	15.54
	102	8/27/2007 4:25:00 PM	15.82	15.64	15.67	15.55
	103	8/27/2007 4:26:00 PM	15.81	15.63	15.66	15.55
	104	8/27/2007 4:27:00 PM	15.81	15.63	15.66	15.55
	105	8/27/2007 4:28:00 PM	15.77	15.62	15.65	15.55
	106	8/27/2007 4:29:00 PM	15.80	15.62	15.65	15.55
	107	8/27/2007 4:30:00 PM	15.77	15.61	15.65	15.55
	108	8/27/2007 4:31:00 PM	15.77	15.60	15.65	15.55
	109	8/27/2007 4:32:00 PM	15.79	15.60	15.65	15.54
	110	8/27/2007 4:33:00 PM	15.77	15.60	15.64	15.54
	111	8/27/2007 4:34:00 PM	15.77	15.60	15.64	15.54
	112	8/27/2007 4:35:00 PM	15.76	15.59	15.64	15.54
	113	8/27/2007 4:36:00 PM	15.75	15.59	15.63	15.54
	114	8/27/2007 4:37:00 PM	15.76	15.58	15.63	15.54
	115	8/27/2007 4:38:00 PM	15.76	15.58	15.63	15.54
	116	8/27/2007 4:39:00 PM	15.75	15.57	15.62	15.54
	117	8/27/2007 4:40:00 PM	15.75	15.57	15.59	15.54
	118	8/27/2007 4:41:00 PM	15.74	15.56	15.60	15.53
	119	8/27/2007 4:42:00 PM	15.74	15.57	15.57	15.53
	120	8/27/2007 4:43:00 PM	15.74	15.56	15.56	15.50
	121	8/27/2007 4:44:00 PM	15.74	15.56	15.57	15.50
	122	8/27/2007 4:45:00 PM	15.74	15.56	15.56	15.49
	123	8/27/2007 4:46:00 PM	15.74	15.55	15.56	15.50
	124	8/27/2007 4:47:00 PM	15.74	15.55	15.55	15.50
	125	8/27/2007 4:48:00 PM	15.73	15.55	15.55	15.50
	126	8/27/2007 4:49:00 PM	15.73	15.54	15.55	15.50
	127	8/27/2007 4:50:00 PM	15.73	15.54	15.54	15.49
	128	8/27/2007 4:51:00 PM	15.73	15.53	15.54	15.49
	129	8/27/2007 4:52:00 PM	15.72	15.53	15.53	15.49
	130	8/27/2007 4:53:00 PM	15.73	15.52	15.53	15.49

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Name : LOGGER 2

Handy logger

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/27/2007 4:53:58 PM	15.71	15.52	15.52	15.49

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Handy logger

Name : **LOGGER 1**

LOG Name	08281348
Interval	00:01:00
Personnel	

Start	8/28/2007 1:48:16 PM
Stop	8/28/2007 4:00:59 PM
Comment	

Data	134
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	1.40	1.78	15.73	15.85
Minimum	-7.50	-7.50	-7.34	-7.35
Average	-4.82	-4.58	14.51	14.67
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	8/28/2007 1:48:16 PM	0.01	0.05	-0.01	0.14
	2	8/28/2007 1:49:00 PM	0.05	0.08	0.06	0.18
	3	8/28/2007 1:50:00 PM	0.07	0.07	1.93	1.90
	4	8/28/2007 1:51:00 PM	0.06	0.10	3.26	3.18
	5	8/28/2007 1:52:00 PM	0.06	0.09	4.34	4.35
	6	8/28/2007 1:53:00 PM	0.06	0.09	5.44	5.48
	7	8/28/2007 1:54:00 PM	0.05	0.08	6.54	6.62
	8	8/28/2007 1:55:00 PM	0.05	0.08	7.64	7.77
	9	8/28/2007 1:56:00 PM	0.05	0.09	8.75	8.93
	10	8/28/2007 1:57:00 PM	0.05	0.08	9.86	10.10
	11	8/28/2007 1:58:00 PM	0.06	0.08	11.02	11.27
	12	8/28/2007 1:59:00 PM	0.05	0.08	12.16	12.49
	13	8/28/2007 2:00:00 PM	0.05	0.08	13.31	13.69
	14	8/28/2007 2:01:00 PM	0.05	0.08	15.01	15.47
	15	8/28/2007 2:02:00 PM	0.05	0.08	^ 15.73	15.84
	16	8/28/2007 2:03:00 PM	1.39	1.77	15.69	15.83
	17	8/28/2007 2:04:00 PM	^ 1.40	1.66	15.67	15.84
	18	8/28/2007 2:05:00 PM	1.39	^ 1.78	15.69	^ 15.85
	19	8/28/2007 2:06:00 PM	0.06	0.09	15.68	15.84
	20	8/28/2007 2:07:00 PM	0.04	0.06	15.66	15.83
	21	8/28/2007 2:08:00 PM	0.05	0.06	15.68	15.82
	22	8/28/2007 2:09:00 PM	0.04	0.04	15.68	15.82
	23	8/28/2007 2:10:00 PM	0.03	0.06	15.67	15.81
	24	8/28/2007 2:11:00 PM	0.02	0.05	15.68	15.81
	25	8/28/2007 2:12:00 PM	0.01	0.04	15.67	15.81
	26	8/28/2007 2:13:00 PM	0.01	0.04	15.67	15.83
	27	8/28/2007 2:14:00 PM	0.01	0.03	15.67	15.81
	28	8/28/2007 2:15:00 PM	0.02	0.04	15.67	15.82
	29	8/28/2007 2:16:00 PM	0.01	0.04	15.67	15.81
	30	8/28/2007 2:17:00 PM	0.02	0.04	15.67	15.81

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	8/28/2007 2:18:00 PM	0.02	0.05	15.67	15.82
	32	8/28/2007 2:19:00 PM	0.03	0.06	15.67	15.80
	33	8/28/2007 2:20:00 PM	0.03	0.06	15.67	15.81
	34	8/28/2007 2:21:00 PM	0.03	0.07	15.67	15.81
	35	8/28/2007 2:22:00 PM	0.04	0.07	15.66	15.80
	36	8/28/2007 2:23:00 PM	0.04	0.08	15.67	15.80
	37	8/28/2007 2:24:00 PM	0.04	0.08	15.67	15.81
	38	8/28/2007 2:25:00 PM	0.05	0.09	15.67	15.81
	39	8/28/2007 2:26:00 PM	0.05	0.06	15.67	15.80
	40	8/28/2007 2:27:00 PM	0.06	0.06	15.67	15.80
	41	8/28/2007 2:28:00 PM	0.06	0.07	15.67	15.80
	42	8/28/2007 2:29:00 PM	0.07	0.07	15.66	15.80
	43	8/28/2007 2:30:00 PM	0.07	0.08	15.63	15.80
	44	8/28/2007 2:31:00 PM	0.04	0.09	15.63	15.80
	45	8/28/2007 2:32:00 PM	0.05	0.10	15.63	15.80
	46	8/28/2007 2:33:00 PM	0.05	0.09	15.63	15.80
	47	8/28/2007 2:34:00 PM	0.05	0.07	15.63	15.80
	48	8/28/2007 2:35:00 PM	v -7.50	0.07	15.63	15.80
	49	8/28/2007 2:36:00 PM	v -7.50	0.07	15.62	15.80
	50	8/28/2007 2:37:00 PM	v -7.50	0.07	15.62	15.80
	51	8/28/2007 2:38:00 PM	v -7.50	0.08	15.62	15.79
	52	8/28/2007 2:39:00 PM	v -7.50	v -7.50	15.62	15.79
	53	8/28/2007 2:40:00 PM	v -7.50	v -7.50	15.61	15.79
	54	8/28/2007 2:41:00 PM	v -7.50	v -7.50	15.61	15.79
	55	8/28/2007 2:42:00 PM	v -7.50	v -7.50	15.61	15.79
	56	8/28/2007 2:43:00 PM	v -7.50	v -7.50	15.61	15.79
	57	8/28/2007 2:44:00 PM	v -7.50	v -7.50	15.61	15.79
	58	8/28/2007 2:45:00 PM	v -7.50	v -7.50	15.61	15.79
	59	8/28/2007 2:46:00 PM	v -7.50	v -7.50	15.60	15.79
	60	8/28/2007 2:47:00 PM	v -7.50	v -7.50	15.61	15.79
	61	8/28/2007 2:48:00 PM	v -7.50	v -7.50	15.61	15.79
	62	8/28/2007 2:49:00 PM	v -7.50	v -7.50	15.62	15.77
	63	8/28/2007 2:50:00 PM	v -7.50	v -7.50	15.61	15.77
	64	8/28/2007 2:51:00 PM	v -7.50	v -7.50	15.61	15.76
	65	8/28/2007 2:52:00 PM	v -7.50	v -7.50	15.61	15.76
	66	8/28/2007 2:53:00 PM	v -7.50	v -7.50	15.60	15.77
	67	8/28/2007 2:54:00 PM	v -7.50	v -7.50	15.61	15.76
	68	8/28/2007 2:55:00 PM	v -7.50	v -7.50	15.60	15.76
	69	8/28/2007 2:56:00 PM	v -7.50	v -7.50	15.60	15.76
	70	8/28/2007 2:57:00 PM	v -7.50	v -7.50	15.60	15.75
	71	8/28/2007 2:58:00 PM	v -7.50	v -7.50	15.60	15.75
	72	8/28/2007 2:59:00 PM	v -7.50	v -7.50	15.59	15.75
	73	8/28/2007 3:00:00 PM	v -7.50	v -7.50	15.60	15.75
	74	8/28/2007 3:01:00 PM	v -7.50	v -7.50	15.59	15.75
	75	8/28/2007 3:02:00 PM	v -7.50	v -7.50	15.59	15.75
	76	8/28/2007 3:03:00 PM	v -7.50	v -7.50	15.58	15.74
	77	8/28/2007 3:04:00 PM	v -7.50	v -7.50	15.58	15.74
	78	8/28/2007 3:05:00 PM	v -7.50	v -7.50	15.58	15.74
	79	8/28/2007 3:06:00 PM	v -7.50	v -7.50	15.58	15.74
	80	8/28/2007 3:07:00 PM	v -7.50	v -7.50	15.58	15.74

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/28/2007 3:08:00 PM	v -7.50	v -7.50	15.58	15.73
	82	8/28/2007 3:09:00 PM	v -7.50	v -7.50	15.58	15.70
	83	8/28/2007 3:10:00 PM	v -7.50	v -7.50	15.57	15.69
	84	8/28/2007 3:11:00 PM	v -7.50	v -7.50	15.58	15.69
	85	8/28/2007 3:12:00 PM	v -7.50	v -7.50	15.57	15.69
	86	8/28/2007 3:13:00 PM	v -7.50	v -7.50	15.53	15.69
	87	8/28/2007 3:14:00 PM	v -7.50	v -7.50	15.53	15.69
	88	8/28/2007 3:15:00 PM	v -7.50	v -7.50	15.53	15.69
	89	8/28/2007 3:16:00 PM	v -7.50	v -7.50	15.53	15.68
	90	8/28/2007 3:17:00 PM	v -7.50	v -7.50	15.52	15.68
	91	8/28/2007 3:18:00 PM	v -7.50	v -7.50	15.52	15.70
	92	8/28/2007 3:19:00 PM	v -7.50	v -7.50	15.51	15.71
	93	8/28/2007 3:20:00 PM	v -7.50	v -7.50	15.51	15.67
	94	8/28/2007 3:21:00 PM	v -7.50	v -7.50	15.51	15.66
	95	8/28/2007 3:22:00 PM	v -7.50	v -7.50	15.51	15.70
	96	8/28/2007 3:23:00 PM	v -7.50	v -7.50	15.51	15.70
	97	8/28/2007 3:24:00 PM	v -7.50	v -7.50	15.50	15.67
	98	8/28/2007 3:25:00 PM	v -7.50	v -7.50	15.50	15.69
	99	8/28/2007 3:26:00 PM	v -7.50	v -7.50	15.50	15.65
	100	8/28/2007 3:27:00 PM	v -7.50	v -7.50	15.50	15.69
	101	8/28/2007 3:28:00 PM	v -7.50	v -7.50	15.50	15.65
	102	8/28/2007 3:29:00 PM	v -7.50	v -7.50	15.50	15.64
	103	8/28/2007 3:30:00 PM	v -7.50	v -7.50	15.49	15.64
	104	8/28/2007 3:31:00 PM	v -7.50	v -7.50	15.49	15.64
	105	8/28/2007 3:32:00 PM	v -7.50	v -7.50	15.49	15.64
	106	8/28/2007 3:33:00 PM	v -7.50	v -7.50	15.49	15.64
	107	8/28/2007 3:34:00 PM	v -7.50	v -7.50	15.49	15.66
	108	8/28/2007 3:35:00 PM	v -7.50	v -7.50	15.53	15.62
	109	8/28/2007 3:36:00 PM	v -7.50	v -7.50	15.52	15.66
	110	8/28/2007 3:37:00 PM	v -7.50	v -7.50	15.51	15.65
	111	8/28/2007 3:38:00 PM	v -7.50	v -7.50	15.50	15.66
	112	8/28/2007 3:39:00 PM	v -7.50	v -7.50	15.46	15.65
	113	8/28/2007 3:40:00 PM	v -7.50	v -7.50	15.46	15.65
	114	8/28/2007 3:41:00 PM	v -7.50	v -7.50	15.46	15.65
	115	8/28/2007 3:42:00 PM	v -7.50	v -7.50	15.45	15.64
	116	8/28/2007 3:43:00 PM	v -7.50	v -7.50	15.45	15.64
	117	8/28/2007 3:44:00 PM	v -7.50	v -7.50	15.45	15.63
	118	8/28/2007 3:45:00 PM	v -7.50	v -7.50	15.44	15.63
	119	8/28/2007 3:46:00 PM	v -7.50	v -7.50	15.44	15.62
	120	8/28/2007 3:47:00 PM	v -7.50	v -7.50	15.42	15.62
	121	8/28/2007 3:48:00 PM	v -7.50	v -7.50	15.48	15.62
	122	8/28/2007 3:49:00 PM	v -7.50	v -7.50	15.43	15.61
	123	8/28/2007 3:50:00 PM	v -7.50	v -7.50	v -7.34	v -7.35
	124	8/28/2007 3:51:00 PM	v -7.50	v -7.50	15.37	15.58
	125	8/28/2007 3:52:00 PM	v -7.50	v -7.50	15.41	15.58
	126	8/28/2007 3:53:00 PM	v -7.50	v -7.50	15.44	15.57
	127	8/28/2007 3:54:00 PM	v -7.50	v -7.50	15.43	15.57
	128	8/28/2007 3:55:00 PM	v -7.50	v -7.50	15.43	15.56
	129	8/28/2007 3:56:00 PM	v -7.50	v -7.50	15.42	15.56
	130	8/28/2007 3:57:00 PM	v -7.50	v -7.50	15.41	15.56

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Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	131	8/28/2007 3:58:00 PM	v -7.50	v -7.50	15.41	15.59
	132	8/28/2007 3:59:00 PM	v -7.50	v -7.50	15.41	15.55
	133	8/28/2007 4:00:00 PM	v -7.50	v -7.50	15.40	15.58
	134	8/28/2007 4:00:59 PM	v -7.50	v -7.50	15.39	15.58

printed 1/11/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	8/28/2007 3:08:00 PM	v -7.50	v -7.50	15.94	15.88
	82	8/28/2007 3:09:00 PM	v -7.50	v -7.50	15.94	15.87
	83	8/28/2007 3:10:00 PM	v -7.50	v -7.50	15.94	15.88
	84	8/28/2007 3:11:00 PM	v -7.50	v -7.50	15.94	15.87
	85	8/28/2007 3:12:00 PM	v -7.50	v -7.50	15.93	15.87
	86	8/28/2007 3:13:00 PM	v -7.50	v -7.50	15.93	15.87
	87	8/28/2007 3:14:00 PM	v -7.50	v -7.50	15.93	15.87
	88	8/28/2007 3:15:00 PM	v -7.50	v -7.50	15.93	15.87
	89	8/28/2007 3:16:00 PM	v -7.50	v -7.50	15.93	15.87
	90	8/28/2007 3:17:00 PM	v -7.50	v -7.50	15.96	15.86
	91	8/28/2007 3:18:00 PM	v -7.50	v -7.50	15.96	15.86
	92	8/28/2007 3:19:00 PM	v -7.50	v -7.50	15.93	15.87
	93	8/28/2007 3:20:00 PM	v -7.50	v -7.50	15.93	15.87
	94	8/28/2007 3:21:00 PM	v -7.50	v -7.50	15.93	15.87
	95	8/28/2007 3:22:00 PM	v -7.50	v -7.50	15.93	15.87
	96	8/28/2007 3:23:00 PM	v -7.50	v -7.50	15.93	15.87
	97	8/28/2007 3:24:00 PM	v -7.50	v -7.50	15.93	15.87
	98	8/28/2007 3:25:00 PM	v -7.50	v -7.50	15.93	15.87
	99	8/28/2007 3:26:00 PM	v -7.50	v -7.50	15.93	15.86
	100	8/28/2007 3:27:00 PM	v -7.50	v -7.50	15.93	15.83
	101	8/28/2007 3:28:00 PM	v -7.50	v -7.50	15.93	15.88
	102	8/28/2007 3:29:00 PM	v -7.50	v -7.50	15.94	15.82
	103	8/28/2007 3:30:00 PM	v -7.50	v -7.50	15.93	15.83
	104	8/28/2007 3:31:00 PM	v -7.50	v -7.50	15.93	15.83
	105	8/28/2007 3:32:00 PM	v -7.50	v -7.50	15.93	15.87
	106	8/28/2007 3:33:00 PM	v -7.50	v -7.50	15.93	15.87
	107	8/28/2007 3:34:00 PM	v -7.50	v -7.50	15.93	15.87
	108	8/28/2007 3:35:00 PM	v -7.50	v -7.50	15.93	15.87
	109	8/28/2007 3:36:00 PM	v -7.50	v -7.50	15.93	15.87
	110	8/28/2007 3:37:00 PM	v -7.50	v -7.50	15.92	15.86
	111	8/28/2007 3:38:00 PM	v -7.50	v -7.50	15.92	15.86
	112	8/28/2007 3:39:00 PM	v -7.50	v -7.50	15.92	15.86
	113	8/28/2007 3:40:00 PM	v -7.50	v -7.50	15.92	15.86
	114	8/28/2007 3:41:00 PM	v -7.50	v -7.50	15.92	15.87
	115	8/28/2007 3:42:00 PM	v -7.50	v -7.50	15.92	15.86
	116	8/28/2007 3:43:00 PM	v -7.50	v -7.50	15.92	15.86
	117	8/28/2007 3:44:00 PM	v -7.50	v -7.50	15.92	15.86
	118	8/28/2007 3:45:00 PM	v -7.50	v -7.50	15.92	15.86
	119	8/28/2007 3:46:00 PM	v -7.50	v -7.50	15.91	15.86
	120	8/28/2007 3:47:00 PM	v -7.50	v -7.50	15.91	15.85
	121	8/28/2007 3:48:00 PM	v -7.50	v -7.50	15.91	15.85
	122	8/28/2007 3:49:00 PM	v -7.50	v -7.50	15.91	15.85
	123	8/28/2007 3:50:00 PM	v -7.50	v -7.50	v -7.50	v -7.50
	124	8/28/2007 3:51:00 PM	v -7.50	v -7.50	15.98	15.70
	125	8/28/2007 3:52:00 PM	v -7.50	v -7.50	16.02	15.70
	126	8/28/2007 3:53:00 PM	v -7.50	v -7.50	16.01	15.74
	127	8/28/2007 3:54:00 PM	v -7.50	v -7.50	16.00	15.77
	128	8/28/2007 3:55:00 PM	v -7.50	v -7.50	16.00	15.77
	129	8/28/2007 3:56:00 PM	v -7.50	v -7.50	16.00	15.77
	130	8/28/2007 3:57:00 PM	v -7.50	v -7.50	16.00	15.77

Fort Carson Phase II and III Pressure Test Analysis

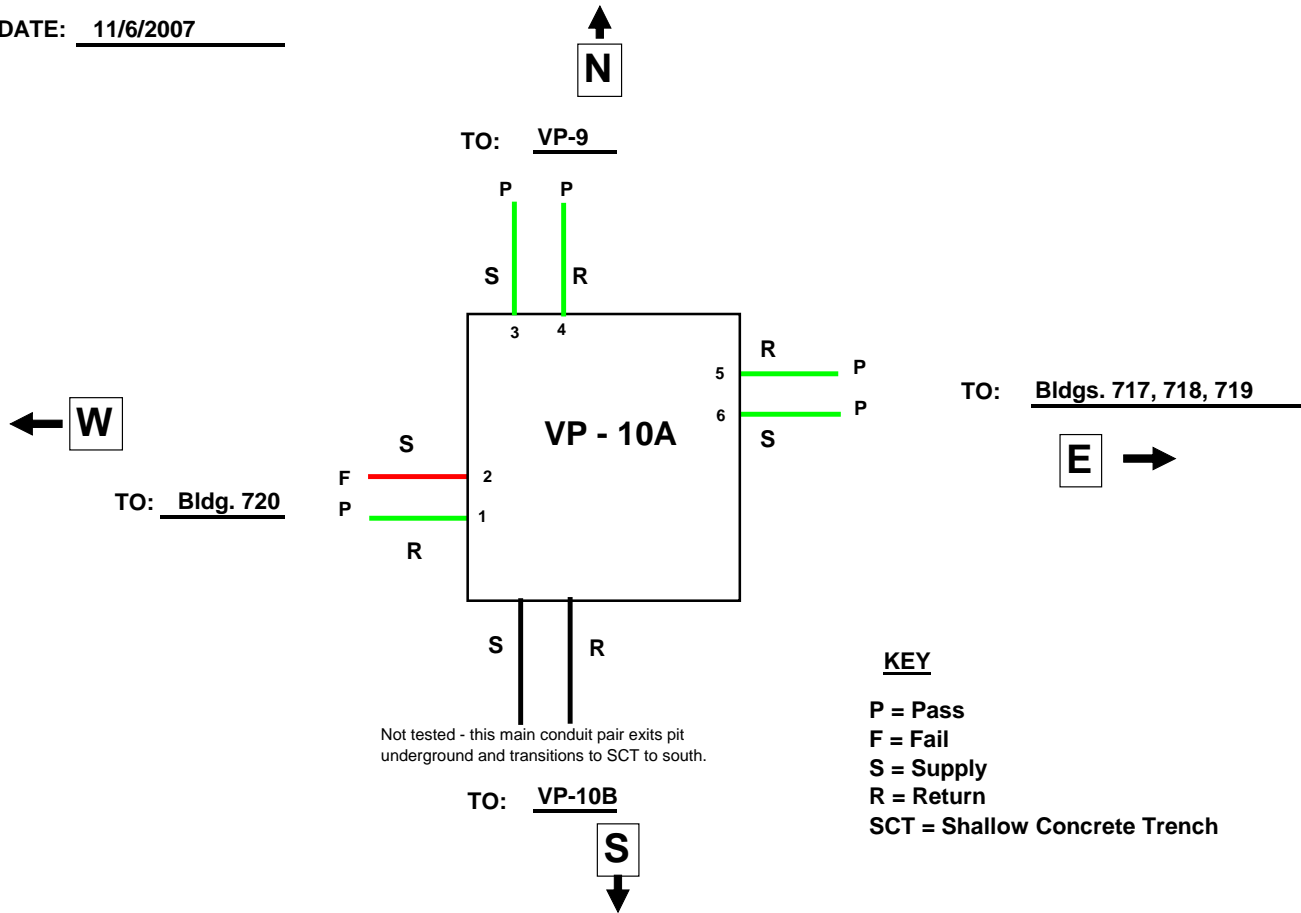
Ft. Carson Pressure Test Results

FROM	TO	S/R	P-Start	P-End	Delta P	% Drop	Pass/Fail (Current)	Pass/Fail (Change)
SOUTH LOOP								
MH-1S	MH-2S	S	15.96	13.83	2.13	13.3%	P	F
		R	15.96	14.34	1.62	10.2%	P	F
	1856	S	15.98	15.03	0.95	5.9%	P	
		R	15.41	15.04	0.37	2.4%	P	
	MAIN PLANT	S	13.92	13.35	0.57	4.1%	F	P
		R	13.87	12.43	1.44	10.4%	F	
1864	S	15.71	10.35	5.36	34.1%	F		
	R	15.85	10.93	4.92	31.0%	F		
MH-2S	1855	S	15.97	14.22	1.75	11.0%	P	F
		R	16.21	13.23	2.98	18.4%	F	
MH-4S	MH-6S	S	*				F	
		R	*				F	
	MH-1S	S	15.93	15.28	0.65	4.1%	P	
		R	15.70	13.83	1.87	11.9%	P	F
MH-5S	1850	S	15.94	15.22	0.72	4.5%	P	
		R	15.72	15.26	0.46	2.9%	P	
	1851	S	16.34	15.33	1.01	6.2%	P	
		R	15.96	15.95	0.01	0.1%	P	
	MH-4S	S	15.77	13.46	2.31	14.6%	P	F
		R	15.61	13.74	1.87	12.0%	P	F
	1852	S	15.85	11.63	4.22	26.6%	F	
		R	18.11	17.59	0.52	2.9%	P	
MH-6S	1853	S	15.84	12.44	3.40	21.5%	F	
		R	15.95	13.19	2.76	17.3%	F	
	1854	S	15.70	15.20	0.50	3.2%	P	
		R	15.90	13.88	2.02	12.7%	P	F
MH-7S	MH-6S	S	15.37	13.78	1.59	10.3%	P	F
		R	15.45	14.95	0.50	3.2%	P	
	MH-9S	S	15.13	14.95	0.18	1.2%	P	
		R	*				F	
	MH-8S	S	15.99	13.83	2.16	13.5%	P	F
		R	15.96	11.70	4.26	26.7%	F	
MH-8S	1954	S	15.95	15.92	0.03	0.2%	P	
		R	16.36	15.68	0.68	4.2%	P	
	1955	S	16.05	15.81	0.24	1.5%	P	
		R	16.31	16.21	0.10	0.6%	P	
	1950	S	16.92	13.84	3.08	18.2%	P	F
		R	16.41	15.92	0.49	3.0%	P	
	1951	S	16.22	15.41	0.81	5.0%	P	
		R	15.79	15.42	0.37	2.3%	P	
MH-10S	MH-9S	S	15.78	13.32	2.46	15.6%	F	
		R	15.31	13.46	1.85	12.1%	F	
	1958	S	15.97	13.15	2.82	17.7%	F	
		R	16.88	14.98	1.90	11.3%	P	F
	2058	S	15.90	12.51	3.39	21.3%	F	
		R	15.97	14.02	1.95	12.2%	P	F
MH-12S	MH-13S	S	15.98	10.71	5.27	33.0%	F	
		R	16.24	13.97	2.27	14.0%	P	F
	MH-9S	S	15.97	14.70	1.27	8.0%	P	
		R	15.90	13.64	2.26	14.2%	F	
MH-13S	1953	S	15.95	12.42	3.53	22.1%	F	
		R	15.99	15.33	0.66	4.1%	P	
	2050	S	16.34	15.61	0.73	4.5%	P	
		R	15.93	12.87	3.06	19.2%	F	
	2051	S	15.98	14.57	1.41	8.8%	P	
		R	16.13	15.33	0.80	5.0%	P	
	1952	S	16.11	15.64	0.47	2.9%	P	
		R	16.02	15.70	0.32	2.0%	P	

FROM	TO	S/R	P-Start	P-End	Delta P	% Drop	Pass/Fail (Current)	Pass/Fail (Change)
MH-17S	2061	S	16.18	12.41	3.77	23.3%	F	
		R	15.97	13.37	2.60	16.3%	F	
	2052	S	16.46	14.55	1.91	11.6%	P	F
		R	16.20	16.41	-0.21	-1.3%	P	
	2053	S	15.99	13.62	2.37	14.8%	F	
		R	15.87	9.85	6.02	37.9%	F	
	2056	S	16.48	11.85	4.63	28.1%	F	
		R	16.13	15.19	0.94	5.8%	P	
	2054	S	15.91	7.97	7.94	49.9%	F	
		R	16.50	15.80	0.70	4.2%	P	
MH-19S	2074	S	16.59	15.33	1.26	7.6%	P	
		R	16.45	11.64	4.81	29.2%	F	
	2075	S	16.94	14.79	2.15	12.7%	P	F
		R	16.10	14.47	1.63	10.1%	P	F
	2070	S	15.90	9.97	5.93	37.3%	F	
		R	15.96	13.26	2.70	16.9%	F	
	2071	S	15.99	13.38	2.61	16.3%	F	
		R	15.99	15.70	0.29	1.8%	P	
	2060	S	16.30	12.90	3.40	20.9%	F	
		R	16.41	15.94	0.47	2.9%	P	
MH-20S	MH-18S	S	15.91	15.15	0.76	4.8%	P	
		R	NO TEST					
	MH-26S	S	*				F	
		R	*				F	
MH-21S	MH-20S	S	16.30	12.75	3.55	21.8%	F	
		R	15.97	12.50	3.47	21.7%	F	
	2078	S	15.89	7.00	8.89	55.9%	F	
		R	16.30	8.82	7.48	45.9%	F	
	2158	S	16.10	13.90	2.20	13.7%	F	
		R	15.98	9.29	6.69	41.9%	F	
MH-22S	MH-25S	S	15.97	13.39	2.58	16.2%	F	
		R	15.99	14.76	1.23	7.7%	P	
	MH-20S	S	16.31	14.79	1.52	9.3%	P	
		R	16.22	11.10	5.12	31.6%	F	
MH-25S	2073	S	15.43	12.43	3.00	19.4%	F	
		R	16.04	12.61	3.43	21.4%	F	
	2150	S	15.27	13.35	1.92	12.6%	F	
		R	15.55	13.61	1.94	12.5%	F	
	2151	S	15.88	15.02	0.86	5.4%	P	
		R	15.65	15.03	0.62	4.0%	P	
	2072	S	15.93	13.92	2.01	12.6%	P	F
		R	16.59	15.30	1.29	7.8%	P	
MH-27S	2161	S	*				F	
		R	16.55	15.04	1.51	9.1%	P	
	2152	S	14.72	14.42	0.30	2.0%	P	
		R	14.89	13.29	1.60	10.7%	F	
	2153	S	16.37	12.20	4.17	25.5%	F	
		R	16.59	14.43	2.16	13.0%	P	F
	2156	S	16.26	15.32	0.94	5.8%	P	
		R	16.29	14.46	1.83	11.2%	P	F
	2154	S	16.33	15.10	1.23	7.5%	P	
		R	16.68	16.08	0.60	3.6%	P	
MH-30S	2254	S	15.64	12.64	3.00	19.2%	F	
		R	14.91	9.41	5.50	36.9%	F	
	2255	S	15.34	10.15	5.19	33.8%	F	
		R	14.49	7.00	7.49	51.7%	F	
	2250	S	14.87	1.75	13.12	88.2%	F	
		R	16.09	7.13	8.96	55.7%	F	
	2251	S	16.52	13.93	2.59	15.7%	F	
		R	16.49	14.07	2.42	14.7%	F	
	2160	S	15.71	12.41	3.30	21.0%	F	
		R	16.42	13.03	3.39	20.6%	F	

Fort Stewart Phase II Valve Pit and Pressure Test Data

DATE: 11/6/2007



NOTES:

