



May 30, 2012

Mr. James K. Moore, P.E.
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794

**Subject: SVE System Construction Completion Report
Equilon Enterprises LLC d/b/a Shell Oil Products US
Roxana, Illinois
1191150002 -- Madison County
ILD 080 012 305
Log No. B-43R**

Dear Mr. Moore:

URS Corporation (URS), on behalf of Shell Oil Products US (SOPUS), is submitting the enclosed SVE System Construction Completion Report.

If you have any questions concerning this report, please contact Kevin Dyer, SOPUS Principal Program Manager at (618) 288-7237 or kevin.dyer@shell.com or me at (314) 743-4106 or robert.mooshegian@urs.com.

Sincerely,

Dave Palmer
Project Manager

Robert E. Mooshegian, CHMM
Senior Project Manager

Enclosure

Cc: Kevin Dyer, SOPUS
Gina Search, IEPA-Collinsville

R E P O R T

SVE SYSTEM
CONSTRUCTION
COMPLETION REPORT

WRB REFINING LP
WOOD RIVER REFINERY
ROXANA, ILLINOIS

Prepared for
Shell Oil Products US
17 Junction Drive
PMB#39
Glen Carbon, IL 62034

May 2012



URS Corporation
1001 Highland Plaza Drive West, Suite 300
St. Louis, MO 63110
(314) 429-0100
Project # 21562735.00017

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: WRB Refining LP - Wood River Refinery County: Madison
Street Address: 900 South Central Ave. Site No. (IEPA): 1191150002
City: Roxana, IL 62084 Site No. (USEPA): ILD 080 012 305

2.0 OWNER INFORMATION

Name: Not Applicable

Mailing Address: _____

Contact Name: _____

Contact Title: _____

Phone No.: _____

3.0 OPERATOR INFORMATION

Equilon Enterprises LLC d/b/a Shell Oil Products US

17 Junction Drive, PMB #399

Glen Carbon, IL 62034

Kevin Dyer

Principal Program Manager

618-288-7237

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

- RFI Phase I Workplan/Report
 RFI Phase II Workplan/Report
 CMP Report; Phase _____
 Other (describe):

SVE System Construction Completion Report
Date of Submittal _____

IEPA Permit Log No. B-43R
Date of Last IEPA Letter
on Project March 14, 2012
Log No. of Last IEPA
Letter on Project B-43-CA-25
Does this submittal include groundwater information: Yes No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

Construction Completion Report for a Soil Vapor Extraction System constructed within the Wood River Refinery.

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

Cover letter, RCRA Corrective Action Certification and SVE System Construction Completion Report.

7.0 CERTIFICATION STATEMENT - (This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below). The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

IEPA RCRA Corrective Action Certification

For: { FORMTEXT }

Date of Submission: _____

Page 2

7.1 **OWNER/OPERATOR CERTIFICATION** (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ (Date) _____

Title: { FORMTEXT }

Operator Signature: [Signature] _____ 5/30/12 (Date) _____

Title: Principal Program Manager

7.2 **PROFESSIONAL CERTIFICATION** (if necessary) - Work carried out in this submittal or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. No one is relieved from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Professional's Signature: [Signature] _____ 5/25/12 Date: _____

Professional's Name: Leslie B. Voss

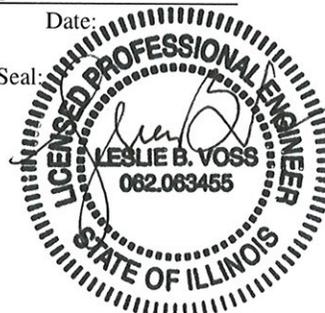
Professional's Seal: _____

Professional's Address: 8300 College Boulevard, Suite 200

Suite 200

Overland Park, KS 66210

Professional's Phone No. (913) 344-1040



7.3 **LABORATORY CERTIFICATION** (if necessary) - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

Name of Laboratory _____

Signature of Laboratory _____ Date _____
Responsible Officer

Mailing Address of Laboratory _____

{ FORMTEXT }
Name and Title of Laboratory Responsible Officer

{ FORMTEXT }

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SECTION ONE

Introduction

At the request of Shell Oil Products US (SOPUS), URS Corporation (URS) designed and constructed a Soil Vapor Extraction (SVE) system. The designed system was to be located along the west boundary (West Fenceline) of the WRB Refining LP Wood River Refinery (WRR) North Property and within the Village Public Works property, in the Village of Roxana, Illinois (Village). At this time, access has not been provided to SOPUS for the portion which is to be constructed on the Village Publics Work property. The purpose of this Construction Completion Report (CCR) is to provide information regarding the West Fenceline portion of the system (System) layout and construction activities. A separate CCR will be developed after the portion on the Village Public Works property has been constructed.

1.1 SITE BACKGROUND

The WRR is composed of five areas, including the North Property, which contains storage tanks and most of the current and past waste management areas. Located in the Village at 900 South Central Avenue, WRR was operated by Shell Oil Company and subsequent owners until ownership changed to ConocoPhillips (COP) effective June 1, 2000. WRB Refining LLC, formed January 1, 2007, was a 50/50 joint venture between COP and EnCana US Refineries, LLC. On December 31, 2010, WRB Refining LLC was converted into a limited partnership named WRB Refining LP (WRB) with limited partners COP and Cenovus US Refinery Holdings. WRB is now the legal owner of WRR. Equilon Enterprises LLC (d/b/a Shell Oil Products US (SOPUS) remains as a co-operator for certain assets at the site, and is working with the assistance of COP on several environmental projects and programs.

Subsurface investigations have been conducted within the area generally bounded by Illinois Route 111 to the west, the West Fenceline to the east, East 1st Street to the north, and Rand Avenue to the south and within the WRR along the West Fenceline (**Figure 1**).

These two areas to be addressed by the System, and together will be referred to as the “Site” for the purposes of this document. The primary System construction area is located on the North Property, along the West Fenceline, between Second and Eighth Streets in the Village (**Figure 2**).

1.2 SOIL VAPOR EXTRACTION

The current understanding of existing site conditions is the result of extensive investigative efforts beginning with the *West Fenceline P-93 Dissolved Phase Benzene Investigation*

SECTION ONE

Introduction

conducted in 2006. The investigative efforts included collection of soil, groundwater, LNAPL, and soil vapor samples.

To address potential vapor intrusion in the Village, SOPUS submitted a *Vapor Intrusion Investigation Work Plan* to the Illinois Environmental Protection Agency (IEPA) in September, 2010, in which installation of an SVE system was proposed (SOPUS, 2010). SOPUS then submitted a *Pilot Test Work Plan* to IEPA in December 2010 to gather additional information required for System design. IEPA formally approved the pilot test on March 16, 2011 (IEPA, 2011), however, based on conversations with the IEPA, pilot test activities moved forward ahead of formal approval and were conducted between February 28, 2011 and March 24, 2011, including advancement of soil borings completed as SVE wells (SVE-1 along the West Fenceline and SVE-2 at Public Works). The IEPA 2011 letter, in addition to approving the pilot test work plan, also required submittal of a conceptual/final design report. The June 2011 *Conceptual/Final Design Report* was subsequently submitted to the IEPA presenting background information, remedial objectives (and conceptual approach to meet those objectives), and provided a final System design. Since submitting the *Conceptual/Final Design Report*, several meetings, telephone conversations and e-mails have occurred, including a site tour with the Agency to keep the IEPA abreast of the construction and operations progress. IEPA issued a *Joint Construction and Operating Permit* on July 14, 2011 for construction and operation of the System.

As stated above, this CCR describes the construction activities associated with installation of the West Fenceline portion of the System. Once access to the Village Public Works property is obtained and this phase of the project is completed, a Construction Completion Report will be issued detailing that phase of System installation.

SECTION TWO

Technical Specifications

Plans, technical specifications and drawings used for construction/installation of the System were provided in the June 11, 2011 *Conceptual/Final Design Report*, along with revisions included in a subsequent submittal to IEPA on September 23, 2011.

The System consists of 34 SVE wells, 25 of which are located along the West Fenceline of the WRR North Property and 3 are located in the Village along East 4th Street west of Chaffer Avenue (**Figure 2**). The remaining 6 wells are located at the Village Public Works property and will be connected to the System following execution of an access agreement between SOPUS and the Village. SVE well construction details can be found in **Table 1**.

The SVE wells are connected via 4-inch steel piping to vapor/liquid separators (VLS) and a rotary lobe positive displacement blower housed within a customized intermodal freight container (conex). Piping from the SVE wells feeds into the conex, where vapor moves through the VLSs, before traveling through the blower and a baffle connected to a Regenerative Thermal Oxidizer (RTO). A second blower, located on the RTO side of the baffle, pushes the vapor into the RTO and adds fresh air to dilute the vapor stream as necessary.

SECTION THREE

Deviations From Conceptual Design

As the System is located within an active petroleum refinery, the construction area was heavily congested with above ground and underground pipelines and utilities, requiring installation adjustments during construction activities.

Other than well/piping layout and subsequent plumbing changes resulting from site conditions referenced above, there were three deviations from the conceptual/final design during System construction:

- Pipe supports - During the original conceptual design of the System, the pipe rack and piping conveyance system were to be constructed parallel and immediately adjacent to the West Fenceline, supported by shallow precast concrete support structures. However, due to overhead utilities, above ground piping, and numerous underground utilities, pipe supports were changed to cast in place concrete piers.

Given the variability of underground obstructions, each pipe support pier location was hydro-excavated (water enhanced vacuum excavation) prior to selection of final design locations.

- Conex – The conceptual System design included construction of a building near the RTO to house System components, including the blower, VLSs, transfer pumps, above ground storage tanks (ASTs), and a room for electrical control panels. In an effort to expedite system installation, URS and SOPUS elected to use a pre-built, customized conex containing the VLSs, blower and control panels in lieu of constructing a building. System ASTs are located outside, just east of the conex, on a concrete pad with the conex and RTO.
- Heat trace – The conceptual design included the installation of heat trace and insulation on the SVE piping. The SVE piping was installed to allow condensate within the System to drain toward the wells to minimize water accumulation within the pipes. Upon further review by URS and SOPUS following System construction, it was decided that neither heat trace nor insulation would be installed pending subsequent evaluation of System performance after operating during a period of cold weather.

SECTION FOUR

Description of Construction Activities

System construction consisted of installation of 28 SVE wells along the West Fenceline, vapor extraction components, and an RTO, connected via carbon steel conveyance piping routed atop concrete supporting piers.

Gross Mechanical Contractors, Inc. (Gross), of St. Louis, Missouri, was responsible for activities related to construction and installation of the System piers, pipe supports, piping, well vault pads, well vaults, and construction of the concrete pad for installation of the conex and RTO, along with connection of System components.

The construction was divided into multiple phases:

Phase 1 – Installation of SVE wells at the Public Works Property and along the West Fenceline

Phase 2 – Connection of SVE wells located in the Village along 4th Street

Phase 3 – Installation of System piping along the West Fenceline

Phase 4 – Installation of the conex and RTO

Phase 5 – Connection of piping from the SVE wells to the conex, and start-up

Phase 6 – Installation of System piping at Public Works Property (Yet to be completed)

Phase 1 – URS contracted Roberts Environmental Drilling, Inc. (REDI) to install the SVE wells in the Village, at the Public Works Property, and along the West Fenceline. Installation of the SVE wells was completed between March and November 2011. Boring logs for all SVE wells are included in **Appendix A**.

Phase 2 – Following installation of all SVE wells, URS subcontractors excavated a pipe trench from the three wells in 4th street (SVE-3, SVE-4 and SVE-25) eastward to the WRR, for installation of a 4-inch diameter HDPE pipe. Once the pipe crossed the WRR fenceline along Chaffer Avenue, the HDPE pipe transitioned to 4-inch diameter carbon steel pipe, including cathodic protection for the underground portion of the carbon steel pipe. The majority of the pipe trench was backfilled with low strength concrete (“flowable fill”), with compacted crushed limestone fill utilized near and around utility pipe locations as requested by the Village Public Works Department (PWD). At the request of PWD, 6-inch diameter, 8-foot long steel pipe sleeves with sealed ends were installed around the SVE piping at intersections with public water mains and residential water service lines to minimize the potential for vapors within the SVE line from entering a nearby public water line, and to prevent potential damage to the SVE line in the event PWD needed to mechanically excavate in these locations. The scope of work for Phase 2

SECTION FOUR

Description of Construction Activities

was completed between June and August 2011.

Phase 3 – Hydro-excavation for the pipe support piers along the West Fenceline started on September 23, 2011. Each pier location was excavated to approximately 11 feet below grade. Upon completion of hydro-excavation, each pier location was backfilled with sand in anticipation of pier installation.

Excavation of the sand backfill commenced on October 27, 2011. Upon removal of the sand backfill and inspection of each pier excavation, a reinforcing steel (rebar) cage, concrete forms and anchor bolts for the pier cap were installed, followed by 4,000 pounds per square inch (psi) concrete for completion of each pier. Piers were constructed from the north end of the West Fenceline towards the south end (**Figure 2**). The final location of each pipe support pier was surveyed for horizontal location and top of concrete elevation. On-site and laboratory concrete testing was performed by Quality Testing and Engineering Inc., an independent Quality Assurance and Quality Control (QA/QC) testing company. A summary of information on pier locations and concrete strength results is presented in **Tables 2** and **3**, respectively.

Beginning the week of November 28, 2011 Gross began installation of pipe racks and carbon steel piping atop completed piers. Installation of the structural pipe support piers was completed on December 16, 2011.

Phase 4 – Construction of the concrete pad for the conex and RTO commenced on November 28, 2011 with the excavation of the pad footing. Placement and compaction of two 4-inch thick layers of crushed limestone base rock was completed on November 30, 2011, followed by installation of rebar and construction of concrete forms on December 1 and 2, 2011. Approximately 123 cubic yards of concrete was placed on December 3, 2011 to complete the 1-foot thick pad measuring approximately 52 feet by 37 feet. Concrete strength results are presented in **Table 3**.

Maple Leaf Environmental Equipment (Maple Leaf) provided the electrical layout, component wiring, and fabrication of the conex containing the SVE blower, VLSs, transfer pumps, air compressor, and electric control panels. The conex was delivered and set in place on the west side of the concrete pad on December 13, 2011. The RTO was supplied by Anguil Environmental Systems, Inc. (Anguil) and delivered to the Site and set in place on the concrete pad east of the conex on December 14, 2011. Once the conex and RTO were set in place, both were anchored to the pad, followed by connection of System components, including an air baffle linking the conex to the RTO.

SECTION FOUR

Description of Construction Activities

Phase 5 – Connection of SVE piping to the conex progressed through December 2011 and January 2012. Piping from the West Fenceline wells turns east toward the conex near the intersection of 8th Street and Chaffer Avenue. From there, the piping is routed into the top of the east side of the conex. With the exception of bolted 150lb flanges installed for SVE-5 subsurface pipe terminations, the Public Works piping yet to be started, and vapor lines attached to the conex, all piping was welded. Results of pipe weld inspections and testing are included in **Appendix E**.

Concurrent with completion of piping connections from the wells to the conex, Ameren Corporation installed three transformers on a power pole at the southwest corner of 8th Street and Chaffer Avenue to supply electrical power to the conex and RTO. In addition, Ameren installed a natural gas supply line and meter northeast of the 8th Street and Chaffer Avenue intersection within WRR to supply fuel to the RTO.

Electrical work associated with supplying power to the RTO and components within the conex, installation of electrical wiring, control panel boxes, connections between the electrical systems, and associated start up procedures for the SVE system continued during December 2011 and January 2012.

During the last two weeks of January 2012, Gross completed connection of the underground piping to well SVE-5 at the north end of the Site, along with completion of successful hydrostatic testing of the SVE piping. Connections for the gas supply line from the Ameren meter to the RTO were also completed and successfully tested. Testing results are presented in Section 6 of this CCR.

URS System operators and representatives from Anguil and Maple Leaf arrived on-site the week of January 23, 2012 to assist with final electrical connections, review equipment operations, review start-up procedures, and assist with start-up of the System. System start-up commenced on January 31, 2012, initially utilizing natural gas to fuel the RTO burners, followed by vapor from SVE wells 3, 4, 10, 11, 12 and 25. URS System operators continued to work with the Anguil and Maple Leaf representatives to perform System start-up checks.

During the month of February 2012, URS completed System commissioning. Additionally, Gross completed installation and successful hydrostatic testing of the piping that extends from the conex to the West Fenceline. The terminus of this pipe run at the west fenceline is where the piping from the Public Works Property, once installed will connect to the System.

SECTION FIVE

Detailed As-Built Drawings

Plan views of the System are included in **Figures 2** and **2A** through **2C**. Additional equipment details and respective drawings are included in **Appendices B** through **D**.

SECTION SIX

Quality Assurance/Quality Control

URS personnel provided oversight during the construction and installation of the System to monitor, document, and assure construction activities and performance met the intent of the design specifications. Oversight activities included layout, documentation of installation, and general monitoring of the construction and installation of the SVE wells. On-site URS field representatives performed general construction monitoring activities during the hydro-excavation and installation of the pipe support piers and SVE piping system. Additionally, the on-site URS representatives monitored compliance of individual contractors with their respective QA/QC plans.

Each Contractor performed QA/QC on their respective portions of the System construction. The contractor's QA/QC testing documentation can be found in **Appendix E**, including on-site concrete test results, laboratory concrete strength/break test results, pipe weld test results, and SVE piping hydrostatic testing results.

SECTION SEVEN

Conclusions

Through daily on-site construction monitoring performed by URS field representatives, along with contractors' on-site QA/QC representatives, independent QC testing, and review of the project QA/QC documentation and data, URS observed that the System construction and installation activities performed by URS' contractors were in general conformance with the design requirements described in the Conceptual/Final Design Report.

SECTION EIGHT

References

Illinois Environmental Protection Agency (IEPA). November 15, 2010. Letter of work plan approval with conditions.

Illinois Environmental Protection Agency (IEPA). July 14, 2011. *Joint Construction and Operating Permit*

Shell Oil Products US. September 2007. *West Fenceline P-93 Dissolved Phase Benzene Investigation*. Prepared by URS Corporation.

Shell Oil Products US. September 20, 2010. *Vapor Intrusion Investigation Work Plan*. Prepared by URS Corporation.

Shell Oil Products US. June 2011. *Conceptual/Final Design Report*. Prepared by URS Corporation.

URS Corporation. September 23, 2011 electronic mail to IEPA in response to September 1, 2011 request for additional information.

**Table 1
SVE Well Construction**

WELL ID	COMPLETION DATE	COORDINATES		GROUND ELEVATION (feet)	SCREEN INTERVAL (feet bgs)	TOTAL WELL DEPTH (feet bgs)	TOTAL BORING DEPTH (feet bgs)
		Northing	Easting				
SVE-1	3/4/11	793210.40	2322305.00	443.29	12-55	55.0	55.0
SVE-2	3/2/11	791987.40	2322012.00	436.21	12-45	45.0	45.0
SVE-3	5/3/11	793307.69	2322206.71	441.95	5-15	15.0	15.0
SVE-4	5/12/11	793309.47	2322158.43	442.04	5-15	15.0	15.0
SVE-5	9/30/11	793831.00	2322280.00	444.23	9.9-19.8	20.0	20.0
SVE-6	10/13/11	793713.30	2322280.00	444.04	10.4-20.1	20.1	20.5
SVE-7	9/29/11	793595.00	2322280.00	443.71	9.8-19.8	20.0	20.0
SVE-8	9/30/11	793480.70	2322291.00	443.12	8.8-18.8	19.0	20.0
SVE-9	10/4/11	793363.20	2322296.00	442.41	9.8-19.8	20.0	20.0
SVE-10	10/5/11	793245.90	2322301.00	442.74	10-20	20.0	20.0
SVE-11	10/7/11	793132.10	2322307.00	443.56	9.8-19.8	20.0	20.0
SVE-12	10/5/11	793005.70	2322299.00	443.78	9.8-19.8	20.0	20.0
SVE-13	10/7/11	792893.30	2322303.00	443.77	9.8-19.8	20.0	20.0
SVE-14	9/27/11	792770.80	2322308.00	443.87	9.8-19.8	20.0	20.0
SVE-15	9/27/11	792651.20	2322310.00	444.15	9.9-19.9	20.0	20.0
SVE-16	10/4/11	792525.80	2322308.00	443.97	9.6-19.6	20.0	20.0
SVE-17	10/5/11	792410.10	2322314.00	444.42	9.6-19.6	20.0	20.0
SVE-18	10/4/11	792285.20	2322321.00	444.93	7.6-17.6	18.0	20.0
SVE-19	9/26/11	792168.00	2322333.00	444.44	10.75-20.75	21.0	21.0
SVE-20	9/28/11	792047.60	2322341.00	444.67	24.9-34.9	35.0	35.0
SVE-21	10/10/11	792024.80	2322190.00	443.29	24.7-34.7	34.9	36.0
SVE-22	10/11/11	792020.50	2322014.00	439.37	25.3-35.0	35.5	36.0
SVE-23	10/11/11	792019.70	2321846.00	430.75	14.6-24.6	25.0	36.0
SVE-24	10/12/11	791880.60	2321944.00	434.22	14.8-24.8	25.0	36.0
SVE-25	5/3/11	793307.69	2322206.71	442.00	9.9-24.6	25.0	27.0
SVE-26	10/11/11	791889.40	2322084.00	435.60	20.4-30.1	30.5	36.0
SVE-27	10/11/11	791860.10	2322231.00	435.93	20.3-30.0	30.5	36.0
SVE-28	10/3/11	793624.50	2322284.00	443.94	40.6-50.6	51.0	51.5
SVE-29	10/4/11	793537.30	2322292.00	443.93	20.8-29.8	31.0	31.0
SVE-30	10/5/11	793423.40	2322291.00	442.67	25-35	35.0	35.0
SVE-31	10/6/11	793304.40	2322301.00	442.81	25.5-35.5	35.5	36.0
SVE-32	10/7/11	793184.60	2322302.00	443.63	25.1-34.6	35.0	35.0
SVE-33	10/7/11	793065.50	2322299.00	443.46	25.1-34.6	35.0	35.0
SVE-34	10/6/11	792945.20	2322298.00	443.76	24.85-44.85	45.0	45.0
SVE-35	9/28/11	792825.50	2322304.00	443.84	30.6-40.6	41.0	41.0
SVE-36	9/26/11	792043.00	2322307.00	443.65	10.0-20.0	20.0	20.0

Table 2
Pier Installation Summary

Pier ID	Coordinates		Top of Concrete Elevation (feet)	Reference Grade Elevation (feet)
	Northing	Easting		
P-001	793815.70	2322265.84	454.75	451.84
P-002	793795.65	2322265.44	453.75	451.79
P-003	793775.55	2322265.83	453.75	451.71
P-004	793755.37	2322266.25	453.75	451.61
P-005	793737.52	2322266.15	453.75	451.90
P-006	793717.50	2322266.75	453.75	451.62
P-007	793703.55	2322267.49	453.75	451.40
P-008	793689.66	2322267.80	453.75	451.69
P-009	793670.79	2322272.02	453.75	451.75
P-010	793650.82	2322272.36	453.50	451.43
P-011	793630.76	2322273.46	453.50	451.72
P-012	793610.71	2322273.46	453.50	451.23
P-013	793590.66	2322274.26	453.50	451.24
P-014	793570.68	2322274.57	453.50	451.31
P-015	793550.62	2322274.84	453.50	451.07
P-016	793530.63	2322275.83	453.25	450.76
P-017	793510.61	2322276.24	453.25	450.71
P-018	793490.55	2322277.06	453.25	450.56
P-019	793470.68	2322280.15	453.25	450.35
P-020	793450.52	2322280.66	453.25	450.63
P-021	793430.61	2322281.05	453.25	450.68
P-022	793410.49	2322281.66	453.25	450.46
P-023	793390.52	2322282.19	453.00	450.30
P-024	793370.51	2322282.68	453.00	450.56
P-025	793350.34	2322283.50	453.00	450.52
P-026	793330.31	2322284.06	453.00	450.57
P-027	793310.22	2322284.46	453.00	450.85
P-028	793289.98	2322284.93	453.25	451.07
P-029	793270.07	2322285.47	453.25	450.89
P-030	793250.03	2322286.09	453.25	451.06
P-031	793230.07	2322289.25	453.25	451.23
P-032	793209.95	2322289.74	453.25	451.33
P-033	793189.92	2322290.37	453.25	451.38
P-034	793175.93	2322290.61	453.50	451.41
P-035	793155.98	2322291.34	453.50	451.51
P-036	793136.00	2322291.95	453.50	451.78
P-037	793116.20	2322292.51	453.50	451.61
P-038	793095.77	2322292.78	453.50	451.86
P-039	793075.75	2322290.40	453.75	451.94
P-040	793062.04	2322291.44	453.75	451.98
P-041	793041.59	2322291.89	453.75	451.91
P-042	793021.41	2322292.22	453.75	452.01
P-043N	793006.75	2322292.82	453.75	451.84
P-044N	792996.54	2322293.05	453.75	451.91
P-044S	792976.37	2322293.92	453.75	452.09
P-045	792961.31	2322294.06	453.75	452.10
P-046W	792941.53	2322293.67	454.00	452.15
P-047N	792925.49	2322297.87	454.00	452.24
P-047S	792905.44	2322298.29	454.00	452.23
P-048	792889.53	2322298.66	454.00	451.97
P-049	792869.61	2322299.34	454.00	452.19
P-050	792849.21	2322299.79	454.00	452.26

Table 2
Pier Installation Summary

Pier ID	Coordinates		Top of Concrete Elevation (feet)	Reference Grade Elevation (feet)
	Northing	Easting		
P-051	792829.47	2322300.41	454.25	452.22
P-052	792809.15	2322300.82	454.25	452.14
P-053	792789.15	2322301.54	454.25	452.12
P-054	792769.10	2322301.90	454.25	452.28
P-055	792749.01	2322302.43	454.25	452.07
P-056	792728.94	2322303.04	454.25	452.07
P-057	792708.93	2322303.91	454.25	452.05
P-058	792694.14	2322304.14	454.50	451.79
P-059N	792678.87	2322304.51	454.50	452.04
P-059S	792663.72	2322305.11	454.50	451.94
P-060	792649.00	2322305.67	454.50	451.85
P-061	792628.96	2322306.01	454.50	451.83
P-062	792608.91	2322306.57	454.50	451.89
P-063	792588.93	2322307.24	454.50	452.00
P-064	792569.08	2322302.73	454.75	451.97
P-065	792548.83	2322303.08	454.75	451.87
P-066	792528.80	2322303.85	454.75	451.87
P-067	792508.63	2322304.23	454.75	452.09
P-068	792488.61	2322304.91	454.75	452.27
P-069	792468.86	2322305.43	455.00	452.52
P-070E	792448.85	2322307.14	455.00	452.57
P-071E	792428.87	2322310.19	454.50	452.71
P-071W	792428.16	2322300.65	454.50	452.79
P-072	792408.19	2322302.82	455.00	452.84
P-073	792388.03	2322303.37	455.00	452.89
P-074	792367.90	2322303.86	455.00	452.63
P-075	792349.48	2322306.70	455.00	452.74
P-076	792327.87	2322304.84	455.25	452.56
P-077	792308.14	2322305.77	455.25	452.78
P-078	792287.97	2322306.41	455.25	452.70
P-079	792267.93	2322306.83	455.25	452.83
P-080	792247.82	2322307.56	455.25	452.63
P-081	792227.69	2322308.22	455.25	452.57
P-082	792207.67	2322308.84	455.50	452.49
P-083	792187.41	2322309.42	455.50	452.24
P-084	792167.58	2322309.76	455.50	452.30
P-085	792147.56	2322310.31	455.50	452.38
P-086	792127.46	2322310.77	455.50	452.37
P-087	792107.64	2322313.45	455.50	452.42
P-088	792087.54	2322313.84	455.75	452.55
P-089	792067.86	2322314.46	455.75	452.63
P-090	792047.95	2322315.07	455.75	452.04
P-091	792027.94	2322315.61	453.50	451.96
P-092	792007.56	2322316.03	453.50	451.60
P-093	791987.70	2322316.72	453.50	451.59
P-094	791972.15	2322310.10	453.50	451.49
P-095	791956.91	2322310.81	453.50	451.24
P-096	791936.54	2322311.59	453.50	451.72
P-097	791918.51	2322312.20	453.50	451.29
P-098	791898.84	2322312.88	453.50	451.48

Notes:

1. Coordinates in accordance with ConocoPhillips grid system, with Memphis Datum elevations.
2. Memphis Datum = State Plane Elevation + 7.94 Ft.
3. Reference SW and NW Corners of transformer pad at elevation 453.06'

**Table 3
Concrete Compression Test Summary**

POUR LOCATION	DATE CAST	DATE TESTED	AGE (DAYS)	MAXIMUM LOAD (LBS)	COMPRESSIVE STRENGTH (PSI)
Pier 012	10/28/11	11/4/11	7	87,580	3,100
	10/28/11	11/25/11	28	128,010	4,530
	10/28/11	11/25/11	28	137,810	4,870
	10/28/11	N/A	Hold	N/A	N/A
Piers 008 & 009	10/31/11	11/7/11	7	109,770	3,880
	10/31/11	11/28/11	28	127,100	4,500
	10/31/11	11/28/11	28	123,520	4,370
	10/31/11	N/A	Hold	N/A	N/A
Piers 024 & 025	11/1/11	11/8/11	7	107,420	3,800
	11/1/11	11/29/11	28	129,830	4,590
	11/1/11	11/29/11	28	123,940	4,380
	11/1/11	N/A	Hold	N/A	N/A
Pier 007	11/2/11	11/9/11	7	103,520	3,660
	11/2/11	11/30/11	28	130,700	4,620
	11/2/11	11/30/11	28	146,810	5,190
	11/2/11	N/A	Hold	N/A	N/A
Piers 034, 025, & 1/4 of 036	11/4/11	11/11/11	7	111,800	3,950
	11/4/11	12/2/11	28	138,600	4,900
	11/4/11	12/2/11	28	136,700	4,840
	11/4/11	N/A	Hold	N/A	N/A
Pier Caps 1-8	11/10/11	11/14/11	4	116,780	4,130
	11/10/11	11/14/11	4	115,420	4,080
	11/10/11	11/17/11	7	131,200	4,640
	11/10/11	12/8/11	28	144,740	5,120
	11/10/11	12/8/11	28	154,010	5,450
	11/10/11	N/A	Hold	N/A	N/A

**Table 3
Concrete Compression Test Summary**

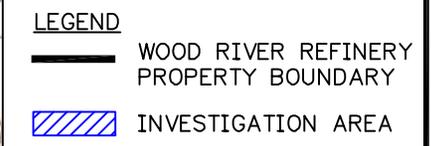
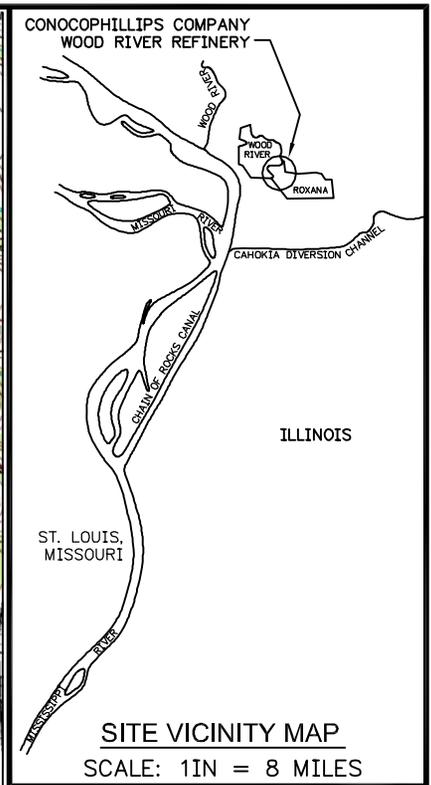
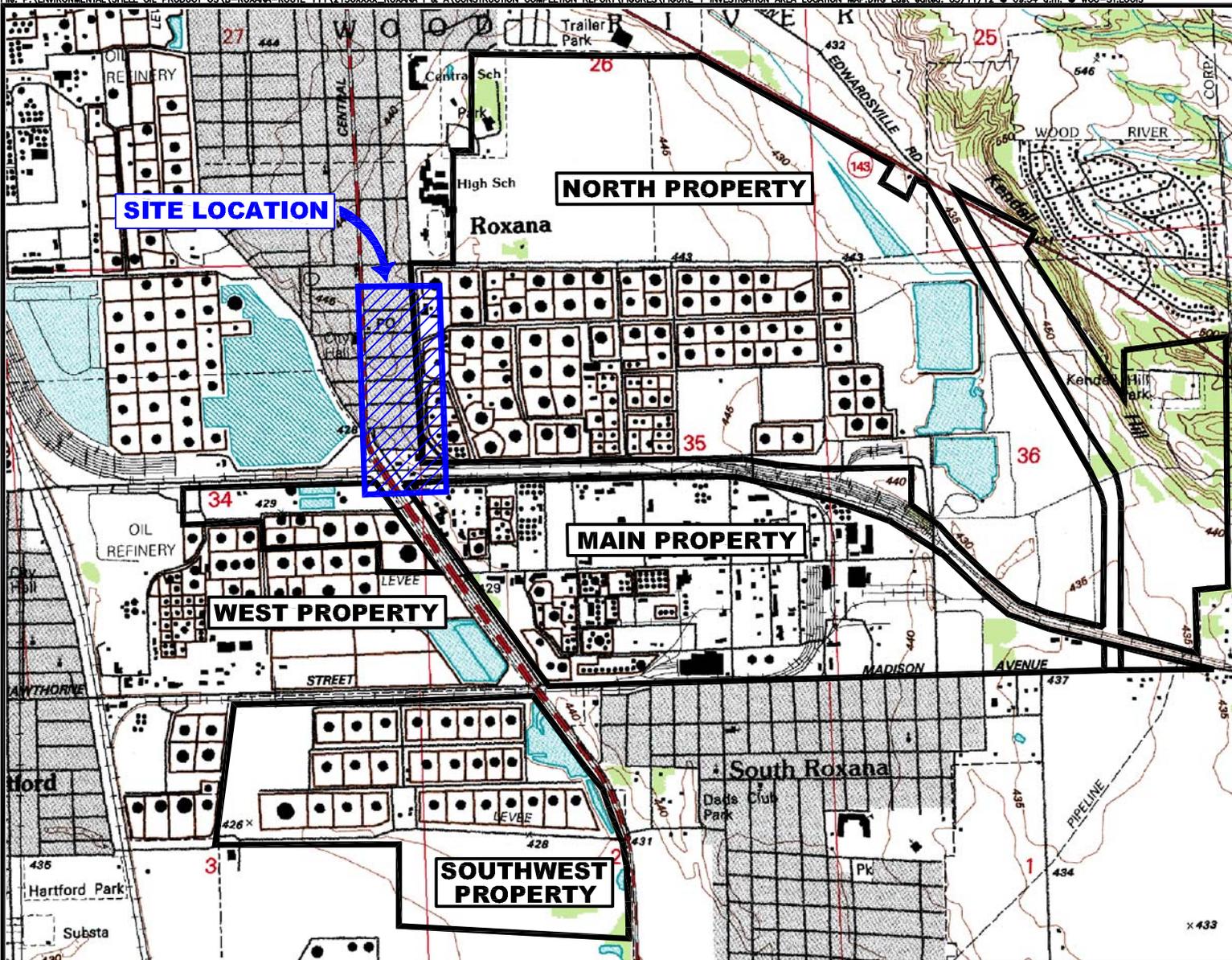
POUR LOCATION	DATE CAST	DATE TESTED	AGE (DAYS)	MAXIMUM LOAD (LBS)	COMPRESSIVE STRENGTH (PSI)
Piers 042, 043 North & 044 North	11/15/11	11/22/11	7	114,570	4,050
	11/15/11	12/13/11	28	128,140	4,530
	11/15/11	12/13/11	28	132,080	4,670
	11/15/11	N/A	Hold	N/A	N/A
Pier Caps 19-23 & Piers 048 & 049	11/16/11	11/23/11	7	133,930	4,740
	11/16/11	12/14/11	28	154,350	5,460
	11/16/11	12/14/11	28	157,490	5,570
	11/16/11	N/A	Hold	N/A	N/A
Pier Caps 24-30	11/17/11	11/24/11	7	117,410	4,150
	11/17/11	12/15/11	28	139,070	4,920
	11/17/11	12/15/11	28	133,830	4,730
	11/17/11	N/A	Hold	N/A	N/A
Pier 059N	11/18/11	11/25/11	7	93,610	3,310
	11/18/11	12/16/11	28	117,750	4,170
	11/18/11	12/16/11	28	115,110	4,070
	11/18/11	N/A	Hold	N/A	N/A
Piers 070E & 072	11/21/11	11/28/11	7	105,450	3,730
	11/21/11	12/19/11	28	123,690	4,380
	11/21/11	12/19/11	28	124,040	4,390
	11/21/11	N/A	Hold	N/A	N/A
Piers 075 & 076	11/23/11	11/30/11	7	99,400	3,520
	11/23/11	12/21/11	28	124,690	4,410
	11/23/11	12/21/11	28	127,270	4,500
	11/23/11	N/A	Hold	N/A	N/A
Piers 082 & 083	11/28/11	12/5/11	7	126,920	4,490
	11/28/11	12/26/11	28	157,870	5,580
	11/28/11	12/26/11	28	149,290	5,280
	11/28/11	N/A	Hold	N/A	N/A

**Table 3
Concrete Compression Test Summary**

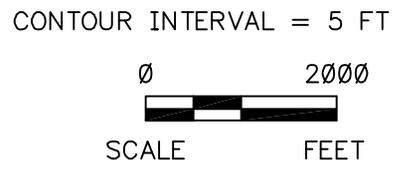
POUR LOCATION	DATE CAST	DATE TESTED	AGE (DAYS)	MAXIMUM LOAD (LBS)	COMPRESSIVE STRENGTH (PSI)
North Side Grade Beam	12/3/11	12/10/11	7	112,490	3,980
(NE Outside Corner on East Side to NW Corner, up to Rock Grade of Pad)	12/3/11	12/31/11	28	130,600	4,620
	12/3/11	12/31/11	28	143,720	5,080
	12/3/11	N/A	Hold	N/A	N/A
Conex/RTO Pad - North Center	12/3/11	12/10/11	7	109,930	3,890
	12/3/11	12/31/11	28	125,510	4,440
	12/3/11	12/31/11	28	129,560	4,580
	12/3/11	N/A	Hold	N/A	N/A
Conex/RTO Pad - South End	12/3/11	12/10/11	7	106,810	3,780
	12/3/11	12/31/11	28	130,580	4,620
	12/3/11	12/31/11	28	128,780	4,560
	12/3/11	N/A	Hold	N/A	N/A
Well Pads for SVE 7, 28 & 29	12/9/11	12/16/11	7	114,810	4,060
	12/9/11	1/6/12	28	130,110	4,600
	12/9/11	1/6/12	28	136,060	4,810
	12/9/11	N/A	Hold	N/A	N/A
Piers 094, 095 & 096	12/14/11	12/21/11	7	106,500	3,770
	12/14/11	1/11/12	28	126,890	4,490
	12/14/11	1/11/12	28	132,370	4,680
	12/14/11	N/A	Hold	N/A	N/A
Piers 091, 097 & 098	12/15/11	12/22/11	7	136,210	4,820
	12/15/11	1/12/12	28	155,560	5,500
	12/15/11	1/12/12	28	159,190	5,630
	12/15/11	N/A	Hold	N/A	N/A
Piers at Bents B, C & D	12/16/11	12/23/11	7	113,960	4,030
	12/16/11	1/13/12	28	135,230	4,780
	12/16/11	1/13/12	28	136,160	4,820
	12/16/11	N/A	Hold	N/A	N/A

**Table 3
Concrete Compression Test Summary**

POUR LOCATION	DATE CAST	DATE TESTED	AGE (DAYS)	MAXIMUM LOAD (LBS)	COMPRESSIVE STRENGTH (PSI)
Well Pads for SVE 11, 12 & 33	12/19/11	12/26/11	7	125,840	4,450
	12/19/11	1/16/12	28	148,550	5,250
	12/19/11	1/16/11	28	135,620	4,800
	12/19/11	N/A	Hold	N/A	N/A
Well Pads for SVE 13, 35, 14 & 15	12/21/11	12/28/11	7	131,260	4,640
	12/21/11	1/18/12	28	146,440	5,180
	12/21/11	1/18/12	28	150,900	5,340
	12/21/11	N/A	Hold	N/A	N/A
Well Pad for SVE 16	12/30/11	1/6/12	7	129,550	4,580
	12/30/11	1/27/12	28	153,240	5,420
	12/30/11	1/27/12	28	164,100	5,800
	12/30/11	N/A	Hold	N/A	N/A
Well pads for SVE 6 & 34	1/4/12	1/11/12	7	124,450	4,400
	1/4/12	2/1/12	28	141,220	5,000
	1/4/12	2/1/12	28	144,300	5,100
	1/4/12	N/A	Hold	N/A	N/A
Pier Base Plates	1/10/12	1/17/12	7	13,020	3,260
	1/10/12	1/17/12	7	12,430	3,110
	1/10/12	1/17/12	7	18,010	4,500
	1/10/12	2/7/12	28	39,210	9,800
	1/10/12	2/7/12	28	38,420	9,610
	1/10/12	2/7/12	28	33,840	8,460
	1/10/12	N/A	Hold	N/A	N/A
	1/10/12	N/A	Hold	N/A	N/A
	1/10/12	N/A	Hold	N/A	N/A
SVE Pipe Supports	2/24/2012	3/2/2012	7	119,760	4,240
	2/24/2012	3/23/2012	28	140,280	4960
	2/24/2012	3/23/2012	28	138,970	4,920
	2/24/2012	N/A	Hold	N/A	N/A



SOURCE:
MAP TAKEN FROM ELECTRONIC USGS DIGITAL RASTER GRAPHIC 7.5 MINUTE TOPOGRAPHIC MAP OF WOOD RIVER, ILL-MO REVISED 1994.



SHELL OIL PRODUCTS US ROXANA, ILLINOIS		PROJECT NO. 21562735
URS		
DRN. BY: djd May 2012 DSGN. BY: djd CHKD. BY: mpm	Site Location Map	FIG. NO. 1

(S. CENTRAL AVE) HIGHWAY 111

1986 APPROXIMATE
BENZENE RELEASE SITE

FIGURE 2A

FIGURE 2B

FIGURE 2C

VILLAGE OF ROXANA

WOOD RIVER
REFINERY

NORTH PROPERTY

MAIN
PROPERTY

PUBLIC WORKS
PROPERTY

CONEX
RTO
ABOVE GROUND
STORAGE TANKS

ASPHALT
PARKING
OMC BUILDING

BUILDING

METER
SHELTER

F-73

F-74

F-78

F-77

A-22

F-76

A-27

A-28

EIGHTH ST

SEVENTH ST

SIXTH ST

FIFTH ST

FOURTH ST

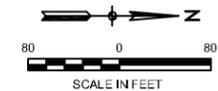
THIRD ST

SECOND ST

CHAFFER ST

LEG NO.	SVE WELLS	COLOR	WELL SYMBOL
1	SVE-5 THROUGH SVE-9	RED	
2	SVE-3, SVE-4, SVE-25 & SVE-10 THROUGH SVE-12	BLUE	
3	SVE-13 THROUGH SVE-19 & SVE-36	GREEN	
4	SVE-20 THROUGH SVE-27	TEAL	
5	SVE-28 THROUGH SVE-33	PURPLE	
6	SVE-34 THROUGH SVE-35	BROWN	

- LEGEND:**
- SVE EXTRACTION WELL (SEE TABLE FOR COLOR LEGEND)
 - VAPOR MONITORING POINT (VMP)
 - PROPERTY BOUNDARY
 - PROPOSED SVE LINE

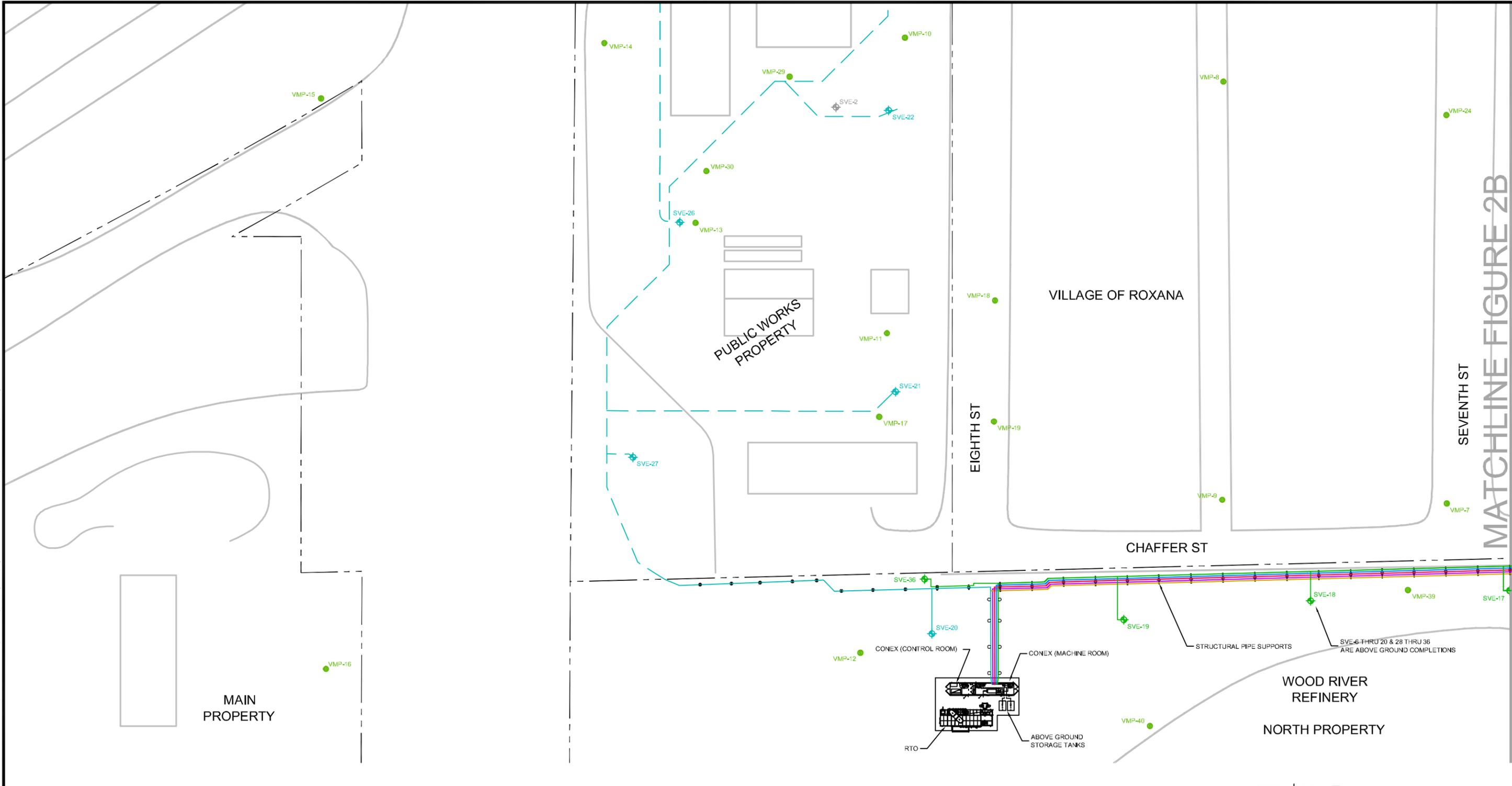


SHELL OIL PRODUCTS US ROXANA, ILLINOIS		PROJECT NO. 21562735
URS		
DRN. BY: djd May 2012 DSGN. BY: lv CHKD. BY: dp	Soil Vapor Extraction System Overall Plan	FIG. NO. 2

DRAFT

May 11, 2012 10:04:17 am (dev)
F:\Environmental\Shell Oil Product US_Roxana-Route 111\2156000X_Roxana 1 & A\Construction Completion Report\Figures\Figure 2, 2A, 2B, 2C, Soil Vapor Extraction System.dwg

May 11, 2012 10:05:36 am (dev)
 F:\Environmental\Shell Oil Product US_Roxana-Route 111\215600XX_Roxana I & A\Construction Completion Report\Figures\Figure 2, 2A, 2B, 2C, Soil Vapor Extraction System.dwg



MATCHLINE FIGURE 2B

LEG NO.	SVE WELLS	COLOR	WELL SYMBOL
1	SVE-5 THROUGH SVE-9	RED	
2	SVE-3, SVE-4, SVE-25 & SVE-10 THROUGH SVE-12	BLUE	
3	SVE-13 THROUGH SVE-19 & SVE-36	GREEN	
4	SVE-20 THROUGH SVE-27	TEAL	
5	SVE-28 THROUGH SVE-33	PURPLE	
6	SVE-34 THROUGH SVE-35	BROWN	

LEGEND:
 SVE EXTRACTION WELL (SEE TABLE FOR COLOR LEGEND)
 VAPOR MONITORING POINT (VMP)
 PROPERTY BOUNDARY
 PROPOSED SVE LINE

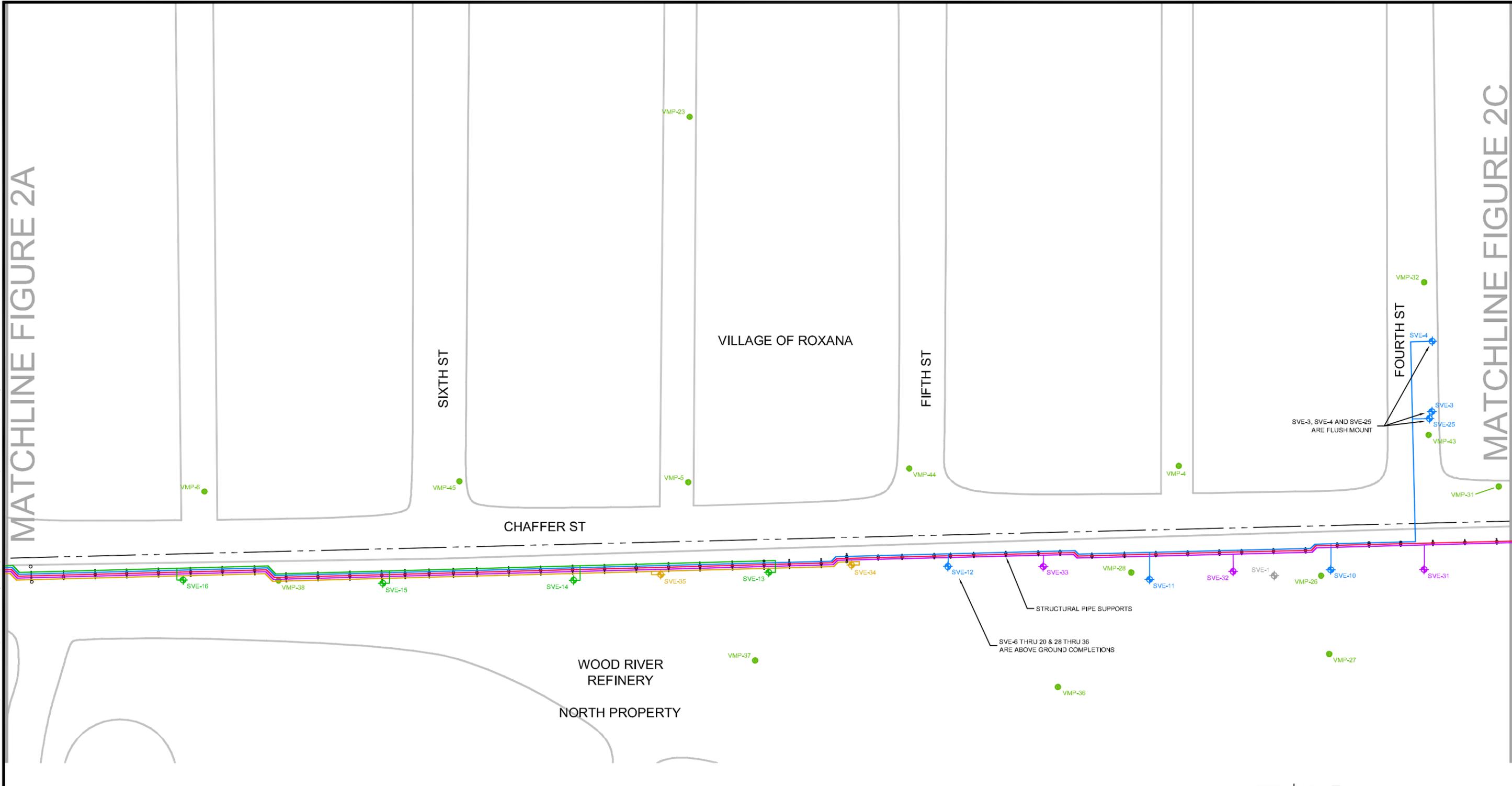
DRAFT

SHELL OIL PRODUCTS US ROXANA, ILLINOIS		PROJECT NO. 21562735
URS		
DRN. BY: djd May 2012 DSGN. BY: lv CHKD. BY: dp	Soil Vapor Extraction System	FIG. NO. 2A

May 11, 2012 10:07:43 am (dev)
 F:\Environmental\Shell Oil Product US-Roxana-Route 111\21560000_Roxana I & A\Construction Completion Report\Figures\Figure 2, 2A, 2B, 2C, Soil Vapor Extraction System.dwg

MATCHLINE FIGURE 2A

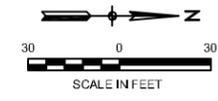
MATCHLINE FIGURE 2C



LEG NO.	SVE WELLS	COLOR	WELL SYMBOL
1	SVE-5 THROUGH SVE-9	RED	
2	SVE-3, SVE-4, SVE-25 & SVE-10 THROUGH SVE-12	BLUE	
3	SVE-13 THROUGH SVE-19 & SVE-36	GREEN	
5	SVE-28 THROUGH SVE-33	PURPLE	
6	SVE-34 THROUGH SVE-35	BROWN	

LEGEND:
 SVE EXTRACTION WELL (SEE TABLE FOR COLOR LEGEND)
 VAPOR MONITORING POINT (VMP)
 - - - - - PROPERTY BOUNDARY

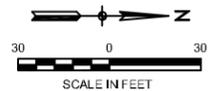
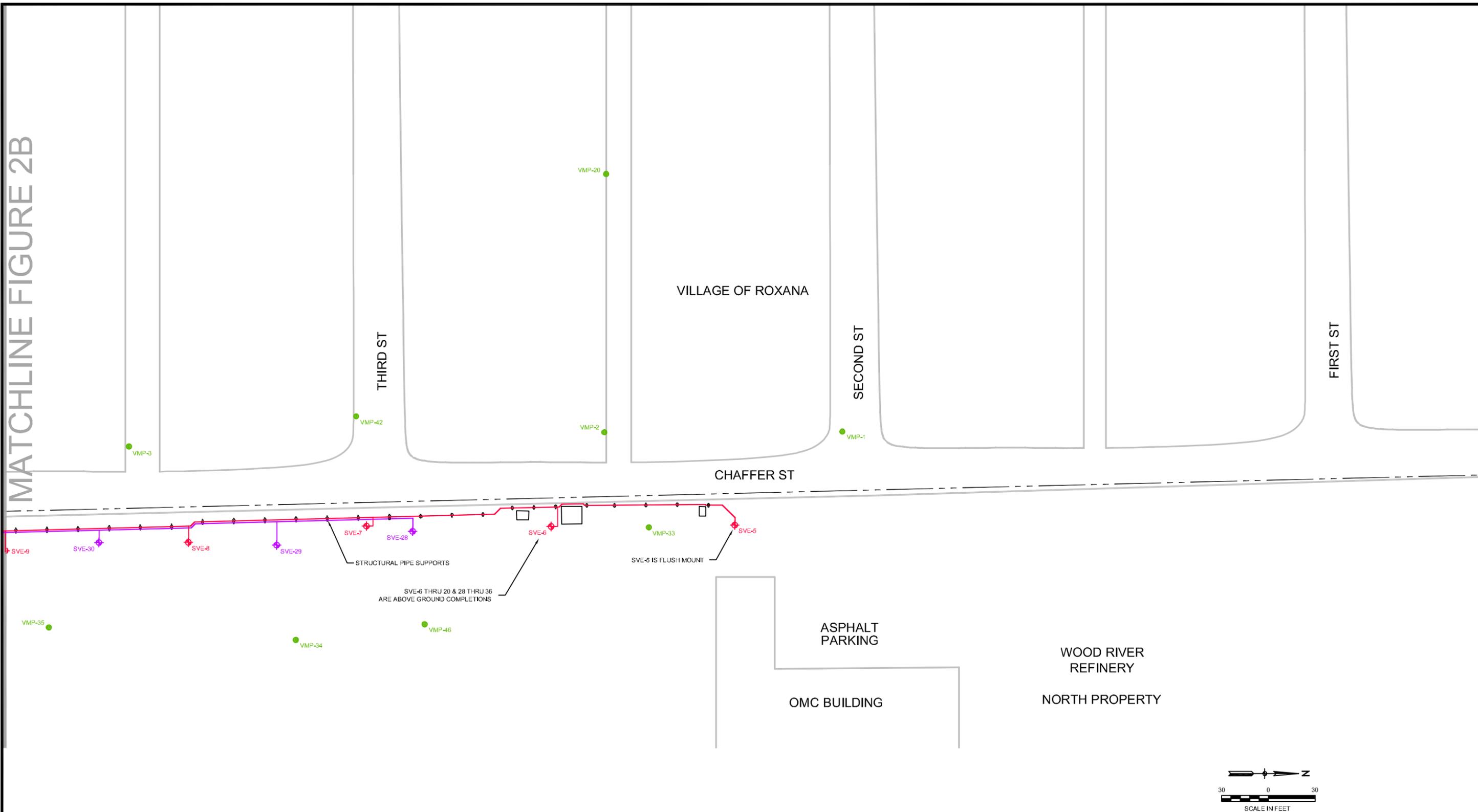
DRAFT



SHELL OIL PRODUCTS US ROXANA, ILLINOIS		PROJECT NO. 21562735
URS		
DRN. BY: djd May 2012 DSGN. BY: lv CHKD. BY: dp	Soil Vapor Extraction System	FIG. NO. 2B

May 11, 2012 10:08:01 am (dev)
 F:\Environmental\Shell Oil Product US-Roxana-Route 111\215600XX_Roxana I & A\Construction Completion Report\Figures\Figures\Figure 2, 2A, 2B, 2C, Soil Vapor Extraction System.dwg

MATCHLINE FIGURE 2B



LEG NO.	SVE WELLS	COLOR	WELL SYMBOL
1	SVE-5 THROUGH SVE-9	RED	
5	SVE-28 THROUGH SVE-33	PURPLE	

- LEGEND:**
- SVE EXTRACTION WELL (SEE TABLE FOR COLOR LEGEND)
 - VAPOR MONITORING POINT (VMP)
 - PROPERTY BOUNDARY

DRAFT

SHELL OIL PRODUCTS US ROXANA, ILLINOIS		PROJECT NO. 21562735
URS		
DRN. BY: djd May 2012 DSGN. BY: lv CHKD. BY: dp	Soil Vapor Extraction System	FIG. NO. 2C

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-1

Completion
Date: 3/4/11
Casing Elevation: 443.54
Ground Elevation: 443.29

Coordinates
Northing: 793210.40
Easting: 2322305.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
					■	[Diagonal Hatching]	FILL	Gravel and Asphalt (FILL)	Air knife completed to 10' bgs to clear utilities. Boring not logged during air knife.
5					●	[Dotted]	SM	Loose, moist, brown with gray, Silty SAND (SM)	
10					●	[Dotted]	SP	Loose, moist, grayish brown, fine grained, poorly graded SAND (SP), with silt	
15		120	120	103.1	●	[Diagonal Hatching]	SC	Medium dense, moist, dark gray, fine grained, Clayey SAND (SC)	
20				25.2	●	[Dotted]	SP	Medium dense, moist to dry, gray, fine grained, poorly graded SAND (SP)	
				28.8	●	[Dotted]	SP		
				11.5	●	[Dotted]	SP		
				49.2	●	[Dotted]	SP		
		120	120	289.9	●	[Dotted]	SP		
				368.7	●	[Dotted]	SP		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 55.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Boart Longyear
 Drilling method: Roto Sonic Rig Type: Roto Sonic
 Drilled by: K. Smith
 Logged by: M. Miller

Water Depth: 41 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-1

Completion
Date: 3/4/11
Casing Elevation: 443.54
Ground Elevation: 443.29

Coordinates
Northing: 793210.40
Easting: 2322305.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				622.5				Same: Medium dense, wet to dry, gray, fine grained, poorly graded SAND (SP) Becomes brown Becomes moist, medium grained Becomes moist to wet Becomes wet	
				865.2					
				681.1					
30				450.3					
		60	60	508.0					
				370.2					
35				496.6			SP		
				737.9					
40		120	120	767.4					
				785.3					
			789.9						
45			838.5						
	120	120	801.2						

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 55.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Boart Longyear
 Drilling method: Roto Sonic Rig Type: Roto Sonic
 Drilled by: K. Smith
 Logged by: M. Miller

Water Depth: 41 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-1

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	Description	Notes
								Completion Date: 3/4/11 Casing Elevation: 443.54 Ground Elevation: 443.29	Coordinates Northing: 793210.40 Easting: 2322305.00
55	Well Construction			856.4			SP	SAME: Medium dense, wet, brown, medium grained, poorly graded SAND (SP)	
				820.0					
				775.3					
60									
65									
70									
								Bottom of boring at 55' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 55.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Boart Longyear
 Drilling method: Roto Sonic Rig Type: Roto Sonic
 Drilled by: K. Smith
 Logged by: M. Miller

Water Depth: 41 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-2

Completion Date: 3/2/11
Casing Elevation: 436.38
Ground Elevation: 436.21

Coordinates
Northing: 791987.40
Easting: 2322012.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						TOPSOIL		Topsoil	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA
						FILL		Silty clay (FILL), trace roots	
						SM		Loose, moist, brown, Silty SAND (SM)	
5								Loose, moist, brown, fine grained, poorly graded SAND (SP), with silt	
10				0.8	■			Becomes dense, moist to dry, light brown, fine to medium grained, silt grades out	
15		120	120	2.4	■		SP		
20				2.5	■				
				2.8	■				
		120	120	3.8	■				
				3.6	■				

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 45.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Boart Longyear
 Drilling method: Roto Sonic Rig Type: Roto Sonic
 Drilled by: K. Smith
 Logged by: M. Miller

Water Depth: 30.5 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-2

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	Completion		Coordinates	
								Date: 3/2/11	Casing Elevation: 436.38	Ground Elevation: 436.21	Northing: 791987.40
								DESCRIPTION		NOTES	
30				2.8				SAME: Dense, moist to dry, light brown, fine to medium grained, poorly graded SAND (SP)			
				3.2							
35		60	60	4.1			SP	Becomes wet		▽	
				536.9				Becomes gray brown, trace silt			
				528.4				Becomes brown, silt grades out			
				147.01				Becomes wet, medium grained			
40		120	60	1500+							
				1500+							
				1500+							
45				1500+				Bottom of boring at 45' bgs			

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 45.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Boart Longyear
 Drilling method: Roto Sonic Rig Type: Roto Sonic
 Drilled by: K. Smith
 Logged by: M. Miller

Water Depth: 30.5 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Sonic
- Hollow Stem Auger- Soil samples not collected



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-4

Completion Date: 5/12/11
Casing Elevation: Not Surveyed
Ground Elevation: 442.04

Coordinates
Northing: 793309.47
Easting: 2322158.43

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				1.5			ASPHALT	ASPHALT	Boring advance to a depth of 5' via air knife to clear utilities, then continued with Geoprobe.
							GRAVEL	Gravel	
5				0.3			FILL	Moist, brown, fine to medium grained, Silty Sand (FILL)	
							CL	Soft, moist, brown, medium plastic, Silty CLAY (CL) Iron staining present 4' to 5'	
10				1.7			SM	Medium dense, moist, fine to medium grained, Silty SAND (SM)	
							SM	Becomes gray	
10				13.2			SM	Becomes dark olive, very fine grained	
							SM	1" of black staining	
15				1.3			SM	Becomes dark olive, very fine grained	
							SM	1" of black staining	
15				0			SM	Becomes dark olive, very fine grained	
							SM	1" of black staining	
15				1.7			SM	Becomes dark olive, very fine grained	
							SM	1" of black staining	
15				24.3			SM	Becomes dark olive, very fine grained	
							SM	1" of black staining	
20								Bottom of boring at 15' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 15.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Direct Push Rig Type: VTR
 Drilled by: B. Schilling
 Logged by: R. Hart

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger Sampler
 ATD - At time of drilling Air Rotary
 Splitspoon Sampler
 Hollow Stem Auger-
 Soil samples not collected Sonic
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-5

Completion Date: 9/30/11
Casing Elevation: Not Installed
Ground Elevation: 444.23

Coordinates
Northing: 793831.00
Easting: 2322280.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				26.7 83.1				ASPHALT	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				63.2				Dark brown to gray, organic SILT (ML)	
				48.6					
				34.5				Soft, dark brown to gray, organic SILT (ML), trace of sand	
				48.9					
				96.4				Soft, olive brown-dark, reddish gray SILT (ML), with fine grained sand	
				95.0					
				105.9					
				78.7				Soft, brown to reddish brown SILT (ML)	
10								Loose, dry, light brown SAND (SP)	
		60		8.0					
				10.7					
15							SP		
		60		18.3					
				10.3					
20								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger Sampler
 ATD - At time of drilling Air Rotary
 Splitspoon Sampler Sonic
 Hollow Stem Auger-Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-6

Completion Date: 10/13/11
Casing Elevation: Not Installed
Ground Elevation: 444.04

