Docket #0044 Date Filed: 9/24/2019

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE

In Re: WELDED CONSTRUCTION, L.P., et al. *et al,* Debtors and Debtor in Possession.	Chapter 11 Case No. 18-12378 (KG) (Jointly Administered)
WELDED CONSTRUCTION, L.P., Plaintiff, **v.** PRIME NDT SERVICES, INC., Defendant.	Adversary Proceeding Adv. Pro. No. 19-50180 (KG)
PRIME NDT SERVICES, INC. Third Party Plaintiff, v. PROJECT CONSULTING SERVICES, INC. Third Party Defendants	

PRIME NDT SERVICES, INC.'S THIRD-PARTY COMPLAINT

COMES NOW, Defendant/Third-Party Plaintiff Prime NDT Services, Inc. ("Prime"), by and through its undersigned counsel, and for its Third Party Complaint against Project Consulting Services, Inc. ("PCS"), states as follows:

PARTIES

1. Debtor/Adversary Proceeding Plaintiff, Welded Construction L.P. and Welded

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Construction Michigan, LLC (collectively "Welded"), are a Delaware Partnership and a Michigan limited liability company, respectively.

2. Prime is a Pennsylvania corporation with its principal place of business located at 4345 Independence Drive, Schnecksville, PA 18078.

3. PCS is a Louisiana Corporation with its principal place of business located at 3300 West Esplenade Avenue South, Suite 500, Metairie, Louisiana 70002.

JURISDICTION

4. This Court has jurisdiction over the claims raised in this adversary proceeding pursuant to 28 U.S.C. §§ 1334 and 157 and the *Amended Standing Order of Reference* dated as of February 29, 2012 from the United States District Court for the District of Delaware.[1]

FACTUAL BACKGROUND

5. Welded contracted with Sunoco Marketing Partners & Terminals L.P. and Sunoco Pipeline L.P. (collectively "Sunoco") to construct the Mariner East 2 Pipeline (the "Project"), a natural gas pipeline. Welded contracted with Prime to perform non-destructive x-ray examination of three spreads within that pipeline.

6. Upon information and belief, Sunoco contracted with Rooney Engineering, Inc. d/b/a Tetra Tech Rooney ("Rooney") to act as project engineering manager. Rooney, in turn, retained PCS to manage Prime's work on the Project and to audit the non-destructive x-ray testing performed by Prime.

7. The workflow on the Project was such that Welded would perform a weld on a portion of the pipeline and Prime would take x-rays of the weld. The x-ray films would then be collected and provided to PCS personnel. PCS would audit Prime's x-ray films and x-rays reports,

[1] Prime does not consent to the jurisdiction of the Bankruptcy Court for the entry of final orders in connection with this adversary proceeding.

ultimately approving Prime's work.

8. Welded's Adversary Proceeding Complaint alleges that there were non-confirming irregularities in the x-ray films associated with Prime's x-ray films. *See* Adversary Complaint, Ex. 1.

9. Particularly, Welded's Adversary Proceeding Complaint alleges, "In or around June 2018, Sunoco discovered that there were non-conforming irregularities in the films associated with over seventy discrete welds." *Id*. at ¶ 22. As a result of these irregularities, Welded alleges that it was forced to perform remedial work at its own expense. *Id*. at ¶¶ 25-30.

10. PCS, in its role as project manager and auditor, reviewed x-rays taken by Prime on a daily basis. As such, PCS would have reviewed and approved the films that Welded alleges to be non-conforming.

11. PCS' presence and role on the Project caused Prime to alter its staffing on the Project.

12. If Welded suffered damages as alleged, PCS' failure to perform its auditing work in a workmanlike manner caused or contributed to Welded's damages, such that PCS' improper approval of allegedly irregular x-ray films and/or delay in detecting any irregularities caused Welded to incur additional expenses if PCS had not improperly approved irregular films and/or had detected any such irregularities in a reasonably diligent manner.

COUNT I
BREACH OF CONTRACT

13. Prime incorporates by reference the preceding paragraphs 1 – 12 as though fully set forth herein at length.

14. Upon information and belief, in its contract with Rooney, PCS warranted that it would perform its non-destructive x-ray examination auditing services in a workmanlike manner.

15. Upon information and belief, in its contract with Rooney, PCS warranted that it would perform its project management services in a workmanlike manner.

16. Upon information and belief, Prime and Welded were intended third-party beneficiaries of PCS' contract with Rooney.

17. If the allegations in Welded's Complaint are proven true, PCS will have breached its contract with Rooney in the following particulars:

a. Approving non-conforming x-ray films;

b. Failing to detect irregularities in x-ray films in a reasonable amount of time; and

c. Failing to perform its auditing and management of Prime's non-destructive x-ray testing in a workmanlike and efficient manner.

18. If Welded suffered damages as alleged, it was PCS' breach of its contract with Rooney that caused or contributed to those damages.

19. If Prime is determined to be liable to Welded, then PCS will be liable to Prime because Prime was an anticipated third-party beneficiary of PCS' contract, and Prime relied on PCS' representations that it would perform its auditing services in a workmanlike manner.

COUNT II
CONTRIBUTION AND INDEMNIFICATION

20. Prime incorporates by reference the preceding paragraphs 1 – 19.

21. PCS owed a duty of care in performing its auditing of non-destructive x-ray films and to properly advise Prime and Welded of any irregularities in x-ray films.

22. If Welded's allegations as set forth in its Complaint are established to be true, the same being denied, then PCS acted negligently and/or breached a legal duty owed in performing its work in a good and workmanlike manner, free from all defects in materials and/or

workmanship, and this conduct proximately caused and/or contributed to Welded's claimed damages.

23. In the event that it is established at trial that Prime is liable to Welded for the events described in Welded's Complaint and any resultant damages, the same being denied, then PCS is solely liable to Welded, jointly and severally liable to Welded, and/or liable over to Prime for contribution, indemnification, and reimbursement because Welded's damages, as set forth in Welded's Complaint, resulted directly and proximately from the negligence, carelessness and acts and/or omissions of PCS in failing to perform its auditing in a workmanlike manner.

WHEREFORE, Defendant/Third Party Plaintiff Prime NDT Services, Inc. demands that this Court enter judgment in its favor with respect to the claims asserted by Welded or, in the alternative, to the extent judgment be entered in Welded's favor and against Prime NDT Services, Inc., that judgment be entered against Project Consulting Services, Inc. on the grounds that it is liable for contribution and/or indemnification to Prime NDT Services, Inc.

Respectfully submitted,

GORDON REES SCULLY MANSUKHANI LLP

/s/ Michael C. Heyden, Jr.
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Attorneys for Defendant Prime NDT Services, Inc.

Dated: August 28, 2019

EXHIBIT 1

IN THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE

In re:	)	Chapter 11
WELDED CONSTRUCTION, L.P., *et al.*,[1] Debtors and Debtors In Possession.	)	Case No. 18-12378 (KG)
	)	(Jointly Administered)
WELDED CONSTRUCTION, L.P., Plaintiff, vs. PRIME NDT SERVICES, INC., Defendant.	)	Adversary Proceeding No. 18-_____ (KG)

COMPLAINT

The above-captioned plaintiffs (collectively, the "Plaintiffs," "Debtors" or "Welded"), by and through their undersigned attorneys, state and allege as follows:

I. SUMMARY OF THE ACTION

This action arises from a breach of a subcontract (the "Subcontract") between Welded and Prime NDT Services, Inc. ("Prime") related to the construction of the Mariner East 2 Pipeline (the "Project"). Mariner East 2 is a pipeline project owned by Sunoco Marketing Partners & Terminals L.P. and Sunoco Pipeline L.P. (collectively "Sunoco") designed to build

[1] The Debtors in these chapter 11 cases, along with the last four digits of each Debtor's federal tax identification number, are: Welded Construction, L.P. (5008) and Welded Construction Michigan, LLC (9830). The mailing address for each of the Debtors is 26933 Eckel Road, Perrysburg, OH 43551.

new pipeline capacity from Ohio through West Virginia and Pennsylvania to transport natural gas liquids ("NGLs") to Sunoco's Marcus Hook Industrial Complex. Pursuant to various contractual agreements, Welded was responsible for constructing three separate pipeline "spreads" within the Project, totaling approximately 152.6 miles of high pressure liquefied natural gas pipeline.

Pursuant to the Subcontract, Prime was to perform 100% of the non-destructive examination ("NDE") x-ray inspection of the welds on the "P1" and "P5" spreads of the pipeline. When Prime's work on P1 was reviewed by Sunoco's QA/QC contractor, it discovered that in excess of seventy NDE x-ray results contained irregularities and were rejected by Sunoco. This lawsuit seeks to recover Welded's direct costs to remediate these irregularities as well as acceleration cost impacts to recover schedule lost by the necessity to perform this re-work.

II. JURISDICTION AND VENUE

1. On October 22, 2018 (the "Petition Date"), the Debtors filed voluntary petitions for relief under chapter 11 of the Bankruptcy Code (collectively, the "Chapter 11 Cases") in the United States Bankruptcy Court for the District of Delaware (the "Bankruptcy Court"). The Debtors are continuing to operate their businesses and manage their properties as debtors in possession pursuant to sections 1107(a) and 1108 of the Bankruptcy Code.

2. This Court has jurisdiction over the claims raised in this adversary proceeding pursuant to 28 U.S.C. §§ 1334 and 157 and the *Amended Standing Order of Reference* dated as of February 29, 2012 from the United States District Court for the District of Delaware.

3. The Debtors consent to the entry of a final order by the Court in connection with this Complaint to the extent that it is later determined that the Court, absent consent of the

parties, cannot enter final orders or judgments in connection herewith consistent with Article III of the United States Constitution.