1. Pit is clean and dry. All conduit drains dry at exits from pit.

VP - 10A					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Return to Bldg. 720	P	Top of conduit 37" below grade at exit from pit
	2	2	Supply to Bldg. 720	F	Top of conduit 37" below grade at exit from pit
	3	3	Supply to VP-9 (Main)	P	Top of conduit 34" below grade at exit from pit
	4	4	Return to VP-9 (Main)	P	Top of conduit 34" below grade at exit from pit
2	1	5	Return to Bldgs. 717, 718, 719	P	Top of conduit 37" below grade at exit from pit
	2	6	Supply to Bldgs. 717, 718, 719	P	Top of conduit 37" below grade at exit from pit

printed 1/15/2008

Handy logger

Name : LOGGER 1

LOG Name	11060943
Interval	00:01:00
Personnel	

Start	11/6/2007 9:43:09 AM
Stop	11/6/2007 11:50:00 AM
Comment	

Data	129
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	16.86	18.35	16.27	15.57
Minimum	-0.19	-0.06	0.10	0.17
Average	15.89	15.21	15.16	15.07
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/6/2007 9:43:09 AM	v -0.19	v -0.06	v 0.10	v 0.17
	2	11/6/2007 9:44:00 AM	^ 16.86	15.18	0.11	0.54
	3	11/6/2007 9:45:00 AM	16.23	18.32	8.79	9.47
	4	11/6/2007 9:46:00 AM	16.24	18.33	^ 16.27	13.47
	5	11/6/2007 9:47:00 AM	16.25	18.34	15.62	^ 15.57
	6	11/6/2007 9:48:00 AM	16.26	18.32	15.59	15.55
	7	11/6/2007 9:49:00 AM	16.24	^ 18.35	15.55	15.53
	8	11/6/2007 9:50:00 AM	16.22	16.79	15.55	15.52
	9	11/6/2007 9:51:00 AM	16.20	16.07	15.55	15.50
	10	11/6/2007 9:52:00 AM	16.19	16.04	15.53	15.50
	11	11/6/2007 9:53:00 AM	16.21	16.01	15.52	15.49
	12	11/6/2007 9:54:00 AM	16.20	16.01	15.54	15.50
	13	11/6/2007 9:55:00 AM	16.20	15.98	15.54	15.50
	14	11/6/2007 9:56:00 AM	16.19	15.95	15.54	15.49
	15	11/6/2007 9:57:00 AM	16.17	15.92	15.53	15.49
	16	11/6/2007 9:58:00 AM	16.16	15.89	15.53	15.48
	17	11/6/2007 9:59:00 AM	16.14	15.88	15.53	15.48
	18	11/6/2007 10:00:00 AM	16.16	15.85	15.53	15.51
	19	11/6/2007 10:01:00 AM	16.15	15.83	15.53	15.50
	20	11/6/2007 10:02:00 AM	16.13	15.84	15.52	15.50
	21	11/6/2007 10:03:00 AM	16.12	15.81	15.52	15.50
	22	11/6/2007 10:04:00 AM	16.11	15.79	15.52	15.49
	23	11/6/2007 10:05:00 AM	16.10	15.77	15.51	15.48
	24	11/6/2007 10:06:00 AM	16.10	15.75	15.54	15.47
	25	11/6/2007 10:07:00 AM	16.09	15.77	15.53	15.45
	26	11/6/2007 10:08:00 AM	16.08	15.75	15.52	15.46
	27	11/6/2007 10:09:00 AM	16.07	15.69	15.50	15.46
	28	11/6/2007 10:10:00 AM	16.06	15.72	15.52	15.45
	29	11/6/2007 10:11:00 AM	16.05	15.70	15.53	15.47
	30	11/6/2007 10:12:00 AM	16.04	15.68	15.53	15.47

printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/6/2007 10:13:00 AM	16.04	15.66	15.50	15.47
	32	11/6/2007 10:14:00 AM	16.03	15.68	15.53	15.46
	33	11/6/2007 10:15:00 AM	16.02	15.66	15.52	15.46
	34	11/6/2007 10:16:00 AM	16.01	15.65	15.51	15.45
	35	11/6/2007 10:17:00 AM	16.00	15.63	15.51	15.45
	36	11/6/2007 10:18:00 AM	15.99	15.61	15.50	15.44
	37	11/6/2007 10:19:00 AM	15.99	15.59	15.50	15.44
	38	11/6/2007 10:20:00 AM	16.01	15.57	15.48	15.43
	39	11/6/2007 10:21:00 AM	16.00	15.55	15.46	15.42
	40	11/6/2007 10:22:00 AM	16.00	15.53	15.46	15.42
	41	11/6/2007 10:23:00 AM	15.98	15.52	15.50	15.41
	42	11/6/2007 10:24:00 AM	15.98	15.50	15.49	15.44
	43	11/6/2007 10:25:00 AM	15.97	15.49	15.48	15.41
	44	11/6/2007 10:26:00 AM	15.97	15.48	15.43	15.40
	45	11/6/2007 10:27:00 AM	15.96	15.47	15.44	15.40
	46	11/6/2007 10:28:00 AM	15.95	15.45	15.43	15.43
	47	11/6/2007 10:29:00 AM	15.94	15.44	15.43	15.42
	48	11/6/2007 10:30:00 AM	15.93	15.41	15.47	15.41
	49	11/6/2007 10:31:00 AM	15.92	15.40	15.48	15.41
	50	11/6/2007 10:32:00 AM	15.90	15.43	15.46	15.40
	51	11/6/2007 10:33:00 AM	15.89	15.41	15.46	15.39
	52	11/6/2007 10:34:00 AM	15.87	15.39	15.45	15.40
	53	11/6/2007 10:35:00 AM	15.86	15.37	15.48	15.39
	54	11/6/2007 10:36:00 AM	15.85	15.39	15.46	15.38
	55	11/6/2007 10:37:00 AM	15.89	15.37	15.45	15.38
	56	11/6/2007 10:38:00 AM	15.88	15.35	15.44	15.38
	57	11/6/2007 10:39:00 AM	15.87	15.34	15.43	15.38
	58	11/6/2007 10:40:00 AM	15.86	15.31	15.43	15.37
	59	11/6/2007 10:41:00 AM	15.85	15.30	15.43	15.40
	60	11/6/2007 10:42:00 AM	15.87	15.28	15.42	15.36
	61	11/6/2007 10:43:00 AM	15.84	15.28	15.43	15.36
	62	11/6/2007 10:44:00 AM	15.83	15.27	15.43	15.36
	63	11/6/2007 10:45:00 AM	15.83	15.26	15.44	15.35
	64	11/6/2007 10:46:00 AM	15.82	15.22	15.43	15.35
	65	11/6/2007 10:47:00 AM	15.82	15.20	15.43	15.35
	66	11/6/2007 10:48:00 AM	15.81	15.24	15.44	15.34
	67	11/6/2007 10:49:00 AM	15.81	15.21	15.44	15.36
	68	11/6/2007 10:50:00 AM	15.80	15.20	15.43	15.36
	69	11/6/2007 10:51:00 AM	15.83	15.19	15.42	15.35
	70	11/6/2007 10:52:00 AM	15.79	15.18	15.43	15.34
	71	11/6/2007 10:53:00 AM	15.79	15.15	15.42	15.34
	72	11/6/2007 10:54:00 AM	15.79	15.11	15.42	15.35
	73	11/6/2007 10:55:00 AM	15.79	15.10	15.42	15.34
	74	11/6/2007 10:56:00 AM	15.78	15.13	15.42	15.34
	75	11/6/2007 10:57:00 AM	15.77	15.11	15.42	15.34
	76	11/6/2007 10:58:00 AM	15.76	15.10	15.41	15.33
	77	11/6/2007 10:59:00 AM	15.76	15.09	15.40	15.32
	78	11/6/2007 11:00:00 AM	15.75	15.07	15.39	15.35
	79	11/6/2007 11:01:00 AM	15.76	15.05	15.42	15.35
	80	11/6/2007 11:02:00 AM	15.78	15.03	15.41	15.35

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/6/2007 11:03:00 AM	15.74	15.02	15.41	15.34
	82	11/6/2007 11:04:00 AM	15.74	15.00	15.41	15.34
	83	11/6/2007 11:05:00 AM	15.76	14.98	15.40	15.34
	84	11/6/2007 11:06:00 AM	15.73	14.97	15.37	15.30
	85	11/6/2007 11:07:00 AM	15.73	14.97	15.37	15.31
	86	11/6/2007 11:08:00 AM	15.73	14.93	15.38	15.31
	87	11/6/2007 11:09:00 AM	15.73	14.93	15.39	15.31
	88	11/6/2007 11:10:00 AM	15.72	14.92	15.40	15.30
	89	11/6/2007 11:11:00 AM	15.71	14.91	15.39	15.30
	90	11/6/2007 11:12:00 AM	15.70	14.94	15.39	15.30
	91	11/6/2007 11:13:00 AM	15.73	14.92	15.39	15.30
	92	11/6/2007 11:14:00 AM	15.72	14.90	15.39	15.29
	93	11/6/2007 11:15:00 AM	15.71	14.88	15.40	15.32
	94	11/6/2007 11:16:00 AM	15.70	14.86	15.40	15.33
	95	11/6/2007 11:17:00 AM	15.69	14.84	15.39	15.31
	96	11/6/2007 11:18:00 AM	15.68	14.82	15.39	15.31
	97	11/6/2007 11:19:00 AM	15.67	14.80	15.39	15.30
	98	11/6/2007 11:20:00 AM	15.66	14.79	15.38	15.30
	99	11/6/2007 11:21:00 AM	15.63	14.78	15.37	15.30
	100	11/6/2007 11:22:00 AM	15.61	14.81	15.37	15.29
	101	11/6/2007 11:23:00 AM	15.65	14.79	15.39	15.30
	102	11/6/2007 11:24:00 AM	15.75	14.79	15.39	15.29
	103	11/6/2007 11:25:00 AM	15.86	14.76	15.38	15.29
	104	11/6/2007 11:26:00 AM	15.96	14.76	15.38	15.29
	105	11/6/2007 11:27:00 AM	16.05	14.74	15.35	15.28
	106	11/6/2007 11:28:00 AM	16.12	14.74	15.35	15.29
	107	11/6/2007 11:29:00 AM	16.19	14.72	15.38	15.28
	108	11/6/2007 11:30:00 AM	16.24	14.73	15.38	15.28
	109	11/6/2007 11:31:00 AM	16.29	14.69	15.39	15.27
	110	11/6/2007 11:32:00 AM	16.33	14.68	15.39	15.27
	111	11/6/2007 11:33:00 AM	16.36	14.67	15.35	15.27
	112	11/6/2007 11:34:00 AM	16.39	14.66	15.36	15.27
	113	11/6/2007 11:35:00 AM	16.42	14.65	15.39	15.24
	114	11/6/2007 11:36:00 AM	16.44	14.64	15.39	15.24
	115	11/6/2007 11:37:00 AM	16.46	14.63	15.39	15.27
	116	11/6/2007 11:38:00 AM	16.49	14.65	15.41	15.27
	117	11/6/2007 11:39:00 AM	16.49	14.64	15.40	15.26
	118	11/6/2007 11:40:00 AM	16.50	14.62	15.38	15.27
	119	11/6/2007 11:41:00 AM	16.50	14.59	15.37	15.25
	120	11/6/2007 11:42:00 AM	16.48	14.59	15.38	15.25
	121	11/6/2007 11:43:00 AM	16.50	14.56	15.41	15.25
	122	11/6/2007 11:44:00 AM	16.48	14.54	15.40	15.24
	123	11/6/2007 11:45:00 AM	16.46	14.52	15.38	15.25
	124	11/6/2007 11:46:00 AM	16.44	14.50	15.40	15.25
	125	11/6/2007 11:47:00 AM	16.44	14.48	15.42	15.24
	126	11/6/2007 11:48:00 AM	16.42	14.46	15.40	15.24
	127	11/6/2007 11:49:00 AM	16.39	14.43	15.37	15.23
	128	11/6/2007 11:50:00 AM	16.36	14.41	15.40	15.23
	129	11/6/2007 11:50:00 AM	16.36	14.41	15.40	15.23

printed 1/15/2008

Handy logger

Name : LOGGER 2

LOG Name	11060941
Interval	00:01:00
Personnel	

Start	11/6/2007 9:41:35 AM
Stop	11/6/2007 11:48:11 AM
Comment	

Data	129
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	17.60	17.28	-7.50	-7.50
Minimum	0.05	-0.09	-7.50	-7.50
Average	14.37	14.82	-7.50	-7.50
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/6/2007 9:41:35 AM	v 0.05	v -0.09	v -7.50	v -7.50
	2	11/6/2007 9:42:00 AM	0.55	v -0.09	v -7.50	v -7.50
	3	11/6/2007 9:43:00 AM	0.56	-0.06	v -7.50	v -7.50
	4	11/6/2007 9:44:00 AM	0.56	-0.07	v -7.50	v -7.50
	5	11/6/2007 9:45:00 AM	0.56	-0.07	v -7.50	v -7.50
	6	11/6/2007 9:46:00 AM	12.21	11.11	v -7.50	v -7.50
	7	11/6/2007 9:47:00 AM	^ 17.60	^ 17.28	v -7.50	v -7.50
	8	11/6/2007 9:48:00 AM	15.44	15.83	v -7.50	v -7.50
	9	11/6/2007 9:49:00 AM	15.43	15.82	v -7.50	v -7.50
	10	11/6/2007 9:50:00 AM	15.39	15.81	v -7.50	v -7.50
	11	11/6/2007 9:51:00 AM	15.38	15.76	v -7.50	v -7.50
	12	11/6/2007 9:52:00 AM	15.34	15.76	v -7.50	v -7.50
	13	11/6/2007 9:53:00 AM	15.34	15.73	v -7.50	v -7.50
	14	11/6/2007 9:54:00 AM	15.33	15.71	v -7.50	v -7.50
	15	11/6/2007 9:55:00 AM	15.35	15.70	v -7.50	v -7.50
	16	11/6/2007 9:56:00 AM	15.34	15.70	v -7.50	v -7.50
	17	11/6/2007 9:57:00 AM	15.35	15.69	v -7.50	v -7.50
	18	11/6/2007 9:58:00 AM	15.35	15.69	v -7.50	v -7.50
	19	11/6/2007 9:59:00 AM	15.35	15.72	v -7.50	v -7.50
	20	11/6/2007 10:00:00 AM	15.36	15.72	v -7.50	v -7.50
	21	11/6/2007 10:01:00 AM	15.36	15.72	v -7.50	v -7.50
	22	11/6/2007 10:02:00 AM	15.36	15.72	v -7.50	v -7.50
	23	11/6/2007 10:03:00 AM	15.36	15.72	v -7.50	v -7.50
	24	11/6/2007 10:04:00 AM	15.36	15.68	v -7.50	v -7.50
	25	11/6/2007 10:05:00 AM	15.35	15.68	v -7.50	v -7.50
	26	11/6/2007 10:06:00 AM	15.35	15.67	v -7.50	v -7.50
	27	11/6/2007 10:07:00 AM	15.34	15.67	v -7.50	v -7.50
	28	11/6/2007 10:08:00 AM	15.35	15.66	v -7.50	v -7.50
	29	11/6/2007 10:09:00 AM	15.34	15.66	v -7.50	v -7.50
	30	11/6/2007 10:10:00 AM	15.33	15.65	v -7.50	v -7.50

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/6/2007 10:11:00 AM	15.32	15.65	v -7.50	v -7.50
	32	11/6/2007 10:12:00 AM	15.29	15.68	v -7.50	v -7.50
	33	11/6/2007 10:13:00 AM	15.28	15.64	v -7.50	v -7.50
	34	11/6/2007 10:14:00 AM	15.26	15.63	v -7.50	v -7.50
	35	11/6/2007 10:15:00 AM	15.25	15.66	v -7.50	v -7.50
	36	11/6/2007 10:16:00 AM	15.23	15.65	v -7.50	v -7.50
	37	11/6/2007 10:17:00 AM	15.22	15.65	v -7.50	v -7.50
	38	11/6/2007 10:18:00 AM	15.23	15.64	v -7.50	v -7.50
	39	11/6/2007 10:19:00 AM	15.20	15.63	v -7.50	v -7.50
	40	11/6/2007 10:20:00 AM	15.19	15.62	v -7.50	v -7.50
	41	11/6/2007 10:21:00 AM	15.18	15.62	v -7.50	v -7.50
	42	11/6/2007 10:22:00 AM	15.16	15.62	v -7.50	v -7.50
	43	11/6/2007 10:23:00 AM	15.15	15.61	v -7.50	v -7.50
	44	11/6/2007 10:24:00 AM	15.11	15.61	v -7.50	v -7.50
	45	11/6/2007 10:25:00 AM	15.10	15.61	v -7.50	v -7.50
	46	11/6/2007 10:26:00 AM	15.09	15.60	v -7.50	v -7.50
	47	11/6/2007 10:27:00 AM	15.08	15.57	v -7.50	v -7.50
	48	11/6/2007 10:28:00 AM	15.07	15.56	v -7.50	v -7.50
	49	11/6/2007 10:29:00 AM	15.06	15.58	v -7.50	v -7.50
	50	11/6/2007 10:30:00 AM	15.05	15.57	v -7.50	v -7.50
	51	11/6/2007 10:31:00 AM	15.04	15.56	v -7.50	v -7.50
	52	11/6/2007 10:32:00 AM	15.01	15.55	v -7.50	v -7.50
	53	11/6/2007 10:33:00 AM	15.04	15.54	v -7.50	v -7.50
	54	11/6/2007 10:34:00 AM	15.03	15.52	v -7.50	v -7.50
	55	11/6/2007 10:35:00 AM	15.01	15.51	v -7.50	v -7.50
	56	11/6/2007 10:36:00 AM	14.99	15.50	v -7.50	v -7.50
	57	11/6/2007 10:37:00 AM	14.98	15.49	v -7.50	v -7.50
	58	11/6/2007 10:38:00 AM	14.97	15.48	v -7.50	v -7.50
	59	11/6/2007 10:39:00 AM	14.95	15.47	v -7.50	v -7.50
	60	11/6/2007 10:40:00 AM	14.94	15.46	v -7.50	v -7.50
	61	11/6/2007 10:41:00 AM	14.94	15.46	v -7.50	v -7.50
	62	11/6/2007 10:42:00 AM	14.94	15.46	v -7.50	v -7.50
	63	11/6/2007 10:43:00 AM	14.93	15.46	v -7.50	v -7.50
	64	11/6/2007 10:44:00 AM	14.93	15.45	v -7.50	v -7.50
	65	11/6/2007 10:45:00 AM	14.92	15.45	v -7.50	v -7.50
	66	11/6/2007 10:46:00 AM	14.88	15.45	v -7.50	v -7.50
	67	11/6/2007 10:47:00 AM	14.87	15.44	v -7.50	v -7.50
	68	11/6/2007 10:48:00 AM	14.87	15.44	v -7.50	v -7.50
	69	11/6/2007 10:49:00 AM	14.89	15.43	v -7.50	v -7.50
	70	11/6/2007 10:50:00 AM	14.88	15.42	v -7.50	v -7.50
	71	11/6/2007 10:51:00 AM	14.87	15.42	v -7.50	v -7.50
	72	11/6/2007 10:52:00 AM	14.87	15.42	v -7.50	v -7.50
	73	11/6/2007 10:53:00 AM	14.82	15.41	v -7.50	v -7.50
	74	11/6/2007 10:54:00 AM	14.84	15.40	v -7.50	v -7.50
	75	11/6/2007 10:55:00 AM	14.83	15.40	v -7.50	v -7.50
	76	11/6/2007 10:56:00 AM	14.82	15.38	v -7.50	v -7.50
	77	11/6/2007 10:57:00 AM	14.81	15.37	v -7.50	v -7.50
	78	11/6/2007 10:58:00 AM	14.79	15.36	v -7.50	v -7.50
	79	11/6/2007 10:59:00 AM	14.78	15.35	v -7.50	v -7.50
	80	11/6/2007 11:00:00 AM	14.77	15.34	v -7.50	v -7.50

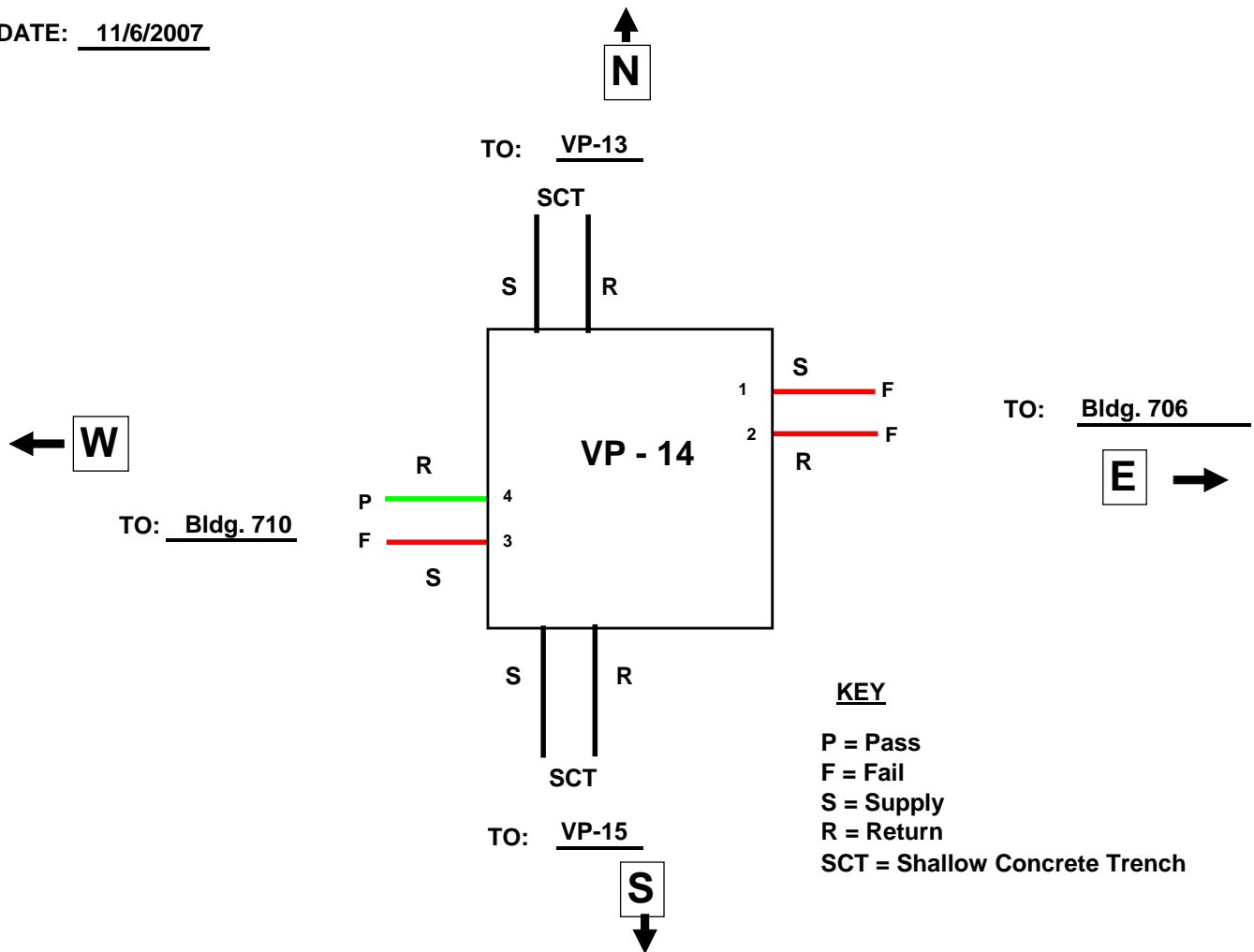
printed 1/15/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/6/2007 11:01:00 AM	14.75	15.33	v -7.50	v -7.50
	82	11/6/2007 11:02:00 AM	14.74	15.32	v -7.50	v -7.50
	83	11/6/2007 11:03:00 AM	14.73	15.31	v -7.50	v -7.50
	84	11/6/2007 11:04:00 AM	14.72	15.30	v -7.50	v -7.50
	85	11/6/2007 11:05:00 AM	14.72	15.30	v -7.50	v -7.50
	86	11/6/2007 11:06:00 AM	14.72	15.30	v -7.50	v -7.50
	87	11/6/2007 11:07:00 AM	14.72	15.28	v -7.50	v -7.50
	88	11/6/2007 11:08:00 AM	14.72	15.27	v -7.50	v -7.50
	89	11/6/2007 11:09:00 AM	14.67	15.30	v -7.50	v -7.50
	90	11/6/2007 11:10:00 AM	14.71	15.29	v -7.50	v -7.50
	91	11/6/2007 11:11:00 AM	14.71	15.29	v -7.50	v -7.50
	92	11/6/2007 11:12:00 AM	14.69	15.28	v -7.50	v -7.50
	93	11/6/2007 11:13:00 AM	14.69	15.27	v -7.50	v -7.50
	94	11/6/2007 11:14:00 AM	14.68	15.26	v -7.50	v -7.50
	95	11/6/2007 11:15:00 AM	14.69	15.24	v -7.50	v -7.50
	96	11/6/2007 11:16:00 AM	14.69	15.23	v -7.50	v -7.50
	97	11/6/2007 11:17:00 AM	14.65	15.22	v -7.50	v -7.50
	98	11/6/2007 11:18:00 AM	14.64	15.21	v -7.50	v -7.50
	99	11/6/2007 11:19:00 AM	14.64	15.20	v -7.50	v -7.50
	100	11/6/2007 11:20:00 AM	14.63	15.20	v -7.50	v -7.50
	101	11/6/2007 11:21:00 AM	14.64	15.19	v -7.50	v -7.50
	102	11/6/2007 11:22:00 AM	14.64	15.18	v -7.50	v -7.50
	103	11/6/2007 11:23:00 AM	14.62	15.18	v -7.50	v -7.50
	104	11/6/2007 11:24:00 AM	14.61	15.22	v -7.50	v -7.50
	105	11/6/2007 11:25:00 AM	14.60	15.17	v -7.50	v -7.50
	106	11/6/2007 11:26:00 AM	14.59	15.18	v -7.50	v -7.50
	107	11/6/2007 11:27:00 AM	14.57	15.18	v -7.50	v -7.50
	108	11/6/2007 11:28:00 AM	14.53	15.19	v -7.50	v -7.50
	109	11/6/2007 11:29:00 AM	14.53	15.20	v -7.50	v -7.50
	110	11/6/2007 11:30:00 AM	14.54	15.21	v -7.50	v -7.50
	111	11/6/2007 11:31:00 AM	14.55	15.22	v -7.50	v -7.50
	112	11/6/2007 11:32:00 AM	14.56	15.22	v -7.50	v -7.50
	113	11/6/2007 11:33:00 AM	14.57	15.23	v -7.50	v -7.50
	114	11/6/2007 11:34:00 AM	14.58	15.23	v -7.50	v -7.50
	115	11/6/2007 11:35:00 AM	14.59	15.24	v -7.50	v -7.50
	116	11/6/2007 11:36:00 AM	14.62	15.24	v -7.50	v -7.50
	117	11/6/2007 11:37:00 AM	14.62	15.23	v -7.50	v -7.50
	118	11/6/2007 11:38:00 AM	14.63	15.23	v -7.50	v -7.50
	119	11/6/2007 11:39:00 AM	14.63	15.23	v -7.50	v -7.50
	120	11/6/2007 11:40:00 AM	14.63	15.26	v -7.50	v -7.50
	121	11/6/2007 11:41:00 AM	14.66	15.26	v -7.50	v -7.50
	122	11/6/2007 11:42:00 AM	14.66	15.26	v -7.50	v -7.50
	123	11/6/2007 11:43:00 AM	14.66	15.25	v -7.50	v -7.50
	124	11/6/2007 11:44:00 AM	14.65	15.25	v -7.50	v -7.50
	125	11/6/2007 11:45:00 AM	14.64	15.27	v -7.50	v -7.50
	126	11/6/2007 11:46:00 AM	14.66	15.26	v -7.50	v -7.50
	127	11/6/2007 11:47:00 AM	14.65	15.25	v -7.50	v -7.50
	128	11/6/2007 11:48:00 AM	14.64	15.25	v -7.50	v -7.50
	129	11/6/2007 11:48:11 AM	14.64	15.25	v -7.50	v -7.50

DATE: 11/6/2007



NOTES:

1. All conduit drains dry at exit of pit.
2. Pit had partial shallow water and mud on floor. Manually actuated sump to clear. Water runs around south end of pit and re-enters through vertical grating.

VP - 14					
Logger No.	Channel No.	Transducer No.	Description	P/F	Comment
1	1	1	Supply to Bldg 706	F	Top of conduit 62" below grade at exit from pit. This is very short run. Leaks detected under insulation at building vent connection - could not correct without removal of insulation system. No value seen in performing that operation.
	2	2	Supply to Bldg. 720	F	Top of conduit 62" below grade at exit from pit. This is very short run. Leaks detected under insulation at building vent connection - could not correct without removal of insulation system. No value seen in performing that operation.
	3	3	Supply to Bldg. 710	F	Top of conduit 62" below grade at exit from pit
	4	4	Return to Bldg. 710	P	Top of conduit 62" below grade at exit from pit

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Handy logger

Name : LOGGER 1

LOG Name	11061241
Interval	00:01:00
Personnel	

Start	11/6/2007 12:41:19 PM
Stop	11/6/2007 4:42:00 PM
Comment	

Data	242
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Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	18.53	23.50	15.47	15.48
Minimum	0.00	0.02	0.06	0.17
Average	12.64	13.10	14.49	14.82
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/6/2007 12:41:19 PM	v 0.00	v 0.02	v 0.06	v 0.17
	2	11/6/2007 12:42:00 PM	^ 18.53	^ 23.50	9.23	0.18
	3	11/6/2007 12:43:00 PM	18.49	23.39	14.31	14.95
	4	11/6/2007 12:44:00 PM	17.52	23.34	15.43	^ 15.48
	5	11/6/2007 12:45:00 PM	15.97	15.71	15.43	^ 15.48
	6	11/6/2007 12:46:00 PM	14.65	15.87	15.43	15.47
	7	11/6/2007 12:47:00 PM	14.62	15.63	15.42	15.47
	8	11/6/2007 12:48:00 PM	14.58	15.57	^ 15.47	15.46
	9	11/6/2007 12:49:00 PM	14.54	15.51	15.45	15.45
	10	11/6/2007 12:50:00 PM	14.50	15.42	15.44	15.45
	11	11/6/2007 12:51:00 PM	14.46	15.38	15.38	15.43
	12	11/6/2007 12:52:00 PM	14.43	15.33	15.37	15.43
	13	11/6/2007 12:53:00 PM	14.39	15.28	15.35	15.42
	14	11/6/2007 12:54:00 PM	14.35	15.24	15.34	15.43
	15	11/6/2007 12:55:00 PM	14.30	15.20	15.30	15.41
	16	11/6/2007 12:56:00 PM	14.29	15.15	15.29	15.40
	17	11/6/2007 12:57:00 PM	14.25	15.10	15.25	15.39
	18	11/6/2007 12:58:00 PM	14.22	15.06	15.25	15.38
	19	11/6/2007 12:59:00 PM	14.15	15.01	15.21	15.38
	20	11/6/2007 1:00:00 PM	14.11	14.97	15.20	15.36
	21	11/6/2007 1:01:00 PM	14.08	14.92	15.20	15.36
	22	11/6/2007 1:02:00 PM	14.05	14.88	15.16	15.35
	23	11/6/2007 1:03:00 PM	14.02	14.83	15.16	15.34
	24	11/6/2007 1:04:00 PM	13.98	14.78	15.16	15.33
	25	11/6/2007 1:05:00 PM	13.94	14.70	15.15	15.33
	26	11/6/2007 1:06:00 PM	13.91	14.70	15.13	15.32
	27	11/6/2007 1:07:00 PM	13.87	14.61	15.08	15.30
	28	11/6/2007 1:08:00 PM	13.84	14.56	15.08	15.30
	29	11/6/2007 1:09:00 PM	13.80	14.53	15.07	15.29
	30	11/6/2007 1:10:00 PM	13.76	14.48	15.06	15.28

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Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/6/2007 1:11:00 PM	13.72	14.43	15.05	15.27
	32	11/6/2007 1:12:00 PM	13.68	14.38	15.05	15.26
	33	11/6/2007 1:13:00 PM	13.64	14.33	15.04	15.25
	34	11/6/2007 1:14:00 PM	13.61	14.28	15.02	15.24
	35	11/6/2007 1:15:00 PM	13.58	14.23	15.02	15.24
	36	11/6/2007 1:16:00 PM	13.53	14.19	15.00	15.23
	37	11/6/2007 1:17:00 PM	13.50	14.15	14.99	15.24
	38	11/6/2007 1:18:00 PM	13.47	14.11	14.99	15.23
	39	11/6/2007 1:19:00 PM	13.44	14.06	14.98	15.22
	40	11/6/2007 1:20:00 PM	13.40	14.01	14.96	15.22
	41	11/6/2007 1:21:00 PM	13.34	13.97	15.00	15.21
	42	11/6/2007 1:22:00 PM	13.34	13.92	14.96	15.20
	43	11/6/2007 1:23:00 PM	13.31	13.87	14.94	15.20
	44	11/6/2007 1:24:00 PM	13.27	13.82	14.96	15.19
	45	11/6/2007 1:25:00 PM	13.23	13.77	14.93	15.20
	46	11/6/2007 1:26:00 PM	13.19	13.73	14.89	15.18
	47	11/6/2007 1:27:00 PM	13.16	13.68	14.87	15.17
	48	11/6/2007 1:28:00 PM	13.13	13.64	14.85	15.16
	49	11/6/2007 1:29:00 PM	13.09	13.61	14.84	15.16
	50	11/6/2007 1:30:00 PM	13.03	13.52	14.82	15.15
	51	11/6/2007 1:31:00 PM	13.00	13.49	14.81	15.13
	52	11/6/2007 1:32:00 PM	12.98	13.45	14.77	15.12
	53	11/6/2007 1:33:00 PM	12.93	13.41	14.77	15.12
	54	11/6/2007 1:34:00 PM	12.90	13.38	14.76	15.11
	55	11/6/2007 1:35:00 PM	12.88	13.29	14.75	15.10
	56	11/6/2007 1:36:00 PM	12.85	13.25	14.74	15.10
	57	11/6/2007 1:37:00 PM	12.82	13.21	14.73	15.09
	58	11/6/2007 1:38:00 PM	12.79	13.16	14.72	15.09
	59	11/6/2007 1:39:00 PM	12.76	13.11	14.70	15.08
	60	11/6/2007 1:40:00 PM	12.73	13.08	14.69	15.09
	61	11/6/2007 1:41:00 PM	12.69	13.03	14.67	15.08
	62	11/6/2007 1:42:00 PM	12.66	12.99	14.66	15.07
	63	11/6/2007 1:43:00 PM	12.62	12.94	14.64	15.06
	64	11/6/2007 1:44:00 PM	12.57	12.90	14.64	15.06
	65	11/6/2007 1:45:00 PM	12.54	12.87	14.62	15.05
	66	11/6/2007 1:46:00 PM	12.51	12.81	14.61	15.05
	67	11/6/2007 1:47:00 PM	12.48	12.78	14.60	15.04
	68	11/6/2007 1:48:00 PM	12.45	12.74	14.59	15.04
	69	11/6/2007 1:49:00 PM	12.44	12.69	14.58	15.03
	70	11/6/2007 1:50:00 PM	12.38	12.66	14.56	15.02
	71	11/6/2007 1:51:00 PM	12.35	12.61	14.56	15.02
	72	11/6/2007 1:52:00 PM	12.32	12.58	14.54	15.00
	73	11/6/2007 1:53:00 PM	12.29	12.57	14.53	14.99
	74	11/6/2007 1:54:00 PM	12.26	12.53	14.52	14.99
	75	11/6/2007 1:55:00 PM	12.22	12.48	14.50	14.98
	76	11/6/2007 1:56:00 PM	12.19	12.44	14.49	14.97
	77	11/6/2007 1:57:00 PM	12.16	12.40	14.49	14.97
	78	11/6/2007 1:58:00 PM	12.12	12.36	14.48	14.97
	79	11/6/2007 1:59:00 PM	12.09	12.31	14.47	14.93
	80	11/6/2007 2:00:00 PM	12.06	12.28	14.45	14.93