Coordinates
Northing: 793713.30
Easting: 2322280.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5								Loose gravel Gravelly clay Sandy clay	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
10		24	18	10.8			FILL	6" Backfill	
15		24	13	26.8			SP	Loose, dry, light gray, poorly graded, fine grained SAND (SP) Fine laminations	Slight hydrocarbon odor, slight staining
		26	16	39				Becomes light gray to dark brown, very fine to fine grained	
		24	16	31.7				3" Silt lens	Slight hydrocarbon odor, slight staining
		24	14	14.8				Becomes moist, light brown, fine grained	No staining, faint hydrocarbon odor
20								Bottom of boring at 20.5' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-55
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 Splitspoon Sampler
 Hollow Stem Auger-
 Soil samples not collected
 Geoprobe
 Air Knife/Hand Auger
 Sampler
 Air Rotary
 Sonic
 USC based on field
 visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-7

Completion Date: 9/29/11
Casing Elevation: Not Installed
Ground Elevation: 443.71

Coordinates
Northing: 793595.00
Easting: 2322280.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							GP	GRAVEL cover at surface	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				36.8			CL	Soft, moist, brown, low plastic, Silty CLAY (CL)	
				10.9					
				20.4			SM	Loose, dry, light brown, fine grained, Silty SAND (SM)	
5				15.3					
				14.9					
				18.5					
				57.5					
				72.8					
10									Hydrocarbon odor
		60		46.5			SP		
				120.2					
				80.1				Becomes light gray to gray	
15									
		60		15.2				Becomes fine to medium grained	
20								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-8

Completion Date: 9/30/11
Casing Elevation: Not Installed
Ground Elevation: 443.12

Coordinates
Northing: 793480.70
Easting: 2322291.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				115.9	●	●	GP	GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				96.6	●	●	FILL	Dry, dark brown, Sandy Silt (FILL)	
				132.0	●	●	FILL	Dry, dark brown, Sandy Clay (FILL)	
				150.3	●	●	FILL	Dry, dark brown, Sandy Silt (FILL), trace clay	
5				214.9	●	●	FILL	Dry, dark brown, Sandy Silt (FILL), trace clay	
				893.0	●	●	SP	Loose, dry, dark gray, fine grained, poorly graded SAND (SP)	
				1136	●	●	SP	Becomes gray	
				1068	●	●	SP		
				1597	●	●	SP		
10				873.3	●	●	SP	Becomes light brown	Hydrocarbon odor
		60		909.2	●	●	SP		
15				1011	●	●	SP	Becomes light brown to dark gray	Hydrocarbon staining
		60		582.3	●	●	CL	Medium stiff, light gray, low plastic CLAY (CL)	
					●	●	SP	Loose, dry, light brown, poorly graded SAND (SP)	
20					●	●	SP	Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger Sampler
 ATD - At time of drilling Air Rotary
 Splitspoon Sampler Sonic
 Hollow Stem Auger-Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-9

Completion Date: 10/4/11
Casing Elevation: Not Installed
Ground Elevation: 442.41

Coordinates
Northing: 793363.20
Easting: 2322296.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							GP	Crushed GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				5.9			FILL	Stiff, moist, brown, Silty Clay (FILL)	
				2.0					
				14.6				With gray and brownish red mottles	
				8.3					
5				121.5			SM	Soft, moist, dark gray, silty SAND (SM)	
				40.0					
				15.5					
				8.6					
				11.4					
10									Hydrocarbon odor
		60		71.9			SP	Loose, wet, dark brown, fine to medium grained, poorly graded SAND (SP)	
				379.3					
15		60		99.6				Becomes dark brown to light brown, fine grained	
				122.7					
20								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 10 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-10

Completion
Date: 10/5/12
Casing Elevation: Not Installed
Ground Elevation: 442.74

Coordinates
Northing: 793245.90
Easting: 2322301.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				17.8			GP	Loose gravel	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				975.8			GC	Loose, black, moist to dry gravelly CLAY (GC)	
				967.2			CL	Loose, black, dry to moist, CLAY (CL)	
				1177				Becomes wet and silty	
				945.8				Becomes dry to moist, gravelly	
				1648			SC	Loose, black, moist, sandy CLAY (SC)	
				1329					
				1872					
				1954					
5				366.4			SP	Loose, dry, light brown to gray, fine grained, poorly graded SAND (SP)	
		60		962.1				Becomes light brown to light gray	
				747.2				1" clay lens	
10				1007					
15									
20								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

-  Water level at time of drilling
-  Water level after drilling
-  ATD - At time of drilling
-  Spoon Sampler
-  Hollow Stem Auger-
Soil samples not collected
-  Geoprobe
-  Air Knife/Hand Auger
Sampler
-  Air Rotary
-  Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-11

Completion
Date: 10/7/11
Casing Elevation: Not Installed
Ground Elevation: 443.56

Coordinates
Northing: 793132.10
Easting: 2322307.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				17.8	●	●	GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
			975.8		●	●	CL	Loose, dry to moist, black, Gravelly CLAY (CL)	
			967.2		●	●		Gravel grades out	
			1177		●	●		Becomes wet, Silty CLAY	
5			945.8		●	●		Becomes dry to moist, gravelly Silty CLAY	
			1648		●	●		Becomes Sandy CLAY	
			1329		●	●			
			1872		●	●			
			1954		●	●			
10				363.2	●	●	SP	Loose, dry, light brown, fine grained, poorly graded SAND (SP)	Hydrocarbon odor
		60	34	1042	●	●		Becomes light brown to gray	
15				1021	●	●			
				271.0	●	●	ML	Soft, gray, Sandy SILT (ML)	Hydrocarbon odor
20					●	●		Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 Splitspoon Sampler
 Hollow Stem Auger-
 Soil samples not collected

Geoprobe
 Air Knife/Hand Auger
 Sampler
 Air Rotary
 Sonic

USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-12

Completion Date: 10/5/11
Casing Elevation: Not Installed
Ground Elevation: 443.78

Coordinates
Northing: 793005.70
Easting: 2322299.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES	
				3.1	●	●	GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.	
			1.2		●	●	CL	Loose, dry, black, gravelly CLAY (CL) Becomes dry to moist, brown Becomes wet, black		
			23.4		●	●				
5			938.7		●	●	CL	Becomes medium stiff		
			816.4		●	●				
			867.4		●	●				
			802.6		●	●				
			857.1		●	●		Soft, dry to moist, gray, Silty CLAY (CL)		
10			522.3		●	●	ML	Medium stiff, dry, gray to olive gray, Sandy SILT (ML)		Hydrocarbon odor
		60	51	352.5	●	●				
				1449	●	●				
15				1404	●	●	SP	Loose, dry, light gray to light brown, fine grained, poorly graded SAND (SP)		
		60	50	1409	●	●				
20					●	●		Bottom of boring at 20' bgs		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-13

Completion
Date: 10/7/11
Casing Elevation: Not Installed
Ground Elevation: 443.77

Coordinates
Northing: 792893.30
Easting: 23222303.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				0.0	●	●	GP	Loose gravel	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
			8.5		●	●	CL	Loose, dry, black, medium gravelly CLAY (CL) Becomes dry to moist	
			31.7		●	●	CL	Loose, dry to moist, black CLAY (CL)	
5			250.2		●	●	CL	Becomes medium stiff	
			28.1		●	●	CL	Loose, dry to moist, blackish gray, fine grained, Sandy CLAY (CL)	
			90.9		●	●	CL		
			51.8		●	●	CL		
			19.6		●	●	CL		
10			71.8		●	●	CL		
		60	43	137.5	●	●	SP	Loose, dry, brown to light gray, fine grained, poorly graded SAND (SP)	Hydrocarbon odor
				809.2	●	●	SM	Loose to medium dense, moist, light gray, very fine grained, Silty SAND (SM)	
15				706.2	●	●	SP	Loose, moist, light brown to brown, fine to medium grained SAND (SP)	
		60	42	1647	●	●	SP		
20					●	●		Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-14

Completion Date: 9/27/11
Casing Elevation: .
Ground Elevation: 443.87

Coordinates
Northing: 792770.80
Easting: 2322308.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
							GP	Loose gravel	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				5.1			CL	Loose, dry, black, gravelly CLAY (CL)	
				261.5				Becomes dry to moist, no gravel	
				383.4					
				17.6					
5				53.0				Loose, dry to moist, gray CLAY (CL)	
				10.6			SP	Becomes Sandy	
				16.0					
				21.3					
10				6.5				Becomes moist, Silty	
		60		471.6				Loose, moist, brown, fine grained, poorly graded SAND (SP), with soft silty clay lenses	
				913.3					
15				293.7					
		60		38.2					
20								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-15

Completion
Date: 9/27/11
Casing Elevation: Not Installed
Ground Elevation: 444.15

Coordinates
Northing: 792651.20
Easting: 2322310.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				185.6	●	●	GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
			76.4		●	●	CL	Loose, dry, black, Gravelly CLAY (CL)	
			124.1		●	●	CL	Medium stiff, dry to moist, black CLAY (CL)	
			154.4		●	●	CL	Loose, moist, gray, fine grained, Sandy CLAY (CL)	
5			16.0		●	●	SP	Loose, moist, gray, fine grained, poorly graded SAND (SP)	
			12.9		●	●	SP	Becomes brown	
			128.0		●	●	SP	Becomes light gray to gray	
10			88.0		●	●	SP		
		60	87.1		●	●	SP		
			634.1		●	●	SP		
15			1138		●	●	SP		
		60	850.1		●	●	SP		
			1207		●	●	SP		
20					●	●	SP	Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-16

Completion Date: 10/4/11
Casing Elevation: Not Installed
Ground Elevation: 443.97

Coordinates
Northing: 792525.80
Easting: 2322308.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				237.8			GP	GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				145.0			CL	Soft, dry to moist, black, Gravelly CLAY (CL)	
250.0	Gravel grades out								
140.1									
150.2									
233.6									
530.6									
10				400.1			SP	Loose, moist, black, fine grained SAND (SP)	
				615.3			CL	Loose, moist, black, fine grained, Sandy CLAY (CL)	
				1086			SM	Loose, moist, brown to gray, fine grained poorly graded, Silty SAND (SM)	
1088									
1107									
15		60		1128					
20		60							
								Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger Sampler
 ATD - At time of drilling Air Rotary
 Splitspoon Sampler Sonic
 Hollow Stem Auger-Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-17

Completion
Date: 10/5/11
Casing Elevation: Not Installed
Ground Elevation: 444.42

Coordinates
Northing: 792410.10
Easting: 2322314.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES						
5	[Well Construction Diagram]			901.7	[Sampler Graphic]	[Symbol]	GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.						
				922.8		[Symbol]	CL	Soft, dry to moist, black, Gravelly CLAY (CL) Gravel grades out							
10	[Well Construction Diagram]			998.1	[Sampler Graphic]	[Symbol]	SP	Loose, dry to moist, brown, fine grained SAND (SP)	Hydrocarbon odor						
				876.8				[Sampler Graphic]		[Symbol]	ML	Soft, wet, gray, Clayey SILT (ML)			
				405.0								[Sampler Graphic]	[Symbol]	SP	Loose, moist, light gray to brown, fine to medium grained SAND (SP)
				304.8											60
354.2	[Sampler Graphic]	[Symbol]	SP	Loose, moist, light gray to brown, fine to medium grained SAND (SP)											
311.1				60	1134	[Sampler Graphic]	[Symbol]	SP	Loose, moist, light gray to brown, fine to medium grained SAND (SP)						
15	[Well Construction Diagram]			448	[Sampler Graphic]				[Symbol]	SP	Loose, moist, light gray to brown, fine to medium grained SAND (SP)	Hydrocarbon odor			
				291		60	448	[Sampler Graphic]			[Symbol]		SP	Loose, moist, light gray to brown, fine to medium grained SAND (SP)	
20	60	448	[Sampler Graphic]	[Symbol]	SP	Bottom of boring at 20' bgs									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-18

Completion
Date: 10/4/11
Casing Elevation: Not Installed
Ground Elevation: 444.93

Coordinates
Northing: 792285.20
Easting: 2322321.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				7.6	●	●	GP	Loose Gravel	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				22.5	●	●	CL	Soft, dry, black, Gravelly CLAY (CL)	
				16.5	●	●		Medium stiff, dry to moist, black CLAY (CL)	
				251.6	●	●		Becomes soft	
5				274.1	●	●	CL	Loose, moist to dry, black, fine grained, Sandy CLAY (CL)	
				362.3	●	●			
				350.2	●	●			
				370.6	●	●	SP	Loose, brown, moist to dry, fine grained, poorly graded SAND (SP)	Hydrocarbon odor
10				97.5	●	●		Becomes moist, light brown, fine to medium grained	
		60		506.5	●	●			
				768.4	●	●	SP		Hydrocarbon odor
15				607.2	●	●			
		60		876.6	●	●	CL	Soft, moist, dark gray, Silty CLAY (CL)	Hydrocarbon odor
20					●	●	SP	Loose, moist, light brown, fine to medium grained, poorly graded SAND (SP) Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger-
Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger
Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-19

Completion Date: 9/26/11
Casing Elevation: Not Installed
Ground Elevation: 444.44

Coordinates
Northing: 792168.00
Easting: 2322333.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
				15.4	●	●	GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
			11.4		●	/ / / / /	CL	Soft, dry, black CLAY (CL)	
			5.1		●	/ / / / /	CL	Becomes dry to moist, Sandy	
5			0.5		●	SP	Loose, dry to moist, brown, fine grained SAND (SP)	
			2.3		●	/ / / / /	CL	Medium stiff, dry to moist, brownish gray, fine grained, Sandy CLAY (CL)	
			1.5		●	/ / / / /	CL		
			0.9		●	/ / / / /	CL		
			1.4		●	/ / / / /	CL		
10			0.3		●	/ / / / /	CL		
		60		1.7	●	SP	Loose, moist, light brown to gray, fine to medium grained, poorly graded SAND(SP)	
				10.6	●	SP		
15				21.7	●	SM	Loose to medium dense, wet, dark gray to black, fine to medium grained, Silty SAND (SM)	▽
		60		24.3	●	SM		▽
20					●	SM	Bottom of boring at 20' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 15 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-20

Completion Date: 9/29/11
Casing Elevation: Not Installed
Ground Elevation: 444.67

Coordinates
Northing: 492047.60
Easting: 2322341.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
								Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				4.0			GP	Loose, dry, black, CLAY (CL)	
				35.7			CL	Becomes loose to stiff, moist to wet	
				16.6				Becomes loose, blackish gray, Sandy	
5				33.4			SP		Hydrocarbon odor and staining
				13.8					
				9.3					
				9.8					
10				2.0				Loose to medium dense, moist, black to grayish brown, fine to medium grained, poorly graded SAND (SP)	
		60	41	29.2					Hydrocarbon odor
				253.6				Becomes loose, light brown to grayish brown, fine grained	
15		60	46	351.3					
				57.3					Becomes light brown 3" stiff silt lens
20		60	48	921.7					
				1348					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 3 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling
 Water level after drilling
 ATD - At time of drilling
 Splitspoon Sampler
 Hollow Stem Auger-
 Soil samples not collected
 Geoprobe
 Air Knife/Hand Auger
 Sampler
 Air Rotary
 Sonic
 USC based on field
 visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-20

Completion Date: 9/29/11
Casing Elevation: Not Installed
Ground Elevation: 444.67

Coordinates
Northing: 492047.60
Easting: 2322341.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	60	60		634.7	▲	●	SP	Loose, moist, light brown, fine grained, poorly graded SAND (SP) Coarsening with depth	Hydrocarbon odor and staining
				196.4	▲	●		Becomes medium grained	
35	60	60		113.7	▲	●		With thin clay lamillae	
40				140.7	▲	●		Bottom of boring at 35' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 3 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-21

Completion
Date: 10/10/11
Casing Elevation: Not Installed
Ground Elevation: 443.29

Coordinates
Northing: 792024.80
Easting: 2322190.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						TOPSOIL	TOPSOIL	TOPSOIL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				0.5	●	TOPSOIL	ML	Dense, dry, brown SILT (ML)	
				1.3	●	TOPSOIL	ML	Becomes Sandy	
				2.5	●	TOPSOIL	ML		
				1.1	●	TOPSOIL	ML		
5				0.9	●	TOPSOIL	ML		
				0.5	●	TOPSOIL	ML	Dense, dry, brown, fine grained, poorly graded SAND (SP)	
				0.7	●	TOPSOIL	ML		
				1.5	●	TOPSOIL	ML		
				0.7	●	TOPSOIL	ML		
10		24		0.2	◆	TOPSOIL	ML	Becomes moist, light brown to brown	
				0.4	◆	TOPSOIL	ML		
15		48		0.3	◆	TOPSOIL	SP	Becomes loose, red to black	
				0.3	◆	TOPSOIL	SP		
				0.5	◆	TOPSOIL	SP		
20		48		0.1	◆	TOPSOIL	SP	Becomes light brown to brown	
				0.2	◆	TOPSOIL	SP	3" Silty lens	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-21

Completion
Date: 10/10/11
Casing Elevation: Not Installed
Ground Elevation: 443.29

Coordinates
Northing: 792024.80
Easting: 2322190.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30		48		0.6	▲	●	SP	SAME: Loose, moist, light brown to brown, fine grained, poorly graded SAND (SP)	
				1.3	◆	●			
		48		0.7	◆	●			
				0.8	◆	●			
35		48		0.5	▲	●			
				0.4	▲	●			
40								Bottom of boring at 36' bgs	
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Sonic
- Hollow Stem Auger- Soil samples not collected



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-22

Completion
Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 439.37

Coordinates
Northing: 792020.50
Easting: 2322014.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES		
5						TOPSOIL	TOPSOIL	TOPSOIL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.		
						ML	Stiff, dry, light brown, Sandy SILT (ML)				
						ML	Becomes brown				
						SP	Dense, dry, light brown SAND (SP)				
						SM	Dense, dry, light brown, Silty SAND (SM)				
						SP	Dense, dry, light brown, medium grained, poorly graded SAND (SP)				
						SP	Becomes loose, moist, brown				
						SP	Becomes fine to medium grained				
						SP	Becomes fine to medium grained				
						SP	Becomes fine to medium grained				
10						SP	SP	Dense, dry, light brown, medium grained, poorly graded SAND (SP)			
										24	0.0
										48	0.1
										48	0.2
15						SP	SP	Dense, dry, light brown, medium grained, poorly graded SAND (SP)			
										48	0.6
										48	0.9
										48	0.9
20						SP	SP	Dense, dry, light brown, medium grained, poorly graded SAND (SP)			
										48	0.5

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT_4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 34 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-22

Completion Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 439.37

Coordinates
Northing: 792020.50
Easting: 2322014.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30		48		0.3	▲	●	SP	SAME: Loose, moist, brown, fine grained, poorly graded SAND (SP) 3" laminated organic material	
				0.8	◆	●			
		48		1.0	◆	●			
				15.4	◆	●			
35		48		9853 15000	▲	●		Becomes fine to medium grained Becomes wet, light brown to gray	▽
40								Bottom of boring at 36' bgs	
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 34 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-23

Completion
Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 430.75

Coordinates
Northing: 792019.70
Easting: 2321846.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				0.4			GP	Loose GRAVEL	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				0.5			CL	Soft, dry, brown, Gravelly CLAY (CL)	
				0.8				Becomes dry to moist, dark brown, gravel grades out	
				0.3				Becomes medium stiff, brown	
				0.2				Becomes Gravelly	
				0.3				Gravel grades out	
				0.6				Becomes Sandy	
				0.3					
				0.4					
				10					
0.0			Loose, moist, light brown, fine to medium grained, poorly graded SAND (SP)						
0.0									
0.1									
0.0									
0.0									
0.0									
0.0									
0.0									
0.0							Thin laminations black organic material		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 26 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-23

Completion Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 430.75

Coordinates
Northing: 792019.70
Easting: 2321846.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30				0.0			SP	Loose, moist, light brown, medium grained, poorly graded, SAND (SP) Becomes wet	▽
35				0.0					
40				0.2					
45				0.7					
Bottom of boring at 36' bgs									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 26 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-24

Completion
Date: 10/12/11
Casing Elevation: Not Installed
Ground Elevation: 434.22

Coordinates
Northing: 791880.60
Easting: 2321944.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5	Well Construction	Inches Driven	Inches Recovered	0.2	Sampler Graphic	Symbol	USCS	Dry dense gray, Sandy Gravel (FILL)	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				0.2				Loose, dry to moist, brown, medium grained Sand (FILL)	
				0.2				Loose, dry, dark brown, Clayey SAND (SC)	
				0.1					
				0.2					
				0.5					
				0.4					
				2.6					
				12.3					
				10				Well Construction	
48	12.3								
48	35.7								
48	0.0								
15	Well Construction	Inches Driven	Inches Recovered	48	Sampler Graphic	Symbol	USCS	Becomes gray to dark gray, thinly laminated	Water level at time of drilling
				48					
				48					
				48					
20	Well Construction	Inches Driven	Inches Recovered	48	Sampler Graphic	Symbol	USCS	Becomes wet, brown to gray	Water level after drilling
				48					
				48					
				48					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 20 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
 - Geoprobe
 - Water level after drilling
 - Air Knife/Hand Auger Sampler
 - ATD - At time of drilling
 - Air Rotary
 - Splitspoon Sampler
 - Hollow Stem Auger-Soil samples not collected
 - Sonic
- USC based on field visual observations



**LOG OF BORING AND
WELL CONSTRUCTION DETAIL
SVE-24**

Completion Date: 10/12/11
Casing Elevation: Not Installed
Ground Elevation: 434.22

Coordinates
Northing: 791880.60
Easting: 2321944.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30		48		296					
		48		2500					
35		48		2027					
								Bottom of boring at 36' bgs	
40									
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 20 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Sonic
- Hollow Stem Auger-Soil samples not collected



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-25

Completion
Date: 5/3/11
Casing Elevation: Not Surveyed
Ground Elevation: 442.00

Coordinates
Northing: 793307.69
Easting: 2322206.71

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
						○	ASPHALT	ASPHALT	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA
						○	GRAVEL	Gravel	
				3.2		/ / / / /	FILL	Medium stiff, moist, brown, low plastic, Silty CLAY (FILL), with fine sand	
				1.7					
				1.4					
				2.2				Silt grades out, becomes sandy	
5				8.2		●	SP	Medium dense, moist, brown, fine grained SAND (SP), trace clay	
				76.5				Clay grades out	
				45.2					
				10.7					
10								Becomes loose	
		24	16	20.7					
		24	16	158.8				1" soft, moist to wet, gray, low plastic CLAY (CL)	
		12	0				SP	Becomes clayey	SVE-3 installed in adjacent boring to SVE-25.
15		24	20	20.8				Becomes medium dense, dry, light brown, clay grades out	
		24	20	104.2					
		24	20	305.9					
		24	20	206.3				Becomes light brown and gray	
20		24	18	91.3					
		24	16	197.0					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 27.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Enviromental Drilling Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-55
 Drilled by: B. Schilling
 Logged by: M. Miller

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger Sampler
 ATD - At time of drilling Air Rotary
 Splitspoon Sampler Sonic
 Hollow Stem Auger-Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-25

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	Completion	
								Coordinates	
								Date: 5/3/11	Northing: 793307.69
								Casing Elevation: Not Surveyed	Easting: 2322206.71
								Ground Elevation: 442.00	
								DESCRIPTION	NOTES
30		24	16	54.0			SP	SAME: Medium dense, dry, light brown and gray, fine grained SAND (SP)	
35								Bottom of Boring at 27' bgs (Auger) and 25' bgs (Split-spoon)	
40									
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ URSSTLEV.GDT 4/27/12

Completion Depth: 27.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Enviromental Drilling Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-55
 Drilled by: B. Schilling
 Logged by: M. Miller

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-26

Completion Date: 10/12/11
Casing Elevation: Not Installed
Ground Elevation: 435.60

Coordinates
Northing: 791889.40
Easting: 2322084.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				0.7					Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				0.6					
				0.2					
				0.4					
				0.5					
				0.5					
				0.5					
				0.5					
				0.2					
10				0.7				Loose, light gray, medium grained, poorly graded SAND (SP)	
		60		0.9					
15				44.6				Loose, light gray, thinly laminated, medium grained SAND (SP), no odor, no staining	
		60		8.6			SP		
				12.2					
20				2.3					
		60		9.3					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 25 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-26

Completion Date: 10/12/11
Casing Elevation: Not Installed
Ground Elevation: 435.60

Coordinates
Northing: 791889.40
Easting: 2322084.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	60			28.6	32.4	239	SP	Loose, dry, light gray to black laminated, fine grained poorly graded SAND (SP), no odor, no staining	Hydrocarbon odor
35	60			942	2614	55.2	SP	Loose, saturated, gray to black, thinly laminated, fine grained poorly graded SAND (SP), hydrocarbon odor; grain size coarsening with depth	
	12							Bottom of boring at 36' bgs	
40									
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 25 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-27

Completion Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 435.93

Coordinates
Northing: 791860.10
Easting: 2322231.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				0.7					Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				0.9					
				1.0					
				0.8					
				0.7					
				0.5					
				0.3					
				0.4					
				0.4					
10		24		1.8				Loose, light brown, to gray, fine to medium grained, poorly graded SAND (SP)	
				113				Loose, moist, dark gray, fine grained, poorly graded SAND (SP), hydrocarbon odor, staining	
15				5.3				Loose, dark gray, poorly graded SAND (SP) (SP), hydrocarbon odor	
				7.6					
		48		22.4				Loose, dry, dark gray, poorly graded SAND (SP), hydrocarbon odor	
20				21.2					
				55.3					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 29 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
 - Water level after drilling
 - ATD - At time of drilling
 - Splitspoon Sampler
 - Hollow Stem Auger- Soil samples not collected
 - Geoprobe
 - Air Knife/Hand Auger Sampler
 - Air Rotary
 - Sonic
- USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-27

Completion
Date: 10/11/11
Casing Elevation: Not Installed
Ground Elevation: 435.93

Coordinates
Northing: 791860.10
Easting: 2322231.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	48	48		72.2	25.7	SP		Loose, dry, dark gray, fine grained to medium grained, poorly graded SAND (SP), hydrocarbon odor	▽
35	48	48		320.7	6000	SP		Loose, wet, dark gray, fine grained, poorly graded SAND, hydrocarbon odor	
40				1196				Bottom of boring at 36' bgs	
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 36.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 29 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 ▽ Water level at time of drilling ☒ Geoprobe
 ▼ Water level after drilling ☒ Air Knife/Hand Auger
 ATD - At time of drilling ☒ Sampler
 ☒ Splitspoon Sampler ☒ Air Rotary
 ☒ Hollow Stem Auger- ☒ Sonic
 Soil samples not collected USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-28

Completion Date: 10/3/11
Casing Elevation: Not Installed
Ground Elevation: 443.94

Coordinates
Northing: 793624.50
Easting: 2322284.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				5.6			SP	Loose, moist, light brown, (SP), no odor, no staining	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				23.6					
				19.2					
				24.4					
				10.2					
				23.5					
				39.2					
				54.7					
				26.9					
		10		24		16.1			
48				30.8					
48				19.3					
48				7.2					
48				11.8					
15				13.5			SP	Loose, dry, light brown, poorly graded, fine grained, poorly graded, SAND (SP), no odor, no staining; ~ 3 inches CLAY at 20 ft	
20							SP	Loose, dry, light gray, poorly graded, fine grained, poorly graded, SAND (SP), no odor, no staining	

Completion Depth: 40.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 36 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-28

Completion
Date: 10/3/11
Casing Elevation: Not Installed
Ground Elevation: 443.94

Coordinates
Northing: 793624.50
Easting: 2322284.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES	
30	[Hatched Pattern]	48		1.5	▲			Loose, dry, light brown, poorly graded, fine grained, poorly graded, SAND (SP), no odor, no staining		
				3.7	◆			Loose, dry, light brown, poorly graded, fine grained, poorly graded, SAND (SP), no odor, no staining		
		48		8.9	▲			Loose, dry, light brown, poorly graded, fine to medium grained, poorly graded, SAND (SP), no odor, no staining		
				9.1	◆			ML	Soft, dry, SILT no odor, no staining	
		48		22.4	▲		[Dotted Pattern]		Loose, dry, brown to gray, fine to medium grained, poorly graded, SAND (SP), no odor, no staining	
				7.6	◆					
		48		74.0	▲			SP	Loose, wet, brown to gray, fine grained, poorly graded, SAND (SP), no odor, no staining	▽
				70.2	◆					
		40		24	16	26.0	▲		Loose, wet, brown to gray, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
				24	17	32.0	◆			
45	[Hatched Pattern]	24	23	97.0	▲	[Hatched Pattern]	CL	Medium stiff, wet, gray, low plasticity CLAY (CP)		
				24	24	421.5	▲		Loose, wet, gray to brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
				24	22	297.3	◆			
								SP		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 40.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 36 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

**LOG OF BORING AND
WELL CONSTRUCTION DETAIL
SVE-28**

Completion Date: 10/3/11
Casing Elevation: Not Installed
Ground Elevation: 443.94

Coordinates
Northing: 793624.50
Easting: 2322284.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-28	
								DESCRIPTION	NOTES
55		18	18	446.0			sw	Loose, wet, brown to gray, medium grained, well grained poorly graded, SAND (SW)	
60									
65									
70									
									Botto of boring at 51.5' bgs

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ URSSTLEV.GDT 4/27/12

Completion Depth: 40.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 36 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-29

Completion Date: 10/4/11
Casing Elevation: Not Installed
Ground Elevation: 443.93

Coordinates
Northing: 793537.30
Easting: 2322292.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				6.8				Loose, moist, light gray to light brown, fine grained to medium grained, poorly graded, SAND (SP), hydrocarbon odor	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				365					
				9.2					
				37.5					
				15.1					
				15.8					
				19.7					
				68.2					
				127					
		10		60		24.8			
				48.7					
	60				19.3				
				44.6					
15				455.0			SP	Loose, moist, light gray to dark gray, poorly graded, (SP), hydrocarbon odor, hydrocarbon staining; 1 inch interbedded thin clay silty	
				374.2					
			60						
20							SP	Loose, dry, light gray to dark gray, fine grained, poorly graded, SAND (SP), hydrocarbon odor; Light brown clean sand at 24 ft	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 31.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 30 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-29

Completion Date: 10/4/11
Casing Elevation: Not Installed
Ground Elevation: 443.93

Coordinates
Northing: 793537.30
Easting: 2322292.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	60	60		657.4	▼	●	SP	Loose, dry, light gray to gray, very fine grained, poorly graded, SAND (SP), hydrocarbon odor; homogenous .wet at 30 ft	▽
		12		74.9	▼	●			
				13.6	▼	●			
35									
40									
45									
								Bottom of boring at 31' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ URSSTLEV.GDT 4/27/12

Completion Depth: 31.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 30 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Sonic
- Hollow Stem Auger-Soil samples not collected



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-30

Completion Date: 10/5/12
Casing Elevation: Not Installed
Ground Elevation: 442.67

Coordinates
Northing: 793423.40
Easting: 2322291.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				608.3					Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				994.9					
				1554					
				368.5					
				126.9					
				162.9					
				456.2					
				1238					
				1044					
10				902.7				Loose, wet, dark brownish gray, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
		60		325.7					
15				537.0			SP		
		60		935.4					
20				370.2					
		60		263.7				Medium stiff, wet, olive gray, Clayey SILT hydrocarbon odor; 2 in. reddish brown fat clay at	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 10 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-30

Completion Date: 10/5/12
Casing Elevation: Not Installed
Ground Elevation: 442.67

Coordinates
Northing: 793423.40
Easting: 2322291.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
								bottom	
		60		300.8			SP	Loose, moist, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
30				260.8			CL	Medium stiff, wet, olive gray, Clayey SILT hydrocarbon odor	
		60		99.0			SP	Dense, moist, brownish gray, fine grained, poorly graded, SAND (SP)	
35				102.1			SP	Loose, moist, olive brown, poorly graded, (SP), hydrocarbon odor; Laminated Medium stiff, wet clayey SILT, with interbedded clay lenses	
								Bottom of boring at 35' bgs	
40									
45									

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ URSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 10 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-31

Completion Date: 10/6/11
Casing Elevation: Not Installed
Ground Elevation: 442.81

Coordinates
Northing: 793304.40
Easting: 2322301.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				38.4				Loose, dry, light brown, (SP), hydrocarbon odor, no staining	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				254.9					
				308.8					
				15000+					
				15000+					
				15000+					
10		60	42	1117				Loose, dry, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
				384.2					
		60	42	944.9			SP		
				656.4					
15		60	50	235.4				Loose, dry, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor, hydrocarbon staining at 17.5' -20'	
				222.4					
				222.4					
20				235.4				Loose, dry, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor, no staining	
				222.4					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-31

Completion Date: 10/6/11
Casing Elevation: Not Installed
Ground Elevation: 442.81

Coordinates
Northing: 793304.40
Easting: 2322301.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES	
30	60	50	60	179.8	249.6	933.5	944.6	SP	<p>Loose, dry, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor, no staining</p> <p>Loose, dry, light brown, fine to medium grained, poorly sorted SAND (SP), hydrocarbon odor</p> <p>~3" of clay at bottom of run</p>	
35									Bott0m of boring at 35' bgs	
40										
45										

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-32

Completion Date: 10/7/11
Casing Elevation: Not Installed
Ground Elevation: 443.63

Coordinates
Northing: 793184.60
Easting: 2322302.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES	
5				18.8				Loose, moist, brown, (SP), hydrocarbon odor; Homogenous	Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.	
				9.5						
				14.8						
				14.5						
				14.7						
				933.5						
10				956.7				Loose, moist, brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor		
				818.7						
				902.5						
				713.8						
15		60	33	684.9			SP			
				938.8			ML			Medium stiff, moist, gray to olive gray, Clayey SILT hydrocarbon odor
				889.7			SP			Loose, moist, brown, poorly graded, fine grained, poorly graded, SAND (SP), some silt, hydrocarbon odor
20				808.1			SP	Loose, moist, light brown, (SP), hydrocarbon odor, hydrocarbon staining		
		60	42	378.4			SP			

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-32

Completion Date: 10/7/11
Casing Elevation: Not Installed
Ground Elevation: 443.63

Coordinates
Northing: 793184.60
Easting: 2322302.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	[Well Construction Diagram]	60	42	831.2 356.1	[Sampler Graphic]	[Symbol]	SP	Loose, moist, light brown, fine grained, poorly graded, SAND (SP), hydrocarbon odor, hydrocarbon staining	
35	[Well Construction Diagram]	60	42	1006 932.6	[Sampler Graphic]	[Symbol]		Loose, moist, light brown, poorly graded, fine grained, poorly graded, SAND (SP), hydrocarbon odor	
40									
45									
									Bottom of boring at 35' bgs

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Sonic
- Hollow Stem Auger- Soil samples not collected



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-33

Completion Date: 10/10/11
Casing Elevation: Not Installed
Ground Elevation: 443.46

Coordinates
Northing: 793065.50
Easting: 2322299.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				1.0 502.5 593.2 803.6 924.0 755.5 953.2 955.1 1038	●				Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
10		60	42	1065	◆			Medium dense, moist, brown to olive gray, very fine grained, poorly graded, SAND (SP), hydrocarbon odor, staining	
15		60	42	1083	◆		SP		
20		60	50	981.4	◆				
				1046	◆				
				926.6	◆				
				753.5	◆		CL	Medium stiff to stiff, wet, Clayey SILT (CL), hydrocarbon odor	
					◆		SP		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.
 Water level at time of drilling Geoprobe
 Water level after drilling Air Knife/Hand Auger
 ATD - At time of drilling Sampler
 Splitspoon Sampler Air Rotary
 Hollow Stem Auger- Sonic
 Soil samples not collected
 USC based on field visual observations



LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-33

Completion Date: 10/10/11
Casing Elevation: Not Installed
Ground Elevation: 443.46

Coordinates
Northing: 793065.50
Easting: 2322299.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	[Well Construction Diagram]	60	50	693.4	[Sampler Graphic]	[Symbol]	SP	Dry, light reddish brown, fine to medium grained, poorly graded, SAND (SP),	
				743.4				Hydrocarbon odor	
35		60	36	59.3					
				324.8					
40									
45									
								Bottom of boring 35' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 35.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-34

Completion Date: 10/6/11
Casing Elevation: Not Installed
Ground Elevation: 443.76

Coordinates
Northing: 792945.20
Easting: 2322298.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				4.0					Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA. Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				166.8					
				72.4					
				54.5					
				589.6					
				885.1					
				358.8					
				852.4					
				846.4					
		10		24		730.1			
48				939.2			ML	Stiff, brown, Sandy SILT hydrocarbon odor, no staining	
48				760.7			ML	Stiff, brown, Sandy SILT hydrocarbon odor, no staining	
48				422.2			ML	Stiff, brown, Sandy SILT hydrocarbon odor, no staining	
15		48		649.5			SP	Loose, dry, gray, SAND (SP), hydrocarbon odor, no staining	
		48		844.1			SP	Loose, dry, gray, SAND (SP), hydrocarbon odor, no staining	
		48		627.9			SP	Loose, dry, gray, SAND (SP), hydrocarbon odor, no staining	
20		48		627.9			SP	Loose, dry, gray, SAND (SP), hydrocarbon odor, no staining	
		48		627.9			SP	Loose, dry, gray, SAND (SP), hydrocarbon odor, no staining	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSITLEV.GDT 4/27/12

Completion Depth: 45.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 39 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-34

Completion
Date: 10/6/11
Casing Elevation: Not Installed
Ground Elevation: 443.76

Coordinates
Northing: 792945.20
Easting: 2322298.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
30	[Well Construction Diagram]	48		446.4	[Sonic]	[Symbol]	SP	Loose, dry, brown, SAND (SP), hydrocarbon odor, no staining; Clay lenses at 26.5-26.7 ft. and, 27.7-27.9 ft.	
				941.8	[Sonic]	[Symbol]	SP	Loose, dry, brown, SAND (SP), hydrocarbon odor, no staining	
35	[Well Construction Diagram]	48		592.9	[Sonic]	[Symbol]	SP	Loose, dry, brown, SAND (SP)	
				538.1	[Sonic]	[Symbol]	SP	Loose, dry, brown, SAND (SP)	
40	[Well Construction Diagram]	48		926.0	[Sonic]	[Symbol]	SP	Loose, dry, brown, SAND (SP), hydrocarbon odor, no staining; Wet at 39 ft.	▽
				723.2	[Sonic]	[Symbol]	SP	Loose, wet, light brown to gray, SAND (SP), hydrocarbon odor, no staining	
45	[Well Construction Diagram]	48		759.1	[Sonic]	[Symbol]	SP	Loose, wet, light brown to gray, SAND (SP), hydrocarbon odor, no staining	
				466.3	[Sonic]	[Symbol]	SP	NO RECOVERY	
		12			[Sonic]	[Symbol]		Bottom of boring at 45' bgs	

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 45.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 39 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Water level after drilling
- ATD - At time of drilling
- Splitspoon Sampler
- Hollow Stem Auger- Soil samples not collected
- Geoprobe
- Air Knife/Hand Auger Sampler
- Air Rotary
- Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-35

Completion
Date: 9/28/11
Casing Elevation: Not Installed
Ground Elevation: 443.84

Coordinates
Northing: 792825.50
Easting: 2322304.00

DESCRIPTION

NOTES

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES	
30	[Wavy pattern]	48		35.1	[Black diamond]	[Dotted pattern]	SP	Loose, moist, light brown, poorly graded, SAND (SP), no odor		
				15.3	[Black diamond]	[Dotted pattern]				
	35	[Hatched pattern]	48		39.7	[Black diamond]	[Dotted pattern]	SP	Loose, moist, reddish brown, SAND (SP), no odor, no staining; Coarsening with depth	
					19.2	[Black diamond]	[Dotted pattern]			
	40	[Horizontal lines]	48		87.2	[Black diamond]	[Dotted pattern]	SP	Loose, moist, brown, SAND (SP), hydrocarbon odor, hydrocarbon staining	
					38.4	[Black diamond]	[Dotted pattern]			▽
45	[Vertical lines]	48		49.6	[Black diamond]	[Dotted pattern]	SP	Loose, wet, light brown to gray, SAND (SP), no odor; Scattered interbedded black, thin, carbonaceous stringers		
				106.3	[Black diamond]	[Dotted pattern]				
		48		99.8	[Black diamond]			Bottomo boring at 41' bgs		
		12			[Black diamond]					

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 41.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: CME-75
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: 36 ft., After ATD hrs.
 Water Depth: _____ ft., After _____ hrs.

- ▽ Water level at time of drilling
- ▼ Water level after drilling
- ATD - At time of drilling
- [] Splitspoon Sampler
- [] Hollow Stem Auger- Soil samples not collected
- [X] Geoprobe
- [] Air Knife/Hand Auger Sampler
- [] Air Rotary
- [] Sonic



USC based on field visual observations

LOG OF BORING AND WELL CONSTRUCTION DETAIL SVE-36

Completion Date: 9/26/11
Casing Elevation: Not Installed
Ground Elevation: 443.65

Coordinates
Northing: 792043.00
Easting: 2322307.00

Depth In feet	Well Construction	Inches Driven	Inches Recovered	PID (ppm)	Sampler Graphic	Symbol	USCS	DESCRIPTION	NOTES
5				2.6	●				Boring advance to a depth of 10' via air knife to clear utilities, then continued with 4.25" HSA Lithology logged by geoprobe boring. Well installed by overdrilling geoprobe boring.
				4.4	●				
				50.6	●				
				40.3	●				
				318.7	●				
				126.8	●				
10				638.5	●			Loose, moist, light brown to brown, fine grained, poorly graded, SAND (SP), hydro carbon odor	
		60		652.8	●				
				253.7	●				
15				212.2	●		SP	Loose, moist, light brown, (SP), hydrocarbon odor	
		60		10.8	●		SP		
20				13.2	●		SP	Bottom of boring at 20' bgs	
				39.5	●		SP		

URS (ENVIRON) LOG + 1 WELL 21562593 ROXANA SVE SYSTEM - FALL 2011.GPJ_URSSSTLEV.GDT 4/27/12

Completion Depth: 20.0 ft bgs
 Project No.: 21562593
 Project Name: Roxana SVE System
 Drilling Contractor: Roberts Environmental Drilling, Inc.
 Drilling method: Dual-tube Geoprobe/6 1/4" HSA Rig Type: AMS Power-probe
 Drilled by: P. Seymour/E. Wetzel
 Logged by: S. Wrightson

Water Depth: _____ ft., After _____ hrs.
 Water Depth: _____ ft., After _____ hrs.

- Water level at time of drilling
- Geoprobe
- Water level after drilling
- Air Knife/Hand Auger Sampler
- ATD - At time of drilling
- Air Rotary
- Splitspoon Sampler
- Hollow Stem Auger-Soil samples not collected
- Sonic

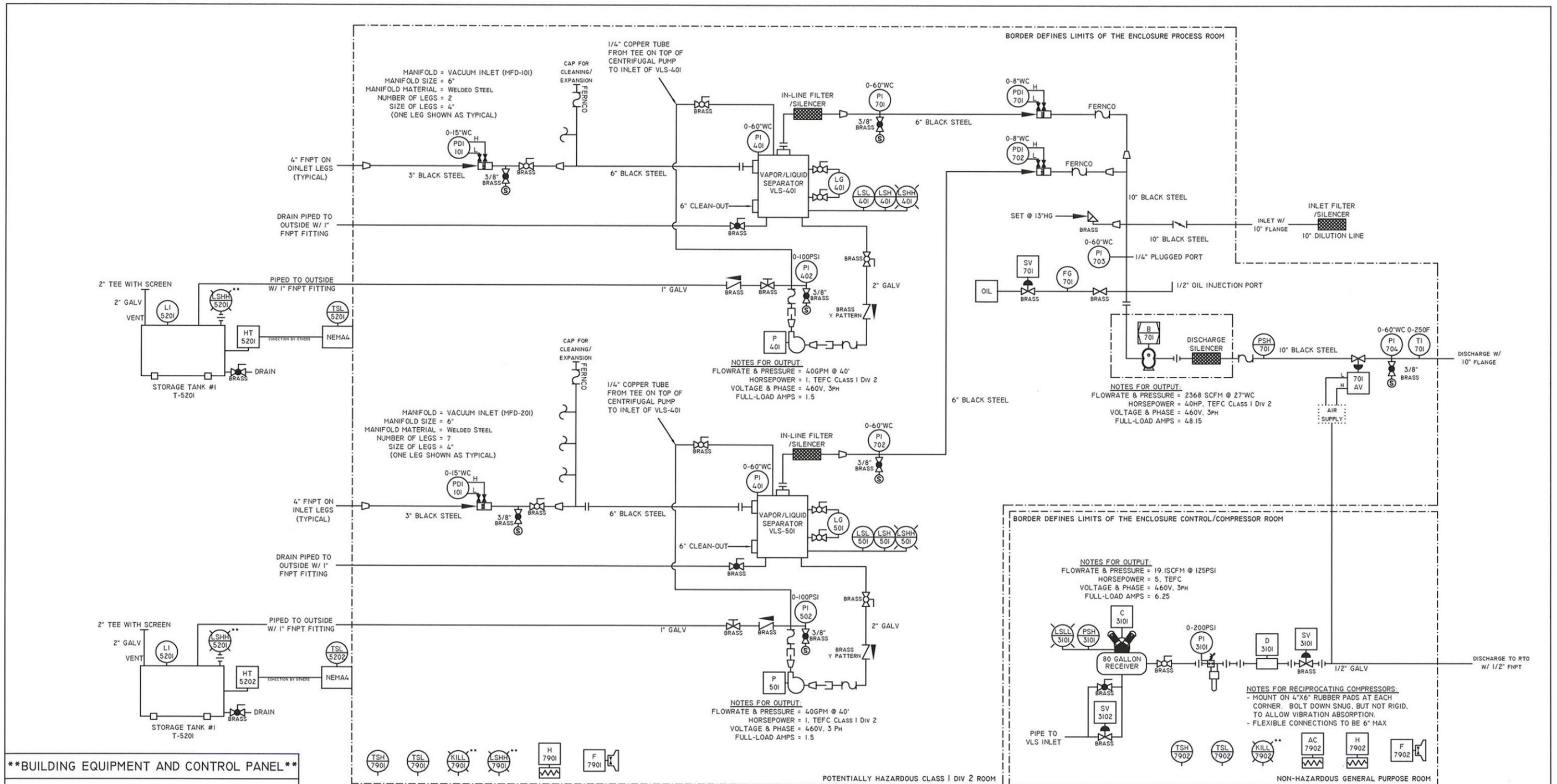


USC based on field visual observations

SVE System Construction Completion Report
WRR
Roxana, Illinois

APPENDIX B

Maple Leaf As-Built Drawings



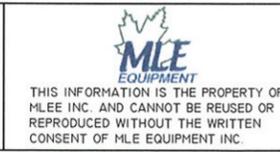
****BUILDING EQUIPMENT AND CONTROL PANEL****

CONTROL PANEL
 TO BE LOCATED IN BUILDING INSIDE INTERIOR WALL OF NON HAZARDOUS ROOM

****WIRING AND SPECIAL PROJECT NOTES****
 IS INPUT WIRING TO BE WIRED FOR INDOORS, ACCORDING NEC FOR HAZARDOUS LOCATIONS.
 WIRING TO BE CLASS I DIVISION 2, AS PER THE NEC.

DESIGN NOTE:
 NEVER USE BRAIDED BLACK HOSE WITH ZIP TIE FOR PRESSURE CONNECTION IN LIQUID SERVICE. USE COMPRESSION FITTINGS AND COPPER TUBE.

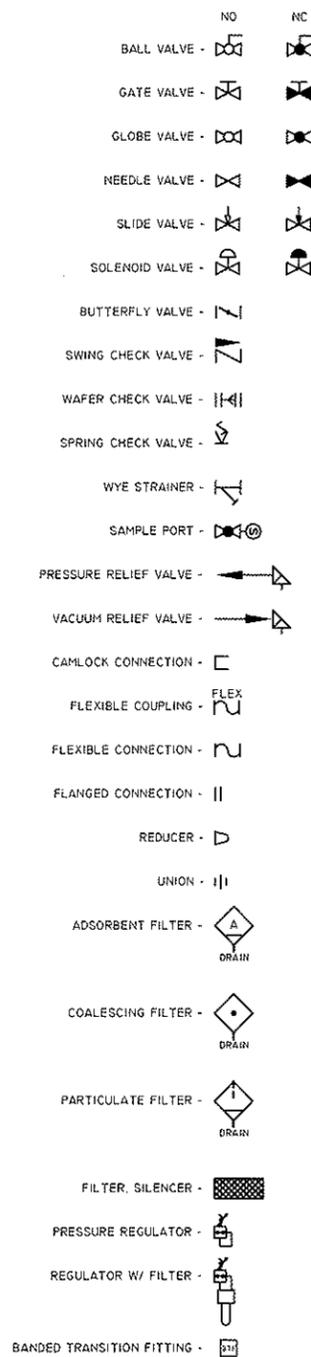
PIPING DETAILS:
 - WATER FLOW METERS: PROVIDE 10 DIA. OF STRAIGHT PIPE BEFORE AND 5 DIA. OF STRAIGHT PIPE AFTER METERS. ENSURE THAT THROTTLING VALVES ARE NOT DIRECTLY IN LINE WITH METERS.
 - AIR FLOW METERS: PROVIDE 8 DIA. OF STRAIGHT PIPE BEFORE AND 3 DIA. OF STRAIGHT PIPE AFTER METERS, IF POSSIBLE. AVOID TEES AND ELBOWS BEFORE AND AFTER METERS.
 - MATERIALS OF VALVES AND FITTINGS TO BE THE SAME AS THE DESCRIPTION AT THE LINE. IF THERE IS A TRANSITION FROM PVC TO STEEL, THE VALVE SHOULD BE BRASS.
 - THERE ARE NO SPECIAL PIPING REQUIREMENTS OTHER THAN WHAT IS EXPLAINED ON THE DIAGRAM.
 - WHEN PVC HOSE IS SPECIFIED, ALWAYS USE VACUUM HOSE; USE GREEN HOSE FOR PRESSURES LESS THAN 60PSI; USE TANK TRUCK HOSE FOR PRESSURES BETWEEN 60PSI AND 150PSI.
 - PVC PIPE MAY BE SUBSTITUTED WITH EQUAL-SIZED PVC HOSE WHERE A FLEXIBLE CONNECTION IS PREFERRED.



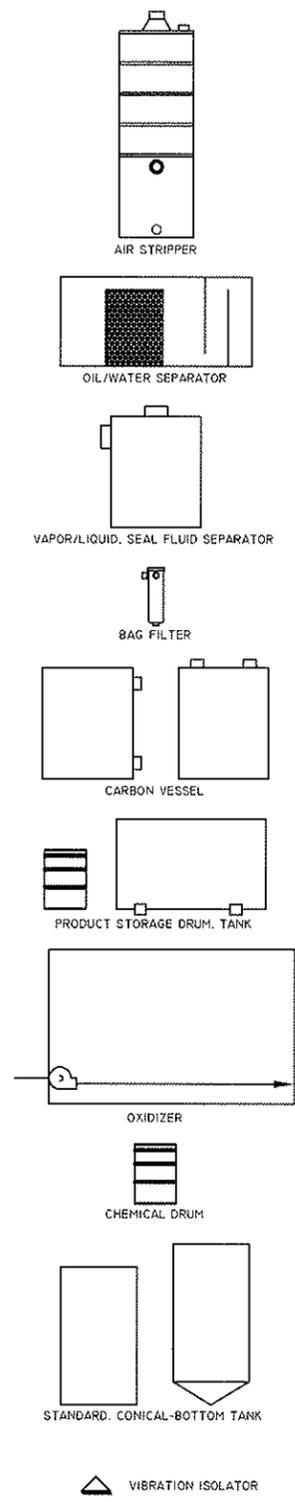
LEVEL	DATE	BY	REVISION
C	2011-12-07	EF	AS BUILT
B	2011-11-14	EF	PRODUCTION
A	2011-10-25	PW	FOR APPROVAL

DWG. NO:	201097-01 (PAGE 1 OF 2)
TITLE:	PROCESS & INSTRUMENTATION DRAWING
CUSTOMER:	SHELL PRODUCTS - ROXANA URS CORPORATION
	MLE EQUIPMENT INC.

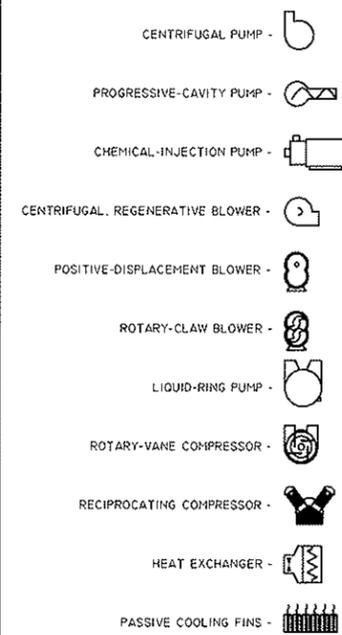
VALVES AND PIPING



EQUIPMENT



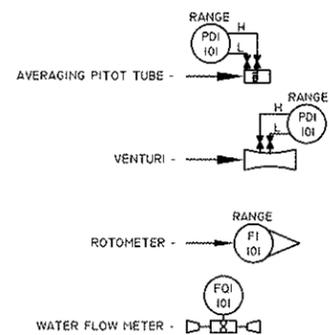
EQUIPMENT



EQUIPMENT

AS - AIR STRIPPER
 BLD - BUILDING, TRAILER OR SKID
 FLT - FILTER VESSEL
 LPC - LIQUID-PHASE CARBON VESSEL
 MFD - MANIFOLD
 OWS - OIL/WATER SEPARATOR
 OX - OXIDIZER
 PST - PRODUCT STORAGE TANK
 SOS - SEAL OIL SEPARATOR
 SWS - SEAL WATER SEPARATOR
 TNK - TANK
 VLS - VAPOR/LIQUID SEPARATOR
 VPC - VAPOR-PHASE CARBON VESSEL

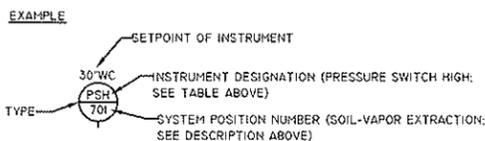
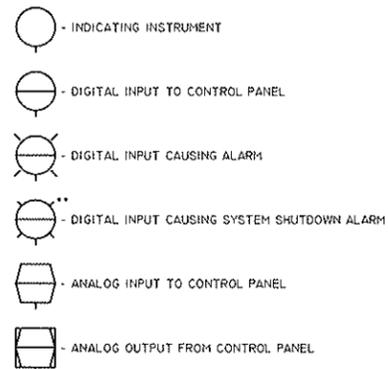
FLOW MEASUREMENT



INSTRUMENT DESIGNATION

INPUT	1ST MODIFIER	2ND MODIFIER	3RD MODIFIER	OUTPUT	1ST MODIFIER	A
A		ALARM				A
B				BLOWER		B
C	CYCLE			COMPRESSOR		C
D		DIFFERENTIAL		AIR DRYER		D
E						E
F	FLOW			FAN		F
G	GAS (L/L)	GAUGE				G
H			HIGH	HAND	HEATER	H
I	CURRENT	INDICATOR				I
J						J
K						K
L	LEVEL		LOW			L
M				MOTORIZED		M
N						N
O						O
P	PRESSURE			PNEUMATIC	PUMP	P
Q		QUANTITY				Q
R						R
S	SPEED	SWITCH		SOLENOID		S
T	TEMPERATURE	TRANSMITTER				T
U						U
V					VALVE	V
W						W
X						X
Y						Y
Z	POSITION					Z

INSTRUMENT IDENTIFICATION



SYSTEM POSITION DESIGNATION

- 100 - VACUUM INLET MANIFOLD
- 300 - INLET HEAT EXCHANGER
- 400 - VAPOR/LIQUID SEPARATOR
- 500 - VAPOR/LIQUID SEPARATOR - 2
- 700 - SOIL-VAPOR EXTRACTION
- 1000 - LIQUID-RING PUMP
- 1300 - SVE HEAT EXCHANGER
- 1600 - VAPOR-PHASE CARBON
- 1900 - OXIDIZER
- 2200 - AIR SPARGE
- 2500 - SPARGE HEAT EXCHANGER
- 2800 - SPARGE OUTLET MANIFOLD
- 3100 - AIR COMPRESSOR
- 3400 - COMPRESSED-AIR OUTLET MANIFOLD
- 3700 - PNEUMATIC WELL PUMPS
- 4000 - SUBMERSIBLE WELL PUMPS
- 4300 - SURFACE-MOUNT WELL PUMPS
- 4600 - GROUNDWATER INLET MANIFOLD
- 4900 - OIL/WATER SEPARATOR
- 5200 - PRODUCT STORAGE TANK
- 5500 - INLET TANK
- 5800 - UPSTREAM BAG FILTER
- 6100 - CHEMICAL INJECTION
- 6400 - AIR STRIPPER
- 6700 - PRE-CARBON BAG FILTER
- 7000 - LIQUID-PHASE CARBON
- 7100 - PRE-MEDIA BAG FILTER
- 7200 - ACTIVATED ALUMINA
- 7300 - DISCHARGE TANK
- 7400 - POST-TREATMENT BAG FILTER
- 7600 - REINJECTION
- 7900 - BUILDING, TRAILER OR SKID
- 8200 - CONTROL PANEL
- 8500 - ELECTRICAL PARTS
- 9900 - EXTRAS

MLE EQUIPMENT
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LEVEL	DATE	BY	REVISION
C	2011-12-07	EF	AS BUILT
B	2011-11-14	EF	PRODUCTION
A	2011-10-25	PW	FOR APPROVAL

DWG. NO.	201097-01 (PAGE 2 OF 2)
TITLE	P&ID LEGEND
CUSTOMER	SHELL PRODUCTS - ROXANA URS CORPORATION
	MLE EQUIPMENT INC.

SCALE BAR, EACH BLOCK IS 12" LONG

****CUSTOMER SPECIFIC NOTES ****

- CIVIL:**
 - PROCESS ROOM TO INCLUDE A SECONDARY CONTAINMENT FOR ENTIRE FLOOR AREA.
- MECHANICAL:**
 - NO PVC IS PERMITTED IN THE SYSTEM PIPING
 - NO GALVANIZED STEEL ON VAPOR LINES, BLACK STEEL ONLY DUE TO DOWNSTREAM OXIDIZER.
- ELECTRICAL:**
 - NOTE THE LOCATIONS OF NEMA4 JUNCTION BOXES TO INCLUDE PROVISIONS FOR:
 - CONTAIN CONNECTION POINTS FOR HEAT TRACE.
 - HEAT TRACE THERMOSTAT.
- GENERAL:**
 - INSTALLATION OF RTO PANEL AND HEAT TRACE PANELS WILL BE THE RESPONSIBILITY OF URS.

**** CIVIL CONSTRUCTION NOTES ****

- PROVIDE WOOD LIP AROUND PERIMETER TO ALLOW SUMP SWITCH TO TRIP.
- INSTALL GRATING BETWEEN BUILDING FANS AND OUTSIDE LOUVERS.
- THERMAL INSULATION ON WALLS AND CEILING.
- DOOR COLOUR TO BE THE SAME AS BUILDING.

****MECH./ELECT. ASS'Y NOTES ****

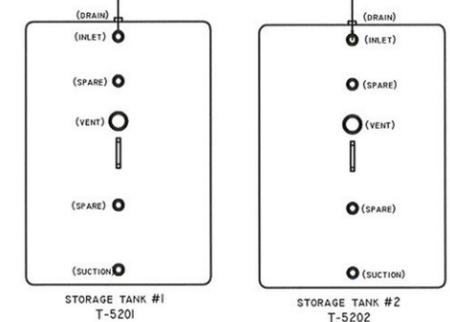
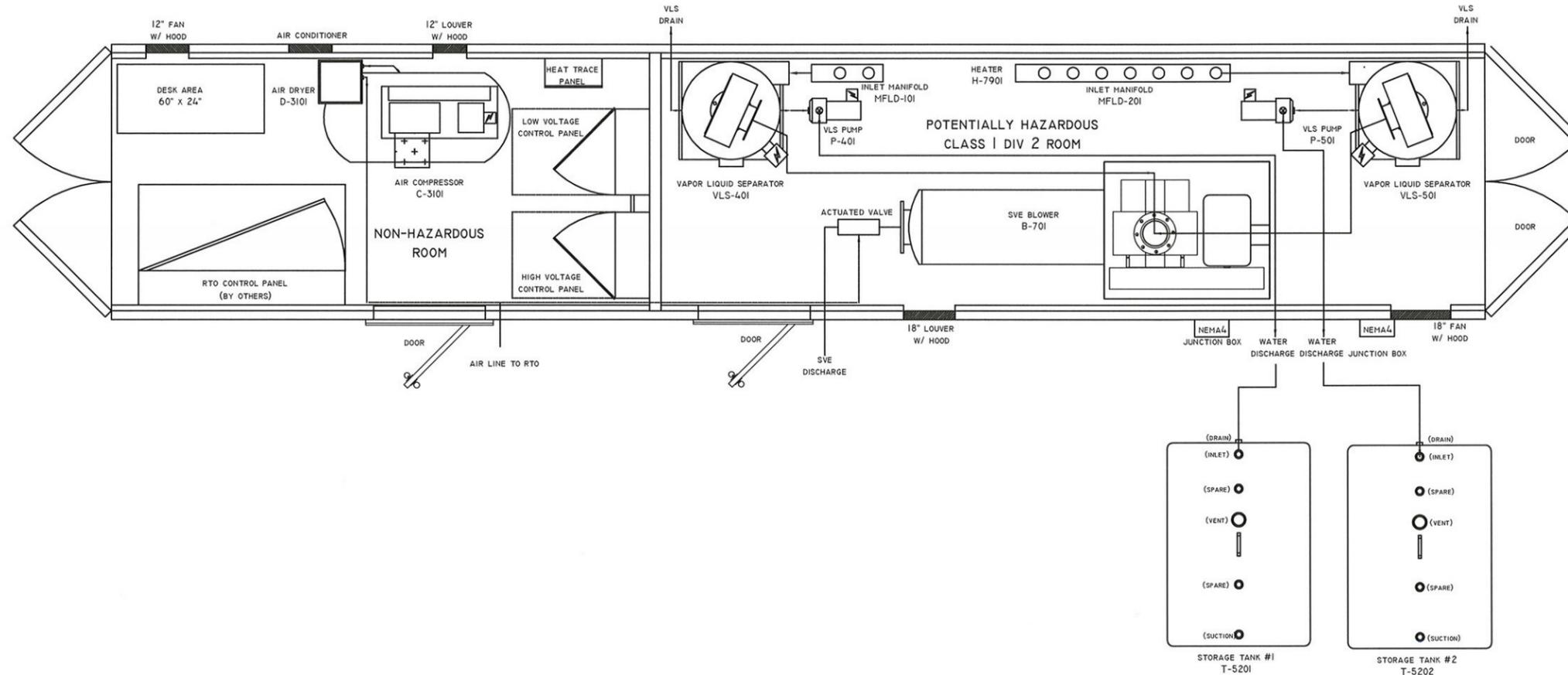
- LOCATE COOLING THERMOSTAT IN THE WARMEST LOCATION AT CEILING LEVEL.
- LOCATE HEATING THERMOSTAT AT FLOOR LEVEL.
- RUBBER MATTING ON FLOOR.
- PLUG AND SEAL (WITH WASHERS) ANY HOLES IN THE FLOOR TO CONTAIN WATER SPILLS.
- MAXIMUM WIDTH FOR SHIPPING IS 102". THIS INCLUDES ALL CONNECTIONS THAT PROTRUDE THROUGH THE SIDES OF THE ENCLOSURE.

***** COMMISSIONING NOTES *****

- FAN AND LOUVER HOODS NEED TO BE INSTALLED ON SITE. CANNOT SHIP WITH HOODS ATTACHED.
- FOR BUILDINGS IN COLD WEATHER CLIMATES, WHERE THE BUILDING IS ELEVATED, A SKIRT MUST BE BUILT AROUND THE BASE TO PREVENT THE FLOOR FROM FREEZING.
- MLEE RECOMMENDS PAD BE AT LEAST 12" LARGER THAN ENCLOSURE IN ALL DIRECTIONS. LOCAL CODES MAY REQUIRE ALTERNATE DIMENSIONS.

***** DIMENSION INFORMATION *****

DESCRIPTION	DIM (L X W X H)	WEIGHT
CONTAINER	40' X 8' X 8'6"	-

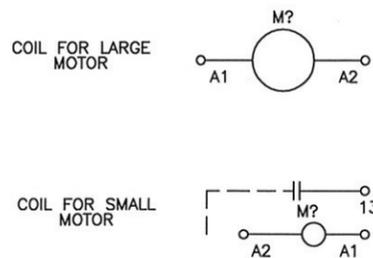


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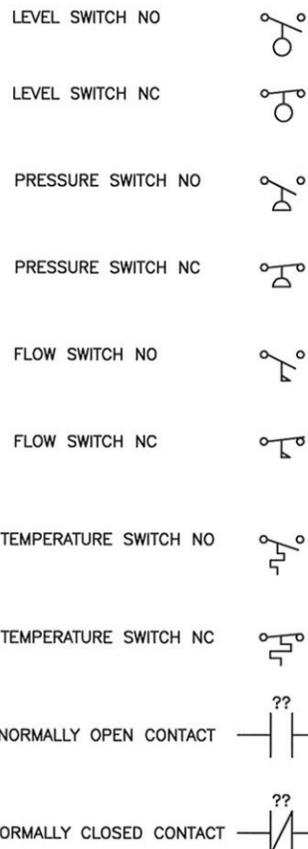
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B	2011-11-14	EF	PRODUCTION
A1	2011-10-31	EF	FOR APPROVAL - REVISED AS PER REQUEST
A	2011-10-25	PW	FOR APPROVAL

DWG. NO:	201097 - 02
TITLE:	SYSTEM LAYOUT
CUSTOMER:	SHELL PRODUCTS - ROXANA URS CORPORATION MLEE EQUIPMENT INC.