4. Venue is proper before this Court pursuant to 28 U.S.C. §§ 1408 and 1409.

5. This is an adversary proceeding brought pursuant to Rule 7001 of the Bankruptcy Rules.

III. PARTIES

6. Plaintiff Welded Construction Michigan, LLC ("Welded MI") is a Michigan limited liability company wholly owned by Plaintiff Welded Construction, L.P. ("Welded Construction")

7. Plaintiff Welded Construction, L.P. is a Delaware limited partnership. Plaintiff Welded Construction has two general partners and two limited partners. The general partners are Ohio Welded Company LLC (owner of 15 partnership units) and McCaig Welded GP, LLC (owner of 5 partnership units). The limited partners are Bechtell Oil, Gas and Chemicals, Inc. (735 partnership units) and McCaig US Holdings, Inc. (245 partnership units). The entity is overseen by a five-member board of managers, and governed in accordance with the *Second Amended and Restated Limited Partnership Agreement of Welded Construction, L.P.* dated December 1, 2015.

8. The headquarters of all Plaintiffs is located at 26933 Eckel Road, Perrysberg, OH 43551.

9. On information and belief, Defendant Prime is a Pennsylvania Corporation with its headquarters located at 4345 Independence Drive, Schnecksville, PA 18078.

IV. FACTUAL BACKGROUND

10. Pursuant to the Subcontract, Prime was to perform NDE weld inspections on spreads P1 and P5 of the Project. A true and correct copy of the Subcontract is attached hereto as **Exhibit 1** and is incorporated herein by reference.

11. The Subcontract was effective on January 6, 2016.

12. Prime warranted that its workmanship and materials would be of proper quality, would be performed in accordance with the generally accepted practices of the industry, would meet the requirements of Sunoco's specification, and would be in full compliance with the requirements of the contract documents. Subcontract, Ex. G, Art. 16.0.

13. Prime also represented that it would perform the work with due diligence and in a safe, workmanlike, and competent manner in accordance with sound construction practices and standards and Sunoco approved practices and standards. Subcontract, Ex. G, Art. 20.0(1).

14. The Subcontract provided that Prime would hold Welded harmless from all damages, losses, costs and expenses resulting from its incorrect, defective, or otherwise erroneous work. Subcontract, Ex. G, Art. 16.0.

15. Prime was retained by Welded to perform NDE x-rays of the completed welds on the pipeline to determine whether the welds connecting each length of pipe were of an acceptable quality and free from imperfections which would render the weld non-conforming.

16. After Welded performed a weld on a piece of pipe, Prime would perform a 360 degree x-ray of the weld by exposing three films per weld.

17. Prime would then read the films and report to Welded whether the weld was conforming or needed repair.

18. If the weld was conforming, Welded would backfill the trench and continue constructing the pipeline.

19. Prime was required to perform QA/QC work on its x-ray films analysis to ensure that it was performing work in compliance with the contractual requirements.

20. Welded was not required to read or analyze the films itself to determine whether Prime's work complied with contractual requirements.

21. Rather, Welded provided the films to Sunoco which would then provide the films to a third-party company which would perform additional QA/QC on the films.

22. In or around June 2018, Sunoco discovered that there were non-conforming irregularities in the films associated with over seventy discrete welds.

23. After Sunoco discovered Prime's defective x-ray films, Sunoco called a meeting attended by representatives of Sunoco, Welded, and Prime to discuss the findings.

24. Neither at the meeting, nor, on information and belief, at any other time, did Prime dispute (to Sunoco or Welded) the findings that its work was defective and non-conforming.

25. As a result, Sunoco directed Welded to excavate each of the affected welds to investigate the irregularities in more detail.

26. To perform the investigation, Welded was required to excavate each weld, perform a second round of x-ray testing, backfill, and restore the affected land.

27. Welded performed this remedial work which was necessitated by Prime's defective work at great expense in money and time.

28. The required remedial work took Welded approximately thirty days to perform, essentially halting Welded's progress on the P1 spread, greatly impairing Welded's ability to complete the Project on schedule.

29. In fact, Welded accelerated its work by adding an additional crew of workers from the week of August 19 through the week of October 21, 2018 to attempt to recover the production schedule lost during the period Welded was performing the remedial work required by reason of Prime's defective work.

30. Although the re-investigation of the welds revealed each to be compliant with applicable quality standards, Welded incurred costs in labor and equipment to remediate Prime's breach and acceleration costs in an attempt to recover schedule.

31. Subsequently, Sunoco terminated Welded from the Project for cause and Prime's defective and non-conforming work was cited by Sunoco as a substantial factor in this decision.

32. In turn, Sunoco's decision to terminate Welded for cause was a substantial factor in Welded's decision to file the instant Chapter 11 proceeding.

V. CLAIMS

FIRST CLAIM – BREACH OF CONTRACT

33. Welded incorporates herein by reference so much of the other portions of this Complaint as is not inconsistent with this breach of warranty claim and in addition alleges:

34. The Subcontract constitutes a binding and enforceable contract between Welded and Prime.

35. Prime breached the Subcontract by providing Welded with defective and non-conforming x-ray films for over seventy discrete welds.

36. Prime also breached the Subcontract by failing to perform adequate QA/QC of its own work.

37. On information and belief, Prime's breaches of the contract constituted a grossly negligent performance or willful misconduct.

38. As a direct and proximate result of Prime's breaches of the Subcontract, Welded was required to remediate the defective work at great expense in cost and time.

39. Welded made due demand the amounts owing and Prime has failed to pay.

40. By reason of the foregoing, Welded has been damaged in an amount in excess of five million dollars.

SECOND CLAIM – BREACH OF WARRANTY

41. Welded incorporates herein by reference so much of the other portions of this Complaint as is not inconsistent with this breach of contract claim and in addition alleges:

42. The Subcontract constitutes a binding and enforceable contract between Welded and Prime.

43. Prime breached the Subcontract by providing Welded with defective and non-conforming x-ray films for over seventy discrete welds.

44. Prime also breached the Subcontract by failing to perform adequate QA/QC of its own work.

45. On information and belief, Prime's breaches of the contract constituted grossly negligent performance or willful misconduct.

46. By providing Welded with defective and non-conforming x-ray films for over seventy discrete welds, Prime breached warranties, both express and implied that it would perform its work in a good and workmanlike manner consistent with standards in the industry.

47. As a direct and proximate result of Prime's breached warranties, Welded was required to remediate the defective work at great expense in cost and time.

48. Welded made due demand the amounts owing and Prime has failed to pay.

49. By reason of the foregoing, Welded has been damaged in an amount in excess of five million dollars.

VI. RELIEF REQUESTED

WHEREFORE, Plaintiffs respectfully requests the following relief:

A. Awarding Welded damages in an amount to be determined at trial, but in no event less than five million dollars;

B. Any and all such other and further relief which this Court deems just and equitable.

Dated: March 27, 2019
Wilmington, Delaware

YOUNG CONAWAY STARGATT & TAYLOR, LLP

/s/ Erin D. Edwards
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Attorneys for Debtors and Debtors-In-Possession

EXHIBIT 1

CONSTRUCTION SUBCONTRACT

Subcontractor: Prime NDT Services, Inc.

Address: 4345 Independence Drive
Schnecksville, PA 18078

Contact: Scott Elliott

Telephone:330-209-5600

email: pndtscott@live.com

Subcontract No.: 2016-SL_ME2-02

Work Location: Harrison County, OH to Washington County, PA (OPP1); Washington County PA to Westmorland County, PA (PPP1); and Dauphin/Lebanon Counties to Berks/Chester Counties, PA (PPP5)

Yard Address: TBD

This subcontract is effective as of the 6th day of January 2016, between Welded Construction, L.P., a Delaware Limited Partnership (CONTRACTOR) and the above named SUBCONTRACTOR who hereby agree that all Work specified below shall be performed by the SUBCONTRACTOR understanding that CONTRACTOR is committed to safety, health and the protection of the environment as core values reflected in all aspects of its operations. In the event of any conflict between the terms and conditions of this Agreement, the Description of Services, the request for proposal and the Subcontractor Proposal, the terms of this Agreement shall govern. SUBCONTRACTOR shall perform all activities in accordance with these principles and all provisions of this subcontract, consisting of the following Subcontract Documents:

Subcontract Form of Agreement

Exhibit "A" – Labor and Equipment Rates
Exhibit "B" – Change Orders
Exhibit "C" - Insurance
Exhibit "D" – Additional Insured
Exhibit "E" – Baseline Schedule
Exhibit "F" – Subcontractor Proposal
Exhibit "G" – General Terms & Conditions
Exhibit "H" – Safety Requirements
Exhibit "I" – Client Safety (Client Attachment F)
Exhibit "J" – Client Construction Specifications
Exhibit "K" – Owner Welding Manual
Exhibit "L" – Subcontractor Safety

A. WORK TO BE PERFORMED (Work): Except as specified elsewhere in the subcontract, SUBCONTRACTOR shall furnish all project; union labor; materials; tools; supplies; equipment; transportation (other than stipulated in this article); supervision; technical, professional and other services; and shall perform all operations necessary and required to satisfactorily perform the following:

- Subcontractor will provide all labor, equipment and material for 100% NDE inspection of welds in accordance with API Standard 1104, latest edition and approved by DOT Part 195.
- Subcontractor is responsible for storage of all records. Records are to be turned over

to Contractor at the end of the project.