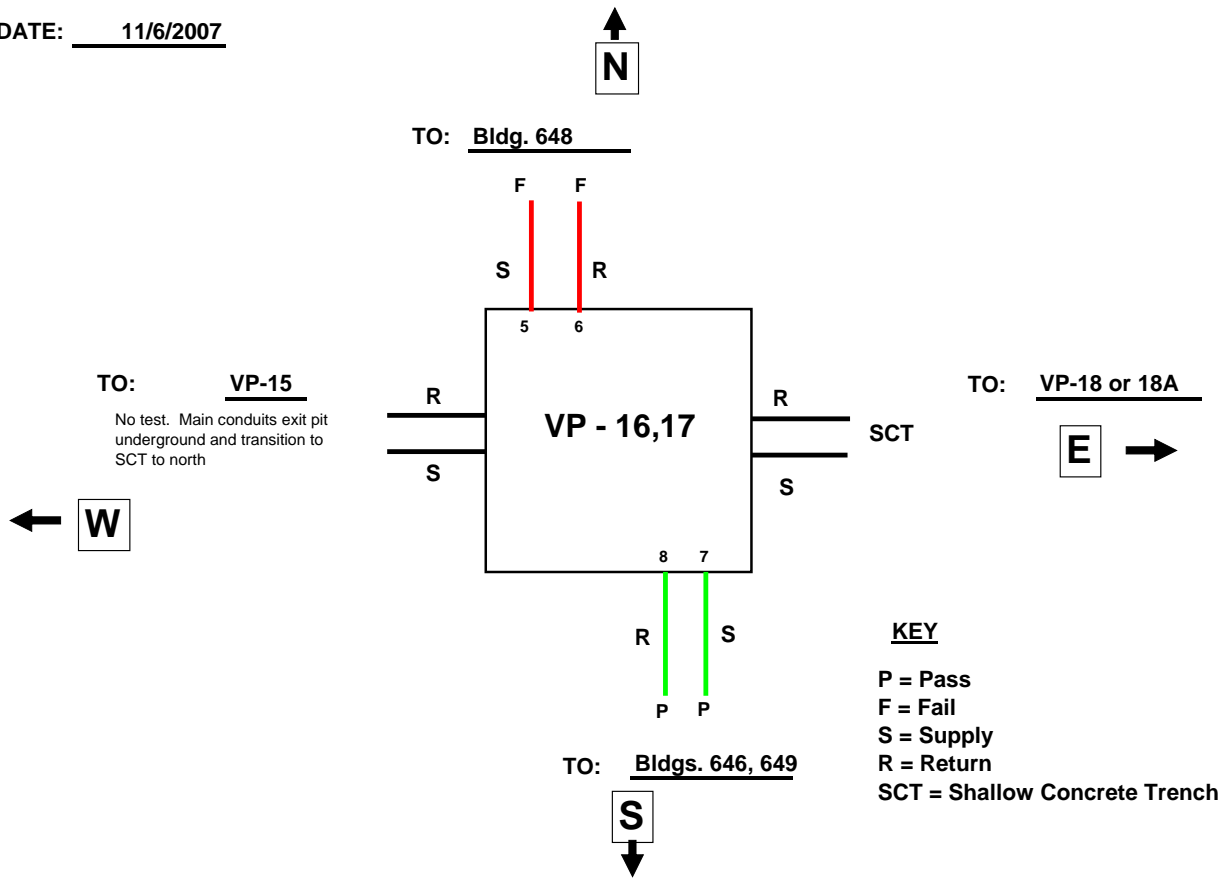
printed 1/15/2008

Handy logger

Name : LOGGER 1

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/6/2007 2:01:00 PM	12.03	12.23	14.40	14.92
	82	11/6/2007 2:02:00 PM	11.99	12.18	14.43	14.92
	83	11/6/2007 2:03:00 PM	11.96	12.14	14.42	14.91
	84	11/6/2007 2:04:00 PM	11.93	12.10	14.40	14.90
	85	11/6/2007 2:05:00 PM	11.90	12.05	14.39	14.90
	86	11/6/2007 2:06:00 PM	11.87	12.05	14.37	14.89
	87	11/6/2007 2:07:00 PM	11.86	12.01	14.36	14.89
	88	11/6/2007 2:08:00 PM	11.80	11.96	14.34	14.88
	89	11/6/2007 2:09:00 PM	11.77	11.92	14.33	14.87
	90	11/6/2007 2:10:00 PM	11.75	11.89	14.32	14.87
	91	11/6/2007 2:11:00 PM	11.72	11.84	14.31	14.87
	92	11/6/2007 2:12:00 PM	11.69	11.80	14.29	14.87
	93	11/6/2007 2:13:00 PM	11.66	11.77	14.28	14.86
	94	11/6/2007 2:14:00 PM	11.63	11.73	14.27	14.86
	95	11/6/2007 2:15:00 PM	11.60	11.69	14.26	14.85
	96	11/6/2007 2:16:00 PM	11.61	11.65	14.25	14.84
	97	11/6/2007 2:17:00 PM	11.54	11.61	14.23	14.84
	98	11/6/2007 2:18:00 PM	11.54	11.56	14.23	14.84
	99	11/6/2007 2:19:00 PM	11.51	11.53	14.22	14.83
	100	11/6/2007 2:20:00 PM	11.48	11.49	14.21	14.82
	101	11/6/2007 2:21:00 PM	11.45	11.45	14.20	14.82
	102	11/6/2007 2:22:00 PM	11.42	11.41	14.19	14.82
	103	11/6/2007 2:23:00 PM	11.39	11.38	14.18	14.81
	104	11/6/2007 2:24:00 PM	11.33	11.34	14.17	14.81
	105	11/6/2007 2:25:00 PM	11.34	11.31	14.16	14.80
	106	11/6/2007 2:26:00 PM	11.28	11.27	14.15	14.78
	107	11/6/2007 2:27:00 PM	11.26	11.23	14.13	14.78
	108	11/6/2007 2:28:00 PM	11.23	11.19	14.13	14.78
	109	11/6/2007 2:29:00 PM	11.20	11.16	14.12	14.77
	110	11/6/2007 2:30:00 PM	11.18	11.12	14.10	14.77
	111	11/6/2007 2:31:00 PM	11.16	11.09	14.06	14.77
	112	11/6/2007 2:32:00 PM	11.13	11.02	14.05	14.77
	113	11/6/2007 2:33:00 PM	11.06	10.99	14.04	14.77
	114	11/6/2007 2:34:00 PM	11.04	10.96	14.03	14.73
	115	11/6/2007 2:35:00 PM	11.02	10.94	14.02	14.72
	116	11/6/2007 2:36:00 PM	11.00	10.85	14.02	14.73
	117	11/6/2007 2:37:00 PM	10.98	10.87	14.01	14.71
	118	11/6/2007 2:38:00 PM	10.93	10.78	13.97	14.71
	119	11/6/2007 2:39:00 PM	10.91	10.76	13.96	14.71
	120	11/6/2007 2:40:00 PM	10.86	10.74	13.96	14.71
	121	11/6/2007 2:41:00 PM	10.84	10.71	13.95	14.70
	122	11/6/2007 2:42:00 PM	10.82	10.67	13.94	14.70
	123	11/6/2007 2:43:00 PM	10.80	10.64	13.94	14.70
	124	11/6/2007 2:44:00 PM	10.77	10.61	13.93	14.70
	125	11/6/2007 2:45:00 PM	10.75	10.59	13.89	14.70
	126	11/6/2007 2:46:00 PM	10.73	10.51	13.87	14.65
	127	11/6/2007 2:47:00 PM	O.R.	O.R.	O.R.	O.R.
	128	11/6/2007 2:48:00 PM	O.R.	O.R.	O.R.	O.R.
	129	11/6/2007 2:49:00 PM	O.R.	O.R.	O.R.	O.R.
	130	11/6/2007 2:50:00 PM	O.R.	O.R.	O.R.	O.R.

DATE: 11/6/2007



NOTES:

1. Pit is clean and dry. All conduit drains are dry at exit from pit.

VP - 16,17					
Logger No.	Channel Nol	Transducer No.	Description	P/F	Comment
2	1	5	Supply to Bldg. 648	F	Top of conduit exits pit at 66" below grade
	2	6	Return to Bldg. 648	F	Top of conduit exits pit at 66" below grade
	3	7	Supply to Bldgs. 646, 649	P	Top of conduit exits pit at 63" below grade
	4	8	Return to Bldgs. 646, 649	P	Top of conduit exits pit at 63" below grade

printed 1/15/2008

Handy logger

Name : **LOGGER 2**

LOG Name	11061311
Interval	00:01:00
Personnel	

Start	11/6/2007 1:11:30 PM
Stop	11/6/2007 3:19:54 PM
Comment	

Data	130
------	-----

Set value	CH1	CH2	CH3	CH4
Sensor	V	V	V	V
H-alarm	-	-	-	-
L-alarm	-	-	-	-
Accum.base	-	-	-	-

	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
Maximum	15.74	16.95	16.09	17.01
Minimum	0.14	-0.04	-7.50	0.06
Average	14.73	14.28	14.58	15.04
Accum.-H				
Accum.-L				

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	1	11/6/2007 1:11:30 PM	v 0.14	v -0.04	0.08	v 0.06
	2	11/6/2007 1:12:00 PM	10.53	v -0.04	0.09	v 0.06
	3	11/6/2007 1:13:00 PM	^ 15.74	^ 16.95	6.14	6.91
	4	11/6/2007 1:14:00 PM	15.70	16.90	0.13	0.08
	5	11/6/2007 1:15:00 PM	15.69	16.85	6.97	7.00
	6	11/6/2007 1:16:00 PM	15.70	16.84	^ 16.09	^ 17.01
	7	11/6/2007 1:17:00 PM	15.71	16.80	15.55	15.90
	8	11/6/2007 1:18:00 PM	15.68	15.89	15.57	15.94
	9	11/6/2007 1:19:00 PM	15.70	15.87	15.58	15.92
	10	11/6/2007 1:20:00 PM	15.68	15.83	15.57	15.91
	11	11/6/2007 1:21:00 PM	15.66	15.83	15.55	15.90
	12	11/6/2007 1:22:00 PM	15.66	15.79	15.54	15.90
	13	11/6/2007 1:23:00 PM	15.64	15.80	15.53	15.89
	14	11/6/2007 1:24:00 PM	15.61	15.76	15.52	15.89
	15	11/6/2007 1:25:00 PM	15.59	15.72	15.51	15.90
	16	11/6/2007 1:26:00 PM	15.57	15.68	15.50	15.89
	17	11/6/2007 1:27:00 PM	15.56	15.65	15.49	15.90
	18	11/6/2007 1:28:00 PM	15.54	15.62	15.46	15.90
	19	11/6/2007 1:29:00 PM	15.54	15.60	15.46	15.89
	20	11/6/2007 1:30:00 PM	15.51	15.59	15.45	15.87
	21	11/6/2007 1:31:00 PM	15.51	15.57	15.46	15.87
	22	11/6/2007 1:32:00 PM	15.47	15.55	15.46	15.87
	23	11/6/2007 1:33:00 PM	15.47	15.51	15.46	15.87
	24	11/6/2007 1:34:00 PM	15.46	15.48	15.45	15.85
	25	11/6/2007 1:35:00 PM	15.46	15.45	15.44	15.85
	26	11/6/2007 1:36:00 PM	15.42	15.41	15.44	15.84
	27	11/6/2007 1:37:00 PM	15.41	15.38	15.43	15.84
	28	11/6/2007 1:38:00 PM	15.40	15.38	15.41	15.83
	29	11/6/2007 1:39:00 PM	15.38	15.39	15.41	15.82
	30	11/6/2007 1:40:00 PM	15.36	15.35	15.42	15.81

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Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	31	11/6/2007 1:41:00 PM	15.37	15.31	15.41	15.81
	32	11/6/2007 1:42:00 PM	15.35	15.28	15.40	15.80
	33	11/6/2007 1:43:00 PM	15.37	15.25	15.38	15.79
	34	11/6/2007 1:44:00 PM	15.34	15.22	15.37	15.78
	35	11/6/2007 1:45:00 PM	15.35	15.19	15.37	15.78
	36	11/6/2007 1:46:00 PM	15.32	15.17	15.36	15.77
	37	11/6/2007 1:47:00 PM	15.31	15.17	15.35	15.76
	38	11/6/2007 1:48:00 PM	15.30	15.14	15.33	15.75
	39	11/6/2007 1:49:00 PM	15.27	15.11	15.32	15.74
	40	11/6/2007 1:50:00 PM	15.25	15.09	15.32	15.74
	41	11/6/2007 1:51:00 PM	15.24	15.06	15.31	15.74
	42	11/6/2007 1:52:00 PM	15.22	15.03	15.31	15.72
	43	11/6/2007 1:53:00 PM	15.21	15.00	15.30	15.72
	44	11/6/2007 1:54:00 PM	15.22	14.98	15.32	15.71
	45	11/6/2007 1:55:00 PM	15.19	14.94	15.30	15.73
	46	11/6/2007 1:56:00 PM	15.18	14.91	15.30	15.70
	47	11/6/2007 1:57:00 PM	15.17	14.90	15.29	15.69
	48	11/6/2007 1:58:00 PM	15.16	14.88	15.29	15.69
	49	11/6/2007 1:59:00 PM	15.11	14.83	15.29	15.68
	50	11/6/2007 2:00:00 PM	15.11	14.82	15.30	15.68
	51	11/6/2007 2:01:00 PM	15.09	14.80	15.26	15.68
	52	11/6/2007 2:02:00 PM	15.08	14.78	15.28	15.67
	53	11/6/2007 2:03:00 PM	15.07	14.76	15.29	15.66
	54	11/6/2007 2:04:00 PM	15.06	14.76	15.29	15.66
	55	11/6/2007 2:05:00 PM	15.04	14.74	15.27	15.64
	56	11/6/2007 2:06:00 PM	15.06	14.73	15.28	15.63
	57	11/6/2007 2:07:00 PM	15.04	14.72	15.27	15.61
	58	11/6/2007 2:08:00 PM	15.02	14.69	15.25	15.64
	59	11/6/2007 2:09:00 PM	15.00	14.61	15.27	15.62
	60	11/6/2007 2:10:00 PM	14.99	14.60	15.27	15.62
	61	11/6/2007 2:11:00 PM	14.94	14.59	15.22	15.61
	62	11/6/2007 2:12:00 PM	14.96	14.58	15.25	15.61
	63	11/6/2007 2:13:00 PM	14.95	14.51	15.24	15.59
	64	11/6/2007 2:14:00 PM	14.93	14.50	15.23	15.59
	65	11/6/2007 2:15:00 PM	14.93	14.48	15.22	15.58
	66	11/6/2007 2:16:00 PM	14.89	14.46	15.19	15.57
	67	11/6/2007 2:17:00 PM	14.88	14.44	15.22	15.56
	68	11/6/2007 2:18:00 PM	14.85	14.41	15.25	15.56
	69	11/6/2007 2:19:00 PM	14.84	14.39	15.25	15.55
	70	11/6/2007 2:20:00 PM	14.86	14.36	15.24	15.54
	71	11/6/2007 2:21:00 PM	14.85	14.34	15.24	15.53
	72	11/6/2007 2:22:00 PM	14.81	14.31	15.18	15.52
	73	11/6/2007 2:23:00 PM	14.79	14.25	15.17	15.51
	74	11/6/2007 2:24:00 PM	14.79	14.25	15.22	15.51
	75	11/6/2007 2:25:00 PM	14.75	14.20	15.18	15.48
	76	11/6/2007 2:26:00 PM	14.74	14.17	15.18	15.47
	77	11/6/2007 2:27:00 PM	14.73	14.17	15.17	15.47
	78	11/6/2007 2:28:00 PM	14.72	14.15	15.18	15.47
	79	11/6/2007 2:29:00 PM	14.72	14.10	15.16	15.46
	80	11/6/2007 2:30:00 PM	14.70	14.09	15.16	15.46

printed 1/15/2008

Handy logger

Name : LOGGER 2

Mark	No.	Date	CH1 [PSI]	CH2 [PSI]	CH3 [PSI]	CH4 [PSI]
	81	11/6/2007 2:31:00 PM	14.69	14.06	15.16	15.46
	82	11/6/2007 2:32:00 PM	14.67	14.04	15.16	15.45
	83	11/6/2007 2:33:00 PM	14.67	14.04	15.15	15.45
	84	11/6/2007 2:34:00 PM	14.66	14.00	15.16	15.44
	85	11/6/2007 2:35:00 PM	14.63	13.95	15.14	15.44
	86	11/6/2007 2:36:00 PM	14.61	13.94	15.15	15.42
	87	11/6/2007 2:37:00 PM	14.61	13.93	15.15	15.42
	88	11/6/2007 2:38:00 PM	14.57	13.92	15.12	15.42
	89	11/6/2007 2:39:00 PM	14.56	13.90	15.12	15.41
	90	11/6/2007 2:40:00 PM	14.55	13.87	15.14	15.41
	91	11/6/2007 2:41:00 PM	14.55	13.86	15.12	15.35
	92	11/6/2007 2:42:00 PM	14.54	13.85	15.13	15.34
	93	11/6/2007 2:43:00 PM	14.54	13.80	15.12	15.34
	94	11/6/2007 2:44:00 PM	14.52	13.80	15.11	15.37
	95	11/6/2007 2:45:00 PM	14.50	13.77	15.11	15.37
	96	11/6/2007 2:46:00 PM	14.49	13.73	15.10	15.32
	97	11/6/2007 2:47:00 PM	14.46	13.71	15.11	15.31
	98	11/6/2007 2:48:00 PM	14.45	13.71	15.08	15.31
	99	11/6/2007 2:49:00 PM	14.43	13.69	15.07	15.27
	100	11/6/2007 2:50:00 PM	14.41	13.68	15.08	15.27
	101	11/6/2007 2:51:00 PM	14.41	13.66	15.08	15.27
	102	11/6/2007 2:52:00 PM	14.40	13.65	15.05	15.27
	103	11/6/2007 2:53:00 PM	14.40	13.60	15.05	15.27
	104	11/6/2007 2:54:00 PM	14.38	13.58	15.05	15.26
	105	11/6/2007 2:55:00 PM	14.37	13.56	15.04	15.26
	106	11/6/2007 2:56:00 PM	14.35	13.54	15.04	15.25
	107	11/6/2007 2:57:00 PM	14.34	13.52	15.03	15.25
	108	11/6/2007 2:58:00 PM	14.32	13.50	15.06	15.24
	109	11/6/2007 2:59:00 PM	14.31	13.47	15.02	15.23
	110	11/6/2007 3:00:00 PM	14.29	13.45	15.02	15.22
	111	11/6/2007 3:01:00 PM	14.28	13.43	15.02	15.21
	112	11/6/2007 3:02:00 PM	14.26	13.44	15.04	15.20
	113	11/6/2007 3:03:00 PM	14.24	13.42	15.03	15.19
	114	11/6/2007 3:04:00 PM	14.23	13.40	15.02	15.22
	115	11/6/2007 3:05:00 PM	14.21	13.37	15.01	15.20
	116	11/6/2007 3:06:00 PM	14.22	13.34	15.04	15.19
	117	11/6/2007 3:07:00 PM	14.21	13.31	15.05	15.18
	118	11/6/2007 3:08:00 PM	14.22	13.30	15.03	15.17
	119	11/6/2007 3:09:00 PM	14.20	13.27	15.04	15.16
	120	11/6/2007 3:10:00 PM	14.18	13.23	15.03	15.16
	121	11/6/2007 3:11:00 PM	14.17	13.21	14.99	15.15
	122	11/6/2007 3:12:00 PM	14.15	13.19	14.99	15.14
	123	11/6/2007 3:13:00 PM	14.13	13.17	14.99	15.14
	124	11/6/2007 3:14:00 PM	14.11	13.14	14.97	15.13
	125	11/6/2007 3:15:00 PM	14.09	13.11	15.00	15.16
	126	11/6/2007 3:16:00 PM	14.10	13.13	14.98	15.11
	127	11/6/2007 3:17:00 PM	14.08	13.09	14.97	15.10
	128	11/6/2007 3:18:00 PM	14.05	13.10	14.95	15.14
	129	11/6/2007 3:19:00 PM	14.04	13.08	14.94	15.12
	130	11/6/2007 3:19:54 PM	12.28	13.05	v -7.50	13.51

Fort Stewart Phase II Pressure Test Analysis

PHASE II								
FROM	TO	S/R	P-START	P-END	DELTA P	5 DROP%	ORIGINAL	NEW
VP-10A	720	S	16.07	14.41	1.66	10.3%	P	F
		R	16.23	16.36	-0.13	-0.8%	P	
	VP-9	S	15.62	15.42	0.20	1.3%	P	
		R	15.57	15.24	0.33	2.1%	P	
	717/718/719	S	15.83	15.25	0.58	3.7%	P	
		R	15.44	14.64	0.80	5.2%	P	
VP-14	706	S	15.97	12.54	3.43	21.5%	F	
		R	15.71	12.87	2.84	18.1%	F	
	710	S	15.47	13.87	1.60	10.3%	P	F
		R	15.46	14.65	0.81	5.2%	P	
VP-16/17	648	S	15.74	14.13	1.61	10.2%	P	F
		R	15.89	13.10	2.79	17.6%	F	
	646/649	S	15.55	14.97	0.58	3.7%	P	
		R	15.94	15.14	0.80	5.0%	P	
Phase II						No. Passed =	11	8
						No Failed =	3	6
						Total Tested =	14	14

Appendix J: Consolidated Close Interval Survey Data for Forts Carson and Stewart

CIS Abbreviation Key

Asp = Asphalt

CIS = Close Interval Survey

Con = Concrete

LT = Left Turn

MH = Manhole (Fort Carson nomenclature)

N = North

Rd = Road

RT = Right Turn

S = South

St = Street

SW = Sidewalk

VP = Valve Pit (Fort Stewart nomenclature)

NOTE: All potentials reported are negative volts

Fort Carson Phase I North Loop CIS Data

MH-15N to MH-10N (Supply, Failed)												Min	Max	Avg	
9/13/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.42	0.42	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0}	MH-15N (Supply) / 7} 90 Lt	0.410	0.460	0.426
0+20	0.41	0.41	0.41	0.42	RD	RD	RD	RD	RD	RD	26}	90 RT/ 35}Magrath A.			
0+40	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	79}	End Magrath A.			
0+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	83}	sw/ 89}sw end			
0+80	0.42	0.42	sw	sw	sw	0.41	0.41	0.42	0.42	0.42	83}	sw/ 89}sw end			
1+00	0.42	0.41	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.44					
1+20	0.44	0.44	0.44	0.44	0.45	0.44	0.44	0.46	0.44	0.45					
1+40	0.44	0.44	0.43	0.41	0.42	0.42	0.42	0.42	0.42	0.42	158}	90 Lt			
1+60	0.42	0.42	0.42	0.43	0.43	0.43	0.45	0.45	0.45	0.45	171}	90 Rt			
1+80	0.45	0.45	0.45	0.45	0.44	0.45	0.43	0.42	0.42	0.42	191}	90 Rt			
2+00	0.41	0.41	0.42	0.42	0.43	0.43	0.43	0.42	0.42	0.42	202}	90 Lt			
2+20	0.42	0.42	0.43	0.42	0.43	0.42	0.42	0.42	0.42	0.42					
2+40	0.42	0.42	0.42	0.44	0.44	0.44	0.44	0.43	0.43	0.43					
2+60	0.42	0.42	0.42	0.43	0.43	0.44	0.44	0.44	0.43	0.43					
2+80	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42					
3+00	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.43					
3+20	0.43	0.43	0.42	0.43	0.43	0.43	0.43	0.42	St	St	335}	St			
3+40	St	St	St	St	St	St	St	St	St	St					
3+60	St	St	St	St	St	0.42	0.42	0.42	0.43	0.43	369}	End St			
3+80	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.43	0.42	0.43					
4+00	0.43	0.43	0.42	0.43	0.43	0.42	0.42	0.42	0.42	0.43	408}	90 Lt/ 417} 90 Rt			
4+20	0.43	0.41	0.41								425}	MH-10N (Supply)			

MH-15N to MH-10N (Return, Passed)												Min	Max	Avg	
9/19/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.40	0.42	0.44	0.44	0.43	0.43	0.42	0.42	0.43	0.43	0}	MH-15N (Return) / 7} 90 Lt	0.400	0.460	0.428
0+20	0.44	0.44	0.43	0.44	RD	RD	RD	RD	RD	RD	26}	90 RT/ 35}Magrath A.			
0+40	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	79}	End Magrath A.			
0+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	83}	sw/ 89}sw end			
0+80	0.41	0.41	sw	sw	sw	0.41	0.41	0.42	0.42	0.42	83}	sw/ 89}sw end			
1+00	0.41	0.41	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.44					
1+20	0.44	0.44	0.44	0.44	0.45	0.44	0.44	0.46	0.44	0.45					
1+40	0.44	0.44	0.43	0.41	0.42	0.42	0.42	0.42	0.41	0.41	158}	90 Lt			
1+60	0.43	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	171}	90 Rt			
1+80	0.45	0.45	0.45	0.45	0.44	0.45	0.45	0.45	0.44	0.44	191}	90 Rt			
2+00	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.42	0.42	0.42	202}	90 Lt			
2+20	0.42	0.42	0.43	0.42	0.43	0.42	0.42	0.42	0.42	0.42					
2+40	0.42	0.42	0.42	0.43	0.44	0.44	0.44	0.43	0.43	0.43					
2+60	0.42	0.42	0.42	0.43	0.43	0.44	0.44	0.43	0.43	0.43					
2+80	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42					
3+00	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.43	0.43					
3+20	0.43	0.43	0.42	0.43	0.43	0.43	0.43	0.42	St	St	335}	St			
3+40	St	St	St	St	St	St	St	St	St	St					
3+60	St	St	St	St	St	0.42	0.42	0.42	0.43	0.43	369}	End St			
3+80	0.43	0.43	0.42	0.42	0.41	0.42	0.42	0.43	0.43	0.43					
4+00	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	408}	90 Lt/ 417} 90 Rt			
4+20	0.43	0.42	0.42								425}	MH-10N (Return)			

MH-2N to MH-1N (Supply, Passed)												Min	Max	Avg	
9/19/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.34	0.34	0.34	sw	sw	sw	sw	0.34	0.34	0.34	0}	MH-2N (Supply) / 5} to 12} sw	0.340	0.480	0.436
0+20	0.35	0.35	0.35	0.36	0.36	0.37	0.37	0.37	sw	sw	34}	sw			
0+40	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw					
0+60	sw	sw	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	63}	sw ends			
0+80	0.41	0.41	0.41	0.43	0.43	0.41	0.41	0.41	0.41	0.41					
1+00	0.42	0.41	0.41	0.41	0.41	sw	sw	sw	sw	sw	110}	to 119}sw			
1+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	120}	Asp			
1+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	158}	end Asp			
1+60	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.43	0.43					
1+80	0.43	0.43	0.43	0.43	0.44	0.44	0.43	0.43	0.43	0.43					
2+00	0.42	0.40	0.40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	206}	Asp/ 214} 90 Lt			
2+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	238}	90 Rt			
2+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp					
2+60	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	0.46	0.46	264}	90 Rt/ 274} End Asp			
2+80	0.45	0.45	0.45	0.45	0.46	0.46	0.45	0.45	0.46	0.46	288}	90 Lt			
3+00	0.45	0.45	0.45	0.45	0.45	0.46	0.45	0.45	0.45	0.45					
3+20	0.44	0.44	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	324}	Asp			
3+40	Asp	Asp	Asp	Asp	Asp	Asp	0.46	0.47	0.48	0.48	350}	End Asp			
3+60	0.48	0.48	0.48	0.47	0.47	0.46	0.46	0.46	0.46	0.46					
3+80	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.47	0.47	0.48					
4+00	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.46	0.46					
4+20	0.46	0.46	0.45	0.45	0.45	0.46	0.46	0.46	0.45	0.45					
4+40	0.45	0.45	0.44	0.44	0.44	Rd	Rd	Rd	Rd	Rd	450}	Prussman Blvd			
4+60	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd					
4+80	Rd	Rd	Rd	Rd	0.46	0.46	0.46	0.45	0.46	0.46	486}	End Prussman			
5+00	0.47	0.47									502	MH-1N (Supply)			

MH-2N to MH-1N (Return, Failed)												Min	Max	Avg	
9/14/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.40	0.40	0.41	sw	sw	sw	sw	0.43	0.43	0.43	0}	MH-2N (Return) / 5} to 12} sw	0.380	0.480	0.436
0+20	0.44	0.44	0.44	0.43	0.43	0.44	0.44	0.44	sw	sw	34}	sw			
0+40	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw					
0+60	sw	sw	0.40	0.41	0.41	0.41	0.41	0.40	0.40	0.40	63}	sw ends			
0+80	0.40	0.40	0.39	0.39	0.39	0.38	0.38	0.38	0.38	0.38					
1+00	0.39	0.39	0.38	0.38	0.38	sw	sw	sw	sw	sw	110}	to 119}sw			
1+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	120}	Asp			
1+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	158}	end Asp			
1+60	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.43	0.43					
1+80	0.43	0.43	0.43	0.43	0.44	0.44	0.43	0.43	0.43	0.43					
2+00	0.42	0.40	0.40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	206}	Asp/ 214} 90 Lt			
2+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	238}	90 Rt			
2+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp					
2+60	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	0.45	0.45	264}	90 Rt/ 274} End Asp			
2+80	0.45	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.43	288}	90 Lt			
3+00	0.43	0.43	0.42	0.42	0.42	0.43	0.43	0.42	0.42	0.43					
3+20	0.43	0.43	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	324}	Asp			
3+40	Asp	Asp	Asp	Asp	Asp	Asp	0.44	0.44	0.44	0.47	350}	End Asp			
3+60	0.46	0.46	0.46	0.45	0.45	0.46	0.45	0.46	0.46	0.46					
3+80	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.47	0.47	0.48					
4+00	0.47	0.47	0.46	0.46	0.47	0.46	0.46	0.46	0.46	0.46					
4+20	0.46	0.46	0.45	0.45	0.45	0.46	0.46	0.46	0.45	0.45					
4+40	0.45	0.45	0.46	0.46	0.46	Rd	Rd	Rd	Rd	Rd	450}	Prussman Blvd			
4+60	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd					
4+80	Rd	Rd	Rd	Rd	0.46	0.46	0.45	0.45	0.46	0.46	486}	End Prussman			
5+00	0.47	0.47									502	MH-1N (Return)			

MH-9N to MH-8N (Return, Failed)												Min	Max	Avg	
9/12/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.42	0.42	0.42	0.43	0.43	0.43	0.43	0.43	0.42	0.43	0}	MH-9N (Return)	0.410	0.470	0.439
0+20	0.44	0.44	0.44	0.45	0.45	0.46	0.45	0.45	0.45	0.45					
0+40	0.46	0.45	0.46	0.46	0.47	0.47	0.47	0.46	0.46	0.46					
0+60	0.46	0.46	0.46	0.45	0.45	0.45	0.46	0.46	0.46	0.46					
0+80	0.45	0.45	0.43	0.43	0.43	0.42	0.42	sw	sw	sw	94}	sw			
1+00	sw	0.42	0.42	0.42	0.42	0.43	0.42	0.42	0.42	0.43	101}	sw ends			
1+20	0.43	0.43	0.43	0.43	0.43	0.42	0.43	0.43	0.42	0.42					
1+40	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	150}	90 Rt			
1+60	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.41	0.41					
1+80	0.43	0.43	0.42	0.43	0.43	0.43	0.43	0.43	0.43	sw	198}	sw			
2+00	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw					
2+20	sw	0.43	0.44	0.46	0.46	0.46	0.46	0.45	0.45	0.45	220}	sw ends/ 228}	90 Lt		
2+40	0.45	0.45	0.46	0.45	0.45	0.45	0.44	0.44	0.44	0.44					
2+60	0.44	0.44	0.45	0.45	0.45	0.44	0.44	0.45	0.45	0.45					
2+80	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45					
3+00	0.45	0.45	0.43	0.43							306}	MH-8N (Return)			