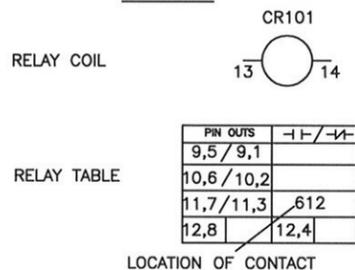
CONTACTORS



SWITCHES

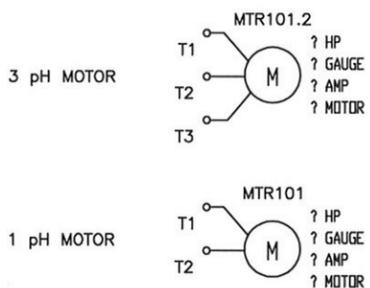


RELAYS



GENERAL PURPOSE AREA
CLASS 1 DIV 2 AREA

MOTORS



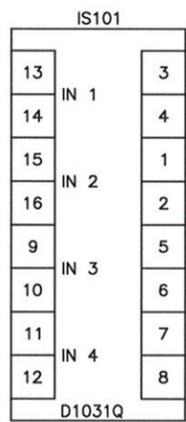
IS BARRIERS

4CH IS BARRIER DIP SETTINGS

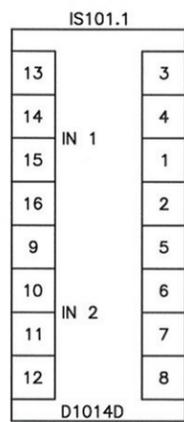
INPUT - OUTPUT OPERATION	SW2 Ch.1	SW4 Ch.2	SW6 Ch.3	SW8 Ch.4
IN NO - OUT NC	OFF	OFF	OFF	OFF
IN NC - OUT NO	ON	ON	ON	ON
LINE FAULT DETECTION	SW1 Ch.1	SW3 Ch.2	SW5 Ch.3	SW7 Ch.4
DISABLED	OFF	OFF	OFF	OFF
ENABLED	ON	ON	ON	ON

FACTORY DEFAULT DIP SETTINGS

ON	ON	ON	ON
OFF	OFF	OFF	OFF

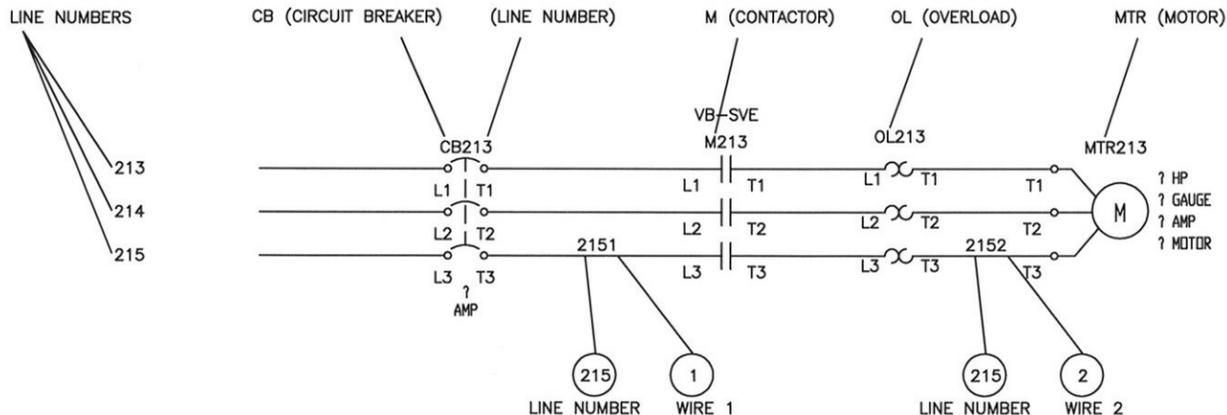


4 CHANNEL ISBARRIER



2 CHANNEL ANALOG ISBARRIER

WIRE NUMBER DESCRIPTION

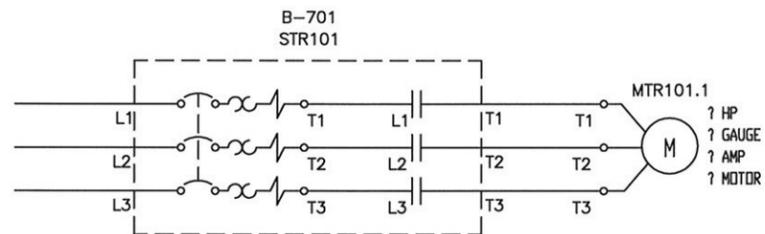


VB-SVE

OVERLOAD PINS	
95	96
97	98
CONTACTOR	
A1	A2
13	14
53	54
63	64
61	62

LOCATION OF AUXILIARY CONTACT

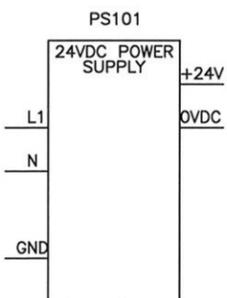
COMBINATION MOTOR STARTER



B-701

TERMINALS	
A1	A2
13	14
53	54
63	64
97	98
53	54OL

POWER SUPPLY



WIRE LEGEND

BLACK: POWER
RED: CONTROL
WHITE: NEUTRAL
BLUE: +24VDC & I.S. (Intrinsically Safe)
BL/WH: 0VDC
YELLOW: INTERLOCKS

NOTES:

SVE ROOM TO BE MET US CERTIFIED, BUILT TO CLASS 1 DIV 2 STANDARDS, ALL WIRING INTRINSICALLY SAFE AND ALL EQUIPMENT PRE-PIPED AND FACTORY TESTED AND MOUNTED IN ENCLOSURE. COMPRESSOR ROOM TO BE MET US CERTIFIED, BUILT TO GENERAL PURPOSE STANDARDS, ALL WIRING COMPLETE AND ALL EQUIPMENT PRE-PIPED FACTORY TESTED AND MOUNTED IN ENCLOSURE.

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN: JW	09/11/11
CKD	
APPR	



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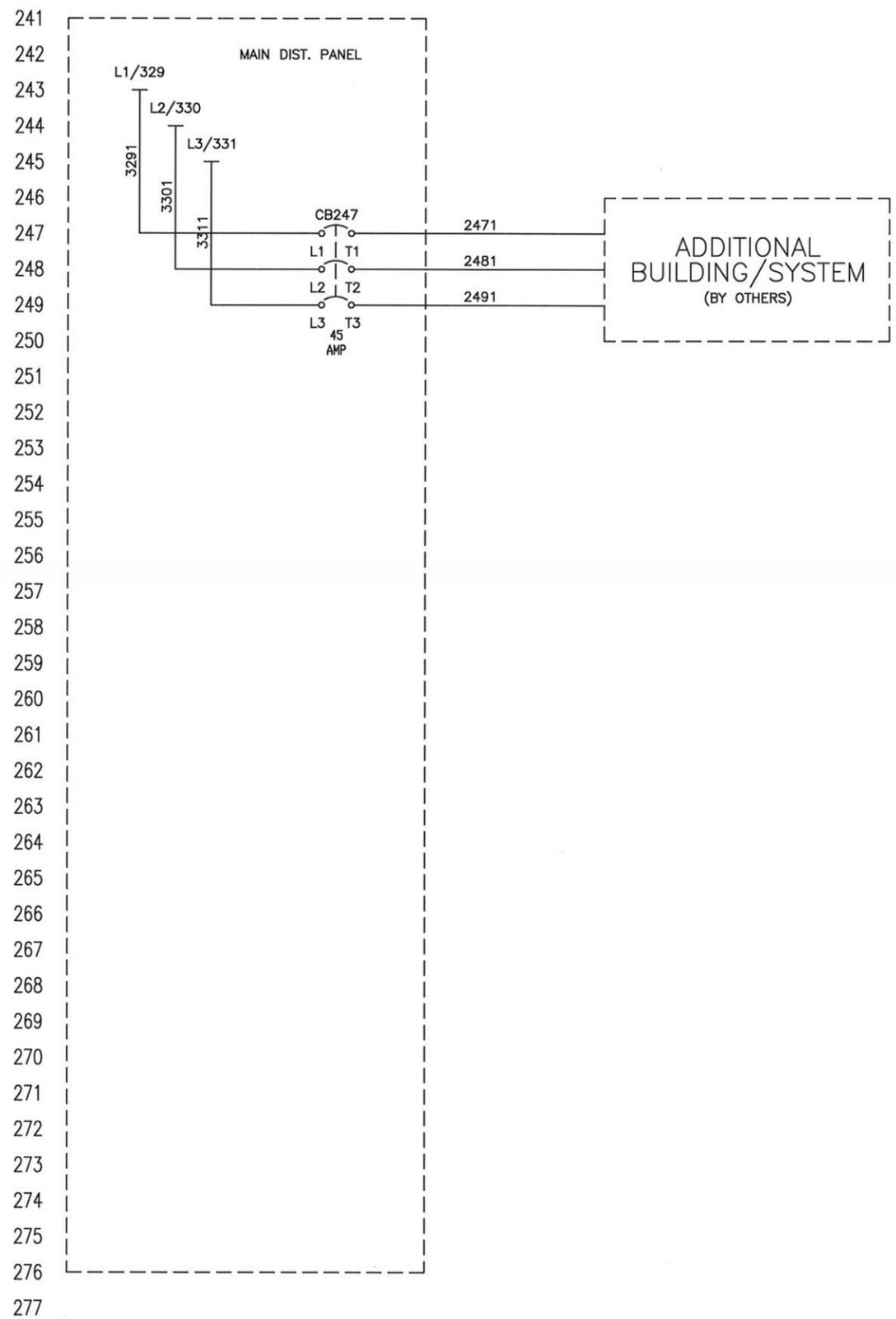
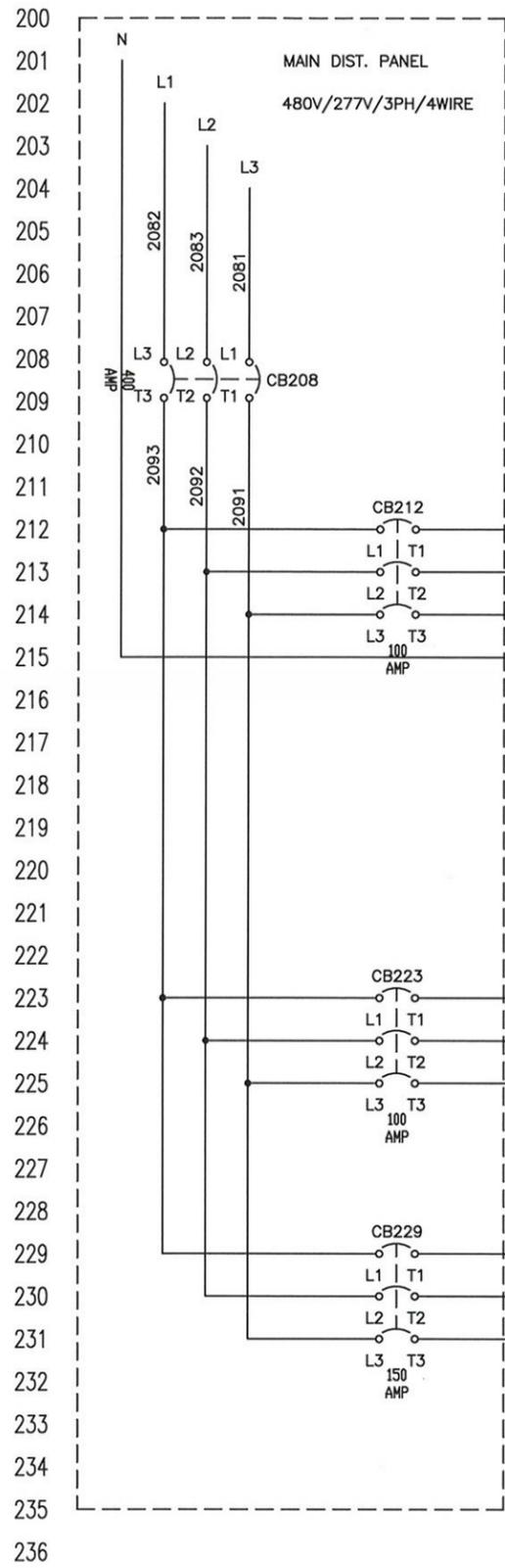
PROJECT:
201097
Shell Products - Roxana

PAGE DESCRIPTION
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JOB-NO:
201097

PAGE:
1 OF 13



WIRE LEGEND

BLACK: POWER
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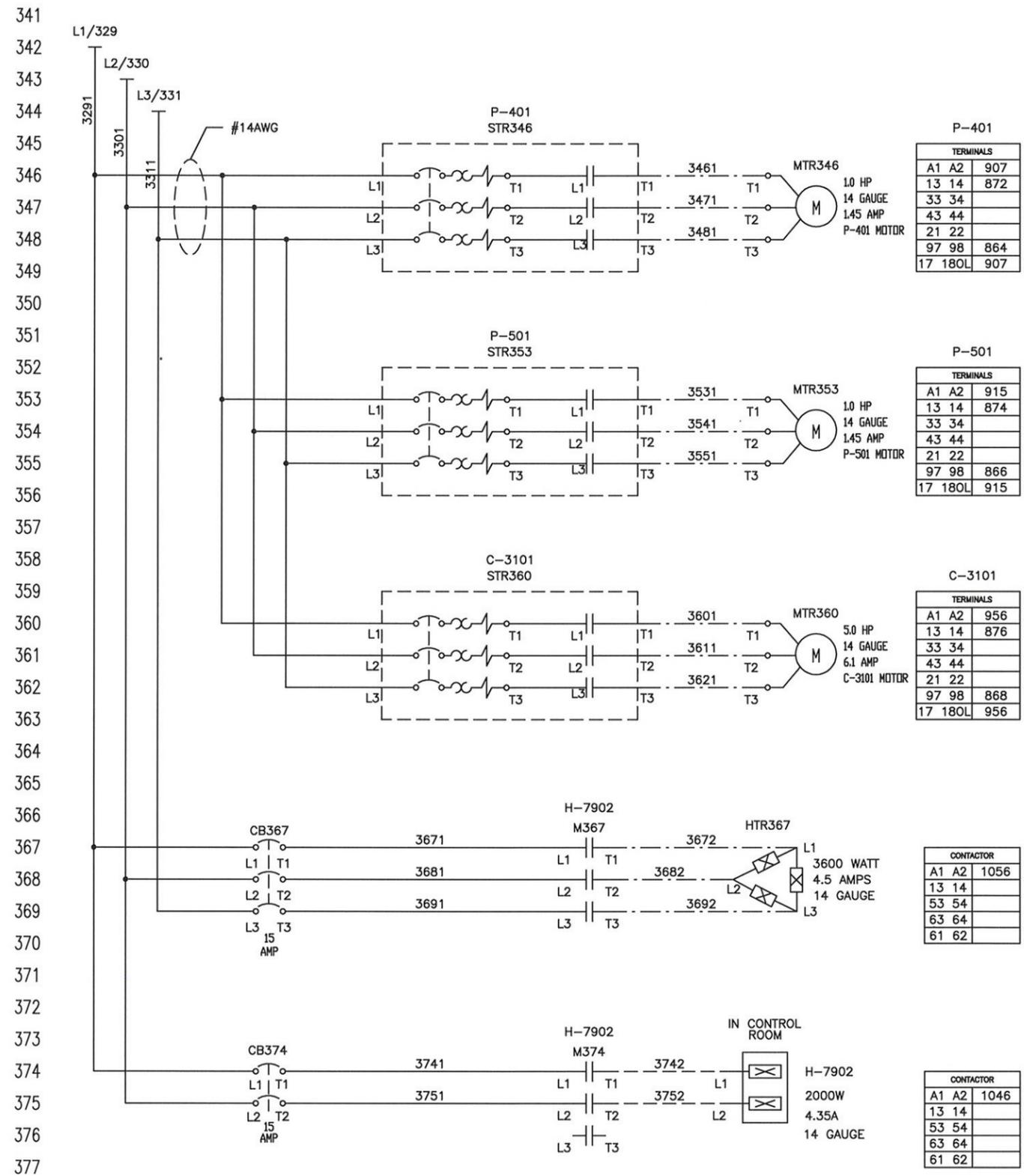
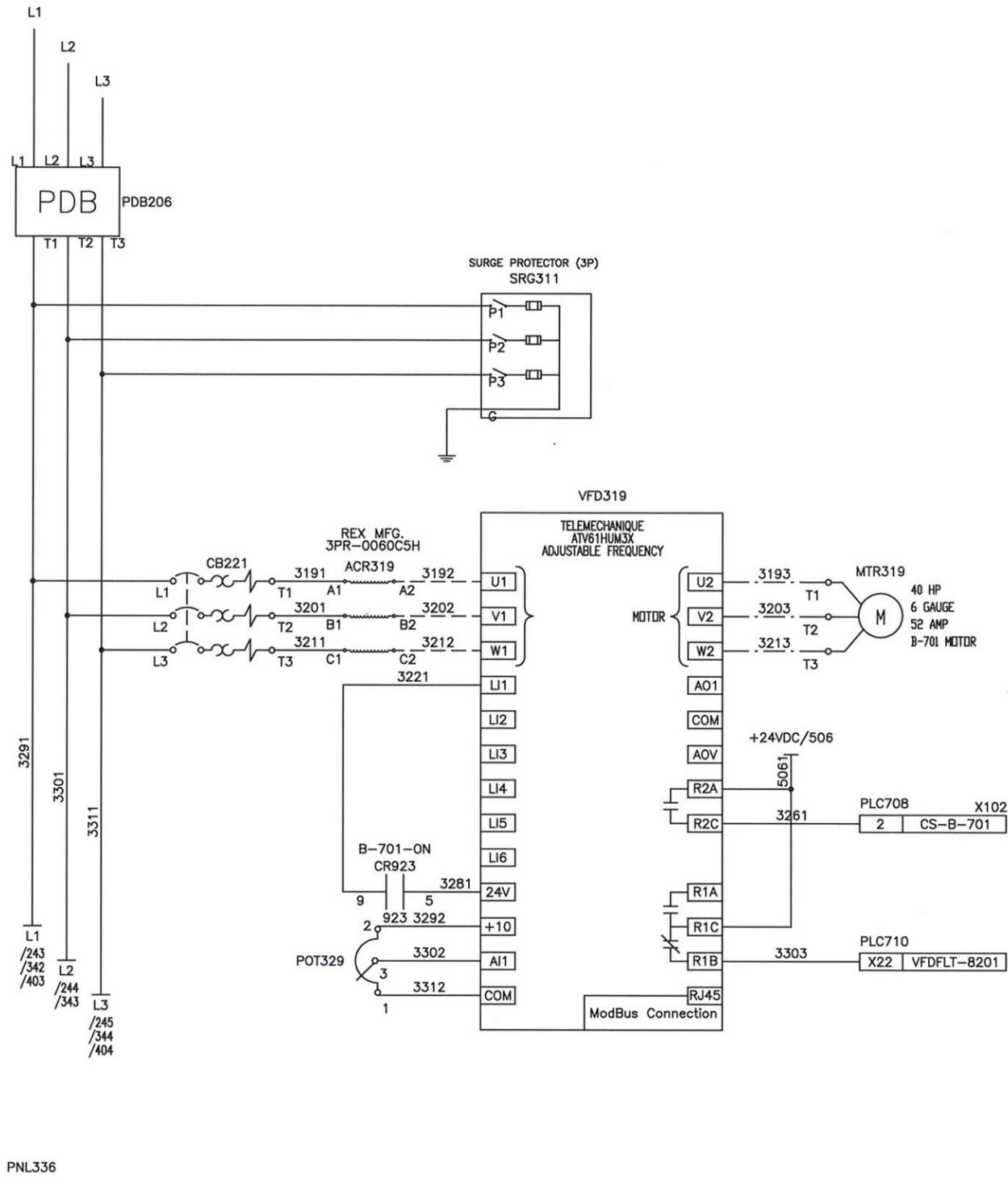
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B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

	NAME	DATE
DRAWN	JW	09/11/11
CKD		
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PROJECT: 201097 Shell Products - Roxana	DRAWING-NO: JOB-NO: 201097
PAGE DESCRIPTION 480V POWER DISTRIBUTION	PAGE: 2 OF 13

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 301 CONTINUED FROM PAGE 2
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WIRE LEGEND

BLACK: POWER
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 BLUE: +24VDC & I.S. (Intrinsically Safe)
 BL/WH: OVDC
 YELLOW: INTERLOCKS

NOTES:

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REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	

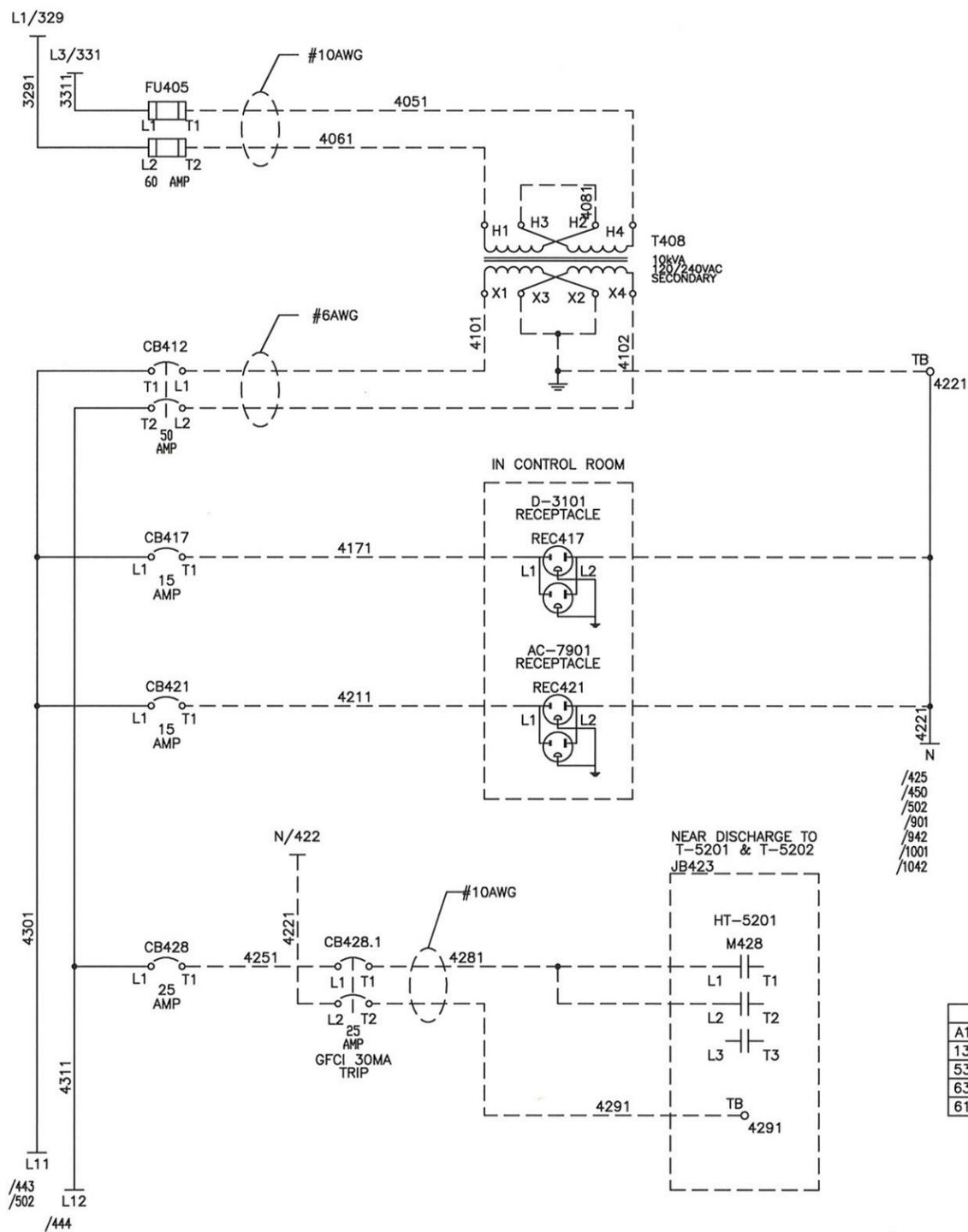


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PROJECT: 201097
 Shell Products - Roxana
 PAGE DESCRIPTION
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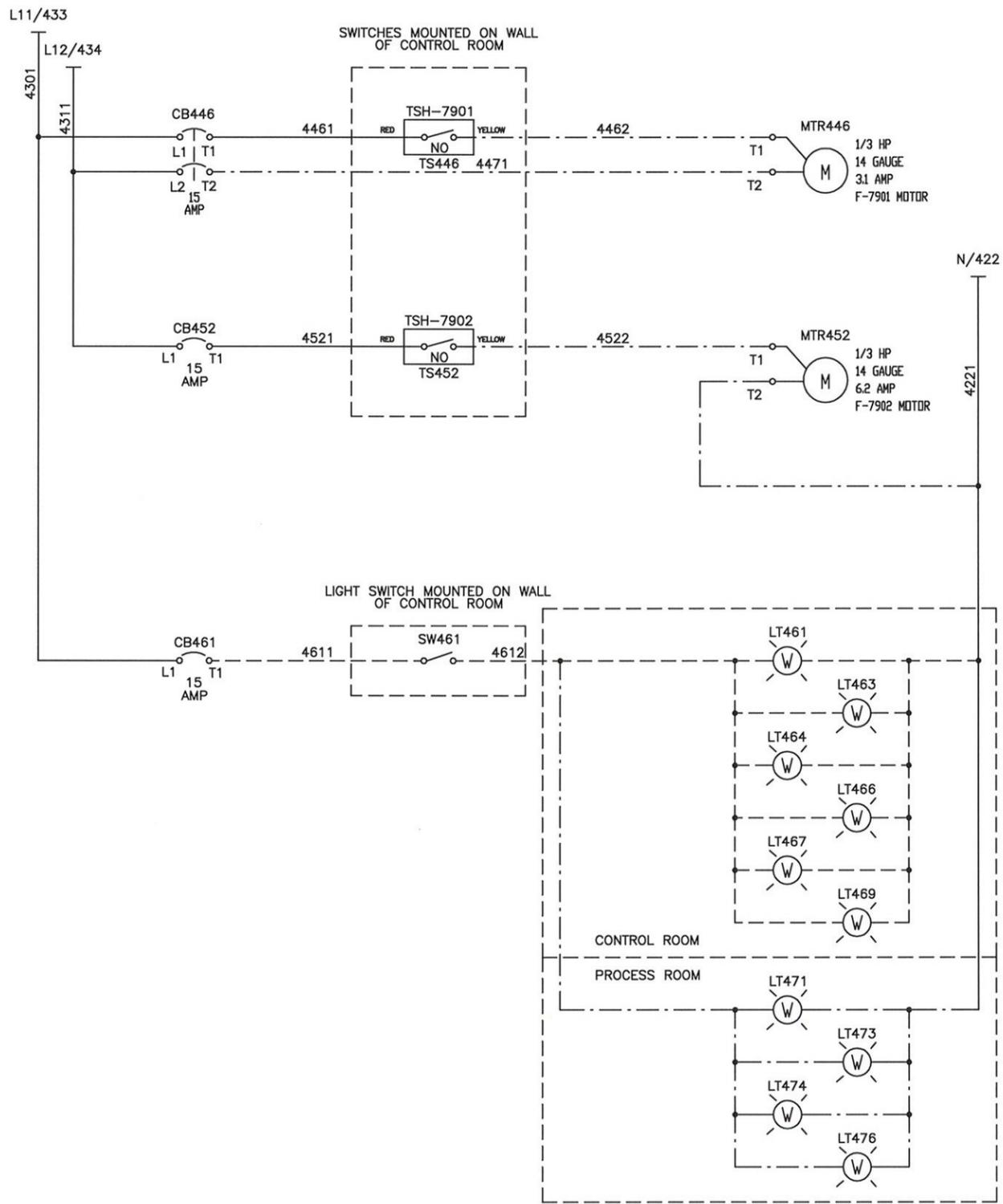
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 JOB-NO:
 201097

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CONTACTOR		
A1	A2	1051
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63	64	
61	62	

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WIRE LEGEND

BLACK: POWER
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REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

	NAME	DATE
DRAWN	JW	09/11/11
CKD		
APPR		



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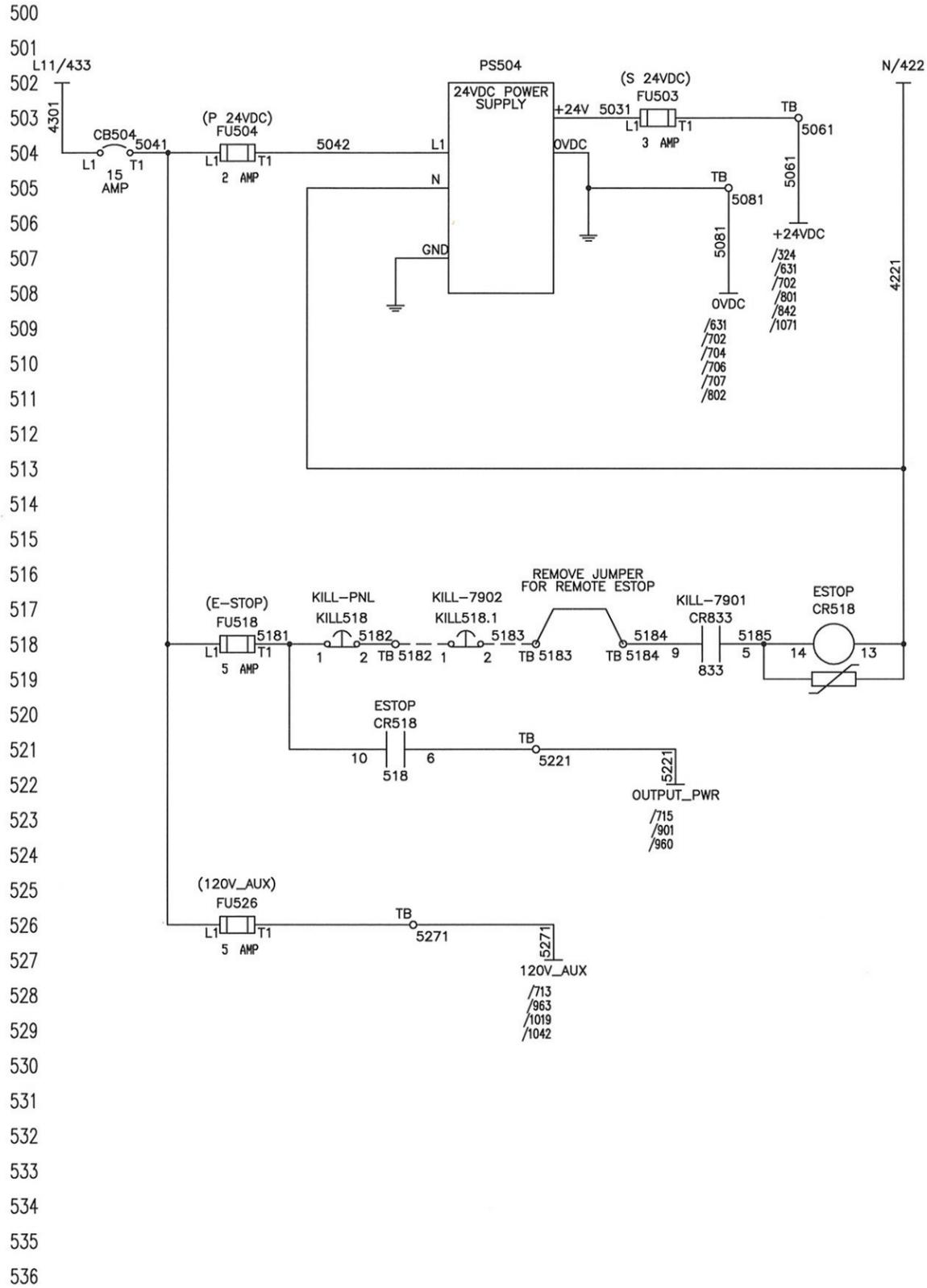
PROJECT:
201097
Shell Products - Roxana

PAGE DESCRIPTION
120/240V POWER DISTRIBUTION

DRAWING-NO:

JOB-NO:
201097

PAGE:
4 OF 13



PIN	OUTS	-I-	-I-
9,5	9,1	870	
10,6	10,2	521	
11,7	11,3		
12,8		12,4	

WIRE LEGEND
 BLACK: POWER
 RED: CONTROL
 WHITE: NEUTRAL
 BLUE: +24VDC & I.S. (Intrinsically Safe)
 BL/WH: OVDC
 YELLOW: INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

	NAME	DATE
DRAWN	JW	09/11/11
CKD		
APPR		

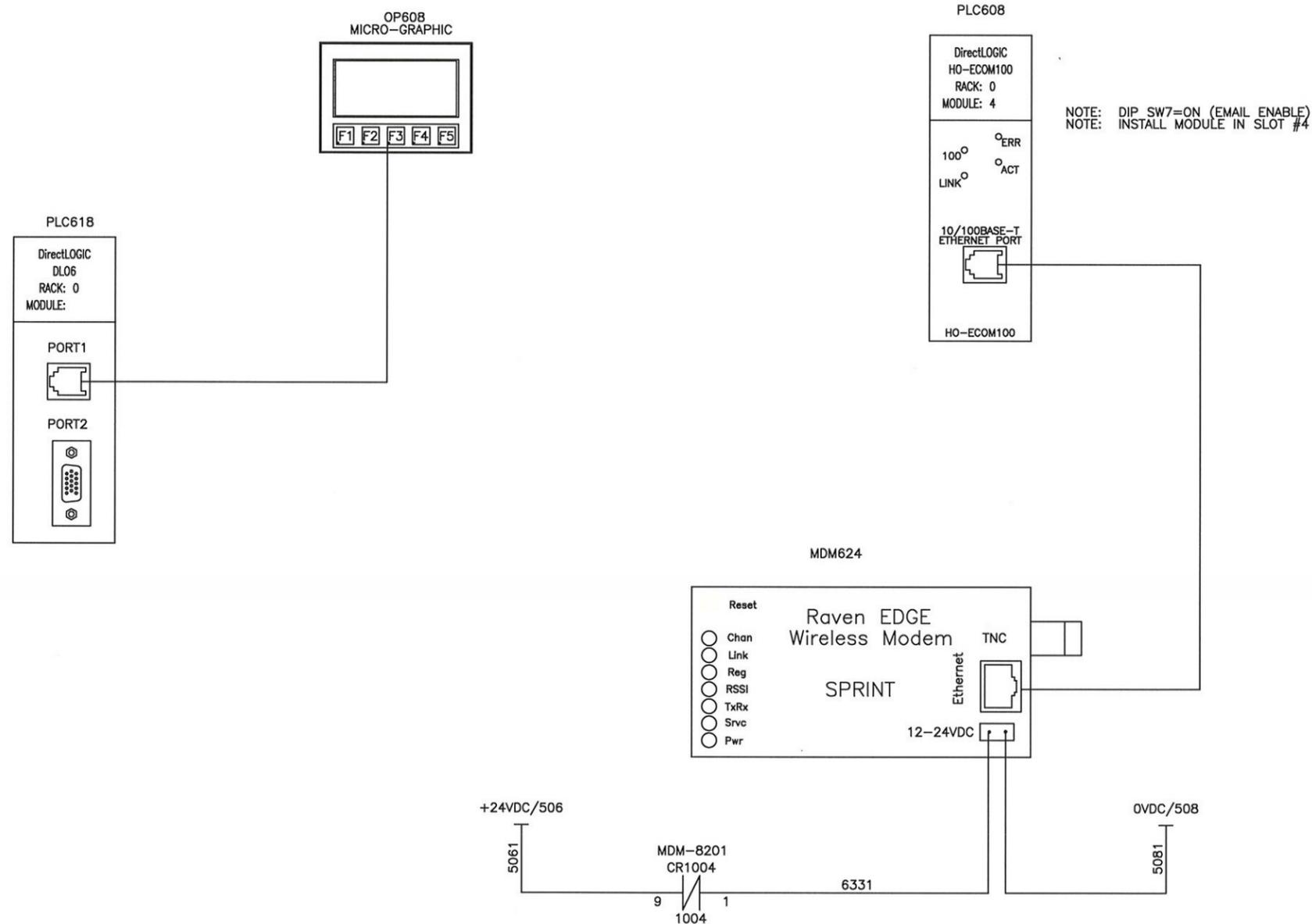


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PROJECT:
 201097
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DRAWING-NO:
 JOB-NO:
 201097
 PAGE DESCRIPTION
 24VDC POWER SUPPLY
 PAGE:
 5 OF 13

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WIRE LEGEND

BLACK:	POWER
RED:	CONTROL
WHITE:	NEUTRAL
BLUE:	+24VDC & I.S.(Intrinsically Safe)
BL/WH:	0VDC
YELLOW:	INTERLOCKS

NOTES:

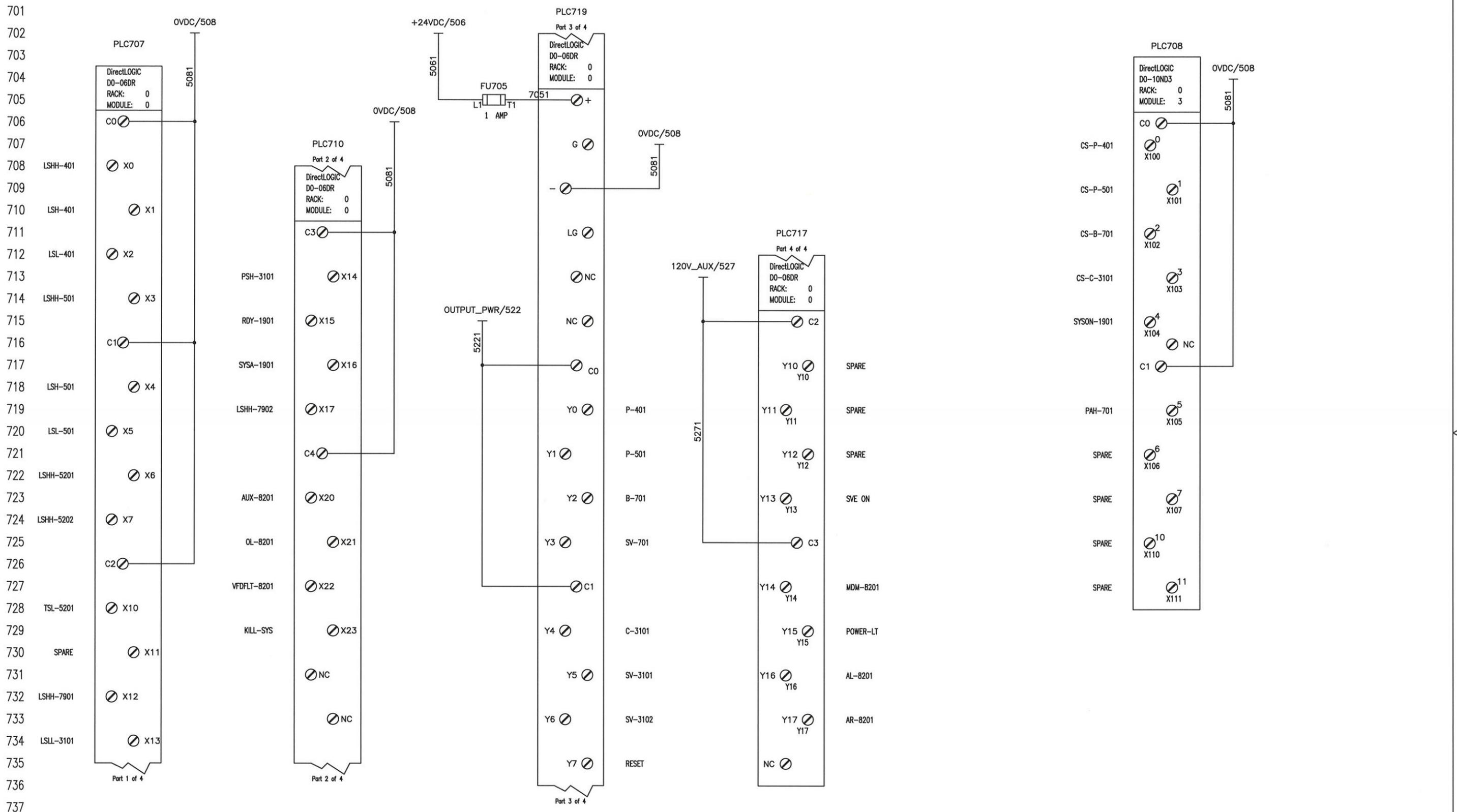
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C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	



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CANADA
K6V 5Y6
WWW.MLEEQUIPMENT.COM

PROJECT: 201097 Shell Products - Roxana	DRAWING-NO:
PAGE DESCRIPTION MODEM/TOUCHSCREEN CONNECTIONS	JOB-NO: 201097
	PAGE: 6 OF 13



WIRE LEGEND

BLACK:	POWER
RED:	CONTROL
WHITE:	NEUTRAL
BLUE:	+24VDC & I.S. (Intrinsically Safe)
BL/WH:	OVDC
YELLOW:	INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	



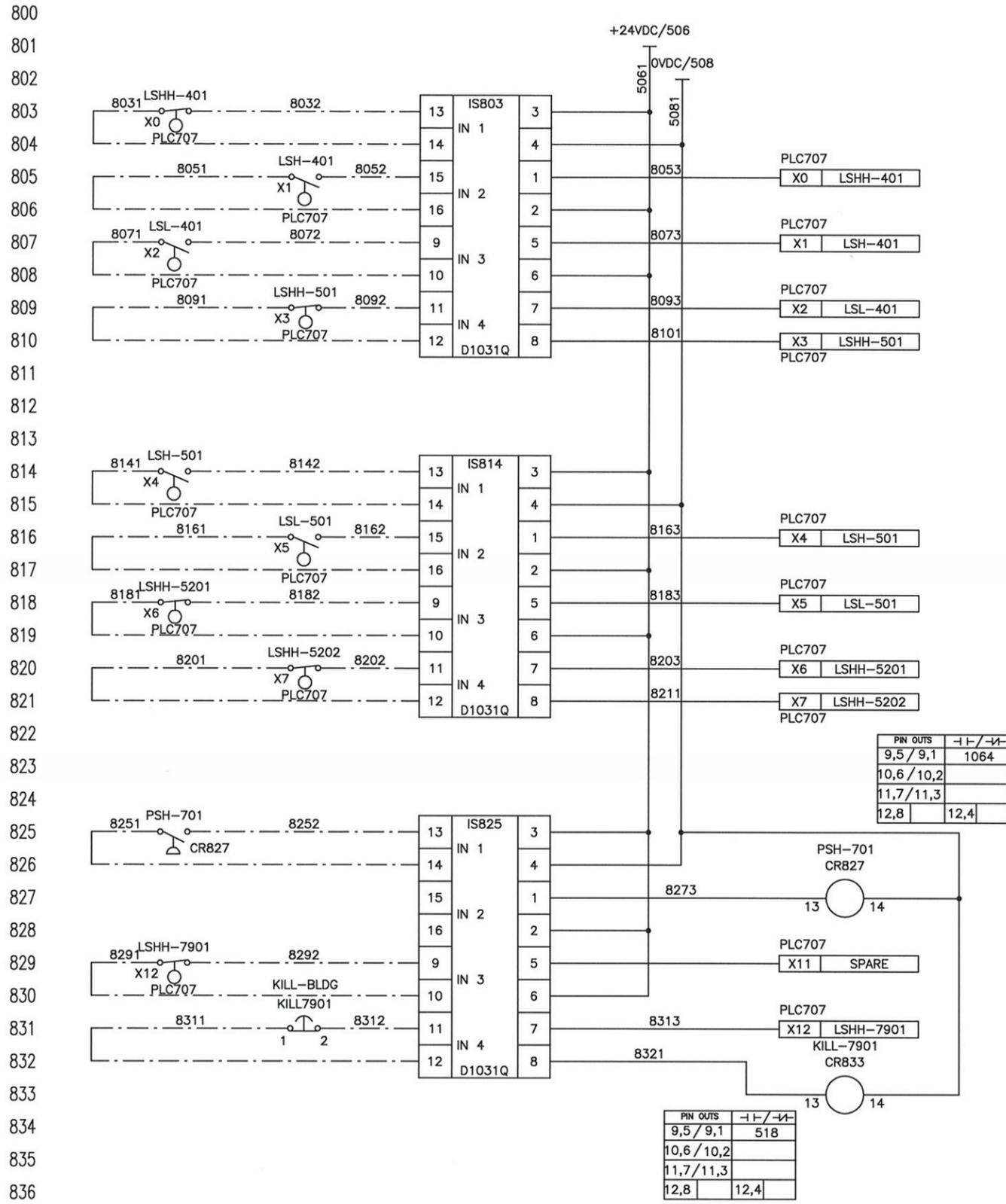
1325 CALIFORNIA AVE.
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CANADA
K6V 5Y6
WWW.MLEEQUIPMENT.COM

PROJECT:
201097
Shell Products - Roxana

PAGE DESCRIPTION
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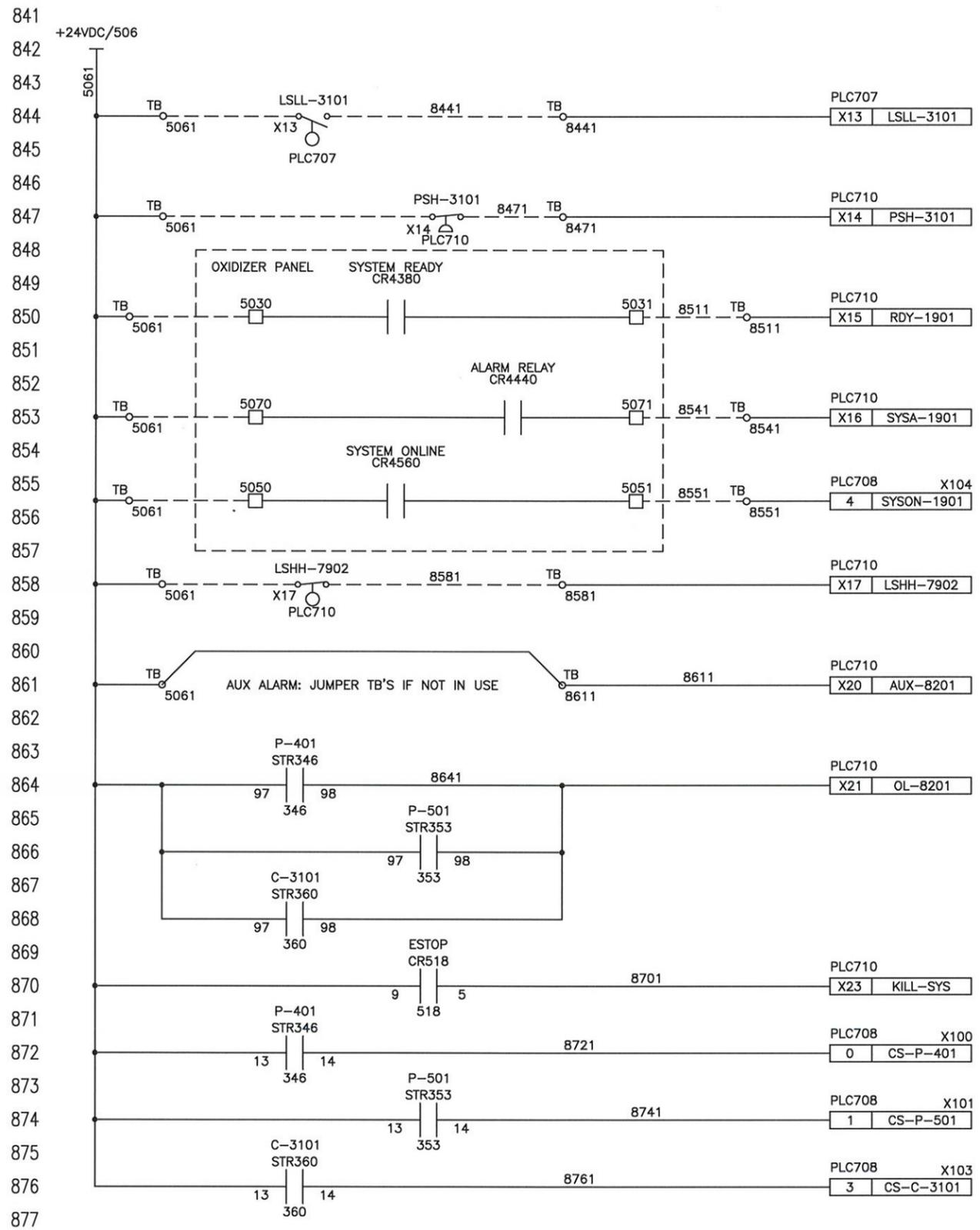
DRAWING-NO:
JOB-NO:
201097

PAGE:
7 OF 13



PIN	OUTS	-I	-V
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10,6	10,2		
11,7	11,3		
12,8		12,4	

PIN	OUTS	-I	-V
9,5	9,1		518
10,6	10,2		
11,7	11,3		
12,8		12,4	



WIRE LEGEND
 BLACK: POWER
 RED: CONTROL
 WHITE: NEUTRAL
 BLUE: +24VDC & I.S. (Intrinsically Safe)
 BL/WH: OVDC
 YELLOW: INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

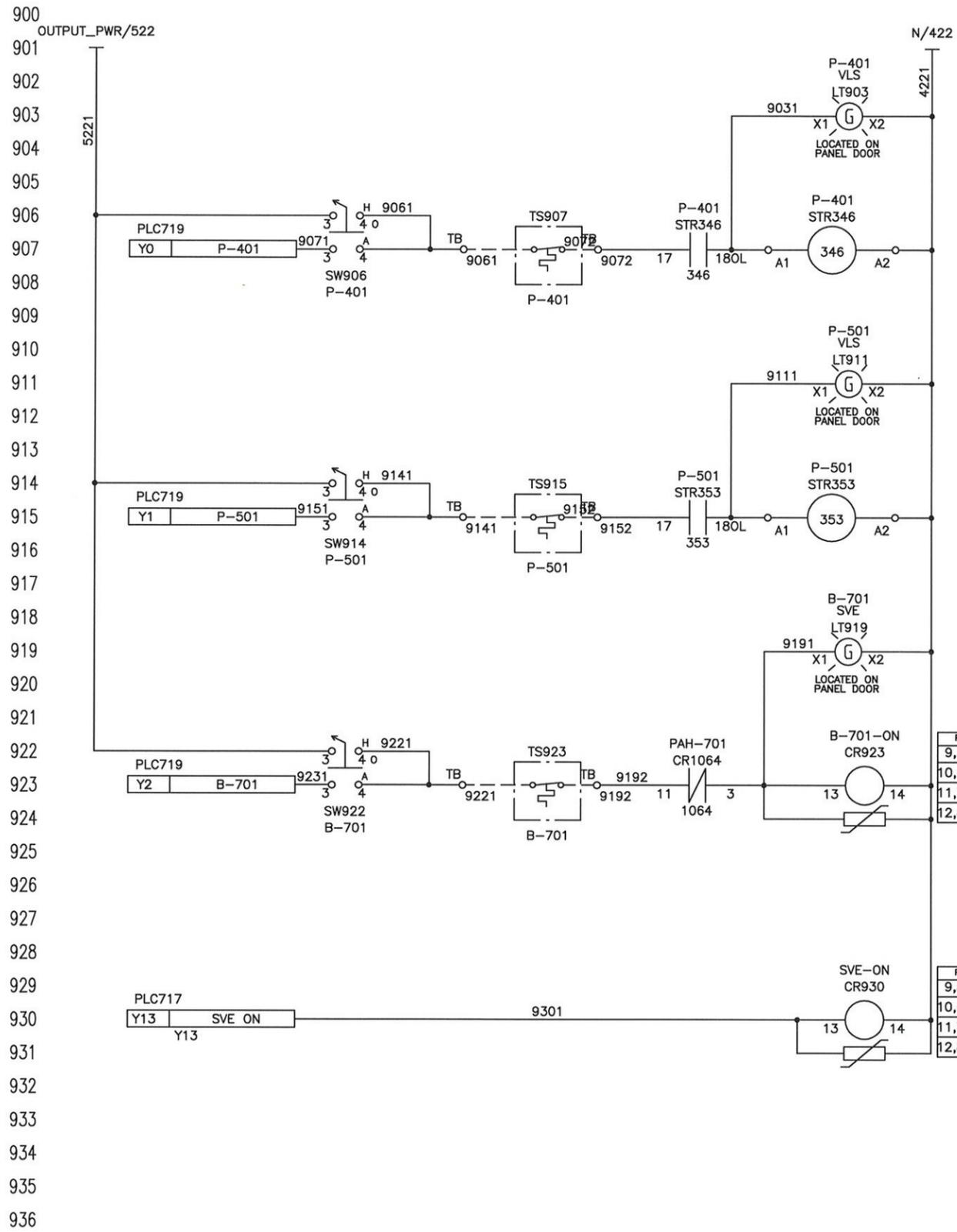
NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	



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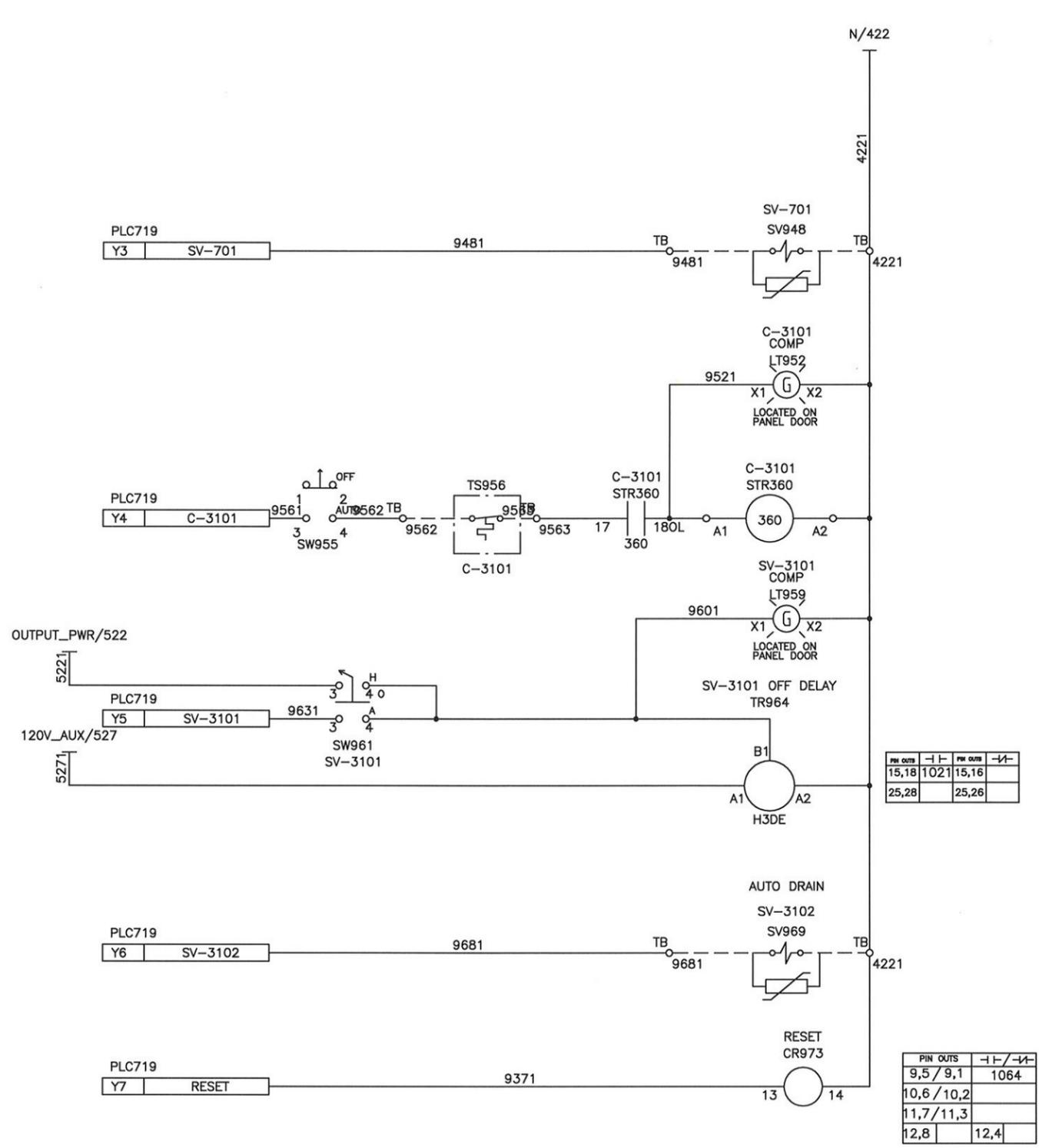
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 8 OF 13



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11,7	11,3		
12,8		12,4	

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PIN	OUTS	-I-	-I-
15,18	10,21		15,16
25,28		25,26	

PIN	OUTS	-I-	-I-
9,5	9,1		1064
10,6	10,2		
11,7	11,3		
12,8		12,4	

WIRE LEGEND
 BLACK: POWER
 RED: CONTROL
 WHITE: NEUTRAL
 BLUE: +24VDC & I.S. (Intrinsically Safe)
 BL/WH: OVDC
 YELLOW: INTERLOCKS

NOTES:

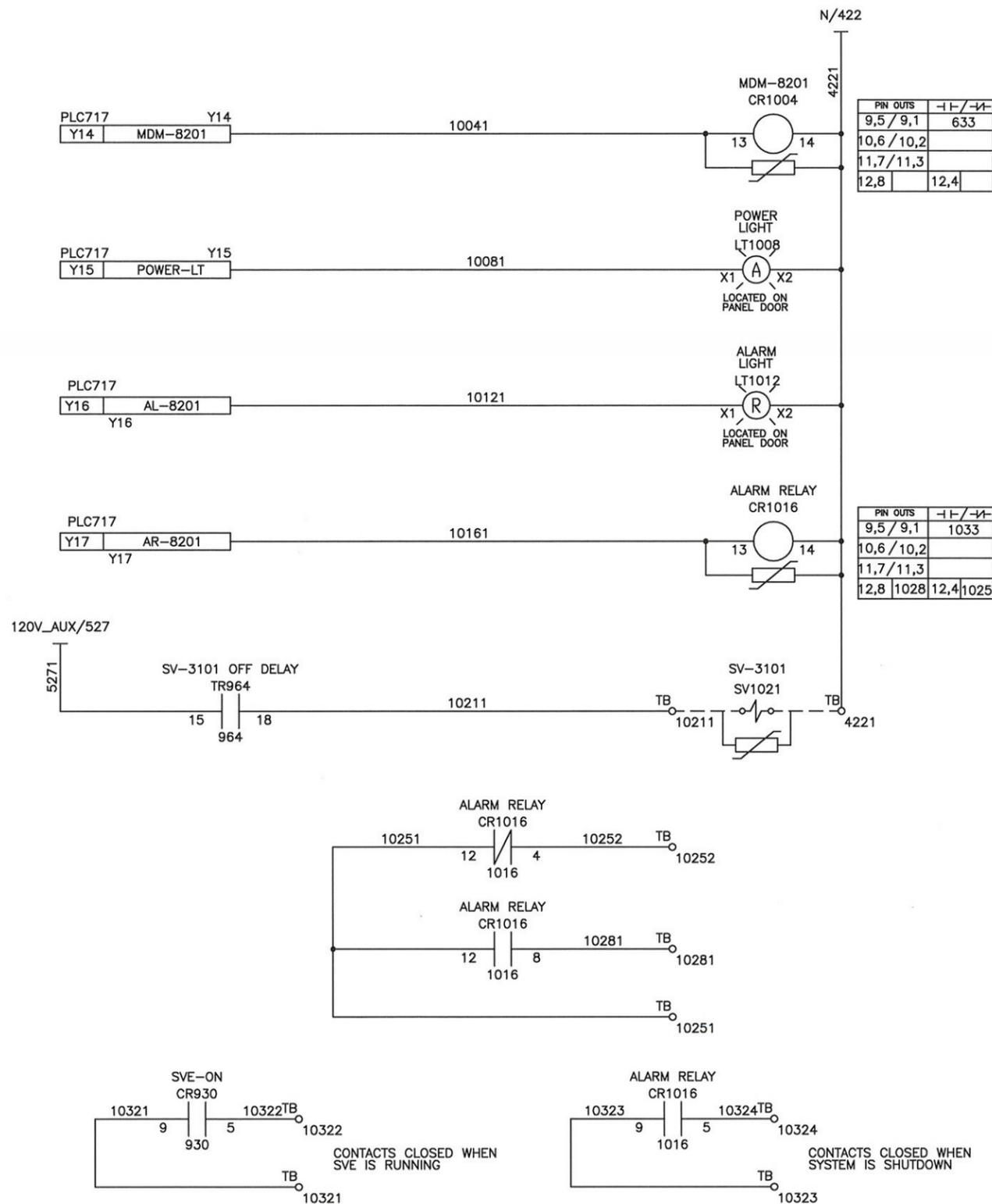
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C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	

MLE EQUIPMENT
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 BROCKVILLE, ONTARIO
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PROJECT: 201097 Shell Products - Roxana	DRAWING-NO: JOB-NO: 201097
PAGE DESCRIPTION OUTPUTS	PAGE: 9 OF 13

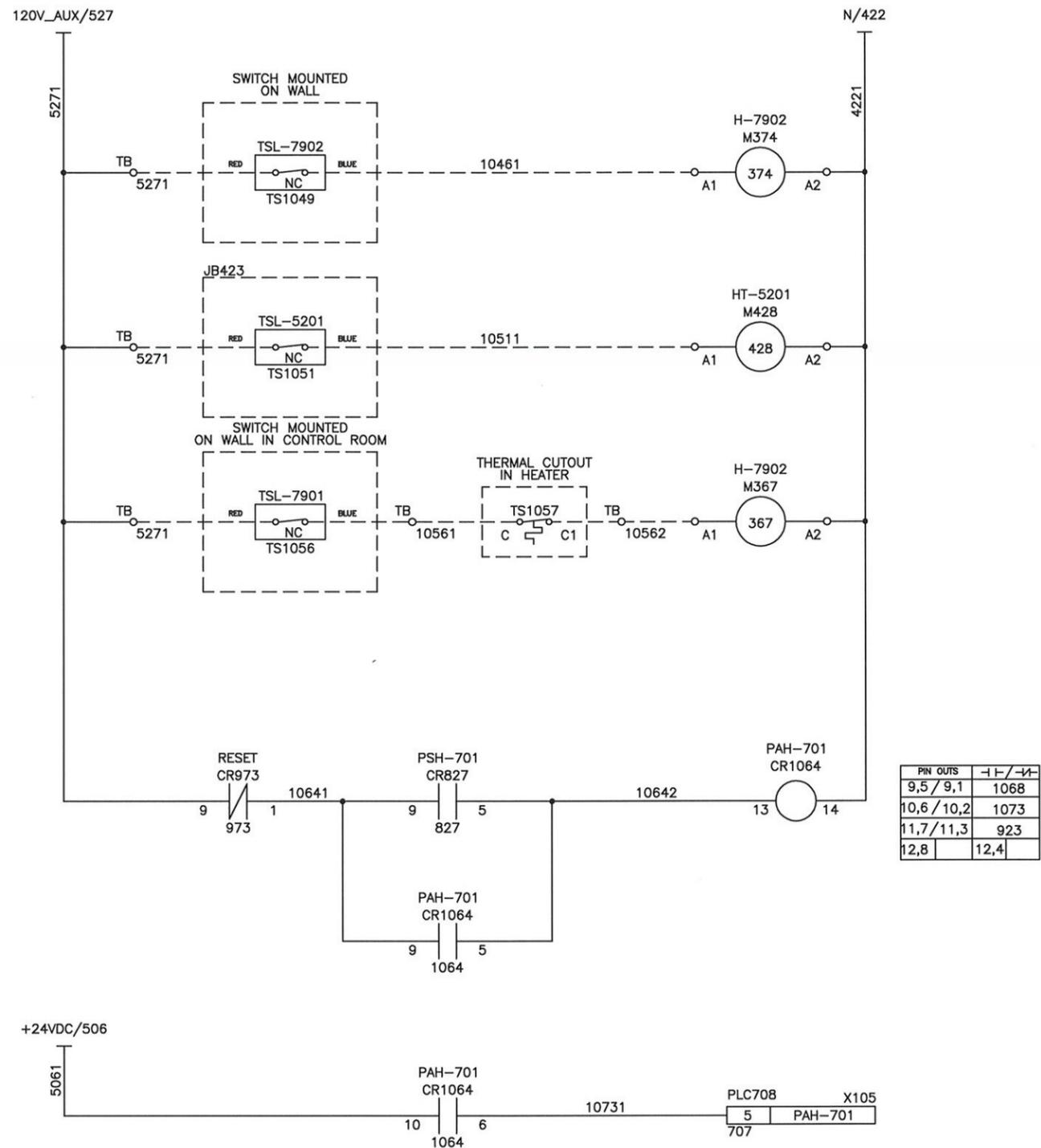
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11,7	11,3		
12,8		12,4	

PIN	OUTS	-I-	-I-
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10,6	10,2		
11,7	11,3		
12,8	1028	12,4	1025

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1077



PIN	OUTS	-I-	-I-
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12,8		12,4	

WIRE LEGEND

BLACK: POWER
RED: CONTROL
WHITE: NEUTRAL
BLUE: +24VDC & I.S. (Intrinsically Safe)
BL/WH: OVDC
YELLOW: INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
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B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	



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PROJECT:
201097
Shell Products - Roxana

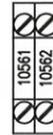
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DRAWING-NO:
JOB-NO:
201097