- Subcontractor shall maintain a record of each weld in the form of a weld log which is to be submitted to Welded weekly or as often as determined by the Spread Project Manager.
- Subcontractor will complete a daily report to be submitted to Welded Project Manager by noon of the next business day for the previous business day's work.
- Subcontractor shall submit all employee licenses and qualifications prior to the start of the Work.
- Subcontractor shall provide a written project specific procedure prior to the start of any work.
- Subcontractor will comply with all client specifications, standards, safety and environmental project requirements that pertain to NDE activities as set forth herein by form of exhibits.

The Work is a portion of the goods and services to be provided by CONTRACTOR to Sunoco Pipeline (OWNER) for the Mariner East 2 – OPP Spread 1, PPP Spread 1, and PPP Spread 5 Projects in Ohio and Pennsylvania.

B. SCHEDULE: The Work shall be performed in accordance with the dates set forth in the Exhibit "E".

In accordance with Exhibit E – Subcontractor will operate ten (10) hours per day six (6) days a week.

Any hours worked over 10 hours per day or 60 hours per week must be pre-approved in writing by the Spread Project Manager prior to the performance of the overtime work.

C. COMPENSATION: As full consideration for the satisfactory performance by SUBCONTRACTOR of this subcontract, CONTRACTOR shall pay to SUBCONTRACTOR compensation in accordance with the prices set forth in Exhibit "A" and with the payment provisions of this subcontract.

Compensation is in accordance with Exhibit A

- **Exhibit F – Subcontractor Proposal is attached for reference**

This subcontract embodies the entire agreement between CONTRACTOR and SUBCONTRACTOR and supersedes all other writings. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding not set forth herein.

CONTRACTOR:	**SUBCONTRACTOR:**
Welded Construction, L.P.	**Prime NDT Services, Inc.**
Authorized Signature: Walsh	Authorized Signature: [signature]
Print Name: William Welsh	Print Name: Don Shumway Jr.
Print Title: Project manager	Print Title: PRESIDENT
	23-2865040
	(Federal Tax Payer I.D. Number)

EXHIBIT A

LABOR & EQUIPMENT RATES FOR EXTRA WORK

As it Pertains to Project	Sunoco Logistics ME2-OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

2016 NDT Day Rate Schedule – Construction / Pipeline

Two / Three Person Crew Unit Cost	
	Price
Two (2) Person Crew, ten (10) hour daily rate (Mon:Sat)	$2000.00
Two (2) Person Crew per hour rate for all hours in excess of 10 hrs. to nearest ½ hr. (Mon:Sat)	$205.00
Two (2) Person Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$2600.00
Two (2) Person Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$ 250.00
Two (2) Person Crew, four (4) hour daily rate (Standby Crew and Equip.)	$ 1020.00
Three (3) Person Crew, ten (10) hour daily rate (Mon:Sat)	$2850.00
Three (3) Person Crew, per hour rate, for all hours in excess of 10 hrs. to nearest ½ hr. (Mon: Sat)	$272.50
Three (3) Person Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$3550.00
Three (3) Person Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$325.00
Three (3) Person Crew, four (4) hour daily rate (Standby Crew and Equip.)	$1400.00
Level III / CWI / UT Flaw Technician, ten (10) hour daily rate (Mon:Sat)	$1950.00
Level III / CWI / UT Flaw Technician, per hour rate, for all hours in excess of 10 hrs. to nearest ½ hr. (Mon:Sat)	$150.00
Level III / CWI / UT Flaw Technician, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$1850.00
Level III / CWI / UT Flaw Technician, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$150.00
Mileage per day in excess of 100 miles	$1.00 / mile

Day Rates for Certified Technicians, Assistants, and Equipment to do Radiographic, Magnetic Particle, Liquid Penetrant and Ultrasonic Thickness Inspections at your jobsite or facility. The RT (Crawler), MT, PT and UTT equipment, 100 travel miles per day, And Per Diem for work days are included in the Day Rates.

Consumable Charges by Weld Size for 70mm Film, CR plate charge or MT, PT, UTT

SIZE	PRICE		SIZE	PRICE
2"--6"	$6.50		18"--20"	$6.00
8"	$8.50		22"--24"	$13.00
10"	$9.00		26"--30"	$14.50
12"	$9.50		32"--36"	$17.00
14"--16"	$6.00		38"--48"	$20.25

Cut Film Charges – Contact us if Pre---Cut film is required

EXHIBIT A

LABOR & EQUIPMENT RATES FOR EXTRA WORK

As it Pertains to Project	Sunoco Logistics ME2-OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

ADDITIONAL EQUIPMENT CHARGES IF APPLICABLE

Internal X---Ray Crawler	By Quote	Hardness Tester	$50 / Day
Tensile Machine	$250 / Day	Additional Truck / UTV	$50 / Day
Positive Material Identification (PMI)	By Quote	Air Quality Monitor	$25 / Day
Ground Penetrating Radar (GPR)	By Quote	Bulk PT / MT / UT Material	By Quote
Ferrite Testing	By Quote	MT Powder	$25 / lb.
Film Digitizing / Duplicating	By Quote	Aerosol Can--- PT, MT Material	$30 / can

Standby Rates--- 4 hour charge + Per Diem if a crew is released due to inclement weather, etc.

Travel Time --- One hour will be charged for every 50 miles traveled.

Excess Mileage (over 100/day) -- $1.00/mile --- This includes all miles to and from jobsites.

Per Diem--- $160/day will be charged for each person on days where the day rate is not charged.

Cancellations--- Must be made by 4pm the previous day to avoid being charged for a full day.

Minimum Charges--- PROJECTS--- All work will carry a minimum of 40 hours / week + Per Diem.

Shop Work--- Whitehall, PA $115 / Hour --- 1 Hour minimum charge

Additional requested equipment not listed will be charged at cost + 10%.

EXHIBIT A

LABOR & EQUIPMENT RATES FOR EXTRA WORK

As it Pertains to Project	Sunoco Logistics ME2-OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

2016 NDT Day Rate Schedule – Internal Crawler

Four Person Crew Unit Cost	
	Price
Crawler Crew, ten (10) hour daily rate (Mon6Sat)	$3200.00
Crawler Crew per hour rate for all hours in excess of 10 hrs. to nearest ½ hr. (Mon6Sat)	$355.00
Crawler Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$5170.00
Crawler Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$425.00
Crawler Crew, four (4) hour daily rate (Standby Crew and Equip.)	$1825.00
Mileage per day in excess of 100 miles	$1.00 / Mile
Additional Truck / UTV	$50.00 / Day

Day Rates for Certified Technicians, Assistants, and Equipment to do Radiographic, Magnetic Particle, Liquid Penetrant and Ultrasonic Thickness Inspections at your jobsite or facility. The RT (Crawler),MT,PT and UTT equipment, 100 travel miles per day, And Per Diem for work days are included in the Day Rates.

Consumable Charges by Weld Size for 70mm Film, CR plate charge or MT, PT, UTT

SIZE	PRICE		SIZE	PRICE
2"--6"	$6.50		18"--20"	$6.00
8"	$8.50		22"--24"	$13.00
10"	$9.00		26"--30"	$14.50
12"	$9.50		32"--36"	$17.00
14"--16"	$6.00		38"--48"	$20.25

Standby Rates--- 4 hour charge + Per Diem if a crew is released due to inclement weather, etc.

Per Diem--- $160/day will be charged for each person on days where the day rate is not charged.

Cancellations--- Must be made by 4pm the previous day to avoid being charged for a full day.

Minimum Charges--- PROJECTS--- All work will carry a minimum of 40 hours / week + Per Diem.

Additional requested equipment not listed will be charged at cost + 10%.

EXHIBIT B

ADMINISTRATIVE FORMS

As it Pertains to Project	Sunoco Logistics ME2-OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

The following are incorporated into this Exhibit and must be utilized for this Subcontract:

B-1 Contractor Change Directive
B-2 Subcontractor Request for Change
B-3 Progress Payment Release
B-4 Release and Certificate of Final Payment
B-5 RFI Form

Exhibit B-1: Contractor Change Directive

SUBCONTRACT NO. _____ CHANGE DIRECTIVE NO. _____

CORRESPONDENCE NO._____ Additional Pages attached to this request: _____
Total No. of Pages _____

COMMITMENT SECTION

PROJECT LOCATION	DATE	CONTRACTOR WORK ORDER NO.
SUBCONTRACTOR	ADDRESS	

Reference to Contract Sections associated with this Change Directive:

Reference to Drawings associated with or impacted by this Change Directive (as required):

Detailed Description of the Change:

Project Scope of Work:	☐ Unchanged	☐ Reduced	☐ Increased
Request Cost based on:	☐ Lump Sum	☐ Unit Cost	☐ Time and Material

To be completed by the Subcontractor:

Total Value of Change	$
Total Impact to Schedule	Calendar Days (Enter # of Days)

NOTE: **By executing this Change Order Directive, Subcontractor acknowledges that all cost and schedule impacts have been expressly identified. No further adjustments for this Work shall be made.**

Revised Date of Completion:	

To be completed by Welded:

Revised Contract Value:

When signed by the Subcontractor and Contractor, this document becomes effective immediately as a Construction Change Directive (CCD), and the Subcontractor shall proceed in accordance with the change described above.
If the Subcontractor plans to seek an adjustment as a result of this Construction Change Directive, the Subcontractor must submit a proposed adjustment to the Contractor within five (5) Business Days of the receipt of this document.
Work may not proceed until all cost and schedule impacts associated with the change order have been submitted for Welded's review and approval.
Signed authorization by a Welded representative is required to commence Work associated with this Change Directive.
Subcontractor acknowledges that Contractor, by authorizing this Change Directive, does not waive or modify any contractual rights or responsibilities unless such waiver or modification is expressly set forth in this Change Order.