MH-2N to MH-3N (Supply, Failed)												Min	Max	Avg	
9/14/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0}	MH-2N (Supply)	0.410	0.470	0.435
0+20	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46					
0+40	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43					
0+60	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	64}	90 Rt			
0+80	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	92}	90 Lt			
1+00	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44					
1+20	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44					
1+40	0.44	0.44	0.45	0.45	0.45	0.47	0.46	0.46	0.45	0.45					
1+60	0.45	0.45	0.44	0.44	0.43	0.43	0.42	0.41	0.41	0.41	170}	90 Lt			
1+80	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	198}	90 Rt			
2+00	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.42	0.42					
2+20	0.41	0.41	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.43					
2+40	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43					
2+60	0.43	0.43	0.42	0.42	0.42	0.42	0.42				272}	MH-3N (Supply)			

MH-4N to BLDG 1664 (Supply, Failed)												Min	Max	Avg	
9/14/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.35	0.35	0.35	0.36	0.36	0.37	0.37	sw	sw	sw	0}	MH-4N (Supply) / 4} 90 Rt / 10} 90 Lt	0.350	0.380	0.362
0+20	sw	sw	sw	sw	sw	0.36	0.36	0.36	0.36	0.36	13 to 28}	sw			
0+40	0.36	0.36	0.36	0.38	0.38						48}	BLDG 1664 (Supply)			

MH-8N to Bldg 1363 (Supply, Failed)												Min	Max	Avg	
9/14/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.33	0.33	sw	sw	sw	sw	sw	sw	sw	sw	0}	MH-8N (Supply) / 3} sw start / 5} 90 Rt	0.330	0.340	0.336
0+20	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw	27}	90 Lt			
0+40	sw	sw	sw	sw	0.34	0.34	0.34	0.34	0.34	0.33	47}	end sw/ 59}	BLDG		
0+60											1363}	(Supply)			

MH-11N to MH-10N (Supply, Failed)												Min	Max	Avg	
9/13/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0} MH-11N (Supply)	0.400	0.420	0.415
0+20	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.42	0.42	0.42	0.42	33} 90 Lt			
0+40	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	40} 90 Rt/ 52} 90 Rt			
0+60	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	61} 90Lt			
0+80	0.41	0.41	0.41	0.42	0.42	0.41	0.41	0.40	0.40			95} MH-10N (Supply)			
1+00															

MH-11N to MH-10N (Return, Failed)												Min	Max	Avg	
9/13/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0} MH-11N (Return)	0.400	0.410	0.403
0+20	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	33} 90 Lt			
0+40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41	40} 90 Rt/ 52} 90 Rt			
0+60	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	61} 90 Lt			
0+80	0.40	0.40	0.40	0.40	0.41	0.40	0.40	0.40	0.40	0.40		95} MH-10N (Return)			

MH-18N to MH-17N (Return, Failed)												Min	Max	Avg	
9/13/2007	Potential - Volts										Comments				
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.35	0.35	0.35	0.35	0.35	0.35	0.36	0.36	0.36	0.36	0}	MH-18N (Return)	0.350	0.450	0.402
0+20	0.37	0.37	0.37	0.36	0.36	0.36	0.37	0.37	0.37	0.37					
0+40	0.38	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39					
0+60	0.38	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39					
0+80	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38	0.38	0.38					
1+00	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.39	0.39	0.39					
1+20	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	137}	90 Lt			
1+40	0.39	0.39	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38	143}	90 Rt/ 157}	90 Rt		
1+60	0.38	0.38	0.38	0.38	0.38	0.37	0.38	0.38	0.38	0.38	169}	90 Lt			
1+80	0.39	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38	0.38					
2+00	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39					
2+20	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.39	0.39					
2+40	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39					
2+60	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39					
2+80	0.38	0.38	0.38	0.38	0.40	0.40	0.40	0.40	0.40	0.40					
3+00	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40					
3+20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40					
3+40	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.40	0.40					
3+60	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40					
3+80	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41					
4+00	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40					
4+20	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	431}	90 Lt			
4+40	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	443}	90 Rt/ 454}	90 Rt		
4+60	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	466}	90 Lt			
4+80	0.40	0.40	0.40	0.40	0.41	0.41	0.42	0.42	0.42	0.42					
5+00	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42					
5+20	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43					
5+40	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43					
5+60	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42					
5+80	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44					
6+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	600}	45 Lt			
6+20	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44					
6+40	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45					
6+60	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45					
6+80	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44					
7+00	0.44	0.41	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	705}	90 Lt/ 718}	90 Rt		
7+20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	728}	90 Rt/ 738}	90 Lt		
7+40	0.39	0.39	0.39	0.39	0.39	0.38	0.38	0.38	0.38	0.38					
7+60	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.37	0.37	0.37					
7+80	0.37	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	782}	Tank Rd			
8+00	Rd	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	800}	End Tank Rd			
8+20	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.40					
8+40	0.40	0.40	0.40	0.40	0.40	0.40					850}	MH-17N (Return)			

MH-7N to MH-6N (Supply, Failed)												Min	Max	Avg
9/13/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.410	0.490	0.441
0+20	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.44			
0+40	0.45	0.45	0.45	sw	sw	sw	sw	0.44	0.44	0.44	0.44			
0+60	0.44	0.44	0.44	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44			
0+80	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.43			
1+00	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.43	0.43			
1+20	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.44	0.44	0.44	0.44			
1+40	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.44	0.44	0.45			153} 90 Lt
1+60	0.45	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.45			170} 90 Rt
1+80	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44			192} 90 RT
2+00	0.43	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45			210} 90 Lt
2+20	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.45			
2+40	0.45	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.46	0.46	0.46			
2+60	0.46	0.47	0.47	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49			
2+80	0.48	0.48	0.48	0.48	0.47	0.47	0.48	0.48	0.48	0.48	sw			297}sw
3+00	sw	sw	sw	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43			304}sw ends
3+20	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.42	0.42	0.42	0.42			338} MH-6N (Supply)

MH-7N to MH-6N (Return, Failed)												Min	Max	Avg
9/13/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.42	0.42	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.410	0.460	0.435
0+20	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.42	0.42	0.42	0.42			
0+40	0.42	0.42	0.42	sw	sw	sw	sw	0.42	0.42	0.42	0.42			46 to 52}sw
0+60	0.42	0.42	0.42	0.43	0.43	0.43	0.42	0.42	0.44	0.43	0.43			
0+80	0.43	0.43	0.43	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.44			
1+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.43			
1+20	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45			
1+40	0.44	0.44	0.44	0.44	0.44	0.45	0.43	0.43	0.43	0.43	0.43			153} 90 Lt
1+60	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.43			170} 90 Rt
1+80	0.43	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43	0.43			192} 90 RT
2+00	0.43	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.43			210} 90 Lt
2+20	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46			
2+40	0.45	0.46	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.45			
2+60	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46			
2+80	0.46	0.46	0.46	0.45	0.45	0.45	0.44	0.44	0.44	0.44	sw			297}sw
3+00	sw	sw	sw	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43			304}sw ends
3+20	0.42	0.42	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42			338} MH-6N (Return)

Fort Carson Phase II and III South Loop CIS Data

MH-27S to BLDG 2161 (Supply, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	sw *	sw	sw	sw	sw	sw	0.45	0.45	0.45	0.45	0 to 12} sw/ 14} 90 Lt	0.440	0.450	0.445
0+20	0.45	0.45	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	24} Asp			
0+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
0+60	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
0+80	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+00	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	100} 90 Rt			
1+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	0.44	0.44	154} Asp ends			
1+60	0.44	0.44	0.44	0.44	0.44						168} BLDG 2161 (Supply)			
NOTE: * = MH-27S location														

MH-38S to BLDG 2355 (Supply, Failed)												Min	Max	Avg
9/15/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.41	0.41	0.41	0.41	0.41	0.43	0.43	0.43	0.43	0.43	0} MH38S (supply)	0.410	0.460	0.436
0+20	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.44	0.44	0.44				
0+40	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43	0.43				
0+60	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	0.44				
0+80	0.44	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	94} 90 Rt			
1+00	0.44	0.44	0.44	0.44	0.46	0.46	0.46				112} BLDG 2355 (Supply)			

MH-4S to MH-6S (Supply, Failed)												Min	Max	Avg
9/19/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.47	0.47	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0} MH-4S (Supply)	0.440	0.490	0.460
0+20	0.48	0.46	0.46	0.46	0.46	0.46	0.44	0.44	0.44	0.44				
0+40	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw	40} sw			
0+60	sw	sw	sw	sw	sw	sw	sw	0.44	0.45	0.45	72} sw ends			
0+80	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.47				
1+00	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.49	0.49				
1+20	0.49	sw	sw	sw	0.45	0.45	0.46	0.46	0.46	0.46	121 to 127} sw/ 134} 90 Lt			
1+40	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46	0.46	138} 90 Rt			
1+60	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45				
1+80	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45				
2+00	0.45	0.45	0.45	0.45	0.45	Rd	Rd	Rd	Rd	Rd	200} 90 Rt/ 210} Rd			
2+20	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
2+40	Rd	0.44	0.44	0.44	0.46	0.46	0.46	0.46	0.46		240} Rd end			
											256} MH-6S (Supply)			

MH-4S to MH-6S (Return, Failed)												Min	Max	Avg
9/19/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.49	0.49	0.49	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0} MH-4S (Return)	0.450	0.490	0.459
0+20	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46				
0+40	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw	40} sw			
0+60	sw	sw	sw	sw	sw	sw	sw	0.48	0.48	0.45	72} sw ends			
0+80	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46				
1+00	0.47	0.47	0.47	0.46	0.46	0.46	0.46	0.47	0.47	0.47				
1+20	0.49	sw	sw	sw	0.48	0.48	0.46	0.46	0.46	0.45	121 to 127} sw/ 134} 90 Lt			
1+40	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	138} 90 Rt			
1+60	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.45	0.45				
1+80	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.45				
2+00	0.45	0.46	0.46	0.45	0.45	Rd	Rd	Rd	Rd	Rd	200} 90 Rt/ 210} Rd			
2+20	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
2+40	Rd	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45		240} Rd end			
											256} MH-6S (Return)			

9/15/2007 MH 37S to MH 38S (Return, Failed)												Min	Max	Avg
Feet	Potential - Volts										Comments			
0+00	0.52	sw	sw	sw	0.50	0.50	0.50	0.49	0.49	0.49	0} MH-37S (Return) / 1 to 7} sw	0.440	0.520	0.468
0+20	0.49	0.48	0.48	Rd	Rd	Rd	Rd	Rd	Rd	Rd	26} Rd/ 28} 90 Rt			
0+40	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
0+60	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
0+80	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+00	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+20	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+40	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+60	Rd	Rd	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45	163} Rd end/ 167} 90 Lt			
1+80	0.44	0.44	0.44	0.44	0.45	0.45	0.45				180} 90 Rt/ 192} MH-38S (Return)			

9/17/2007 MH-30S to Bldg. 2255 (Return, Failed)												Min	Max	Avg
Feet	Potential - Volts										Comments			
0+00	0.46	0.46	0.46	0.46	0.46	0.46	sw	sw	sw	0.47	0} MH-30S (Return) / 12 to 17} sw	0.460	0.490	0.473
0+20	0.47	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	22} 90 Rt/ 30} 90 Lt			
0+40	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47				
0+60	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47				
0+80	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.48				
1+00	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49				
1+20	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49				
1+40	sw	sw	sw	sw	0.48	0.48	0.48	0.48	0.48	0.48	140 to 147} sw			
1+60	0.48	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	160} 90 Rt/ 162 to 183} sw			
1+80	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48	201 to 212} sw			
2+00	0.48	sw	sw	sw	sw	sw	sw				212} BLDG 2255 (Return)			

9/17/2007 MH-30S to BLDG 2254 (Supply, Failed)												Min	Max	Avg
Feet	Potential - Volts										Comments			
0+00	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0} MH-30S (Supply)	0.460	0.480	0.472
0+20	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.46	0.46				
0+40	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47				
0+60	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	60} 90 Rt			
0+80	sw	sw	sw	0.48	0.48	0.48	0.48	0.48	0.48	0.47	79 to 84}sw			
1+00	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47					
1+20	0.47	0.47	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.48				
1+40	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48				
1+60	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48				
1+80	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48				
2+00	sw	sw	sw	sw	0.48	0.48	0.48	0.48	0.48	0.48	200 to 206} sw/ 220} 90 Rt			
2+20	0.47										221} BLDG 2254 (Supply)			

MH-21S to MH-20S (Supply, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.42	0.42	0.42	0.43	0.43	0.43	sw	sw	sw	sw	0) MH-21S (Supply) / 11) sw	0.420	0.460	0.447
0+20	sw	sw	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	22) sw ends			
0+40	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.43	0.43				
0+60	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44				
0+80	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45				
1+00	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	105) 90 Rt/ 114) 90 Lt			
1+20	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	120) 90 Lt/ 130) 90 Rt			
1+40	0.46	0.46	sw	sw	sw	sw	sw	sw	0.46	0.46	144) sw/ 155) sw ends			
1+60	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45				
1+80	0.46	0.46	0.46	0.46	0.46	Rd	Rd	Rd	Rd	Rd	191) Rd			
2+00	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	0.46	216) Rd ends			
2+20	0.46	0.46	0.46								224) MH-20S (Supply)			

MH-25S to BLDG 2150 (Return, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	sw	sw	sw	sw	sw	sw	0.51	0.51	0.51	0.51	0) MH-25S (Return) / 0 to 11) sw	0.480	0.510	0.495
0+20	0.51	0.51	0.51	0.50	0.50	0.50	0.50	0.50	Rd	Rd	36)Rd			
0+40	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
0+60	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
0+80	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	102) Rd ends			
1+00	Rd	Rd	0.49	0.49	0.49	0.49	0.49	sw	sw	sw	108) 90 Rt/ 113 to 119)sw			
1+20	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49	132) 90 Lt			
1+40	0.49	0.49	0.49	0.49	sw	sw	sw				147 to 152) sw			
											152) BLDG 2150 (Return)			

MH-19S to BLDG 2074 (Return, Failed)												Min	Max	Avg
9/19/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0) MH-19S (Return)	0.440	0.470	0.456
0+20	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.45	20) 90 Lt/ 37) 90 Rt			
0+40	sw	sw	sw	0.45	0.45	0.45	0.45	0.45	0.45	0.45	39 to 45) sw			
0+60	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.46				
0+80	0.46	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.44				
1+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45				
1+20	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46				
1+40	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46				
1+60	sw	sw	sw	sw	0.47	0.47	0.47	0.47	0.47	0.47	160 to 166)sw/ 180)90 Rt			
1+80	0.47	0.47									182) BLDG 2074 (Return)			

MH-22S to MH-20S (Return, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.48	sw	0) MH-22S (Return) / 18) sw	0.470	0.500	0.481
0+20	sw	sw	sw	sw	sw	sw	0.49	0.49	0.49	0.50	30) sw ends			
0+40	0.50	0.50	0.49	0.49	0.49	0.48	0.48	0.48	0.48	0.48				
0+60	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.48	0.48				
0+80	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48				
1+00	0.48	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.48	0.48	102) 90 Lt/ 108) 90 Rt			
1+20	0.48	0.48	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	118) 90 Rt/ 126) 90 Lt			
1+40	0.47	0.48	0.48	0.48	0.48	sw	sw	sw	sw	sw	150 to 160) sw			
1+60	sw	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47		176) MH-20S (Return)			

MH-22S to MH-25S (Supply, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	sw	sw	sw	0.55	0.55	0.55	0.54	0.54	0.54	0.54	0} MH-22S (Supply) / 0 to 5} sw	0.500	0.550	0.536
0+20	0.54	0.54	0.54	0.54	0.55	0.55	0.55	0.55	0.55	0.54				
0+40	0.54	0.54	0.54	0.54	0.54	0.54	0.52	0.52	0.50	0.50	48} 90 Lt/ 56 90 Lt			
0+60	0.53	0.53	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54	66} 90 Lt/ 74} 90 Rt			
0+80	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.54				
1+00	0.54	0.54	0.54								104} MH-25S (Supply)			

MH-27S to BLDG 2153 (Supply, Failed)												Min	Max	Avg
9/18/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0} MH-27S (Supply)	0.440	0.460	0.454
0+20	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46				
0+40	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45				
0+60	0.45	0.45	0.45	0.45	0.45	sw	sw	sw	sw	0.45	70 to 76} sw			
0+80	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44		88} 90 Rt			
											96} BLDG 2153 (Supply)			

MH-38S to BLDG 2356 (Return, Failed)												Min	Max	Avg
9/15/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.46	0.46	0.45	0.45	0.44	0.44	Asp	Asp	Asp	Asp	0} MH-38S (Return)	0.440	0.460	0.456
0+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
0+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
0+60	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
0+80	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+00	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+20	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+40	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+60	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
1+80	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
2+00	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp				
2+20	Asp	Asp	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45	0.45			
2+40	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46				
2+60	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.44	268} 90 Rt/ 272} 90 Lt			
2+80											278 BLDG 2356 (Return)			

MH-33S to MH-32S (Supply, Failed)												Min	Max	Avg
9/15/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.48	0.48	0.46	0.46	sw	sw	sw	sw	sw	sw	0} MH-33S (Supply) / 7 to 19} sw	0.460	0.500	0.479
0+20	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.48				
0+40	0.47	0.47	0.46	0.46	0.46	0.46	0.46	0.47	0.47	0.47	44} 90 Rt/ 48} 90 Lt			
0+60	0.47	0.47	0.47	0.49	0.49	0.49	0.49	0.49	0.48	0.48	60} 90 Lt/ 64} 90 Rt			
0+80	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49				
1+00	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.50	0.50	0.50				
1+20	0.50										120} MH-32S (Supply)			

MH-48S to MH-47S (Return, Failed)												Min	Max	Avg
9/15/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0} MH-48S (Return)	0.450	0.470	0.462
0+20	0.46	0.46	0.45	0.45	0.45	0.45	0.46	0.46	0.46	sw	37} sw			
0+40	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw	43} 90 Rt/ 52 90 Lt			
0+60	sw	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47	60} 90 Lt, sw end			
0+80	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.46	0.47	0.47	68} 90 Rt			
1+00	0.47	0.47	0.47	0.47	0.47	0.47					110} MH-47S (Return)			

MH-33S to BLDG 2253 (Supply, Failed)												Min	Max	Avg
9/17/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.43	sw	sw	sw	sw	sw	sw	sw	0.45	0.45	0} MH-33S (Supply) / 1 to 14} sw	0.430	0.450	0.444
0+20	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.44			
0+40	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	41} 90 Lt/ 47} 90 Rt			
0+60	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	57} 90 Lt/ 67} 90 Rt			
0+80	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44				
1+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45				
1+20	0.45	0.45	0.44	sw	sw	sw	sw	0.44	0.44	0.44	126 to 132} sw			
1+40	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44			146} 90 Rt			
1+60											154} BLDG 2253 (Supply)			

MH-33S to BLDG 2253 (Return, Passed)												Min	Max	Avg
9/17/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.43	0.43	0.44	0.44	sw	sw	sw	sw	0.45	0.45	0} MH-33S (Return) / 7} sw / 14} sw ends	0.430	0.450	0.444
0+20	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44				
0+40	0.44	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	41} 90 Lt/ 47} 90 Rt			
0+60	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	57} 90 Lt/ 67} 90 Rt			
0+80	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.44	0.44				
1+00	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45				
1+20	0.44	0.44	0.44	sw	sw	sw	sw	0.44	0.44	0.44	126} sw/ 132} sw ends			
1+40	0.44	0.44	0.45	0.45	0.45	0.45	0.44	0.44			146} 90 Rt			
											154} BLDG 2253 (Return)			

MH-39S to MH-40S (Supply, Passed)												Min	Max	Avg
9/20/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.46	sw	sw	sw	sw	sw	sw	0.46	0.46	0.46	0} MH-39S (Supply) / 1} sw / 12} sw ends	0.450	0.470	0.464
0+20	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47				
0+40	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	54} 90 Rt			
0+60	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	66} 90 Lt/ 76} 90 Lt			
0+80	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	88} 90 Rt			
1+00	0.47	0.47	0.46	0.46	0.46	0.46	sw	sw	sw	sw	110} sw			
1+20	sw	sw	sw	0.46	0.46	0.46	0.46	0.46	0.46	0.46	124} sw ends			
1+40	0.45	0.45	0.45	0.45	0.46	0.46	0.45	0.45			154} MH-40S (Supply)			

MH-39S to MH-40S (Return, Failed)												Min	Max	Avg
9/15/2007	Potential - Volts										Comments			
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.44	sw	sw	sw	sw	sw	sw	0.43	0.43	0.43	0} MH-39S (Return) / 1 to 12} sw	0.420	0.470	0.431
0+20	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42				
0+40	0.42	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	54} 90 Rt			
0+60	0.42	0.42	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	66} 90 Lt/ 76} 90 Lt			
0+80	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.44	88} 90 Rt			
1+00	0.43	0.45	0.45	0.47	0.47	sw	sw	sw	sw	sw				
1+20	sw	sw	sw	0.44	0.44	0.44	0.43	0.43	0.43	0.43				
1+40	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44			154} MH-40S (Return)			

MH-37S to BLDG 2352 (Return, Passed)											Min	Max	Avg	
9/19/2007	Potential - Volts													
Feet	0	2	4	6	8	10	12	14	16	18	Comments			
0+00	0.50	0.50	0.47	0.47	sw	sw	sw	sw	sw	sw	0) MH-37S (Return) / 7) sw	0.430	0.500	0.457
0+20	sw	0.45	0.45	0.45	0.45	0.45	Rd	Rd	Rd	Rd	20) sw ends/ 32) Rd			
0+40	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
0+60	Rd	Rd	0.44	0.44	0.44	0.44	0.43	0.43	0.43	sw	63) Rd ends/ 78) sw			
0+80	sw	sw	sw	sw	sw	sw	0.43	0.43	0.43	0.43	89) sw ends			
1+00	0.44	0.44	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	107) 90 Rt/ 116) 90 Lt			
1+20	0.45	0.45	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.45	130) 90 Lt			
1+40	0.46	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46	140) 90 Rt			
1+60	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	sw	sw	176) sw			
1+80	sw	sw	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47	182) sw ends			
2+00	0.47	0.47	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46				
2+20	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47				
2+40	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47				
2+60	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47				
2+80	0.46	0.46	0.46	0.47	0.47	sw	sw	sw	sw	sw	286) 90 Lt/ 290 to 302)sw			
3+00	sw	sw	0.45	0.45	0.45	0.44	0.44	0.44			314) BLDG 2352 (Return)			

MH-4S to MH-1S (Supply, Passed)											Min.	Max.	Avg.	
9/20/2007	Potential - Volts													
Feet	0	2	4	6	8	10	12	14	16	18	Comments			
0+00	0.43	0.42	0.43	0.43	0.43	0.43	0.43	0.44	0.44	0.44	0) MH-4S (Supply)	0.420	0.480	0.460
0+20	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.45				
0+40	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46				
0+60	0.47	0.47	0.47	0.47	0.47	0.47	0.47	sw	sw	sw	74) sw			
0+80	sw	0.48	0.48	0.48	0.48	Rd	Rd	Rd	Rd	Rd	80) sw ends/ 90) Rd			
1+00	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+20	Rd	Rd	Rd	Rd	Rd	Rd	0.46	0.45	0.46	0.46	130) Rd ends			
1+40	0.46	0.46	0.46	0.47	0.47	0.47	0.48	0.48	0.48	0.48				
1+60	0.47	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.48	172) 90 Rt			
1+80	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.48	0.48	184) sw/ 190) sw ends			
2+00	0.48	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47				
2+20	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47	0.47				
2+40	0.47	0.47	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.46				
2+60	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47				
2+80	0.47	0.46	0.46	0.45	0.45	0.45	0.44	0.44	0.44	0.44				
3+00	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.45	0.45	0.45				
3+20	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.46				
3+40	0.45	0.45	0.45	0.46	0.46	0.46	0.45	0.44	0.44	0.44	358) MH-1S (Supply)			

MH-4S to MH-1S (Return, Passed)											Min	Max	Avg	
9/19/2007	Potential - Volts													
Feet	0	2	4	6	8	10	12	14	16	18	Comments			
0+00	0.44	0.44	0.46	0.46	0.47	0.47	0.47	0.46	0.46	0.46	0) MH-4S (Return)	0.440	0.490	0.474
0+20	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.46	0.46	0.46				
0+40	0.47	0.47	0.47	0.47	0.47	0.47	0.48	0.48	0.48	0.48				
0+60	0.48	0.48	0.48	0.48	0.49	0.49	0.49	sw	sw	sw	74) sw			
0+80	sw	0.49	0.49	0.47	0.47	Rd	Rd	Rd	Rd	Rd	80) sw ends/ 90) Rd			
1+00	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd	Rd				
1+20	Rd	Rd	Rd	Rd	Rd	Rd	0.47	0.47	0.47	0.47	130) Rd ends			
1+40	0.47	0.47	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.46				
1+60	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	172) 90 Rt			
1+80	0.45	0.45	0.45	0.46	0.46	0.47	0.47	0.47	0.48	0.48	184) sw/ 190) sw ends			
2+00	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48				
2+20	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.49				
2+40	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48				
2+60	0.48	0.48	0.49	0.49	0.49	0.49	0.48	0.49	0.49	0.49				
2+80	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49				
3+00	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49				
3+20	0.49	0.49	0.49	0.49	0.49	0.48	0.48	0.48	0.48	0.48				
3+40	0.49	0.49	0.49	0.49	0.49	0.47	0.47	0.47	0.46	0.46	358) MH-1S (Return)			

MH-13S to MH-12S (Return, Passed)											Min.	Max.	Avg.	
9/20/2007	Potential - Volts													Comments
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.47	0.47	0.47	0} MH-13S (Return)	0.430	0.490	0.470
0+20	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.48	0.48	0.48				
0+40	0.48	0.48	0.48	0.49	0.49	0.49	0.49	0.49	0.49	0.48	53} 90 Lt			
0+60	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49	0.49	0.48	61} 90 Rt/ 69} 90 Rt			
0+80	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.47	0.47	78} 90 Lt			
1+00	0.47	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.45	0.45				
1+20	0.44	0.44	0.44	0.44	0.44	0.43	0.43				132} MH-12S (Return)			

Fort Stewart Phase I CIS Data

VP-41 to VP-42 (Supply, Passed)											
11/29/2007	Potential - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.15	0.15	0.15	0.15	0.17	0.19	0.19	0.19	0.2	0.2	0] VP-41(Supply)
0+20	0.24	0.24	0.26	0.26	0.26	0.28	0.28	0.27	0.27	0.27	
0+40	0.28	0.28	0.28	0.30	0.30	0.30	0.31	0.31	0.31	0.31	
0+60	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.28	0.28	
0+80	0.28	sw	sw	sw	sw	sw	0.26	0.26	0.28	0.28	82] to 90] SW/ 95] 90 RT
1+00	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.30	0.30	109] 90 LT
1+20	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.29	0.29	0.29	121] 90 LT/ 136 90 RT
1+40	0.29	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	
1+60	0.29	0.29	0.29	0.29	0.30	0.30	0.30	0.29	0.29	0.29	
1+80	0.29	0.28	0.28	0.28	0.28	0.27	0.27	0.27	0.27	0.27	
2+00	0.25	0.25	0.24	0.24	0.24	0.24	0.23	0.23	0.23	0.24	
2+20	0.24	0.24	0.24	0.24	0.24	0.26	0.26	0.26	0.26	0.26	
2+40	0.25	0.25	0.23	0.23	0.22	0.18	0.16	0.11	0.11	0.10	
2+60	0.06	0.06	0.10	0.12	0.16	0.19	0.22	0.22	0.24	0.24	272] 45 RT
2+80	0.28	0.28	0.30	0.30	0.30	0.30	0.30	0.28	0.28	0.28	281] 90 LT
3+00	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.28	0.28	0.28	300] 90 RT
3+20	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.26	0.26	0.26	
3+40	0.27	0.27	0.27	0.26	0.26	0.28	0.28	0.28	0.30	0.30	354] 45 RT
3+60	0.30	0.29	0.28	0.28	0.29	0.29	0.29	0.28	0.28	sw	362] 45 LT
3+80	sw	sw	sw	sw	sw	sw	sw	sw	sw	sw	379] SW start
4+00	sw	sw	0.29	0.29	0.30	0.30	0.31	0.31	sw	sw	403] SW end/ 415] SW
4+20	sw	sw	sw	sw	sw	0.31	0.31	0.31	0.31	0.31	429] SW end, 45 LT
4+40	0.32	0.32	0.32	0.32	0.32	0.32	0.34	0.34	0.32	0.32	
4+60	0.32	0.33	0.33	0.33	0.34	0.34	0.34	0.36	0.36	0.36	
4+80	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	sw	498] SW start
5+00	sw	sw	sw	sw	0.36	0.36	0.37	0.37	0.40	0.40	506] SW end/ 511] 45 LT
5+20	0.40	0.40	0.40	0.40	0.40	0.42	0.42	0.42	0.42	sw	527] 45 RT/ 539] SW
5+40	sw	sw	sw	0.45	0.45	0.45	0.42	0.42	0.42	0.46	545] SW end, 90 RT
5+60	0.46	0.46	0.48	0.48	0.47	0.47	0.47	0.44	0.44	0.44	563] 90 LT
5+80	0.44	0.42								0.43	578] VP-42 (Supply)

Avg. 0.296 Min. 0.060 Max. 0.480

NOTES:

1. Readings low at VP-41, probably shorted to pit rebar
2. Readings low from 2+50 to 2+68, cause unknown

VP-41 to VP-39 (Supply, Passed)											
11/28/2007	Potetial - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.21	0.21	0.23	0.23	0.23	0.25	0.26	0.26	0.26	0.26	0] VP-41 (Supply)
0+20	0.28	0.28	0.28	0.26	0.26	0.25	0.25	0.26	0.26	0.26	
0+40	0.26	0.28	0.28	0.28	0.28	0.28	0.3	0.3	0.31	0.31	
0+60	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	
0+80	0.31	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	81] 90 LT/ 91] 90 RT
1+00	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.30	sw	101] 90 RT/ 114] 90 LT
1+20	sw	sw	sw	sw	0.29	0.29	0.29	0.28	0.28	0.28	118] to 126] SW
1+40	0.28	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.29	0.29	
1+60	0.29	0.29	0.29	0.28	0.28	0.28	0.27	0.27	0.29	0.29	
1+80	0.29	0.29	0.29	0.28	0.28	0.28	0.28	0.28	0.28	0.28	
2+00	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	
2+20	0.30	0.30	0.30	0.30	0.29	0.29	0.30	0.30	0.30	0.30	
2+40	0.30	0.30	0.29	0.29	0.29	0.30	0.30	0.30	0.30	0.29	
2+60	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	
2+80	0.30	0.30	0.29	0.29	0.29	0.29	0.29	sw	sw	sw	294] to 302] SW
3+00	sw	sw	0.28	0.28	0.28	0.28	0.30	0.30	0.30	0.30	306] 90 LT
3+20	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.32	331] 90 RT
3+40	0.30	0.30	0.32	0.32	0.34	0.34	0.34	0.32	0.32	0.30	
3+60	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	
3+80	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	0.32	
4+00	0.32	0.32	0.32	0.34	0.34	0.34	0.30	0.30	0.27	0.27	418] VP-39 (Supply)

Avg.
0.292

Min
0.210

Max
0.340

VP-41 to VP-39 (Return, Passed)											
11/29/2007	Potential - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.25	0.25	0.25	0.25	0.25	0.27	0.27	0.27	0.29	0.29	VP-41 (Return)
0+20	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	
0+40	0.28	0.29	0.29	0.29	0.29	0.29	0.31	0.31	0.32	0.32	
0+60	0.32	0.32	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	
0+80	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.31	0.31	0.31	81] 90 LT/ 91] 90 RT
1+00	0.31	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	sw	101] 90 RT/ 114] 90 LT
1+20	sw	sw	sw	sw	0.29	0.29	0.30	0.30	0.32	0.32	118] to 126] SW
1+40	0.31	0.31	0.31	0.31	0.31	0.29	0.29	0.29	0.29	0.29	
1+60	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.29	0.29	0.29	
1+80	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	0.28	
2+00	0.28	0.29	0.29	0.28	0.28	0.29	0.29	0.29	0.29	0.29	
2+20	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.28	0.28	0.28	
2+40	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.29	0.29	0.29	
2+60	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	
2+80	0.28	0.28	0.28	0.28	0.29	0.29	0.29	sw	sw	sw	294] to 302] SW
3+00	sw	sw	0.28	0.28	0.30	0.30	0.30	0.31	0.32	0.32	306] 90 LT
3+20	0.32	0.32	0.32	0.31	0.31	0.33	0.33	0.33	0.34	0.34	331] 90 RT
3+40	0.34	0.34	0.34	0.35	0.35	0.35	0.35	0.35	0.34	0.34	
3+60	0.34	0.34	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	
3+80	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.33	0.33	0.33	
4+00	0.36	0.36	0.34	0.34	0.34					0.33	418] VP-39 (Return)