PAGE:
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FIELD WIRING

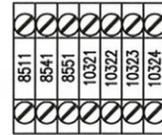
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TSL-7902



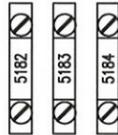
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INPUTS



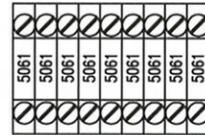
OXIDIZER
INPUTS & OUTPUTS



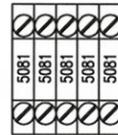
BLDG ESTOP
REMOTE ESTOP



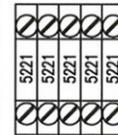
+24 VDC



0 VDC



OUTPUT
POWER



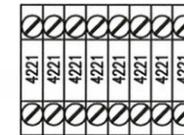
120V AUX



SV-701
SV-3101
SV-3102



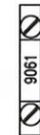
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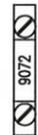
SYSTEM ALARM
RELAY



P-401
THERMS



P-501
THERMS



P-501
THERMS



P-501
THERMS



B-701
THERMS



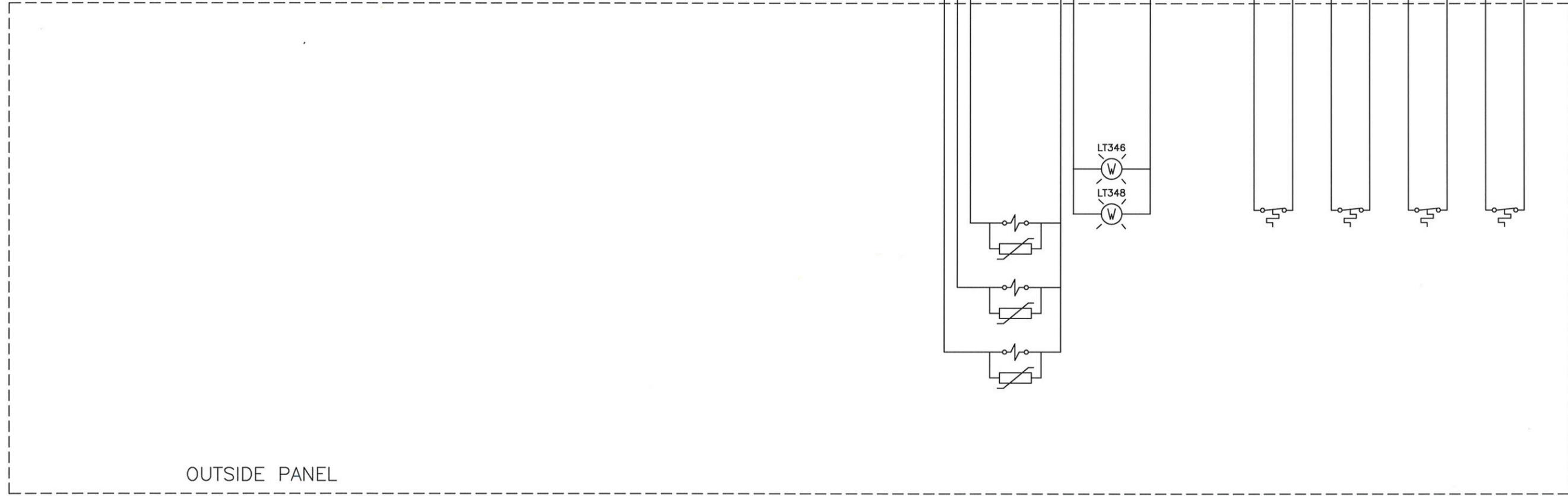
B-701
THERMS



C-3101
THERMS



C-3101
THERMS



OUTSIDE PANEL

WIRE LEGEND

BLACK: POWER
RED: CONTROL
WHITE: NEUTRAL
BLUE: +24VDC & I.S. (Intrinsically Safe)
BL/WH: 0VDC
YELLOW: INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
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B	11/11/11	jwhittle	PRODUCTION

	NAME	DATE
DRAWN	JW	09/11/11
CKD		
APPR		



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PROJECT:
201097
Shell Products - Roxana

PAGE DESCRIPTION
WIRING LAYOUT

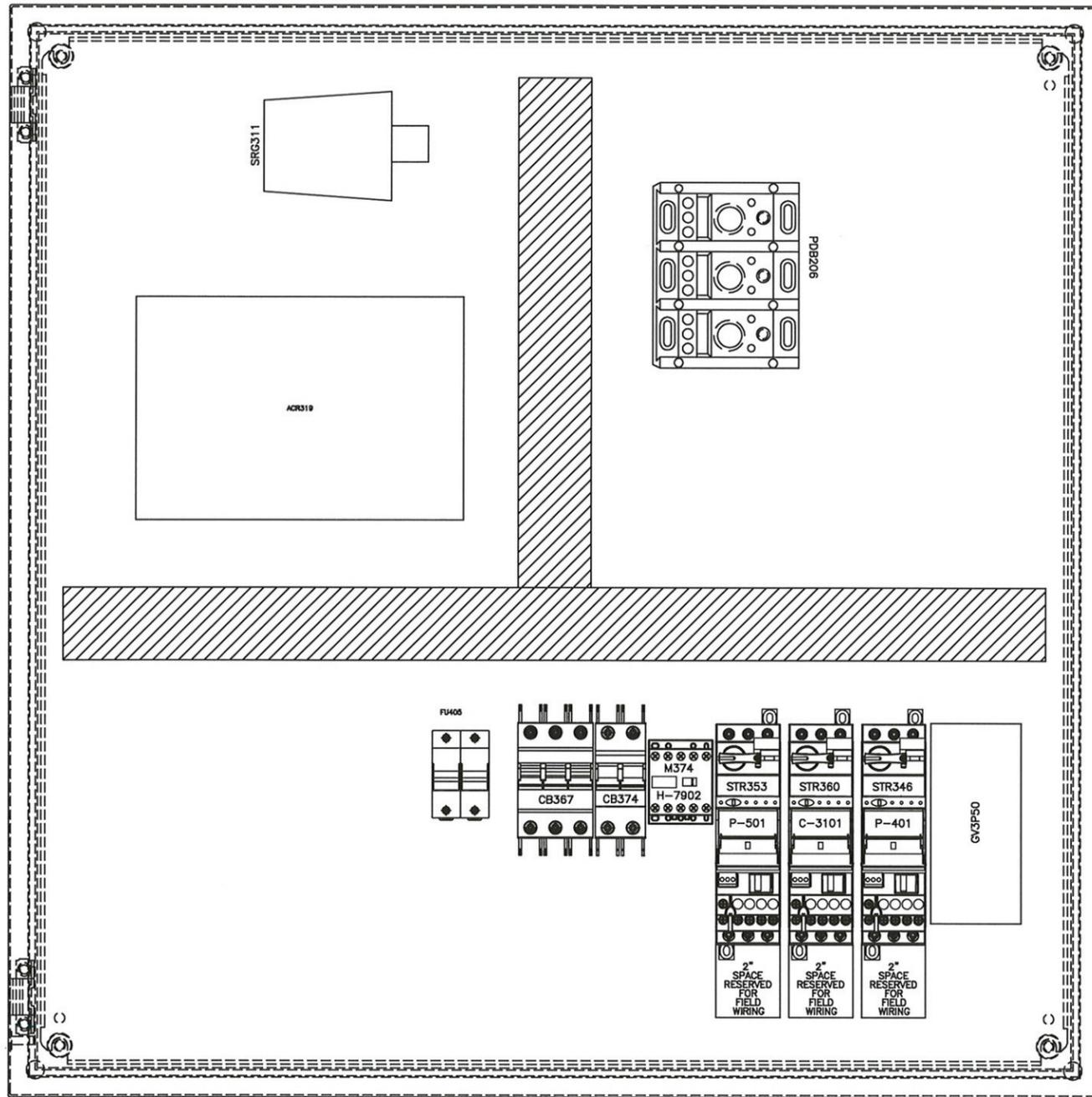
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JOB-NO:
201097

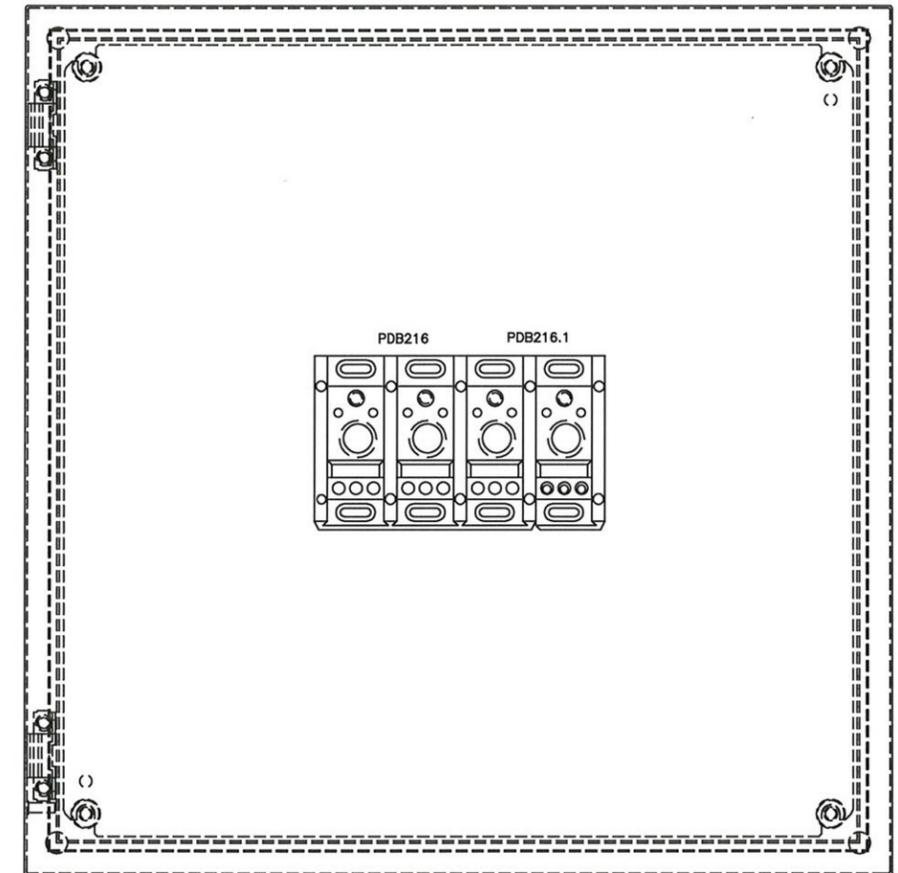
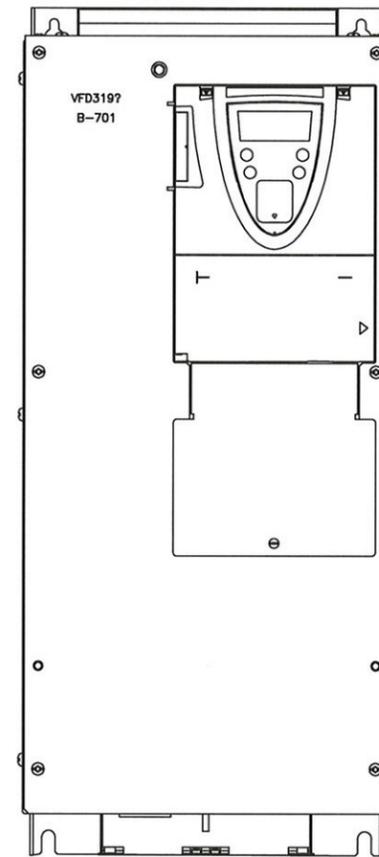
PAGE:
11 OF 13

CAUTION: DISCONNECT THE POWER BEFORE OPENING

WARNING: SYSTEM WILL AUTO RESTART



HEAT TRACE PANEL



NOTE 1: NEMA 4 LOCKABLE PANELS
 NOTE 2: VFD MOUNTED ON CONTROL ROOM WALL

WIRE LEGEND

BLACK:	POWER
RED:	CONTROL
WHITE:	NEUTRAL
BLUE:	+24VDC & I.S.(Intrinsically Safe)
BL/WH:	OVDC
YELLOW:	INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

	NAME	DATE
DRAWN	JW	09/11/11
CKD		
APPR		



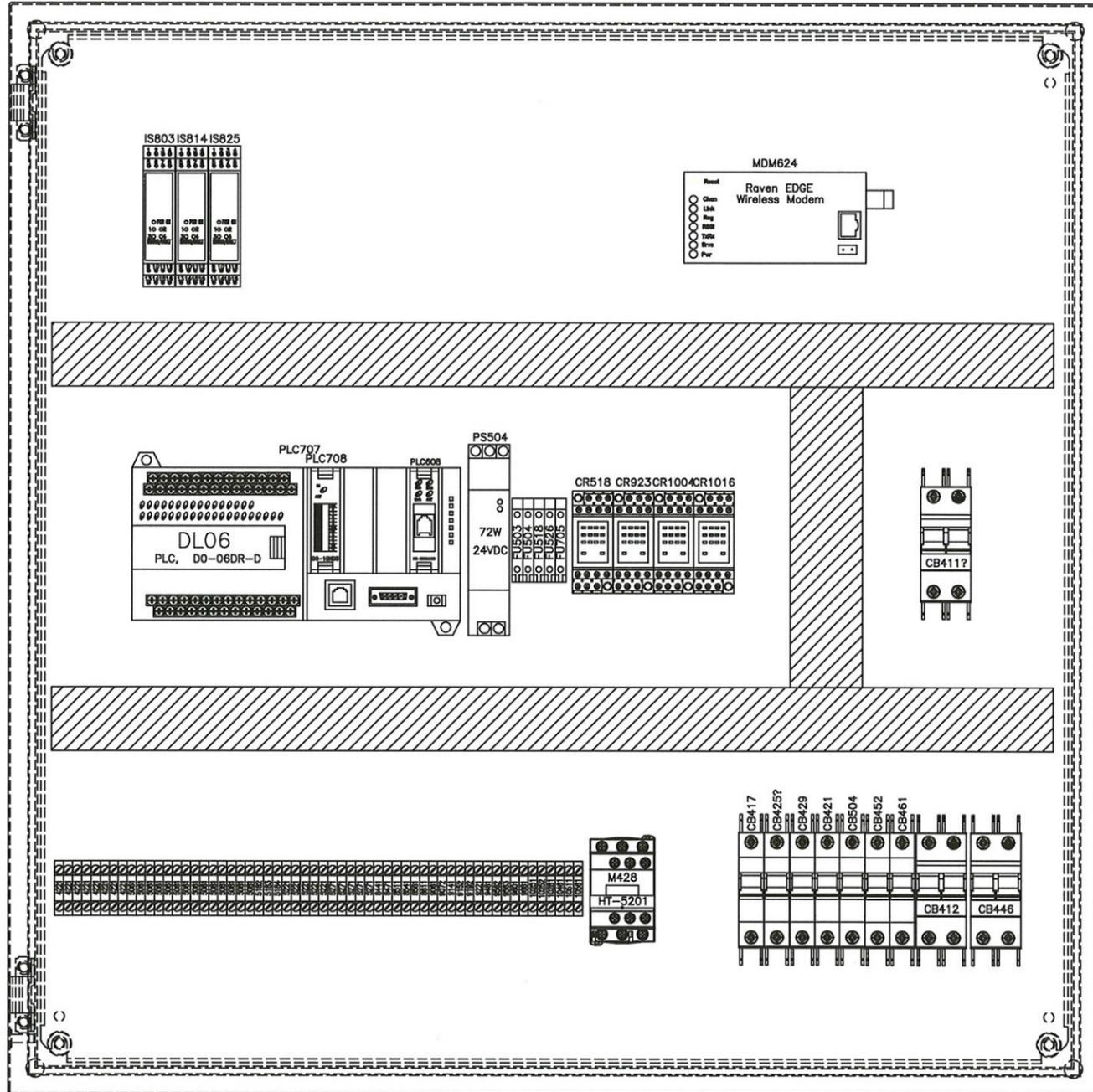
1325 CALIFORNIA AVE.
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PROJECT:
 201097
 Shell Products - Roxana

PAGE DESCRIPTION
 480V PANEL

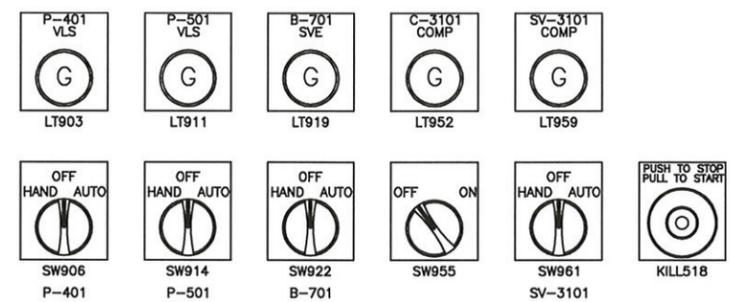
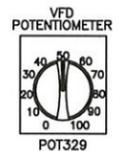
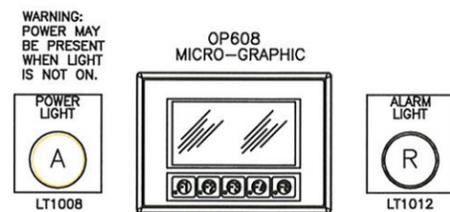
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 JOB-NO:
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PAGE:
 12 OF 13



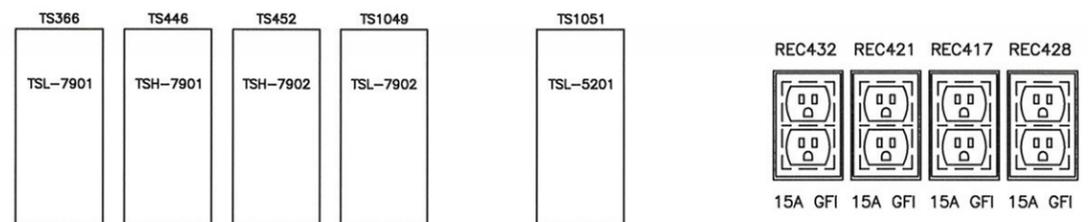
CAUTION: DISCONNECT THE POWER BEFORE OPENING
 WARNING: SYSTEM WILL AUTO RESTART
 WARNING: INSTRINSICALLY SAFE CIRCUITS INSIDE

MOUNT TOUCHSCREEN 60" ABOVE FLOOR



30 X 30

NOTE 1: NEMA 4 LOCKABLE PANELS
 NOTE 2: LIGHTS, SWITCHES AND TOUCHSCREEN MOUNTED ON OUTER PANEL DOOR



WIRE LEGEND

BLACK:	POWER
RED:	CONTROL
WHITE:	NEUTRAL
BLUE:	+24VDC & I.S. (Intrinsically Safe)
BL/WH:	OVDC
YELLOW:	INTERLOCKS

NOTES:

REV	DATE	BY	DESCRIPTION
C	12/12/11	jwhittle	AS BUILT
B2	12/08/11	jwhittle	PAH-701
B	11/11/11	jwhittle	PRODUCTION

NAME	DATE
DRAWN JW	09/11/11
CKD	
APPR	

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PROJECT: 201097 Shell Products - Roxana	DRAWING-NO:
PAGE DESCRIPTION CONTROL PANEL	JOB-NO: 201097
	PAGE: 13 OF 13

SVE System Construction Completion Report
WRR
Roxana, Illinois

APPENDIX C

Anguil As-Built Drawings

TERMINAL POINT SCHEDULE

T.P.	DESCRIPTION	MEDIA	SIZE	CONNECTION	MATERIAL
A	PLENUM INLET	VOC LADEN AIR	28"	FLANGED	CARBON STEEL
B	FUEL INLET	NATURAL GAS	1-1/2"	FNPT	CARBON STEEL
C	COMPRESSED AIR INLET	COMPRESSED AIR	3/4"	FNPT	CARBON STEEL

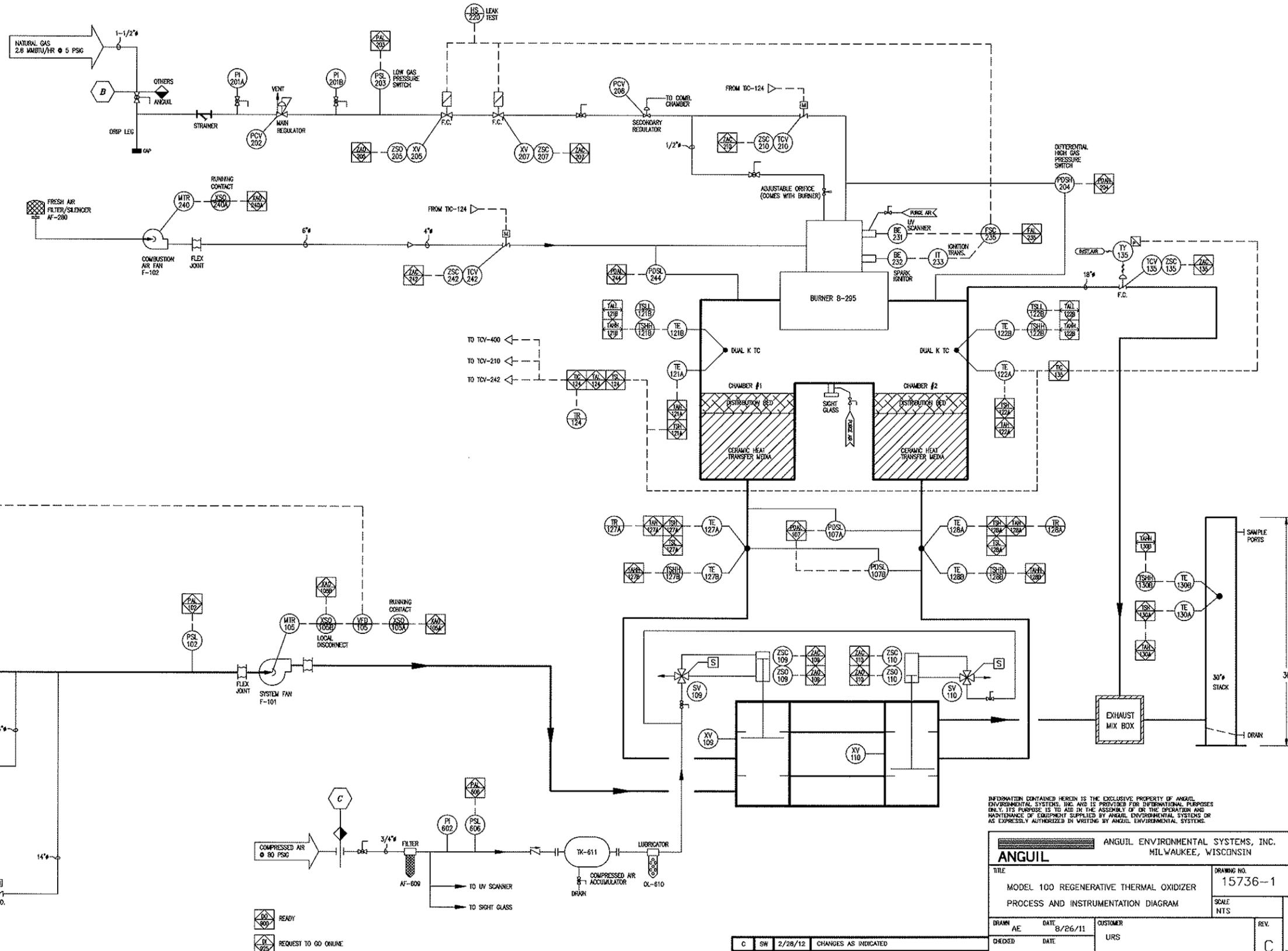
PROCESS DESIGN CONDITIONS

MAXIMUM RTO FLOW	10,000 SCFM
PROCESS FLOW	2,000 SCFM
PROCESS AIR INLET TEMPERATURE	100 °F
MAXIMUM VOC LOADING	10,000 PPMV BENZENE
DESTRUCTION EFFICIENCY	98%
NOMINAL THERMAL EFFICIENCY	95%
STATIC PRESSURE AT TERMINAL POINT A	-1" W.C.

UTILITIES

NATURAL GAS	2800 SCFH @ 5 PSIG
POWER	480V/60Hz/3PH
COMPRESSED AIR	10 CFM @ 80 PSIG MINIMUM (-40 °F DEWPOINT)

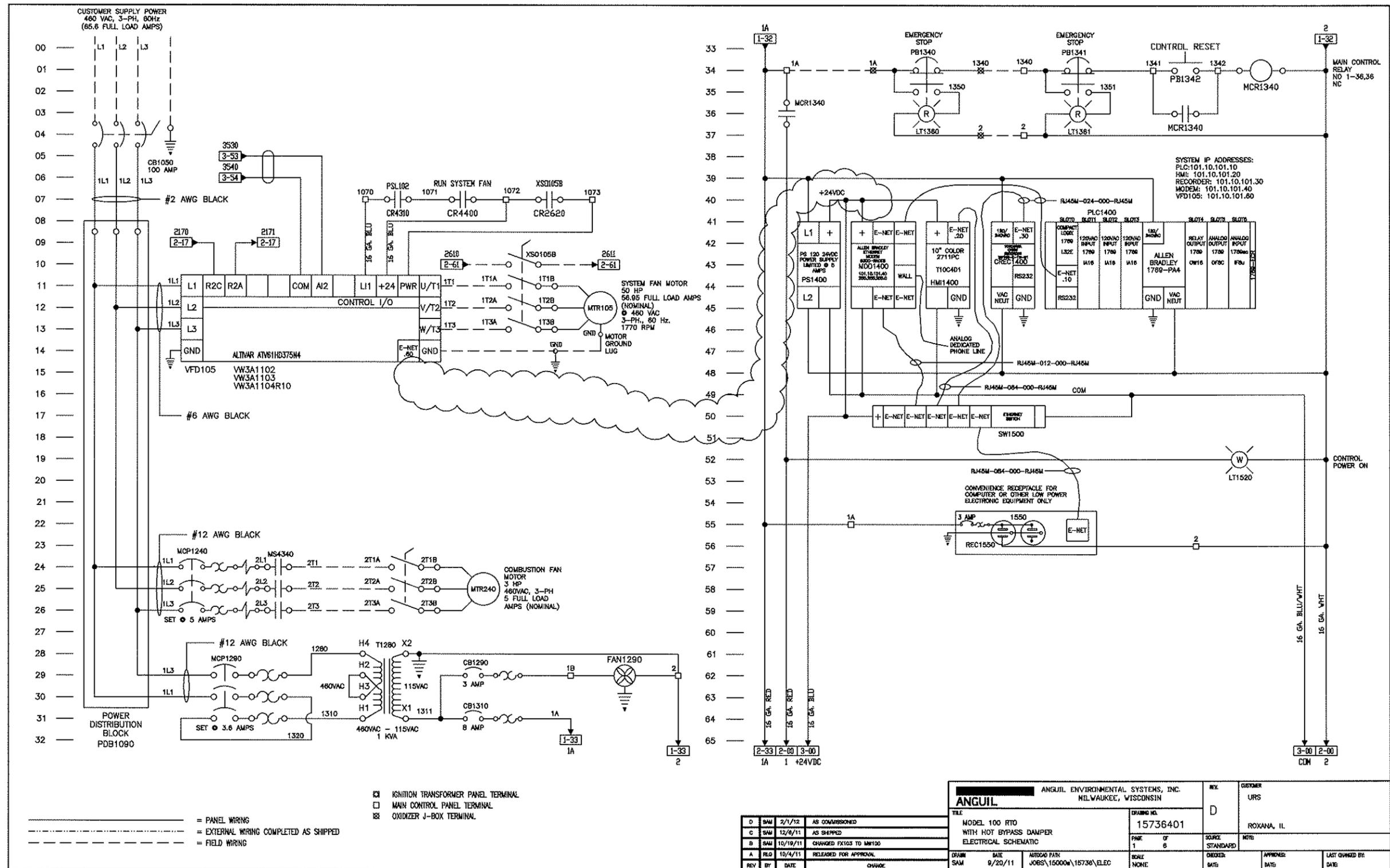
- NOTES:
- 1) OFFLINE BAKEOUT.
 - 2) ALL EXTERNAL INSULATION IS BY OTHERS IF REQUIRED.
 - 3) STACK SUPPORTED LATERALLY BY GUY WIRES.
 - 4) HOT GAS BYPASS VALVE AND EXHAUST MIX BOX ARE INTERNALLY INSULATED.
 - 5) INSULATION OF INLET DUCT RECOMMENDED.

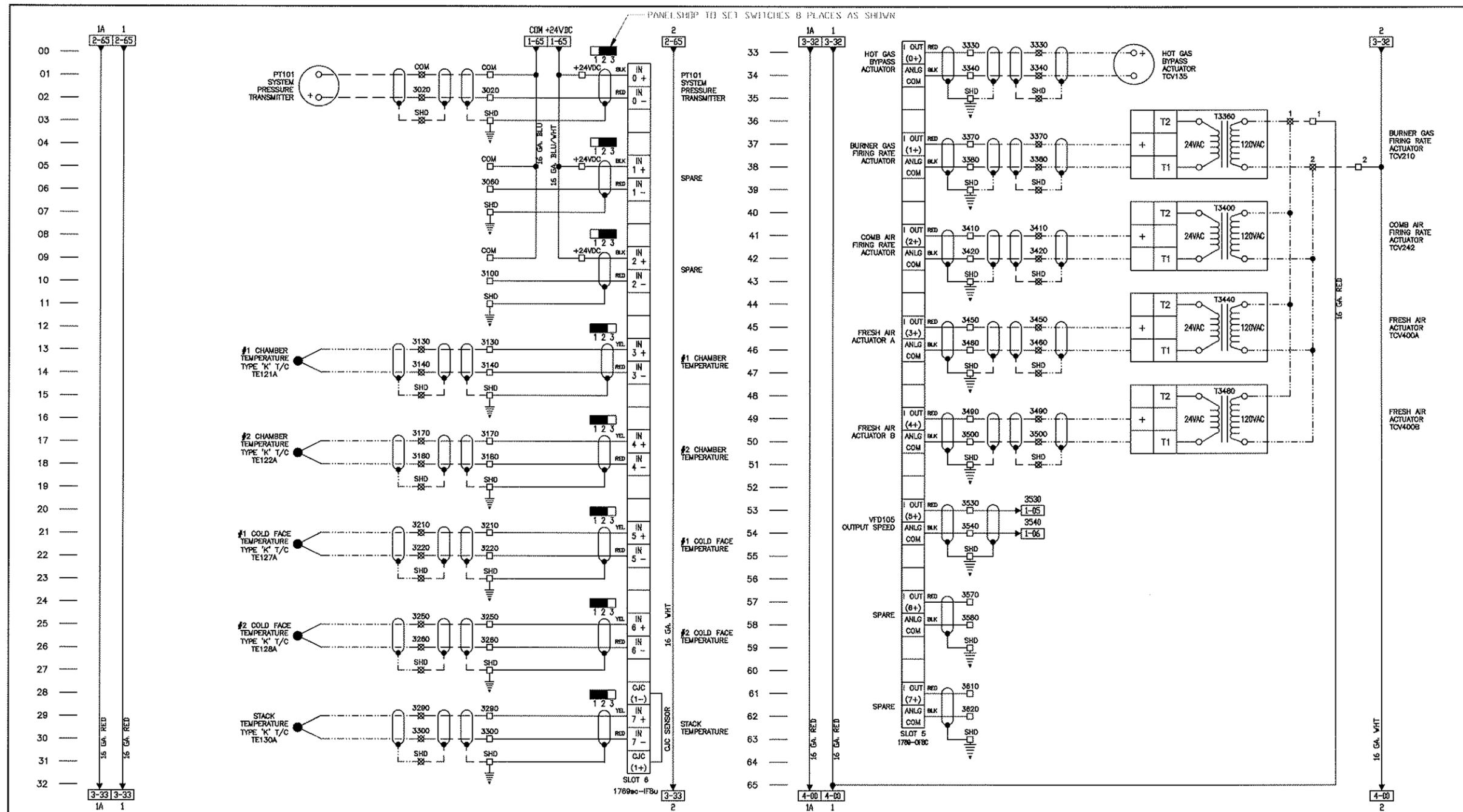


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ANGUIL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN	
ANGUIL	DRAWING NO. 15736-1
MODEL 100 REGENERATIVE THERMAL OXIDIZER PROCESS AND INSTRUMENTATION DIAGRAM	
DRAWN BY: AE	DATE: 8/26/11
CHECKED BY: SAM	DATE: 12/13/11
APPROVED BY: SW	DATE: 9-18-11
LAST DRAWN BY: SW	DATE: 9-18-11
CUSTOMER: URS	REV: C
LOCATION: ROXANA, IL	SOURCE: PAGE 1 OF 1

REV	BY	DATE	CHANGE
C	SW	2/28/12	CHANGES AS INDICATED
B	SAM	12/13/11	CHANGES AS INDICATED
A	SW	9-18-11	CHANGES AS INDICATED



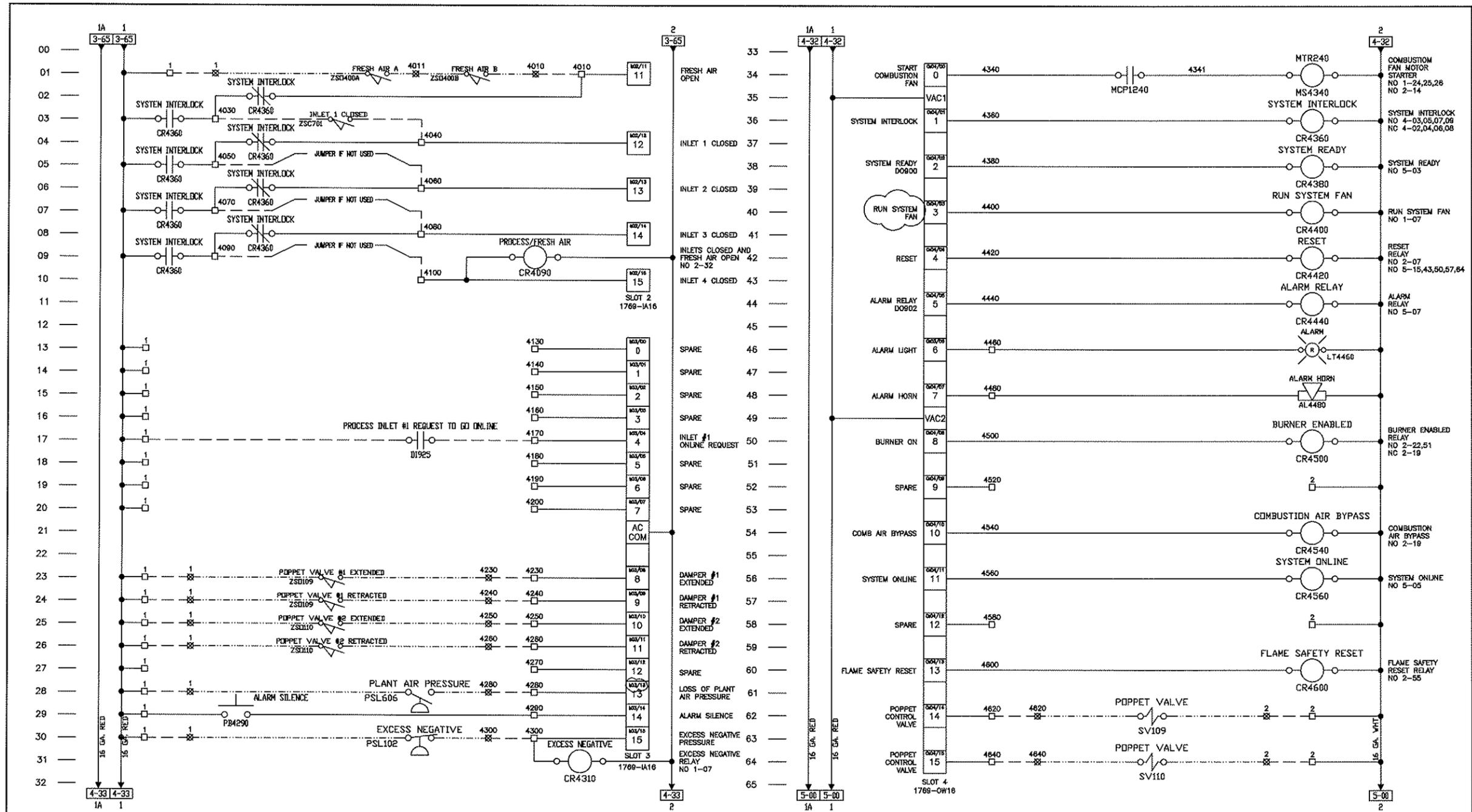


_____ = PANEL WIRING
 - - - - - = EXTERNAL WIRING COMPLETED AS SHIPPED
 - - - - - = FIELD WIRING

- ☒ IGNITION TRANSFORMER PANEL TERMINAL
- ☐ MAIN CONTROL PANEL TERMINAL
- ☒ OXIDIZER J-BOX TERMINAL

REV	BY	DATE	CHANGE
D	SAW	2/1/12	AS COMMISSIONED
C	SAW	12/9/11	AS SHIPPED
B	SAW	10/19/11	CHANGED FX103 TO AM100
A	PLD	10/4/11	RELEASED FOR APPROVAL

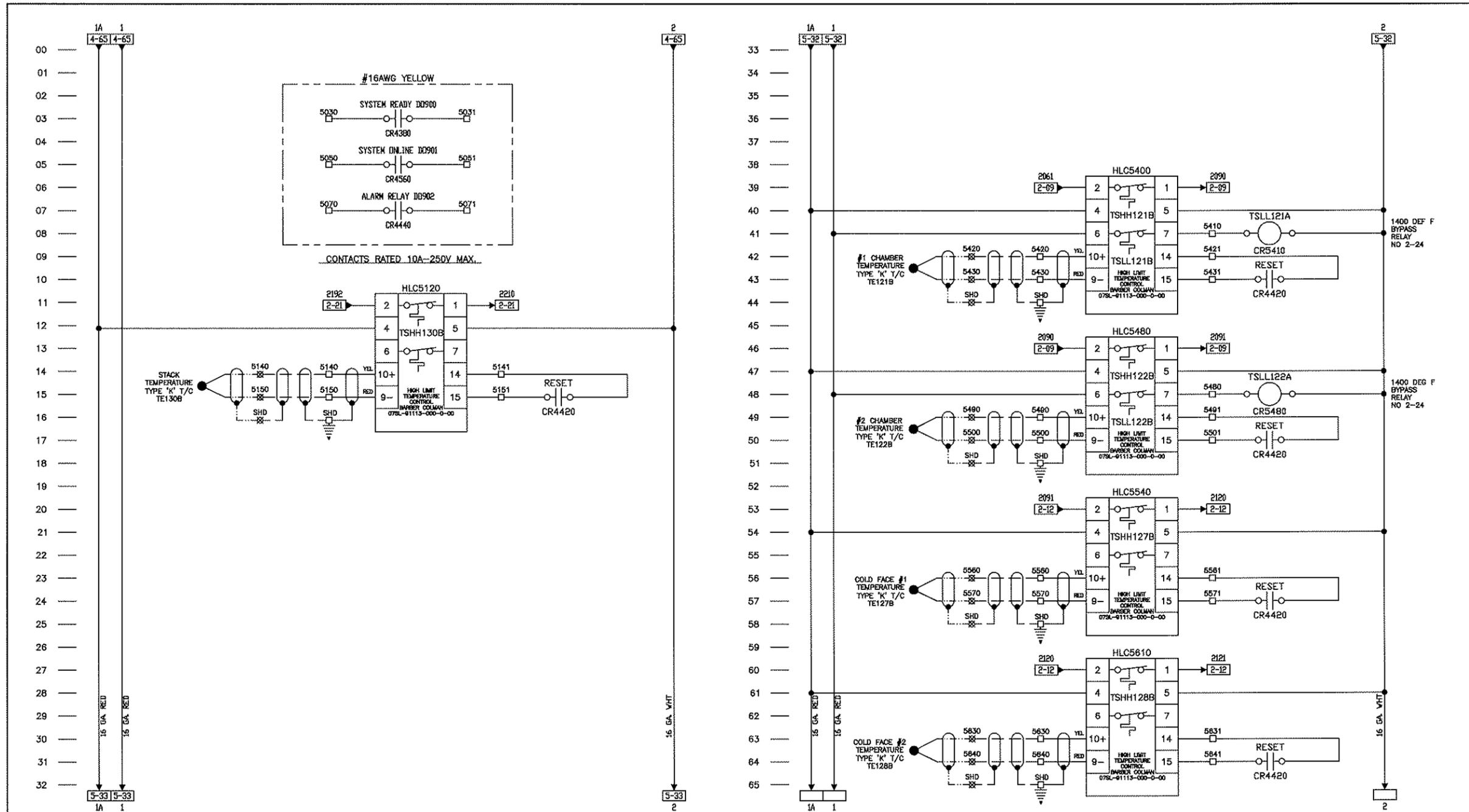
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TITLE MODEL 100 RTO WITH HOT BYPASS DAMPER ELECTRICAL SCHEMATIC	DRAWING NO. 15736403	SOURCE STANDARD NONE
DRAWN SAW	DATE 9/20/11	APPROVED DATE
PROJECT AIRTOX PATH JOBS\15000w\16736\ELEC	SCALE NONE	LAST OWNED BY DATE



[Symbol] IGNITION TRANSFORMER PANEL TERMINAL
 [Symbol] MAIN CONTROL PANEL TERMINAL
 [Symbol] OXIDIZER J-BOX TERMINAL
 _____ = PANEL WIRING
 - - - - - = EXTERNAL WIRING COMPLETED AS SHIPPED
 = FIELD WIRING

D	SAW	2/1/12	AS COMMISSIONED
O	SAW	12/9/11	AS SHIPPED
B	SAW	10/16/11	CHANGED FX103 TO LM100
A	BLG	10/4/11	RELEASED FOR APPROVAL
REV	BY	DATE	CHANGE

ANGUIL ANGUILL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN		REV: D CUSTOMER: URS ROXANA, IL
MODEL 100 RTO WITH HOT BYPASS DAMPER ELECTRICAL SCHEMATIC	DRAWING NO. 15736404	SOURCE STANDARD: NONE APPROVAL: NONE DATE:
DRAWN: SAW DATE: 9/20/11	APPROVAL: ARROD FAH JOBS\150004\15736\ELEC	SCALE: NONE DATE:
LAST CHANGED BY:		DATE:

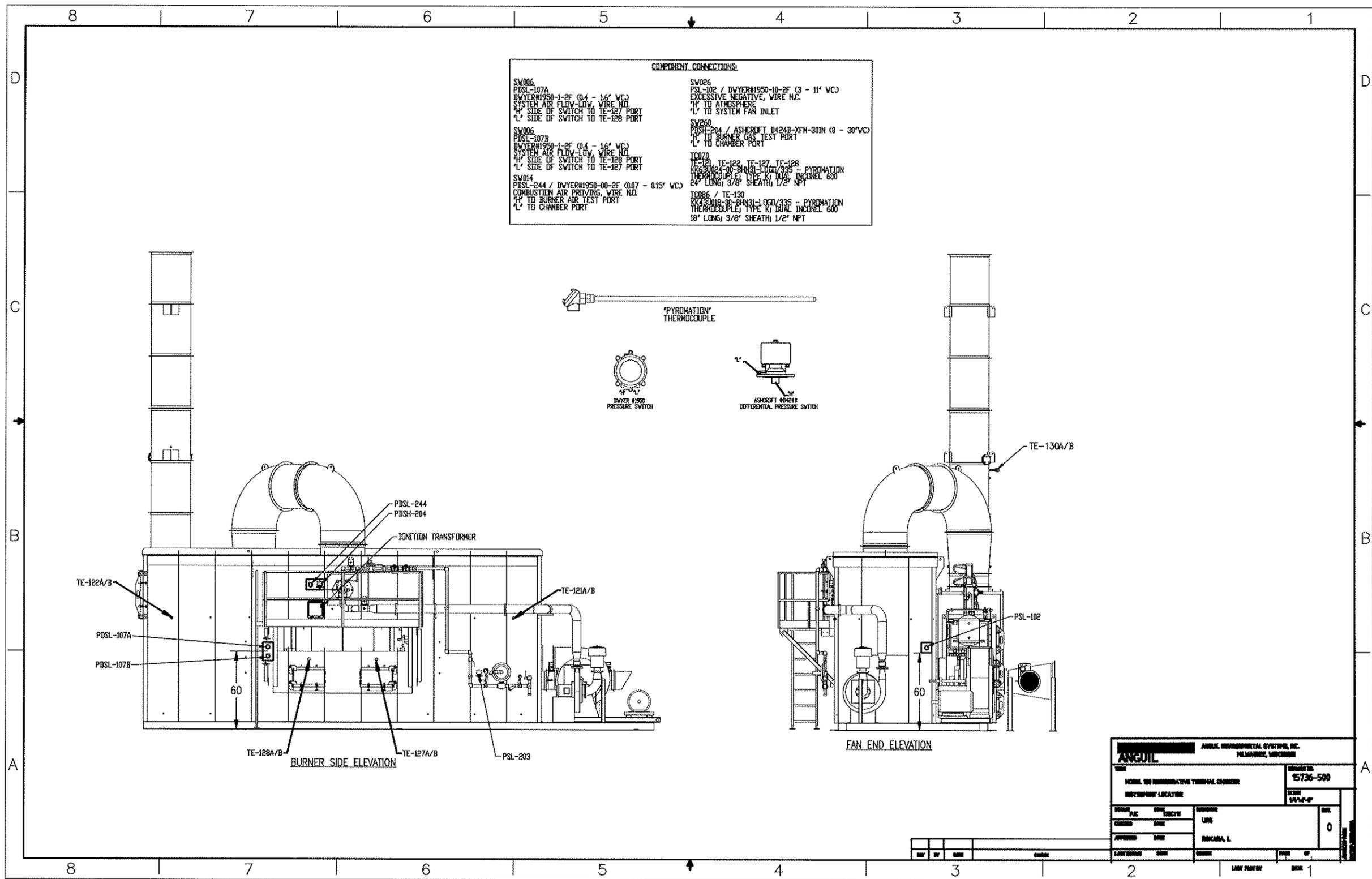


_____ = PANEL WIRING
 - - - - - = EXTERNAL WIRING COMPLETED AS SHIPPED
 - - - - - = FIELD WIRING

☒ IGNITION TRANSFORMER PANEL TERMINAL
 ☐ MAIN CONTROL PANEL TERMINAL
 ☒ OXIDIZER J-BOX TERMINAL

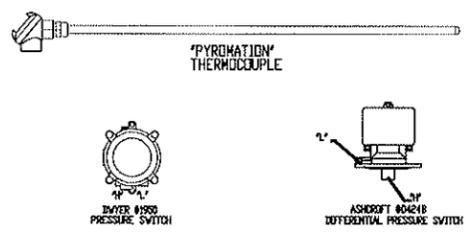
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C	SAW	12/6/11	AS SHIPPED
B	SAW	10/18/11	CHANGED FX103 TO WMT00
A	RLD	10/4/11	RELEASED FOR APPROVAL

ANGUIL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN		REV. D CUSTOMER URS ROXANA, IL.
TITLE MODEL 100 RTO WITH HOT BYPASS DAMPER ELECTRICAL SCHEMATIC	DRAWING NO. 15736405	PAGE OF 5 OF 8
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CHECKED NONE	DATE	APPROVED NONE
LAST CHECKED BY NONE	DATE	APPROVED NONE

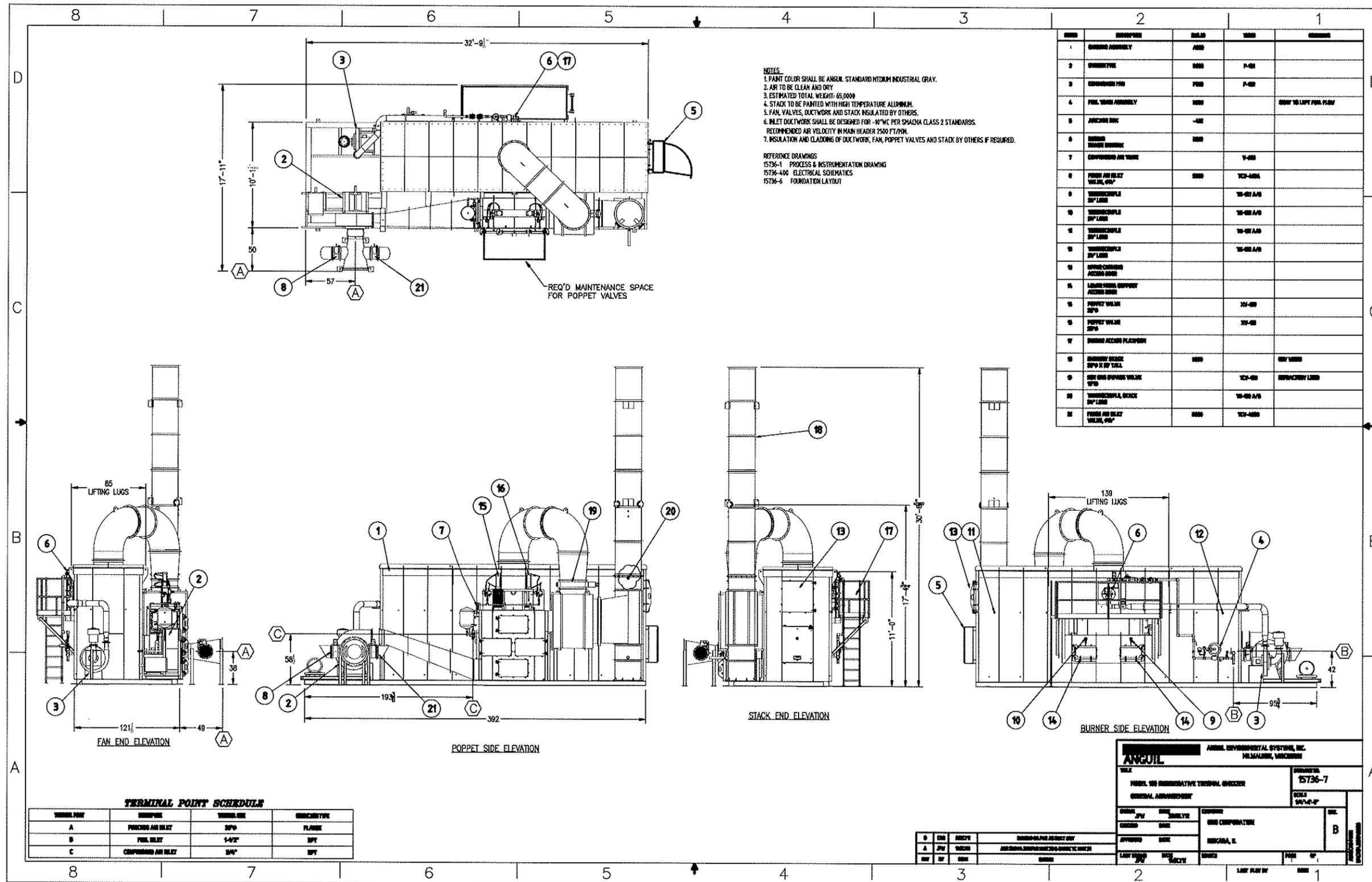


COMPONENT CONNECTIONS:

SW006 PDSL-107A DWYER1950-1-2F (0.4 - 1.6" WC) SYSTEM AIR FLOW-LOW, WIRE NO. 4" SIDE OF SWITCH TO TE-127 PORT 4" SIDE OF SWITCH TO TE-128 PORT	SW008 PDSL-107B DWYER1950-1-2F (0.4 - 1.6" WC) SYSTEM AIR FLOW-LOW, WIRE NO. 4" SIDE OF SWITCH TO TE-128 PORT 4" SIDE OF SWITCH TO TE-127 PORT	SW004 PDSL-244 / DWYER1950-00-2F (0.07 - 0.15" WC) COMBUSTION AIR PRESSING, WIRE NO. 4" TO BURNER AIR TEST PORT 4" TO CHAMBER PORT	SW026 PSL-102 / DWYER1950-10-2F (3 - 11" WC) EXCESSIVE NEGATIVE, WIRE N.C. 4" TO ATMOSPHERE 4" TO SYSTEM FAN INLET	SW260 PDSH-204 / ASHROFT 8421B-YFH-30IN (0 - 30" WC) 4" TO BURNER GAS TEST PORT 4" TO CHAMBER PORT
TC070 TE-121, TE-122, TE-127, TE-128 KJG-3024-00-BUNG-1101/335 - PYRAMATION THERMOCOUPLE, TYPE KJ, DIA. INCONEL 600 24" LONG, 3/8" SHEATH 1/2" NPT		TC086 / TE-130 KJG-3018-00-BUNG-1-LOGO/335 - PYRAMATION THERMOCOUPLE, TYPE KJ, DIA. INCONEL 600 18" LONG, 3/8" SHEATH 1/2" NPT		



ANGUIL		ANGUIL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN	
MODEL: 800 IMMEDIATE-TIME THERMAL CHAMBER		REVISION: 15736-500	
DESIGNER: [blank]		DATE: 5/14/87	
DATE: [blank]	BY: [blank]	CHECKED: [blank]	APP.:
APPROVED: [blank]	DATE: [blank]	REVISION: [blank]	0
LAST DRAWN: [blank]	DATE: [blank]	DATE: [blank]	FIG. OF: [blank]
REV:	BY:	DATE:	DESCRIPTION:



NOTES
 1. PAINT COLOR SHALL BE ANGUIL STANDARD MEDIUM INDUSTRIAL GRAY.
 2. AIR TO BE CLEAN AND DRY.
 3. ESTIMATED TOTAL WEIGHT: 65,000#
 4. STACK TO BE PAINTED WITH HIGH TEMPERATURE ALUMINUM.
 5. FAN, VALVES, DUCTWORK AND STACK INSULATED BY OTHERS.
 6. INLET DUCTWORK SHALL BE DESIGNED FOR -14°C PER SHAKNA CLASS 2 STANDARDS.
 7. INSULATION AND CLADDING OF DUCTWORK, FAN, POPPET VALVES AND STACK BY OTHERS IF REQUIRED.

REFERENCE DRAWINGS
 15736-1 PROCESS & INSTRUMENTATION DRAWING
 15736-400 ELECTRICAL SCHEMATICS
 15736-6 FOUNDATION LAYOUT

ITEM	DESCRIPTION	QTY	UNIT	REMARKS
1	GRASSHOPPER	1	ASSEMBLY	
2	GRASSHOPPER	1	ASSEMBLY	
3	GRASSHOPPER	1	ASSEMBLY	
4	FUEL VALVE ASSEMBLY	1	ASSEMBLY	SHOW 180° LEFT FUEL FLOW
5	GRASSHOPPER	1	ASSEMBLY	
6	GRASSHOPPER	1	ASSEMBLY	
7	GRASSHOPPER	1	ASSEMBLY	
8	FUEL AIR BLEED VALVE, 1/2"	1	VALVE	
9	TERMINAL POINT	1	FLANGE	
10	TERMINAL POINT	1	FLANGE	
11	TERMINAL POINT	1	FLANGE	
12	TERMINAL POINT	1	FLANGE	
13	TERMINAL POINT	1	FLANGE	
14	TERMINAL POINT	1	FLANGE	
15	GRASSHOPPER	1	ASSEMBLY	
16	GRASSHOPPER	1	ASSEMBLY	
17	GRASSHOPPER	1	ASSEMBLY	
18	GRASSHOPPER	1	ASSEMBLY	
19	GRASSHOPPER	1	ASSEMBLY	
20	GRASSHOPPER	1	ASSEMBLY	
21	GRASSHOPPER	1	ASSEMBLY	

TERMINAL POINT SCHEDULE

TERMINAL POINT	DESCRIPTION	TERMINAL SIZE	ORIENTATION
A	FUEL AIR BLEED	1/2"	FLANGE
B	FUEL BLEED	1/2"	SPY
C	COMPRESSED AIR BLEED	1/2"	SPY

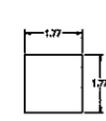
ANGUIL ANGUIL ENVIRONMENTAL SYSTEMS, INC.
 MILWAUKEE, WISCONSIN

PROJECT: 15736-7
 TITLE: FUEL AIR BLEED VALVE, 1/2"

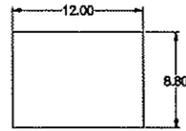
DATE: 10/14/87

DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 DRAWN BY: [Signature]

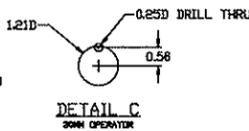
NO.	REV.	DATE	DESCRIPTION
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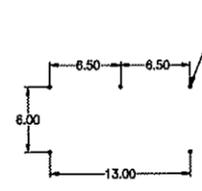
DETAIL A
BAKERS CONTROL
0721-8113-000-00



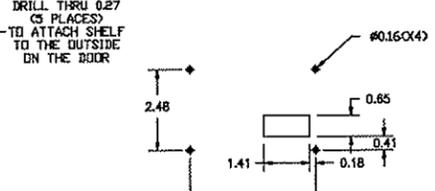
DETAIL B
AIR PANELVIEW COMPACT
1000



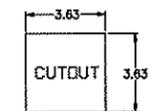
DETAIL C
SMM OPERATOR



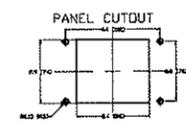
DETAIL D
HEFFMAN
A-15417389



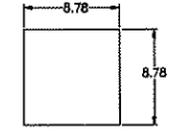
DETAIL E
BT 2 DISPLAY MODULE



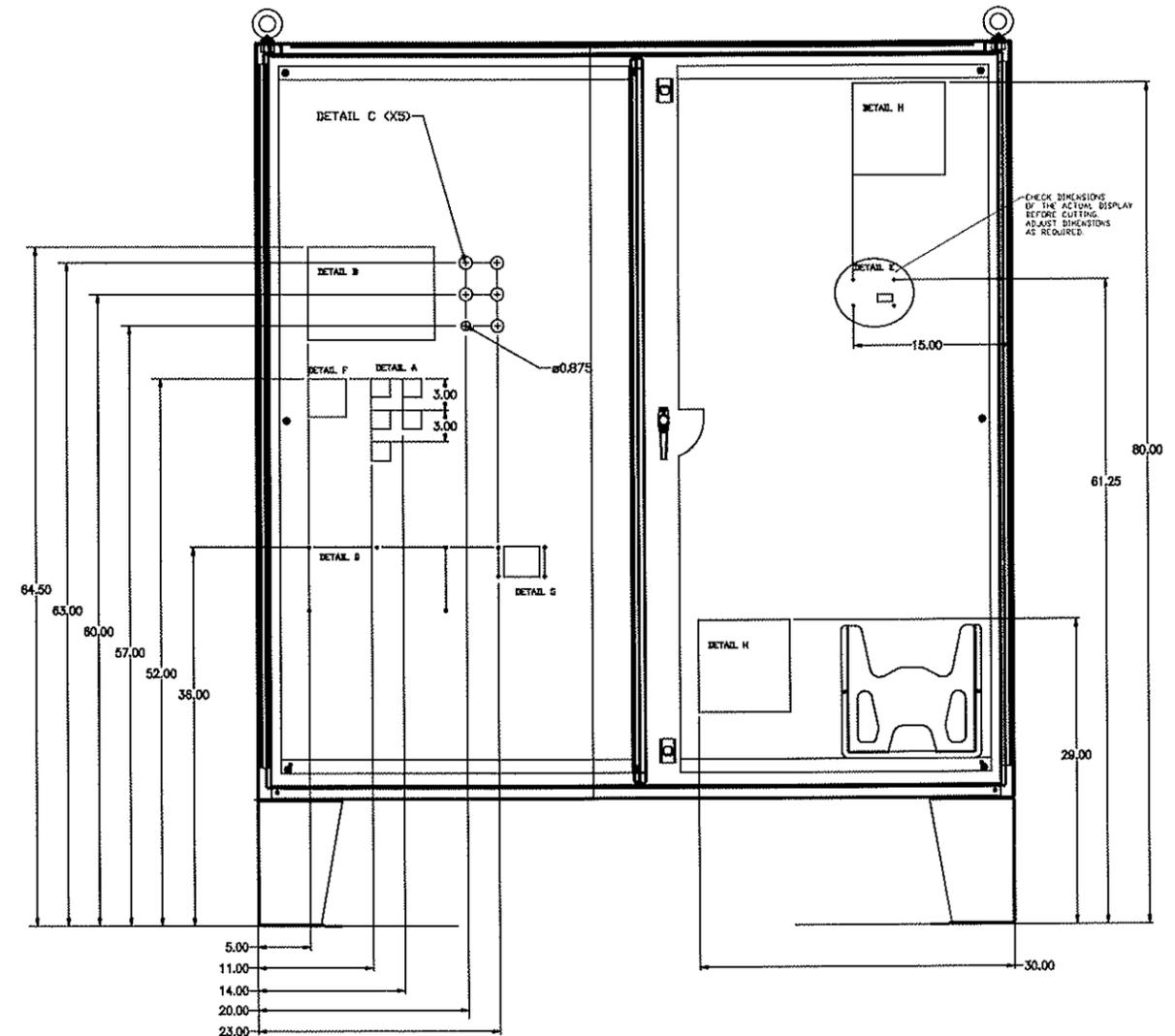
DETAIL F
FIREX
FLAME CONTROL



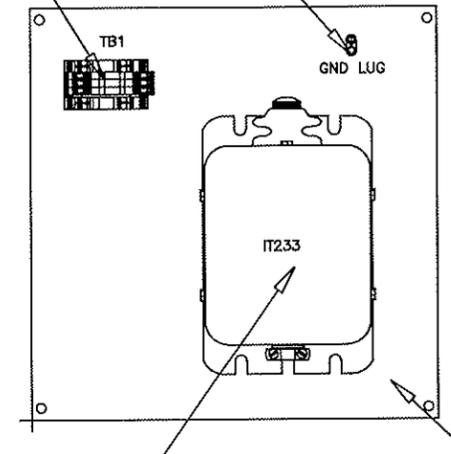
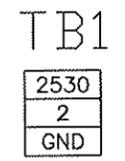
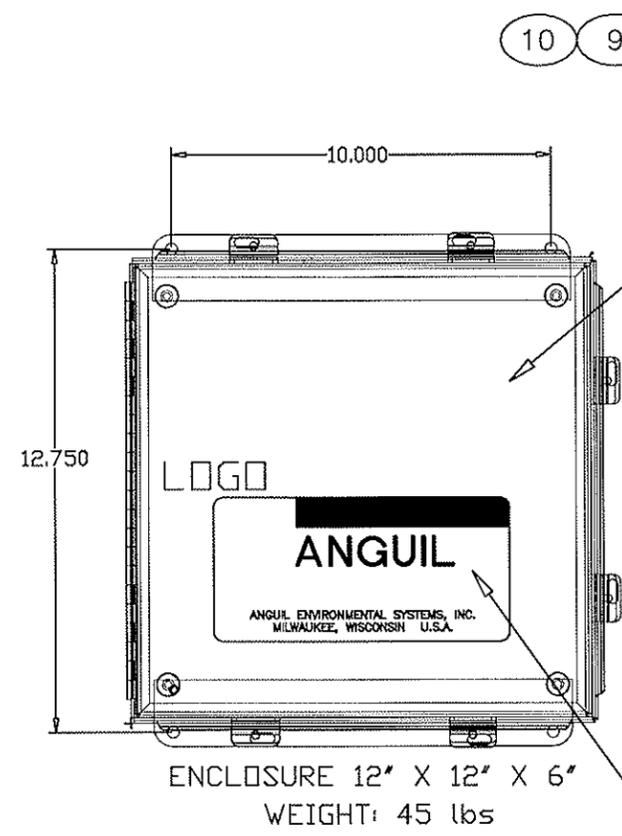
DETAIL G
GRACE ENGINEERING
P-NE-12876



DETAIL H
RYTAL FILTER FAN
P/N 184110



ANGUIL		ANGUIL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN		REV	CUSTOMER
TITLE MODEL 100 RTD MAIN CONTROL PANEL CUTOUT DETAILS		DRAWING NO. 15736452		ROXANA, IL	
DATE 10/4/11	SCALE NONE	PROJECT AURORA PLANT JOB# 156000A/15736452	SCALE NONE	STANDARD NONE	APPROVAL DATE
REV	BY	DATE	DESCRIPTION	DATE	USER



BILL OF MATERIAL					
ITEM	QTY	SYMBOL	DESCRIPTION	CATALOG NO.	MFG.
1	1	IT233	IGNITION TRANSFORMER, 120V, 60HZ	A06-SA6	DONGAN
2	1	LOGO	ANGUIL LOGO, NAME PLATE	LOGO	ANGUIL
3	1		ENCLOSURE, 12" X 12" X 6"	A1212CHNF	HOFFMAN
4	1		SUB PANEL, 10.75" X 10.88"	A12P12	HOFFMAN
5	1	GND LUG	GROUND LUG	L70	NSI
6	A/R		MOUNTING RAIL, DIN	98.300.1000	WIELAND
7	3	TB1	TERMINAL BLOCK	1492-J3	AB
8	1	TB1	END BARRIER, TERMINAL BLOCK	1492-EBJ3	AB
9	2	TB1	END ANCHOR, TERMINAL BLOCK	1492-EAJ35	AB
10	6	TB1	MARKER CARD	1492-MSX12-ENG	BRADY
11	1		TORQUE LABEL	THT-19-435-1-PR	BRADY
12	3		ID LABEL	THT-5-435-10-PR	BRADY
13	6		WIREMARKERS	THT-68-499-10-PR	BRADY