Approvals:

Sub-Contractor Representative: _____

AUTHORIZED REPRESENTATIVE SIGNATURE DATE

Contractor Representative: _____

AUTHORIZED REPRESENTATIVE SIGNATURE DATE

Remarks: _____

Revision Date – 12/12/13

Exhibit B-2: Subcontractor Requested Change

SUBCONTRACT NO. _____ SUBCONTRACTOR REQUESTED CHANGE NO. _____

CORRESPONDENCE NO._____ Additional Pages attached to this request: _____
Total No. of Pages _____

COMMITMENT SECTION

PROJECT LOCATION	DATE	COMPANY WORK ORDER NO.
CONTRACTOR	ADDRESS	

Contractor is hereby notified that the following circumstances have arisen that Sub-Contractor believes entitles it to request a change:

Reference to Contract Sections associated with this requested change:

Reference to Drawings associated with or impacted by this requested change (as required):

Detailed Description of the Change:

Project Scope of Work:	☐ Unchanged	☐ Reduced	☐ Increased
Cost Proposal Basis:	☐ Lump Sum	☐ Unit Cost	☐ Time and Material

Estimated Value of Change	$
Estimated Impact to Schedule	Calendar Days (Enter # of Days)

NOTE: By executing this Change Order Request, Subcontractor acknowledges that all cost and schedule impacts have been expressly identified. No further adjustments for this Work shall be made.

Sub-Contractor's Representative:

AUTHORIZED REPRESENTATIVE DATE

Remarks:

Welded Approval: **Date:**

The Subcontractor is responsible to complete this form in its entirety and provide associated backup as noted above in this request and / or provide additional backup required to substantiate the change order request.
All T&M/Unit Cost changes will require timesheets for Welded Project Manager (or designee) approval.
Signed authorization by a Welded representative is required to commence Work noted in this Change Request.
Subcontractor acknowledges that Contractor, by authorizing this change request, does not waive or modify any contractual rights or responsibilities unless such waiver or modification is expressly set forth in this change request.

Revision Date: 12/12/2013

PROGRESS PAYMENT RELEASE (B-3)

Subcontractor: _____ JOB NO.: _____

With reference to Subcontract No. _____ dated _____

_____
[NAME OF CONTRACTOR]

and _____
[OWNER]

for _____
[TYPE OF WORK]

at _____
[LOCATION OF OWNER'S PREMISES]

Upon actual receipt by Subcontractor of payment from Contractor in the sum of _____Dollars ($___) to Subcontractor, which sum represents the full amount due Subcontractor as of Release Date, less and except that retention in the amount of _____Dollars ($_____) to be withheld by Contractor all under and pursuant to the Contract, this document shall become effective to release any mechanic's lien or stop notices that Subcontractor has on the Project as of the Release Date. Contractor does hereby:

1. Certify to Contractor and Owner that all persons, firms, associations, corporations, or other entities furnishing labor, materials, equipment, supplies or services to Subcontractor, Contractor, or Owner with respect to the Contract have been paid in full as of Release Date, including any and all applicable federal, state and local sales, use, excise or similar taxes or import duties, licenses and royalties, except the following (none, unless noted):

2. Release and waive any and all manner of liens, whatsoever which Subcontractor, its successors or assigns may have upon any portion of the property of Owner, or any personal or intangible property of Owner, for labor, material, equipment or services furnished under the Contract, as of Release Date, and

3. Further remise, release and forever discharge Contractor and/or Owner, their affiliates, successors and assigns of and from any and all manner of liens, claims, demands, and causes of action whatsoever against Contractor and/or Owner which Subcontractor, its successors or assigns may have for, upon or by reason of any matter, cause or thing whatsoever arising under or out of the Contract, as of Release Date, except the following (none, unless noted):

4. Agree to indemnify and hold harmless Contractor and/or Owner, their successors or assigns, against all loss, cost, damage or expense (including, but not limited to attorneys' fees) by reason of any and all manner of liens, claims or demands which anyone may have for labor performed, or for materials, equipment or services furnished under the Contract, as of Release Date, except the following (none, unless noted).

As additional consideration for this payment, the Subcontractor agrees to the fullest extent of the law to, indemnify and hold harmless the said Owner and Welded from and against all costs, losses, damages, claims, causes of action, judgments and expenses, including attorney's fees, arising out of or in connection with claims against the said Owner or Welded which claims arise out of the performance of the work under the Contract and which may be asserted by the Subcontractor or any of its suppliers, Subcontractors of any tier or any of their representatives, officers, agents or employees except for those claims listed above, and except for claims arising out of the sole negligence or willful misconduct of the party indemnified or held harmless.

The foregoing shall not relieve the Undersigned of its obligations under the provisions of said Contract, as amended, which by their nature survive completion of the Work including, without limitation, warranties, guarantees and indemnities.

Executed this _____ day of _____

_____
[NAME OF SUBCONTRACTOR]

SIGNED	TITLE

RELEASE AND CERTIFICATE OF FINAL PAYMENT (B-4)

Welded Construction, L.P. JOB NO.: _____

With reference to Contract No. _____ dated _____
as amended, between the undersigned Subcontractor,

[NAME OF SUBCONTRACTOR]

and _____
[OWNER]

for _____
[TYPE OF WORK]

at _____
[LOCATION OF OWNER'S PREMISES]

the Undersigned hereby certifies and represents that it has made full payment of all costs, charges and expenses incurred by it or on its behalf for work, labor, services, materials and equipment supplied to the foregoing premises and/or used in connection with the Work under said Contract.

The Undersigned further certifies that to its best knowledge and belief, each of its contractors and materialmen has made full payment of all costs, charges and expenses incurred by them or on their behalf for work, labor, services, materials and equipment supplied to the foregoing premises and/or used by them in connection with the Undersigned's work under said Contract and has obtained releases to that effect.

In consideration of $ _____ as final payment under the Contract, the Undersigned hereby unconditionally releases and forever discharges the Owner and Contractor Welded Construction, L.P. and the Owner's premises and property from all claims, liens and obligations of every nature arising out of or in connection with the performance of the said Contract and all amendments thereto except as set forth below:

(Note: If none, write "None". in space above. Any claims excepted must be described and the specific amount claimed must be set forth.)

As additional consideration for this payment, the Subcontractor agrees to the fullest extent of the law to, indemnify and hold harmless the said Owner and Welded from and against all costs, losses, damages, claims, causes of action, judgments and expenses, including attorney's fees, arising out of or in connection with claims against the said Owner or Welded which claims arise out of the performance of the work under the Contract and which may be asserted by the Subcontractor or any of its suppliers, Subcontractors of any tier or any of their representatives, officers, agents or employees except for those claims listed above, and except for claims arising out of the sole negligence or willful misconduct of the party indemnified or held harmless.

The foregoing shall not relieve the Undersigned of its obligations under the provisions of said Contract, as amended, which by their nature survive completion of the Work including, without limitation, warranties, guarantees and indemnities.

Executed this _____ day of _____

_____
[NAME OF SUBCONTRACTOR]

SIGNED	TITLE

REQUEST FOR INFORMATION (B-5)

Project #:

TO:				SUBCONTRACTOR:				
Project Name:						RFI #:		
Referenced Documents:								
Work Activities:	CIVIL	STRUCT	MECH	ELECT	INSTRU	OTHER	Asbes Abate	
Information Requested:								

ORIGIN:		DATE:		APPRVD:		DATE:	
PLEASE REPLY BY:							
RESPONSE:							

RESPONDER:		DATE:		CO REP:		DATE:	
Distribution							

EXHIBIT C

EXHIBIT TO SUBCONTRACT

As it Pertains to Project	Sunoco Logistics ME2 – OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Worker's Compensation
Statutory

Employer's Liability per:

Accident	Disease (Policy Limit)	Disease (Each)
$2,000,000	$2,000,000	$2,000,000

Coverage should include USL&H if warranted by type of work.

Commercial General Liability (ISO Form CG 0001 10 01)

Including products/completed operations, independent contractor's protective, owner's and contractor's protective liability, broad form contractual liability insuring the subcontract contained herein, per project aggregates, and broad form property damage, with the exclusion pertaining to explosion, collapse and underground property damage eliminated for all the above coverage's.

Minimum Limits	Combined Single Limit
Bodily Injury and Property Damage	$5,000,000 Each Occurrence $5,000,000 Aggregate
Products/Completed Operations	$2,000,000 Aggregate
Personal Injury	$1,000,000
Stop Gap Liability for Monopolistic States* (ND, OH, WA & WY)	$1,000,000 Limit

Business Automobile Liability

Including owned, hired and non-owned automobiles.

Bodily Injury and Property Damage	$5,000,000 Each Occurrence

Umbrella/ Excess Liability

Bodily Injury and Property Damage	$5,000,000 Each Occurrence $5,000,000 Aggregate

***Use of Umbrella/Excess Liability Coverage is permitted to meet limits**

Pollution Liability (for work that involves handling, transporting, disposing or performing work or operations with Hazardous materials or other contaminants, waste or toxic material)

Bodily Injury and Property Damage	$5,000,000 Each Occurrence

Professional Liability Insurance**

Minimum Limit of Liability	$2,000,000 Aggregate

**This coverage is required only when architectural or engineering services are provided as part of the Work.

EXHIBIT TO SUBCONTRACT

As it Pertains to Project	Sunoco Logistics ME2 – OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

INSURANCE REQUIREMENTS

- **The CONTRACTOR and Owner are to be named Additional Insureds on all of the above General and Umbrella/Excess Liability coverages, except Professional Liability, Worker's Compensation, and Employer's Liability Insurance and so described on the Certificate(s) of Insurance. Additional insured endorsement MUST be attached to the Certificate of Insurance and must be ISO forms: CG 2010 (1185) or CG 2010 (0704) in combination with CG 2037 (0704) or the equivalent, which covers on-going and completed operations.**

- Prior to the start of any WORK, SUBCONTRACTOR will furnish original Certificate(s) of Insurance to CONTRACTOR evidencing that all insurance coverage required is in force and that it will not be canceled, non-renewed or materially change with less than thirty (30) days prior written notice thereof mailed by Certified Mail to CONTRACTOR and Owner. Replacement Certificates of Insurance, evidencing replacement or renewed coverage, will be delivered to CONTRACTOR and all Additional and Named Insureds on or before the expiration date of any Policies.