Avg.
0.302

Min
0.250

Max
0.360

VP-23 to Power Plant (Supply, Failed)											Comments	Min	Max	Avg
11/27/2007	Potential - Volts													
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.10	0.10	0.18	0.18	0.24	0.24	0.26	0.30	0.34	0.35	0] VP-23 (Supply)	0.100	0.490	0.406
0+20	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.44	0.44	0.44				
0+40	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.43	0.44	0.44				
0+60	0.43	0.43	0.44	0.44	0.43	0.43	0.43	0.42	0.42	0.42	72] 90 LT			
0+80	0.41	0.41	0.41	sw	sw	sw	sw	sw	sw	sw	89] 90 RT			
1+00	sw	sw	sw	sw	sw	0.41	0.40	0.40	0.41	0.41	118] 90LT			
1+20	0.40	0.40	0.39	0.39	0.40	0.40	0.39	0.39	0.39	0.39				
1+40	0.40	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.39	0.38				
1+60	0.39	0.39	0.38	0.38	0.38	0.40	0.40	0.42	0.42	0.42				
1+80	0.44	0.44	0.47	0.47	0.48	0.48	0.48	0.47	0.47	0.47				
2+00	0.48	0.48	0.48	0.48	0.47	0.47	0.47	0.47	0.47	0.47				
2+20	0.47	0.48	0.48	0.48	0.47	0.48	0.48	0.48	0.48	0.48				
2+40	0.47	0.47	0.48	0.48	0.48	0.48	0.48	0.48	0.49	0.49	254] 90 LT			
2+60	0.49	sw	sw	sw	sw	sw	sw	sw	sw	sw	266] 90 RT			
2+80	sw	sw	sw	0.45	0.45	0.44	0.44	0.45	0.45	0.45	280] 90 RT/ 293] 90 LT			
3+00	0.45	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.40				
3+20	0.40	0.40	0.41	0.42	0.42	0.42	0.40	0.42	0.42	0.41				
3+40	0.41	0.41	0.40	0.41	0.40	0.40	0.36	0.36	0.35	0.35				
3+60	0.34	0.34	0.34	0.34	0.32	0.32	0.32	0.31	0.31	0.31				
3+80	0.31	0.30	0.30	0.29	0.29	0.29	0.30	0.30	0.30	0.30				
4+00	0.33	0.33	0.34	0.34	0.34	0.34	0.35	0.35	0.36	0.36	413] 90LT			
4+20	0.39	0.39	0.41	0.41	0.41	0.43	0.43	0.43	0.42	0.42	439] 90RT			
4+40	0.43	0.43	0.42	0.42	0.42	RD	RD	RD	RD	RD	450] RD W. Wilson			
4+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	0.33	476] RD W. Wilson			
4+80	0.34	0.34	0.35	0.35	0.35	0.37	0.37	0.36	0.36	0.35	496] Hi-point vent			
5+00	0.35	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37	0.37	500] End vent/ 502] 90RT			
5+20	0.37	0.37	0.38	0.38	0.38	0.38	0.38	0.36	0.36	0.35				
5+40	0.36	0.36	0.35	0.36	0.35	0.36	0.38	0.38	0.38	0.39				
5+60	0.39	0.39	0.39	0.41	0.41	0.42	0.41	0.41	0.41	0.40	569] 90 RT/ 579] Fence			
5+80	0.40	0.40	0.41	0.42	0.42	0.40	0.40	0.40	0.39	0.39				
6+00	0.39	0.42	0.42	0.42	0.42	0.40	0.40	0.41	0.41	0.40				
6+20	0.40	0.41	0.42	0.42	0.41	0.41	0.42	0.42	0.39	0.39				
6+40	0.39	0.40	0.40	0.42	0.42	0.43	0.43	0.43	0.44	0.44				
6+60	0.44	0.44	0.45	0.45	0.44	0.44	0.44	0.44	0.43	0.43				
6+80	0.43	0.43	0.45	0.45	0.44	0.44	0.44	0.43	0.43	0.42	681] 90 RT			
7+00	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	702] 90 LT			
7+20	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42				
7+40	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42				
7+60	0.43	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42				
7+80	0.42	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43	0.43				
8+00	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42				
8+20	0.42	0.42	0.42	0.42	0.43	0.43	0.43	0.43	0.43	0.43				
8+40	0.43	0.42	0.42	0.42	0.43	0.43	0.43	0.40	0.40	0.40	857] 90 LT			
8+60	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40	0.40				
8+80	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.40	0.40	883] 90 RT			
9+00	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.40	0.40	898] 90 RT			
9+20	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.41	926] 90 LT			
9+40	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42				
9+60	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41				
9+80	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42				
10+00	0.42	0.42	0.42	0.42	0.42	0.39	0.39	0.40	0.40	0.40	1017] Fence			
10+20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41	0.41	0.41				
10+40	0.40	0.40	0.40	0.39	0.39	0.39	0.40	0.41	0.41	0.41				
10+60	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40				
10+80	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	1093] Fence			
11+00	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42				
11+20	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41	0.41	1131] 90 LT			
11+40	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.40				
11+60	0.40	0.40	0.41	0.41	0.41	0.40	0.40	0.40	0.40	0.40	1162 90 RT/ 1178] 90 RT			
11+80	0.40	0.40	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.39				
12+00	0.38	0.38	0.38	0.38	0.39	0.39	0.38	0.39	0.39	0.39	1206] 90 LT/ 1214] Fence			
12+20	0.40	0.40	0.41	0.41	0.40	0.40	0.41	0.41	0.40	0.41				
12+40	0.39	0.39	0.38	0.38	0.35	0.35	RD	RD	RD	RD	1252] RD McFarland			
12+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD				
12+80	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD				
13+00	RD	0.45	0.45	0.45	0.43	0.43	0.43				1300] RD end			
13+20											1313] Fence at Plant			

VP-23 to Power Plant (Return, Failed)											Comments	Min.	Max.	Avg.	
11/27/2007	Potential - Volts														
Feet	0	2	4	6	8	10	12	14	16	18					
0+00	0.10	0.10	0.22	0.22	0.25	0.25	0.26	0.27	0.27	0.29	0]	VP-23 (Return)	0.100	0.490	0.407
0+20	0.34	0.37	0.37	0.35	0.35	0.35	0.37	0.37	0.39	0.39					
0+40	0.39	0.39	0.40	0.40	0.40	0.42	0.42	0.42	0.44	0.44					
0+60	0.42	0.43	0.43	0.43	0.43	0.42	0.42	0.42	0.42	0.42	72]	90 LT			
0+80	0.43	0.43	0.43	sw	sw	sw	sw	sw	sw	sw	89]	90 RT			
1+00	sw	sw	sw	sw	sw	0.41	0.40	0.40	0.41	0.43	118]	90LT			
1+20	0.43	0.43	0.39	0.39	0.40	0.40	0.39	0.39	0.39	0.39					
1+40	0.39	0.40	0.40	0.40	0.39	0.39	0.39	0.38	0.38	0.38					
1+60	0.40	0.40	0.40	0.40	0.40	0.40	0.38	0.37	0.37	0.38					
1+80	0.38	0.37	0.37	0.37	0.38	0.38	0.41	0.41	0.41	0.40					
2+00	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.43	0.44					
2+20	0.47	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.46	0.47					
2+40	0.47	0.47	0.47	0.47	0.46	0.46	0.46	0.48	0.48	0.48	254]	90 LT			
2+60	0.49	sw	sw	sw	sw	sw	sw	sw	sw	sw	266]	90 RT			
2+80	sw	sw	sw	0.48	0.48	0.48	0.47	0.47	0.47	0.47	280]	90 RT/ 293]	90 LT		
3+00	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.42	0.42					
3+20	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41					
3+40	0.41	0.41	0.41	0.40	0.40	0.40	0.39	0.39	0.38	0.38					
3+60	0.38	0.38	0.37	0.37	0.37	0.37	0.39	0.39	0.39	0.37					
3+80	0.39	0.36	0.36	0.35	0.35	0.34	0.34	0.33	0.31	0.31					
4+00	0.30	0.28	0.28	0.30	0.35	0.35	0.35	0.36	0.36	0.36	413]	90LT			
4+20	0.38	0.38	0.40	0.40	0.40	0.42	0.42	0.42	0.44	0.44	439]	90RT			
4+40	0.46	0.46	0.44	0.44	0.42	0.42	RD	RD	RD	RD	450]	RD W. Wilson			
4+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	0.33	476]	RD W. Wilson			
4+80	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32	496]	Hi-point vent			
5+00	0.34	0.35	0.35	0.35	0.34	0.34	0.35	0.35	0.35	0.35	500]	End vent/ 502]	90RT		
5+20	0.34	0.33	0.33	0.34	0.34	0.34	0.35	0.35	0.35	0.35					
5+40	0.36	0.36	0.38	0.38	0.38	0.41	0.41	0.41	0.40	0.40					
5+60	0.41	0.41	0.41	0.40	0.40	0.40	0.42	0.42	0.42	0.44	569]	90 RT/ 579]	Fence		
5+80	0.40	0.42	0.42	0.40	0.40	0.40	0.39	0.39	0.39	0.39					
6+00	0.38	0.38	0.38	0.40	0.40	0.40	0.42	0.42	0.42	0.42					
6+20	0.42	0.42	0.42	0.42	0.42	0.44	0.44	0.44	0.44	0.44					
6+40	0.44	0.43	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.42					
6+60	0.42	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.45	0.45					
6+80	0.45	0.45	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	681]	90 RT			
7+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.45	702]	90 LT			
7+20	0.45	0.45	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45					
7+40	0.45	0.45	0.44	0.44	0.42	0.42	0.42	0.42	0.42	0.42					
7+60	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.44	0.44					
7+80	0.44	0.44	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.44					
8+00	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44					
8+20	0.44	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41	0.41					
8+40	0.40	0.40	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	857]	90 LT			
8+60	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42					
8+80	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41	883]	90 RT			
9+00	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.42	898]	90 RT			
9+20	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	926]	90 LT			
9+40	0.42	0.42	0.42	0.41	0.41	0.41	0.41	0.41	0.41	0.41					
9+60	0.41	0.41	0.41	0.41	0.41	0.41	0.40	0.40	0.40	0.40					
9+80	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41					
10+00	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.40	1017]	Fence			
10+20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40					
10+40	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41					
10+60	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42					
10+80	0.42	0.42	0.42	0.42	0.41	0.41	0.41	0.41	0.41	0.41	1093]	Fence			
11+00	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.41					
11+20	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.43	1131]	90 LT			
11+40	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.41					
11+60	0.41	0.41	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	1162]	90 RT/ 1178]	90 RT		
11+80	0.39	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39					
12+00	0.39	0.42	0.42	0.43	0.43	0.45	0.45	0.45	0.44	0.44	1206]	90 LT/ 1214]	Fence		
12+20	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43					
12+40	0.43	0.43	0.42	0.42	0.42	0.42	RD	RD	RD	RD	1252]	RD McFarland			
12+60	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD					
12+80	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD					
13+00	RD	0.43	0.43	0.45	0.45	0.48	0.46				1300]	RD end			
13+20											1313]	Fence at Plant			

VP-27/28 to Bldg 620/621 (Supply, Failed)											
11/29/2007	Potential - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.02	0.10	0.10	0.10	0.11	0.11	0.13	0.13	0.15	0.17	0] VP-27/28 (Supply)
0+20	0.17	0.17	0.18	0.18	0.17	0.17	0.18	0.18	0.18	0.19	
0+40	0.19	0.20	0.20	0.21	0.21	0.23	0.23	0.21	0.21	0.20	
0+60	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	
0+80	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	102] 90 RT/ 108] Tee
1+00	0.20	0.20	0.20	0.20	0.19	0.19	0.17	0.17	0.17	0.14	117] 90 LT/ 128 90 RT
1+20	0.17	0.17	0.17	0.20	0.20	0.22					130] Bldg 620
0+00	0.19	0.19	0.18	0.18	0.18	0.18	0.18	sw	sw	sw	Tee to Bldg 621/ 14] SW
0+20	sw	sw	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.19	22] SW end
0+40	0.20	0.20	0.20	0.18	0.18	0.18	0.18	0.18	0.18	0.18	
0+60	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.19	0.20	
0+80	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	
1+00	0.21	0.20	0.20	0.21	0.20	0.20	0.20	0.21	0.21	0.21	
1+20	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.22	0.22	0.26	134] 90 LT
1+40	0.28	0.28	0.28	0.28	0.28	0.30	0.30	0.33	0.33	0.33	
1+60	0.33	0.33	sw	sw	sw	sw	0.37	0.35	0.33	0.33	163] to 170] SW
1+80	0.30	0.30	0.30	0.28	0.28	0.28	0.24	0.24	0.22	0.22	197] 90 RT
2+00	0.20	0.20	0.24	0.27	0.27	0.26	0.26	sw	sw	sw	214] to 221] SW
2+20	sw	0.28	0.28	0.26	0.26	0.24	0.20	0.20	0.19	0.19	227] 90 LT
2+40	0.19	0.19	0.19								245] Bldg 621
NOTE: Low readings at VP-27/28 most likely caused by short to pit rebar											

Min. 0.020 Max. 0.370 Avg. 0.210

Bldg 218 to VP-42 (Supply, Failed)											
11/28/2007	Potential - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.26	0.28	0.32	0.34	0.34	0.36	0.37	0.37	0.38	0.38	0] Bldg 218 (Supply)
0+20	0.38	0.38	sw	sw	sw	0.40	0.40	0.40	0.41	0.41	23] to 29] SW
0+40	0.42	0.42	0.44	0.44	0.44	0.44	0.44	0.45	0.45	0.45	43] 90 LT/ 53] SW
0+60	0.45	0.44	0.44	0.42	0.42	0.42	0.42	sw	sw	sw	70] SW end
0+80	sw	sw	sw	sw	sw	sw	0.42	0.42	0.44	0.44	88] 90 RT
1+00	0.42	0.42									102] VP-42 (Supply)

Min. 0.260 Max. 0.450 Avg. 0.404

Bldg 218 to VP-42 (Return, Failed)											
11/28/2007	Potential - Volts										Comments
Feet	0	2	4	6	8	10	12	14	16	18	
0+00	0.26	0.26	0.26	0.29	0.29	0.32	0.32	0.32	0.35	0.35	0] Bldg 218 (Return)
0+20	0.36	0.37	sw	sw	sw	0.40	0.40	0.40	0.41	0.41	23] to 29] SW
0+40	0.40	0.40	0.40	0.40	0.41	0.41	0.43	0.44	0.44	0.44	43] 90 LT/ 53] SW
0+60	0.44	0.44	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	70] SW end
0+80	0.43	0.43	0.43	0.42	0.42	0.40	0.40	0.40	0.41	0.41	88] 90 RT
1+00	0.42	0.42									102] VP-42 (Return)

Min 0.260 Max 0.450 Avg 0.396

Fort Stewart Phase II CIS Data

VP-16/17 to Bldg 648 (Return, Failed)														
11/28/2007	Potential - Volts										Comments	Min	Max	Avg
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.02	0.02	0.06	0.06	0.08	0.08	0.13	0.13	0.13	0.17	0] VP-16/17 (Return) / 6] 90 LT	0.020	0.310	0.272
0+20	0.17	0.23	0.23	0.25	0.25	0.27	0.27	0.29	0.31	0.31	26] 90 RT			
0+40	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31				
0+60	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.30	0.30				
0+80	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31				
1+00	0.30	0.31	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30				
1+20	0.30	0.30	0.30	0.30	0.30	0.30	0.31	0.31	0.30	sw	124] 90 RT/ 137] SW start			
1+40	sw	sw	sw	0.29	0.29	0.29	0.29	0.29	0.29	0.30	145] Sw end			
1+60	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.29	0.29				
1+80	sw	sw	sw	sw	sw	sw	0.29	0.29	0.28	0.28	181] to 190] SW/ 207] 90 RT			
2+00	0.28	0.26	0.26	0.26	0.28	0.28	0.28	0.28			214] Bldg 648 (Return)			
NOTES:														
1. Readings low at pit, probably short to pit rebar														

Bldg 706 to VP-14 (Supply, Failed)														
11/28/2007	Potential - Volts										Comments	Min	Max	Avg
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	con	con	con	con	con	0.35	0.35	0.36	0.36	0.36	0] Bldg 706 (Supply)	0.350	0.380	0.363
0+20	0.38	0.38	sw	sw	sw	sw	RD	RD	RD	RD	0] to 10] concrete			
0+40	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	6] 90 RT/ 24] SW start			
0+60	RD	RD	RD	RD	RD	RD	RD				31] RD/ 72] VP-14 (Supply)			
0+80														

VP-16/17 to Bldg 646/649 (Supply, Passed)														
11/28/2007	Potential - Volts										Comments	Min	Max	Avg
Feet	0	2	4	6	8	10	12	14	16	18				
0+00	0.07	0.07	0.10	0.10	0.18	0.18	0.22	0.22	0.24	0.28	0] VP-16/17 (Supply)	0.070	0.360	0.281
0+20	0.28	0.28	0.32	0.34	0.34	0.34	0.32	0.32	0.33	0.33				
0+40	0.33	0.31	0.31	0.30	0.30	0.30	0.3	0.29	0.29	0.29	50] 90 LT			
0+60	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.29	0.29	75] 90 RT			
0+80	0.31	0.31	0.33	0.33	0.33	0.33	0.36	0.36	0.34	0.34				
1+00	0.34	0.34	0.32	0.32	0.31	0.31	0.30	0.30			113] Bldg 646 (Supply)			
0+00	0.19	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.23	0.23	0] Tee			
0+20	0.25	0.27	sw	sw	sw	sw	sw	sw	sw	sw	23] to 29] SW			
0+40	0.30	0.32	0.32	0.32	0.32	0.32	0.32	0.30	0.30	0.30	32] 90 RT/ 44] 90 LT			
0+60	0.30	0.29	0.29	0.29							66] Bldg 649 (Supply)			
NOTE: Readings low at pit, probably shorted to pit rebar														

11/28/2007														
VP-16/17 to Bldg 646/649 (Return, Passed)														
Feet	Potential - Volts										Comments	Min.	Max.	Avg.
	0	2	4	6	8	10	12	14	16	18				
0+00	0.05	0.05	0.07	0.07	0.14	0.14	0.18	0.18	0.22	0.24	0] VP-16/17 (Return)	0.050	0.350	0.293
0+20	0.28	0.28	0.31	0.34	0.34	0.34	0.34	0.34	0.34	0.34				
0+40	0.34	0.34	0.34	0.32	0.32	0.31	0.31	0.31	0.31	0.30	50] 90 LT			
0+60	0.29	0.29	0.30	0.30	0.30	0.30	0.30	0.29	0.29	0.29	75] 90 RT			
0+80	0.31	0.33	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34				
1+00	0.34	0.34	0.34	0.35	0.35	0.35	0.35				113] Bldg 646 (Return)			
0+00	0.23	0.23	0.25	0.25	0.25	0.27	0.27	0.27	0.29	0.29	0] Tee			
0+20	0.29	0.29	sw	sw	sw	sw	sw	sw	sw	sw	23] to 29] SW			
0+40	0.32	0.32	0.34	0.34	0.34	0.34	0.35	0.35	0.35	0.33	32] 90 RT/ 44] 90 LT			
0+60	0.33	0.33	0.32	0.32							66] Bldg 649 (Return)			
NOTE: Readings low at pit, probably short to pit rebar														

Appendix K: Consolidated ASHRAE Soil Test Reports for Forts Carson and Stewart

Fort Carson ASHRAE Test Site Notes

ASHRAE Site Number 1:

Date data was recorded: 13 Dec 2007, 11:00 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
Recorded at 10:00 AM, 13 December 2007

Manhole 18-N, West Wall:

Supply, South location: Temp = 340 F
Steel Casing: C = 40.0 inches
Plastic Jacket (RFP): C = 58.25 inches
Top of Jacket to top of concrete manhole: **20.0** inches
Top of Concrete Manhole to earth elevation: **13.0** inches
Depth of bury (top of conduit): **7.0** inches

Return, West location: Temp = 215 F (220 F)*
Steel Casing: C = 40.0 inches
Plastic Jacket (RFP): C = 57.75 inches
Top of Jacket to top of concrete manhole: **20.0** inches
Top of Concrete Manhole to earth elevation: **13.0** inches
Depth of bury (top of conduit): **7.0** inches

Conduit spacing in manhole 18-N: 30.0 inches

Conduit spacing measured at stakes: (not measured) inches

Earth Temperature, North (North of stakes): 53.6 F
Earth Temperature, South: 55.0 F

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Manhole 17-N, East Wall

Manhole 17-N was not accessible to us at this time. Entry to this manhole required equipment which we did not have on this data gathering visit.

This was a cold morning, and, there were high flows through the supply and return: therefore, very little change in HTHW temperature from manhole to manhole. We believe that the HTHW temperature would be the same in Manhole 17-N and 18-N (where we took temperature data).

ASHRAE Site Number 2:

Date data was recorded: 13 Dec 2007, 10:30 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
Recorded at 10:00 AM, 13 December 2007

Manhole 9-N, South Wall

Supply, East location: Temp = 349 F
Steel Casing: C = 50.5 inches
Plastic Jacket (RFP): C = 57.5 inches
Top of Jacket to top of concrete manhole: 59.0 inches
Top of Concrete Manhole to earth elevation: 6.0 inches
Depth of bury (top of conduit): 53.0 inches

Return, West location: Temp = 251 F (248 F)*
Steel Casing: C = 50.5 inches
Plastic Jacket (RFP): C = 58.0 inches
Top of Jacket to top of concrete manhole: 59.0 inches
Top of Concrete Manhole to earth elevation: 6.0 inches
Depth of bury (top of conduit): 53.0 inches

Conduit spacing in manhole 9-N: (not available) inches

Conduit spacing measured at stakes: 29.0 inches

Earth Temperature, East (East of stakes): 46.7 F

Earth Temperature, West: 52.3 F

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Manhole 8-N, North Wall

Supply, East location: Temp = 347 F
Steel Casing: C = 50.5 inches
Plastic Jacket (RFP): C = 58.25 inches
Top of Jacket to top of concrete manhole: 65.5 inches
Top of Concrete Manhole to earth elevation: 10.0 inches
Depth of bury (top of conduit): 55.5 inches

Return, West location: Temp = 247 F

Steel Casing: C = 50.5 inches
Plastic Jacket (RFP): C = 58.25 inches
Top of Jacket to top of concrete manhole: 65.5 inches
Top of Concrete Manhole to earth elevation: 10.0 inches
Depth of bury (top of conduit): 55.5 inches

Conduit spacing in manhole 8-N: 30 inches

ASHRAE Site Number 3:

Date data was recorded: 13 Dec 2007, 10:00 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
Recorded at 10:00 AM, 13 December 2007

Manhole 2-N, North Wall

Supply, East location: Temp = 346 F (352 F)*
Steel Casing: C = 63.0 inches
Plastic Jacket (RFP): C = 70.75 inches
Top of Jacket to top of concrete manhole: 49.0 inches
Top of Concrete Manhole to earth elevation: 4.0 inches
Depth of bury (top of conduit): 45.0 inches

Return, West location: Temp = 283 F (285 F)*
Steel Casing: C = 63.0 inches
Plastic Jacket (RFP): C = 70.50 inches
Top of Jacket to top of concrete manhole: 49.0 inches
Top of Concrete Manhole to earth elevation: 4.0 inches
Depth of bury (top of conduit): 45.0 inches

Conduit Spacing in Manhole 2-N: 34.0 inches
Conduit Spacing at Stakes: 30 inches

Earth Temperature, East: 43.8 F
Earth Temperature, West: 42.8 F

Manhole 3-N, South Wall

Supply, East location: Temp = 352 F
Steel Casing: C = 63.5 inches
Plastic Jacket (RFP): C = 70.5 inches
Top of Jacket to top of concrete manhole: 30.0 inches
Top of Concrete Manhole to earth elevation: 8.0 inches
Depth of bury (top of conduit): 22.0 inches

Return, West location: Temp = 291 F (284 F)*
Steel Casing: C = 63.0 inches
Plastic Jacket (RFP): C = 70.0 inches

Top of Jacket to top of concrete manhole: 30.0 inches
Top of Concrete Manhole to earth elevation: 8.0 inches
Depth of bury (top of conduit): 22.0 inches

Conduit Spacing in Manhole 3-N: 32.0 inches.

ASHRAE Site Number 4:

Date data was recorded: 13 Dec 2007, 9:30 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
Recorded at 10:00 AM, 13 December 2007

Manhole 5-S, North Wall

Supply, East location: Temp = 334 F
Steel Casing: C = 21.0 inches
Plastic Jacket (HDPE): C = 27.5 inches
Top of Jacket to top of concrete manhole: 31.5 inches
Top of Concrete Manhole to earth elevation: 4.5 inches
Depth of bury (top of conduit): 27.0 inches

Return, West location: Temp = 148 F
Steel Casing: C = 21.0 inches
Plastic Jacket (HDPE): C = 27.5 inches
Top of Jacket to top of concrete manhole: 31.5 inches
Top of Concrete Manhole to earth elevation: 4.5 inches
Depth of bury (top of conduit): 27.0 inches

Conduit spacing in manhole 5-S: (not available) inches

Conduit spacing measured at stakes: 18.5 inches

Earth Temperature, East (East of stakes): 40 F
Earth Temperature, West: 37 F

Note: A second set of lines on the North Wall go to Building 1851.

#####

Building 1850 Chapel, South Wall, basement

Supply, East location: Temp = 322 F
Steel Casing: C = 21.0 inches
Plastic Jacket (RFP): C = 27.75 inches
Top of Jacket to top of concrete unknown (in Basement)
Top of Concrete Manhole to earth elevation: unknown
Depth of bury (top of conduit): estimated 36 inches

Return, West location: Temp = 157 F
Steel Casing: C = 21.0 inches
Plastic Jacket (RFP): C = 27.75 inches
Top of Jacket to top of concrete basement: unknown
Top of Concrete Basement to earth: unknown
Depth of bury (top of conduit): estimated 36 inches

Conduit spacing in Building 1850: 17.0 inches

ASHRAE Site Number 5:

Date data was recorded: 13 Dec 2007, 9:05 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
Recorded at 10:00 AM, 13 December 2007

Manhole 13-S, East Wall

Supply, North location: Temp = 341 F
Steel Casing: C = 27.0 inches
Plastic Jacket (HDPE): C = 40.5 inches
Top of Jacket to top of concrete manhole: 45.0 inches
Top of Concrete Manhole to earth elevation: 4.0 inches
Depth of bury (top of conduit): 41.0 inches

Return, South location: Temp = 181 F
Steel Casing: C = 27.0 inches
Plastic Jacket (HDPE): C = 40.5 inches
Top of Jacket to top of concrete manhole: 45.0 inches
Top of Concrete Manhole to earth elevation: 4.0 inches
Depth of bury (top of conduit): 41.0 inches

Conduit spacing in manhole 13-S: 24 inches

Conduit spacing measured at stakes: 24 inches

Earth Temp, North (North of stakes): 44.7 F (by sidewalk)
Earth Temperature, South: 51.6 F (near or under pine tree)

#####

Manhole 12-S, West Wall

Supply, North location: Temp = 337 F
Steel Casing: C = 27.25 inches
Plastic Jacket (HDPE): C = 34.0 inches
Top of Jacket to top of concrete manhole: 45.5 inches
Top of Concrete Manhole to earth elevation: 7.0 inches
Depth of bury (top of conduit): 38.5 inches

Return, South location: Temp = 183 F
 Steel Casing: C = 27.25 inches
 Plastic Jacket (HDPE): C = 33.5 inches
 Top of Jacket to top of concrete manhole: 45.5 inches
 Top of Concrete Manhole to earth elevation: 7.0 inches
 Depth of bury (top of conduit): 38.5 inches

Conduit Spacing: 24.0 inches

ASHRAE Site Number 6:

Date data was recorded: 13 Dec 2007, 8:30 AM

Central Heating Plant Data: Supply = 350 F: Return = 275 F
 Recorded at 10:00 AM, 13 December 2007

Manhole 36-S, South Wall

Supply, East location: Temp = 336 F
 Steel Casing: C = 21.5 inches
 Plastic Jacket (HDPE): C = 28.0 inches
 Top of Jacket to top of concrete manhole: 56.0 inches
 Top of Concrete Manhole to earth elevation: 12.0 inches
 Depth of bury (top of conduit): 44.0 inches

Return, West location: Temp = 151 F
 Steel Casing: C = 21.25 inches
 Plastic Jacket (HDPE): C = 28.0 inches
 Top of Jacket to top of concrete manhole: 56.0 inches
 Top of Concrete Manhole to earth elevation: 12.0 inches
 Depth of bury (top of conduit): 44.0 inches

Conduit spacing in manhole 36-S: 21 inches

Conduit spacing measured at stakes: 18 inches

Earth Temp, North (North of stakes): 44.0 F
 Earth Temperature, South: 46.5 F

#####

Building 2354 HQ Building, North Wall, basement

Supply, East location: Temp = 316 F
 Steel Casing: C = 21.5 inches (Not Measured)
 Plastic Jacket (RFP): C = 28.0 inches (Not Measured)
 Top of Jacket to top of concrete unknown (in Basement)
 Top of Concrete Manhole to earth elevation: unknown
 Depth of bury (top of conduit): estimated 24 inches

Return, West location: Temp = 145 F
Steel Casing: C = 21.25 inches (Not Measured)
Plastic Jacket (RFP): C = 28.0 inches (Not Measured)
Top of Jacket to top of concrete in basement: unknown
Top of Concrete Basement to earth: unknown
Depth of bury (top of conduit): estimated 24 inches

Conduit spacing in Building 2354: (Not Measured)

Fort Carson ASHRAE Test Data and Results



CASTLE ROCK
950 S. Interstate 25
Castle Rock, CO 80104
Phone: (303) 688-9475
Fax: (303) 814-2454

MONUMENT
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Monument, CO 80132
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WOODLAND PARK
321 West Horsetails
PO Box 5816
Woodland Park, CO 80066
Phone: (719) 687-5077
Fax: (719) 687-6151

SERVING COLORADO SINCE 1995

January 2, 2008
Job Number: 072-0367

PAUL R. BRYANT, P.E.
STEVEN C. JACOB, P.E.

Dr. Doug Neale c/o
Mandaree Enterprise Corporation
812 Park Drive
Warner Robins, GA 31088

Re: Soil Testing
Fort Carson Military Reservation
El Paso County, Colorado

Dear Dr. Neale,

This report summarizes the results of data obtained during investigations at various sites located throughout the Fort Carson Military Reservation in El Paso County, Colorado. Samples were obtained on December 12, 2007 at locations and depths designated by your firm. The purpose of the investigation was to reveal the properties of the soil pursuant to heat loss calculations of underground hot water pipes.

Exploratory borings were advanced using a four-inch nominal diameter, truck-mounted continuous-flight auger. The approximate boring locations are indicated on the attached site diagram and were established in the field by pacing and measuring angles from identifiable site references. At depths determined by the supervising technician, samples were obtained by means of a two-inch diameter split-spoon sampler, advanced by a 140-pound drop-hammer falling a distance of 30 inches, in general compliance with ASTM D-1586. Twelve additional borings were drilled for the installation of probes by your personnel.

The materials encountered consisted primarily of sandy clay soils overlying claystone bedrock. The bedrock in this area consists of the upper Cretaceous Pierre Shale (Kp), and the overlying soils are generally sheet wash deposits locally derived from the Pierre Shale.

The general topography around the site of this investigation is relatively flat. Weather was cold and clear at the time of the investigation. The elevation varied from approximately 5,750 to 5,900 feet above sea level.

Please see the attached Summary of Laboratory Testing and the Boring Logs for detailed results.

Thank you for this opportunity to serve you. Please do not hesitate to call if there is any matter with which we can assist.

Sincerely,

Steven C. Jacob, P.E.