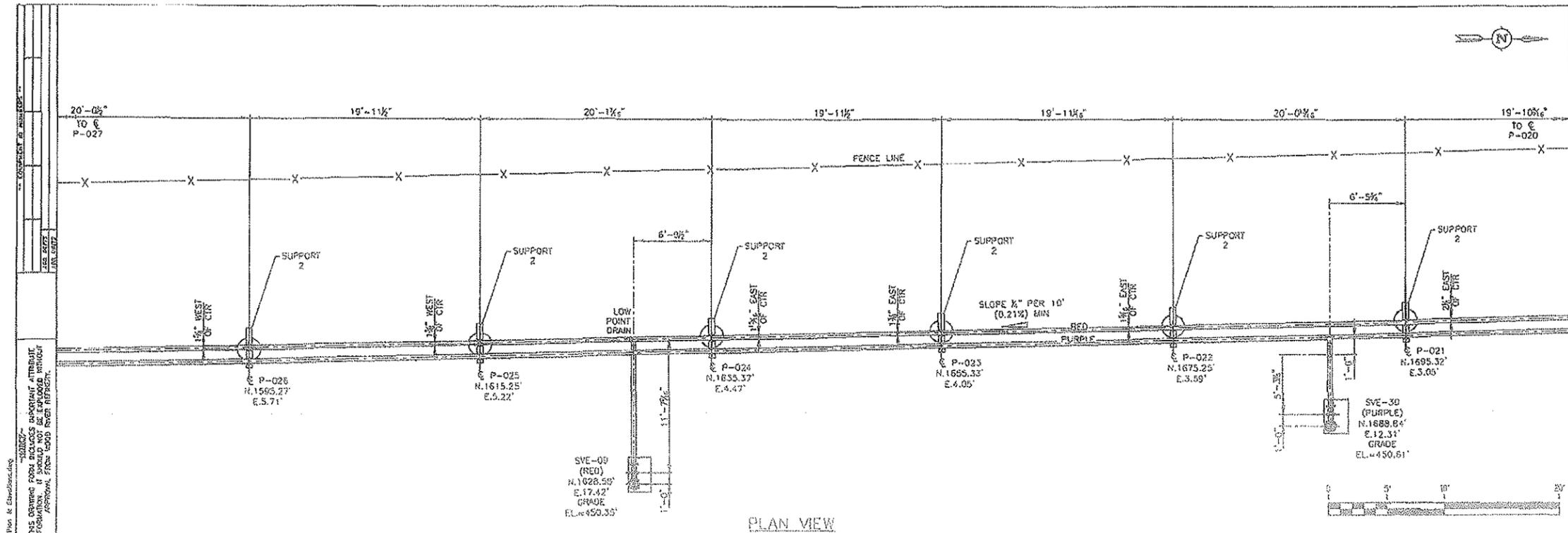
PART ID	MANUFACTURER	PART NUMBER	TORQUE (LB-IN)	WIRE TEMP (DEG C)
TB1	AB	1492-J3	4.5-7.1	60
GND LUG	NSI	L70	45 (4-6 GA)	60
GND LUG	NSI	L70	40 (8 GA)	60
GND LUG	NSI	L70	35 (10-14 GA)	60

ANGUIL ENVIRONMENTAL SYSTEMS, INC. MILWAUKEE, WISCONSIN		REV	CUSTOMER
MODEL 100 RTO IGNITION TRANSFORMER CONTROL PANEL ENCLOSURE DETAILS & BOM		DRAWING NO. 15736455	CUSTOMER URS ROXANA, IL.
DRAWN RLG	DATE 10/4/11	APPROVED FOR JOBS\15000\15736\CLED	CHECKED DATE
REV BY DATE	CHANGE	SCALE NONE	APPROVED DATE LAST CHECKED BY DATE

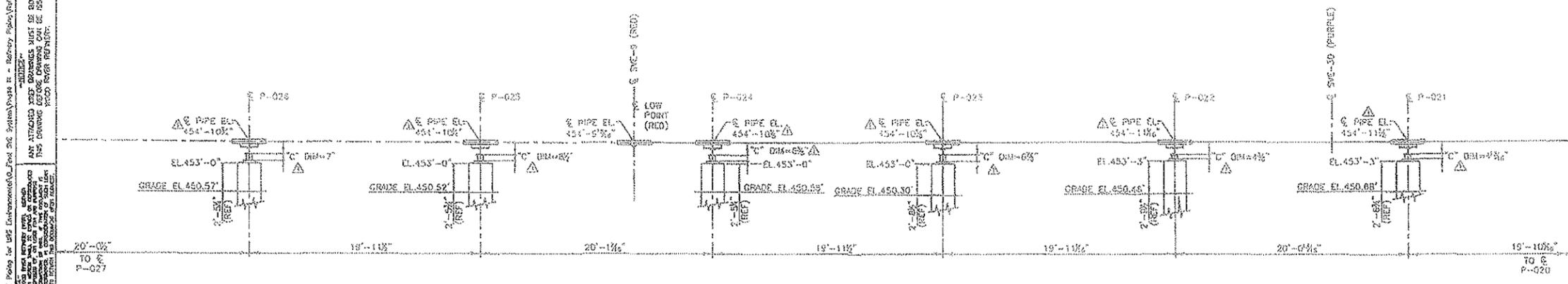
SVE System Construction Completion Report
WRR
Roxana, Illinois

APPENDIX D

Gross Mechanical As-Built Drawings



PLAN VIEW



ELEVATION VIEW
(LOOKING WEST)

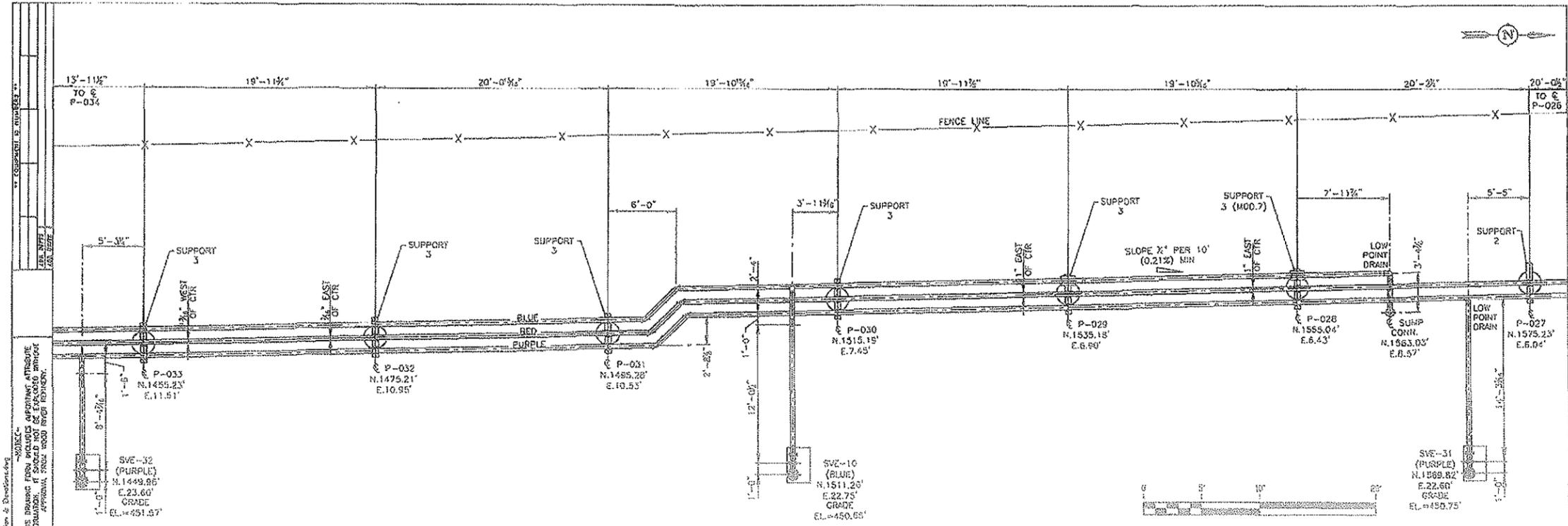
W.P. 0000-01-003
 RE-ISSUED FOR CONSTRUCTION
 BUL#000-3019 DATE: 12/02/2011

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 URS
 ANY ATTACHED XREF DRAWINGS MUST BE REVIEWED TO THIS DRAWING BEFORE ANY CHANGES ARE MADE TO THIS DRAWING. CHANGES TO THIS DRAWING SHOULD BE APPROVED BY THE DESIGNER AND TO WHOM THE DRAWING IS ISSUED.
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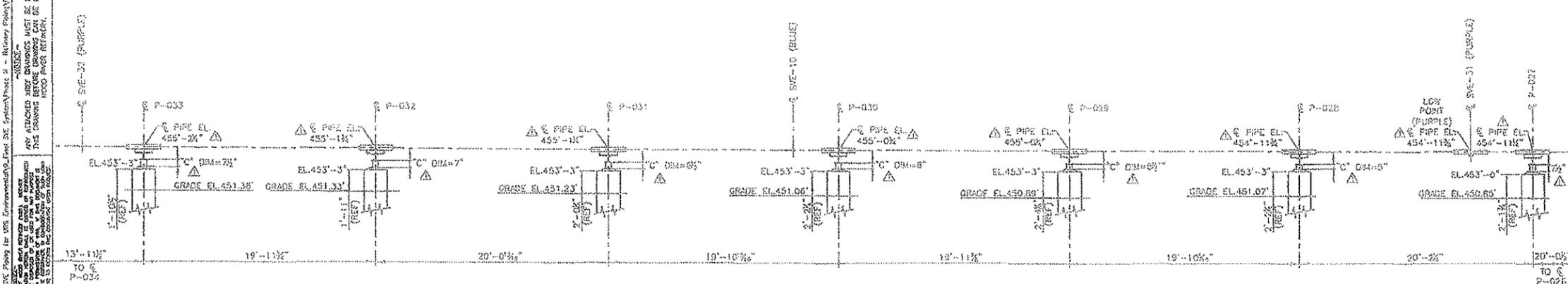
REFERENCE DRAWINGS		*CAD DRAWING DO NOT REVISE MANUALLY*				SHEET APP.		WOOD RIVER		Wood River Refinery		LINGS		MASTER DRAWING		
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3001	9/19/11	ISSUED FOR EDS	A	JAB												
3001	10/24/11	ISSUED FOR CONSTRUCTION	0	JAB												
3001	10/31/11	REVISED AS MARKED / RE-ISSUED FOR CONSTRUCTION	1	JAB												
3001	12/2/11	GENERAL REVISION - RE-ISSUED FOR CONSTRUCTION	2	JAB												



SCALE:
 SHEET 2 OF 16
 SVE-3-013 2



PLAN VIEW



ELEVATION VIEW
(LOOKING WEST)

12/2/2011 11:25 AM
 C:\Documents and Settings\jld\My Documents\WoodRiver\Phase II - Refinery Piping\Victory Piping Plan & Elevation.dwg
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REFERENCE DRAWINGS

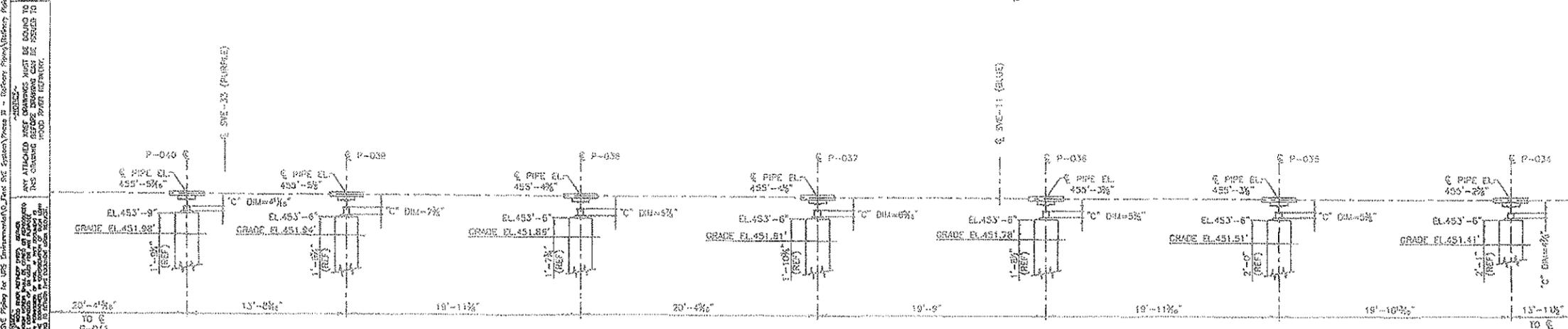
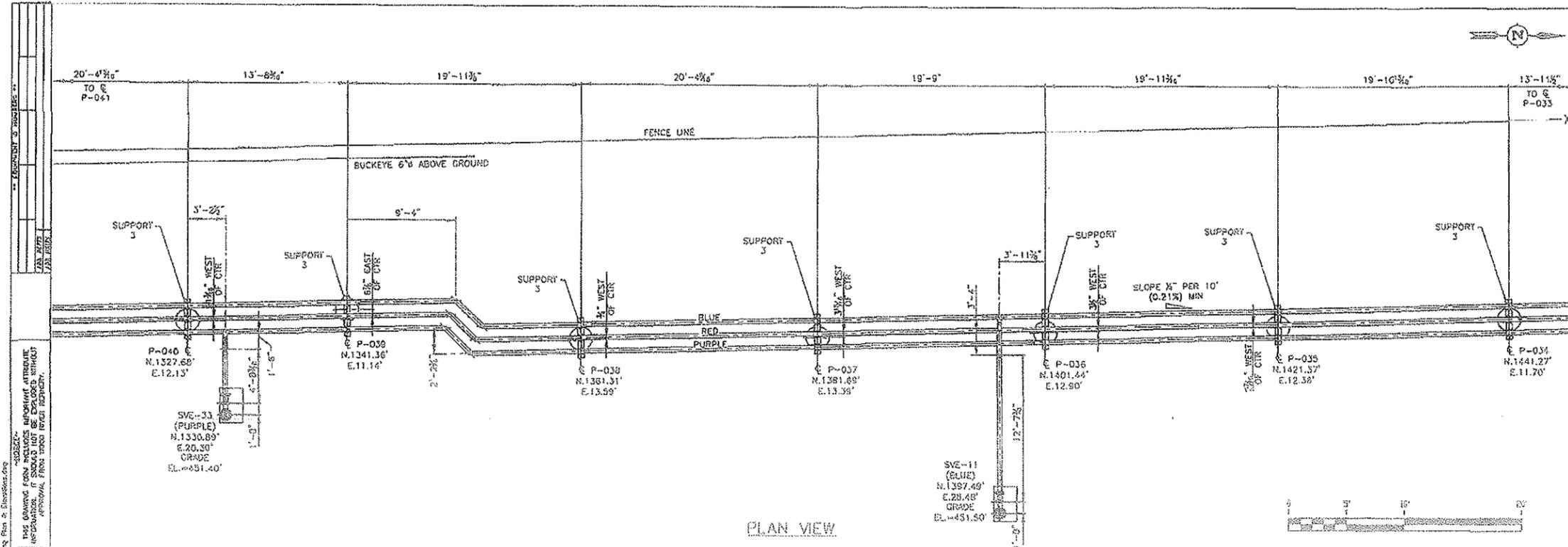
NO.	DATE	REVISION

NO. 430 DRAWING DO NOT REVISE MANUALLY

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3002	10/24/11	ISSUED FOR CONSTRUCTION	D	JAB/PBW			
3003	11/21/11	REVISED AS MARKED (A) - RE-ISSUED FOR CONSTRUCTION	1	JAB/PBW			
3004	12/2/11	GENERAL REVISION - RE-ISSUED FOR CONSTRUCTION	2	JAB/PBW			

Wood River Refinery		MASTER DRAWING YES/NO
SHELL OIL PRODUCTS, US - ROCKAWAY, IL PROJECT PHASE II - REFINERY PIPING PLANS & ELEVATIONS PIPING ON PIERS NO. P-027 THRU P-033		SCALE: AS SHOWN
SHEET 5 OF 14 REV. 2		DATE: 12/2/2011

W.P. 0000-01-003
 RE-ISSUED FOR CONSTRUCTION
 BUL#000-3019 DATE:12/02/2011



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NOT TO SCALE

DATE: 12/2/2011

SCALE: 1" = 10'



REFERENCE DRAWINGS

NO.	DATE	REVISION
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WOOD DRAWING NO. NOT REWIND MANUALLY

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002	10/21/11	ISSUED FOR CONSTRUCTION	0	JAB	FEW	
003	12/2/11	ORIGINAL REVISION - RE-ISSUED FOR CONSTRUCTION	1	JAB	FEW	

Wood River Refinery

SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT

PHASE III - REFINERY PIPING PLANS & ELEVATIONS

PIPING ON PIPES NO. P-034 THRU P-040

W.P. 0000-01-003

RE-ISSUED FOR CONSTRUCTION

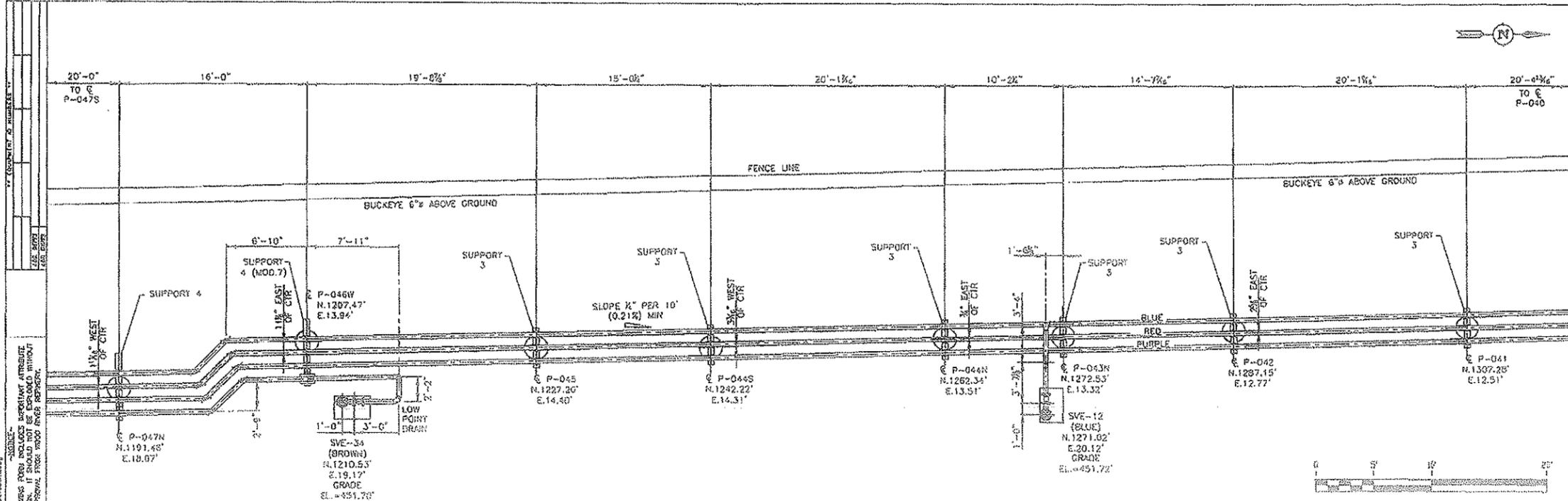
BUL#000-3019 DATE: 12/02/2011

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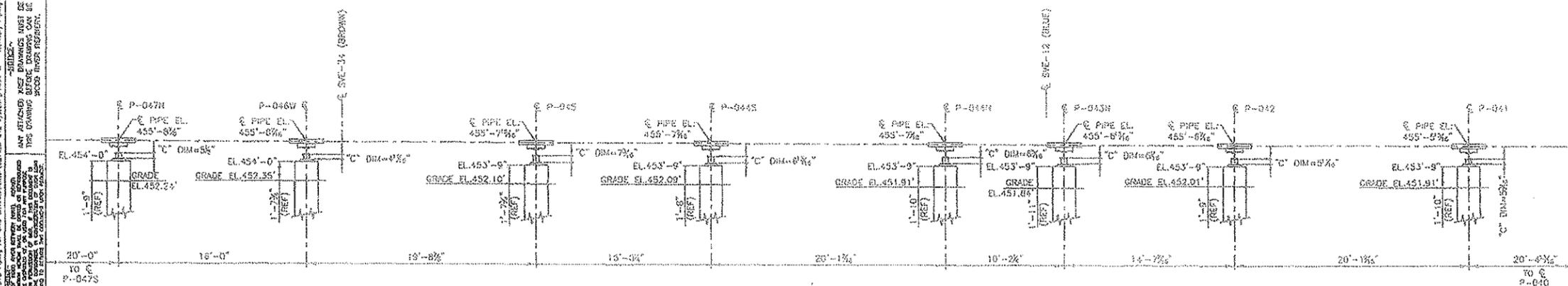
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SHEET 6 OF 12

SVE-3-015



PLAN VIEW



ELEVATION VIEW
(LOOKING WEST)

W.P. 0000-01-003
 SHEET 7 OF 14
 SHEET 3-016
 12/02/2011
 RE-ISSUED FOR CONSTRUCTION
 BUL#000-3019

TO P-047S
 20'-0"
 16'-0"
 19'-8 1/2"
 15'-0 1/2"
 20'-1 1/2"
 10'-2 1/2"
 14'-7 1/2"
 20'-1 1/2"
 20'-6 1/2"
 TO P-040

FENCE LINE
 BUCKEYE 6" ABOVE GROUND
 BUCKEYE 6" ABOVE GROUND

SUPPORT 4
 SUPPORT 3
 SUPPORT 3
 SUPPORT 3
 SUPPORT 3
 SUPPORT 3

P-047N
 N. 1191.48'
 E. 18.07'
 P-046W
 N. 1287.47'
 E. 13.84'
 P-045
 N. 1227.20'
 E. 14.40'
 P-044S
 N. 1242.22'
 E. 14.31'
 P-044N
 N. 1262.34'
 E. 13.51'
 P-043N
 N. 1272.53'
 E. 13.33'
 P-042
 N. 1287.15'
 E. 12.77'
 P-041
 N. 1307.28'
 E. 12.51'

SVE-12 (BLUE)
 N. 1271.02'
 E. 20.12'
 GRADE
 EL. 451.72'

SVE-34 (BROWN)
 N. 1210.53'
 E. 19.17'
 GRADE
 EL. 451.70'

LOW POINT DRAIN
 1'-0" x 3'-0"

1/2" WEST OF CIR
 1/2" EAST OF CIR
 1/2" WEST OF CIR
 1/2" EAST OF CIR

SLOPE 1/2" PER 10' (0.21%) MIR

BLUE REQ
 PURPLE

6'-10"
 7'-11"
 1'-6"
 3'-6"
 1'-0"

EL. 454'-0"
 EL. 454'-0"
 EL. 453'-9"
 EL. 453'-9"
 EL. 453'-9"
 EL. 453'-9"
 EL. 453'-9"
 EL. 453'-9"
 EL. 453'-9"

GRADE EL. 452.24'
 GRADE EL. 452.35'
 GRADE EL. 452.10'
 GRADE EL. 452.09'
 GRADE EL. 451.91'
 GRADE EL. 451.88'
 GRADE EL. 452.01'
 GRADE EL. 451.91'

TO P-047S
 20'-0"
 16'-0"
 19'-8 1/2"
 15'-0 1/2"
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 10'-2 1/2"
 14'-7 1/2"
 20'-1 1/2"
 20'-6 1/2"
 TO P-040



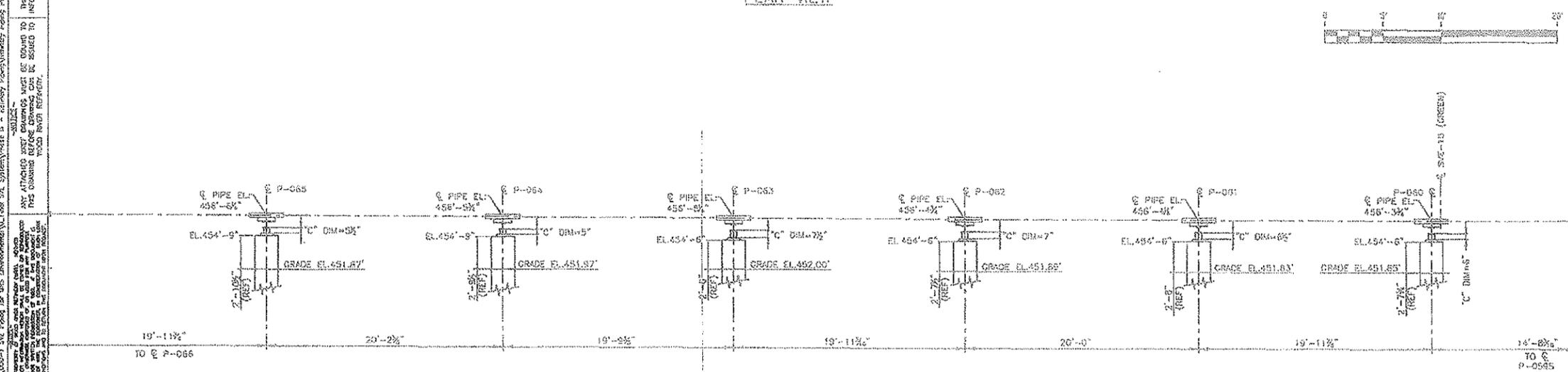
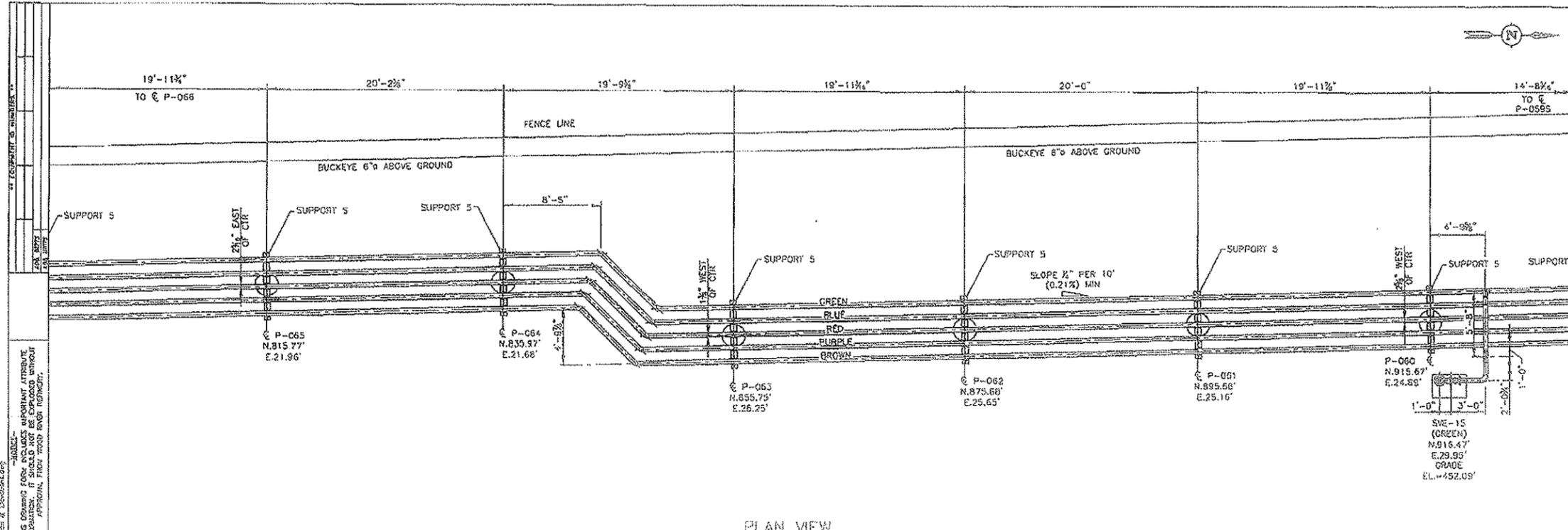
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 RE-ISSUED FOR CONSTRUCTION
 BUL#000-3019 DATE: 12/02/2011

REFERENCE DRAWINGS		SCALE DRAWING DO NOT REUSE MANUALLY				PANEL APP		WOOD RIVER REFINERY		MASTER DRAWING	
ACCT. NO.	DATE	NO.	DR.	CK.	APP.	NO.	DR.	CK.	APP.	YES/NO	DATE
001	8/19/11	A	JAB			1	JAB				
002	10/11/11	O	JAD	PMW		1	JAD	PMW			
003	12/2/11	1	JMS	PMW		1	JMS	PMW			

SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT
 PHASE III - REFINERY PIPING PLANS & ELEVATIONS
 PIPING ON PIERS NO. P-040 THRU P-047N

SHEET 7 OF 14
 SCALE
 SVE-3-016 1





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REFERENCE DRAWINGS

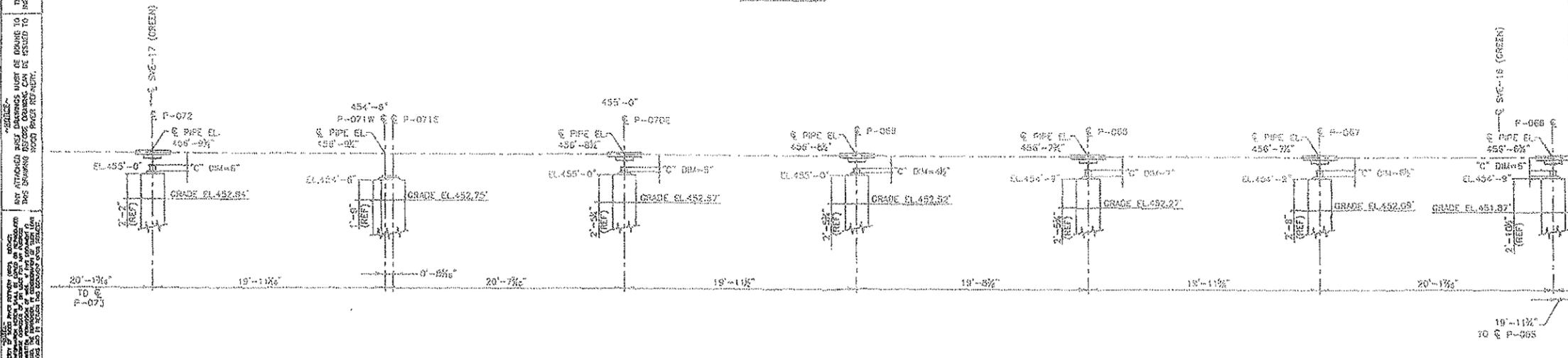
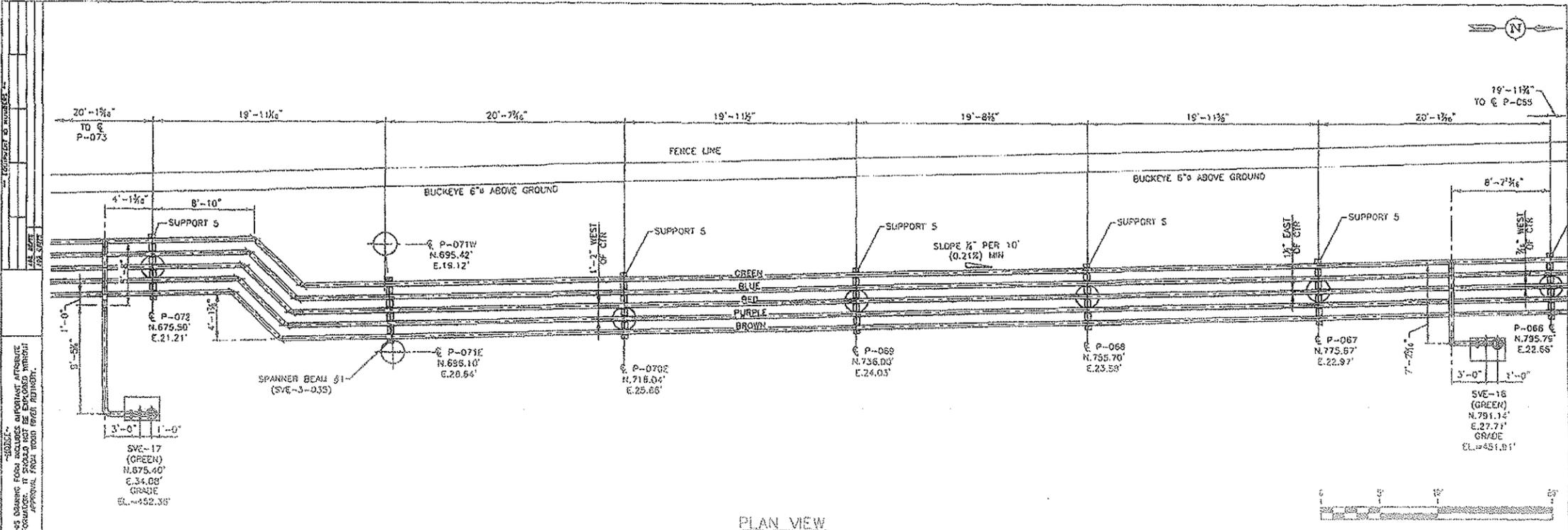
NO.	DESCRIPTION

SCALE DRAWINGS DO NOT REVISE MANUALLY

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002	11/14/11	ISSUED FOR CONSTRUCTION	0	JAS			
003	12/2/11	ORIGINAL REVISION - RE-ISSUED FOR CONSTRUCTION	1	JAS			

WOOD RIVER	Wood River Refinery	ILLINOIS
SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT		
PHASE III - REFINERY PIPING PLANS & ELEVATIONS		
PIPING ON PIERS NO. P-060 THRU P-065		
SCALE	NO. OF SHEETS	REV.
1"=20'	16	1
SVE-3-019		1

W.P. 0000-01-003
 RE-ISSUED FOR CONSTRUCTION
 BUL #000-3019 DATE: 12/02/2011



W.P. 0000-01-003
 RE-ISSUED FOR CONSTRUCTION
 BUIL#000-3019 DATE: 12/02/2011

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ACCT. NO.	DATE	REVISION	NO.	CR.	CHK.	APP.	NO.	NO.	NO.	NO.	NO.	NO.	
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0001	11/4/11	ISSUED FOR CONSTRUCTION	0	JAB	FBH								
0001	12/2/11	GENERAL REVISION - RE-ISSUED FOR CONSTRUCTION	1	JAB	FBH								

URS

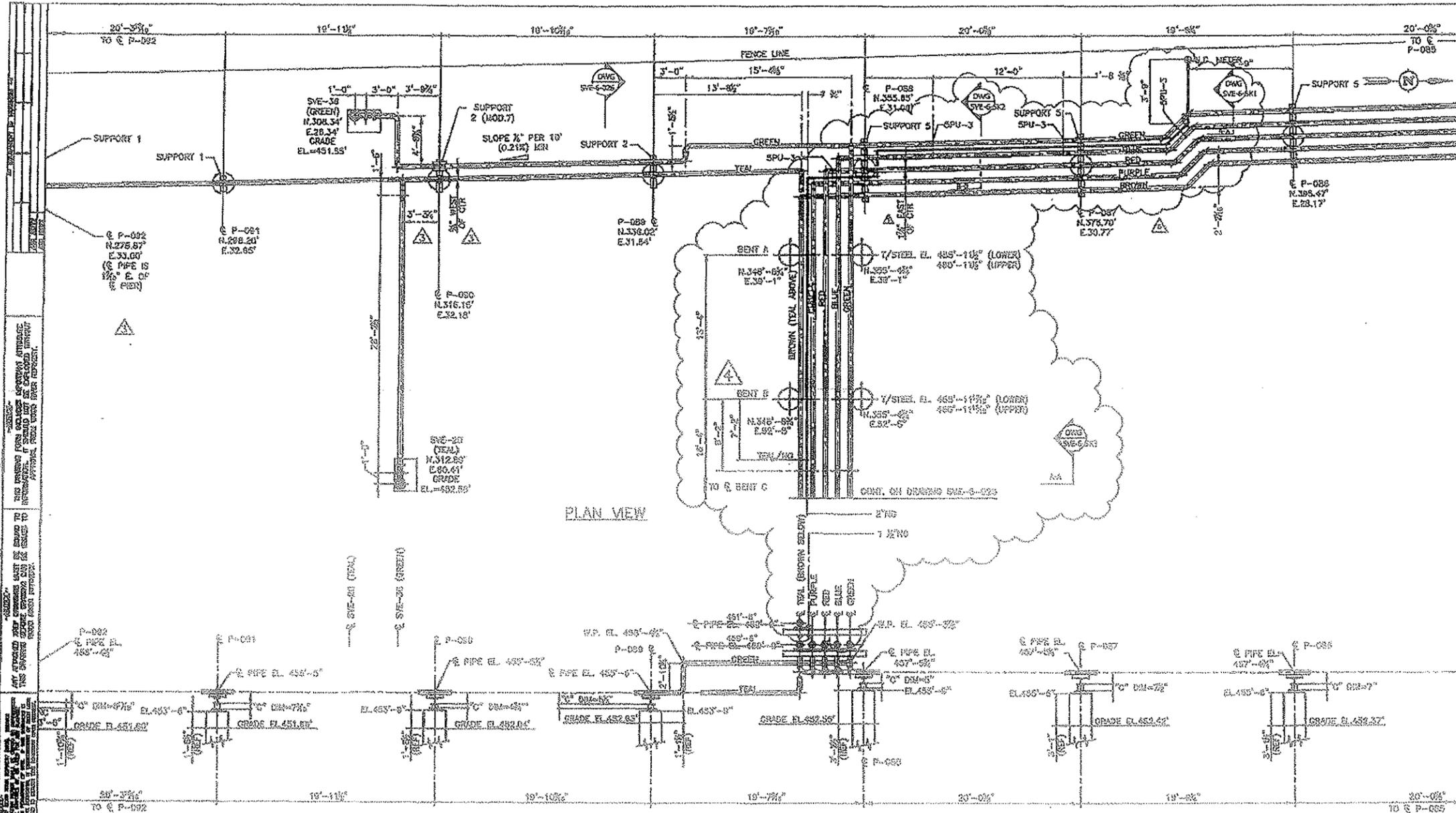
Wood River Refinery
 SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT
 PHASE II - REFINERY PIPING PLANS & ELEVATIONS
 PIPING ON PIERS NO. P-066 THRU P-072

SCALE: 1" = 10'-0"

SHEET 11 OF 14 (REV)

SVE-3-020 1

12/2/2011 11:55 AM
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 12/2/2011 11:55 AM
 C:\Documents and Settings\jacob.f...



PLAN VIEW

ELEVATION VIEW
(LOOKING WEST THRU PIERS)

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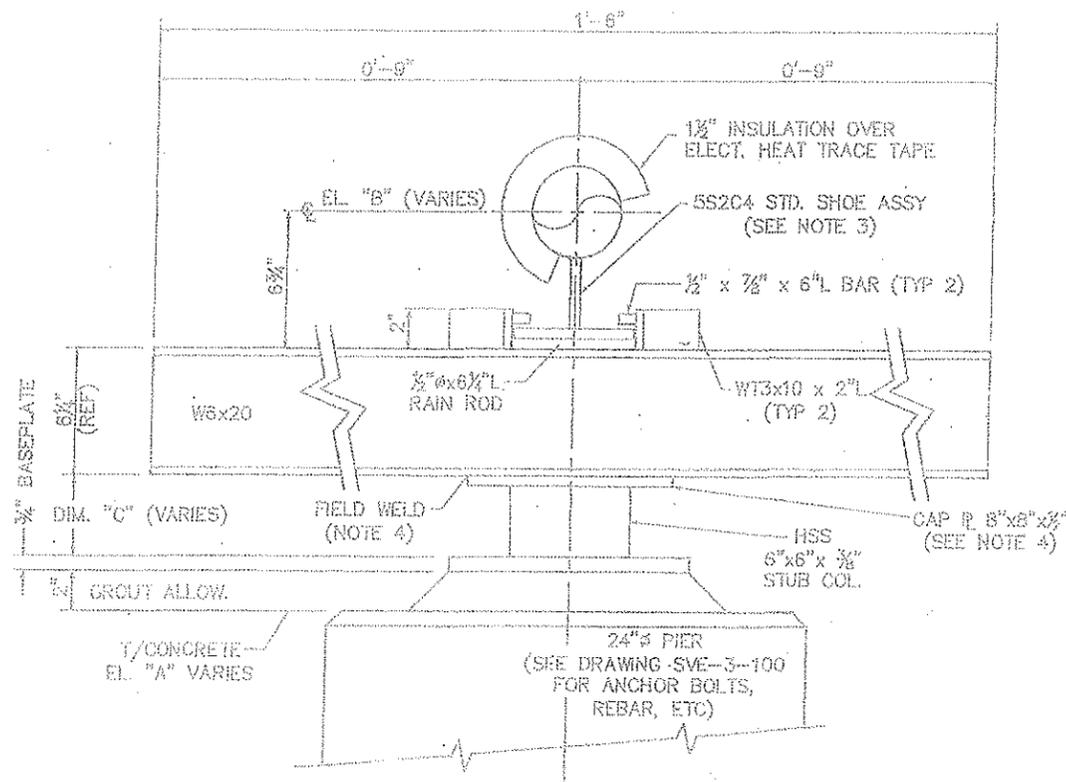
W.P. 0000-01-003
 ISSUED FOR CONSTRUCTION
 BUL 000-3023 DATE: 12/16/2011

REFERENCE DRAWINGS		SCALE CHANGING OR NOT REVERSE INDICALLY				WOOD RIVER		Wood River Refinery		SYSTEM DRAWING	
NO.	DATE	REVISION	ISS.	CHK.	APP.	DATE	NO.	DATE	NO.	DATE	YES/NO
3023	11/4/11	ISSUED FOR CONSTRUCTION	0	URS	FUD						NOT SCALE
3024	12/16/11	FIELD FOR POWER - NOT ISSUED FOR CONSTRUCTION	4	URS	FUD						SCALE
3025	12/16/11	ADDED NATURAL GAS LINE	5	URS	FUD						SCALE
3026	12/16/11	ADDED DIMENSIONS - NOT ISSUED FOR CONSTRUCTION	6	URS	FUD						SCALE

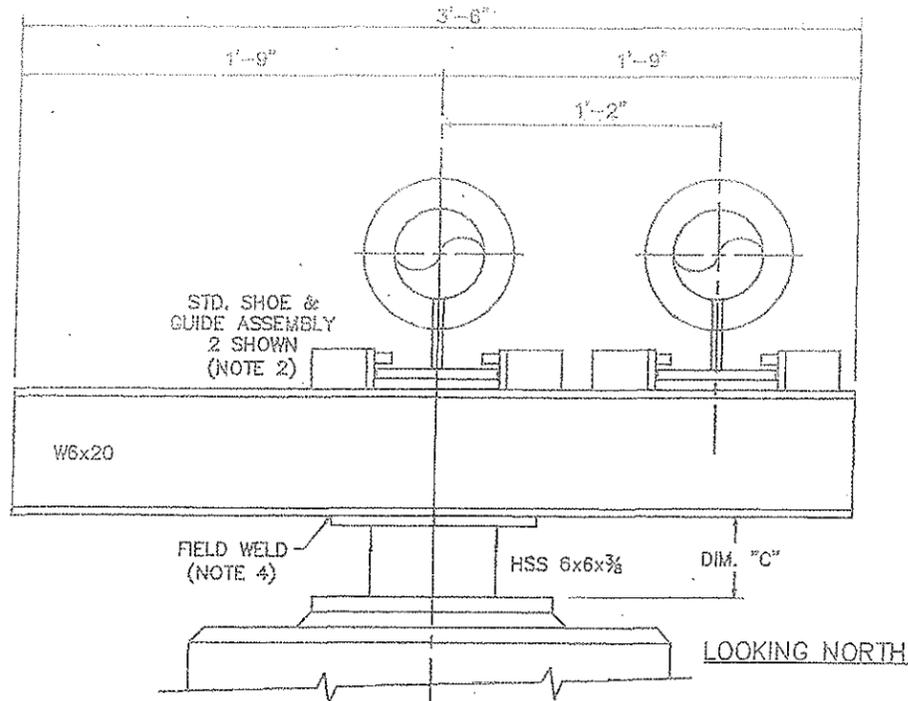


SHELL OIL PRODUCTS US - ROXANA, IL PROJECT
 PHASE B & W - REFINERY PIPING PLANS & ELEVATIONS
 PIPING ON PIERS NO. P-082 THRU P-082 & BENTS A & B

SHEET 3 OF 3
 SVE-3-023 3



SUPPORT #1-GUIDE DETAIL FOR PIERS P-002 THRU P-011



SUPPORT #2-GUIDE DETAIL FOR PIERS P-012 THRU P-027

PIPE SUPPORT DETAIL

PIER NUM.	T/CONC. EL. "A"	PIPE EL. "B"	DIM "C"	SUPPORT #	COMMENTS
P-001	454'-9"	455'-9 3/16"	7 1/4"	6	ANCHOR FOR "RED" LINE
P-002	453'-9"	455'-8 11/16"	7 15/16"	1	
P-003	453'-9"	455'-8 3/16"	7 7/16"	1	
P-004	453'-9"	455'-7 11/16"	6 15/16"	1	
P-005	453'-9"	455'-7 1/4"	6 1/2"	1	
P-006	453'-9"	455'-6 3/4"	6"	1	
P-007	453'-9"	455'-6 3/8"	5 11/16"	1	
P-008	453'-9"	455'-6 1/16"	5 5/16"	1	
P-009	453'-9"	455'-5 9/16"	4 13/16"	1	
P-010	453'-6"	455'-5 1/16"	7 5/16"	1	
P-011	453'-6"	455'-4 9/16"	6 13/16"	1	
P-012	453'-6"	455'-4 1/16"	6 5/16"	2	
P-013	453'-6"	455'-3 9/16"	5 13/16"	2	
P-014	453'-6"	455'-3 1/16"	5 3/8"	2	
P-015	453'-6"	455'-2 9/16"	4 7/8"	2	
P-016	453'-3"	455'-2 1/16"	7 3/8"	2	
P-017	453'-3"	455'-1 9/16"	6 7/8"	2	
P-018	453'-3"	455'-1 1/16"	6 5/16"	2	
P-019	453'-3"	455'-0 5/8"	5 13/16"	2	
P-020	453'-3"	455'-0 1/16"	5 5/16"	2	
P-021	453'-3"	454'-11 5/8"	4 13/16"	2	
P-022	453'-3"	454'-11 1/16"	4 3/8"	2	
P-023	453'-0"	454'-10 5/8"	6 7/8"	2	
P-024	453'-0"	454'-10 1/8"	6 3/8"	2	
P-025	453'-0"	454'-10 1/4"	6 1/2"	2	
P-026	453'-0"	454'-10 3/4"	7"	2	
P-027	453'-0"	454'-11 1/4"	7 1/2"	2	
P-028	453'-3"	454'-11 3/4"	5"	3	
P-029	453'-3"	455'-0 1/4"	5 1/2"	3	
P-030	453'-3"	455'-0 3/4"	6"	3	
P-031	453'-3"	455'-1 1/4"	6 1/2"	3	
P-032	453'-3"	455'-1 3/4"	7"	3	
P-033	453'-3"	455'-2 1/4"	7 1/2"	3	
P-034	453'-6"	455'-2 5/8"	4 7/8"	3	

NOTES:

- SUPPORT #1 PROVIDES DETAILS FOR GUIDE ASSEMBLIES FOR SUPPORT #1 THRU SUPPORT #5.
- GUIDE ASSEMBLY IN CLOSE ACCORDANCE WITH CoP SPEC CORE.250.50040 REV. 6 DATED 22SEP08 FOR ATTACHMENT 5G3 (CLIP TYPE) REVISED AS SHOWN.
- SHOES PER SAME SPEC TAG 5S2C4, 6" BASE WIDTH & 4" HIGH.
- STUB COLUMN BASE PLATE MOUNTS TO ANCHOR BOLTS ON PIER AND W6x20 SITS ATOP STUB COLUMN CAP PLATE. FIELD WELD 3/16" FILLET ALONG W6 FLANGE EDGES AFTER FINAL ALIGNMENT OF W6 TO PIPE RUNS (HORIZONTAL ANGLES FROM E-W WILL VARY PER PIPE RUN SEGMENT)

W.P. 0000-01-003

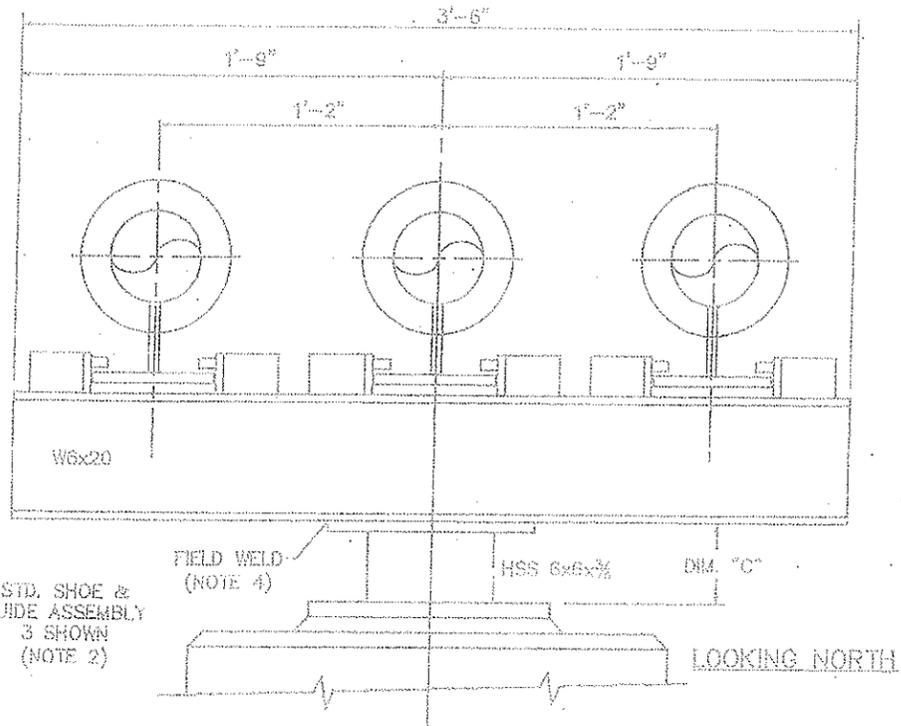
RE-ISSUED FOR CONSTRUCTION
BUL#000-3005 DATE:10/31/2011

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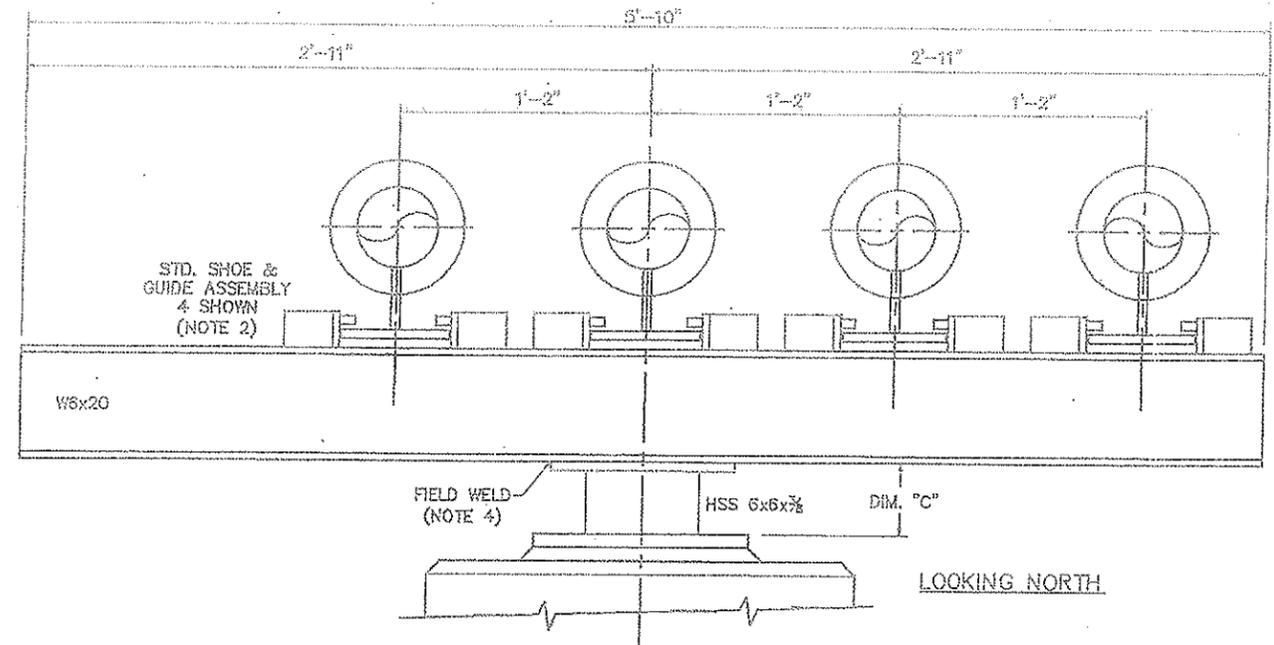
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-- REFERENCE DRAWINGS --		"CAD DRAWING DO NOT REVISE MANUALLY"				FINAL APP.		WOOD RIVER, Wood River Refinery		MASTER DRAWING YES/NO:	
ACCT. NO.	DATE	REVISION	NO.	DR.	CK.	APP.	DATE	SCALE	PLT. SCALE	SHEET 3 OF 4 REV.	
30001	9/12/11	ISSUED FOR BOB	A	JMB						SVE-3-030 1	
30001	10/24/11	ISSUED FOR CONSTRUCTION	0	JMB	FBW					SVE-3-030 1	
30001	10/31/11	REVISED AS NOTED BY A - RE-ISSUED FOR CONSTRUCTION	1	JMB	FBW					SVE-3-030 1	



SUPPORT #3-GUIDE DETAIL FOR PIERS P-028 THRU P-045



SUPPORT #4-GUIDE DETAIL FOR PIERS P-046W THRU P-047S

PIPE SUPPORT DETAIL					
PIER NUM.	T/CONC. EL."A"	Q PIPE EL."B"	DIM "C"	SUPPORT #	COMMENTS
P-035	453'-6"	455'-3 1/8"	5 3/8"	3	--
P-036	453'-6"	455'-3 5/8"	5 7/8"	3	--
P-037	453'-6"	455'-4 1/8"	6 3/16"	3	--
P-038	453'-6"	455'-4 5/8"	6 7/8"	3	--
P-039	453'-6"	455'-5 1/8"	7 3/8"	3	--
P-040	453'-9"	455'-5 7/16"	4 11/16"	3	--
P-041	453'-9"	455'-5 15/16"	5 3/16"	3	--
P-042	453'-9"	455'-6 7/16"	5 11/16"	3	--
P-043N	453'-9"	455'-6 13/16"	6 1/16"	3	--
P-044N	453'-9"	455'-7 1/16"	6 5/16"	3	--
P-044S	453'-9"	455'-7 9/16"	6 13/16"	3	--
P-045	453'-9"	455'-7 15/16"	7 3/16"	3	--
P-046E	--	--	--	--	PIER DELETED
P-046W	454'-0"	455'-8 7/16"	4 11/16"	4	--
P-047N	454'-0"	455'-8 7/8"	5 1/8"	4	--
P-047S	454'-0"	455'-9 3/8"	5 5/8"	4	--
P-048	454'-0"	455'-9 3/4"	6"	5	--
P-049	454'-0"	455'-10 1/4"	6 1/2"	5	--
P-050	454'-0"	455'-10 3/4"	7 1/16"	5	--
P-051	454'-3"	455'-11 1/4"	4 1/2"	5	--
P-052	454'-3"	455'-11 3/4"	5"	5	--
P-053	454'-3"	455'-0 1/4"	5 1/2"	5	--
P-054	454'-3"	456'-0 3/4"	6"	5	--
P-055	454'-3"	456'-1 1/4"	6 1/2"	5	--
P-056	454'-3"	456'-1 3/4"	7"	5	--
P-057	454'-3"	456'-2 1/4"	7 1/2"	5	--
P-058	454'-6"	456'-2 5/8"	4 7/8"	5	--
P-059N	454'-6"	456'-3"	5 1/4"	5	--
P-059S	454'-6"	456'-3 3/8"	5 5/8"	5	--
P-060	454'-6"	456'-3 3/4"	6"	5	--
P-061	454'-6"	456'-4 1/4"	6 1/2"	5	--
P-062	454'-6"	456'-4 3/4"	7"	5	--
P-063	454'-6"	456'-5 1/4"	7 1/2"	5	--
P-064	454'-9"	456'-5 3/4"	5"	5	--
P-065	454'-9"	456'-6 1/4"	5 1/2"	5	--
P-066	454'-9"	456'-6 3/4"	6"	5	--
P-067	454'-9"	456'-7 1/4"	6 1/2"	5	--
P-068	454'-9"	456'-7 3/4"	7"	5	--

NOTES:
1. SEE NOTES ON DRAWING SVE-3-030

W.P. 0000-01-003
RE-ISSUED FOR CONSTRUCTION
BUL#000-3005 DATE: 10/31/2011

URS
 10/31/2011 11:10 AM
 23/07
 CONSTRUCTION DOCUMENTS
 SHEET NO. SVE-3-031
 WOOD RIVER, ILLINOIS
 SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT
 PHASE III - REFINERY PIPING
 PIPE SUPPORT DETAILS SHEET 2 OF 4



ACCT. NO.	DATE	REVISION	NO.	DR.	CK APP.	TRIAL APP.
2061	10/24/11	ISSUED FOR BIDS	A	JAS		
2061	10/24/11	ISSUED FOR CONSTRUCTION	B	JAS/FBT		
2061	10/31/11	ISSUED QUANT DATA - RE-ISSUED FOR CONSTRUCTION	1	JAS/FBT		

WOOD RIVER, ILLINOIS

Wood River Refinery

SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT
PHASE III - REFINERY PIPING
PIPE SUPPORT DETAILS SHEET 2 OF 4

ILRUCS

MASTER DRAWING YES/NO:

PLOT SCALE:

SHEET 2 OF 4

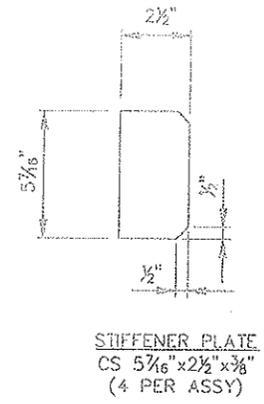
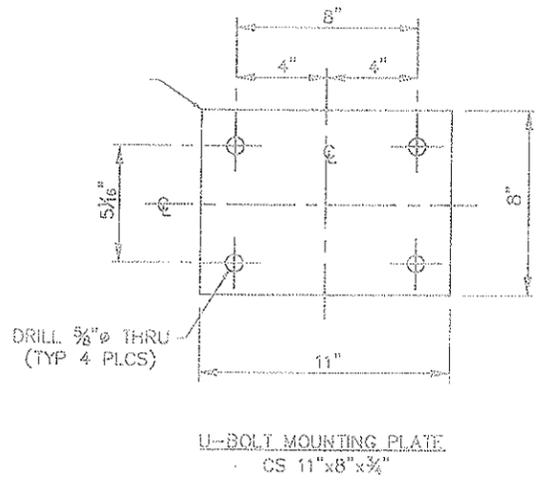
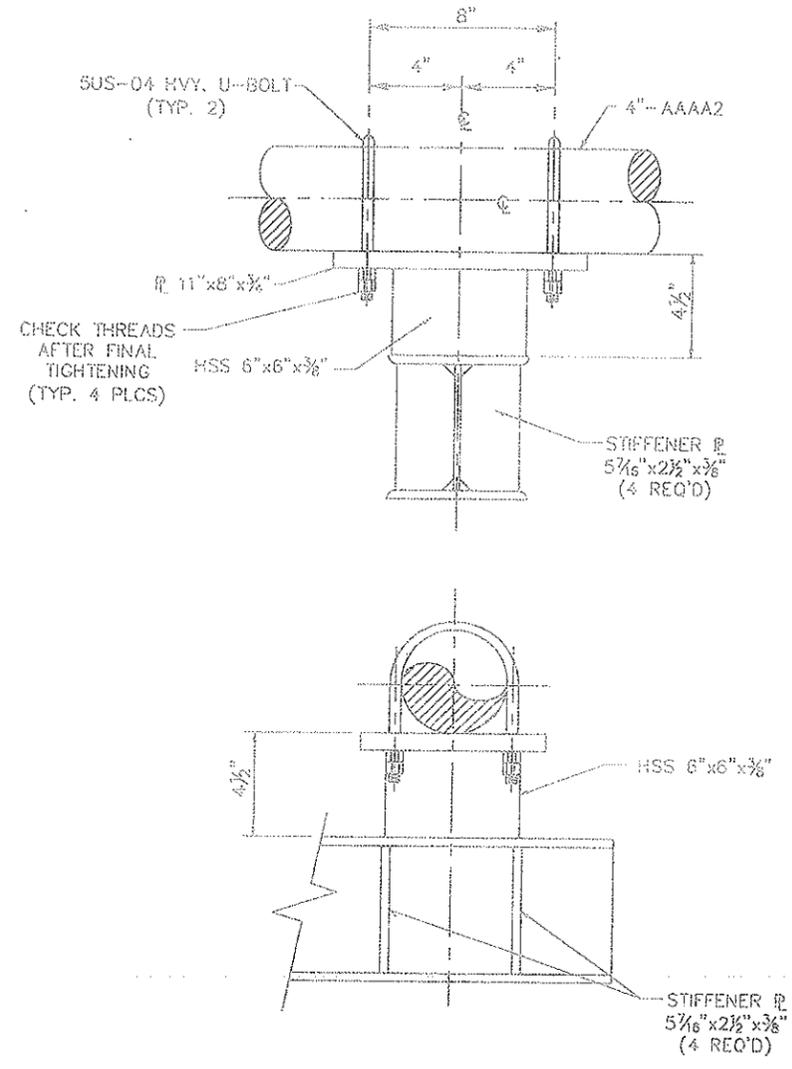
SVE-3-031

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EQUIPMENT ID: ROXREFS
 TYP: BULBS
 TYP: UNITS



SUPPORT #7 - ANCHOR DETAIL (4 REQ'D)

- REPLACES GUIDE ASSEMBLY AT:
 - P-012 GREEN
 - P-028 BLUE
 - P-046W BROWN
 - P-048 GREEN

NOTES:

- SEE NOTES ON DRAWING SVE-3-030
- WELD U-BOLT MOUNTING PLATE TO HSS 6x6 WITH 3/16" FILLET ALL AROUND. WELD HSS 6x6 TO W6x20 WITH 3/16" FILLET. WELD STIFFENER PLATES TO TOP & BOTTOM FLANGES, ONLY.

W.P. 0000-01-003

ISSUED FOR CONSTRUCTION
 BUL#000-3015 DATE: 11/29/2011



- REFERENCE DRAWINGS -

CAD DRAWING DO NOT REVISE MANUALLY

ACCT. NO.	DATE	REVISION	NO.	DR.	CK.	APP.	FINAL APP.	PROJECT	SHEET	REV.
001 & 100	9/12/11	ISSUED FOR BIDS	A	JAB				WOOD RIVER,		
30091	11/29/11	ISSUED FOR CONSTRUCTION	D	JAB	FBW			WOOD RIVER REFINERY		
								SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT		
								PHASE III - REFINERY PIPING		
								PIPE SUPPORT DETAILS SHEET 4 OF 5		
								PIPE SUPPORT		

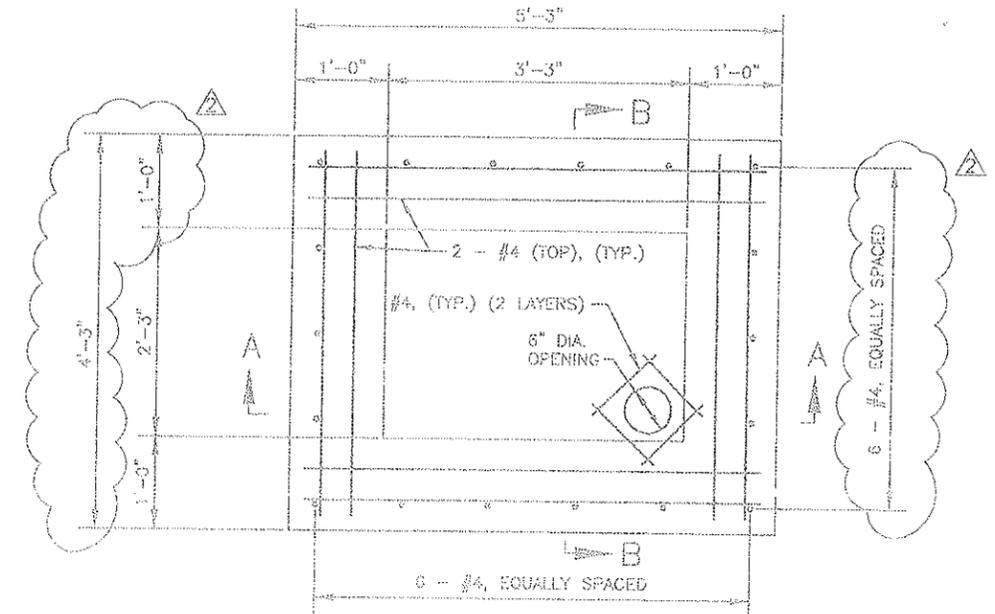
MASTER DRAWING YES/NO:
 PLOT SCALE:
 SCALE:
 SHEET 4 OF 5 REV.
 SVE-3-033 | 0

FORM 23-34.002 REVISED 01/2002

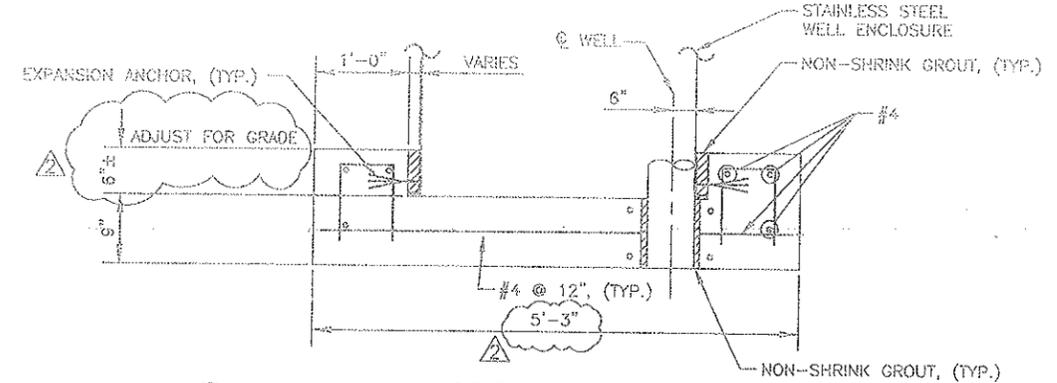
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ED L. BOLDEN
12/16/2011 3:15 PM
P:\Structural\1562593

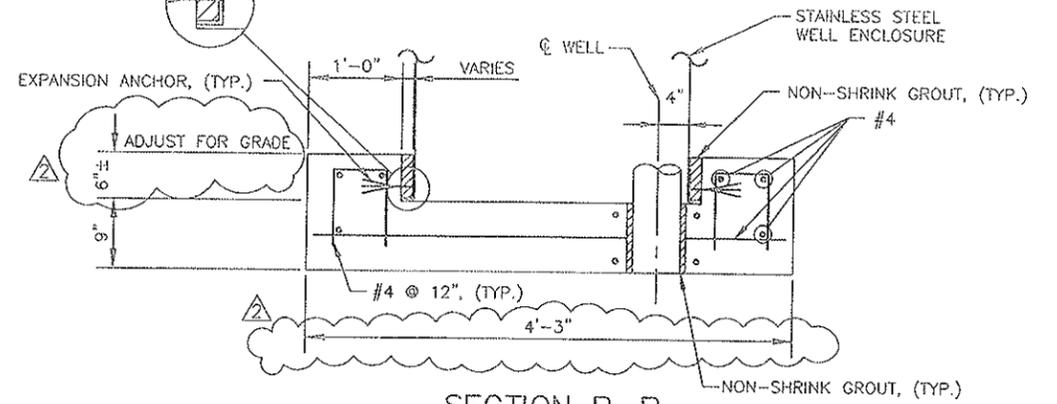
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PLAN



SECTION A-A



SECTION B-B

CONCRETE PADS FOR STAINLESS STEEL WELL ENCLOSURES
NTS

- NOTES:
1. PROVIDE EXPANSION ANCHOR CONNECTIONS OF ENCLOSURE TO CONCRETE. INSTALL TWO ANCHORS MINIMUM PER EACH SIDE OF ENCLOSURE, EQUALLY SPACED. ANCHORS SHALL BE 1/2" Ø, STAINLESS STEEL OR HOT-DIPPED GALVANIZED, HILTI KWIK BOLT 3, 2" MIN. EMBED OR SIMPSON STRONG-TIE WEDGE-ALL, 2 1/2" MIN. EMBED. SUBMIT ALTERNATE ANCHORAGE TO ENGINEER FOR APPROVAL.
 2. PROVIDE ADDITIONAL REINFORCING AROUND PIPE OPENING AS SHOWN.
 3. REFER TO DRAWING SVE-3-100 FOR ADDITIONAL NOTES.
 4. WORK THIS DRAWING WITH DRAWING SVE-3-036. HAND OF PAD DETERMINED BY ORIENTATION OF BOX OVER WELL HEAD.