- The SUBCONTRACTOR shall not have any exclusion under their General Liability or Umbrella/Excess policies for work performed on Residential Type Projects such as: Apartments, Dormitories, Military Housing, Assisted Living Facilities, Nursing Homes, Hospitals or any facilities capable of providing in-house patient stay. Evidence of this type of coverage must be displayed on the Certificate of Insurance AND through evidence of Endorsement or as displayed and denoted in the policy coverage form, a copy of which must be supplied with the certificate of insurance. Any Exclusion pertaining to this type of work on these policies is UNACCEPTABLE. Further, any exclusion of this type must be declared and a copy submitted with the requested insurance certificate.

- Subcontractor waives and shall cause its insurance provider to waiver all rights of subrogation against Contractor, Owner, their agents, officers, directors, and employees for recovery of damages howsoever caused. Whenever Subcontractor shall have Contractor's property in its possession for Subcontractor's fabrication of otherwise as herein required, Subcontractor shall be deemed the insurer thereof and shall be responsible for such property until its return to and acceptance by Contractor.

- All third parties shall maintain the same types and amounts of insurance and be subject to the same requirements as SUBCONTRACTOR.

- All policies shall provide primary coverage and not calling upon any other insurance procured by other parties for defense, payment or contribution. This shall be so described on the Certificate of Insurance(s).

- Policy shall not be prejudiced as to the additional insured by any act of negligence, error, or omission of the named insured as respects payment of premium, reporting of claims, or any other duties required of the named insured by the policy.

- All policies shall contain endorsements requiring thirty (30) days' advance written notice to named and additional insureds of any cancellation, non-renewal or material change in coverages.

- SUBCONTRACTOR shall deliver the original Certificate(s) of Insurance and endorsements required by this clause and all subsequent notices of cancellation, termination and material alteration of such policies to:

  Welded Construction, LP
  26933 Eckel Road
  Perrysburg, OH 43551
  Attn: Contracts Manager

- All policies shall be written by responsible insurance companies with a Best's rating of AVIII or better and be licensed to do business in the state in which the Job is located.

- Completed operations coverage will be maintained for at least one (1) year after completion of the WORK.

- SUBCONTRACTOR shall forward SUBCONTRACTOR'S Certificate of Insurance through SUBCONTRACTOR'S Agent prior to the commencement of work and/or payment with CONTRACTOR, which shall be subject to the CONTRACTOR'S approval of adequacy of protection and the satisfactory character of the insurer. The Certificate of Insurance should be mailed within five days of receipt of the contract, regardless of when SUBCONTRACTOR'S work will start. If covered under a Blanket Agreement, please submit only one "Blanket" Certificate of Insurance which states: "For "All Jobs, All Locations."

EXHIBIT TO SUBCONTRACT

As it Pertains to Project	Sunoco Logistics ME2 -- OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

- SUBCONTRACTOR shall not do anything to cause any of the insurance required to be invalidated in whole or in part.
- Insurance certificates must state that the limits are on a per project basis. This MSA is written for two (2) projects.
- At CONTRACTOR'S request, from time to time or at any time, originals or copies of SUBCONTRACTOR'S or sub-subcontractor's policies, certified by the carrier, shall be delivered to CONTRACTOR.
- CONTRACTOR does not represent that the coverage and limits set out in these insurance requirements will necessarily be adequate to protect the SUBCONTRACTOR, and such coverage and limits shall not be deemed as a limitation on the SUBCONTRACTOR'S liability under the indemnities provided to the CONTRACTOR and others under this agreement.
- If any action or proceeding is commenced to enforce the rights of the CONTRACTOR as an additional insured under this Subcontract, and the CONTRACTOR prevails in that action, the SUBCONTRACTOR and/or its insurer agrees to pay, in addition to any other relief granted, the actual reasonable attorneys' fees which the prevailing party has paid or is obligated to pay and all costs and expenses, not merely recoverable costs, which the prevailing party has paid or is obligated to pay. This provision is independent and severable from any other provision of this Subcontract and shall be enforceable as a separate agreement.
- The requirements contained herein as to types and limits, as well as CONTRACTOR'S approval of insurance coverage to be maintained by SUBCONTRACTOR, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by SUBCONTRACTOR under this subcontract. SUBCONTRACTOR shall require each lower-tier subcontractor to comply with all insurance requirements appropriate for its scope of work, and any deficiency shall not relieve SUBCONTRACTOR of its responsibility herein. Upon written request, SUBCONTRACTOR shall provide CONTRACTOR with complete, certified copies of all required insurance policies, and/or copies of lower-tier subcontractor certificates of insurance.
- CONTRACTOR shall have no duty to advise SUBCONTRACTOR in the event SUBCONTRACTOR'S insurance does not comply with the requirements of this subcontract. If SUBCONTRACTOR fails to procure and maintain all the insurance coverage required by this clause, SUBCONTRACTOR shall indemnify and hold harmless each member of the Group from and against all claims, demands, costs, charges and expenses that would have been covered by such insurance had SUBCONTRACTOR complied with its obligations herein.
- CONTRACTOR'S acceptance of any evidence of insurance, including any certificate of insurance, shall not: (i) constitute acceptance of the adequacy of SUBCONTRACTOR'S insurance coverage, (ii) imply that any insurance coverage provided by SUBCONTRACTOR complies with the requirements of this subcontract, (iii) be deemed as a modification of any of SUBCONTRACTOR'S requirements in the subcontract, or (iv) waive CONTRACTOR'S or OWNER'S rights to enforce any of SUBCONTRACTOR'S requirements in this subcontract, including the requirements concerning insurance coverage amounts, insurance terms and conditions and qualifications of insurance companies.

EXHIBIT D

ADDITIONAL INSURED

As it Pertains to Project	Sunoco Logistics ME2 – OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Contractor:	Welded Construction, L.P. 26933 Eckel Road Perrysburg, OH 43551
Owner (Additional Insured):	Sunoco Pipeline, LP 100 Green Street Marcus Hook, PA 19060

EXHIBIT E
SCHEDULE

As it Pertains to Project	Sunoco Logistics ME2 – OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Work to be performed on a call out basis.

First call out for OPP1 expected on our around February 1, 2016 with subsequent crews called out as weather conditions permit construction.

Contractor will make every effort to provide as much advance notice to Subcontractor as possible.

Subcontractors Proposal

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Effective: 12/15/15 - 12/31/2016

Schedule: Welded Day Rate Rev.2

PRIME NDT SERVICES, INC.
4345 Independence Drive
Schnecksville, PA 18078
Office: 610-262-1100
Fax: 610-262-1516
Email: sales@primendt.com

WELDED CONSTRUCTION MARINER 2 PROJECT

2016 NDT DAY RATE SCHEDULE - CONSTRUCTION / PIPELINE

Two / Three Person Crew Unit Cost	
	Price
Two (2) Person Crew, ten (10) hour daily rate (Mon-Sat)	$2000.00
Two (2) Person Crew per hour rate for all hours in excess of 10 hrs. to nearest ½ hr. (Mon-Sat)	$205.00
Two (2) Person Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$2600.00
Two (2) Person Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$ 250.00
Two (2) Person Crew, four (4) hour daily rate (Standby Crew and Equip.)	$ 1020.00
Three (3) Person Crew, ten (10) hour daily rate (Mon-Sat)	$2850.00
Three (3) Person Crew, per hour rate, for all hours in excess of 10 hrs. to nearest ½ hr. (Mon-Sat)	$272.50
Three (3) Person Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$3550.00
Three (3) Person Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$325.00
Three (3) Person Crew, four (4) hour daily rate (Standby Crew and Equip.)	$1400.00
Level III / CWI / UT Flaw Technician, ten (10) hour daily rate (Mon-Sat)	$1950.00
Level III / CWI / UT Flaw Technician, per hour rate, for all hours in excess of 10 hrs. to nearest ½ hr. (Mon-Sat)	$150.00
Level III / CWI / UT Flaw Technician, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$1850.00
Level III / CWI / UT Flaw Technician, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$150.00
Mileage per day in excess of 100 miles	$1.00 / mile

Consumable Charges by Weld Size for 70mm Film, CR plate charge or MT, PT, UTT

SIZE	PRICE		SIZE	PRICE
2" - 6"	$6.50		18" - 20"	$6.00
8"	$8.50		22" - 24"	$13.00
10"	$9.00		26" - 30"	$14.50
12"	$9.50		32" - 36"	$17.00
14" - 16"	$6.00		38" - 48"	$20.25

Cut Film Charges - Contact us if Pre-Cut film is required

ADDITIONAL EQUIPMENT CHARGES IF APPLICABLE

Website: www.primendt.com

Subcontractors Proposal

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Effective: 12/15/15 - 12/31/2016 Schedule: Welded Day Rate Rev.2

Internal X-Ray Crawler	By Quote	Hardness Tester	$50 / Day
Tensile Machine	$250 / Day	Additional Truck / UTV	$50 / Day
Positive Material Identification (PMI)	By Quote	Air Quality Monitor	$25 / Day
Ground Penetrating Radar (GPR)	By Quote	Bulk PT / MT / UT Material	By Quote
Ferrite Testing	By Quote	MT Powder	$25 / lb.
Film Digitizing / Duplicating	By Quote	Aerosol Can- PT, MT Material	$30 / can

Standby Rates- 4 hour charge + Per Diem if a crew is released due to inclement weather, etc.