SCJ:ae

- SOIL TESTING & ANALYSIS
- PERCOLATION REPORTS
- FOUNDATION DESIGN
- SEPTIC DESIGN
- STRUCTURAL DESIGN
- STRUCTURAL CODE PLAN CHECK
- RESIDENTIAL DESIGN
- HOME INSPECTIONS
- PROFESSIONAL CONSULTATION
- EXPERT TESTIMONY
- GEO-HAZARD SURVEYS
- DRAINAGE REPORTS

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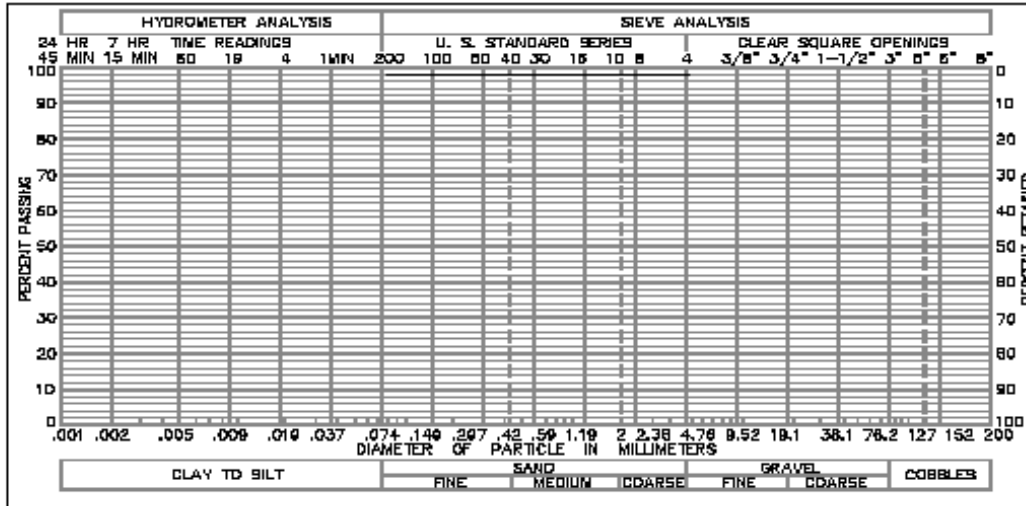
Summary of Laboratory Testing

Job Number 072-0367

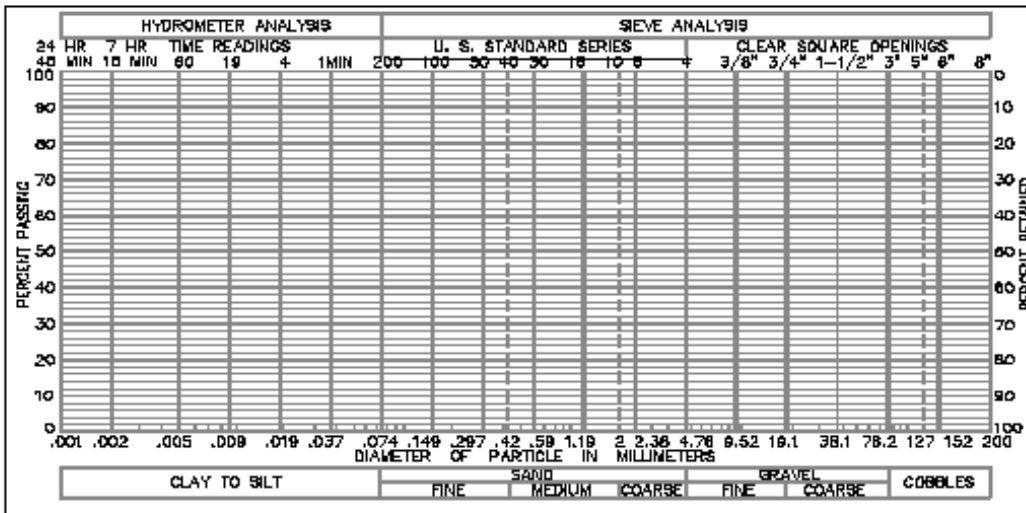
Test Hole	Depth (ft)	Natural Moisture (%)	Passing #200 Sieve (%)	Blow Count (Blows/Inch)	Swell at 1000 psf (%)	Natural Dry Density (pcf)	Liquid Limit/Plasticity Index	Soil Description (USCS Symbol)
Site 1:Test Hole 1	6	22.9	91.6	31/12"	NT	NT	59/39	Claystone (CH)
Site 1:Test Hole 2	6	21.6	96.1	32/12"	NT	NT	NT	Claystone (CH)
Site 2:Test Hole 1	5.5	11.7	100	80/12"	NT	126.3	42/28	Claystone (CL)
Site 2:Test Hole 2	5.5	14.3	100	62/12"	NT	117.4	NT	Claystone (CL)
Site 3:Test Hole 1	3	10.9	57.3	28/12"	NT	127.6	46/33	Sandy lean clay (CL)
Site 3:Test Hole 2	3	12.4	68.7	25/12"	NT	117.0	NT	Sandy lean clay (CL)
Site 4:Test Hole 1	2	15.2	77.6	18/12"	NT	109.5	NT	Fat clay with sand (CH)
Site 4: Test Hole 2	2	20.5	86.1	21/12"	NT	109.3	58/44	Fat clay (CH)
Site 5:Test Hole 1	2.5	9.0	65.5	18/12"	NT	109.4	NT	Sandy lean clay (CL)
Site 5:Test Hole 2	2.5	10.2	58.7	14/12"	NT	117.6	36/24	Sandy lean clay (CL)
Site 6:Test Hole 1	2.5	12.8	53.2	25/12"	NT	125.7	46/31	Sandy lean clay (CL)
Site 6:Test Hole 2	2.5	15.1	74.2	26/12"	NT	121.5	NT	Lean clay with sand (CL)

NT=Not Tested

COLORADO ENGINEERING AND GEOTECHNICAL GROUP, INC.
GRADATION TEST RESULTS

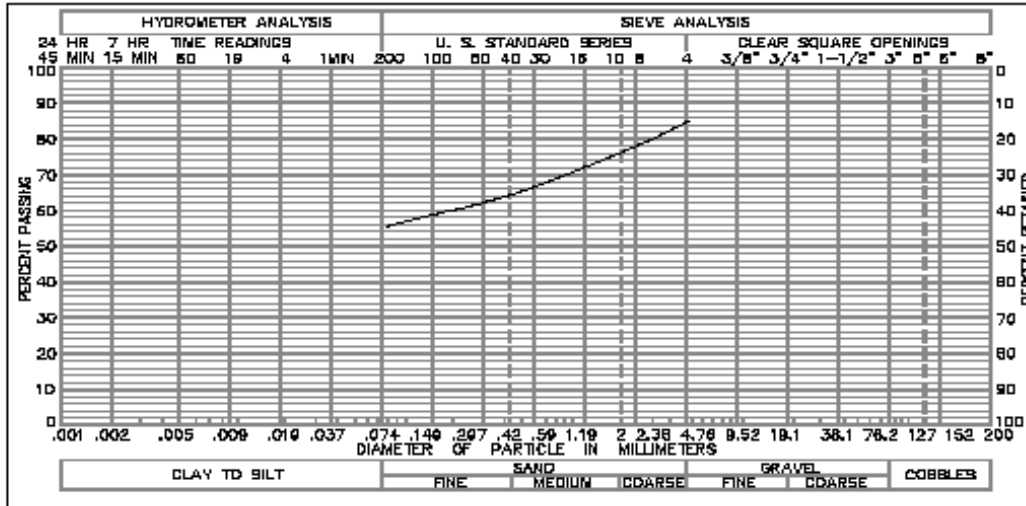


CLASSIFICATION	<u>CL</u>	NOTES: <u>11.7 % Moisture Content</u>
GRAVEL	<u>0.0 %</u>	_____
SAND	<u>0.0 %</u>	<u>SITE 2</u>
FINES	<u>100.0 %</u>	_____
BLOWS	<u>8012" HOLE# 1 DEPTH 5.5</u>	<u>Job Number: 072-0367</u>



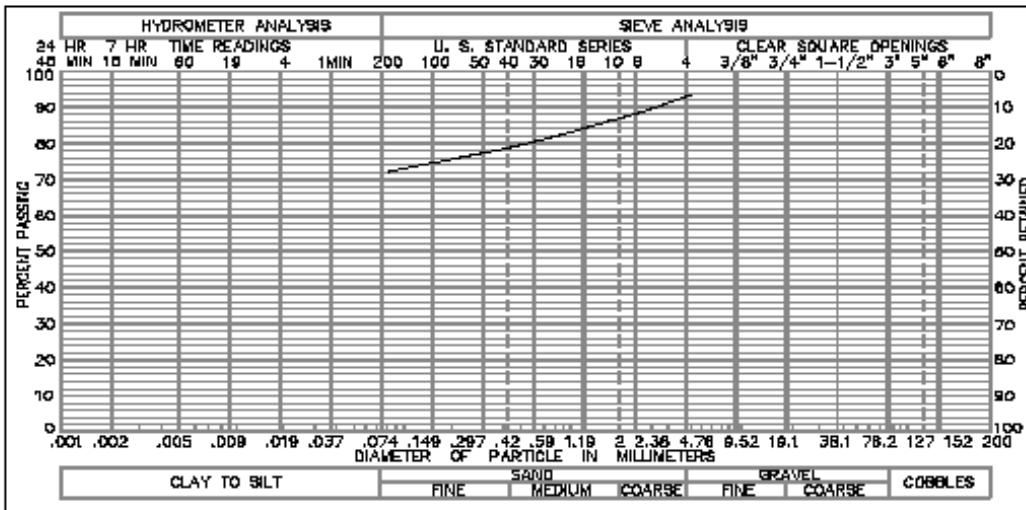
CLASSIFICATION	<u>CL</u>	NOTES: <u>14.3 % Moisture Content</u>
GRAVEL	<u>0.0 %</u>	_____
SAND	<u>0.0 %</u>	<u>SITE 2</u>
FINES	<u>100.0 %</u>	_____
BLOWS	<u>6212" HOLE# 2 DEPTH 5.5</u>	<u>Job Number: 072-0367</u>

COLORADO ENGINEERING AND GEOTECHNICAL GROUP, INC.
GRADATION TEST RESULTS



CLASSIFICATION CL
 GRAVEL 12.7 %
 SAND 29.9 %
 FINES 57.3 %
 BLOWS 251/2" HOLE# 1 DEPTH 3

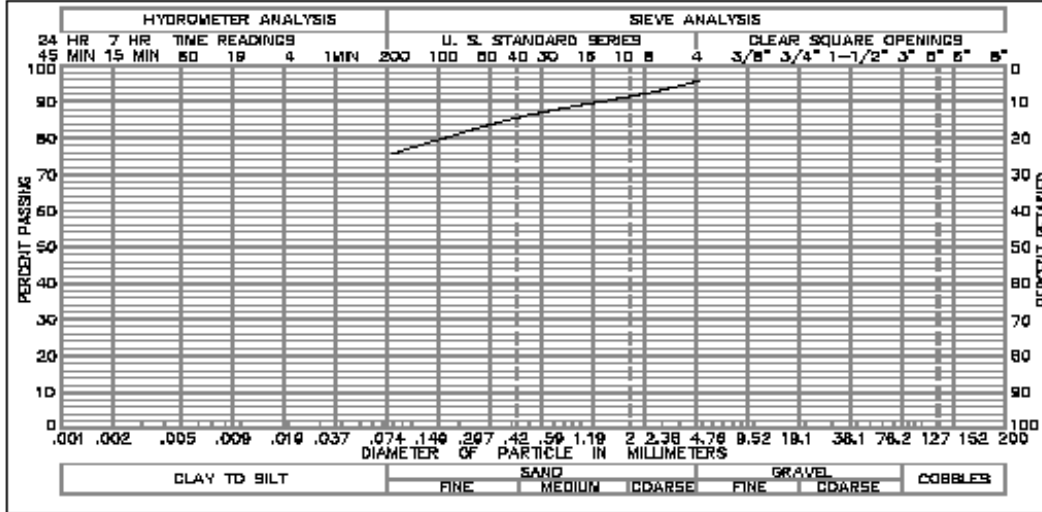
NOTES: 10.9 % Moisture Content
SITE 3
 Job Number: 072-0367



CLASSIFICATION CL
 GRAVEL 9.8 %
 SAND 21.5 %
 FINES 68.7 %
 BLOWS 251/2" HOLE# 2 DEPTH 3

NOTES: 12.4 % Moisture Content
SITE 3
 Job Number: 072-0367

COLORADO ENGINEERING AND GEOTECHNICAL GROUP, INC.
GRADATION TEST RESULTS



CLASSIFICATION CH NOTES: 15.2 % Moisture Content

GRAVEL 2.1 %

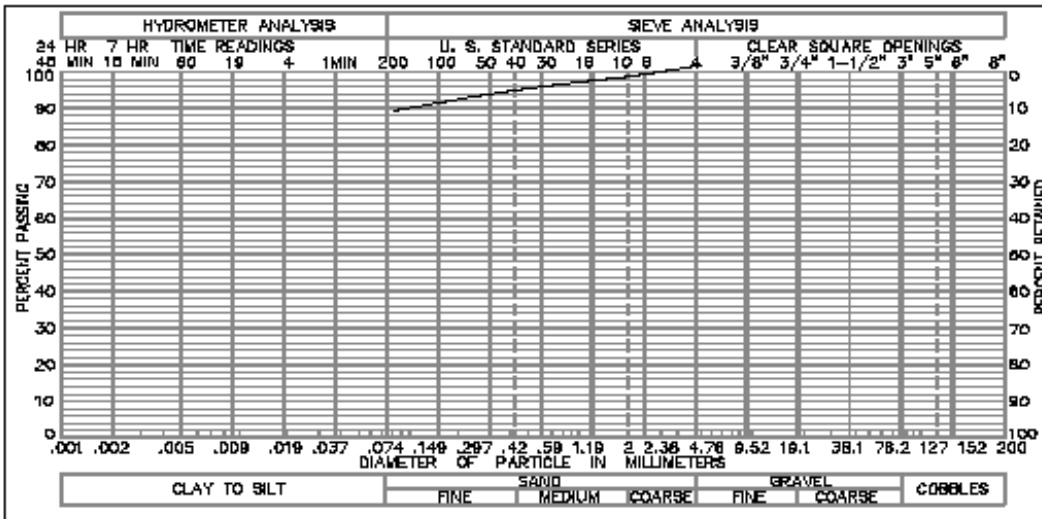
SAND 20.3 %

FINES 77.6 %

BLOWS 18 1/2" HOLE# 1 DEPTH 2

SITE 4

Job Number: 072-0367



CLASSIFICATION CH NOTES: 20.5 % Moisture Content

GRAVEL 1.3 %

SAND 12.5 %

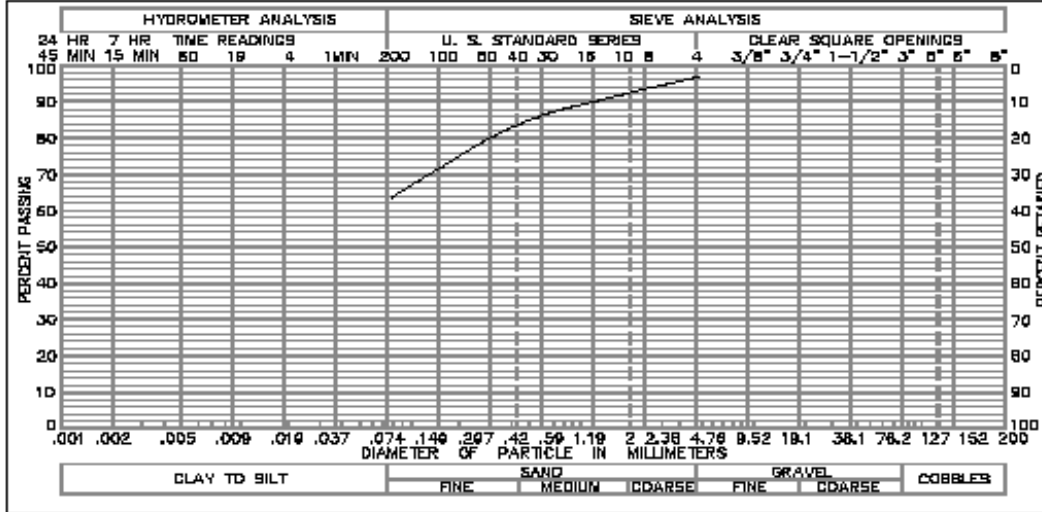
FINES 86.1 %

BLOWS 21 1/2" HOLE# 2 DEPTH 2

SITE 4

Job Number: 072-0367

COLORADO ENGINEERING AND GEOTECHNICAL GROUP, INC.
GRADATION TEST RESULTS



CLASSIFICATION CL NOTES: 9.0 % Moisture Content

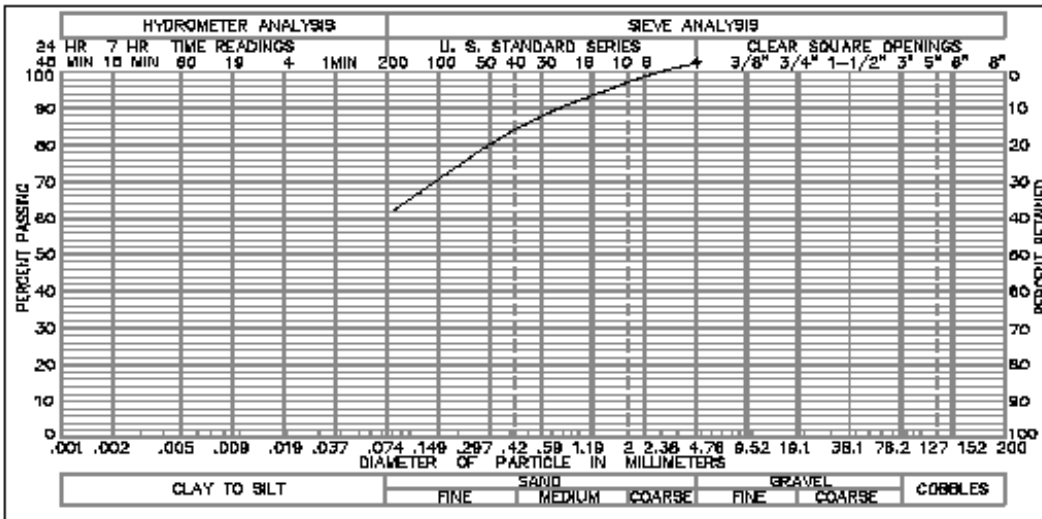
GRAVEL 0.8 %

SAND 33.7 %

FINES 65.5 %

BLOWS 18 1/2" HOLE# 1 DEPTH 2.5 Job Number: 072-0367

SITE 5



CLASSIFICATION CL NOTES: 10.2 % Moisture Content

GRAVEL 0.3 %

SAND 41.0 %

FINES 58.7 %

BLOWS 14 1/2" HOLE# 2 DEPTH 2.5 Job Number: 072-0367

SITE 5

Table J1. k-Factor Results for Fort Carson ASHRAE Sites.

SOIL ANALYSIS - Fort Carson ASHRAE SITES						USCS			Ref. Data
SITE #	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	0	8.4	91.6	NT	22.9	CH		P4602 Fairbanks	93.3
Sample 2	0	3.9	96.1	NT	21.6			at 54.3 F	
Mean	0	6.15	93.85	NT	22.25		8.979		
									Ref. Data
SITE # 2	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	0	0	100	126.3	11.7	CL		P4708 Healy Clay	93.95
Sample 2	0	0	100	117.4	14.3				
Mean	0	0	100	121.85	13		6.972	at 49.5 F	
									Ref. Data
SITE # 3	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	12.7	29.9	57.3	127.6	10.9	CL		P4713 Ramsey	120.3
Sample 2	9.8	21.5	68.7	117	12.4			P4505 Northway	122.3
Mean	11.25	25.7	63	122.3	11.65		9.515	at 43.3 F	
									Ref. Data
SITE # 4	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	2.1	20.3	77.6	109.5	15.2	CH		P4505 Northway	97.1
Sample 2	1.3	12.6	86.1	109.3	20.5				
Mean	1.7	16.45	81.85	109.4	17.85		6.464	at 38.5 F	
									Ref. Data
SITE # 5	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	0.8	33.7	65.5	109.4	9	CL		P4713 Ramsey	110
Sample 2	0.3	41	58.7	117.6	10.2			P4505 Northway	96.75
Mean	0.55	37.35	62.1	113.5	9.6		7.151	at 48.15 F	
									Ref. Data
SITE # 6	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	6.7	40.1	53.2	125.7	12.8	CL		P4713 Ramsey	109.5
Sample 2	2.5	23.3	74.2	121.5	15.1			P4505 Northway	96.75
Mean	4.6	31.7	63.7	123.6	13.95		8.544	at 45.25 F	
Reference: FINAL REPORT									
LABORATORY RESEARCH FOR THE DETERMINATION									
OF THE THERMAL PROPERTIES OF SOILS									
Engineer Experiment Station									
University Of Minnesota, St. Paul, Minnesota									
June 1949 Miles S. Kersten									
P4505 Northway Silt Loam (ML) page 106									
P4602 Fairbanks Silt Loam (ML) page 107									
P4708 Healy Clay (CL) page 108 & 109									
P4713 Ramsey Sandy Loam (CL) page 105 & 106									
k-factor: (BTU in) / (Hr SqFt F)									
That is, per inch of material thickness									

Fort Stewart ASHRAE Test Site Notes

ASHRAE TEST SITE NO. 1 (Bounded by Harmon, Lindquist, and Hase)

DATE:	5-Feb-08		
	TEMPERATURE - DEG F		
SOIL 1	81	23' east of Return (east) line CL	
SOIL 2	60	21' west of Supply (west) line CL	
VP-39			
RETURN CARRIER {exits pit en route to VP-37 on east (right) side facing north exit wall}	279	Casing Circ.	Jacket Circ.
SUPPLY CARRIER {exits pit en route to VP-37 on west (left) side facing north exit wall}	352		50"
VP-37			
RETURN CARRIER {exits pit en route to VP-39 on north (left) side facing east exit wall}	296	Casing Circ.	Jacket Circ.
SUPPLY CARRIER {exits pit en route to VP-39 on south (right) side facing east exit wall}	361		47.5"

NOTES:

Per drawing M-122:
 Supply on west
 Return on east
 6" HTWS

Measured circumference at excavation: 48" (15.3" dia.), both conduits

CL to Cl Separation = 54.5" at excavation

Conduit measurements at exit of VP-39 en route to VP-37:

Return (on right facing wall) = 49.5" circ. with immediate step down to 45.25" circ. in pit
 Supply (on left facing wall) = 50" circ. with immediate step down to 45.25" circ in pit.

NOTE 1: Measurement difficult because conduit jackets do not extend beyond wall and appear to have other material on exterior

NOTE 2: Later re-measurement on Supply at TC site shows 49.5" circ. on conduit plastic jacket; 45" circ. on thin metal jacket after step down (approx. circ. of steel casing as well), 4.5" insulation over carrier to thin metal jacket after step down. 4" insulation over carrier to thin metal jacket after step down on Return conduit.

Conduit measurements at exit of VP-37 en route to VP-39:

Return (on left facing wall) = 47.5" circ. on plastic casing
 Supply (on right facing wall) = 47.5" circ on plastic casing

NOTE 1: Plastic jackets extend well beyond wall and allows accurate measurement on both Supply and Return

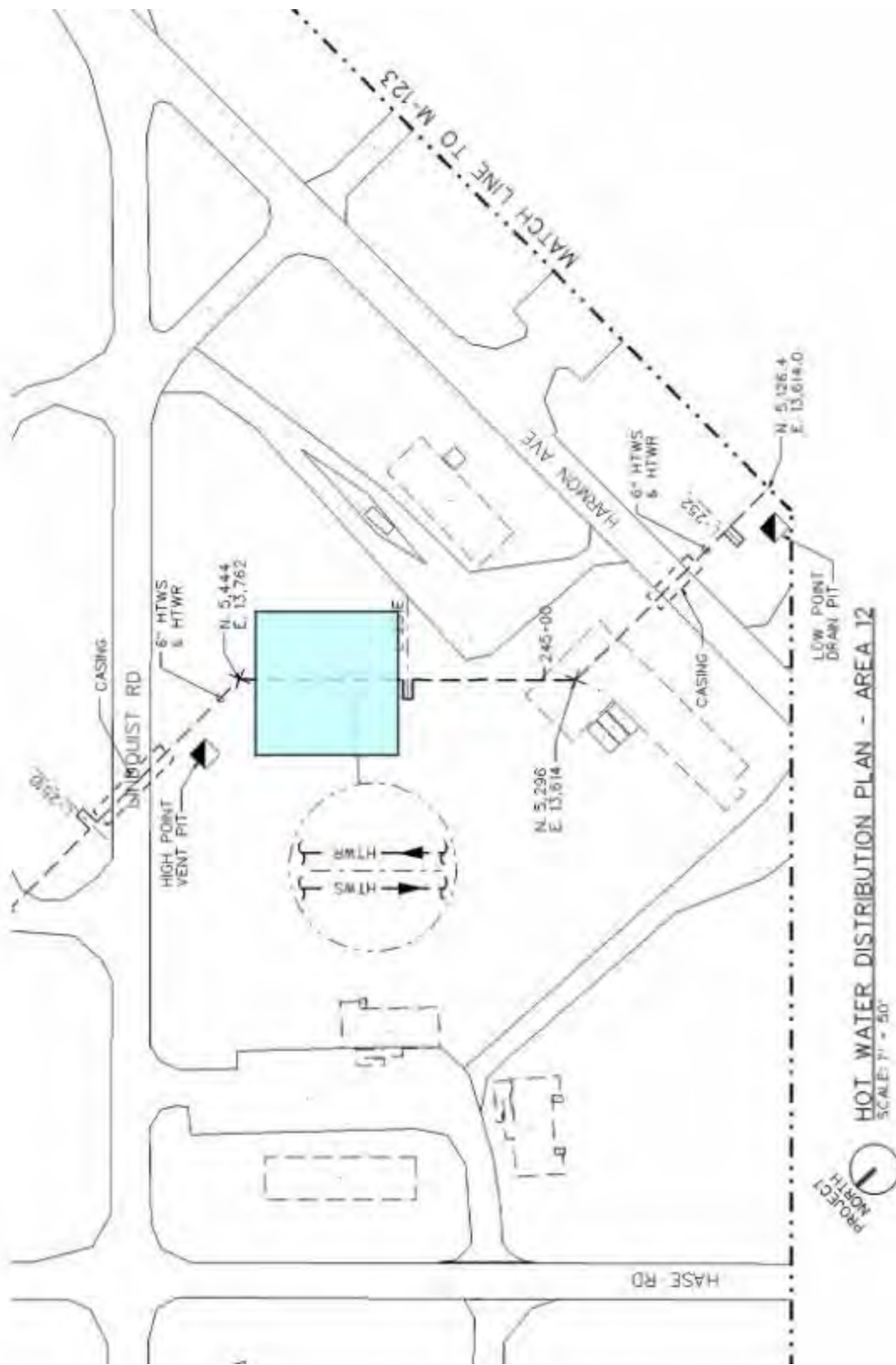
NOTE 2: Later re-measurement on Supply at TC site shows 47.25" circ. on plastic casing; 44.5" circ. on thin sheet metal jacket after step down with 3.5" insulation over metal casing to thin metal jacket.

Supply temperature should be higher at exit of VP-37 than at entrance to VP-39 - measurements agree

Return temperature should be higher at exit of VP-39 than at entrance to VP-37 - measurements do not agree

Suspect that return temperature measured in VP-39 is low (difficulty in installing TC on this conduit)

Conduits exit excavation toward ASHRAE site @ 63" below grade



ASHRAE Site 1 Map

ASHRAE TEST SITE NO. 2 (West of New Clinic - Bldg. 412)

DATE:	5-Feb-08	
	TEMPERATURE - DEG F	
SOIL 1	66	25' north of Return (north) CL
SOIL 2	56	28.5' south of Supply (south) CL
VP-37		Casing Circ. Jacket Circ.
RETURN CARRIER {exits pit en route to VP-30B on north (right) side facing west exit wall}	288	56"
SUPPLY CARRIER {exits pit en route to VP-30B on south (left) side facing west exit wall}	361	56"
VP-30B		Casing Circ. Jacket Circ.
RETURN CARRIER {exits pit en route to VP-37 on north (left) side facing east exit wall}	300	56"
SUPPLY CARRIER {exits pit en route to VP-37 on south (right) side facing east exit wall}	365	56"

NOTES:

Per Drawing M-122:
 Supply on south
 Return on north
 8" HTWS

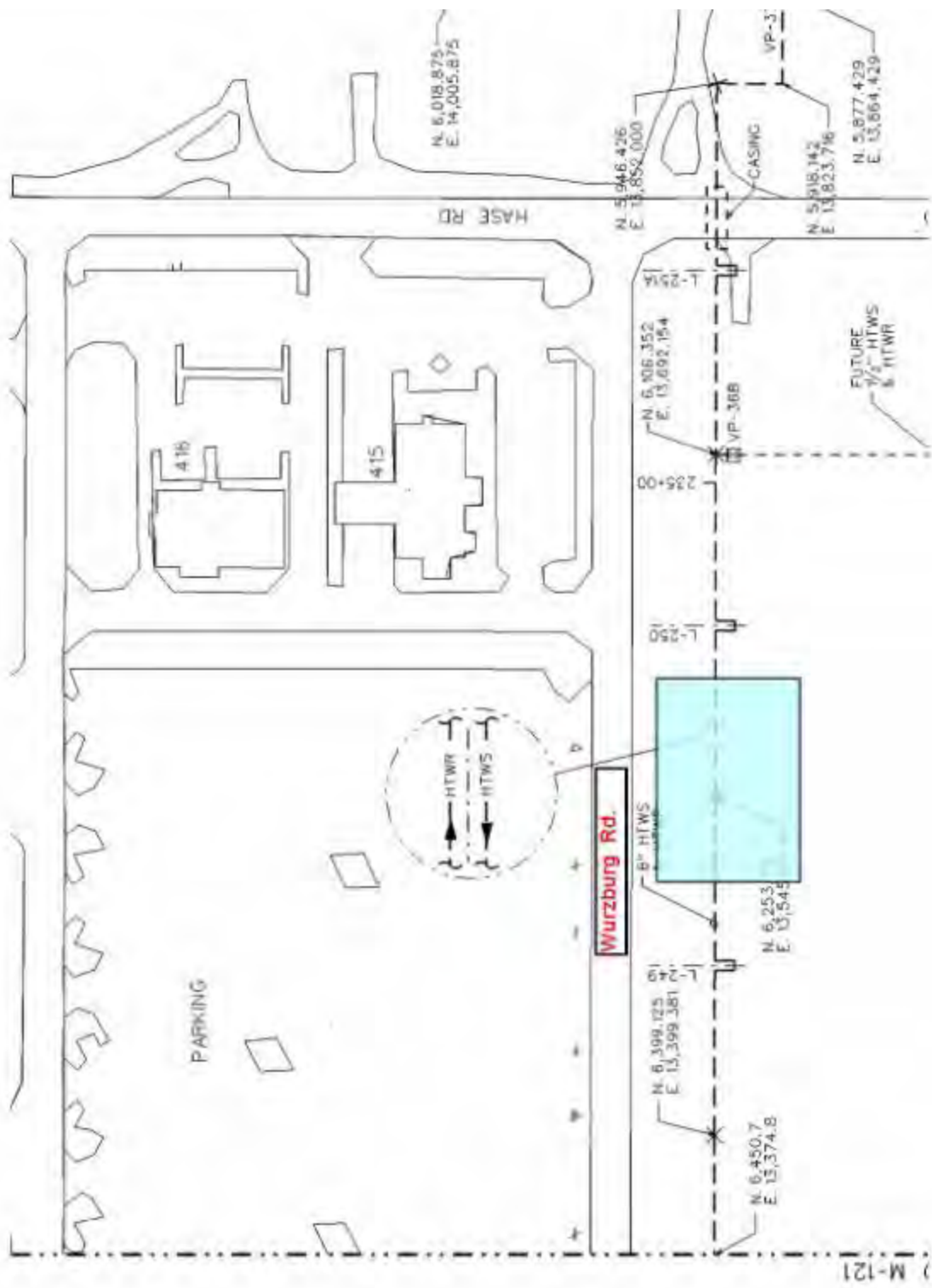
Conduit burial depth = 10 ft.

CL-CL spacing = 36 in.

Thin metal jacket circ. after step-down = 51" with 3.5" insulation over carrier to thin metal jacket.

Supply temperature should be higher at exit of VP-30B than entering VP-37 - measurments agree

Cannot state Return relative temperature expectations between VP-30B and VP-37 because Building 412 Retrrn line disch into this conduit through old pit between VP-30B and VP-37.



ASHRAE Site 2 Map

ASHRAE TEST SITE NO. 3 (Between Power Plant and VP-23A)

DATE:	5-Feb-08		
	TEMPERATURE - DEG F		
SOIL 1	65	64' north of Return (north) conduit CL	
SOIL 2	60	64' south of Supply (south) conduit CL	
Power Plant		Casing Circ.	Jacket Circ.
RETURN CARRIER (north)	Not available		See Below
SUPPLY CARRIER (south)	Not available		See Below
VP-23A		Casing Circ.	Jacket Circ.
RETURN CARRIER	321		See Below
SUPPLY CARRIER	363		See Below

NOTES:

Per Drawing M-116:
12" HTWS

Supply/Return relative locations not given - determined by carrier temperature measurements in VP-23A

Conduit circumferences measured at adjacent excavation site to east:

Supply (south) = 70.75" = 22.5" dia.