W.P. 0000-01-003

ISSUED FOR CONSTRUCTION
BUL#000-3024 DATE:12/16/2011



REFERENCE DRAWINGS

DWG1	DWG6
DWG2	DWG7
DWG3	DWG8
DWG4	DWG9
DWG5	DWG10

CAD DRAWING DO NOT REVISE MANUALLY

ACCT. NO.	DATE	REVISION	NO.	DR.	CK.	APP.	FINAL APP.
30091	9/20/11	ISSUED FOR BIDS	A	EEB	TBS		
30091	11/15/11	ISSUED FOR CONSTRUCTION	0	EEB	TBS		
30091	11/17/11	REVISED DIM, ADDED NOTE 4 - RE-ISSUED FOR CONSTRUCTION	1	JAB	FBW		
30091	12/16/11	REVISED DIM AND NOTE 1 - RE-ISSUED FOR CONSTRUCTION	2	EEB	DK		

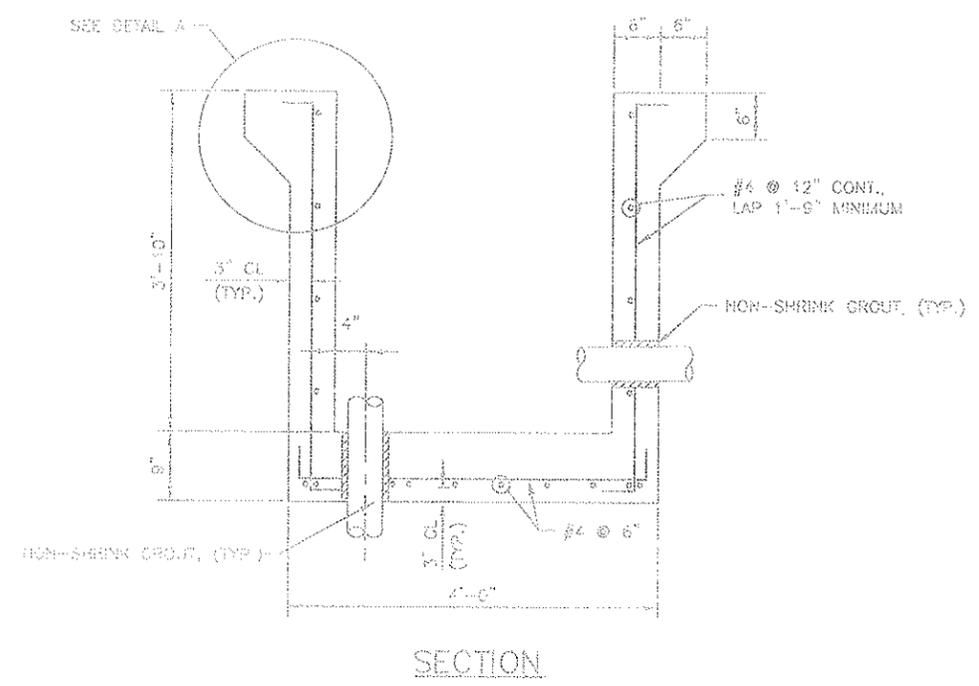
WOOD RIVER,	SHELL OIL PRODUCTS, US	ILLINOIS	MASTER DRAWING YES/NO:
SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT			PLOT SCALE:
PHASE III - REFINERY AREA			SCALE:
WELL ENCLOSURE PAD, SVE-6 THRU SVE-36			SHEET 1 OF 1 REV.
			SVE-3-102 2

REF: 85134759 12/16/11 01/25/11

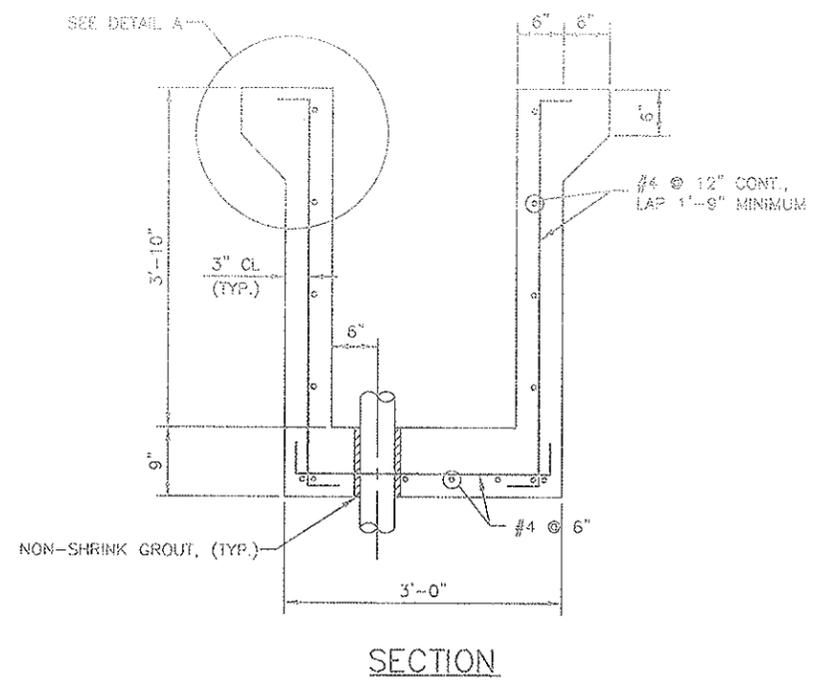
2:00 T. TWEEDE
 11/21/2011 11:01 AM
 P:\Structural\21502203 Shell Roxana SVE Project\000 SVE-3-100.dwg

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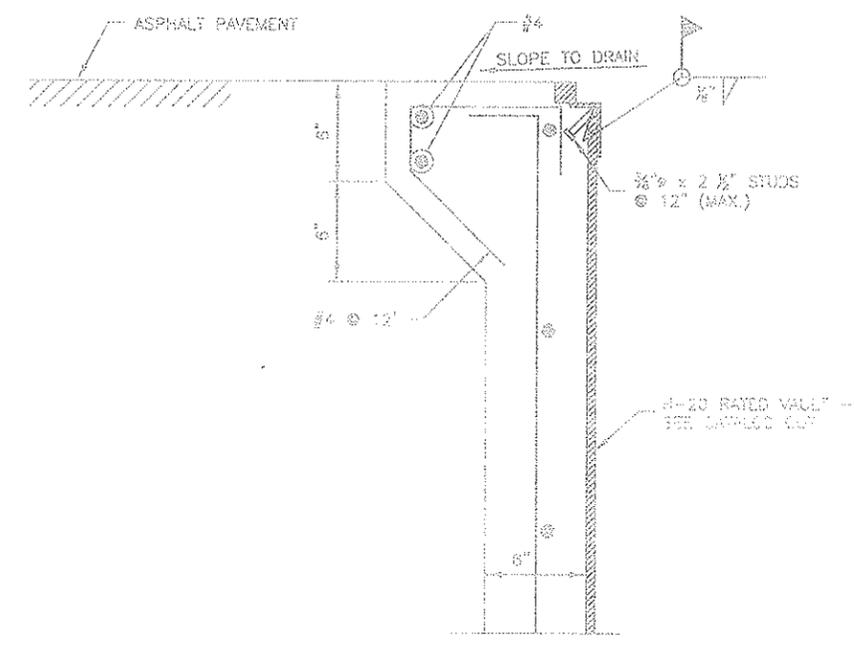
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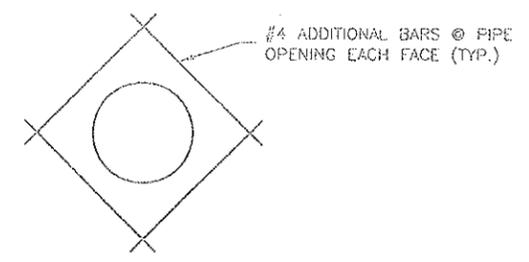
SECTION



SECTION



DETAIL A



OPENING DETAIL

NOTES:

1. PROVIDE ADDITIONAL REINFORCING AROUND PIPE OPENINGS AS SHOWN.
2. REFER TO DRAWING SVE-3-100 FOR ADDITIONAL NOTES.
3. WORK THIS DRAWING WITH DRAWING SVE-3-035.

W.P. 0000-01-003

ISSUED FOR CONSTRUCTION
 BUL #000-3010 DATE: 11/21/2011



— REFERENCE DRAWINGS —

DWG1	DWG6
DWG2	DWG7
DWG3	DWG8
DWG4	DWG9
DWG5	DWG10

— CAD DRAWING DO NOT REVISE MANUALLY —

ACCT. NO.	DATE	REVISION	NO.	DR.	CK.	APP.	FINAL APP.
3001	11/21/11	ISSUED FOR CONSTRUCTION	0	EEB	RJF		

WOOD RIVER,	SHELL OIL PRODUCTS, US	ILLINOIS
SHELL OIL PRODUCTS, US - ROXANA, IL PROJECT		
PHASE III - REFINERY AREA		
SVE-5 WELL VAULT STRUCTURAL DETAILS		

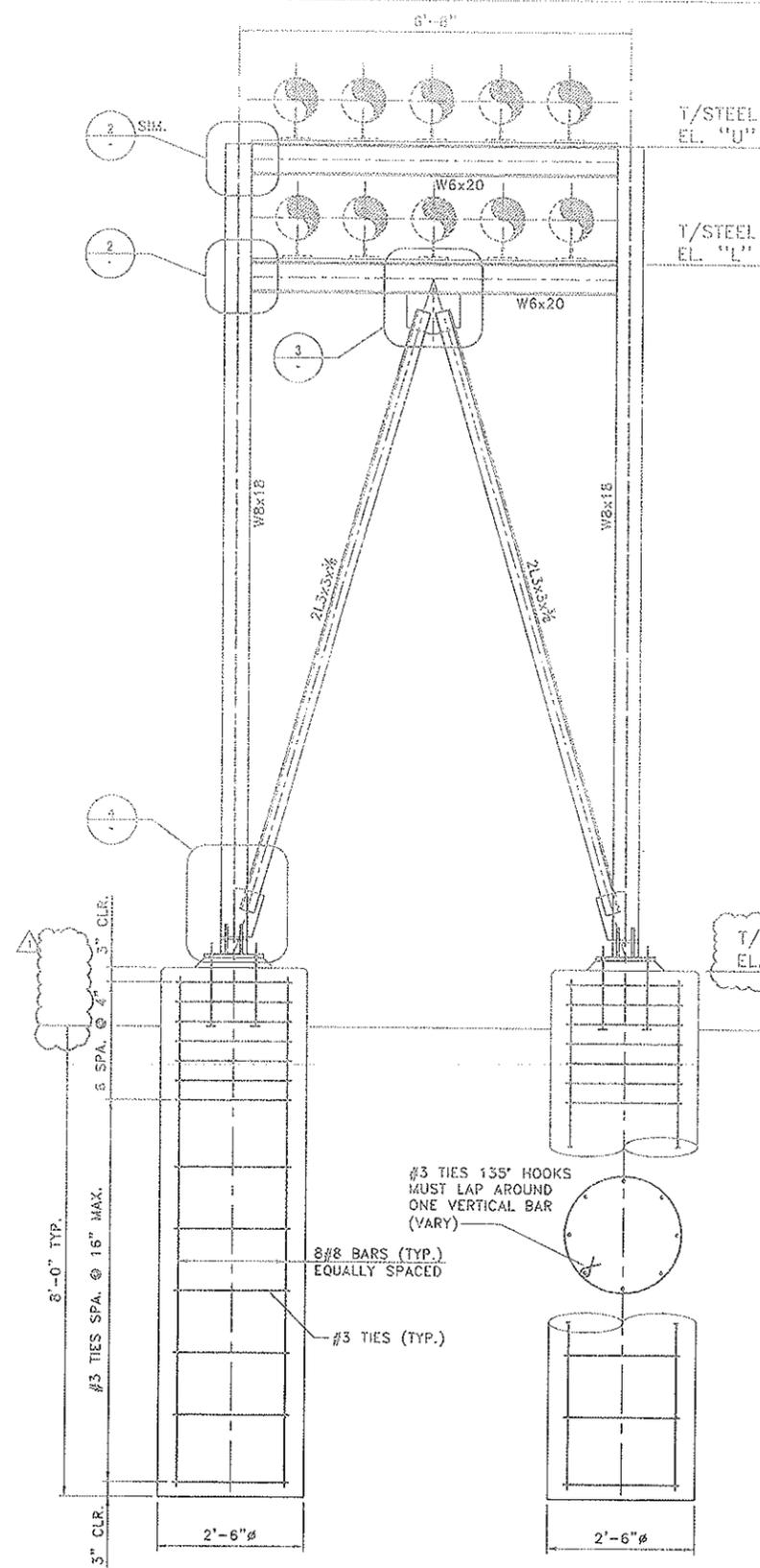
MASTER DRAWING YES/NO:	
PLOT SCALE:	
SCALE:	
SHEET 1 OF 1 REV.	
SVE-3-105	0

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 READER: DAVID L

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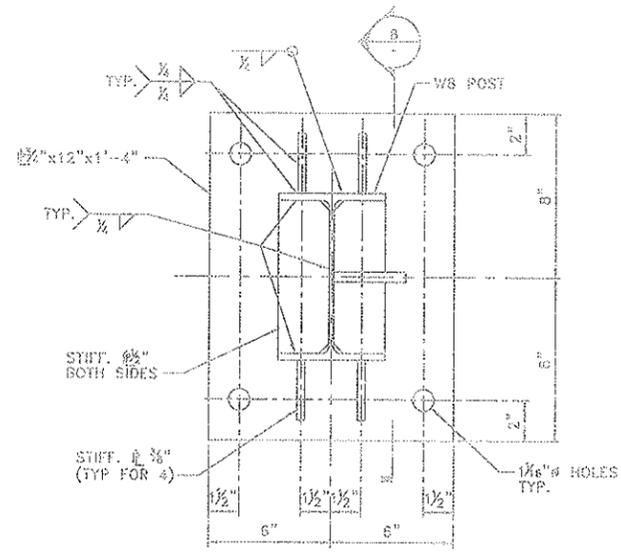
EQUIPMENT TO NUMBER 36
 TANK TOPS
 TANK BOTTOMS



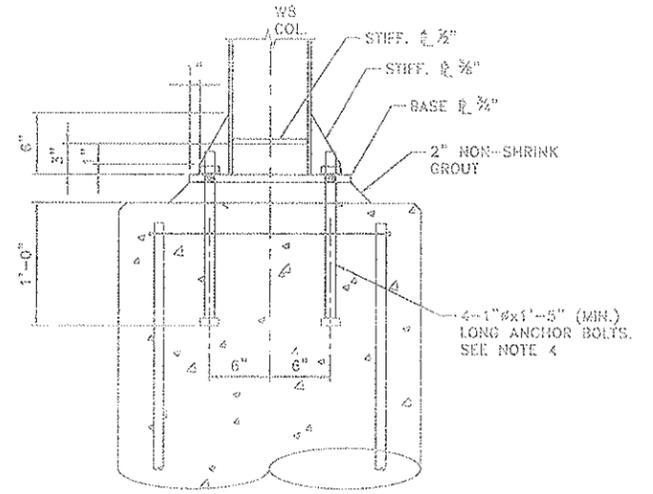
1 ELEVATION
 SCALE: 3/4"=1'-0"

PIPE BENT	T/STEEL EL. "U"	T/STEEL EL. "L"	T/PIER EL. "P"
BENT A	460'-11 1/2"	458'-11 1/2"	453'-10"
BENT B	460'-11 1/2"	458'-11 1/2"	453'-10"
BENT C	466'-5 1/2"	464'-5 1/2"	453'-6"
BENT D	466'-5 1/2"	464'-5 1/2"	453'-6"

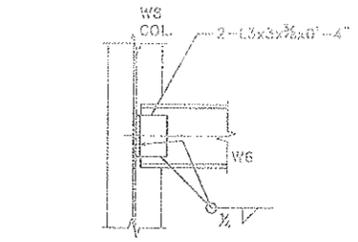
NOTE:
 SEE DRAWINGS SVE-6-023 AND SVE-6-025
 FOR LOCATION OF PIPE BENTS.



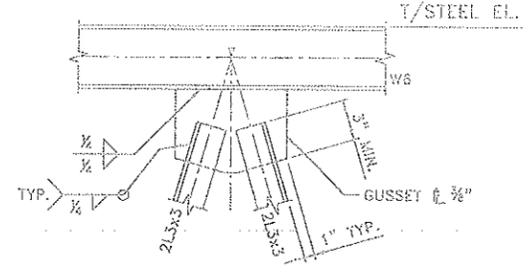
A SECTION
 SCALE: 3"=1'-0"



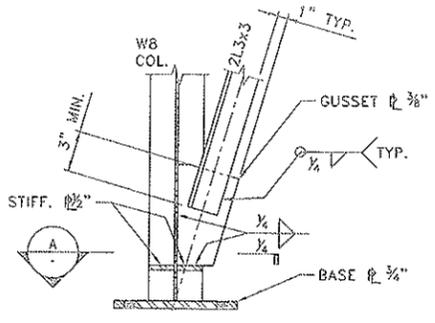
B SECTION
 SCALE: 1 1/2"=1'-0"



2 DETAIL
 SCALE: 1 1/2"=1'-0"



3 DETAIL
 SCALE: 1 1/2"=1'-0"



4 DETAIL
 SCALE: 1 1/2"=1'-0"

NOTES:

1. REINFORCED CONCRETE SHALL BE INSTALLED PER REP 4-2-3 REV. 1.1, REP 4-2-6 REV. 1.1, AND REP 4-3-2 REV. 1.0.
 2. CONCRETE MIX SHALL BE IN ACCORDANCE WITH REP 4-3-1 REV. 1.0. CONCRETE SHALL REACH AN ULTIMATE COMPRESSIVE STRENGTH (C_u) = 3000 PSI AT 28 DAYS PRIOR TO PLACEMENT OF STEEL.
 3. REINFORCEMENT SHALL CONFORM TO ASTM A615 FOR DEFORMED BARS. FABRICATION SHALL BE IN ACCORDANCE WITH REP 4-3-3 REV. 1.0. YIELD STRENGTH, F_y, SHALL BE 60 KSI MINIMUM.
 4. STRUCTURAL STEEL SHALL CONFORM TO REP 4-5-1 REV. 1.0 UNLESS NOTED OTHERWISE. BASE PLATES AND NON-SHRINK GROUT SHALL BE INSTALLED PER REP 4-2-9 REV. 1.0.
- BEAMS, COLUMNS, AND BASE PLATES ASTM A572
 STRUCTURAL BOLTS ASTM A307 GRADE A
 ANCHOR BOLTS ASTM F1554 GRADE 36
 NUTS ASTM A563 GRADE A
 WASHERS ASTM F436
5. ALL STRUCTURAL STEEL, AND HARDWARE, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH REP. 10-3-8 REV. 1.1.
 6. SEE PIPING PLANS FOR DETAILS NOT SHOWN.
 7. CONCRETE PIER EXCAVATION TO BE INSPECTED BY URS CORPORATION GEOTECHNICAL INSPECTOR AND ADJUSTED AS REQUIRED PRIOR TO INSTALLATION OF REINFORCING AND CONCRETE. COORDINATE WITH OWNER'S CONSTRUCTION REPRESENTATIVE.

W.P. 0000-12-002

ISSUED FOR CONSTRUCTION
 BUL#000-3021 DATE: 12/13/2011



— REFERENCE DRAWINGS —

ACCT. NO.	DATE	REVISION
30091	11/21/11	ISSUED FOR CONSTRUCTION
30091	12/13/11	IFC - REVISED ELEVATIONS

CAD DRAWING DO NOT REVISE MANUALLY

NO.	DR.	CK.	APP.	FINAL APP.
0	DR	DK		
1	DR	DK		

WOOD RIVER,	ILLINOIS	MASTER DRAWING YES/NO:
Shell Oil Products, US - Roxana, IL Project		PLOT SCALE: 1:1
PHASE VI - TREATMENT AREA		SCALE: AS INDICATED
PIPE SUPPORT BENT ELEVATION, SECTIONS AND DETAILS		SHEET 1 OF 1 (REV)
DESIGNED BY: [Signature]	CHECKED BY: [Signature]	SVE-6-151 1
DRAWN BY: [Signature]	DATE: 12/13/2011	FOUNDATION/STEEL

SVE System Construction Completion Report
WRR
Roxana, Illinois

APPENDIX E

Contractor QA/QC Documentation and Test Results

TE QUALITY TESTING
AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CR-5VE QTE No. 11-0617-C Date: 11-20-11

Client Name: Berge Contractor: Berge

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.

Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.

Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)

Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____

Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 6 x 12's Range: Slump = 3.75 / AE = 4.58 / concrete = 60% / air-temp = 46°

Comments: Core pour of pile caps by conveyor truck. Sampled load from truck chute before pour due to safety concerns. Tested slump, AE & temp on sample taken. Range above reflects these tests. Made 1 set of 6 x 12 cys w/ caps and placed in cure box.

Future Concerns: _____

Site Representative

Michael McKinney
QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains a responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP SVE QTE No. 11-2017-C Date: 11-11-11

Client Name: Brown Contractor: _____

Work Requested by: _____ Message Taken: _____

QTE Personnel: M. Michael [Signature] Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: _____ Range: _____

Comments: Picked up 1 set of 6 6x12 cyls made 11-10 by QTE. Cyls appeared in records

Future Concerns: _____

Site Representative



QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.

QTE QUALITY TESTING AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 11-15-11

Client Name: Brown Contractor: Brown

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

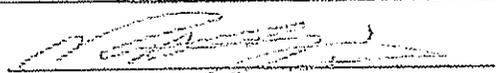
Test Area(s) _____

No. tests: 1 set of 4 tests Range: Slump = 4.5 / AF = 4.9% / concrete = 69' / test temp = 63°

Comments: Complete set of tests by conveyor truck. [Stamp] 1st load rejected
because of [Stamp] ticket missing stamp time. Sampled next load from truck chute before
pour to verify concrete meets specs. Tested slump, AF & temp on sample taken. Results
above reflect these tests. Made 1 set of 4 tests which placed [Stamp]
into cure box.

Future Concerns: _____

Site Representative


QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.

QT QUALITY TESTING
AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-5VE QTE No. 11-0617-C Date: 11-16-11

Client Name: Boro Contractor: _____

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 @ 12" Range: Slump = 4" / AE = 4.33 / core depth = 6 1/2" / air temp = 40"

Comments: Core pour of piers and pile caps by conveyor track. Sampled load from truck
drive before pour to verify core meets spec. To road slump, AE & temp on samples
taken. Range above reflects phase tests. Made 1 set of 4 @ 12" cyls w/ caps and
placed in core box.

Future Concerns: _____

Site Representative

QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.

QUALITY TESTING AND ENGINEERING, INC. **FIELD SERVICES REPORT**

Project Name: CP-SVE QTE No. 11-0618-E Date: 11-17-11

Client Name: Dow Contractor: Dow

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinnis Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____

Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site Off-site

Test Area(s) _____

No. tests: 1 set of 4 (x12) Range: Shrink = 5.25% / A-F = 5.4% / Core damp = 57% / air damp = 43%

Comments: Core pour of p.c. caps by conveyor truck. Sampled load from truck chute before pour to verify core meets specs. Tested shrink, A-F & damp on sample taken. Range above returns those tests. Made 1 set of 4 (x12) cyls w caps.

Future Concerns: _____

Site Representative


QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No: 11-0617-C Date: 11-18-2011
 Client Name: BERCO Contractor: BERCO
 Work Requested by: JOE WOOD Message Taken: _____
 QTE Personnel: JEFFREY P. VOSS Project Engineer: MAN

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump 3-5 in. Air 15-25% Strength 4000 psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier KENSERT-ILL. (ALTON)
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____
 Fill from: On-site Off-site _____
 Test Area(s) PREP P-059N

No. tests: 1 Range: Slump: 4 1/2 Air: 15-25% Strength: 4000 4 CYLINDERS

Comments: QTE PERSONNEL ANALYZED ON-SITE AND TO PERFORM FIELD CONCRETE TESTING FOR A S-4000PP MIX BEING PLACED FOR THE ABOVE LOCATION. QTE PERSONNEL TOOK A FULL SET OF TESTS WITH RESULTS RECORDED ABOVE AND CAST FOUR CYLINDERS FOR USE IN STRENGTH TESTING. THE CYLINDERS WERE STORED IN A CURE BOX.

Future Concerns: _____

_____ Site Representative _____ QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified. Any opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor of a obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SUE QTE No: 11-0617-C Date: 11-21-2011
 Client Name: BERCO Contractor: BERCO
 Work Requested by: JOE WOOD Message Taken: _____
 QTE Personnel: JEFFREY P. VOSS Project Engineer: MAW

SERVICES REQUESTED:

Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump 3-5 in. Air 4.5-2.2% Strength 4000 psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier KENNA-ILL. (ALTON)
 Footings _____ psf Boring Log Y / N // Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

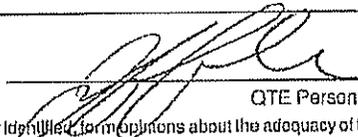
Fill from: On-site _____ Off-site _____

Test Area(s) P-070E AND P-072

No. tests: 1 Range: SLUMP: 4" AIR: 5.8 CONC TEMP: 57 ASP TEMP: 45 4 CYLINDERS

Comments: QTE PERSONNEL ARRIVED ON-SITE PM TO PERFORM FIELD CONCRETE SAMPLING AND TESTING FOR A 5-4000 PSI MIX BEING PLACED VIA CONCRETE MIXER. QTE TOOK ONE FULL SET OF TESTS WITH RESULTS RECORDED ABOVE AND CAST FOUR CONCRETE STRENGTH SPECIMEN FOR USE IN COMPRESSIVE TESTING. QTE STORED THESE IN THE WARE BOX ON-SITE.

Future Concerns: _____

_____ Site Representative  QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor and to report to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-c Date: 11-23-2011
 Client Name: BERLO Contractor: BERLO
 Work Requested by: JOE WOOD Message Taken: _____
 QTE Personnel: JEFFREY P. VOSS Project Engineer: MAW

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump 3.5 in. Air 5.75% Strength 4000 psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier KENSTRALIL (COLLINSVILLE)
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____
 Fill from: On-site _____ Off-site _____

Test Area(s) P-075, P-076
 No. tests: 1 Range: SWAMP; 4 1/2" AIR %: 6.0 CONC TEMP: 65 AIR TEMP: 47 4 CYLINDERS

Comments: QTE PERSONNEL ARRIVED ON-SITE PM TO PERFORM FIELD CONCRETE SAMPLING AND THE SPINER FOR A 5400 MP WEG BEING PLACED VIA CONVEYOR MIXER FOR THE ABOVE LOCATIONS. ONE FULL SET OF TESTS WERE PERFORMED WITH RESULTS RECORDED ABOVE AND LAST FOUR CYLINDERS FOR USE IN SYRINCHIT TESTING. THE CYLINDERS WERE STORED IN A CURE BOX ON-SITE.

Future Concerns: _____

_____ Site Representative  QTE Personnel

*NOTICE: The professional engineer is represented on site solely to observe operations of the contractor, identify, and report on the adequacy of those operations, and report those findings to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains the responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP. SUE QTE No. 11-0617-C Date: 11-25-2011

Client Name: BEALO Contractor: BEALO

Work Requested by: JOE WOOD Message Taken: _____

QTE Personnel: DAVE P. VOSS Project Engineer: MIKE

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

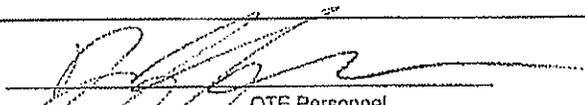
Test Area(s) _____

No. tests: _____ Range: _____

Comments: QTE PERSONNEL PICKED-UP FROM CLIENTS FOR PROFESSIONAL.

Future Concerns: _____

Site Representative



QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No 11-0617-C Date: 11-28-2011

Client Name: BERCO Contractor: BERCO

Work Requested by: JOE WOOD Message Taken: _____

QTE Personnel: JEFFREY P. VOSS Project Engineer: MAH

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump 3-5 in. Air 4.5-7.2% Strength 4000 psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier KEMSTAR ILL. (ALTON)
 Footings _____ psf Boring Log Y / N // Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

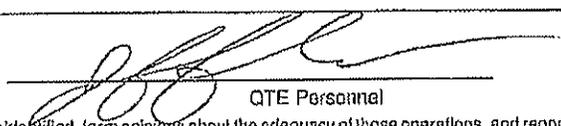
Fill from: On-site _____ Off-site _____

Test Area(s) P-082, P-083

No. tests: 1 Range: SLUMP: 4 AIR%: 6.3 CONC. TEMP: 55°F AIR TEMP: 39°F 4 CYLINDERS

Comments: QTE PERSONNEL ARRIVED ON-SITE PM TO PERFORM FIELD CONCRETE SAMPLING
AND YES-ENTR AIR A 54000MP MIX BEING PLACED VIA CONVEYOR MEYER
FOR THE ABOVE LOCATION QTE PERFORMED ONE FULL SET OF TESTS WITH RESULTS LISTED
ABOVE AND LAST FOUR CYLINDERS FOR USE IN COMPRESSIVE STRENGTH
TESTING.

Future Concerns: _____

_____ Site Representative  QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 11-29-2011

Client Name: BERCO Contractor: Berco

Work Requested by: Jay Wood Message Taken: _____

QTE Personnel: Jascey P. Boss Project Engineer: MAH

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Atr _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

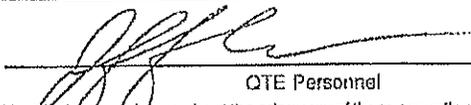
Test Area(s) _____

No. tests: _____ Range: _____

Comments: BTE PICKED-UP FOUR CYLINDERS CAST ON 11-28-2011 FOR PROCESSING AND COMPRESSIVE STRENGTH TESTING.

Future Concerns: _____

Site Representative


QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 11-20-11

Client Name: Brown Contractor: Berco

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 (1) Range: Comp 2 = 97.7% / moist = 6.0%

Comments: Pen test on rock base for floor slab, Took 1 test on ^{south} side w/ results above.
South side was not ready. QTE waited on site to test north side, but ran out of light to
work. QTE will return on next working day to test.

Future Concerns: _____

Site Representative


QTE Personnel

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**QUALITY
TESTING**

AND ENGINEERING, INC.

803 West State Street • O'Fallon, Illinois 62280
 phone: 618-682-8800 • fax: 618-682-8822
 qte@qteinc.com

**COMPACTION TEST SUMMARY #1
 ROCK BASE**

**CP-SVE PROJECT
 WOOD RIVER, ILLINOIS
 QTE NO. 11-0617-C**

Date	Test #	General Area	Location	Depth to Grade (ft.)	Dry ¹ Density (pcf)	Moisture ¹ (%)	Max. Dry ² Unit Wt. (pcf)	Com- paction ³ %	Remarks
11/30/11	1	RTD Pad	South Side	RB	137.8	6.0	141.0	97.7	
	2	RTD Pad	South Side	RB	138.0	7.5	141.0	97.9	

¹ASTM D 6938

²ASTM D 698

³Project specifications required 95% compaction

QUALITY TESTING AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVF QTE No. 11-2417-C Date: 12-7-11

Client Name: Berni Contractor: Dece

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____
 Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____
 Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum
 Slump _____ in.
 Air _____ %
 Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557)
 Asphalt/Concrete Supplier _____
 Footings _____ psf
 Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes
 Sand Cone
 Nuclear/Gauge No. _____

Fill from: On-site _____
 Off-site _____

Test Area(s) _____

No. tests: 1 (2)
 Range: Comp 2 = 97.9 / Moist 2 = 7.5

Comments: Penning test on ~~concrete~~ rock base for floor slab continued from 11-30-11 report. QTE arrived at appointed time and waited for Dece to bring north side to grade and compact it. Took 1 test with results above.

Future Concerns: _____

 Site Representative

Michael McKinney
 QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 12-5-11

Client Name: Berry Contractor: _____

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: _____ Range: _____

Comments: Picked up 3 sets 4 @ 12" cyls made 12-3 by QTE. Cyls appeared unconsolidated.

Future Concerns: _____

Site Representative



QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-6VE QTE No. 11-06175 Date: 12-9-11

Client Name: Berco Contractor: Berco

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.

Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.

Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)

Std (ASTM D 698) or Mod (ASTM D 1557)

Asphalt/Concrete Supplier _____

Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 ATD Range: Slump = 4.5" / AE = 8.0% / core temp = 64° / air temp = 39°

Comments: Core pour of well sands. Sampled 1' long from neck chug before pour to verify core meets specs. Tested slump, AE, temp and made cubs on sample taken. Range above reflects these tests. Made 1 set of 4 6x12 cubs in spec and placed in core box.

Future Concerns: _____

Site Representative


QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-07F QTE No. 11-0617-C Date: 12-12-11

Client Name: Barr Contractor: _____

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.

Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.

Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)

Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____

Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: _____ Range: _____

Comments: Retained 1 set of 4 6x12 cyls made 12-9 by RTF. C/S
approved on record.

Future Concerns: _____

Site Representative

QTE Personnel

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QTE QUALITY TESTING AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 12-01-11

Client Name: Dumas Contractor: Dumas

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 690) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____
 Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 (out of 4 req'd) Range: Slump = 4.25" / 4E = 50% / core req'd = 76" / 4A req'd = 51"

Comments: Core from 1st place. Sampled 1" below form surface and below pipe to verify concrete spec. Tested slump 4E Range used and met, with an average value. Range above reflects above range. Note: 1 set of 4 core sets and 1 set of 4 concrete tests noted in block notes.

Future Concerns: _____

Site Representative

[Signature]
QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains sole responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617C Date: 12-15-11

Client Name: Berna Contractor: Berna

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 BTT's Range: Slump = 3.5" / AF = 4.2% / core temp = 74 / cur. temp = 42"

Comments: Comparison of piles by conveyor. Sampled 1st load from end of conveyor before pour to verify concrete meets specs. Tested slump, AF & temp on sample taken. Range above reflects those across. Made 1 set of 4 BTT's after pour and placed in core box wrapped in core blanket.

Future Concerns: _____

Site Representative



QTE Personnel

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QUALITY TESTING AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 110617-2 Date: 12-16-11

Client Name: Dawa Contractor: Dawa

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKamy Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.

Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.

Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)

Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____

Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 cores Range: Slump = 4.25" / Air = 5.3% / core temp = 75° / air temp = 41°

Comments: Core pair of cores. Sampled 1' bed from rock chise before pour to verify
core means spec. ~~Revised test results with 200000~~ Tested slump 4.25" / air
on sample taken. Range above reflects these tests. Made 1 set of 4 6.12 c/s
and placed in cure box w/ ice blanket over box.

Future Concerns: _____

 Site Representative _____
QTE Personnel

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QUALITY TESTING
AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: i. P. 2011 QTE No. 11-2617-C Date: 12-19-11

Client Name: Bova Contractor: Bova

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKamy Project Engineer: _____

SERVICES REQUESTED:

Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____

Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 cores Range: Slump = 2" / AE 2.502 / core slump = 74" / core slump = 47"

Comments: Cores cut at wall ends. Sampled ~~AE~~ load from truck chime before pour to verify core meets spec. Tested Slump, AE, & temp on sample taken. Range above reflects these tests. Made 1 set of 4 cores w/ 1 core and placed in core box.

Future Concerns: _____

Site Representative

QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 12-20-11

Client Name: Duro Contractor: Beno

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKenney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____
 Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____
 Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum
 Slump _____ in.
 Air _____ %
 Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557)
 Asphalt/Concrete Supplier _____

Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method:
 Drive Tubes
 Sand Cone
 Nuclear/Gauge No. _____

Fill from:
 On-site _____
 Off-site _____

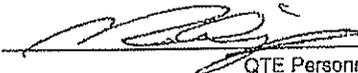
Test Area(s) _____

No. tests: _____ Range: _____

Comments: Picked up 1 set of 4 6x12 cpls made 12-19 by QTE Cpls
appeared unmoed.

Future Concerns: _____

Site Representative


QTE Personnel

NOTICE: The professional engineer is represented on site solely to observe operations of the contractor identified, form opinions about the adequacy of those operations, and report those opinions to the client. The presence and activities of the engineer's field representatives do not relieve the contractor's obligation to meet contractual requirements. The contractor retains responsibility for site safety and the methods and sequences of construction. This preliminary report is provided solely as evidence that field observation was performed. Observations and/or conclusions and/or recommendations conveyed in the final report may vary from and shall take precedence over those indicated in this preliminary report.


QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: C.P-SVE QTE No. 11-0617-C Date: 12-21-11

Client Name: Berco Contractor: Berco

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: Least 4 x 12's Range: Shmp = 3" / AE = 5.0% / Core temp = 74° / air temp = 48°

Comments: Core pour of well pads. Sampled 1st load from truck chive before pour to verify core meets specs. Tested shmp, AE & temp on sample taken. Range above reflects these tests. Made 1 set of 4 x 12 cgl's w/ specs and placed in cure box.

Future Concerns: _____

Site Representative

Michael McKinney
QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 12-22-11

Client Name: Berco Contractor: Berco

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

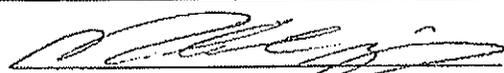
Test Area(s) _____

No. tests: _____ Range: _____

Comments: Picked up 1 set of 4 6x12 cys mud 12-21 by QTE. Cyls appeared unmoored.

Future Concerns: _____

Site Representative


QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE QTE No. 11-0617-C Date: 1-4-12

Client Name: Berco Contractor: Berco

Work Requested by: _____ Message Taken: _____

QTE Personnel: Michael McKinney Project Engineer: _____

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / M If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____
 Fill from: On-site Off-site _____

Test Area(s) _____

No. tests: 1 set of 4 6x12's Range: Slump = 2.75" / AE = 4.7% / conc temp = 71° / air temp = 42°

Comments: Cone pour of well bases; Sampled load from truck chive before pour to verify cone meets specs. Tested slump, AE & temp on sample taken. Range above reflects these tests. Made 1 set of 4 6x12 cpls w/caps and placed in cure box.

Future Concerns: _____

Site Representative

QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVE (GRIDS 29109) QTE No. 11-0617 C Date: 1-10-2012
 Client Name: BIRCO INC. Contractor: BIRCO INC.
 Work Requested by: ANDY Message Taken: _____
 QTE Personnel: JEREMY P. VOSS Project Engineer: LEM

SERVICES REQUESTED:

Soil/Rock Fill Soil Subgrade Rock Base Footing Insp. Asphalt Concrete

SPECIFICATION

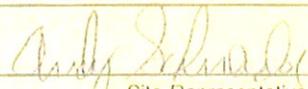
Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psf Boring Log Y / N If Yes, Soil Type Reported _____

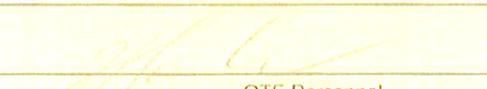
TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____
 Fill from: On-site _____ Off-site _____
 Test Area(s) BEHIND BASE PLATES
 No. tests: _____ Range: MOIST TEMP: 28°F AIR TEMP: 37°F

Comments: QTE PERSONNEL ARRIVED ON-SITE AND TO CAST FIVE CUBES FROM A BATCH OF GROUT MIXED BY HAND BY BIRCO. THE MIX WAS ABOVE DRY FOR USE AROUND THE BASE PLATES. QTE ALLOWED GROUT AND AMBIENT TEMPS ABOVE.

Future Concerns: _____


 Site Representative


 QTE Personnel

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QUALITY TESTING
 AND ENGINEERING, INC.
FIELD SERVICES REPORT

Project Name: CP-SVC (GROSS 29109) QTE No 11-0617-2 Date: 1-11-2012

Client Name: BERCO IND. Contractor: BERCO IND.

Work Requested by: ANAY Message Taken: _____

QTE Personnel: JERREY P. VOSS Project Engineer: EKM

SERVICES REQUESTED:

- Soil/Rock Fill
 Soil Subgrade
 Rock Base
 Footing Insp.
 Asphalt
 Concrete

SPECIFICATION

Compaction _____ % for _____ Compaction _____ % for asphalt surface, _____ in. thick.
 Compaction _____ % for _____ Compaction _____ % for asphalt binder, _____ in. thick.
 Moisture within _____ % of optimum Slump _____ in. Air _____ % Strength _____ psi (at 28 days)
 Std (ASTM D 698) or Mod (ASTM D 1557) Asphalt/Concrete Supplier _____
 Footings _____ psi Boring Log Y / N If Yes, Soil Type Reported _____

TEST RESULT SUMMARY

Test Method: Drive Tubes Sand Cone Nuclear/Gauge No. _____

Fill from: On-site _____ Off-site _____

Test Area(s) _____

No. tests: _____ Range: _____

Comments: QTE PERSONNEL ARRIVED ON-SITE PM TO PICK-UP NINE CEMENTIOUS

BROW CUBES CAST ON 1-10-2012.

Future Concerns: _____

Site Representative


QTE Personnel

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THE QUALITY TESTING AND ENGINEERING, INC.

303 West State Street • O'Fallon, Illinois 62260
 phone: 618-632-9900 • fax: 618-632-9922
 qte@qteinc.com

CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 1
 DATE: 11/25/11

FIELD DATA

Location of Pour:	Pier P-12		
Contractor:	Berco Industrial	Initial Slump ² (in.):	3.5
Concrete Supplier:	Kienstra-II.	Water Added at Site (gal.):	N/A
Concrete Plant:	25	Admixtures Added at Site:	N/A
Truck Number:	29	After Water Added and/or Field Admixtures:	
Ticket Number:	56915	Slump (in.):	N/A
Time Batched:	12:25	Temp. ⁴ (F)= Concrete:	66
Time Cast:	1:30	Truck Quantity Represented (c.y.):	9
Date Cast:	10/28/11	Accumulated Quantity (c.y.):	9
Date Received:	10/31/11	Mix Type or Mix Number:	S-4
Cast By:	QTE (JRC)	Cement Type:	I
		Admixtures:	WRDA
		Strength Required:	4,000 psi @ 28 days

COMPRESSION TEST RESULTS (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
1	8886	Lab	11/04/11	7	2	87,580	3,100
2	8887	Lab	11/25/11	28	1	128,010	4,530
3	8888	Lab	11/25/11	28	2	137,810	4,870
4	8889	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C
 REPORT NO.: 2
 DATE: 11/28/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Piers P-008, 009

Contractor: Berco Industrial
 Concrete Supplier: Kienstra-IL
 Concrete Plant: 23
 Truck Number: 49
 Ticket Number: 55205
 Time Batched: 12:38
 Time Cast: 1:30
 Date Cast: 10/31/11
 Date Received: 11/01/11
 Cast By: QTE (JRC)

Initial Slump² (in.): 5.0 Initial Air Content (%): 6.1
 Water Added at Site (gal.): N/A
 Admixtures Added at Site: N/A
 After Water Added and/or Field Admixtures:
 Slump (in.): N/A Air Content³ (%): N/A
 Temp.⁴ (F) = Concrete: 69 Air: 59
 Truck Quantity Represented (c.y.): 6
 Accumulated Quantity (c.y.): 6
 Mix Type or Mix Number: S-4
 Cement Type: 1
 Admixtures: WRDA
 Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
5	8894	Lab	11/07/11	7	2	109,770	3,880
6	8895	Lab	11/28/11	28	2	127,100	4,500
7	8896	Lab	11/28/11	28	5	123,520	4,370
8	8897	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolle (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 3
 DATE: 11/29/11

FIELD DATA

Location of Pour: Piers P-024, 025

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.0	Initial Air Content (%):	5.5
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	23	Admixtures Added at Site:	N/A		
Truck Number:	49	After Water Added and/or Field Admixtures:			
Ticket Number:	55252	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	12:18	Temp. ⁴ (F)= Concrete:	68	Air:	68
Time Cast:	1:15	Truck Quantity Represented (c.y.):	6		
Date Cast:	11/01/11	Accumulated Quantity (c.y.):	6		
Date Received:	11/02/11	Mix Type or Mix Number:	S-4		
Cast By:	QTE (JRC)	Cement Type:	I		
		Admixtures:	WRDA		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
9	8962	Lab	11/08/11	7	2	107,420	3,800
10	8963	Lab	11/29/11	28	3	129,830	4,590
11	8964	Lab	11/29/11	28	3	123,940	4,380
12	8965	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 4
 DATE: 11/30/11

FIELD DATA

Location of Pour: Piers P-007

Contractor: Berco Industrial
 Concrete Supplier: Kienstra-IL
 Concrete Plant: 23
 Truck Number: 1845
 Ticket Number: 55314
 Time Batched: 12:15
 Time Cast: 1:15
 Date Cast: 11/02/11
 Date Received: 11/03/11
 Cast By: QTE (JRC)

Initial Slump² (in.): 5.0 Initial Air Content (%): 5.5
 Water Added at Site (gal.): N/A
 Admixtures Added at Site: N/A
 After Water Added and/or Field Admixtures:
 Slump (in.): N/A Air Content³ (%): N/A
 Temp.⁴ (F)= Concrete: 69 Air: 69
 Truck Quantity Represented (c.y.): 6
 Accumulated Quantity (c.y.): 6
 Mix Type or Mix Number: S-4
 Cement Type: 1
 Admixtures: WRDA
 Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
13	9075	Lab	11/09/11	7	3	103,520	3,650
14	9076	Lab	11/30/11	28	2	130,700	4,620
15	9077	Lab	11/30/11	28	1	146,810	5,190
16	9078	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 5
 DATE: 12/02/11

FIELD DATA

Location of Pour: Piers 34, 25 and 1/4 of 36

Contractor:	Bereco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	5.4
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal):	N/A		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	49	After Water Added and/or Field Admixtures:			
Ticket Number:	55358	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	12:05	Temp. ⁴ (F)= Concrete:	63	Air:	56
Time Cast:	1:00	Truck Quantity Represented (c.y.):	6		
Date Cast:	11/04/11	Accumulated Quantity (c.y.):	6		
Date Received:	11/07/11	Mix Type or Mix Number:	S-4000		
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	N/A		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
17	9110	Lab	11/11/11	7	2	111,800	3,950
18	9111	Lab	12/02/11	28	3	138,600	4,900
19	9112	Lab	12/02/11	28	2	136,700	4,840
20	9113	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nofte (email)
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 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 6
 DATE: 12/08/11

FIELD DATA

Location of Pour: Pier Caps P-001 to P-008

Contractor:	Berco Industrial	Initial Slump ² (in.):	N/A	Initial Air Content (%):	N/A
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):		5	
Concrete Plant:	Alton-23	Admixtures Added at Site:		N/A	
Truck Number:	49	After Water Added and/or Field Admixtures:			
Ticket Number:	55421	Slump (in.):	3.75	Air Content ³ (%):	4.5
Time Batched:	10:08	Temp. ⁴ (F)= Concrete:	60	Air:	46
Time Cast:	10:57	Truck Quantity Represented (c.y.):		3	
Date Cast:	11/10/11	Accumulated Quantity (c.y.):		3	
Date Received:	11/11/11	Mix Type or Mix Number:		S-4000	
Cast By:	QTE (MWM)	Cement Type:		N/A	
		Admixtures:		N/A	
		Strength Required:	3,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
21	9293	Lab	11/14/11	4	3	116,780	4,130
22	9294	Lab	11/14/11	4	2	115,420	4,080
23	9295	Lab	11/17/11	7	5	131,200	4,640
24	9296	Lab	12/08/11	28	3	144,740	5,120
25	9297	Lab	12/08/11	28	3	154,010	5,450
26	9298	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
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 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 7
 DATE: 12/13/11

FIELD DATA

Location of Pour: Pier #42, 43 North & 44 North

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	4.4
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	33	After Water Added and/or Field Admixtures:			
Ticket Number:	55503	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	12:59	Temp. ⁴ (F) Concrete:	69	Air:	63
Time Cast:	2:02	Truck Quantity Represented (c.y.):			7
Date Cast:	11/15/11	Accumulated Quantity (c.y.):			7*
Date Received:	11/17/11	Mix Type or Mix Number:			N/A
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	N/A		
		Strength Required:	3,000	psi @	28 days

* 1st Load Rejected. Ticket says 13yds.

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
27	9493	Lab	11/22/11	7	1	114,570	4,050
28	9494	Lab	12/13/11	28	3	128,140	4,530
29	9495	Lab	12/13/11	28	2	132,080	4,670
30	9496	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C
 REPORT NO.: 8
 DATE: 12/14/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Pier Caps 19-23 & Piers 48 & 49

Contractor:	Bereco Industrial	Initial Slump ² (in.):	4.0	Initial Air Content (%):	4.3
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Collinsville-25	Admixtures Added at Site:	N/A		
Truck Number:	47	After Water Added and/or Field Admixtures:			
Ticket Number:	57170	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	8:03	Temp. ⁴ (F)= Concrete:	64	Air:	40
Time Cast:	8:53	Truck Quantity Represented (c.y.):	6		
Date Cast:	11/16/11	Accumulated Quantity (c.y.):	6		
Date Received:	11/17/11	Mix Type or Mix Number:	S-4000		
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	N/A		
		Strength Required:	3,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
31	9596	Lab	11/23/11	7	2	133,930	4,740
32	9597	Lab	12/14/11	28	1	154,350	5,160
33	9598	Lab	12/14/11	28	2	157,490	5,570
34	9599	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
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 Hartford, Illinois 62048

QTE NO.: 11-0617-C
 REPORT NO.: 9
 DATE: 12/15/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Pier Caps 24-30

Contractor:	Berco Industrial	Initial Slump ² (in.):	N/A	Initial Air Content (%):	N/A
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	7		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	49	After Water Added and/or Field Admixtures:			
Ticket Number:	55587	Slump (in.):	3.25	Air Content ³ (%):	5.4
Time Batched:	8:56	Temp. ⁴ (F)= Concrete:	57	Air:	43
Time Cast:	9:45	Truck Quantity Represented (c.y.):	3		
Date Cast:	11/17/11	Accumulated Quantity (c.y.):	3		
Date Received:	11/18/11	Mix Type or Mix Number:	S-1000		
Cast By:	QTE (MVM)	Cement Type:	N/A		
		Admixtures:	N/A		
		Strength Required:	3,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
35	9660	Lab	11/24/11	7	1	117,410	4,150
36	9661	Lab	12/15/11	28	2	139,070	4,920
37	9662	Lab	12/15/11	28	1	133,830	4,730
38	9663	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
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 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 10
 DATE: 12/16/11

FIELD DATA

Location of Pour: Pier P-059N

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	6.6
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):		N/A	
Concrete Plant:	Aiton, IL	Admixtures Added at Site:		N/A	
Truck Number:	1845	After Water Added and/or Field Admixtures:			
Ticket Number:	55648	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	9:47	Temp. ⁴ (F) = Concrete:	56	Air:	41
Time Cast:	10:15	Truck Quantity Represented (c.y.):		4	
Date Cast:	11/18/11	Accumulated Quantity (c.y.):		4	
Date Received:	11/21/11	Mix Type or Mix Number:		S-4000AP	
Cast By:	QTE (JPV)	Cement Type:		I	
		Admixtures:		N/A	
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type	Maximum Load (lbs)	Compressive Strength ¹ (psi)
39	9708	Lab	11/25/11	7	5	93,610	3,310
40	9709	Lab	12/16/11	28	1	117,750	4,170
41	9710	Lab	12/16/11	28	5	115,110	4,070
42	9711	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereo Industrial, Inc.
 Attn: Bill Nolte (email)
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 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 11
 DATE: 12/19/11

FIELD DATA

Location of Pour: P-070E and P-072

Contractor:	Bereo Industrial	Initial Slump ² (in.):	4.0	Initial Air Content (%):	5.8
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Alton, IL	Admixtures Added at Site:	N/A		
Truck Number:	1845	After Water Added and/or Field Admixtures:			
Ticket Number:	55721	Slump (in.):	N/A	Air Content ⁴ (%):	N/A
Time Batched:	12:45	Temp. ⁴ (F)= Concrete:	57	Air:	45
Time Cast:	1:15	Truck Quantity Represented (c.y.):	6		
Date Cast:	11/21/11	Accumulated Quantity (c.y.):	6		
Date Received:	11/23/11	Mix Type or Mix Number:	S-4000AP		
Cast By:	QTE (JPV)	Cement Type:	I		
		Admixtures:	N/A		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
43	9748	Lab	11/28/11	7	1	105,450	3,730
44	9749	Lab	12/19/11	28	2	123,690	4,380
45	9750	Lab	12/19/11	28	2	124,040	4,390
46	9751	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereco Industrial, Inc.
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 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 12

DATE: 12/21/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: P-075, P-076

Contractor: Bereco Industrial
 Concrete Supplier: Kienstra-IL
 Concrete Plant: Collinsville, IL
 Truck Number: 1845
 Ticket Number: 57349
 Time Batched: 12:59
 Time Cast: 1:30
 Date Cast: 11/23/11
 Date Received: 11/25/11
 Cast By: QTE (JPV)

Initial Slump² (in.): 4.5 Initial Air Content (%): 6.0
 Water Added at Site (gal.): N/A
 Admixtures Added at Site: N/A
 After Water Added and/or Field Admixtures:
 Slump (in.): N/A Air Content³ (%): N/A
 Temp.⁴ (F)= Concrete: 65 Air: 47
 Truck Quantity Represented (c.y.): 6
 Accumulated Quantity (c.y.): 6
 Mix Type or Mix Number: S-4000AP
 Cement Type: 1
 Admixtures: N/A
 Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
47	9792	Lab	11/30/11	7	2	99,400	3,520
48	9793	Lab	12/21/11	28	2	124,690	4,410
49	9794	Lab	12/21/11	28	1	127,270	4,500
50	9795	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 13

DATE: 12/26/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: P-082, P-083

Contractor: Bereco Industrial
 Concrete Supplier: Kienstra-IL
 Concrete Plant: Alton, IL
 Truck Number: 1049
 Ticket Number: 55884
 Time Batched: 2:50
 Time Cast: 3:15
 Date Cast: 11/28/11
 Date Received: 11/29/11
 Cast By: QTE (JPV)

Initial Slump² (in.): 4.0 Initial Air Content (%): 6.3
 Water Added at Site (gal.): N/A
 Admixtures Added at Site: N/A
 After Water Added and/or Field Admixtures:
 Slump (in.): N/A Air Content³ (%): N/A
 Temp.⁴ (F) = Concrete: 55 Air: 39
 Truck Quantity Represented (c.y.): 6
 Accumulated Quantity (c.y.): 6
 Mix Type or Mix Number: S-4000AP
 Cement Type: 1
 Admixtures: N/A
 Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
51	9845	Lab	12/05/11	7	5	126,920	4,490
52	9846	Lab	12/26/11	28	3	157,870	5,580
53	9847	Lab	12/26/11	28	2	149,290	5,280
54	9848	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.



Eric K. Marlinghaus, P.E.
 Construction Services Manager

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²ASTM C143
³ASTM C231
⁴ASTM C1064

CC: Joe Wood (j.wood@berecoindustrial.com)



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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 14

DATE: 12/31/11

PROJECT: ConocoPhillips - SYE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: North Side Grade Beam: Northeast Outside Corner on East Side to Northwest Corner up to Rock Grade of Slab

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	5.1
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	11	After Water Added and/or Field Admixtures:			
Ticket Number:	56046	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	8:09	Temp. ⁴ (F)= Concrete:	96	Air:	46
Time Cast:	8:42	Truck Quantity Represented (c.y.):	10		
Date Cast:	12/03/11	Accumulated Quantity (c.y.):	10		
Date Received:	12/05/11	Mix Type or Mix Number:	S-4000		
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	Hot Water		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type	Maximum Load (lbs)	Compressive Strength ¹ (psi)
55	9971	Lab	12/10/11	7	5	112,490	3,980
56	9972	Lab	12/31/11	28	2	130,600	4,620
57	9973	Lab	12/31/11	28	2	143,720	5,080
58	9974	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Bereco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C
 REPORT NO.: 15
 DATE: 12/31/11

PROJECT: ConocoPhillips - SYE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Floor Slab - North Center

Contractor:	Bereco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	5.5
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	11	After Water Added and/or Field Admixtures:			
Ticket Number:	56054	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	10:13	Temp. ⁴ (F)≅ Concrete:	91	Air:	52
Time Cast:	10:40	Truck Quantity Represented (c.y.):			10
Date Cast:	12/03/11	Accumulated Quantity (c.y.):			67
Date Received:	12/05/11	Mix Type or Mix Number:			S-4000
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	Hot Water		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
59	9975	Lab	12/10/11	7	5	109,930	3,390
60	9976	Lab	12/31/11	28	1	125,510	4,440
61	9977	Lab	12/31/11	28	1	129,560	4,580
62	9978	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Noite (email)
 1891 South Delmar / P.O. Box 7
 Hartland, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 16

DATE: 12/31/11

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Floor Slab: Full Width - 7ft to 15ft from South End

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	5.0
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Aiton-23	Admixtures Added at Site:	N/A		
Truck Number:	51	After Water Added and/or Field Admixtures:			
Ticket Number:	56060	Slump (in.):	N/A	Air Content ⁴ (%):	N/A
Time Batched:	11:11	Temp. ⁴ (F)= Concrete:	93	Air:	56
Time Cast:	11:52	Truck Quantity Represented (c.y.):			10
Date Cast:	12/03/11	Accumulated Quantity (c.y.):			97
Date Received:	12/05/11	Mix Type or Mix Number:			S-4000
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	Hot Water		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
63	9979	Lab	12/10/11	7	1	106,810	3,780
64	9980	Lab	12/31/11	28	2	130,580	4,620
65	9981	Lab	12/31/11	28	2	128,780	4,560
66	9982	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 17

DATE: 01/06/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Well Pads: SVE 28, SVE 7 and SVE 29

Contractor:	Berco Industrial	Initial Slump ² (in.):	4.5	Initial Air Content (%):	5.0
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	33	After Water Added and/or Field Admixtures:			
Ticket Number:	56177	Slump (in.):	N/A	Air Content ³ (%):	N/A
Time Batched:	9:11	Temp. ⁴ (F)= Concrete:	64	Air:	39
Time Cast:	10:20	Truck Quantity Represented (c.y.):	4		
Date Cast:	12/09/11	Accumulated Quantity (c.y.):	4		
Date Received:	12/12/11	Mix Type or Mix Number:	S-4000		
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	Hot Water		
		Strength Required:	3,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
67	10181	Lab	12/16/11	7	1	114,810	4,060
68	10182	Lab	01/06/12	28	1	130,110	4,600
69	10183	Lab	01/06/12	28	2	136,060	4,810
70	10184	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
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 Hartford, Illinois 62048

QTE NO.: 11-0617-C
REPORT NO.: 18
DATE: 01/11/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Piers 96, 95 & 94

Contractor: Berco Industrial
Concrete Supplier: Kienstra-IL
Concrete Plant: Alton-23
Truck Number: 1845
Ticket Number: 56303
Time Batched: 1:32
Time Cast: 2:10
Date Cast: 12/14/11
Date Received: 12/15/11
Cast By: QTE (MWM)

Initial Slump² (in.): 4.25 **Initial Air Content (%):** 5.6
Water Added at Site (gal.): N/A
Admixtures Added at Site: N/A
After Water Added and/or Field Admixtures:
Slump (in.): N/A **Air Content³ (%):** N/A
Temp.⁴ (F)= Concrete: 76 **Air:** 58
Truck Quantity Represented (c.y.): 6
Accumulated Quantity (c.y.): 6
Mix Type or Mix Number: S-4000
Cement Type: N/A
Admixtures: Hot Water
Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ⁵	Maximum Load (lbs)	Compressive Strength ¹ (psi)
71	10232	Lab	12/21/11	7	3	106,500	3,770
72	10233	Lab	01/11/12	28	2	126,890	4,490
73	10234	Lab	01/11/12	28	3	132,370	4,680
74	10235	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

QTE NO.: 11-0617-C
 REPORT NO.: 19
 DATE: 01/12/12

FIELD DATA

Location of Pour:	Piers 98, 97 & 91		
Contractor:	Berco Industrial	Initial Slump ² (in.):	3.5
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	N/A
Concrete Plant:	Ahon-23	Admixtures Added at Site:	N/A
Truck Number:	49	After Water Added and/or Field Admixtures:	
Ticket Number:	56362	Slump (in.):	N/A
Time Batched:	1:34	Temp. ³ (F) - Concrete:	74
Time Cast:	2:08	Truck Quantity Represented (c.y.):	7
Date Cast:	12/15/11	Accumulated Quantity (c.y.):	7
Date Received:	12/16/11	Mix Type or Mix Number:	S-4000
Cast By:	QTE (MWM)	Cement Type:	N/A
		Admixtures:	Hot Water
		Strength Required:	4,000 psi @ 28 days

COMPRESSION TEST RESULTS (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
75	10276	Lab	12/22/11	7	5	136,210	4,820
76	10277	Lab	01/12/12	28	1	155,560	5,500
77	10278	Lab	01/12/12	28	1	159,190	5,630
78	10279	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.