Travel Time - One hour will be charged for every 50 miles traveled.
Excess Mileage (over 100/day) - $1.00/mile - This includes all miles to and from jobsites.
Per Diem- $160/day will be charged for each person on days where the day rate is not charged.
Cancellations- Must be made by 4pm the previous day to avoid being charged for a full day.
Minimum Charges- PROJECTS- All work will carry a minimum of 40 hours / week + Per Diem.
Shop Work- Whitehall, PA $115 / Hour - 1 Hour minimum charge

NOTE: Day Rates for Certified Technicians, Assistants, and Equipment to do Radiographic, Magnetic Particle, Liquid Penetrant and Ultrasonic Thickness Inspections at your jobsite or facility. The RT,MT,PT and UTT equipment, 100 travel miles per day, Per Diem for work days are included in the Day Rates.

Additional requested equipment not listed will be charged at cost + 10%.

THE ABOVE PRICING WAS NEGOTIATED WITH WELDED EXCLUSIVELY FOR THE SUNOCO MARINER 2 PROJECT

DISPATCH POINTS:

MAIN OFFICE: Schnecksville, PA
610-262-1100 ext. 13
Don B. Shumway, Jr. - don@primendt.com

BRANCH OFFICES:
Beach City, OH 330-209-5600
Scott Elliott - pndtscott@live.com

Washington, PA 828-430-0964
Williamsport, PA 315-877-8255
Wideman, AR 870-291-1991

Website: www.primendt.com

Subcontractors Proposal

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-002

Effective: 12/15/2015 - 12/31/2016

Schedule: Welded Crawler Day Rate Rev.2

4345 Independence Drive
Schnecksville, PA 18078

Office: 610-262-1100
Fax: 610-262-1516
Email: sales@primendt.com

WELDED CONSTRUCTION MARINER 2 PROJECT

2016 NDT DAY RATE SCHEDULE - INTERNAL CRAWLER

Four Person Crew Unit Cost	
	Price
Crawler Crew, ten (10) hour daily rate (Mon-Sat)	$3200.00
Crawler Crew per hour rate for all hours in excess of 10 hrs. to nearest ½ hr. (Mon-Sat)	$355.00
Crawler Crew, ten (10) hour daily rate for Sun. and Holidays (PNDT will determine holidays to be observed).	$5170.00
Crawler Crew, per hour rate, in excess of 10 hrs. (Sun. and Holidays)	$ 425.00
Crawler Crew, four (4) hour daily rate (Standby Crew and Equip.)	$ 1825.00
Mileage per day in excess of 100 miles	$1.00 / Mile
Additional Truck / UTV	$50.00 / Day

Consumable Charges by Weld Size for 70mm Film, CR plate charge or MT, PT, UTT

SIZE	PRICE		SIZE	PRICE
2" - 6"	$6.50		18" - 20"	$6.00
8"	$8.50		22" - 24"	$13.00
10"	$9.00		26" - 30"	$14.50
12"	$9.50		32" - 36"	$17.00
14" - 16"	$6.00		38" - 48"	$20.25

Standby Rates- 4 hour charge + Per Diem if a crew is released due to inclement weather, etc.

Per Diem- $160/day will be charged for each person on days where the day rate is not charged.

Cancellations- Must be made by 4pm the previous day to avoid being charged for a full day.

Minimum Charges- PROJECTS- All work will carry a minimum of 40 hours / week + Per Diem.

NOTE: Day Rates for Certified Technicians, Assistants, and Equipment to do Radiographic, Magnetic Particle, Liquid Penetrant and Ultrasonic Thickness inspections at your jobsite or facility. The RT (Crawler),MT,PT and UTT equipment, 100 travel miles per day, And Per Diem for work days are included in the Day Rates.

Additional requested equipment not listed will be charged at cost + 10%.

THE ABOVE PRICING WAS NEGOTIATED WITH WELDED EXCLUSIVELY FOR THE SUNOCO MARINER 2 PROJECT

DISPATCH POINTS:

MAIN OFFICE: Schnecksville, PA
610-262-1100 ext. 13
Don B. Shumway, Jr. - don@primendt.com

BRANCH OFFICES:
Beach City, OH 330-209-5600
Scott Elliott - pndtscott@live.com
Washington, PA 828-430-0964
Williamsport, PA 315-877-8255
Wideman, AR 870-291-1991

Website: www.primendt.com

GENERAL TERMS AND CONDITIONS

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

1.0 Invoicing

Subcontractor shall submit a signed invoice, itemized to the Contractor's satisfaction, for the portion of the work completed, less Ten percent (10%) retainage (Retention). Due to the nature of this master agreement, interim retainage release may be requested by Subcontractor as work progresses into the next spread and Contractor, at the discretion of the Project Manager, has the option to reduce the retainage to five (5%) percent and, or release a percentage of the retainage previously withheld. In conjunction to Subcontractor's signed invoice, an affidavit (Exhibit B-3) asserting that Contractor is in compliance with the payment terms of this Subcontract Agreement must be submitted. Within forty five (45) days after a satisfactory receipt of invoice and affidavit, payment shall be made to the Subcontractor for the Net Payable amount. The remaining (Retention) will be retained by Contractor until final acceptance of the Work and therefore payable upon a properly executed Affidavit and Release (Exhibit B-4) and accompanying invoice for said Retention. Invoices are to be sent via email to: accountspayable@welded.com with a copy to bwelsh@welded.com. A W-9 is required to be submitted by Subcontractor with the execution of this Service Agreement, if not already on file with the Contractor.

Contractor shall submit all invoices within thirty (30) days of completing the Work covered by the invoice and shall forfeit to Company all costs associated with any invoice not submitted within thirty (30) days of completing the Work covered by the invoice.

Neither progress payments, milestone payments, partial nor entire use or occupancy of the Work by others, shall constitute an acceptance or approval of any of Subcontractor's Work that is defective or otherwise is not in accordance with the Contract, or constitute a waiver of any claim or right that Contractor may then or thereafter have against Subcontractor.

In the event Contractor disputes the amount or content of any invoice, Contractor shall not be responsible for payment of such invoice or portion of such invoice that is in dispute until such time as the disputed portion is resolved. Notwithstanding disputes concerning any invoices, Subcontractor shall continue to diligently prosecute the work. After providing written notice to Contractor and giving Contractor fourteen (14) days to cure, Subcontractor has the right to stop work for non-payment of undisputed invoices that are over sixty (60) days past due, which are issued in accordance with this agreement.

1.1 Audit Rights

Subcontractor shall keep accurate daily records of account for all Work performed. Contractor shall have the right, at all reasonable times during regular business hours, to inspect and audit such records. Subcontractor shall preserve such records for 36 months after completion, cancellation or termination of this Contract.

If the audit discloses that either party owes money to the other, any sums due will be paid within thirty (30) days after the sum due is agreed upon by the parties or determined by a court or other dispute resolution tribunal. In any event, Subcontractor's right to recover any alleged underpayment shall be waived, unless a claim in writing with full support documents is received by Contractor within 180 days after the end of the particular contract year, or the contract term, if less than a year.

2.0 Project Schedule

Prior to starting the Work Subcontractor shall supply a detailed Project Schedule and man power chart that is in compliance with the requirements of this Agreement and the requirements of the Contractor. The Project Schedule shall reflect all required activities with duration, and the man power chart shall reflect the required manpower to accomplish the Work and shall be updated weekly. Subcontractor shall administer the Work in accordance with the Project Schedule. Subcontractor also shall notify Contractor immediately in writing at any time that Subcontractor has reason to believe that there will be a deviation in the Project Schedule and shall specify in said notice the corrective action planned by Subcontractor.

3.0 Time is of the Essence

Time is of the essence for this Agreement. Unless expressly agreed to in writing by the Contractor, Subcontractor agrees that time remains of the essence even though modification to this agreement or delays have occurred and will prosecute the work regularly and diligently and uninterruptedly at such a rate of progress as will be sufficient to achieve the agreed upon dates as set forth in this Contract.

4.0 Contractor's Right to Accelerate the Work at no Additional Cost to Contractor

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

If, in the reasonable belief of the Contractor, the Subcontractor will not meet the completion dates set forth in the Subcontractor's Project Schedule, the Contractor may direct the Subcontractor to accelerate the Work in a manner acceptable to the Contractor and at no additional cost to the Contractor unless the delay is the result of the acts or omissions of the Contractor. If Contractor directs the Subcontractor to accelerate the Work, Subcontractor shall promptly provide a plan, including its recommendation, for the most effective and economical acceleration of the Work. If such plan is unacceptable to the Contractor or the Subcontractor fails to provide a plan within seven (7) Days, Contractor may direct Subcontractor to follow an acceleration plan provided by Contractor.