Return (north) = 70.5" = 22.4" dia.

CL to CL dimension = 40"

Conduits exit adjacent excavation site toward ASHRAE site at 30" below grade

ASHRAE TEST SITE NO. 4 (Phase II - Adjacent to Bldgs. 646, 648, 649)

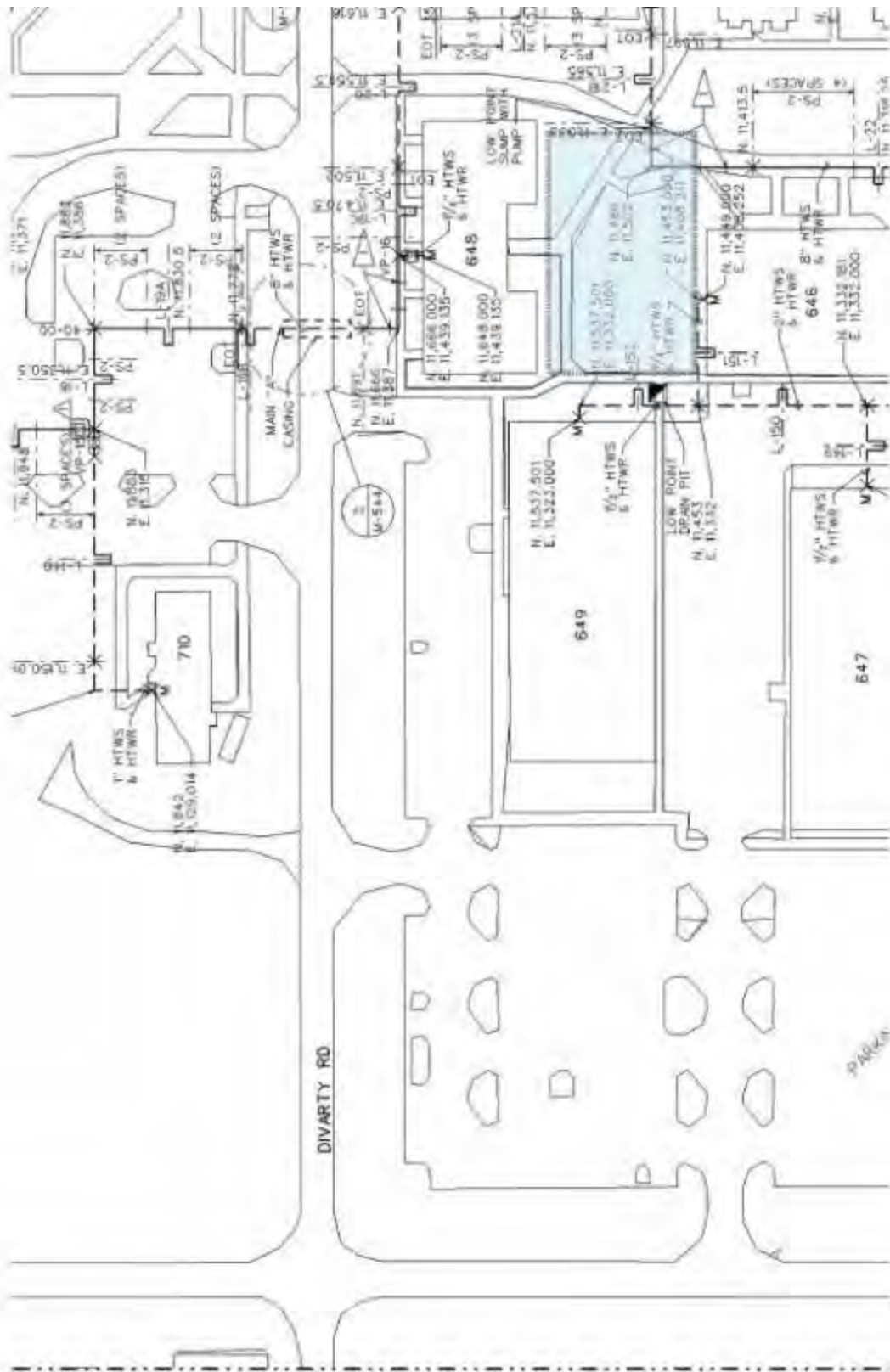
DATE:	5-Feb-08		
	TEMPERATURE - DEG F		
SOIL 1	58	25' east of Supply (east) conduit CL	
SOIL 2	62	34' west of Return (west) conduit CL	
VP-16/17		Casing Circ.	Jacket Circ.
RETURN CARRIER {exits pit en route to Bldg. 646 on west (right) side facing south exit wall}	120	27.25	35.5
SUPPLY CARRIER {exits pit en route to Bldg. 646 on east (left) side facing south exit wall}	241	27.25	35.25
Bldg. 646		Casing Circ.	Jacket Circ.
RETURN CARRIER	Not measured		Not Measured
SUPPLY CARRIER	Not measured		Not Measured

NOTES:

Drawing M-114 completely inaccurate with respect to this site

Dimensions measured at adjacent excavation to north of ASHRAE site:
 Circ. = 27.75" (8.83" dia.) both Supply and Return
 CL to CL = 20"

Dimensions measured at exit of VP-16/17:
 Return steel casing = 27.25" circ.
 Return outer jacket = 35.5" circ.
 Supply steel casing = 27.25" circ.
 Supply outer jacket = 35.25" circ.



ASHRAE Site 4 Map

Fort Stewart ASHRAE Test Data and Results



P.O. Box 1201
Lawrenceville, GA 31420
972-907-9895
800-687-2522 (toll-free)

VIA ELECTRONIC MAIL

February 14, 2008

Mr. Larry Clark
Mandaree Enterprises
812 Park Drive
Warner Robins, Georgia 31088

RE: Soil Testing along U/G Steam Pipelines
Fort Stewart, Georgia

Dear Mr. Clark:

Arrowood Environmental Group (Arrowood) has completed work at the above referenced site. This report contains the project information as provided to us by you, a description of the field work, along with the laboratory results.

On Tuesday February 5, 2008 Arrowood Environmental Group mobilized to the referenced site and met Mr. Doug Neal of Mandaree Enterprises. Arrowood provided a team leader, Mr. David F. Remick PG, and two environmental technicians. Arrowood came equipped with 2 sets of stainless steel augers, so two borings could be advanced at one time.

At the first site, Mandaree requested that moisture density relationship tests (standard proctors) be added to the Scope of Service. Soil borings obtained sixteen (16) soil samples at the locations identified by Mandaree. Two samples were collected at each location. One sample was laboratory tested for moisture content, soil classification and grain size analysis. The second sample was used to provide material for a moisture/density relationship test (standard proctor).

Arrowood also assisted Mandaree representatives install temperature probes by pre-drilling holes at locations where the ground was too hard to drive the probes.

TEST NOTES

Because the first four sample locations were located below the surficial aquifer water table, and because the soil samples were collected with an open bucket auger, excess ground water may have flowed into the sample. The insitu moisture content and density will be the value where the proctor curve crosses the zero air voids lines on the moisture density graph.

CLOSING

Should you have any questions regarding this report, please call David Remick at 912-660-5065. We appreciate this opportunity to provide this service to you and look forward to working with you.

Sincerely,



David F. Remick, PG

Attachments: Soil Test Results

02/07/2008 07:44 19122335061

WHITAKER LABORATORY

PAGE 01/18

WHITAKER LABORATORY, INC.

P.O. Box 7078
2500 Tremont Rd.
Savannah, Georgia 31418

Phone (912) 234-0696

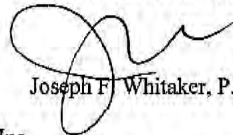
Fax (912) 233-5061

Report No.: 2-5-08-51
Client: Arrowood Environmental Group, Inc.
Project: Mandarie Pipeline
Camden County

Attached are the results of the gradation and moisture-density tests performed on (8) samples of soil submitted by the client on 2-5-08.

I thank you for the opportunity to be of service on this project. We appreciate your trust and look forward to a continuing relationship in the future. If you should have any questions, please don't hesitate to contact our office.

Respectfully submitted,
WHITAKER LABORATORY, INC.



Joseph F. Whitaker, P.E.

1 cc: Arrowood Environmental Group, Inc.
via fax: 888-880-3520
1 cc: File

COMPACTION TEST REPORT

Curve No.: 1

Project No.:
Project: Mandarin Pipeline

Date: 2/6/08

Location: 1 West
Elev./Depth:
Remarks: Sampled by: Contractor

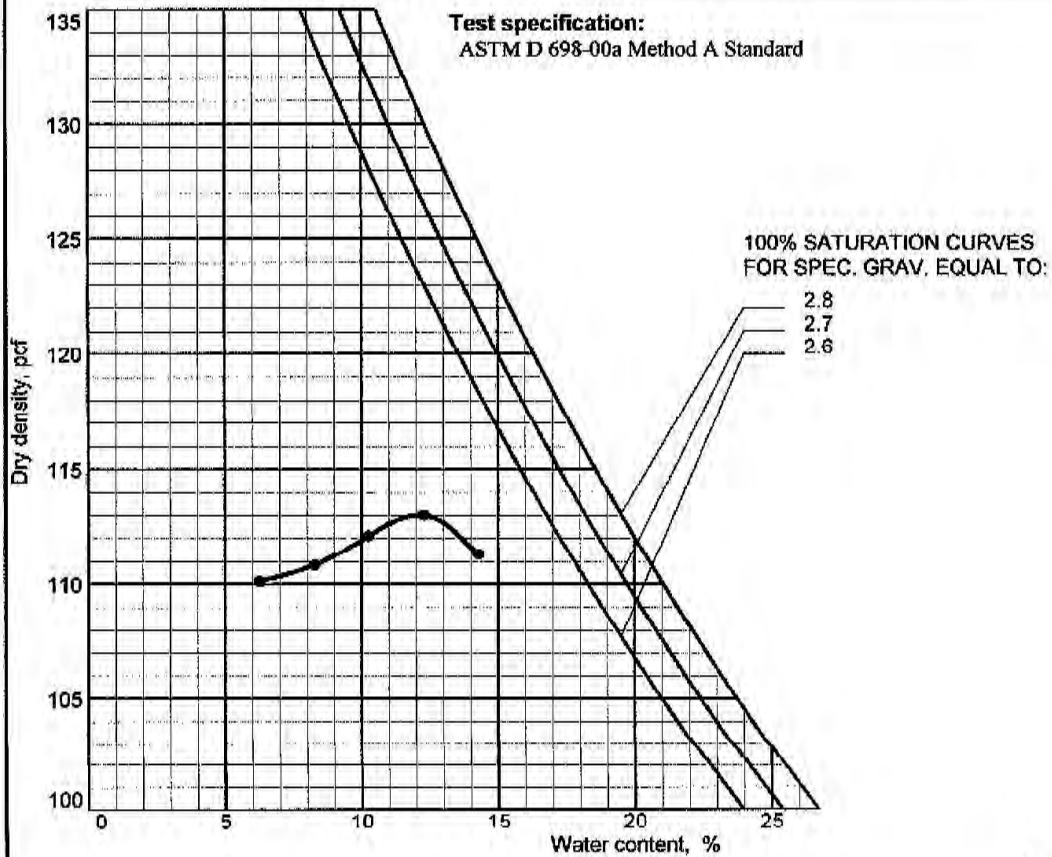
Sample No. 1

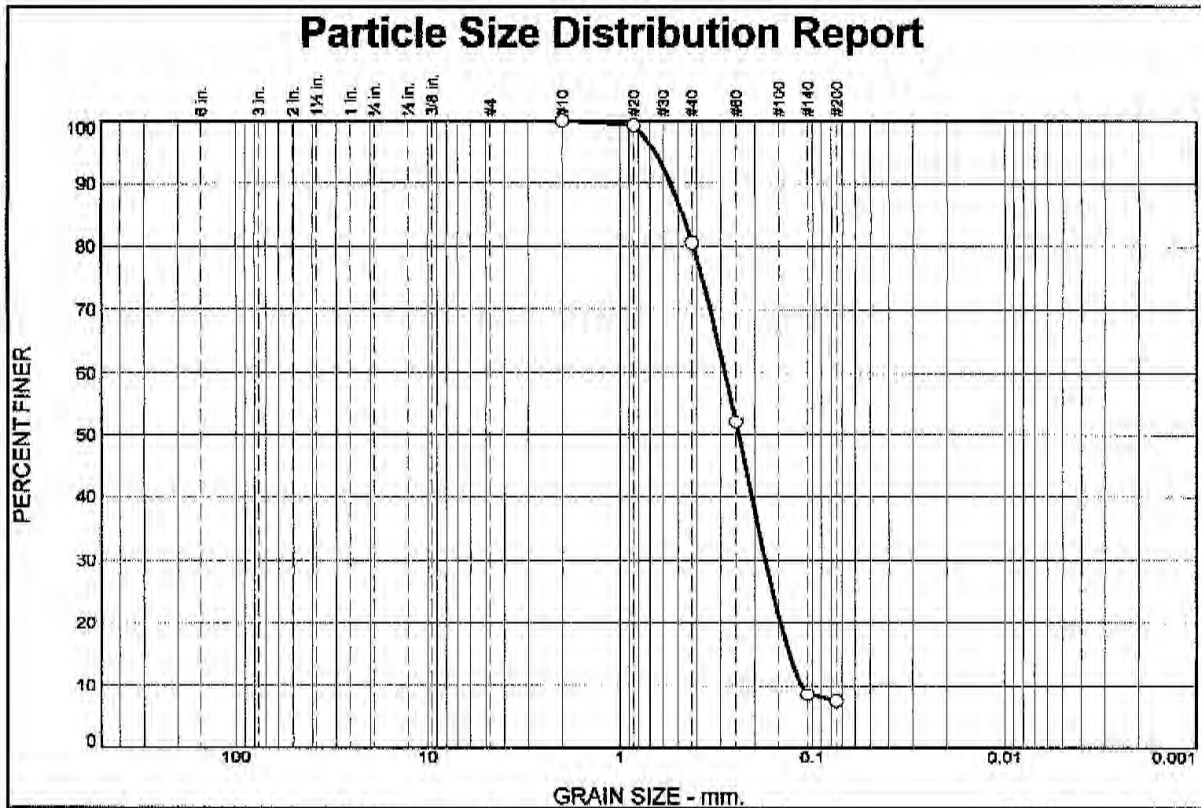
MATERIAL DESCRIPTION

Description: Brown-Gray Fine Silty Slightly Organic Sand

Classifications -	USCS: SP-SM	AASHTO:
Nat. Moist =		Sp.G. =
Liquid Limit =		Plasticity Index =
% > No.4 = 0.0 %		% < No.200 = 7.4 %

TEST RESULTS
Maximum dry density = 113.0 pcf
Optimum moisture = 12.1 %





% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	19.5	73.1	7.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.3		
#40	80.5		
#60	52.1		
#140	8.4		
#200	7.4		

Material Description

Brown-Gray Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS= SP-SM AASHTO=

Coefficients

D₈₅= 0.4752 D₆₀= 0.2849 D₅₀= 0.2417
 D₃₀= 0.1758 D₁₅= 0.1317 D₁₀= 0.1138
 C_u= 2.50 C_c= 0.95

Date Tested: Tested By:

Remarks

Sampled by: Contractor
 Moisture = 25.7%

* (no specification provided)

Sample No.: 1 Source of Sample: Mandarin Pipeline Date Sampled: 2/5/08
 Location: 1 West Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarin Pipeline Project No:	Report No. 2/6/08-101
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COMPACTION TEST REPORT

Curve No.: 2

Project No.:
Project: Mandarin Pipeline

Date: 2/6/08

Location: 1 East
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 2

MATERIAL DESCRIPTION

Description: Brown-Gray Fine Silty Slightly Organic Sand

Classifications -

USCS: SP-SM

AASHTO:

Nat. Moist. =

Sp.G. =

Liquid Limit =

Plasticity Index =

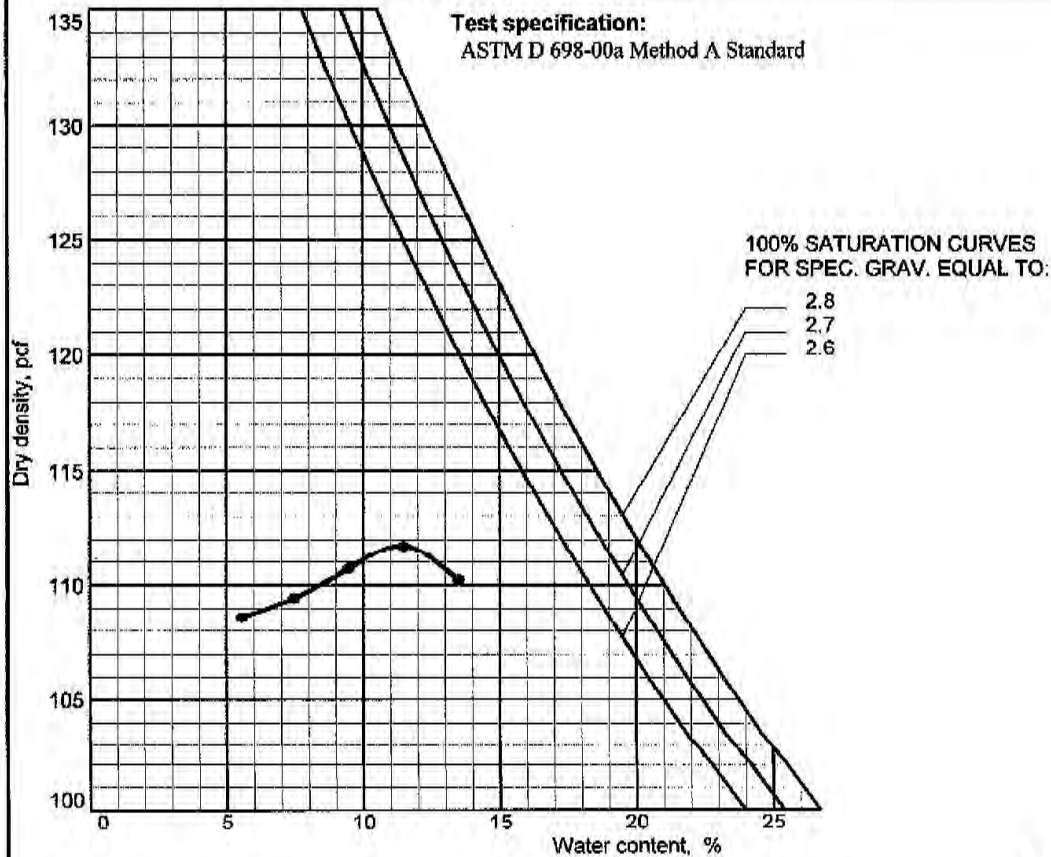
% > No.4 = 0.0 %

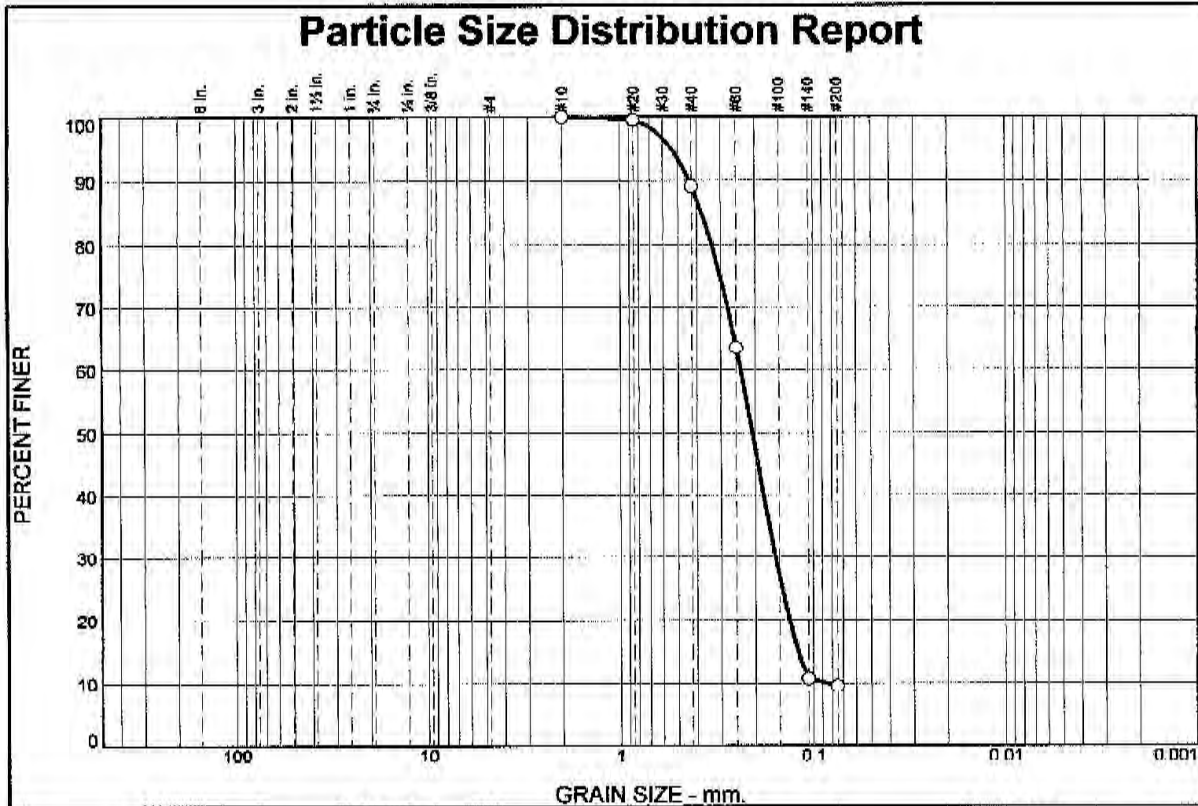
% < No.200 = 9.5 %

TEST RESULTS

Maximum dry density = 111.7 pcf

Optimum moisture = 11.4 %





% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	10.9	79.6	9.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.5		
#40	89.1		
#60	63.5		
#140	10.7		
#200	9.5		

Material Description
Brown-Gray Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)
PL= LL= PI=

Classification
USCS= SP-SM AASHTO=

Coefficients
 D₈₅= 0.3778 D₆₀= 0.2374 D₅₀= 0.2067
 D₃₀= 0.1370 D₁₅= 0.1206 D₁₀= 0.0860
 C_u= 2.76 C_c= 1.21

Date Tested: Tested By:

Remarks
Sampled by: Contractor
Moisture = 19.1%

(no specification provided)

Sample No.: 2 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
 Location: 1 East Checked By: Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No:	Report No. 2/6/08-103
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COMPACTION TEST REPORT

Curve No.: 3

Project No.:
Project: Mandarie Pipeline

Date: 2/6/08

Location: 2 South
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 3

MATERIAL DESCRIPTION

Description: Brown-Gray Fine Silty Slightly Organic Sand

Classifications -

USCS: SP-SM

AASHTO:

Nat. Moist. =

Sp.G. =

Liquid Limit =

Plasticity Index =

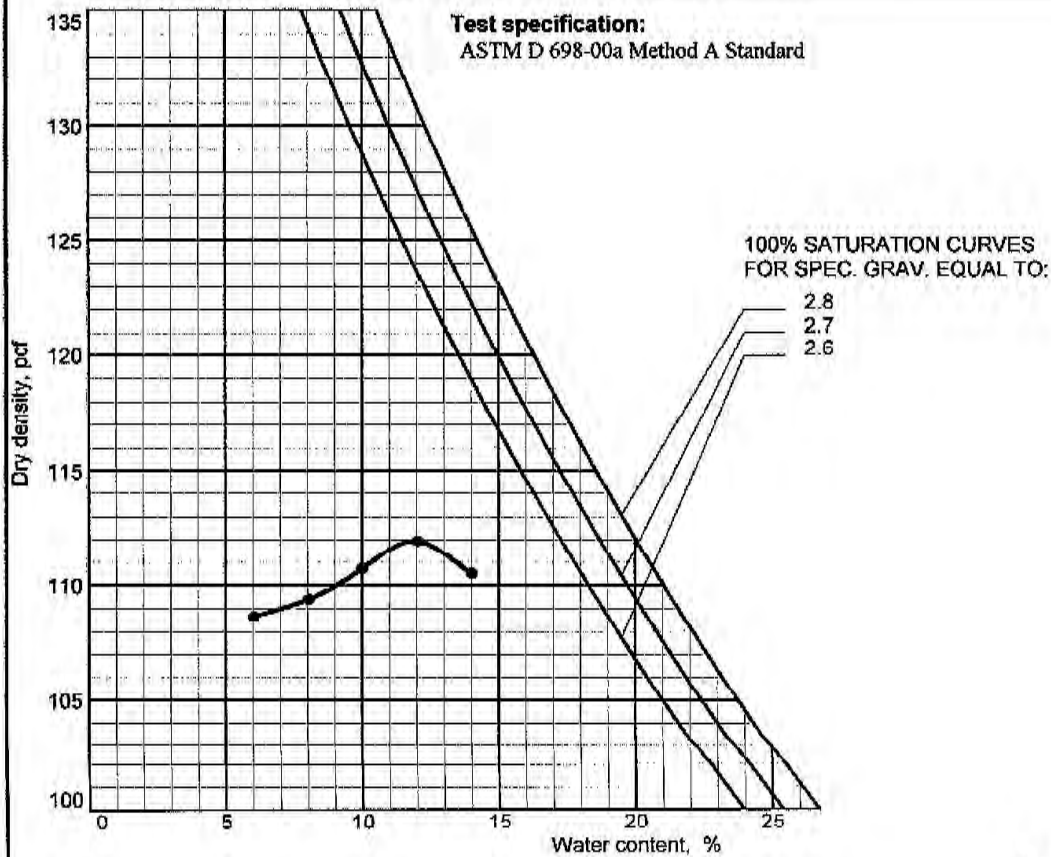
% > No.4 = 3.8 %

% < No.200 = 10.5 %

TEST RESULTS

Maximum dry density = 111.9 pcf

Optimum moisture = 11.9 %



COMPACTION TEST REPORT

Curve No.: 4

Project No.:
Project: Mandarie Pipeline

Date: 2/6/08

Location: 2 North
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 4

MATERIAL DESCRIPTION

Description: Brown-Gray Fine Silty Slightly Organic Sand

Classifications -
Nat. Moist. =
Liquid Limit =
% > No.4 = 0.0 %

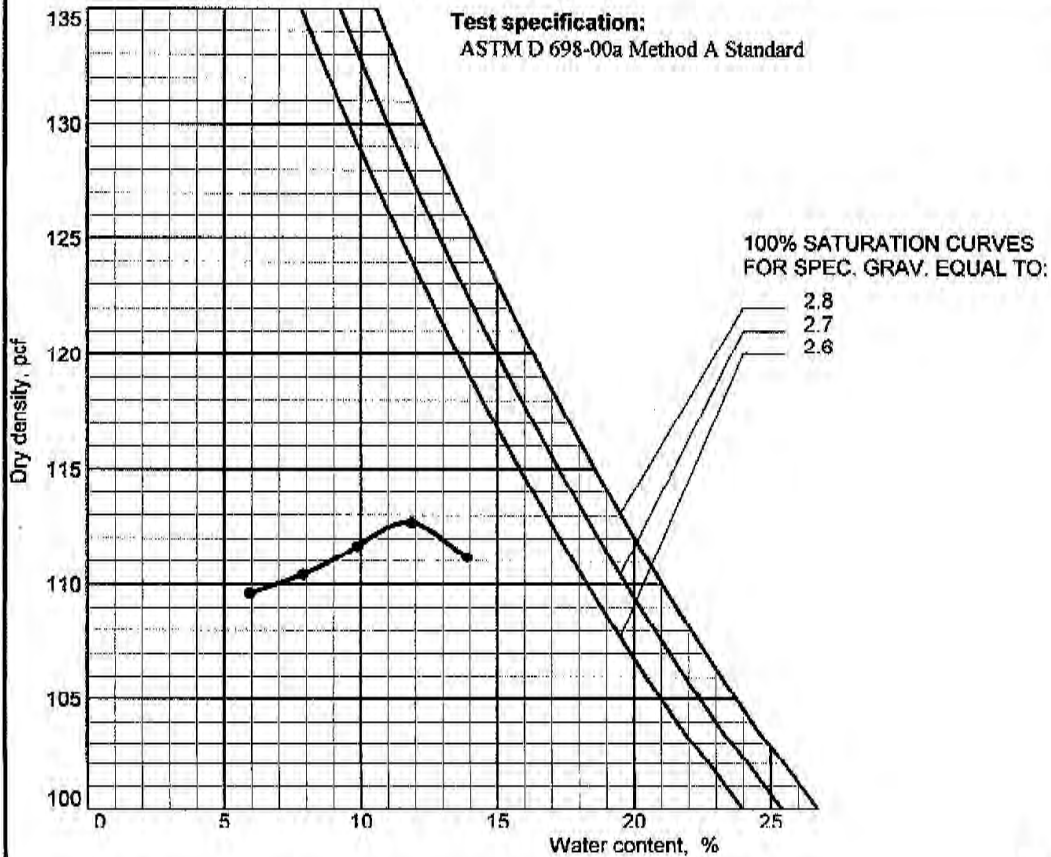
USCS: SP-SM

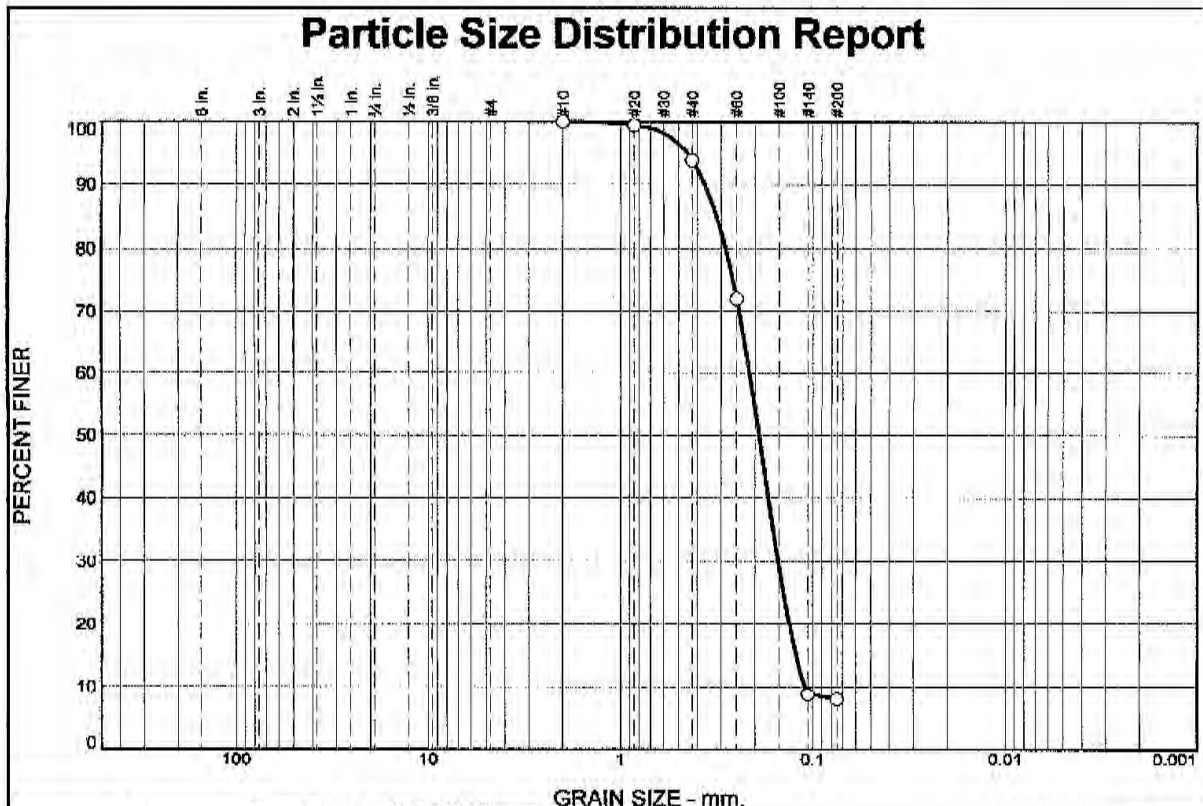
AASHTO:

Sp.G. =
Plasticity Index =
% < No.200 = 7.9 %

TEST RESULTS

Maximum dry density = 112.7 pcf
Optimum moisture = 11.7 %





% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	6.3	85.8	7.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	99.5		
#40	93.7		
#60	71.9		
#140	8.7		
#200	7.9		

Material Description
Brown-Gray Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)
PL= LL= PI=

Classification
USCS= SP-SM AASHTO=

Coefficients
D₈₅= 0.3178 D₆₀= 0.2141 D₅₀= 0.1908
D₃₀= 0.1516 D₁₅= 0.1226 D₁₀= 0.1103
C_u= 1.94 C_c= 0.97

Date Tested: Tested By:

Remarks
Sampled by: Contractor
Moisture = 36.2%

* (no specification provided)

Sample No.: 4 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
Location: 2 North Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No:	Report No. 2/6/08-107
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COMPACTION TEST REPORT