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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C
REPORT NO.: 20
DATE: 01/13/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Piers: Bent B, C & D - North & South Piers

Contractor: Berco Industrial	Initial Slump² (in.): 4.25	Initial Air Content (%): 5.3
Concrete Supplier: Kienstra-IL	Water Added at Site (gal.): N/A	
Concrete Plant: Alton-23	Admixtures Added at Site: N/A	
Truck Number: 29	After Water Added and/or Field Admixtures:	
Ticket Number: 56405	Slump (in.): N/A	Air Content³ (%): N/A
Time Batched: 1:13	Temp.⁴ (F)- Concrete: 75	Air: 41
Time Cast: 1:46	Truck Quantity Represented (c.y.): 7	
Date Cast: 12/16/11	Accumulated Quantity (c.y.): 7	
Date Received: 12/19/11	Mix Type or Mix Number: S-4000	
Cast By: QTE (MWM)	Cement Type: N/A	
	Admixtures: Hot Water	
	Strength Required: 4,000	psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
79	10314	Lab	12/23/11	7	1	113,960	4,030
80	10315	Lab	01/13/12	28	1	135,230	4,780
81	10316	Lab	01/13/12	28	3	136,160	4,820
82	10317	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

(Signature)
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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 21

DATE: 01/17/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Well Pads: SVE 11, 12 & 33

Contractor: Berco Industrial
Concrete Supplier: Kienstra-IL
Concrete Plant: Alton-23
Truck Number: 33
Ticket Number: 56433
Time Batched: 1:31
Time Cast: 2:04
Date Cast: 12/19/11
Date Received: 12/20/11
Cast By: QTE (MWM)

Initial Slump² (in.): 3.0
Water Added at Site (gal.): N/A
Admixtures Added at Site: N/A
After Water Added and/or Field Admixtures:
Slump (in.): N/A
Temp.⁴ (F)= Concrete: 74
Truck Quantity Represented (c.y.): 4.5
Accumulated Quantity (c.y.): 4.5
Mix Type or Mix Number: S-4000
Cement Type: N/A
Admixtures: Hot Water
Strength Required: 4,000 psi @ 28 days

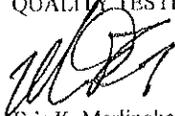
Initial Air Content (%): 5.0
Air Content³ (%): N/A
Air: 47

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
83	10347	Lab	12/26/11	7	2	125,840	4,450
84	10348	Lab	01/16/12	28	2	148,550	5,250
85	10349	Lab	01/16/12	28	2	135,620	4,800
86	10350	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
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 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 22

DATE: 01/18/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Well Pads: SVE 13, 35, 14 & 15

Contractor:	Berco Industrial	Initial Slump ² (in.):	1.75	Initial Air Content (%):	N/A
Concrete Supplier:	Kienstra-IL	Water Added at Site (gal.):	5		
Concrete Plant:	Alton-23	Admixtures Added at Site:	N/A		
Truck Number:	19	After Water Added and/or Field Admixtures:			
Ticket Number:	56457	Slump (in.):	3.0	Air Content ³ (%):	5.2
Time Batched:	12:32	Temp. ³ (F)= Concrete:	74	Air:	48
Time Cast:	1:19	Truck Quantity Represented (c.y.):			3
Date Cast:	12/21/11	Accumulated Quantity (c.y.):			3
Date Received:	12/22/11	Mix Type or Mix Number:			S-4000
Cast By:	QTE (MWM)	Cement Type:	N/A		
		Admixtures:	Hot Water		
		Strength Required:	4,000	psi @ 28	days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
87	10405	Lab	12/28/11	7	3	131,260	4,640
88	10406	Lab	01/18/12	28	1	146,440	5,180
89	10407	Lab	01/18/12	28	5	150,900	5,340
90	10408	Lab		Hold			

Respectfully submitted,

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CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
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 Hartford, Illinois 62048

QTE NO.: 11-0617-C

REPORT NO.: 24

DATE: 02/01/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: SVE 6 & 34

Contractor: Berco Industrial Initial Slump² (in.): 2.75 Initial Air Content (%): 4.7

Concrete Supplier: Kienstra-II. Water Added at Site (gal.): N/A

Concrete Plant: Alton-23 Admixtures Added at Site: N/A

Truck Number: 29 After Water Added and/or Field Admixtures:

Ticket Number: 56726 Slump (in.): N/A Air Content³ (%): N/A

Time Batched: 12:42 Temp.⁴ (F)= Concrete: 71 Air: 48

Time Cast: 1:28 Truck Quantity Represented (c.y.): 4

Date Cast: 01/04/12 Accumulated Quantity (c.y.): 4

Date Received: 01/05/12 Mix Type or Mix Number: S-4000

Cast By: QTE (MWM) Cement Type: N/A

Admixtures: Hot Water

Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
95	0073	Lab	01/11/12	7	5	124,450	4,400
96	0074	Lab	02/01/12	28	5	141,220	5,000
97	0075	Lab	02/01/12	28	2	144,300	5,100
98	0076	Lab		Hold			

Respectfully submitted,

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GROUT COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc.
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7
 Hartford, Illinois 62048

QTE NO.: 11-0617-C
REPORT NO.: 25
DATE: 02/07/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: Pier Base Plates

Contractor: Berco
Concrete Supplier: N/A
Concrete Plant: N/A
Truck Number: N/A
Ticket Number: N/A
Time Batched: 8:00
Time Cast: 8:15
Date Cast: 1/10/12
Date Received: 1/11/12
Cast By: QTE (JPV)

Initial Slump (in.): N/A **Initial Air Content (%):** N/A
Water Added at Site (gal.): N/A
Admixtures Added at Site: N/A
After Water Added and/or Field Admixtures:
Slump (in.): N/A **Air Content (%):** N/A
Temp.¹ (F)= Grout: 70 **Air:** 37
Truck Quantity Represented (c.y.): N/A
Accumulated Quantity (c.y.): N/A
Mix Type or Mix Number: N/A
Cement Type: N/A
Admixtures: N/A
Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 2 in x 2 in x 2 in)

Job Cube Number	Lab Cube Number	Type of Curing	Date Tested	Age (days)	D ₁ (in)	D ₂ (in)	Maximum Load (lbs)	Compressive Strength ² (psi)
99	0255	Lab	01/17/12	7	2.0	2.0	13,020	3,260
100	0256	Lab	01/17/12	7	2.0	2.0	12,430	3,110
101	0257	Lab	01/17/12	7	2.0	2.0	18,010	4,500
102	0258	Lab	02/07/12	28	2.0	2.0	39,210	9,800
103	0259	Lab	02/07/12	28	2.0	2.0	38,420	9,610
104	0260	Lab	02/07/12	28	2.0	2.0	33,840	8,460
105	0261	Lab		Hold	2.0	2.0		
106	0262	Lab		Hold	2.0	2.0		
107	0263	Lab		Hold	2.0	2.0		

QUALITY TESTING AND ENGINEERING, INC.

¹ ASTM C109
² ASTM C1064

Eric K. Marlinghaus, P.E.
 Construction Services Manager



CONCRETE COMPRESSION TEST REPORT

CLIENT: Berco Industrial, Inc. QTE NO.: 11-0617-C
 Attn: Bill Nolte (email)
 1891 South Delmar / P.O. Box 7 REPORT NO.: 26
 Hartford, Illinois 62048 DATE: 03/23/12

PROJECT: ConocoPhillips - SVE Project
 Wood River, Illinois

FIELD DATA

Location of Pour: SVE Pipe Supports

Contractor: Berco Industrial Initial Slump² (in.): 4.0 Initial Air Content (%): 5.3
 Concrete Supplier: Kienstua-II. Water Added at Site (gal.): N/A
 Concrete Plant: 23 Admixtures Added at Site: N/A
 Truck Number: 10 After Water Added and/or Field Admixtures:
 Ticket Number: 57476 Slump (in.): N/A Air Content³ (%): N/A
 Time Batched: 10:12 Temp.⁴ (F) Concrete: 74 Air: 44
 Time Cast: 11:00 Truck Quantity Represented (c.y.): 2.5
 Date Cast: 02/24/12 Accumulated Quantity (c.y.): 2.5
 Date Received: 02/27/12 Mix Type or Mix Number: S-4
 Cast By: QTE (JRC) Cement Type: 1
 Admixtures: Hot Water
 Strength Required: 4,000 psi @ 28 days

COMPRESSION TEST RESULTS
 (Nominal Size 6 in x 12 in)

Job Cylinder Number	Lab Cylinder Number	Type of Curing	Date Tested	Age (days)	Break Type ¹	Maximum Load (lbs)	Compressive Strength ¹ (psi)
108	1408	Lab	03/02/12	7	1	119,760	4,240
109	1409	Lab	03/23/12	28	1	140,280	4,960
110	1410	Lab	03/23/12	28	3	138,970	4,920
111	1411	Lab		Hold			

Respectfully submitted,

QUALITY TESTING AND ENGINEERING, INC.

¹ASTM C39, C1231
²ASTM C143
³ASTM C731
⁴ASTM C1861

Eric K. Marlinghaus, P.E.
 Construction Services Manager

Cc: Joe Wood (jwood@bercoindustrial.com)

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08

Procedure: SP-03-1222 R/O PARA 6.10

REP (COP Only): 5-5-1

Client: GROSS MECH

W.O. / Job #: 12211302/4025

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-134 y	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.4	HBC176/176	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.5	3.4	HBC187/176	X	
W-135 y	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.5	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.3	HBC176/176		
W-164 y	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.5	3.6	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.4	3.5	HBC165/176		
W-165 y	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.5	3.4	HBC187/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.5	3.5	HBC176/176		
W-172 30N	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.3	HBC187/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.2	HBC187/176		
W-173 30N	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.5	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.3	HBC176/176		
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: AARON HAUSMAN

Date: 11-17-11

200-11/18

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11

FWO #

12211302

P.O.#

4025

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-015				Source Strength or MA / KV 50Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Single <input checked="" type="checkbox"/> Viewing Double <input type="checkbox"/>				Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-134	0-1	.001"	\		\					\				TUNGSTEN	Y	2.53	2.42	A. Panoramic			
	1-2		\		\					\				TUNGSTEN		2.65	2.49				
	2-0		\		\					\						2.73	2.66	B. Single Wall			
																		C. Double Wall			
																		D. Elliptical			
																		E. Superimposed			
																		F. Profile			
Procedure			POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication				FA - Film Artifact						
			SI - Slag Inclusion		IF-Incomplete Fusion																

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 11-17-11

S _____

Client: CRC Date: 11/18 Inspector: [Signature] Date: 11-17-11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S. Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11

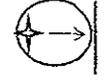
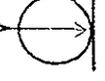
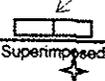
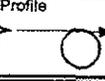
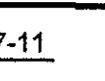
FWO #

12211302

P.O.#

4025

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-015				Source Strength or MA / KV 50Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp - Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-135	0-1	.001"	1												Y	2.51	2.39	A. Panoramic 			
	1-2		1													2.53	2.38				
	2-0		1													2.36	2.24				
																		B. Single Wall 			
																		C. Double Wall 			
																		D. Elliptical 			
																		E. Superimposed 			
																		F. Profile 			
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact											

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 11-17-11

S _____
Client: CB Date: 11/18 Inspector: [Signature] Date: 11-17-11

LEAW Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08

Procedure: SP-03-1222 R/O PARA 6.10

REP (COP Only): 5-5-1

Client: GROSS MECH

W.O. / Job #: 12211302/4025

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-134 y	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.4	3.4	HBC176/176	X	
			Loc. #2	3.5	3.4	HBC187/176	X	
W-135 y	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.4	3.5	HBC165/176		
			Loc. #2	3.3	3.3	HBC176/176		
W-164 y	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.5	3.6	HBC165/176		
			Loc. #2	3.4	3.5	HBC165/176		
W-165 y	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.5	3.4	HBC187/176		
			Loc. #2	3.5	3.5	HBC176/176		
W-172 30N	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.4	3.3	HBC187/176		
			Loc. #2	3.3	3.2	HBC187/176		
W-173 30N	SVE-3-015	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A		
			Loc. #1	3.4	3.5	HBC165/176		
			Loc. #2	3.3	3.3	HBC176/176		
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					

Technician Signature: AARON HAUSMAN

Date: 11-17-11

Handwritten initials/signature

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O PARA 6.10
 REP (COP Only): 5-5-1
 Client: GROSS MECH
 W.O. / Job #: 12211302/4025

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-134 4	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.4	HBC176/176	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.5	3.4	HBC187/176	X	
W-135 4	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.5	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.3	HBC176/176		
W-164 4	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.5	3.6	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.4	3.5	HBC165/176		
W-165 4	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.5	3.4	HBC187/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.5	3.5	HBC176/176		
W-172 30N	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.3	HBC187/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.2	HBC187/176		
W-173 30N	SVE-3-015	<input type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A		
		<input type="checkbox"/> Before PWHT	Loc. #1	3.4	3.5	HBC165/176		
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.3	HBC176/176		
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: AARON HAUSMAN

Date: 11-17-11

Handwritten signature

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway
S. Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11 FWO # 12211302 P.O.# 4025

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-015				Source Strength or MA / KV 50Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A	
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-164	0-1	.001"													Y	2.54	2.43	A. Panoramic			
	1-2															2.34	2.26				
↓	2-0	↓												↓	2.44	2.38					
																		B. Single Wall			
																		C. Double Wall			
																		D. Elliptical			
																		E. Superimposed			
																		F. Profile			
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact											

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 11-17-11
S _____
Client: CPL Date: 11/18 Inspector: [Signature] Date: 11-17-11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11

FWO #

12211302

P.O.#

4025

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE			Film Type AGFAD4		Film Size 4.5" X 10"				
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-015			Source Strength or MA / KV 50Ci				Penetrameter Material SS			Emulsion or Lot No. 7350605N						
Procedure RT.ASME.1 R/13		Pipe Dia. 4"	Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>			Film Exp. Date 2012-04						
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS	Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>						
Technique C		Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"				ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010"	Ctr.	Back .010"	Locations Marker Placement FILM SIDE			Backing Lead Location N/A						
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-165	0-1	.001"	\		\					\			\		Y	2.42	2.34	A. Panoramic
	1-2		\							\						2.51	2.38	
	2-0		\							\						2.53	2.39	
																		B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Procedure		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact						
		SI - Slag Inclusion		IF-Incomplete Fusion														

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 11-17-11
 S _____
 Client: CB Date: 11/18 Inspector: [Signature] Date: 11-17-11

TEAM Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11

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4025

Form 20.6-316 REV2

Customer GROSS MECH			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12 2T HOLE			Film Type AGFAD4		Film Size 4.5" X 10"				
Specification ASME B31.3 2008 NORM			Drawing No. SVE-3-015			Source Strength or MA / KV 50Ci			Penetrameter Material SS			Emulsion or Lot No. 7350605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>			Film Exp. Date 2012-04				
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"			Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE			Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-172	0-1	.001"												TUNGSTEN	30N	2.77	2.70	A. Panoramic
	1-2															2.90	2.78	
	2-0	↓													↓	2.80	2.66	
																		B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Procedure			POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back			Surf - Surface Indication FA - Film Artifact						

Q
S

Client:

Date: _____ Inspector / Reviewed By:

AARON HAUSMAN LEVEL II

Date: 11-17-11

Date: 11/18 Inspector: _____

Date: 11-17-11

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-17-11

FWO #

12211302

P.O.#

4025

Form 20.6-316 REV2

Customer GROSS MECH			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12 2T HOLE			Film Type AGFAD4		Film Size 4.5" X 10"					
Specification ASME B31.3 2008 NORM			Drawing No. SVE-3-015			Source Strength or MA / KV 50Ci			Penetrameter Material SS			Emulsion or Lot No. 7350605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input checked="" type="checkbox"/>		Film Exp. Date 2012-04						
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"			Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE		Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp - Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pen. Density	Weld Density	Techniques	
W-173	0-1	.001"	\		\					\				TUNGSTEN	30N	2.63	2.52	A. Panoramic	
	1-2		\							\				TUNGSTEN		2.77	2.69		
	2-0		\		\					\		\		TUNGSTEN		2.66	2.51		
																			B. Single Wall
																			C. Double Wall
																			D. Elliptical
																			E. Superimposed
																			F. Profile
Procedure			POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact								

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 11-17-11

S _____

Client: Ch Date: 11/18 Inspector: [Signature] Date: 11-17-11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-28-11

FWO #

12211365

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type ASTM HOLE TYPE 12 2T				Film Type AGFAD4		Film Size 4.5" X 10"					
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-14				Source Strength or MA / KV 40Ci				Penetrant Material SS				Emulsion or Lot No. 9140650							
Procedure RT ASME.1 R/13				Pipe Dia. 4.50"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 20 SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.01							
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 5"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>							
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.638"				ID Placement FLASH				Backing Lead Thickness N/A							
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr. N/A		Back .010"		Locations Marker Placement FILM SIDE							
Backing Lead Location N/A																							
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques					
W-82	0-1	.006"	\											PURPLE	38H	2.59	2.32	A. Panoramic					
	1-2		\												38H	2.93	2.88						
	2-0		\												38H	2.70	2.48						
W-84	0-1	.006"	\		\									PURPLE	13I	3.05	2.91	B. Single Wall					
	1-2		\		\										13I	2.86	2.68						
	2-0		\		\	\									13I	2.91	2.90						
																		C. Double Wall					
																		D. Elliptical					
																		E. Superimposed					
																		F. Profile					
Procedure				POR - Porosity SI - Slag Inclusion				C-Crack IF-Incomplete Fusion				IP - Incomplete Penetration				BT- Burn Thru or Suck Back				Surf - Surface Indication FA - Film Artifact			

Q _____ Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-28-11

S _____

Client: CH 1/3 Date: _____ Inspector: [Signature] Date: 11-28-11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD
 Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-84 134	SVE-3-14	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	2.9	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
W-82 384	SVE-3-14	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.9	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: PATRICK WAGGENER *Pat Waggen*

Date: 11-28-11

CBG 12/2

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S. Roxana, Illinois 62087 (618) 251-4125

Date: 11-28-11

FWO #

12211365

P.O.#

4205

Form 20.8-318 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-14		Source Strength or MA / KV 40Ci		Penetrameter Material SS		Emulsion or Lot No. 9140650	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 20 SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.01	
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"		ID Placement FLASH		Backing Lead Thickness N/A	
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE	
								Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Weider ID	Pene. Density	Weld Density	Techniques
W-82	0-1	.006"	\											PURPLE	38H	2.59	2.32	A. Panoramic
	1-2		\												38H	2.93	2.88	
	2-0		\												38H	2.70	2.48	
W-84	0-1	.006"	\		\									PURPLE	13I	3.05	2.91	B. Single Wall
	1-2		\		\										13I	2.86	2.68	
	2-0		\		\	\									13I	2.91	2.90	
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Q
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Client:

Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-28-11
 Date: 11-28-11 Inspector: [Signature] Date: 11-28-11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-84 131	SVE-3-14	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	2.9	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
W-82 384	SVE-3-14	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.9	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: PATRICK WAGGENER *Pat Waggen*

Date: 11-28-11

CBG-12/2

TEAM Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-28-11

FWO #

12211365

P.O.#

4205

Form 20.6-318 REV2

Customer: GROSS MECH				Type of Item: PIPE WELD				Radiation Source: IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type: ASTM HOLE TYPE 12 2T				Film Type: AGFAD4		Film Size: 4.5" X 10"			
Specification: ASME B31.3 2008 NORM				Drawing No.: SVE-3-16				Source Strength or MA / KV: 40Ci				Penetrant Material: SS				Emulsion or Lot No.: 9140650					
Procedure: RT.ASME.1 R/13				Pipe Dia.: 4.50"		Nom. Thickness: .237"		Focal Spot Size: .133"		Exposure Time: 20 SEC		Penetrant Location: Flash				Film Exp. Date: 2014.01					
Acceptance Procedure: PARA 8.2				Joint Type: BUTT		Material: CS		Source to Film Distance (SFD): 5"				Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Shim Material: SS		Shim Thickness: .125"		Film Technique: Single Load <input checked="" type="checkbox"/> Double <input type="checkbox"/>			
Technique: C				Surface Condition: AS WELDED				Source to Object Distance (SOD): 4.638"				ID Placement: FLASH				Backing Lead Thickness: N/A					
Viewing: Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing: Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens: PB		Front: .010"		Ctr.: N/A		Back: .010"		Locations Marker Placement: FILM SIDE					
Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens: PB		Front: .010"		Ctr.: N/A		Back: .010"		Locations Marker Placement: FILM SIDE					
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-189	0-1	.006"	\											BLUE	3I	2.62	2.53	A. Panoramic			
	1-2		\												3I	2.92	2.87				
	2-0		\		\	\									3I	3.00	3.04				
W-190	0-1	.006"	\											BLUE	30N	2.63	2.80	B. Single Weld			
	1-2		\												30N	2.83	2.96				
	2-0		\												30N	2.78	2.99				
W-191	0-1	.006"	\											BLUE	30N	2.78	2.93	C. Double Weld			
	1-2		\												30N	2.74	2.86				
	2-0		\												30N	2.71	2.87				
W-192	0-1	.006"	\		\						\			BLUE	3I	2.85	2.64	D. Elliptical			
	1-2			X	X										3I	2.93	2.55				
	2-0		\		\					\	\				3I	2.34	2.44				
Procedure				POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication									
				SI - Slag Inclusion		IF - Incomplete Fusion						FA - Film Artifact									

Q _____ Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-28-11

S _____

Client: CRC 13 Date: _____ Inspector: Patrick Waggener Date: _____

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-28-11 FWO # 12211365 P.O.# 4205

Form 20.6-318 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-18		Source Strength or MA / KV 40Ci			Penetrameter Material SS		Emulsion or Lot No. 9140650	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 20 SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.01		
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Dot <input type="checkbox"/> e Load	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"			ID Placement FLASH		Backing Lead Thickness N/A	
Single <input checked="" type="checkbox"/>	Double <input type="checkbox"/>	Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE		Backing Lead Location N/A

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-241	0-1	.006"	\											GREEN	Y	2.89	2.61	A. Panoramic
	1-2		\												Y	3.18	2.78	
	2-0		\												Y	2.79	2.37	
W-242	0-1	.006"	\		\									GREEN	30N	3.27	3.36	B. Single Wall
	1-2		\												30N	2.98	2.90	
	2-0		\												30N	3.10	3.17	
W-243	0-1	.006"	\											GREEN	30N	3.03	2.76	C. Double Wall
	1-2		\												30N	3.02	2.99	
	2-0		\												30N	3.07	3.14	
W-244	0-1	.006"	\											GREEN	Y	2.96	2.92	D. Elliptical E. Superimposed F. Profile
	1-2		\												Y	3.06	2.82	
	2-0		\		\										Y	2.92	2.62	

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Q _____ Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-28-11
 S _____
 Client: CET 1/3 Date: _____ Inspector: *Patrick Waggener* Date: 11-28-11

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-241 7	SVE-3-18	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.8	2.8	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	2.9	176/186	\	
W-242 30P	SVE-3-18	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.8	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.9	176/176	\	
W-243 30P	SVE-3-18	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
W-244 7	SVE-3-18	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.8	2.8	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.9	176/176	\	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: PATRICK WAGGENER / Patrick Waggener

Date: 11-28-11

CBG v2/2

TCM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

TEAM Industrial Services, Inc.

Date: 11-28-11 FWO # 12211365 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrant Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-18		Source Strength or MA / KV 40Ci		Penetrant Material SS		Emulsion or Lot No. 9140650	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 20 SEC	Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.01	
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"		ID Placement FLASH		Backing Lead Thickness N/A	
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE	
								Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-241	0-1	.006"												GREEN	Y	2.89	2.61	A. Panoramic
	1-2														Y	3.18	2.78	
	2-0														Y	2.79	2.37	
W-242	0-1	.006"												GREEN	30N	3.27	3.36	B. Single Wall
	1-2														30N	2.98	2.90	
	2-0														30N	3.10	3.17	
W-243	0-1	.006"												GREEN	30N	3.03	2.76	C. Double Wall
	1-2														30N	3.02	2.99	
	2-0														30N	3.07	3.14	
W-244	0-1	.006"												GREEN	Y	2.96	2.92	D. Elliptical
	1-2														Y	3.06	2.82	
	2-0														Y	2.92	2.62	

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Client: CRT 1/3 Date: 11-28-11 Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-28-11
 Date: 11-28-11 Inspector: Patrick Waggener Date: 11-28-11

LEAM Industrial Services, Inc.

TCM division,
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-241 y	SVE-3-18	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	2.8	2.8	176/176	\	
			Loc. #2	3.0	2.9	176/186	\	
W-242 302	SVE-3-18	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	2.9	2.8	176/186	\	
			Loc. #2	2.9	2.9	176/176	\	
W-243 302	SVE-3-18	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	3.0	3.0	176/176	\	
			Loc. #2	3.0	3.0	176/176	\	
W-244 y	SVE-3-18	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	2.8	2.8	176/176	\	
			Loc. #2	2.9	2.9	176/176	\	
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					

Technician Signature: PATRICK WAGGENER / Patrick

Date: 11-28-11

CBG 12/2

TEAM Industrial Services, Inc.

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South Roxana, IL 62087

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Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-189 <i>3I</i>	SVE-3-16	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	3.2	3.1	176/186	\	
			Loc. #2	3.1	3.1	176/176	\	
W-190 <i>3W</i>	SVE-3-16	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	3.0	3.1	176/165	\	
			Loc. #2	3.1	3.1	176/176	\	
W-191 <i>30N</i>	SVE-3-16	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	3.2	3.2	176/176	\	
			Loc. #2	3.1	3.2	176/165	\	
W-192 <i>3I</i>	SVE-3-16	<input checked="" type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal	N/A	N/A	N/A	N/A	
			Loc. #1	3.0	2.9	176/186	\	
			Loc. #2	3.0	3.0	176/176	\	
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					
		<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input type="checkbox"/> After PWHT	Base Metal					
			Loc. #1					
			Loc. #2					

Technician Signature: CORY HEINEMAN 

Date: 11-29-11

CBW/rk

TEAM Industrial Services, Inc.

TCM Division
 500 Broadway
 S. Roxana, Illinois 62087 (618) 251-4125

Date: 11-29-11 FWO # 12211365 P.O.# 4205

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"								
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-16		Source Strength or MA / KV 40Ci			Penetrameter Material SS		Emulsion or Lot No. 9140650									
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 20 SEC		Penetrameter Location		Film Exp. Date 2014.01									
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"		Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Dot Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-192 R1	1-2	.006"	1											BLUE	3I	2.91	2.53	A. Panoramic
																		B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Q
S
Client: CBF 1/3 Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-29-11
 Date: _____ Inspector: *Patrick Waggener* Date: 11-29-11

Procedure: POR - Porosity, SI - Slag Inclusion, C - Crack, IF - Incomplete Fusion, IP - Incomplete Penetration, BT - Burn Thru or Suck Back, Surf - Surface Indication, FA - Film Artifact

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Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-195 <i>A2.C.1 C94</i>	SVE-3-16 <i>3I 3075</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	\	
W-196	SVE-3-16 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.3	3.2	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.2	176/186	\	
W-197	SVE-3-16 <i>32N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.1	3.0	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.1	3.1	176/176	\	
W-198	SVE-3-16 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.1	176/165	\	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: CORY HEINEMAN 

Date: 11-29-11

Cory Heineman

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-29-11

FWO #

12211365

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrant Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"									
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-16		Source Strength or MA / KV 40Ci			Penetrant Material SS		Emulsion or Lot No. 9140650										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 20 SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.01										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-196	0-1	.006"												RED	30N	2.82	3.08	A. Panoramic	
	1-2														30N	2.76	2.61		B. Single Wall
	2-0														30N	2.73	2.81		
W-197	0-1	.006"												RED	30N	2.76	2.99	C. Double Wall	
	1-2														30N	2.84	2.92		
	2-0														30N	2.73	3.16		
W-198	0-1	.006"												RED	30N	2.60	2.88	D. Elliptical	
	1-2														30N	2.89	2.98		
	2-0														30N	2.83	3.11		
																		E. Superimposed	
																		F. Profile	
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact									

Q
S

Client:

Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-29-11

Date: 11-29-11 Inspector: Pat Waggen Date: 11-29-11

TEAM[®] Industrial Services, Inc.

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27.8-316
Rev. 4

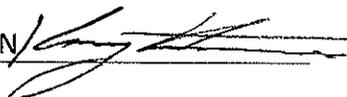
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-336 4	SVE-3-020	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	2.8	2.7	176/190		\	
		<input type="checkbox"/> After PWHT	2.7	2.8	176/165		\	
W-337 4	SVE-3-020	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	2.9	2.8	176/190		\	
		<input type="checkbox"/> After PWHT	2.6	2.6	176/176		\	
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: CORY HEINEMAN 

Date: 11-29-11

CRK 11/11

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 11-29-11

FWO #

12211365

P.O.#

4205

Form 20.6-318 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrant Type ASTM HOLE TYPE 12 2T		Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-020		Source Strength or MA / KV 40Ci			Penetrant Material SS		Emulsion or Lot No. 9140650	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.50"	Nom. Thickness .237"	Focal Spot Size .133"		Exposure Time 20 SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.01
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 5"			Shim Material SS		Shim Thickness .125"	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.638"			ID Placement FLASH		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>	
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement FILM SIDE		Backing Lead Thickness N/A
Backing Lead Location N/A										

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Weider ID	Pene. Density	Weld Density	Techniques
W-336	0-1	.006"												GREEN	Y	2.66	2.74	A. Panoramic
	1-2														Y	3.29	3.11	
	2-0														Y	2.51	2.66	
W-337	0-1	.006"												GREEN	Y	2.37	2.37	B. Single W
	1-2														Y	2.69	2.74	
	2-0														Y	2.89	2.58	
																		C. Double W
																		D. Elliptical
																		E. Superimp
																		F. Profile

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Q _____ Date: _____ Inspector / Reviewed By: PATRICK WAGGENER LV II Date: 11-29-11
 S _____
 Client: CEC 1/3 Date: _____ Inspector: Pat Wagner Date: 11-29-11

TEAM[®] Industrial Services, Inc.

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Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-423	SVE-3-021 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.6	176\190	\	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	2.9	176\186	\	
W-424	SVE-3-021 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.6	2.7	176/190	\	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.9	176/165	\	
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: CORY HEINEMAN 

Date: 11-29-11

CBV 11/29

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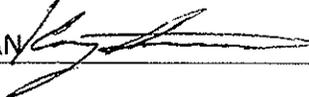
27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 R/O
 REP (COP Only): _____
 Client: GROSS
 W.O. / Job #: 12211365/JOB#4205

Equipment Manufacturer: TELEWELD
 Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-457	SVE-3-022	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	176/176	\	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	176/176	\	
W-458	SVE-3-022	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.8	176/186	\	
		<input type="checkbox"/> After PWHT	Loc. #2	2.6	2.7	176/164	\	
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: CORY HEINEMAN 

Date: 11-29-11

86-217

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-5-11

FWO #

12211390

P.O.#

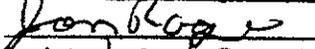
4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-010-REV2				Source Strength or MA / KV 68Ci				Penetrator Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A	
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weid Density	Techniques			
FW-1	0-1	.001"													MS	2.60	2.49	A. Panoramic			
	1-2													SPATTER		2.57	2.51				
∇	2-0	∇													∇	2.49	2.36				
														PURPLE FW-1				B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact											

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11

S _____ Date: _____ Inspector:  Date: 12-5-11

CLIENT REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 12/9/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

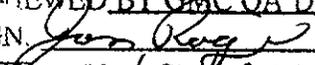
Date: 12-5-11 FWO # 12211390 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-010-REV2				Source Strength or MA / KV 68Ci				Penetrator Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13		Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2		Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C		Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pens. Density	Weld Density	Techniques
FW-3-1	0-1	.001"													RW	2.43	2.37	A. Panoramic
	1-2													SPATTER IN PIPE		2.59	2.51	
	2-0	↓													↓	2.48	2.40	
														RED FW-3-1				B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. SuperImposed
																		
																		F. Profile
																		

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
-----------	---------------------------------------	---------------------------------	-----------------------------	----------------------------	---

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11
 S _____
 Client REVIEWED BY GMC QA DEPT. _____ Date: _____ Inspector:  Date: AS 6
 SIGN: 
 DATE: 12/9/2011

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-5-11

FWO #

12211390

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE		Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-010-REV2		Source Strength or MA / KV 68Ci				Penetrameter Material SS		Emulsion or Lot No. 7350605N	
Procedure RT.ASME.1 R/13		Pipe Dia. 4"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 10 SEC		Penetrameter Location		Film Exp. Date 2012-04		
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.50"		Shim Material SS	Shim Thickness .062N/A	Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>		Backing Lead Thickness N/A	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Locations Marker Placement FILM SIDE		Backing Lead Location N/A	
Single <input checked="" type="checkbox"/>	Double <input type="checkbox"/>	Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr.	Back .010"	Locations Marker Placement FILM SIDE		Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-3	0-1	.001"													RW	2.45	2.39	A. Panoramic
	1-2													SPATTER IN PIPE		2.52	2.46	
	2-0	↓												SPATTER IN PIPE	↓	2.41	2.34	
														RED FW-3				B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11

S _____

Client: BY GMC QA DEPT Date: _____ Inspector: Date: 12-9-2011

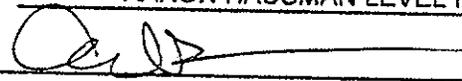
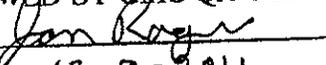
TCM Div
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

TEAM Industrial Services, Inc.

Date: 12-5-11 FWO # 12211390 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"					
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-012-REV2				Source Strength or MA / KV 68Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N							
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location				Film Exp. Date 2012-04							
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A							
Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp " Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques					
FW-4	0-1	.001"																					
	1-2														MS	2.44	2.39	A. Panoramic					
	2-0	↓												SPATTER	↓	2.39	2.30						
															↓	2.49	2.44						
														PURPLE FW-4				B. Single Wall					
																							
																		C. Double Wall					
																							
																		D. Elliptical					
																							
																		E. Superimposed					
																							
																		F. Profile					
																							
Procedure				PQR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact											

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11
 S _____
 Client: _____ Date: _____ Inspector:  Date: 12-5-11
 REVIEWED BY GMC QA DEPT
 SIGN: 
 DATE: 12-9-2011

TEAM Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-5-11 FWO # 12211390 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE			Film Type AGFAD4		Film Size 4.5" X 10"				
Specification ASME B31.3 2008 NORM		Drawing No. SVE-3-011-REV2			Source Strength or MA / KV 68CI				Penetrameter Material SS			Emulsion or Lot No. 7350605N						
Procedure RT.ASME.1 R/13		Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2		Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>				
Technique C		Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"				ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr.	Back .010"	Locations Marker Placement FILM SIDE			Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp " Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pen. Density	Weld Density	Techniques
FW-5	0-1	.001"	\		\	\				\					KS	2.56	2.44	A. Panoramic
	1-2		\		\					\				SPATTER		2.51	2.40	
	2-0	↓	\		\					\				SPATTER	↓	2.48	2.36	
														RED FW-5				B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact								

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11

S
Client: REVIEWED BY GMC QA DEPT Date: _____ Inspector: Date: 12-8-11

SIGN:
DATE: 12/9/2011

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-5-11 FWO # 12211390 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"	
Specification ASME B31.3 2008 NORM				Drawing No. SVE-3-010-REV2				Source Strength or MA / KV 68CI				Penetrator Material SS				Emulsion or Lot No. 7350605N			
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04			
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062N/A		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>			
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A			
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE			
Backing Lead Location N/A																			

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-6	0-1	.001"													KS	2.53	2.46	A. Panoramic
	1-2			X										ROUNDED INDICATION		2.60	2.55	
	2-0															2.57	2.52	
														RED FW-6				B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 

Procedure	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact
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Q
S REVIEWED BY GMC QA DEPT

Client SIGN: *Jan Koger* DATE: 12/9/2011

Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-5-11

Date: _____ Inspector: *[Signature]* Date: 12-5-11

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-1-11 FWO # 12211380 P.O.# 4167

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD *		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. GREEN		Source Strength or MA / KV 92 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 10SEC		Penetrameter Location		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material	Shim Thickness .125"	Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-478	0-1	.008"	\												32A	2.57	2.67	A. Panoramic 	
	1-2	\														2.58	2.70		
	2-0	\														2.27	2.49		
W-480	0-1	\	\												3I	2.89	3.15	B. Single Wall 	
	1-2	\	\													2.61	2.68		
	2-0	\														2.79	3.09		
																		C. Double Wall 	
																		D. Elliptical 	
																		E. Superimposed 	
																		F. Profile 	
Legend:		POR - Porosity	C-Crack	IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		PA - Film Artifact		UC - Undercut							
SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 12-1-11

Client: UPE IB Date: _____ Inspector: BRIAN SMART Date: 12-1-11

TEAM Industrial Services, Inc.

TCM divisio.,
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM B31.3 2008
 Procedure: SP-03-1222 R/0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12211393 / 4205

Equipment Manufacturer: TELEBRINNELER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
624	PURPLE 6 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.8	166/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.85	169/176	/	
599	PURPLE 2 <i>32u</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	3.0	164/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	/	
612	PURPLE 7 <i>Y</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	3.1	3.05	181/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.95	169/176	/	
615	PURPLE 7 <i>3I</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	176/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.85	2.9	169/176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: AARON M ZYUNG

Date: 12/6/11

CB 12/9/11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM B31.3 2008
 Procedure: SP-03-1222 R/0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12211393 / 4205

Equipment Manufacturer: TELEBRINNELER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
624	PURPLE 6 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.8	166/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.85	169/176	/	
599	PURPLE 2 <i>32u</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	3.0	164/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	/	
612	PURPLE 7 <i>Y</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	3.1	3.05	181/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.95	169/176	/	
615	PURPLE 7 <i>3I</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	176/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.85	2.9	169/176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: AARON M ZYUNG

Date: 12/6/11

CB 12/9/11

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM B31.3 2008
 Procedure: SP-03-1222 R/0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12211393 / 4205

Equipment Manufacturer: TELEBRINNELER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
624	PURPLE 6 <i>30N</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.8	166/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.85	169/176	/	
599	PURPLE 2 <i>32u</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	3.0	164/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176/176	/	
612	PURPLE 7 <i>Y</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	3.1	3.05	181/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.95	169/176	/	
615	PURPLE 7 <i>3I</i>	<input checked="" type="checkbox"/> Other Condition	Base Metal	N/A	N/A	N/A	N/A	N/A
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	176/176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.85	2.9	169/176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: AARON M ZYUNG

Date: 12/6/11

36 12/9/11

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-7-11

FWO #

12211393

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. PURPLE 2				Source Strength or MA / KV 42 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 10SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pen. Density	Weld Density	Techniques			
W-599	0-1	.008"	\							\					324A	2.75	3.02	A. Panoramic			
	1-2		\							\						2.67	2.91				
	2-0		\													2.87	3.07	B. Single Wall			
																		C. Double Wall			
																			D. Elliptical		
																			E. Superimposed		
																			F. Profile		
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval:

Date:

Inspector / Reviewed By:

Date:

12-7-11

Client:

CRC 1/3

Date:

Inspector:

BRIAN SMART

Date:

12-7-11

TEAM[®] Industrial Services, Inc.

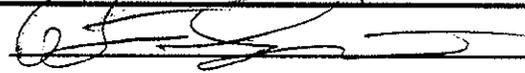
TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-7-11 FWO # 12211393 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. PURPLE 7				Source Strength or MA / KV 42 CI				Penetrant Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 10SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-612	0-1	.008"	\		\	\									Y	2.66	2.85	A. Panoramic			
	1-2		\																		
	2-0		\																		
																		B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC- Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 12-7-11

Client: CRC 1/3 Date: _____ Inspector: BRIAN SMART Date: 12-7-11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-7-11

FWO #

12211393

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. PURPLE 7		Source Strength or MA / KV 42 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 10SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04											
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weid Density	Techniques	
W-615	0-1	.008"	\												3I	2.56	2.80	A. Panoramic 	
	1-2		\													2.48	2.70		
	2-0		\													2.63	2.75		
																		B. Single Wall 	
																		C. Double Wall 	
																		D. Elliptical 	
																		E. Superimposed 	
																		F. Profile 	
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut									

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 12-7-11

Client: CRC 1/3 Date: _____ Inspector: BRIAN SMART Date: 12-7-11

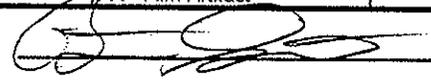
TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-7-11 FWO # 12211393 P.O.# 4205

Form 20-6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. PURPLE 6		Source Strength or MA / KV 42 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 10SEC	Penetrameter Location		Film Exp. Date 2014.04											
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-624	0-1	.008"	\												30N	2.69	2.86	A. Panoramic	
	1-2		\													2.61	2.70		
	2-0		\													2.57	2.80		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut												

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 12-7-11

Client: CPF 1/3 Date: _____ Inspector: BRIAN SMART Date: 12-7-11

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-27-11 FWO # 12211458 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECH	Type of Item PIPE WELD	Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type ASTM 12 2T HOLE	Film Type AGFAD4	Film Size 4.5" X 10"
Specification ASME B31.3 2008 NORM	Drawing No. BROWN3	Source Strength or MA / KV 75CI		Penetrameter Material SS	Emulsion or Lot No. 7350605N	
Procedure RT.ASME.1 R/13	Pipe Dia. 4"	Nom. Thickness .237"	Focal Spot Size .133"	Exposure Time 10 SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Film Exp. Date 2012-04
Acceptance Procedure PARA 8.2	Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.50"		Shim Material SS	Shim Thickness .062
Technique C	Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH	Backing Lead Thickness N/A
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>	Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr.	Back .010"
				Locations Marker Placement FILM SIDE		Backing Lead Location N/A

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-526	0-1	.001"	\							\					30N	2.84	2.85	A. Panoramic
	1-2		\							\						2.79	2.95	
	2-0		\		\					\						2.85	3.01	
																		B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-27-11
 S _____
 Client: CSG Date: 12/27 Inspector: [Signature] Date: 12/27/11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-27-11

FWO #

12211458

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH		Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"		
Specification ASME B31.3 2008 NORM		Drawing No. GREEN3				Source Strength or MA / KV 75Ci				Penetrator Material SS				Emulsion or Lot No. 7350605N				
Procedure RT.ASME.1 R/13		Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04				
Acceptance Procedure PARA 8.2		Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>				
Technique C		Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A				
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE				
Backing Lead Location N/A																		
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
W-534	0-1	.001"	\							\					30N	3.24	3.10	A. Panoramic
	1-2		\							\				TUNGSTEN		3.13	3.30	
	2-0		\		\					\						2.83	3.04	
																		B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact								

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-27-11

S _____

Client: CBK Date: 12/27 Inspector:  Date: 12/27

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-27-11

FWO #

12211458

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12 2T HOLE			Film Type AGFAD4		Film Size 4.5" X 10"				
Specification ASME B31.3 2008 NORM			Drawing No. GREEN6			Source Strength or MA / KV 75Ci			Penetrameter Material SS			Emulsion or Lot No. 7350605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2012-04				
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"			Shim Material SS		Shim Thickness .062		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE			Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pena. Density	Weld Density	Techniques
W-550	0-1	.001"													4F	3.20	3.15	A. Panoramic
	1-2															3.12	3.03	
	2-0	↓												TUNGSTEN	↓	3.07	3.28	
																		B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Procedure		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact								

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-27-11
 S _____
 Client: C815 12/27 Date: _____ Inspector: Date: 12-27-11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211458

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"	
Specification ASME B31.3 2008 NORM				Drawing No. RED 02				Source Strength or MA / KV 75Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N			
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04			
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>			
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A			
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr.		Back .010"		Locations Marker Placement FILM SIDE			
														Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-632	0-1	.001"													32U	2.20	2.29	A. Panoramic	
	1-2															2.35	2.42		
	2-0	↓													↓	2.25	2.37		
														RED 02				B. Single Wall	
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Procedure		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact							
		SI - Slag Inclusion		IF-Incomplete Fusion															

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-29-11

S _____

Client: CSL 12/30 Date: _____ Inspector: [Signature] Date: 12/29/11

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211458

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECH				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12 2T HOLE				Film Type AGFAD4		Film Size 4.5" X 10"			
Specification ASME B31.3 2008 NORM				Drawing No. RED 02				Source Strength or MA / KV 75Ci				Penetrameter Material SS				Emulsion or Lot No. 7350605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4"		Nom. Thickness .237"		Focal Spot Size .133"		Exposure Time 10 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2012-04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.50"				Shim Material SS		Shim Thickness .062		Film Technique Single Load <input type="checkbox"/> Double Load <input checked="" type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"	Ctr.	Back .010"		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-634	0-1	.001"	\							\					32U	2.16	2.25	A. Panoramic			
	1-2	\	\		\					\		\				2.20	2.32				
	2-0	\	\		\					\		\				2.31	2.35				
														RED 02							
																		B. Single Wall 			
																		C. Double Wall 			
																		D. Elliptical 			
																		E. Superimposed 			
																		F. Profile 			
Procedure			POR - Porosity SI - Slag Inclusion			C-Crack IF-Incomplete Fusion			IP - Incomplete Penetration			BT- Burn Thru or Suck Back			Surf - Surface Indication FA - Film Artifact						

Q _____ Date: _____ Inspector / Reviewed By: AARON HAUSMAN LEVEL II Date: 12-29-11
 S _____
 Client: CEB Date: 12/30 Inspector: [Signature] Date: 12.29.11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASME A833-08
Procedure: SP-1222, REV. 0
REP (COP Only): _____

Equipment: _____
Manufacturer: TELEBRINELLER

Client: GROSS
W.O. / Job #: 12211470 / 4205

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
2-1	SVE-3-010	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.6	2.6	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	194/194	X	
2	SVE-3-012	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.5	2.6	186/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.8	194/194	X	
6	SVE-3-013	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	194/194	X	
12	SVE-3-013	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.5	2.5	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.8	194/194	X	
10-1	SVE-3-014	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.8	2.8	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.6	2.6	194/194	X	
21	SVE-3-016	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.5	2.5	194/194	X	

Technician
Signature: [Signature]

Date: 12/29/11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASME A833-08
Procedure: SP-03-1222, REV. 0
REP (COP Only):

Equipment: TELEBRINELLER
Manufacturer:

Client: GROSS
W.O. / Job #: 1221470/4205

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
24	SUE-3-016	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.6	2.6	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.5	2.6	186/194	X	
10	SVE-3-016	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.6	2.6	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.5	2.5	194/194	X	
21	SVE-3-017	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.5	2.5	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.5	2.5	194/194	X	
3	SVE-3-017	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.5	2.6	186/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.5	2.5	194/194	X	
6	SVE-3-018	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	194/194	X	
25	SVE-3-018	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.9	194/194	X	

Technician
Signature: Robert Mosby

Date: 12/29/11

REVIEWED BY GMC QA DEPT
SIGN: Jon Rogan
DATE: 12/29/11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASME A833-08
Procedure: SP-03-1222, REV.0
REP (COP Only): _____

Equipment: _____
Manufacturer: TELEBRINELLER

Client: GROSS
W.O. / Job #: 12211470 / 4205

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
31-31	SVE-3-019	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.6	2.6	194/194	X	
18	SVE-3-019	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	194/194	X	
10	SVE-3-020	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.5	2.6	186/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	194/194	X	
13	SVE-3-020	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.7	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.9	194/194	X	
24	SVE-3-021	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.1	186/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.1	3.1	194/194	X	
39	SVE-3-021	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	2.8	2.8	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	2.9	194/194	X	

Technician
Signature: [Signature]

Date: 12/29/11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASME A833-08
Procedure: SP-03-1222, REV. 0
REP (COP Only):

Equipment: TELEBRINELLER
Manufacturer:

Client: GROSS
W.O. / Job #: 12211470/4205

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
37	SVE-3-022	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.0	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	194/194	X	
20	SVE-3-022	<input checked="" type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1	3.1	3.1	194/194	X	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	194/194	X	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician
Signature: [Signature]

Date: 12/29/11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/11

TEAM[®] Industrial Services, Inc.

T&M Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type SE-1025/12F		Film Type AGFA D4	Film Size 4.5"X10"									
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-016 R/O		Source Strength or MA / KV 54 CI		Penetrameter Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07										
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S	Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weid Density	Techniques
BROWN	0-1	.010	/												MS	2.8	2.7	A. Panoramic
FW-1	1-2		/													2.4	2.6	
	2-0		/													2.7	2.7	B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMCQA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F		Film Type AGFA D4	Film Size 4.5"X10"								
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-017 R/0		Source Strength or MA / KV 54 CI			Penetrameter Material S/S		Emulsion or Lot No. 0440602									
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07									
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"			Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"			ID Placement FLASH		Backing Lead Thickness N/A									
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
GREEN	0-1	ND													MS	2.7	2.6	A. Panoramic
FW-3	1-2															2.5	2.6	
	2-0															2.5	2.4	B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

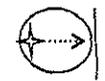
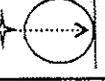
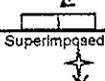
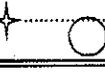
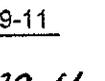
REVIEWED BY GMC QA DEPT
SIGN [Signature]
DATE 12/30/2011

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S. Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL			Type of Item PIPEWELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F			Film Type AGFA D4		Film Size 4.5"X10"				
Specification ASME B31.3 2008 NFS			Drawing No. SVE-3-014 R/1			Source Strength or MA / KV 54 CI			Penetrameter Material S/S			Emulsion or Lot No. 0440602						
Procedure RT ASME.1 REV. 13			Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07					
Acceptance Procedure PARA. 8.2			Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"			Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.7"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr. N/A	Back .010"		Locations Marker Placement F/S		Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej.	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
BLUE	0-1	.010		X	X										MS	2.5	2.5	A. Panoramic
FW-3	1-2															2.9	2.7	
	2-0															2.7	2.8	B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: MD Date: 12-29-11

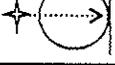
REVIEWED BY GMD QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type SE-1025/12F		Film Type AGFA D4		Film Size 4.5"X10"								
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-017 R/O		Source Strength or MA / KV 54 CI			Penetrator Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07										
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"			Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
BROWN	0-1	.010	/												MS	2.9	2.8	A. Panoramic	
FW-4	1-2		/																
	2-0		/															B. Single Wall	
																			
																		C. Double Wall	
																			
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC- Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: *Mike Dally* Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Divi:

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F		Film Type AGFA D4	Film Size 4.5"X10"									
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-011 R/1		Source Strength or MA / KV 54 CI			Penetrameter Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.		Penetrameter Location		Film Exp. Date 2014-07										
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"			Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IP	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
RED	1-2	.010	✓	✗	✗										KS	2.8	2.6	A. Panoramic	
FW-6/R1																			
<p>* REVERSED DECISION TO ACCEPTABLE - DUE TO SURFACE GEOMETRY.</p> <p><i>Robert Clark RT-III</i> 1-3-12</p>																			
Legend:		POR - Porosity	C-Crack	IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication			FA - Film Artifact		UC - Undercut						
SI - Slag Inclusion		IF - Incomplete Fusion																	

Level III Approval: *Robert Clark* Date: 1-3-12 Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: REVIEWED BY GMC QA DEPT Date: _____ Inspector: *MD* Date: 12-29-11
SIGN: *Jon Ryan*
DATE: 12/30/11

TEAM Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL	Type of Item PIPEWELD	Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F	Film Type AGFA D4	Film Size 4.5"X10"
Specification ASME B31.3 2008 NFS	Drawing No. SVE-3-015 R/O	Source Strength or MA / KV 54 Ci			Penetrameter Material S/S	Emulsion or Lot No. 0440602	
Procedure RT.ASME.1 REV. 13	Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07
Acceptance Procedure PARA. 8.2	Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>
Technique C	Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>	Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S
						Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
BLUE	0-1	.010		X	X										MS	2.7	2.6	A. Panoramic
FW-6	1-2															2.8	2.7	
	2-0															2.7	2.6	
																		B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Legend:	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut
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Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GM6 QA DEPT
SIGN: [Signature]
DATE: 12/30/11

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type SE-1025/12F		Film Type AGFA D4	Film Size 4.5"X10"									
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-012 R/1		Source Strength or MA / KV 54 CI			Penetrator Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07											
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
PURPLE	0-1	0.10	/												KS	2.6	2.6	A. Panoramic	
FW-7	1-2		/													2.7	2.7		
TRACER	2-0		/													2.6	2.4		
																		B. Single Wall	
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: *PK Dally* Date: 12-29-11

REVIEWED BY GMD QA DEPT
SIGN: *Don Key*
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO# 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL			Type of Item PIPEWELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F			Film Type AGFA D4		Film Size 4.5"X10"					
Specification ASME B31.3 2008 NFS			Drawing No. SVE-3-012 R/1			Source Strength or MA / KV 54 CI			Penetrameter Material S/S			Emulsion or Lot No. 0440602							
Procedure RT.ASME.1 REV. 13			Pipe Dia. 4.5"		Norm. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014-07					
Acceptance Procedure PARA. 8.2			Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"			Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.7"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr. N/A	Back .010"		Locations Marker Placement F/S			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
PURPLE	0-1	.010	/	/	/	/	/	/	/	/	/	/	/		KS	2.8	2.5	A. Panoramic	
FW-8	1-2		/	/	/	/	/	/	/	/	/	/	/			2.6	2.6		
TRACER	2-0		/	/	/	/	/	/	/	/	/	/	/			2.6	2.5		
Legend:			POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication			UC- Undercut					
			SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact								

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: MKD Date: 12-29-11

REVIEWED BY TCM QA DEPT.
SIGN. Jon P...
DATE 12/30/2011

TEAM Industrial Services, Inc.

TGM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPEWELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type SE-1025/12F				Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008 NFS				Drawing No. SVE-3-014 R/1				Source Strength or MA / KV 54 CI				Penetrator Material S/S				Emulsion or Lot No. 0440602					
Procedure RT.ASME.1 REV. 13				Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014-07					
Acceptance Procedure PARA. 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"				Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.7"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr. N/A		Back .010"		Locations Marker Placement F/S				Backing Lead Location N/A	
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
PURPLE	0-1	.010													MS	2.6	2.7	A. Panoramic			
FW-10	1-2															2.6	2.8	B. Single Wall			
	2-0															2.5	2.6				
																		C. Double Wall			
																		D. Elliptical			
																		E. Superimposed			
																		F. Profile			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		UC- Undercut									
		SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact											

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: MD Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TGM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F		Film Type AGFA D4		Film Size 4.5"X10"	
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-014 R/1			Source Strength or MA / KV 54 CI			Penetrameter Material S/S		Emulsion or Lot No. 0440602			
Procedure RT, ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07		
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S		Source to Film Distance (SFD) 5.00"			Shim Material S/S	Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>		
Technique C		Surface Condition AS WELDED			Source to Object Distance (SOD) 4.7"			ID Placement FLASH		Backing Lead Thickness N/A			
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A		

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
PURPLE	0-1	0.010	/	/	/	/	/	/	/	/	/	/	/		MS	3.1	2.9	A. Panoramic
FW-11	1-2		/	/	/	/	/	/	/	/	/	/	/			2.6	2.6	B. Single Wall
	2-0		/	/	/	/	/	/	/	/	/	/	/			2.8	2.7	C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Legend:	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut
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Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: MD Date: 12-29-11

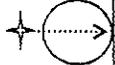
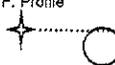
REVIEWED BY GMC QA DEPT
 SIGN: [Signature]
 DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S. Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL			Type of Item PIPEWELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type SE-1025/12F			Film Type AGFA D4		Film Size 4.5"X10"				
Specification ASME B31.3 2008 NFS			Drawing No. SVE-3-018 R/0			Source Strength or MA / KV 54 CI			Penetrameter Material S/S			Emulsion or Lot No. 0440602						
Procedure RT.ASME.1 REV. 13			Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07					
Acceptance Procedure PARA. 8.2			Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"			Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.7"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010"	Ctr. N/A	Back .010"		Locations Marker Placement F/S		Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
BLUE	0-1	<i>did</i>	<i>/</i>												JM	<i>2.8</i>	<i>2.8</i>	A. Panoramic
FW-14	1-2		<i>/</i>															
	2-0		<i>/</i>															
																		B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: *Mike Dally* Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: *Jon Keger*
DATE: 12/30/2011

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPEWELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type SE-1025/12F				Film Type AGFA D4		Film Size 4.5"X10"	
Specification ASME B31.3 2008 NFS				Drawing No. SVE-3-022 R/0				Source Strength or MA / KV 54 CI				Penetrameter Material S/S				Emulsion or Lot No. 0440602			
Procedure RT.ASME.1 REV. 13				Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014-07			
Acceptance Procedure PARA. 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"				Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>			
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.7"				ID Placement FLASH				Backing Lead Thickness N/A			
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr. N/A		Back .010"		Locations Marker Placement F/S			
Backings Lead Location N/A				Backings Lead Location N/A				Backings Lead Location N/A				Backings Lead Location N/A				Backings Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
GREEN	0-1	.010													40D	2.6	2.6	A. Panoramic	
FW-17	1-2															3.1	3.2	B. Single Wall	
	2-0															3.0	2.9		
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC QA DEP
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPEWELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type SE-1025/12F				Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008 NFS				Drawing No. SVE-3-017 R/O				Source Strength or MA / KV 54 CI				Penetrameter Material S/S				Emulsion or Lot No. 0440602					
Procedure RT.ASME.1 REV. 13				Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014-07					
Acceptance Procedure PARA. 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"				Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.7"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr. N/A		Back .010"		Locations Marker Placement F/S				Backing Lead Location N/A	
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pen. Density	Weld Density	Techniques			
PURPLE	0-1	.010	/												JM	3.2	3.0	A. Panoramic			
FW-20	1-2		/													2.8	3.0	B. Single Wall			
	2-0		/													2.7	2.9				
																		C. Double Wall			
																		D. Elliptical			
																		E. Superimposed			
																		F. Profile			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion		IF - Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPEWELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type SE-1025/12F				Film Type AGFA D4		Film Size 4.5"X10"					
Specification ASME B31.3 2008 NFS				Drawing No. SVE-3-016 R/0				Source Strength or MA / KV 54 CI				Penetrator Material S/S				Emulsion or Lot No. 0440602							
Procedure RT.ASME.1 REV. 13				Pipe Dia. 4.5"		Nom. Thickness .237"		Focal Spot Size .135"		Exposure Time 20 sec.		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014-07							
Acceptance Procedure PARA. 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 5.00"				Shim Material S/S		Shim Thickness .06		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>							
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.7"				ID Placement FLASH				Backing Lead Thickness N/A							
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010"		Ctr. N/A		Back .010"		Locations Marker Placement F/S				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques					
RED	0-1	.010	/												JM	2.7	2.7	A. Panoramic					
FW-23	1-2		/													2.9	2.7						
	2-0		/													2.9	2.7						
																		B. Single Wall					
																							
																		C. Double Wall					
																							
																		D. Elliptical					
																							
																		E. Superimposed					
																							
																		F. Profile					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut									
		SI - Slag Inclusion		IF - Incomplete Fusion																			

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: MD Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12-29-11

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type SE-1025/12F		Film Type AGFA D4		Film Size 4.5"X10"								
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-022 R/0		Source Strength or MA / KV 54 CI			Penetrator Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07											
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
BLUE	0-1	DID	/	/											TT	2.8	2.8	A. Panoramic	
FW-29	1-2		/	/												2.6	2.8	B. Single Wall	
	2-0		/	/												2.8	2.6		
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF - Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 12/30/2011

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type SE-1025/12F		Film Type AGFA D4	Film Size 4.5"X10"										
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-021 R/0		Source Strength or MA / KV 54 CI		Penetrameter Material S/S		Emulsion or Lot No. 0440602											
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07											
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S											
Backing Lead Location N/A																			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
PURPLE	0-1	.010													TT	2.8	2.6	A. Panoramic	
FW-35	1-2															2.9	2.9	B. Single Wall	
	2-0															2.8	2.9		
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF - Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC QA DEPI
SIGN: Jan Rogers
DATE: 12/30/2011

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S. Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11 FWO # 12211470 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL	Type of Item PIPEWELD	Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type SE-1025/12F	Film Type AGFA D4	Film Size 4.5"X10"
Specification ASME B31.3 2008 NFS	Drawing No. SVE-3-022 R/0	Source Strength or MA / KV 54 CI		Penetrameter Material S/S	Emulsion or Lot No. 0440602	
Procedure RT.ASME.1 REV. 13	Pipe Dia. 4.5"	Norm. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Film Exp. Date 2014-07
Acceptance Procedure PARA. 8.2	Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06
Technique C	Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>	Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"
Locations Marker Placement F/S			Backing Lead Thickness N/A			
Backing Lead Location N/A						

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
PURPLE	0-1	.010	/												40D	3.1	2.9	A. Panoramic
FW-36	1-2		/													2.9	3.1	
	2-0		/													3.1	2.8	
																		
																		
																		
Legend:			POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		UC - Undercut					
			SI - Slag Inclusion		IF - Incomplete Fusion						FA - Film Artifact							

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC OR DEPI
SIGN: [Signature]
DATE: 12/30/2011

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 12-29-11

FWO #

12211470

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPEWELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrator Type SE-1025/12F		Film Type AGFA D4		Film Size 4.5"X10"								
Specification ASME B31.3 2008 NFS		Drawing No. SVE-3-021 R/0		Source Strength or MA / KV 54 CI		Penetrator Material S/S		Emulsion or Lot No. 0440602										
Procedure RT.ASME.1 REV. 13		Pipe Dia. 4.5"	Nom. Thickness .237"	Focal Spot Size .135"	Exposure Time 20 sec.	Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014-07										
Acceptance Procedure PARA. 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 5.00"		Shim Material S/S	Shim Thickness .06	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.7"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010"	Ctr. N/A	Back .010"	Locations Marker Placement F/S		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
RED	0-1	Did	/												TT	2.6	2.8	A. Panoramic
FW-40	1-2		/													2.8	2.6	B. Single Wall
	2-0		/													2.7	2.7	
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Legend:		POR - Porosity	SI - Slag Inclusion	C-Crack	IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication	FA - Film Artifact	UC- Undercut								

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Mike Dally Date: 12-29-11

Client: _____ Date: _____ Inspector: Mike Dally Date: 12-29-11

REVIEWED BY GMC-OA DEP!
SIGN: [Signature]
DATE: 12/30/11

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08

Procedure: SP-03-1222 REV.0

REP (COP Only): _____

Client: GROSS MECHANICAL

W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-632 WID: 32U	LINE 4" AAAA2-RED-02	<input type="checkbox"/> Other Condition	Base Metal	2.8	2.8	176 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.6	2.5	190 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.9	3.0	164 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

OK 1/17

Technician Signature: *Rick B.*

Date: 1-4-12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

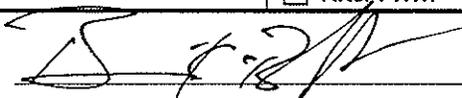
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER
 Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-634 WID: 32U	LINE 4" AAAA2-RED-02	<input type="checkbox"/> Other Condition	Base Metal	3.1	3.0	187 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.2	3.1	187 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.7	176 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: _____



Date: _____

1.4.12

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12 FWO # 12220222 P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL			Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12			Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008			Drawing No. WELL 36				Source Strength or MA / KV 51 CI				Penetrameter Material SS			Emulsion or Lot No. 0440616					
Procedure RT ASME.1 R/13			Pipe Dia. 4.500"		Nominal Thickness .237"		Focal Spot Size .142"		Exposure Time 11 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.07					
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 4.500"				Shim Material C/S	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C			Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH			Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB	Front .010	Ctr. /	Back .010		Locations Marker Placement FILM SIDE			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-753	0-1	.007"	\												3I	2.31	2.40	A. Panoramic	
	1-2		\													2.21	2.24		
	2-0		\													2.18	2.33		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF - Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: **BRIAN BABB L-2** Date: _____
 Client: CR 114 Date: _____ Inspector: *B-K. Babb* Date: 1.4.12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08

Procedure: SP-03-1222 REV.0

REP (COP Only): _____

Client: GROSS MECHANICAL

W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-753 WID: 3I	WELL 36 4"	<input type="checkbox"/> Other Condition	Base Metal	2.9	2.8	187 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.9	176 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.7	2.8	164 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: *B. K. B.*

Date: 1.4.12

CAV 114

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12

FWO #

12220222

P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008				Drawing No. GREEN 26				Source Strength or MA / KV 51 CI				Penetrameter Material SS				Emulsion or Lot No. 0440616					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nominal Thickness .237"		Focal Spot Size .142"		Exposure Time 11 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.07					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 4.500"				Shim Material C/S		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. /	Back .010		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-757 ^b	0-1	.007"	\		\										30N	2.01	2.11	A. Panoramic			
	1-2		\													2.20	2.32				
	2-0		\		\											2.13	2.22				
																		B. Single Wall			
																					
																			C. Double Wall		
																					
																			D. Elliptical		
																					
																			E. Superimposed		
																					
																			F. Profile		
																					
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut									

Level III Approval:

Date:

Inspector / Reviewed By:

BRIAN BABB L-2

Date:

Client:

C96 1/4

Date:

Inspector:

[Signature]

Date:

1.4.12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

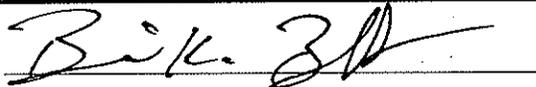
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-757 b WID: 30N	GREEN 26 4"	<input type="checkbox"/> Other Condition	Base Metal	3.1	3.1	176 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.9	176 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.9	165 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: 

Date: 1.4.12

cal. 1.1

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12

FWO #

12220222

P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D4	Film Size 4.5"X10"									
Specification ASME B31.3 2008		Drawing No. BLUE 26		Source Strength or MA / KV 51 CI			Penetrameter Material SS		Emulsion or Lot No. 0440616										
Procedure RT ASME.1 R/13		Pipe Dia. 4.500"	Nominal Thickness .237"	Focal Spot Size .142"	Exposure Time 11 SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.07										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material C/S	Source to Film Distance (SFD) 4.500"			Shim Material C/S	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. /	Back .010	Locations Marker Placement FILM SIDE		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-782	0-1	.007"	\												30N	2.10	2.23	A. Panoramic	
	1-2		\													2.18	2.31		
	2-0		\		\											2.28	2.47		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut							

Level III Approval: _____

Date: _____

Inspector / Reviewed By: _____

BRIAN BABB L-2

Date: _____

Client: _____

COG 1/4

Date: _____

Inspector: _____

B. B. B. II

Date: 1-4-12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-762 WID: 30N	BLUE 26 4"	<input type="checkbox"/> Other Condition	Base Metal	3.0	2.9	187 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	3.0	164 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.1	3.1	176 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: *J. K. B.A.*

Date: 1.4.12

02/14

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12

FWO #

12220222

P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL		Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type ASTM 12				Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008		Drawing No. PURPLE 26				Source Strength or MA / KV 51 CI				Penetrant Material SS				Emulsion or Lot No. 0440616					
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"		Nominal Thickness .237"		Focal Spot Size .142"		Exposure Time 11 SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.07					
Acceptance Procedure PARA 8.2		Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 4.500"				Shim Material C/S		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C		Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. /	Back .010		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
W-772	0-1	.007"	\												30N	2.03	2.19	A. Panoramic	
	1-2		\													2.11	2.28		
	2-0		\													2.05	2.07		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval:

Date:

Inspector / Reviewed By:

BRIAN BABB L-2

Date:

Client:

CBZ 1/4

Date:

Inspector:

[Handwritten Signature]

Date:

1-4-12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER
 Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-772 WID: 30N	PURPLE 26 4"	<input type="checkbox"/> Other Condition	Base Metal	3.1	3.0	187 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.8	187 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.8	176 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: _____

Dick B...