5.0 Termination for Convenience

Contractor may, upon five (5) days' written notice to Subcontractor, terminate this Contract for its convenience in whole or in part at any time without cause for such termination. After issuance of said written notice, Subcontractor shall terminate the Work as instructed by Contractor. If Contractor terminates this Contract for convenience, Subcontractor shall receive, as its sole and exclusive remedy, payment for the Work performed up to the date of the termination and all reasonable documented wind-up costs, including, without limitation, the costs of canceling open purchase orders and demobilizing from the project site. Subcontractor shall use reasonable efforts to mitigate wind-up costs. Subcontractor shall not be entitled to recover any amounts for unabsorbed overhead, anticipated profits on the unperformed portion of the Work, or lost opportunity. After receiving a notice of termination for convenience, Subcontractor shall place no further orders for material or equipment, issue no further subcontracts, and shall stop Work on the date given in the notice. Subcontractor shall consult with Contractor regarding the disposition of existing orders and subcontracts, and use its best efforts to terminate them on terms favorable to Contractor. Subcontractor shall likewise consult with Contractor to decide what actions should be taken to protect Work in place and equipment or materials that have been delivered and not yet installed, and to render the project site safe.

If this Contract is terminated for cause, and it is later determined by the final order or judgment of a court of competent jurisdiction, arbitration entity or administrative proceeding of any type that Subcontractor was not in default, the parties agree that the termination shall then be considered a termination for convenience and Contractor shall receive, as its sole and exclusive remedy, those costs as set forth as described herein.

5.1 Termination for Cause and Contractor's Right to Take Over Work

Contractor may terminate this Subcontract for cause, in whole or in part, for default if Subcontractor fails materially to perform any of its duties or obligations under this Contract. In particular, but without limitation, Contractor may terminate this Subcontract if: (1) Subcontractor fails to prosecute the Work diligently, in accordance with the Project Schedule, achieve milestones set out or to make such progress in the Work as Contractor reasonably believes is necessary to complete the Work within the time required by this Contract; or (2) Subcontractor fails to perform the Work in accordance with the Required Standard of Care or (3) Subcontractor fails to perform the Work in a good and workmanlike manner, or fails to correct defects in the Work promptly upon notice by Contractor; or (4) Contractor reasonably determines that Subcontractor has abandoned the Work, or has failed to pay any subcontractors, suppliers, or laborers when payment is due; or (5) Subcontractor becomes insolvent, makes a general assignment for the benefit of creditors, files a voluntary petition under any chapter of the Bankruptcy Code, has an involuntary petition filed against it, has a receiver appointed, or files for dissolution or otherwise is dissolved; or (6) Subcontractor fails to pay its debts in a timely manner, or (7) Contractor has reasonably determined that Subcontractor does not have the financial ability to carry out its obligations under this Contract and Subcontractor fails to give Contractor prompt and reasonable assurances of its ability to perform.

Except as provided in this Section, Contractor will provide Subcontractor with written notice of its intent to terminate this Contract, five (5) days before actually putting the termination into effect. If Subcontractor has begun its curative action and has made progress satisfactory to Contractor within the five (5) days, Contractor may so notify Subcontractor and the termination will not take effect. Otherwise, the termination shall take effect after five (5) days without further notice or opportunity to cure. If Contractor terminates this Contract for default, no further payment shall be due to Subcontractor and Contractor will have the right to take over the Work, to take and use all tools, equipment and supplies then being used in connection with the Work, and to finish the Work by whatever method it deems expedient, including accepting assignment of any or all outstanding purchase orders or subcontracts. Contractor may terminate this Contract without prior notice or an opportunity for Subcontractor to cure the default, if the default involves risk of personal injury or property damage, violation of Welded or Company Safety and Security Requirements, environmental issues or violations of any applicable laws, codes, regulations or other standards applied by any governmental entity having jurisdiction over the Work.

GENERAL TERMS AND CONDITIONS

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

In no event shall the amount owed to Subcontractor, if anything, upon termination of this agreement, exceed the total Agreement price, nor shall Subcontractor be entitled to loss of anticipated profit or overhead with regard to terminated work.

6.0 Excusable Delays

If Subcontractor's performance of this subcontract is prevented or delayed by any unforeseeable cause, existing or future, notwithstanding weather delays, which is beyond the reasonable control of the parties and without the fault or negligence of Subcontractor, Subcontractor shall, within forty-eight (48) hours of the commencement of any such delay, give to Contractor written notice thereof and, within seven (7) calendar days of commencement of the delay, a written description of the anticipated impact of the delay on performance of the Work. Delays attributable to and within the control of Subcontractor's suppliers or subcontractors of any tier shall be deemed delays within the control of Subcontractor. Within seven (7) calendar days after the termination of any excusable delay, Subcontractor shall file a written notice with Contractor specifying the actual duration of the delay. Failure to give any of the above notices shall be sufficient grounds for denial of an extension of time. If Contractor determines that the delay was unforeseeable, beyond the control and without the fault or negligence of Subcontractor, Contractor will determine the duration of the delay and will extend the time of performance of this subcontract accordingly. Such extension shall be the sole remedy for the delay.

7.0 Force Majeure

If, because of force majeure, either party hereto is unable to carry out any of the obligations under this Contract, other than the obligations to pay money due hereunder, and if such party promptly gives to the other party hereto written notice of such force majeure, then the obligations of the party giving such notice shall be suspended to the extent made necessary by such force majeure and during its continuance, provided that the party giving such notice shall use its best efforts to remedy such force majeure insofar as possible with all reasonable dispatch. The term "force majeure" as used herein shall mean acts of God; acts of public enemy; insurrections; riots; strikes; lockouts; labor disputes; fires; explosions; floods; breakdowns or damage to plants, equipment or facilities; embargoes; orders; or acts of civil or military authority; or other causes of a similar nature which are beyond the reasonable control of the party affected thereby. Any event such as fire; explosion; flood, breakdown or damage to equipment or facilities caused by Subcontractor's actions or inactions shall not be deemed to be a force majeure event for the purposes of this Agreement. Upon the cessation of the force majeure event, the party that had given original notice shall again promptly give notice to the other party of such cessation.

8.0 Change Directives and Change Orders

Contractor may at any time by issuing a Change Directive (Exhibit B-1) to Subcontractor, require a change in the work, or the method, sequencing, conduct, or timing of the Work of this Agreement. Subcontractor shall comply with any Change Directive, but shall have the right to claim an adjustment, if applicable. If Contractor issues a Change Directive and no agreement has been reached as to an adjustment, then the Subcontractor shall diligently proceed as though on a time and materials basis pursuant to Exhibit A (Labor and Equipment Rates). Subcontractor shall keep such project records of the daily cost incurred by completing such Change Directive and submit such records to the Contractor on a daily basis AND Subcontractor shall receive payment for completing the work associated with the Change Directive until the parties mutually agree to the terms of a Change Order. If Subcontractor and Contractor fail to agree on an Adjustment, then the provisions of the section titled "Disputes" may be invoked to resolve the dispute.

8.1 Subcontractor Requested Change

Subcontractor may, at any time, by written notice to the Contractor's Project Manager, in a form consistent with Exhibit B-2 Subcontractor Requested Change to Contractor, request a Change within (2) days Business Days of the event giving rise to the Subcontractor's request. Only a Change Order submitted on the approved form to the Contractor may be deemed adequate for consideration. Subcontractor expressly waives any right to a Change in the event such notice is not made as set forth herein and will be at the sole expense of the Subcontractor. Not later than (10) Business Days after Contractor's receipt of Subcontractor's request, any supporting information required by the section titled "Information Regarding a Change", and any additional supporting documentation reasonably requested by the Contractor, Contractor shall notify Subcontractor of its acceptance or rejection of such request or such request shall be deemed rejected. If Contractor rejects the Change requested by Subcontractor, Subcontractor shall continue with the Work without the Change. If Contractor accepts Change, a Change Order will be issued pursuant to the Agreement. If Subcontractor and Contractor fail to agree on an Adjustment, then the provisions of the Section titled "Disputes" may be invoked to resolve the dispute.

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

8.2 Information Regarding a Change

If Subcontractor is notified of a Change Directive (or earlier if Contractor notifies Subcontractor of a proposed Change) or an event described in Subsection (b) below occurs that Subcontractor believes requires a Change or an Adjustment (or if Contractor notifies Subcontractor that such an event has occurred that Contractor believes requires an Adjustment), then Subcontractor shall promptly prepare and submit to Contractor (or if Subcontractor proposes a Change to Contractor, then concurrently with providing written notice of such proposed Change) an estimate of the increase or decrease, if any, in the cost and time required to complete the Work, together with an explanation of the basis for such estimate. The explanation of the basis for a change in the Subcontract Price shall include, but not be limited to, as appropriate, relevant cost information regarding the portion of the original cost estimate that is affected by the Change, vendor pricing for the cost of Equipment added or deleted by the Change, and estimated quantities of Equipment, other materials, and labor added or deleted by the Change. No Adjustment shall be made except (a) in accordance with a duly issued Change Order or (b) due to Contractor issuing a Change Directive.

In addition, in the event of an emergency which Contractor determines endangers life or property, Contractor may use oral orders to Subcontractor for any work required by reason of such emergency. Subcontractor shall commence and complete such emergency work as directed by Contractor. Such orders will be confirmed by Change Order.

9.0 Disputes

Subcontractor shall not be entitled to claim and neither Contractor nor Owner shall be liable to Subcontractor or its suppliers or subcontractors for any form of tort (including negligence), or contract except as specifically provided in this subcontract.

Any claim arising out of or attributable to the interpretation or performance of this subcontract, which cannot be resolved by negotiation, shall be considered a dispute within the meaning of this clause.

If for any reason Subcontractor and Contractor are unable to resolve a claim for an adjustment, Subcontractor or Contractor shall notify the other party in writing that a dispute exists and request or provide a final determination by Contractor. Any such request by Subcontractor shall be clearly identified by reference to this clause and shall summarize the facts in dispute and Subcontractor's proposal for resolution.