Curve No.: 5

Project No.:
Project: Mandarie Pipeline

Date: 2/6/08

Location: 3 South
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 5

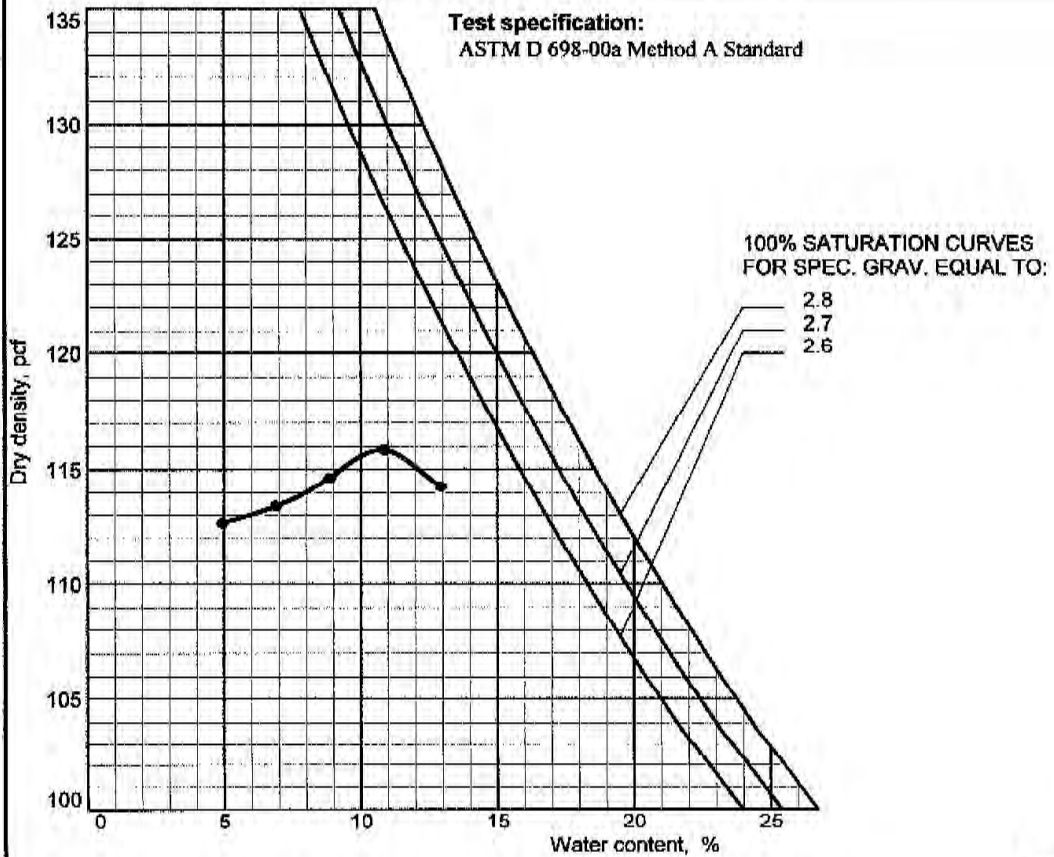
MATERIAL DESCRIPTION

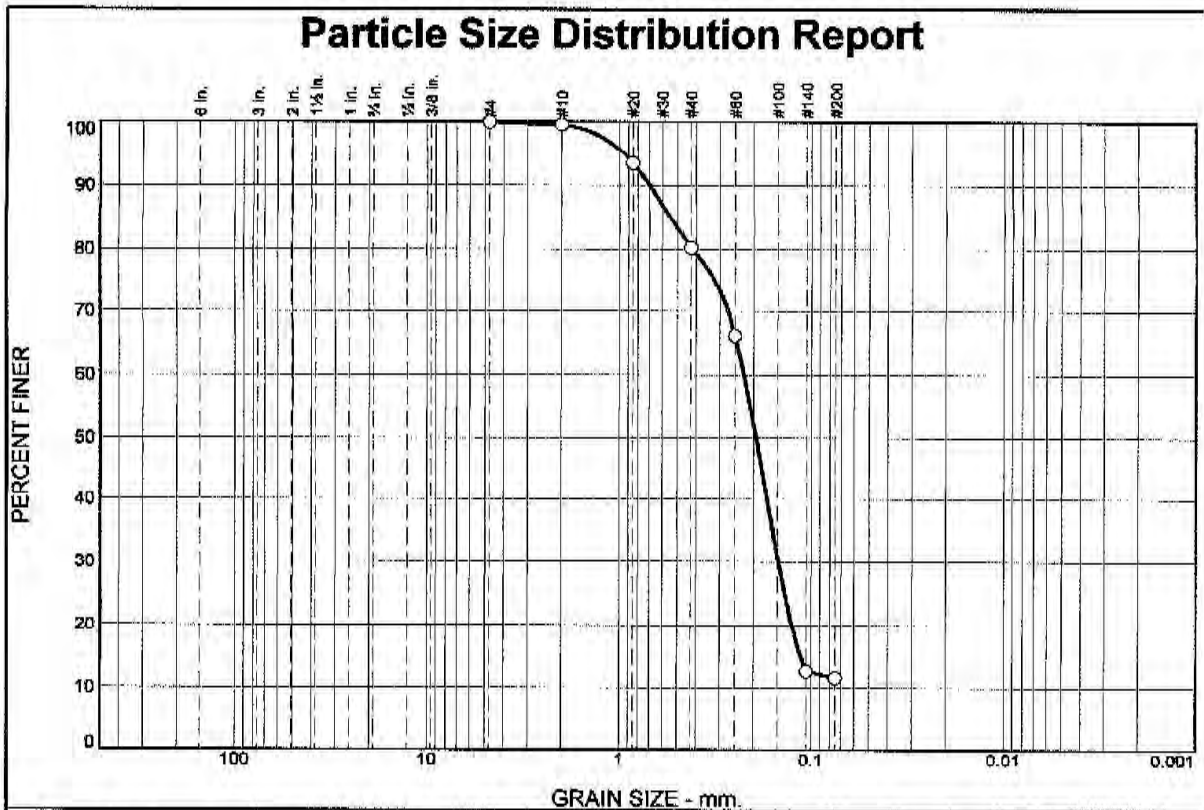
Description: Gray-Brown Fine Silty Slightly Organic Sand

Classifications -	USCS: SP-SM	AASHTO:
Nat. Moist. =		Sp.G. =
Liquid Limit =		Plasticity Index =
% > No.4 = 0.0 %		% < No.200 = 11.5 %

TEST RESULTS

Maximum dry density = 115.8 pcf
Optimum moisture = 10.8 %





% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	19.4	68.7	11.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.6		
#20	93.4		
#40	80.2		
#60	66.2		
#140	12.6		
#200	11.5		

Material Description

Gray-Brown Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS= SP-SM AASHTO=

Coefficients

D₈₅= 0.5457 D₆₀= 0.2243 D₅₀= 0.1940
 D₃₀= 0.1482 D₁₅= 0.1140 D₁₀=
 C_u= C_c=

Date Tested: Tested By:

Remarks

Sampled by: Contractor
 Moisture = 8.6%

(no specification provided)

Sample No.: 5 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
 Location: 3 South Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No:	Report No. 2/6/08-109
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COMPACTION TEST REPORT

Curve No.: 6

Project No.:

Date: 2/6/08

Project: Mandarin Pipeline

Location: 3 North

Sample No. 6

Elev./Depth:

Remarks: Sampled by: Contractor

MATERIAL DESCRIPTION

Description: Gray-Brown Fine Silty Slightly Organic Sand

Classifications -

USCS: SM

AASHTO:

Nat. Moist. =

Sp.G. =

Liquid Limit =

Plasticity Index =

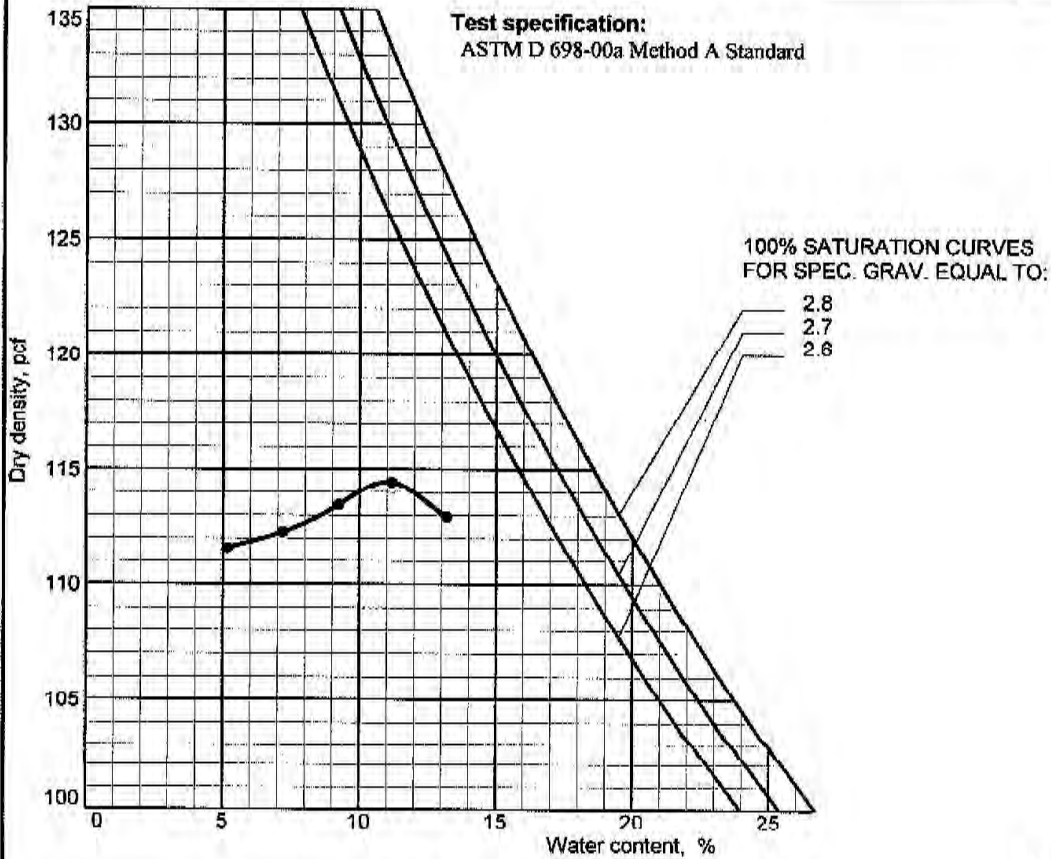
% > No.4 = 0.0 %

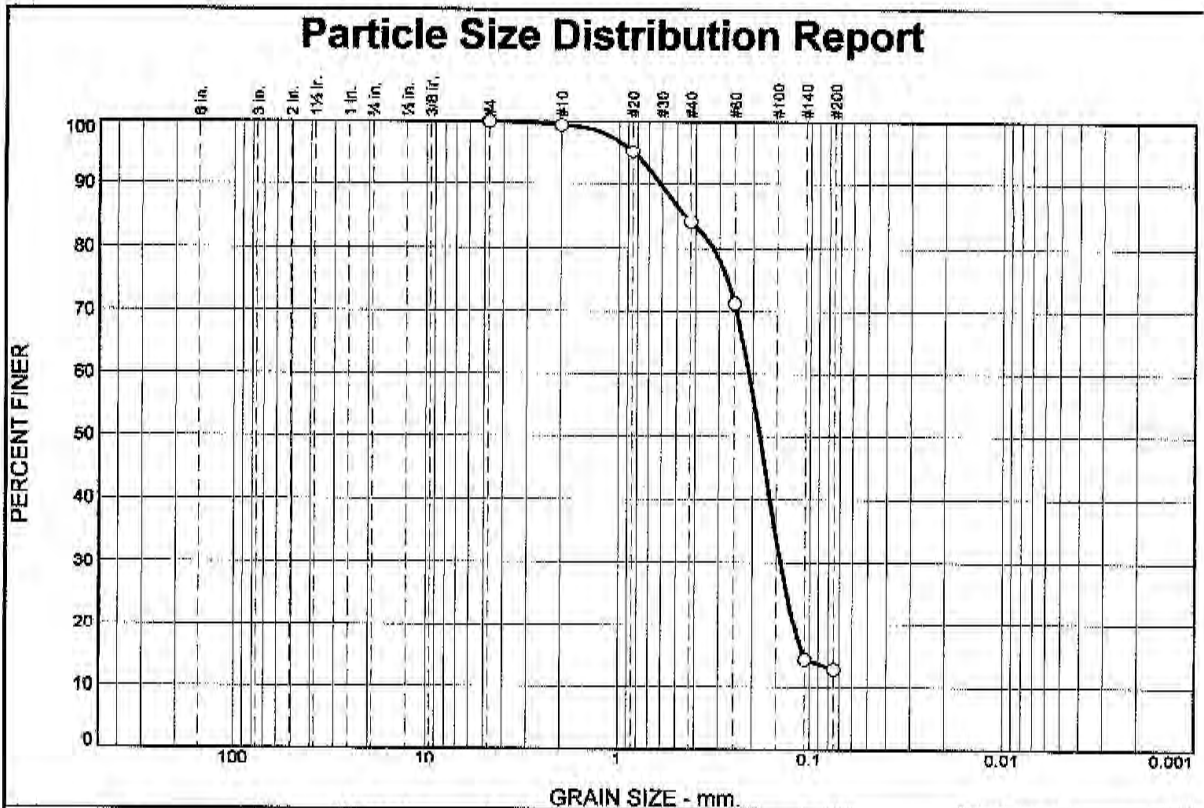
% < No.200 = 12.7 %

TEST RESULTS

Maximum dry density = 114.4 pcf

Optimum moisture = 11.0 %





% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.5	15.5	71.3	12.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.5		
#20	95.1		
#40	84.0		
#60	71.2		
#140	14.3		
#200	12.7		

Material Description

Gray-Brown Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS= SM AASHTO=

Coefficients

D₈₅= 0.4540 D₆₀= 0.2091 D₅₀= 0.1836
 D₃₀= 0.1422 D₁₅= 0.1083 D₁₀=
 C_u= C_c=

Date Tested: Tested By:

Remarks

Sampled by: Contractor
 Moisture = 8.9%

* (no specification provided)

Sample No.: 6 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
 Location: 3 North Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No: Report No. 2/6/08-111
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COMPACTION TEST REPORT

Curve No.: 7

Project No.:
Project: Mandarin Pipeline

Date: 2/6/08

Location: 4 West
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 7

MATERIAL DESCRIPTION

Description: Gray-Brown Fine Silty Slightly Organic Sand

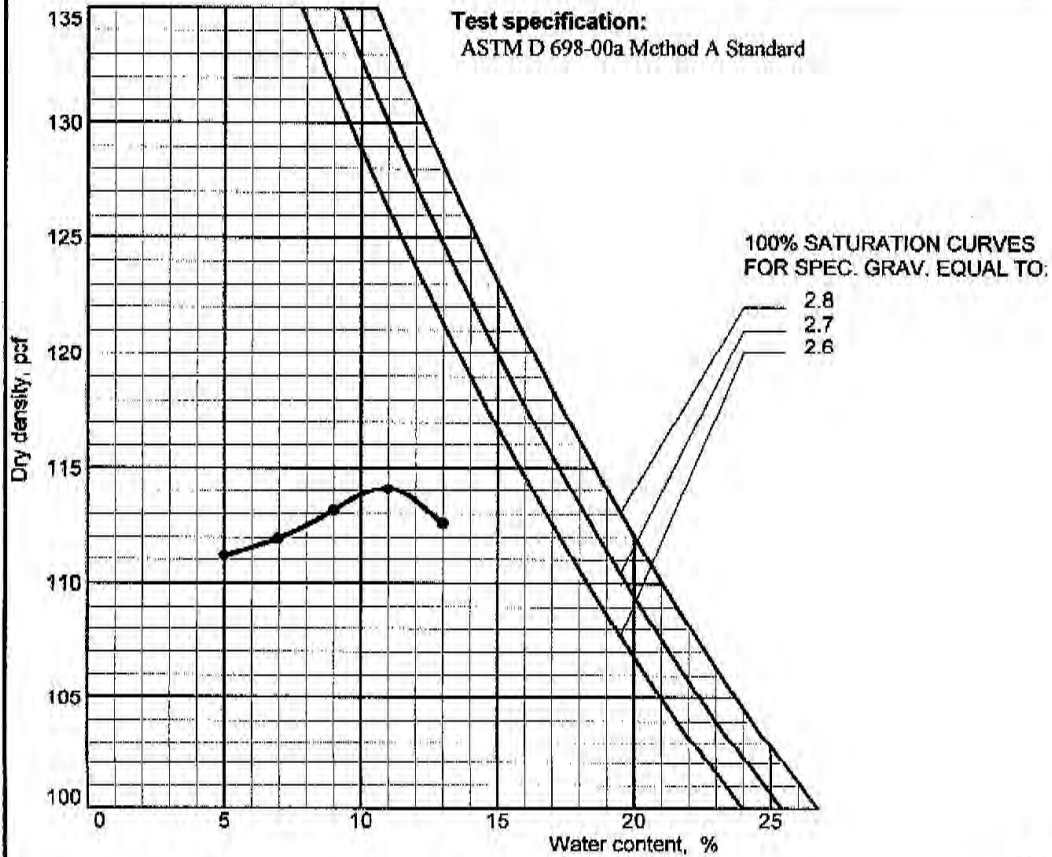
Classifications -
Nat. Moist. =
Liquid Limit =
% > No.4 = 0.0 %

USCS: SM

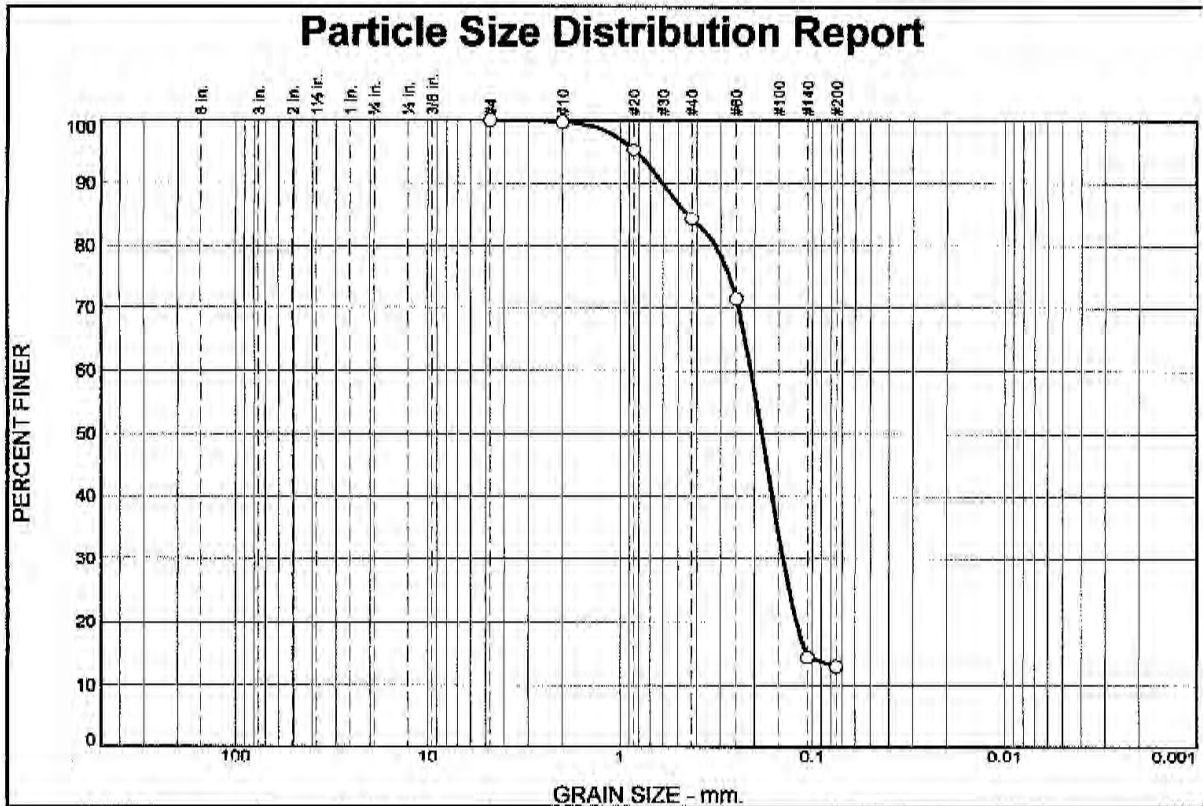
AASHTO:
Sp.G. =
Plasticity Index =
% < No.200 = 13.0 %

TEST RESULTS

Maximum dry density = 114.1 pcf
Optimum moisture = 10.9 %



Report 2/6/08-112



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	15.5	71.2	13.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.7		
#20	95.3		
#40	84.2		
#60	71.4		
#140	14.4		
#200	13.0		

Material Description
Gray-Brown Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)
 PL= LL= PI=

Classification
 USCS= SM AASHTO=

Coefficients
 D₈₅= 0.4481 D₆₀= 0.2086 D₅₀= 0.1832
 D₃₀= 0.1418 D₁₅= 0.1079 D₁₀=
 C_u= C_{c10}=

Date Tested: Tested By:

Remarks
 Sampled by: Contractor
 Moisture = 9.5%

* (no specification provided)

Sample No.: 7 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
 Location: 4 West Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No: Report No. 2/6/08-113
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COMPACTION TEST REPORT

Curve No.: 8

Project No.:
Project: Mandarie Pipeline

Date: 2/6/08

Location: 4 East
Elev./Depth:
Remarks: Sampled by: Contractor

Sample No. 8

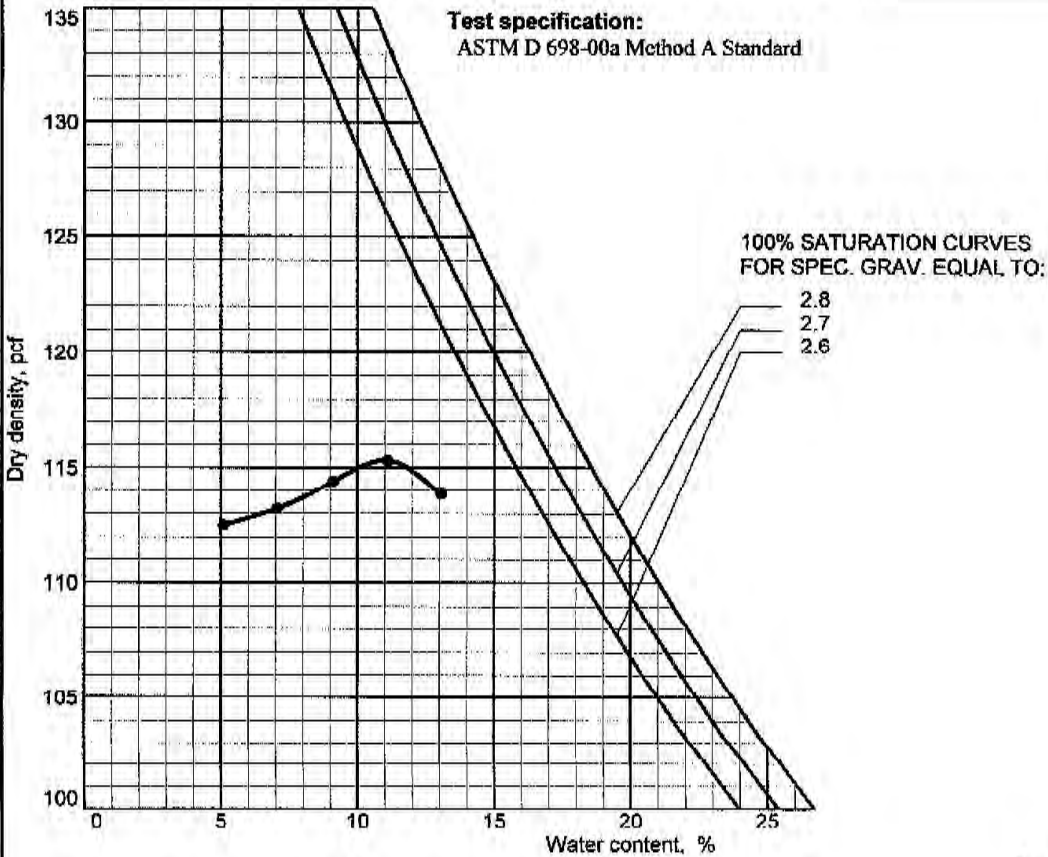
MATERIAL DESCRIPTION

Description:

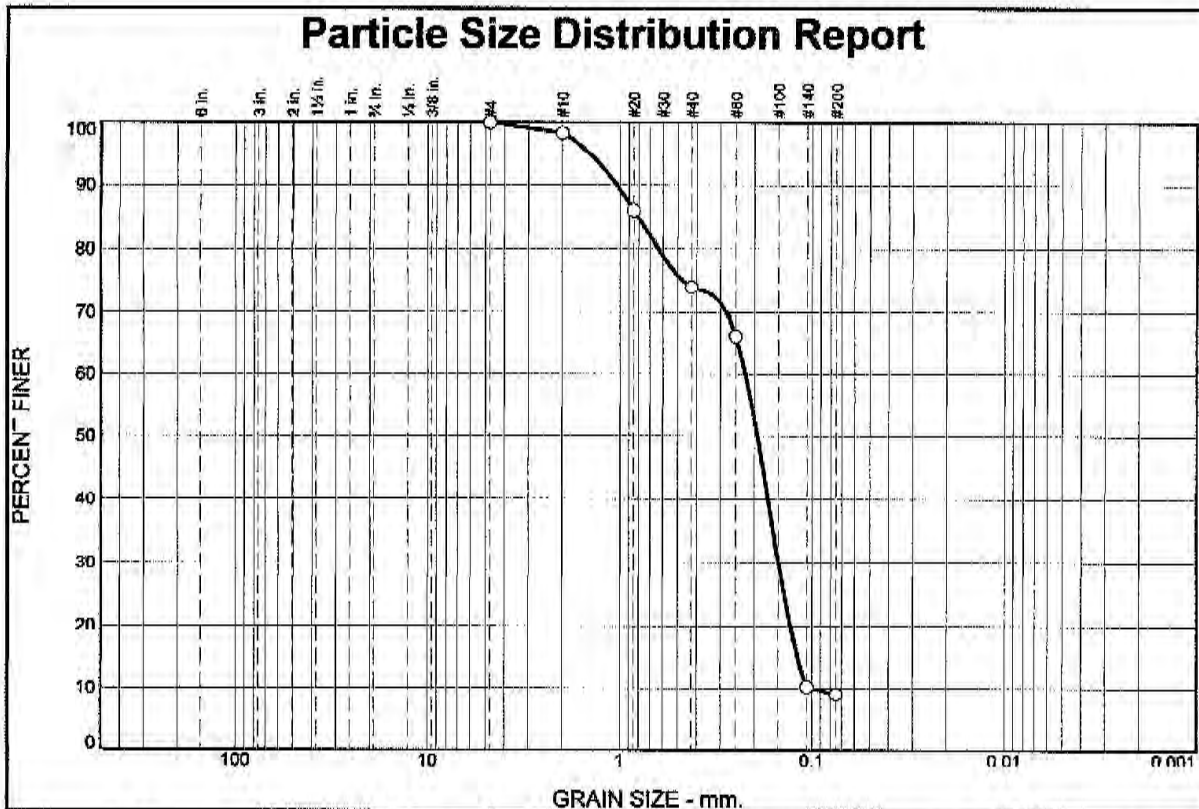
Classifications -	USCS: SP-SM	AASHTO:
Nat. Moist. =		Sp.G. =
Liquid Limit =		Plasticity Index =
% > No.4 = 0.0 %		% < No.200 = 9.0 %

TEST RESULTS

Maximum dry density = 115.3 pcf
Optimum moisture = 11.0 %



Report 2/6/08-114



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.6	24.4	65.0	9.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	98.4		
#20	86.1		
#40	74.0		
#60	66.2		
#140	10.2		
#200	9.0		

Material Description
Gray-Brown Fine Silty Slightly Organic Sand

Atterberg Limits (ASTM D 4318)
PL= LL= PI=

Classification
USCS= SP-SM AASHTO=

Coefficients
 $D_{85} = 0.8059$ $D_{60} = 0.2225$ $D_{50} = 0.1927$
 $D_{30} = 0.1495$ $D_{15} = 0.1192$ $D_{10} = 0.0997$
 $C_u = 2.23$ $C_c = 1.01$

Date Tested: Tested By:

Remarks
Sampled by: Contractor
Moisture = 12.9%

* (no specification provided)

Sample No.: 8 Source of Sample: Mandarie Pipeline Date Sampled: 2/5/08
 Location: 4 East Title: Elev./Depth:

WHITAKER LABORATORY, INC.	Client: Arrowood Environmental Group, Incorporated Project: Mandarie Pipeline Project No:	Report No. 2/6/08-115
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Table J2: k-Factor Results for Fort Stewart ASHRAE Sites.

SOIL ANALYSIS - Fort Stewart ASHRAE SITES						USCS			Ref. Data
SITE #	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 1	0	92.6	7.4	113	22.6	SP-SM		P4502 Northway	110.2
Sample 2	0	90.5	9.5	111.7	23.3	SP-SM		Fine Sand	
Mean	0	91.55	8.45	112.35	22.95		*9.82 / 13.373	at 70.5 F	
									Ref. Data
SITE # 2	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 3	3.8	85.7	10.5	111.9	22	SP-SM		P4502 Northway	110.2
Sample 4	0	92.9	7.9	112.7	21	SP-SM		Fine Sand	
Mean	1.9	89.3	9.2	112.3	21.5		*9.742 / 12.095	at 61.0 F	
									Ref. Data
SITE # 3	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 5	0	88.5	11.5	115.8	8.6	SP-SM		P4502 Northway	110.2
Sample 6	0	87.3	12.7	114.4	8.9	SM		Fine Sand	
Mean	0	87.9	12.1	115.1	8.75		8.158	at 62.5 F	
									Ref. Data
SITE # 4	Gravel %	Sand %	Fines %	Density	Moisture %	Symbol	k-factor	Reference	Density
Sample 7	0	87	13	114.1	9.5	SM		P4502 Northway	110.2
Sample 8	0	91	9	115.3	12.9	SP-SM		Fine Sand	
Mean	0	89	11	114.7	11.2		8.71	at 60.0 F	
Reference:	FINAL REPORT					*From the last data point that is not extrapolated			
	LABORATORY RESEARCH FOR THE					The extrapolated point appears most reasonable			
	FOR THE DETERMINATION OF THE					The record stopped at 14% moisture			
	THERMAL PROPERTIES OF SOILS					The heat loss is affected very little, about 5 BTUH/LF			
	Engineering Experiment Station								
	University of Minnesota								
	St. Paul Minnesota								
	June 1949 Miles S. Kersten								

REPORT DOCUMENTATION PAGE			<i>Form Approved</i> <i>OMB No. 0704-0188</i>		
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1. REPORT DATE (DD-MM-YYYY) June 2011		2. REPORT TYPE Final		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE In Situ Corrosion and Heat Loss Assessment of Two Nonstandard Underground Heat Distribution System Piping Designs: Supplement-Appendices for Final Report on Project F07-AR01			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Alfred D. Beitelman, Charles P. Marsh, Douglas Neale, Vernon Meyer, John Taylor, David Butler, Forest Mandan, Lawrence Clark, and Thomas A. Carlson			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Engineer Research and Development Center Construction Engineering Research Laboratory P.O. Box 9005 Champaign, IL 61826-9005			8. PERFORMING ORGANIZATION REPORT NUMBER ERDC/CERL TR-11-14		
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Office of the Secretary of Defense (OUSD(AT&L)) 3090 Defense Pentagon Washington, DC 20301-3090			10. SPONSOR/MONITOR'S ACRONYM(S) OSD		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.					
13. SUPPLEMENTARY NOTES This report is published in two volumes. Testing data and other appendices are collected in a separate supplement to the main report.					
14. ABSTRACT The objective of this project was to assess the performance of nonstandard underground heat distribution system (UHDS) designs being implemented at various Department of Defense (DoD) installations. These systems incorporate nonmetallic cladding and alternative insulation materials that are advertised to improve energy conservation and corrosion resistance, but they deviate from established guide specifications for UHDS. The ongoing reliable operation of UHDS on military installations is mission-critical, and service interruptions can have adverse and extended negative mission impacts. This report documents the assessment of two similar nonstandard UHDS piping system designs — one at Fort Carson, CO, and one at Fort Stewart, GA. The study consisted of environmental corrosivity tests, air pressure tests, visible inspection of excavated sections, and heat loss evaluation using two methods. Deficiencies in design, installation, and accessibility for maintenance were recorded, and significantly degraded sections were documented. Recommendations for addressing site-specific deficiencies are offered, and supporting technical discussions are provided. Overall, it is advised that these systems not be recommended or allowed in guide specifications and criteria. When more in-service experience is amassed, a second assessment may be merited.					
15. SUBJECT TERMS military installations, underground heat distribution systems (UHDS), performance, guide specifications, design evaluation, Fort Carson, CO, Fort Stewart, GA					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 719	19a. NAME OF RESPONSIBLE PERSON
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			19b. TELEPHONE NUMBER (include area code)