Date: _____

1.4.12

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

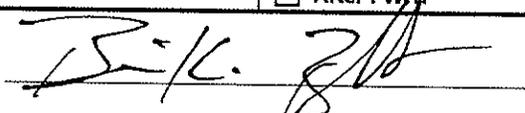
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-776 WID: 4F	BROWN 26 4"	<input type="checkbox"/> Other Condition	Base Metal	3.2	3.1	187 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.1	164 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.0	3.0	176 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: 

Date: 10.4.12

09-14

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12

FWO #

12220222

P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type ASTM 12			Film Type AGFA D4		Film Size 4.5"X10"					
Specification ASME B31.3 2008			Drawing No. TEAL 26			Source Strength or MA / KV 51 CI			Penetrator Material SS			Emulsion or Lot No. 0440616							
Procedure RT ASME.1 R/13			Pipe Dia. 4.500"		Nominal Thickness .237"		Focal Spot Size .142"		Exposure Time 11 SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.07						
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 4.500"			Shim Material C/S		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. /	Back .010		Locations Marker Placement FILM SIDE		Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pen. Density	Weld Density	Techniques	
W-781	0-1	.007"	\												3I	2.03	2.03	A. Panoramic	
	1-2		\		\	\										2.30	2.31		
	2-0		\		\	\										2.11	2.21		
																		B. Single Wall	
																			C. Double Wall
																			D. Elliptical
																			E. Superimposed
																			F. Profile
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF - Incomplete Fusion															

Level III Approval:

Date:

Inspector / Reviewed By:

BRIAN BABB L-2

Date:

Client:

CBG 1/4

Date:

Inspector:

[Signature]

Date:

1-4-12

TEAM[®] Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

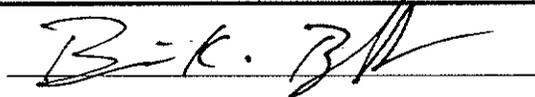
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-781 WID: 31	TEAL 26 4"	<input type="checkbox"/> Other Condition	Base Metal	2.9	3.0	164 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	2.9	187 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	2.8	2.9	164 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: 

Date: 1.4.12

081-114

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-4-12 FWO # 12220222 P.O.# TEAM# 4245 GROSS# 4025

Form 20.6-316 REV2

Customer GROSS MECHANICAL				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D4		Film Size 4.5"X10"			
Specification ASME B31.3 2008				Drawing No. TEAL 26				Source Strength or MA / KV 51 CI				Penetrameter Material SS				Emulsion or Lot No. 0440616					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nominal Thickness .237"		Focal Spot Size .142"		Exposure Time 11 SEC		Penetrameter Location				Film Exp. Date 2014.07					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material C/S		Source to Film Distance (SFD) 4.500"				Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Shim Material C/S		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>			
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input checked="" type="checkbox"/> Double <input type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. /	Back .010		Locations Marker Placement FILM SIDE				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
W-782	0-1	.007"	\		\										3i	2.08	2.24	A. Panoramic			
	1-2		\													2.17	2.19				
	2-0		\													2.03	2.09				
																		B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication				UC - Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact											

Level III Approval: _____ Date: _____ Inspector / Reviewed By: **BRIAN BABB L-2** Date: _____

Client: GR 114 Date: _____ Inspector:  Date: 1.4.12

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

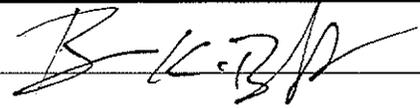
BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222 REV.0
 REP (COP Only): _____
 Client: GROSS MECHANICAL
 W.O. / Job #: 12220002 / GROSS JOB# 4025

Equipment Manufacturer: TELEBRINELLER

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC / Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
W-782 WID: 31	TEAL 26 4"	<input type="checkbox"/> Other Condition	Base Metal	2.9	3.0	164 / 176	/	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	3.1	164 / 176	/	
		<input type="checkbox"/> After PWHT	Loc. #2	3.3	3.2	187 / 176	/	
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: 

Date: 1.4.12

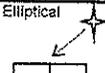
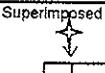
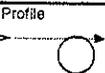
OK ilu

TEAM[®] Industrial Services, Inc.

TCM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

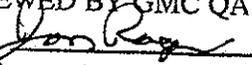
Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"								
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-PURPLE-05 Rev. 0		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N									
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrameter Location		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-1	0-1	.008	\							\			\		KS	3.02	3.19	A. Panoramic 
	1-2		\		\					\	\		\		KS	3.23	3.65	
	2-0		\		\					\			\		KS	3.02	3.27	
																		B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact		UC- Undercut										

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
 SIGN: 
 DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

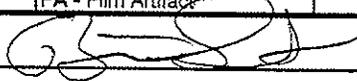
4205

Form 20.6-316 REV2

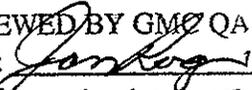
Customer GROSS		Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type ASTM 12			Film Type AGFA D5	Film Size 4.5"X10"	
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-BLUE-03 Rev. 0			Source Strength or MA / KV 49 CI			Penetrator Material SS			Emulsion or Lot No. 0150605N		
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"	Exposure Time 15SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04		
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>		
Technique C		Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A		
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A	

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-1	0-1	.008	\		\										DB	2.81	2.98	A. Panoramic	
	1-2		\		\										DB	2.93	3.04		
	2-0		\												DB	2.99	3.18		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			

Legend:	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut
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Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

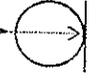
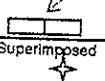
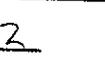
REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-PURPLE-04 Rev. 0		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC		Penetrameter Location		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material		Shim Thickness .125"									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Thickness N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-1	0-1	.008	\		\														
	1-2		\												DB	2.73	2.84	A. Panoramic	
	2-0		\		\										DB	2.93	3.07		
															DB	2.91	2.98		B. Single Wall
																			
																			
																			
																			
																			
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT - Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC - Undercut												

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *[Signature]* Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

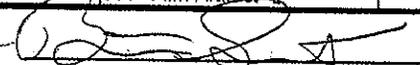
12220017

P.O.#

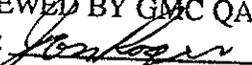
4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"								
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-PURPLE-02 Rev. 0		Source Strength or MA / KV 49 CI			Penetrator Material SS		Emulsion or Lot No. 0150605N									
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Norm. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04									
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A									
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS									
Backings Lead Location N/A		Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS										
Backings Lead Location N/A		Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS										
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-2	0-1	003	\		\								\		RS	2.99	3.14	A. Panoramic 
	1-2		\												RS	3.12	3.26	
	2-0		\							\					RS	3.02	3.10	
																		B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-PURPLE-03 Rev. 0				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-2	0-1	.008	\												40D	2.91	3.05	A. Panoramic 			
	1-2	.008	\												40D	2.84	2.88				
	2-0	.008	\		\	\									40D	2.77	2.87				
																		B. Single Wall 			
																			C. Double Wall 		
																			D. Elliptical 		
																			E. Superimposed 		
																			F. Profile 		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA- Film Artifact		UC- Undercut									

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Brian Smart Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC OR DRP
SIGN: Jon Rojas
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

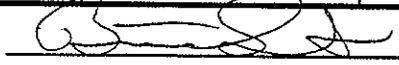
12220017

P.O.#

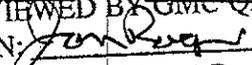
4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-BLUE-02 Rev. 0		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC		Penetrameter Location		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Weider ID	Pene. Density	Weld Density	Techniques	
FW-3	0-1	.008	\		\					\					KS	2.98	3.23	A. Panoramic	
	1-2			XXX	XXX										KS	3.02	3.29		
	2-0		\		\					\					KS	3.01	3.16		
																		B. Single Wall	
																			
																			C. Double Wall
																			
																			D. Elliptical
																			
																			E. Superimposed
																			
																			F. Profile
																			
Legend:		POR - Porosity	C-Crack	IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion	IF - Incomplete Fusion																

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-PURPLE-02 Rev. 0				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
PLW 3	0-1	.008													RS	2.88	2.92	A. Panoramic			
	1-2														RS	2.83	3.11				
	2-0														RS	3.00	3.21				
																					
																					
																					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *Brian Smart* Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: *Jan Kasper*
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12			Film Type AGFA D5	Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-14 Rev. 1				Source Strength or MA / KV 49 CI				Penetrameter Material SS			Emulsion or Lot No. 0150605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04							
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"				Shim Material Shim Thickness SS .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>								
Technique C			Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH		Backing Lead Thickness N/A							
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A						
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques		
FW-3 R1	0-1	.008	\												KS	3.00	3.24	A. Panoramic 		
	BLUE																	B. Single Wall 		
																		C. Double Wall 		
																		D. Elliptical 		
																		E. Superimposed 		
																		F. Profile 		
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication			FA - Film Artifact		UC- Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion																

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *[Signature]* Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-RED-05 Rev. 0		Source Strength or MA / KV 49 CI		Penetrameter Material SS		Emulsion or Lot No. 0150605N	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrameter Location		Film Exp. Date 2014.04	
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A	
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS	
Backings Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB		Front .010	Ctr. NA	Back .010	Locations Marker Placement SS

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-4	0-1	.008	\		\	\							\		40D	2.79	2.70	A. Panoramic
	1-2		\												40D	2.91	3.16	
	2-0		\			\									40D	2.98	3.19	
																		
																		
																		

Legend:	POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut
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Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT:
SIGN: 
DATE: 1/10/12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO #

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P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-PURPLE-03 Rev. 0				Source Strength or MA / KV 49 CI				Penetrant Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrant Location SS				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>			
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010		Ctr. NA		Back .010		Locations Marker Placement SS				Backing Lead Location N/A	
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IP	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-4	0-1	.008	\												TF	3.06	3.24	A. Panoramic			
	1-2	.008	\												TF	2.98	3.26				
	2-0	.008	\												TF	2.92	3.05	B. Single Wall			
																		C. Double Wall			
																			D. Elliptical		
																			E. Superimposed		
																			F. Profile		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut									

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *[Signature]* Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 1-12-10

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

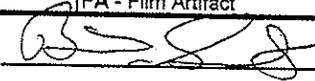
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Form 20.6-318 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-PURPLE-03 Rev. 0				Source Strength or MA / KV 49 CI				Penetrator Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness 237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrator Location SS				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-5	0-1	.008	\		\										TF	2.64	3.03	A. Panoramic			
	1-2		\												TF	2.92	3.00				
	2-0		\												TF	2.88	3.07	B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC- Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval: _____

Date: _____

Inspector / Reviewed By: 

Date: 1-9-12

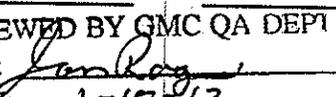
Client: _____

Date: _____

Inspector: **BRIAN SMART**

Date: 1-9-12

REVIEWED BY GMC QA DEPT

SIGN: 

DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

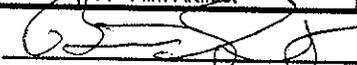
4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetratometer Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-3-15 Rev. 0				Source Strength or MA / KV 49 CI				Penetratometer Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetratometer Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-6 R1	0-1	.008	\												KS	2.95	2.62	A. Panoramic			
	BLUE																				
																		B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut									

Level III Approval: _____

Date: _____

Inspector / Reviewed By: 

Date: 1-9-12

Client: _____

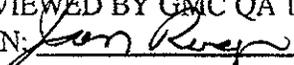
Date: _____

Inspector: _____

BRIAN SMART

Date: 1-9-12

REVIEWED BY GMC QA DEPT

SIGN: 

DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-23 Rev. 5			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location			Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C Viewing			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Per	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weid Density	Techniques	
FW-8	0-1	.0080	\		\					\	\		\		18R	2.92	3.18	A. Panoramic	
	1-2		\							\	\		\		18R	2.95	3.21		
	2-0		\							\	\		\	TEAL	18R	2.92	3.13		
																			B. Single Wall
																			C. Double Wall
																			D. Elliptical
																			E. Superimposed
																			F. Profile
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication			FA - Film Artifact		UC- Undercut				
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval:

Date:

Inspector / Reviewed By:

Date:

1-9-12

Client:

Date:

Inspector:

BRIAN SMART

Date:

1-9-12

REVIEWED BY GMC QA DEPI

SIGN:

DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrator Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-3-20 Rev. 0				Source Strength or MA / KV 49 CI				Penetrator Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-13T	0-1	.008	\												MS	2.92	3.08	A. Panoramic			
	1-2		\												MS	2.94	3.16				
	2-0		\										GREEN	MS	2.92	3.14					
																			B. Single Wall		
																			C. Double Wall		
																			D. Elliptical		
																			E. Superimposed		
																			F. Profile		
Legend:			POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication				UC - Undercut						
			SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact										

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Brian Smart Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT.
SIGN: Jon Roge
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"				
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-21 Rev. 0			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04				
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS			Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-15T	0-1	.008	\		\										MS	3.04	3.18	A. Panoramic 
	1-2		\		\										MS	3.10	3.33	
	2-0			xxx	xxx									BROWN	MS	3.06	3.02	
																		B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact			UC- Undercut					

Level III Approval: _____ Date: _____ Inspector / Reviewed By: [Signature] Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
 SIGN: [Signature]
 DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12			Film Type AGFA D5	Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-20 Rev. 0				Source Strength or MA / KV 49 CI				Penetrameter Material SS			Emulsion or Lot No. 0150605N				
Procedure RT, ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"	Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04						
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>						
Technique C			Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-20 T	0-1	.008	\		\								\		MS	3.03	3.15	A. Panoramic
	1-2		\												MS	3.11	3.38	
	2-0		\												MS	2.97	2.97	
	BLUE																	
																		
																		
																		
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact			UC- Undercut					

Level III Approval: _____ Date: _____ Inspector / Reviewed By: [Signature] Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT.
 SIGN: [Signature]
 DATE: 1-10-12

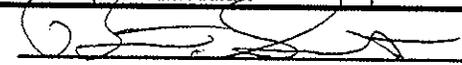
TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

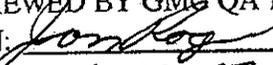
Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-318 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"				
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-23 Rev. 5			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location			Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-21	0-1	.008	\										\		18R	2.78	2.78	A. Panoramic
	1-2		\										\		18R	3.06	3.11	
	2-0		\		\									BROWN	18R	2.74	2.89	
																		B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		UC - Undercut						
		SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact								

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT.
SIGN: 
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12

FWO #

12220017

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-3-23 Rev. 5				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-22	0-1	.008	\										\		18R	2.75	3.02	A. Panoramic			
	1-2		\										\		18R	2.70	2.75				
	2-0		\							\			\	GREEN	18R	2.80	2.89				

Legend: POR - Porosity C-Crack IP - Incomplete Penetration BT- Burn Thru or Suck Back Surf - Surface Indication FA - Film Artifact UC- Undercut
SI - Slag Inclusion IF-Incomplete Fusion

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN:
DATE: 1-10-12

TEAM[®] Industrial Services, Inc.

TCM Division
 500 Broadway
 S.Roxana, Illinois 62087 (618) 251-4125

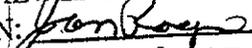
Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"				
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-21 Rev. 0			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04				
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-33T	0-1	.008	\												MS	2.87	3.19	A. Panoramic 
	1-2		\												MS	2.99	3.30	
	2-0			xxx	xxx									PURPLE	MS	2.99	3.06	
																		B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:			POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication			FA - Film Artifact		UC - Undercut		
			SI - Slag Inclusion		IF-Incomplete Fusion													

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
 SIGN: 
 DATE: 1-10-12

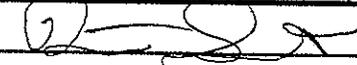
TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-9-12 FWO # 12220017 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-23 Rev. 5			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N							
Procedure RT ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location			Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-46	0-1	.008	\							\	\				18R	2.79	2.89	A. Panoramic	
	1-2		\												18R	2.86	2.98		
	2-0		\										RED	18R	2.78	2.98			
																		B. Single Wall	
																			C. Double Wall
																			D. Elliptical
																			E. Superimposed
																			F. Profile
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC- Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-9-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-9-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-10-12

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM A833-08
 Procedure: SP-03-1222-R10
 REP (COP Only): _____
 Client: 4205
 W.O. / Job #: 1222 0030 / 4205

Equipment Manufacturer: _____

Maximum Hardness: 200

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC/ Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
fu 1	SVC Red-03	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal					
			Loc. #1	2.8	2.9	176/153	X	
Red-fu-21	SVC-3-010	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal					
			Loc. #1	2.9	3.0	176/164	X	
fu-2	SVC green-03	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal	2.8	2.9	176/164	X	
			Loc. #1	2.9	3.0	176/164	X	
fu-4	SVC green-04	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal	2.9	3.0	176/164	X	
			Loc. #1	2.9	3.0	176/164	X	
Red-fu 33	SVC-3-019	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal	2.8	3.0	176/153	X	
			Loc. #1	2.8	3.0	176/153	X	
Blue fu 23	SVC-3-020	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal	2.9	3.0	176/153	X	
			Loc. #1	2.9	3.0	176/164	X	
Brown fu 19	SVC-3-022	<input type="checkbox"/> Other Condition <input type="checkbox"/> Before PWHT <input checked="" type="checkbox"/> After PWHT	Base Metal	2.8	2.9	176/164	X	
			Loc. #1	2.8	2.9	176/164	X	
			Loc. #2	2.9	2.9	176/176	X	

Technician Signature: [Signature]

Date: 1-16-12

TEAM Industrial Services, Inc.

TCM division
500 Broadway
South Roxana, IL 62087

Tel. 618-251-4125
Fax. 618-251-4148

27.8-316
Rev. 4

BRINELL HARDNESS

Specifications: ASTM
Procedure: SA-03-1222 R10
REP (COP Only): _____
Client: _____
W.O. / Job #: 4205 / 1222 0030

Equipment Manufacturer: _____

Maximum Hardness: 2.00

Weld Number	Line / Spool ID	Processing Stage	Location Loc. #2 is 180° from Loc. #1	Test Bar Indent Diameter (mm)	Work Piece Indent Diameter (mm)	Work Piece HBC/ Test Bar #	Based on Maximum Hardness Above	
							Accept	Reject
Fw 2	SVC green-08	<input type="checkbox"/> Other Condition	Base Metal	2.9	2.8	176/189	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	3.0	176/164	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
green Fw 20	SVC-3-023	<input type="checkbox"/> Other Condition	Base Metal	2.8	2.9	176/164	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	3.0	2.9	176/188	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
Green Fw 25	SVC-3-023	<input type="checkbox"/> Other Condition	Base Metal	2.8	2.9	176/164	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.9	2.9	176/176	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
Blue Fw 32	SVC-3-023	<input type="checkbox"/> Other Condition	Base Metal	2.7	2.9	176/153	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.8	2.9	176/164	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
Red Fw 45	SVC-3-023	<input type="checkbox"/> Other Condition	Base Metal	2.8	2.9	176/164	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.8	176/153	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
Purple Fw-41	SVC-3-023	<input type="checkbox"/> Other Condition	Base Metal	2.9	2.8	176/189	X	
		<input type="checkbox"/> Before PWHT	Loc. #1	2.7	2.9	176/153	X	
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					
		<input type="checkbox"/> Other Condition	Base Metal					
		<input type="checkbox"/> Before PWHT	Loc. #1					
		<input checked="" type="checkbox"/> After PWHT	Loc. #2					

Technician Signature: Scott Myer

Date: 1-16-12

TEAM[®] Industrial Services, Inc.

MAGNETIC PARTICLE TECHNIQUE RECORD / INSPECTION REPORT

TCM Division
500 Broadway
South Roxana, IL 62087

Tel: (618) 251-4125
Fax: (618) 251-4148

Form 21.3-316
Rev 5

Client: STRESS	Work Order No.: 1829.0030	Date: 11/6/13.
Address/Job Location: WARR	Job/PO No.: 1205	Specification: ASME A31.3 2008
Part No. or ID: Steel oil products	Drawing No.: Sve	Procedure: ASME 1 R113
Type of Work: Routine	<input type="checkbox"/> New <input checked="" type="checkbox"/> Repair <input type="checkbox"/> Rework	Acceptance: PHI 10.3
Technique: <input checked="" type="checkbox"/> Dry Powder <input type="checkbox"/> Wet Fluorescent Yokes	Clamps/Head Shot Coil Prods: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Amperage: Fixed
Equipment Mfr.: Parker coltoun powder	Particle Type: <input checked="" type="checkbox"/> 8A Red <input type="checkbox"/> 14AM Other: _____	Prod / Leg Spacing: 3" - 6"
Model No.: B 300	Batch No.: 10MO81	Black Light Serial No.: N/A
Serial No.: 8829	UV Intensity: N/A	UV Meter Serial No.: N/A
		Surface Condition: <input checked="" type="checkbox"/> As Welded <input type="checkbox"/> Ground <input type="checkbox"/> Wire Brushed <input type="checkbox"/> Blasted <input type="checkbox"/> Other: _____

Identification	Accept	Reject	Defect Code	Remarks
N9 fu-2 1 1/2 socket weld.	X			no relevant defects or indications found at this time of inspection
N9 fu-3 1 1/2 socket weld.	X			
N9 fu 8 1 1/2 socket weld	X			
fu-6 TOR 3/4 weld	X			
fu-7 E/Aw/let 3"	X			

Defect Code: Key: **LI** = Linear Indication **P** = Porosity **C** = Crack **Specify Other:**

Inspector: **Keith Wray** Level: **II** Date: **1-16-13** Client: **Robert Brown**
 Inspector: _____ Level: _____ Date: _____ Level: _____
 Attachment: Yes No Page ___ of ___

TEAM Industrial Services, Inc.

MAGNETIC PARTICLE TECHNIQUE RECORD / INSPECTION REPORT

ICM Division
500 Broadway
South Roxana, IL 62087

Tel: (618) 251-4125
Fax: (618) 251-4148

Form 21-3-316
Rev 5

Client: <u>SPS5</u>	Work Order No.: <u>1829.0030</u>	Date: <u>11/6/13.</u>
Address/Job Location: <u>WARR</u>	Job/PO No.: <u>1205</u>	Specification: <u>ASME A31.3 2008</u>
Part No. or ID: <u>Shell oil products gas oil recovery project</u>	Procedure: <u>ASME 1 R113</u>	Acceptance: <u>Part 10.3</u>
Drawing No.: <u>SVE</u>	Technique No.:	
Type of Work: Routine <input type="checkbox"/> New <input checked="" type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/>		

Technique: Dry Powder <input checked="" type="checkbox"/> Wet Fluorescent <input type="checkbox"/> Yokes <input type="checkbox"/>	Clamps/Head Shot <input type="checkbox"/> Coil <input type="checkbox"/> Prods <input type="checkbox"/>	Current: AC <input checked="" type="checkbox"/> DC <input type="checkbox"/> HWAC <input type="checkbox"/>	Amperage: <u>4 Yokes</u> Prod / Leg Spacing <u>3" - 6"</u>	Surface Condition: <input checked="" type="checkbox"/> As Welded <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Wire Brushed <input type="checkbox"/> Blasted <input type="checkbox"/> Other:
Equipment Mfr.: <u>Parker</u>	Particle Type: <input checked="" type="checkbox"/> 8A Red <input type="checkbox"/> 14AM Other: _____	Black Light Serial No.: <u>N/A</u>	UV Meter Serial No.: <u>N/A</u>	
Model No.: <u>B 300</u>	Batch No.: <u>10M081</u>	UV Intensity: <u>N/A</u>		
Serial No.: <u>8829</u>				

Identification	Accept	Reject	Defect Code	Remarks
<u>19 fuw - 2</u>				<u>no relevant defects or indications found at this time of inspection</u>
<u>1 1/2 socket weld</u>	<input checked="" type="checkbox"/>			
<u>N3 fuw - 3</u>				
<u>1 1/2 socket weld</u>	<input checked="" type="checkbox"/>			
<u>N3 fuw 8</u>				
<u>1 1/2 socket weld</u>	<input checked="" type="checkbox"/>			
<u>fuw-6 TOL</u>				<u>SVE - BROWN - D2</u>
<u>3/4 weld</u>	<input checked="" type="checkbox"/>			
<u>fuw - 7</u>				
<u>Flange let 3"</u>	<input checked="" type="checkbox"/>			

Defect Code: Key: LI = Linear Indication P = Porosity C = Crack Specify Other:

Inspector: Scott Myers Level: II Date: 1-16-13 Client: John Ryan
 Spector: _____ Level: _____ Date: _____ Level III: _____

Attachment: Yes No

Page ___ of ___

TEAM[®] Industrial Services, Inc.

MAGNETIC PARTICLE TECHNIQUE RECORD / INSPECTION REPORT

TCM Division
500 Broadway
South Roxana, IL 62087

Tel. (618) 251-4125
Fax. (618) 251-4148

Form 21.3-316
Rev 5

Client: SYSS	Work Order No.: 10020030	Date: 11/6/13.
Address/Job Location: WARR	Job/PO No.: 1205	Specification: ASME A31.3 2008
Part No. or ID: Steel oil products	Drawing No.: SV	Procedure: ASME 1 R113
Type of Work: <input type="checkbox"/> Routine <input checked="" type="checkbox"/> New <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/>	Technique No.: PAE 10.3	Acceptance: PAE 10.3

Technique: <input checked="" type="checkbox"/> Dry Powder <input type="checkbox"/> Wet Fluorescent Yokes	Clamps/Head Shot <input type="checkbox"/> Coil <input type="checkbox"/> Prods <input type="checkbox"/>	Current: <input checked="" type="checkbox"/> AC <input type="checkbox"/> DC <input type="checkbox"/>	Amperage: Fixed
Equipment Mfr.: Park's counter probe	Particle Type: <input checked="" type="checkbox"/> 8A Red <input type="checkbox"/> 14AM Other: _____	Black Light Serial No.: N/A	Prod / Leg Spacing: 3" - 6"
Model No.: B 300	Batch No.: 10W081	UV Meter Serial No.: N/A	Surface Condition: <input checked="" type="checkbox"/> As Welded <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Wire Brushed <input type="checkbox"/> Blasted <input type="checkbox"/> Other: _____
Serial No.: 8829	UV Intensity: N/A		

Identification	Accept	Reject	Defect Code	Remarks
1/2 fu-2	<input checked="" type="checkbox"/>	<input type="checkbox"/>		no relevant defects or indications found at this time of inspection
1/2 socket weld	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1/2 fu-3	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1/2 socket weld	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1/2 fu-8	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
1/2 socket weld	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
fu-6 TOL	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3/4 weld	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
fu-7	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Flawlet 3"	<input checked="" type="checkbox"/>	<input type="checkbox"/>		SVI-BLUE-02

Defect Code: Key: **L** = Linear Indication **P** = Porosity **C** = Crack Specify Other: _____

Inspector: **Kurt Weger** Level: **II** Date: **1-16-13** Client: **John Ryan**
 Inspector: _____ Level: _____ Date: _____ Level III: _____

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-GREEN-05 REV.0			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"	Exposure Time 15SEC		Penetrameter Location			Film Exp. Date 2014.04							
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material Shim Thickness SS .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>							
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Single <input type="checkbox"/>	Viewing Double <input checked="" type="checkbox"/>		Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A						
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-2	0-1	.008	\		\										DB	2.83	3.04	A. Panoramic	
	1-2		\													2.77	2.70		
	2-0		\		\											2.76	2.80		
																		B. Single Wall	
																		C. Double Wall	
																		D. Elliptical	
																		E. Superimposed	
																		F. Profile	
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Brian Smart Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

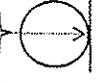
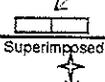
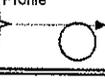
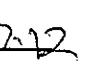
REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 1-19-2012

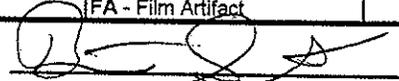
TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

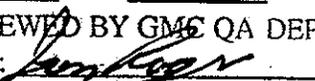
Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> Co-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-BLUE-02 REV.0		Source Strength or MA / KV 49 CI		Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrameter Location		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>	Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS										
Backings Lead Location N/A		Backings Lead Location N/A		Backings Lead Location N/A		Backings Lead Location N/A		Backings Lead Location N/A										
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-3/R1	1-2	.008	\							\			\		DB	2.81	3.01	A. Panoramic
	2-0		\		\					\						2.88	3.15	
																		B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC - Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

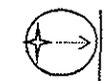
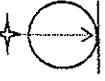
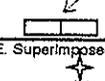
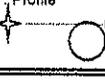
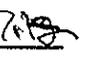
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12220030

P.O.#

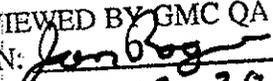
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Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-RED-03 REV.0				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-4	0-1	.008	\		\								\		RS	2.79	2.79	A. Panoramic			
	1-2		\		\											2.89	3.05				
	2-0		\		\											2.82	3.08				
																		B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion		IF - Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: **BRIAN SMART** Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item GAP		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type N/A		Film Type AGFA D5	Film Size 4.5"X10"								
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-023 REV.5		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N									
Procedure RT.ASME.1 R/13		Pipe Dia. 1.500"	Nom. Thickness .219"	Focal Spot Size .155"	Exposure Time 2MIN	Penetrameter Location Film Side <input type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 18.000"			Shim Material N/A	Shim Thickness N/A	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique E		Surface Condition AS WELDED		Source to Object Distance (SOD) 16.500"			ID Placement FLASH		Backing Lead Thickness N/A									
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-7		.008	\											gap shot	40D			A. Panoramic
														NG				B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA- Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *[Signature]* Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS		Type of Item GAP		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type N/A		Film Type AGFA D5		Film Size 4.5"X10"							
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-023 REV.5		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N									
Procedure RT.ASME.1 R/13		Pipe Dia. 1.500"	Nom. Thickness .219"	Focal Spot Size .155"	Exposure Time 2MIN		Penetrameter Location Film Side <input type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04									
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 18.000"			Shim Material N/A	Shim Thickness N/A	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique E		Surface Condition AS WELDED		Source to Object Distance (SOD) 16.500"			ID Placement FLASH		Backing Lead Thickness N/A									
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A								
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-8		.008	\											gap shot	JG			A. Panoramic
														NG				B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Legend:		POR - Porosity	C-Crack	IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC- Undercut						
		SI - Slag Inclusion	IF-Incomplete Fusion															

Level III Approval:

Date:

Inspector / Reviewed By:



Date:

1/17/12

Client:

Date:

Inspector:

BRIAN SMART

Date:

1-17-12

REVIEWED BY GMC QA DEPT

SIGN:



DATE:

1/19/2012

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

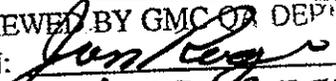
4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-019- REV.0			Source Strength or MA / KV 49 CI			Penetrator Material SS			Emulsion or Lot No. 0150605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04						
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>							
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A						
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-9/T	0-1	.008	\		\								\		MS	2.52	2.53	A. Panoramic	
	1-2		\		\											2.42	2.66		
	2-0		\													2.53	2.54		
														GREEN					B. Single Wall
																			C. Double Wall
																			D. Elliptical
																			E. Superimposed
																			F. Profile
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut							

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: **BRIAN SMART** Date: 1-17-12

REVIEWED BY GMC OR DEPT
SIGN: 
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-020 REV.0		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04											
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A									
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-13/T	0-1	.008	\												MS	2.82	2.93	A. Panoramic	
	1-2		\													2.88	2.98		
	2-0		\													2.81	3.09		
														BROWN				B. Single Wall	
																			
																		C. Double Wall	
																			
																		D. Elliptical	
																			
																		E. Superimposed	
																			
																		F. Profile	
																			
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact	UC- Undercut												

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Brian Smart Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: [Signature]
DATE: 1-19-2012

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

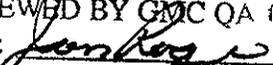
4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>		Penetrator Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"									
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-021 REV.0		Source Strength or MA / KV 49 CI		Penetrator Material SS		Emulsion or Lot No. 0150605N										
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"		Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>										
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"		ID Placement FLASH		Backing Lead Thickness N/A										
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS										
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-15/R1	2-0	.008	\												DB	2.96	2.86	A. Panoramic 
														BROWN				B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-3-021 REV.0				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-16	0-1	.008	\												JM	2.90	2.98	A. Panoramic			
	1-2		\													2.93	2.94				
	2-0		\													2.87	3.16				
														BROWN				B. Single Wall 			
																		C. Double Wall 			
																		D. Elliptical 			
																		E. Superimposed 			
																		F. Profile 			

Legend: POR - Porosity C-Crack IP - Incomplete Penetration BT - Burn Thru or Suck Back Surf - Surface Indication FA - Film Artifact UC - Undercut
SI - Slag Inclusion IF - Incomplete Fusion

Level III Approval: _____ Date: _____ Inspector / Reviewed By: *[Signature]* Date: 1-17-12
Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: *[Signature]*
DATE: 1-19-2012

TEAM[®] Industrial Services, Inc.

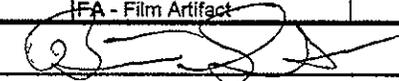
TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"							
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-022 REV.0			Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N								
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC	Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04										
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>									
Technique C		Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A								
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A							
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-18/T	0-1	.008	\												KS	2.85	2.99	A. Panoramic
	1-2		\		\													
	2-0		\															
														GREEN				B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion	C-Crack IF-Incomplete Fusion	IP - Incomplete Penetration	BT- Burn Thru or Suck Back	Surf - Surface Indication FA - Film Artifact						UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-19-2012

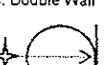
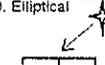
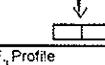
TEAM Industrial Services, Inc.

TCM Division

500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"		
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-019- REV.0				Source Strength or MA / KV 49 CI				Penetrameter Material SS			Emulsion or Lot No. 0150605N				
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04				
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>			
Technique C			Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH			Backing Lead Thickness N/A				
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS			Backing Lead Location N/A		
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pena. Density	Weld Density	Techniques
FW-19/T	0-1	.008	\		\								\		MS	2.67	2.70	A. Panoramic
	1-2		\		\											2.65	2.84	
	2-0		\													2.62	2.57	
														BLUE				B. Single Wall
																		
																		C. Double Wall
																		
																		D. Elliptical
																		
																		E. Superimposed
																		
																		F. Profile
																		
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA- Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By: [Signature] Date: 1/17/12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

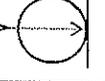
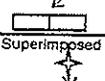
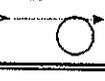
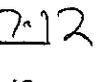
REVIEWED BY GMO QA DEPT
SIGN: [Signature]
DATE: 1-19-2012

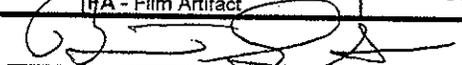
TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS				Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrant Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"			
Specification ASME B31.3 2008/NORMAL				Drawing No. SVE-6-026 REV.1 REV.0				Source Strength or MA / KV 49 CI				Penetrant Material SS				Emulsion or Lot No. 0150605N					
Procedure RT.ASME.1 R/13				Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2				Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C				Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A					
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>				Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques			
FW-24	0-1	.008	\		\					\			\		18R	2.59	2.70	A. Panoramic			
	1-2		\							\			\			2.52	2.69				
	2-0		\							\	\		\	BROWN		2.52	2.55	B. Single Wall			
																					
																		C. Double Wall			
																					
																		D. Elliptical			
																					
																		E. Superimposed			
																					
																		F. Profile			
																					
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		RA - Film Artifact		UC - Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion																	

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

APPROVED BY GMC QA DEPT

DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-023 REV.5			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2			Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>					
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB		Front .010	Ctr. NA	Back .010		Locations Marker Placement SS			Backing Lead Location N/A				
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-27	0-1	.008	\		\										JG	2.41	2.66	A. Panoramic	
	1-2		\														2.76	2.87	
	2-0		\		\												2.66	2.76	
														GREEN					B. Single Wall
																			C. Double Wall
																			D. Elliptical
																			E. SuperImposed
																			F. Profile
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		UC - Undercut							
		SI - Slag Inclusion		IF-Incomplete Fusion						FA - Film Artifact									

Level III Approval: _____ Date: _____ Inspector / Reviewed By: [Signature] Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
IGN [Signature]
DATE: 1-19-2012

TEAM Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

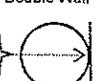
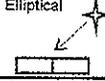
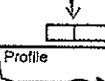
FWO #

12220030

P.O.#

4205

Form 20.6-316 REV2

Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrant Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"										
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-023 REV.5		Source Strength or MA / KV 49 CI			Penetrant Material SS		Emulsion or Lot No. 0150605N											
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC		Penetrant Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>		Film Exp. Date 2014.04											
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>											
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A											
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A										
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques		
FW-28	0-1	.008	\										\		JG	2.67	2.82	A. Panoramic		
	1-2		\																	
	2-0		\																	
														GREEN					B. Single Wall	
																				
																			C. Double Wall	
																				
																			D. Elliptical	
																				
																			E. Superimposed	
																				
																			F. Profile	
																				
Legend:		POR - Porosity	C-Crack	IP - Incomplete Penetration	BT - Burn Thru or Suck Back	Surf - Surface Indication	UC - Undercut													
		SI - Slag Inclusion	IF-Incomplete Fusion			FA - Film Artifact														

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
 GN: 
 DATE: 1-18-2012

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrator Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"					
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-022 REV.0			Source Strength or MA / KV 49 CI			Penetrator Material SS			Emulsion or Lot No. 0150605N							
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrator Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04						
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>							
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A							
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A						
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques	
FW-28/T	0-1	.008	\												KS	2.71	2.86	A. Panoramic	
	1-2		\													2.66	2.84		
	2-0		\													2.56	2.60		
														BLUE				B. Single Wall	
																			
																		C. Double Wall	
																			
																		D. Elliptical	
																			
																		E. Superimposed	
																			
																		F. Profile	
																			
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT - Burn Thru or Suck Back		Surf - Surface Indication		FA - Film Artifact		UC - Undercut					
		SI - Slag Inclusion		IF-Incomplete Fusion															

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMP/QA DEPT
SIGN. 
DATE: 1-19-2012

TEAM[®] Industrial Services, Inc.

TCM Division

500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

12220030

P.O.#

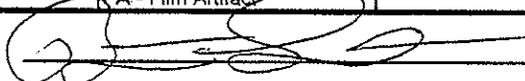
4205

Form 20.6-316 REV2

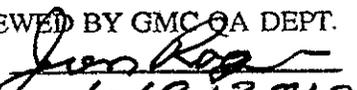
Customer GROSS		Type of Item PIPE WELD		Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12		Film Type AGFA D5	Film Size 4.5"X10"
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-020 REV.0		Source Strength or MA / KV 49 CI			Penetrameter Material SS		Emulsion or Lot No. 0150605N	
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"	Nom. Thickness .237"	Focal Spot Size .155"	Exposure Time 15SEC		Penetrameter Location		Film Exp. Date 2014.04	
Acceptance Procedure PARA 8.2		Joint Type BUTT	Material CS	Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"	Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>	
Technique C		Surface Condition AS WELDED		Source to Object Distance (SOD) 4.263"			ID Placement FLASH		Backing Lead Thickness N/A	
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>		Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS		Backing Lead Location N/A

Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Weider ID	Pene. Density	Weld Density	Techniques
FW-31/T	0-1	.008	\		\										MS	2.59	2.67	A. Panoramic
	1-2		\			\										2.78	2.76	B. Single Wall
	2-0		\													2.90	2.75	
														PURPLE-				C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile

Legend: POR - Porosity C-Crack IP - Incomplete Penetration BT - Burn Thru or Suck Back Surf - Surface Indication UC - Undercut
 SI - Slag Inclusion IF - Incomplete Fusion FA - Film Artifact

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT.
 SIGN: 
 DATE: 1-19-2012

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway

S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12

FWO #

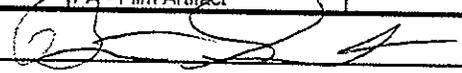
12220030

P.O.#

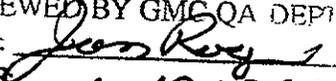
4205

Form 20.6-316 REV2

Customer GROSS			Type of Item PIPE WELD			Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>			Penetrameter Type ASTM 12			Film Type AGFA D5		Film Size 4.5"X10"				
Specification ASME B31.3 2008/NORMAL			Drawing No. SVE-3-021 REV.0			Source Strength or MA / KV 49 CI			Penetrameter Material SS			Emulsion or Lot No. 0150605N						
Procedure RT.ASME.1 R/13			Pipe Dia. 4.500"	Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>			Film Exp. Date 2014.04					
Acceptance Procedure PARA 8.2			Joint Type BUTT	Material CS		Source to Film Distance (SFD) 4.500"			Shim Material SS	Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>						
Technique C			Surface Condition AS WELDED			Source to Object Distance (SOD) 4.263"			ID Placement FLASH			Backing Lead Thickness N/A						
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>			Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>			Screens PB	Front .010	Ctr. NA	Back .010	Locations Marker Placement SS			Backing Lead Location N/A					
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-33/R1	2-0	.008	\												DB	2.68	2.78	A. Panoramic 
														PURPLE				B. Single Wall 
																		C. Double Wall 
																		D. Elliptical 
																		E. Superimposed 
																		F. Profile 
Legend:		POR - Porosity SI - Slag Inclusion		C-Crack IF-Incomplete Fusion		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication FA - Film Artifact		UC- Undercut						

Level III Approval: _____ Date: _____ Inspector / Reviewed By:  Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
SIGN: 
DATE: 1-19-2012

TEAM[®] Industrial Services, Inc.

TCM Division
500 Broadway
S.Roxana, Illinois 62087 (618) 251-4125

Date: 1-17-12 FWO # 12220030 P.O.# 4205

Form 20,6-316 REV2

Customer GROSS		Type of Item PIPE WELD				Radiation Source IR-192 <input checked="" type="checkbox"/> CO-60 <input type="checkbox"/> X-Ray <input type="checkbox"/>				Penetrameter Type ASTM 12				Film Type AGFA D5		Film Size 4.5"X10"		
Specification ASME B31.3 2008/NORMAL		Drawing No. SVE-3-022 REV.0				Source Strength or MA / KV 49 CI				Penetrameter Material SS				Emulsion or Lot No. 0150605N				
Procedure RT.ASME.1 R/13		Pipe Dia. 4.500"		Nom. Thickness .237"		Focal Spot Size .155"		Exposure Time 15SEC		Penetrameter Location Film Side <input checked="" type="checkbox"/> Source Side <input type="checkbox"/>				Film Exp. Date 2014.04				
Acceptance Procedure PARA 8.2		Joint Type BUTT		Material CS		Source to Film Distance (SFD) 4.500"				Shim Material SS		Shim Thickness .125"		Film Technique Single Load <input checked="" type="checkbox"/> Double Load <input type="checkbox"/>				
Technique C		Surface Condition AS WELDED				Source to Object Distance (SOD) 4.263"				ID Placement FLASH				Backing Lead Thickness N/A				
Viewing Single <input type="checkbox"/> Double <input checked="" type="checkbox"/>		Film Processing Automatic <input type="checkbox"/> Manual <input checked="" type="checkbox"/>				Screens PB		Front .010	Ctr. NA	Back .010	Locations Marker Placement SS				Backing Lead Location N/A			
Weld No.	Section Number	Geo. Unsharp "Ug"	Acc.	Rej	Por	SI	C	IF	IP	UC	BT	FA	Surface	Remarks/Comments	Welder ID	Pene. Density	Weld Density	Techniques
FW-42	0-1	.008	\												KS	2.65	2.85	A. Panoramic
	1-2		\													2.89	3.08	
	2-0		\													3.06	3.02	
														RED				B. Single Wall
																		C. Double Wall
																		D. Elliptical
																		E. Superimposed
																		F. Profile
Legend:		POR - Porosity		C-Crack		IP - Incomplete Penetration		BT- Burn Thru or Suck Back		Surf - Surface Indication				UC- Undercut				
		SI - Slag Inclusion		IF-Incomplete Fusion						FA / Film Artifact								

Level III Approval: _____ Date: _____ Inspector / Reviewed By: Date: 1-17-12

Client: _____ Date: _____ Inspector: BRIAN SMART Date: 1-17-12

REVIEWED BY GMC QA DEPT
DATE: 1-19-2012

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-PURPLE-01
 Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
 System Soil Vapor Conveyance Test Pressure 450 PSIG
 Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure Test Gauge 41R
 Ready for Testing N/A Calibration Date 7-21-11
 All Critical Instrumentation Disconnected or Blined to Range 0-1000
 Prevent Damage N/A Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	4"-AAAA2-PURPLE-01	Ref. Dwg: SVE-3-011 R/2, SVE-3-012 R/2, SVE-3-013 R/2, SVE-3-014 R/2, SVE-3-015 R/1 SVE-3-016 R/1, SVE-3-017 R/1, SVE-3-018 R/1, SVE-3-019 R/1, SVE-3-020 R/1, SVE-3-021 R/1 SVE-3-022 R/1, SVE-3-023 R/5, SVE-6-026 R/1
	4"-AAAA2-PURPLE-02	SVE-PURPLE-02 R/O
	4"-AAAA2-PURPLE-03	SVE-PURPLE-03 R/O
	4"-AAAA2-PURPLE-04	SVE-PURPLE-04 R/O
	4"-AAAA2-PURPLE-05	SVE-PURPLE-05 R/O
	4"-AAAA2-PURPLE-06	SVE-PURPLE-06 R/O
	4"-AAAA2-PURPLE-07	SVE-PURPLE-07 R/O

Date: Nov. 26, 2011 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 1/17/2012 GMC Inspector Jim Roger
 Record No. SVE-PURPLE-01

COP Rep. Larry Closterman Date 1/17/2012
 _____ Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-BLUE-01
 Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
 System Soil Vapor Conveyance Test Pressure 450 psig
 Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure
 Ready for Testing N/A Test Gauge 41R
 All Critical Instrumentation Disconnected or Blined to Prevent Damage N/A Calibration Date 7/21/2011
 Range 0-1000 PSI
 Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	4"-AAAA2-BLUE-01	Ref. Dwg:	SVE-3-014 R/2, SVE-3-015 R/1 SVE-3-016 R/1, SVE-3-017 R/1 SVE-3-018 R/1, SVE-3-019 R/1 SVE-3-020 R/1, SVE-3-021 R/1 SVE-3-022 R/1, SVE-3-023 R/5, SVE-6-026 R/1
	4"-AAAA2-BLUE-02		SVE-BLUE-02 R/0
	4"-AAAA2-BLUE-03		SVE-BLUE-03 R/0
	4"-AAAA2-BLUE-04		SVE-BLUE-04 R/0
	4"-AAAA2-BLUE-05		SVE-BLUE-05 R/0

Date: Nov. 26, 2011 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 1/18/2012 GMC Inspector Jon Rogien
 Record No. SVE-BLUE-01

COP Rep. 1/18/2012 [Signature] Date 1/18/2012
 Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-BROWN-01
 Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
 System Soil Vapor Conveyance Test Pressure 450 PSIG
 Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure Test Gauge 41R
 Ready for Testing N/A Calibration Date 7/21/2011
 All Critical Instrumentation Disconnected or Blinded to Range 0-1000 PSI
 Prevent Damage N/A Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	4"-AAAA2-BROWN-01	Ref. Dwg:	SVE-3-016 R/1, SVE-3-017 R/1 SVE-3-018 R/1, SVE-3-019 R/1 SVE-3-020 R/1, SVE-3-021 R/1 SVE-3-022 R/1, SVE-3-023 R/1 ¹⁵ SVE-6-026 r/1 <i>RR</i>
	4"-AAAA2-BROWN-02		SVE-BROWN-02 R/0
	4"-AAAA2-BROWN-03		SVE-BROWN-03 R/0

Date: Nov. 26, 2011 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 1/18/2012 GMC Inspector *Jan Rose*
 Record No. SVE-BROWN-01

COP Rep. *Larry Christman* Date 1/18/2012
 _____ Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-GREEN-01
 Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
 System Soil Vapor Conveyance Test Pressure 450 PSIG
 Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure Test Gauge 41R
 Ready for Testing N/A Calibration Date 7-21-11
 All Critical Instrumentation Disconnected or Blinded to Range 0-1000 PSI
 Prevent Damage N/A Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	4"-AAAA2-GREEN-01	Ref. Dwg:	SVE-3-017 R/1 SVE-3-018 R/1, SVE-3-019 R/1 SVE-3-020 R/1, SVE-3-021 R/1 SVE-3-022 R/1, SVE-3-023 R/5, SVE-6-026 R/1
	4"-AAAA2-GREEN-02		SVE-GREEN-02 R/0
	4"-AAAA2-GREEN-03		SVE-GREEN-03 R/0
	4"-AAAA2-GREEN-04		SVE-GREEN-04 R/0
	4"-AAAA2-GREEN-05		SVE-GREEN-05 R/0
	4"-AAAA2-GREEN-06		SVE-GREEN-06 R/0
	4"-AAAA2-GREEN-07		SVE-GREEN-07 R/0
	4"-AAAA2-GREEN-08		SVE-GREEN-08 R/0

Date: Nov. 26, 2011 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 1/19/2012 GMC Inspector *Jan Day*
 Record No. SVE-GREEN-01

COP Rep. *Larry Cloutman* Date 1/19/2012
 _____ Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-RED-01
 Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
 System Soil Vapor Conveyance Test Pressure 450 PSIG
 Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure Test Gauge 41R
 Ready for Testing N/A Calibration Date 7-21-11
 All Critical Instrumentation Disconnected or Blinded to Range 0-1000 PSI
 Prevent Damage N/A Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	4"-AAAA2-RED-01	Ref. Dwg:	SVE-3-010 R/3, SVE-3-011 R/2, SVE-3-012 R/2, SVE-3-013 R/2, SVE-3-014 R/2, SVE-3-015 R/1 SVE-3-016 R/1, SVE-3-017 R/1, SVE-3-018 R/1, SVE-3-019 R/1, SVE-3-020 R/1, SVE-3-021 R/1 SVE-3-022 R/1, SVE-3-023 R/1, SVE-6-026 R/1
	4"-AAAA2-RED-02		SVE-RED-02 R/0
	4"-AAAA2-RED-03		SVE-RED-03 R/0
	4"-AAAA2-RED-04		SVE-RED-04 R/0
	4"-AAAA2-RED-05		SVE-RED-05 R/0
	4"-AAAA2-RED-06		SVE-RED-06 R/0

Date: Nov. 26, 2011 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 1/19/12 GMC Inspector Jon Rogien
 Record No. SVE-RED-01

COP Rep. Larry Costerman Date 1/19/12
 Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-RED-02

Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1

System <u>Soil Vapor Conveyance</u>	Test Pressure <u>450 psig</u>
Ref P&ID's <u>N/A</u>	Test Medium <u>Water</u>
System inspected according to P&ID Check procedure	Test Gauge <u>42-V, 26-W</u>
Ready for Testing <u>N/A</u>	Calibration Date <u>8-29-2011, 11/16/11</u>
All Critical Instrumentation Disconnected or Blinded to Prevent Damage <u>N/A</u>	Range <u>0-1000 PSI</u>
	Hold Time <u>30 Minutes minimum</u>

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No. 4"-AAAA2-RED-02 Ref. Dwg: SVE-RED-02 Rev. 0

Added two (2) 4" flanges to piping above ground. This test includes both field welds FW-7 & FW-8.

Date: Fwb/ 02, 2012 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 2/2/2012 GMC Inspector *Jan Rosen*
Record No. SVE-RED-02

COP Rep. _____ Date _____

URS Rep. *[Signature]* Date 2-2-12

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-TEAL-01
Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
System Soil Vapor Conveyance Test Pressure 450 PSIG
Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure
Ready for Testing N/A Test Gauge 42-√
All Critical Instrumentation Disconnected or Blinded to Prevent Damage N/A Calibration Date 8-29-2011
Range 0 - 1000 PSI
Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	<u>4"-AAAA2-TEAL-01</u>	Ref. Dwg:	<u>SVE-6-024 R/1, SVE-3-023 R/5, SVE-6-026 R/1</u>
	<u>4"-AAAA2-TEAL-SVE-20</u>		<u>SVE-WELL-20 Rev. 0</u>

Date: Feb. 08, 2012 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 2/10/12 GMC Inspector [Signature]
Record No. SVE-TEAL-01

COP Rep. [Signature] Date 2-9-12
Date _____

Pipe HYDROSTATIC Test Report

Job No. 4205 Test No. SVE-TEAL-02
Plant/Area Wood River, II Refinery, North Property Sheet 1 of 1
System Soil Vapor Conveyance Test Pressure 450 PSIG
Ref P&ID's N/A Test Medium Water

System inspected according to P&ID Check procedure Test Gauge 42V
Ready for Testing N/A Calibration Date 8-29-2011
All Critical Instrumentation Disconnected or Blinded to Range 0-1000 PSI
Prevent Damage N/A Hold Time 30 Minutes minimum

Contractor/Subcontractor Gross Mechanical Contractors, Inc., St. Louis, MO

Line No.	<u>4"-AAAA2-TEAL-01</u>	Ref. Dwg:	<u>SVE-6-024 Rev. 1 - w/Sketch</u>
	From: <u>4" Gate Valve</u>		TO: <u>Underground Flange Connection</u>

Date: Feb. 24, 2012 Contractor/Suncontractor Gross Mechanical, Inc.

Date: 2/24/2012 GMC Inspector *Joey Raper*
Record No. SVE-TEAL-02

COP Rep. *URS: Jay W. Schene* Date 2/24/12

Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 1	Date 11/08/11
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Description:
Pipe rack pier locations near 8th Street and Chaffer Avenue.



Photo No. 2	Date 11/08/11
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Description:
Pipe rack pier locations near Public Works.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.:

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Photo No.:**3****Date:**

11/08/11

Description:Pipe rack pier alignment
north of Pier P-008.**Photo No.:****4****Date:**

11/08/11

Description:Pipe rack pier alignment,
near 4th Street and
Chaffer Avenue.

Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 5	Date 11/10/11		
Description: Top of a pier cap, rebar cage and anchor bolt alignment.			

Photo No. 6	Date 11/10/11	
Description: Top of a pier cap, rebar cage and anchor bolt alignment.		

Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 7	Date 11/10/11
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Description:
Top of a pier cap, rebar cage, anchor bolt alignment, and placement of the epoxy bonding agent.



Photo No. 8	Date 11/10/11
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Description:
Completed pier cap.



Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No.: 9	Date: 11/10/11		
Description: Poured pier caps south of Pier P-006.			

Photo No.: 10	Date: 11/08/11		
Description: Pipe rack pier alignment south of Pier P-009.			

Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 11	Date 11/23/11		
Description: Pipe rack pins north of Pier P-088.			

Photo No. 12	Date 11/10/11		
Description: Carbon steel piping placed on the pipe rack from Pier P-011 to approximately Pier P-008.			

Client Name:

Shell

Site Location:

Shell SVE System

Project No.

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Photo No.
13

Date
12/19/11

Description:

Looking south along the pipe rack, pipe rack stubs, beams, shoe guides, and pipe installation.



Photo No.
14

Date
12/19/11

Description:

Looking south along pipe rack.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.:

21562735.00017

Photo No.:**15****Date:**

02/03/12

Description:

Pipe rack north of Pier P-088.

**Photo No.:****16****Date:**

01/16/12

Description:

Pipe rack north of Pier P-066.



Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 17	Date 01/16/12		
Description: Pipe rack north of Pier P-065.			

Photo No. 18	Date 02/02/12		
Description: SVE pipe rack north of conex.			

Client Name: Shell		Site Location: Shell SVE System	Project No. 21562735.00017
Photo No. 19	Date 12/28/11		
Description: Ground rod installed and connection of grounding cable from the pipe rack to the grounding rod.			

Photo No. 20	Date 12/28/11	
Description: Ground rod installed and grounding cable connected from the pipe rack to the grounding rod.		

Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 21	Date 01/16/12
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Description:
Grounding cable connected to the SVE pipe rack at Pier P-010.

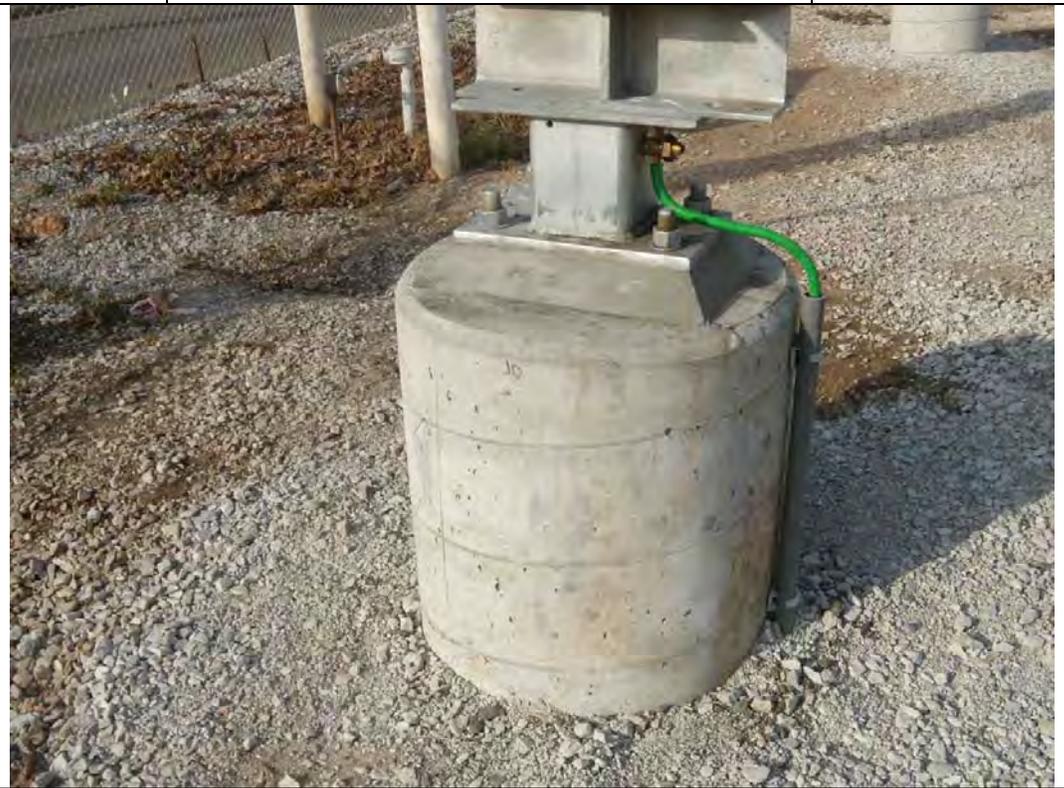


Photo No. 22	Date 02/02/12
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Description:
Hydrostatic pressure test on a weld to install an isolation flange near Pier P-001.



Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 23	Date 12/19/11		
Description: Concrete well pad.			

Photo No. 24	Date 12/22/11	
Description: Well head connection with valve installed.		

Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No.: 25	Date: 01/16/12		
Description: Typical above ground SVE vault and well pad.			

Photo No.: 26	Date: 01/16/12	
Description: Typical above ground SVE vault and well pad.		

Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 27	Date 01/16/12
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Description:
Well head and valve assembly.



Photo No. 28	Date 02/02/12
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Description:
Installation of a pipe support at a SVE well vault location.



Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 29	Date 01/16/12
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Description:
Typical piping run to well vault.



Photo No. 30	Date 01/04/12
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Description:
Precast concrete vault for SVE-5.



Client Name: Shell		Site Location: Shell SVE System	Project No. 21562735.00017
Photo No. 31	Date 11/29/11	 A wide-angle photograph of a construction site under an overcast sky. In the foreground, a worker in a yellow safety vest and white hard hat walks away from the camera. The ground is dirt and gravel. In the middle ground, there's a large area of red earth, possibly an excavation site, with orange safety fencing and several orange traffic cones. In the background, there are utility poles with power lines, a bridge structure, and some industrial buildings.	
Description: Excavation for RTO and conex concrete pad.			

Photo No. 32	Date 12/02/11	 A close-up photograph of a construction site. The foreground is dominated by a dense grid of steel rebar laid out on a concrete slab. Several workers in safety vests and hard hats are visible in the background, some appearing to be working on the rebar. In the far background, there are utility poles, a building with a red roof, and other construction materials.	
Description: Rebar placement for the RTO and conex concrete pad.			

Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 33	Date 12/03/11		
Description: Pouring concrete pad for the RTO and conex.			

Photo No. 34	Date 12/03/11		
Description: Pouring concrete pad for the RTO and conex.			

Client Name:

Shell

Site Location:

Shell SVE System

Project No.

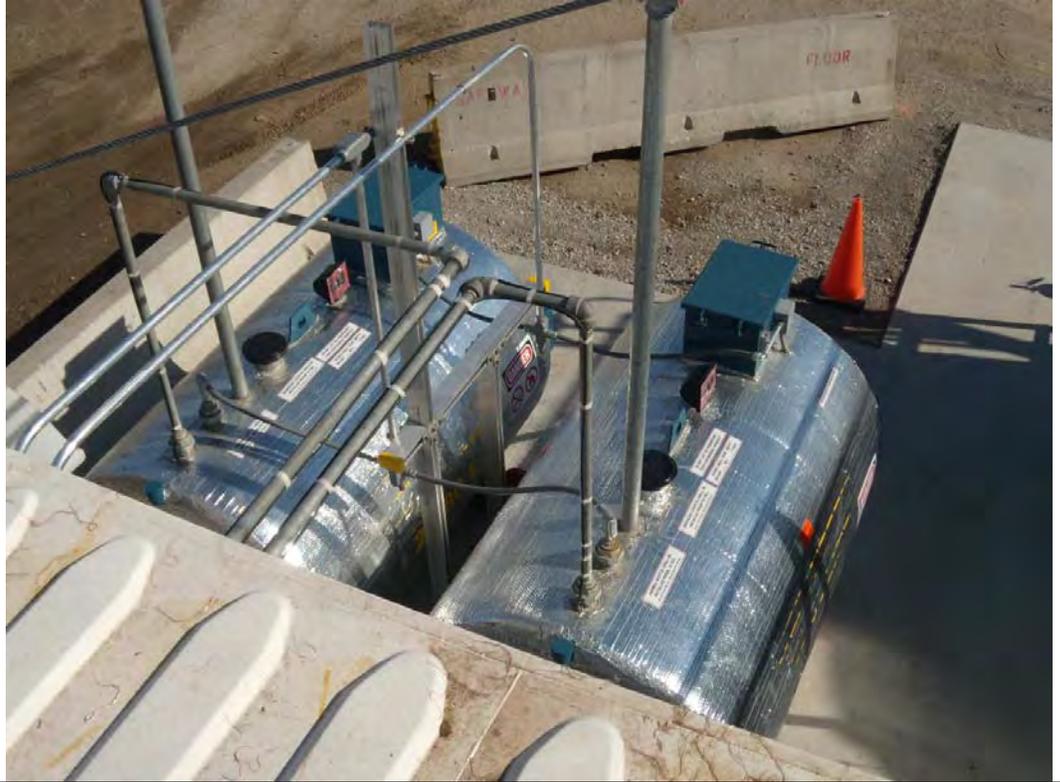
21562735.00017

Photo No.**35****Date**

02/02/12

Description:

Above ground water storage tanks located north of the RTO and adjacent to the conex.

**Photo No.****36****Date**

02/10/12

Description:

Northeast side of the conex.



Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 37	Date 02/02/12		
Description: Vapor lines from along fenceline entering top of conex.			

Photo No. 38	Date 02/02/12	
Description: Vapor line from Public Works leg entering top of conex.		

Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 39	Date 12/16/11		
Description: Vapor lines and valves connected to header.			

Photo No. 40	Date 12/19/11	
Description: Pressure meters located in the conex connected to the vapor lines.		

Client Name: Shell	Site Location: Shell SVE System	Project No. 21562735.00017
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Photo No. 41	Date 12/16/11
Description: Air compressor located in the south side of the conex.	



Photo No. 42	Date 12/16/11
Description: Transfer pump, used to drain the VLS tanks, in the conex.	



Client Name: Shell		Site Location: Shell SVE System	Project No.: 21562735.00017
Photo No. 43	Date 02/10/12	 A photograph of a large industrial blower unit. The unit is primarily grey and is mounted on a dark metal base. A prominent yellow safety cage with a grid pattern is positioned in front of the blower. A blue handwheel is visible on top of the unit. The background shows a grey wall with some pipes and a blue door.	
Description: SVE blower unit located in the north side of the conex.			

Photo No. 44	Date 01/23/12	 A close-up photograph of the pipe connections above the blower unit. The pipes are dark grey and feature various fittings, valves, and a blue handwheel. The scene is illuminated by overhead industrial lights, creating a bright, focused view of the machinery.
Description: Looking at the pipe connections above the blower unit in the north side of the conex.		

Client Name: Shell		Site Location: Shell SVE System	Project No. 21562735.00017
Photo No. 45	Date 12/16/11		
Description: Kill switch located in the conex.			

Photo No. 46	Date 12/16/11	
Description: Control panels located in the south side of the conex.		

Client Name:

Shell

Site Location:

Shell SVE System

Project No.

21562735.00017

Photo No.

47

Date

12/19/11

Description:

North side of the RTO unit.



Photo No.

48

Date

01/26/12

Description:

Looking north at the air baffle between the conex and RTO.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.

21562735.00017

Photo No.

49

Date

12/19/11

Description:

East side of the RTO unit.



Photo No.

50

Date

02/10/12

Description:

Looking at the east side of the RTO unit and the above ground water storage tanks.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.

21562735.00017

Photo No.
51

Date
02/03/12

Description:

Natural gas line and platform on the east side of the RTO unit.



Photo No.
52

Date
02/10/12

Description:

Southwest portion of the RTO unit.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.

21562735.00017

Photo No.

53

Date

02/10/12

Description:

Southwest corner of the RTO unit.



Photo No.

54

Date

02/10/12

Description:

Sample ports on the RTO stack.



Client Name: Shell	Site Location: Shell SVE System	Project No.: 21562735.00017
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Photo No. 55	Date 01/24/12
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Description:
Poppet valve inside the RTO Unit.



Photo No. 56	Date 01/24/12
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Description:
Ceramic media inside the RTO Unit.



Client Name:

Shell

Site Location:

Shell SVE System

Project No.

21562735.00017

Photo No.

57

Date

02/10/12

Description:

Looking to the southwest at the final SVE system setup.



Photo No.

58

Date

02/10/12

Description:

Looking to the south at the final SVE system setup.