Contractor shall, within thirty (30) calendar days of any request by Subcontractor, provide a written final determination setting forth the contractual basis for its decision and defining what subcontract adjustments it considers equitable. Upon Subcontractor's written acceptance of Contractor's determination, the subcontract will be modified and the determination implemented accordingly or, failing agreement, Contractor may in its sole discretion pay such amounts and/or revise the time for performance of the Work in accordance with Contractor's final determination.

If Subcontractor does not accept Contractor's final determination, the parties agree to arbitration.

10.0 Applicable Law

This Agreement is to be governed by, construed and enforced in accordance with the laws of the State of Pennsylvania.

11.0 Taxes

Subcontractor is solely responsible for payment of all applicable taxes levied on Subcontractor. Subcontractor represents that it will comply with all applicable laws.

Subcontractor hereby certifies that he will deduct and pay over to the proper governmental authority any withholding taxes or similar assessment which an employer is required to deduct and pay over. Subcontractor accepts exclusive liability for any payroll taxes or contributions imposed by any federal, state or other governmental authority, covering its agents or employees. Subcontractor assumes full responsibility for and agrees to pay for, and agrees that the price to be paid by Contractor as set forth herein shall be fully inclusive of all labor, including overtime as legally required, all overhead, and all contributions and taxes payable under federal and state social security acts, old age pension, worker's compensation laws, unemployment compensation laws, and income tax laws and any other applicable laws as to all of its employees and agents engaged in the performance of the work hereunder; and Subcontractor hereby agrees to indemnify and save Contractor harmless against the consequences of any failure by Subcontractor or any of its subcontractors or vendors to pay or withhold taxes, charges, or compensation due on behalf of its employees or agents involved in the work.

GENERAL TERMS AND CONDITIONS

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

12.0 Liens

Except for the nonpayment by Contractor to Subcontractor of properly submitted invoices due under this agreement, Subcontractor shall not directly or indirectly create, incur, assume, or suffer to be created any lien against Contractor or Company.

13.0 Insurance

Without limiting in any way the scope of any obligations or liabilities assumed hereunder by Subcontractor, Subcontractor shall procure or cause to be procured and maintained at its expense, for the duration of this Subcontract, the insurance policies described in **Exhibit C - Insurance.**

The General Liability, Business Automobile Liability, Umbrella or Excess Liability and Pollution Liability Policies shall include Contractor, Company and its subsidiaries and affiliates, and the third parties as listed in **Exhibit D – Additional Insured:**

14.0 Subcontractors Obligation and Indemnification

TO THE FULLEST EXTENT PERMITTED BY LAW, SUBCONTRACTOR AGREES TO INDEMNIFY, DEFEND, RELEASE AND HOLD HARMLESS CONTRACTOR; COMPANY, THEIR PARENT AND AFFILIATE COMPANIES, PARTNERS, LIMITED PARTNERSHIPS IN WHICH COMPANY, ITS PARENT AND/OR AFFILIATED COMPANIES ACT AS GENERAL PARTNER, SUCCESSORS, ASSIGNS, LEGAL REPRESENTATIVES, OFFICERS, DIRECTORS, SHAREHOLDERS, INSURERS, AGENTS AND EMPLOYEES (COLLECTIVELY "COMPANY INDEMNITIEES") FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS LOSSES, DAMAGES, CAUSES OF ACTION, SUITS AND LIABILITIES OF EVERY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR LOSS OF DAMAGES (EXCLUDING PUNITIVE AND EXEMPLARY) TO ANY PROPERTY (INCLUDING WITHOUT LIMITATION, CLAIMS FOR POLLUTION AND ENVIRONMENTAL DAMAGE), PRODUCT LIABILITY AND STRICT LIABILITY AND CIVIL OR CRIMINAL FINES OR PENALTIES, DISCOVERED OR UNDISCOVERED, DIRECTLY OR INDIRECTLY ARISING OR ALLEGED TO ARISE OUT OF OR IN ANY WAY INCIDENTAL TO (I) ANY BREACH OR NON-COMPLIANCE WITH ANY TERM OR PROVISION OF THIS AGREEMENT, BY THE SUBCONTRACTOR, ITS EMPLOYEES, ITS SUBCONTRACTORS, VENDORS, AGENTS REPRESENTATIVES, ASSIGNS, SUCCESSORS, AFFILIATED COMPANIES, OR ANY OTHER PERSON FOR WHOM THE SUBCONTRACTOR IS RESPONSIBLE IN THE LAW, RELATED TO THIS AGREEMENT OR THE PERFORMANCE OF NON-PERFORMANCE OF THE WORK HEREUNDER (COLLECTIVELY "CONTRACTOR'S LIABILITIES"). THIS INDEMNITY INCLUDES SUBCONTRACTORS AGREMENT TO PAY ALL COSTS AND EXPENSES OF DEFENSE, INCLUDING WITHOUT LIMITATION REASONABLE ATTORNEY'S FEES INCURRED BY ANY CONTRACTOR OR COMPANY INDEMNITIEE. THIS INDEMNITY SHALL APPLY WITHOUT LIMITATION TO ANY "SUBCONTRACTOR LIABILITY" IMPOSED ON ANY PARTY INDEMNIFIED HEREUNDER AS A RESULT OF ANY STATUTE, RULE, REGULATION OR THEORY OF STRICT LIABLITY INCLUDING BUT NOT LIMITED TO STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY. CONTRACTOR EXPRESSLY ASSUMES, TO THE EXTENT OF ITS RELATIVE FAULT, ANY AND ALL "SUBCONTRACTOR LIABILITIES" ARISING IN FAVOR OF ANY THIRD PARTY OR GOVERNMENTAL AGENCY OR ENTITY, THE PARTIES HERETO, THEIR EMPLOYEES AND THEIR EMPLOYEES' REPRESENTATIVES AND BENEFICIARIES. THIS INDEMNIFICATION SHALL NOT BE LIMITED TO DAMAGES, COMPENSATION, OR BENEFITS PAYABLE UNDER INSURANCE POLICIES, WORKERS' COMPENSATION ACTS, DISABILITY BENEFITS ACTS OR OTHER EMPLOYEES' BENEFITS ACTS. ALTHOUGH SUBCONTRACTOR HAS CAUSED THE INDEMNITIEES TO BE NAMED AS ADDITIONAL INSURED UNDER THE SUBCONTRACTOR'S POLICIES OF INSURANCE, SUBCONTRACTOR'S LIAIBLITY UNDER THIS INDEMNIFICATION SHALL NOT BE LIMITED TO THE LIABILITIES LIMITS SET FORTH IN SUCH POLICIES. If this Contract relates to Work of any kind performed in Ohio, SUBCONTRACTOR EXPRESSLY AND SPECIFICALLY WAIVES ITS STATUTORY AND CONSTITUTIONAL WORKERS' COMPENSATION IMMUNITY UNDER OHIO LAW AND INCLUDING ANY AMENDMENTS TO THIS CONTRACT. This Section shall survive termination or cancellation of this Contract. SUBCONTRACTOR FURTHER AGREES, EXCEPT AS MAY BE OTHERWISE SPECIFICALLY PROVIDED HEREIN, THAT THE OBLIGATIONS OF INDEMMNIFICATION HEREUNDER SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

a. LIENS BY THIRD PERSONS AGAINST CONTRACTOR OR THE COMPANY, COMPANY'S PARENT AND AFFILIATED COMPANIES AND THEIR PROPERTY, BECAUSE OF LABOR, SERVICES, MATERIALS, OR ANY OTHER TYPE OF LIEN, FURNISHED TO THE SUBCONTRACTOR, ITS ASSIGNS OR ITS SUBCONTRACTORS, IN CONNECTION WITH THE WORK PERFORMED BY SUBCONTRACTOR HEREUNDER AND SUBCONTRACTOR SHALL REQUIRE ALL ITS SUBCONTRACTORS OR VENDORS PROVIDING LABOR, SERVICES OR MATERIALS

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

IN CONNECTION WITH THE WORK TO EXECUTE A LIEN WAIVER PRIOR TO SUBCONTRACTOR'S PAYMENT TO SAID ITS SUBCONTRACTOR OR VENDOR. SAID LIEN WAIVER SHALL EXPLICITLY SET FORTH THE SUBCONTRACTOR'S RELEASE AND WAIVER OF ANY AND ALL MECHANIC'S LIEN OR RIGHT OF LIEN WHICH ACCRUES OR MAY ACCRUE TO SAID SUBCONTRACTOR OR VENDOR AND PROPERLY SETTING FORTH COMPANY AS THE OWNER OF THE WORK. SUBCONTRACTOR SHALL PROVIDE CONTRACTOR COPIES OF ALL EXECUTED SUBCONTRACTOR OR VENDOR LIEN WAIVERS.

b. EXPENSES, CLAIMS, FINES, AND PENALTIES OR OTHER ENFORCEMENT CHARGES, RESULTING FROM THE FAILURE OF SUBCONTRACTOR TO ABIDE BY ANY AND ALL VALID APPLICABLE LAWS, RULES OR REGULATIONS OF ANY GOVERNMENTAL OR REGULATORY AUTHORITY WITH JURISDICTION.

SUBCONTRACTOR SHALL WAIVE AND RELEASE AND DOES HEREBY WAIVE AND RELEASE ANY AND EVERY MECHANIC'S LIEN OR RIGHT OF LIEN WHICH ACCRUES TO IT AT ANY TIME UPON ANY REAL ESTATE, BUILDINGS, OR STRUCTURE OF THE COMPANY, ITS PARENT OR AFFILIATED COMPANIES OR IF WORK IS TO BE PERFORMED ON PROPERY OF THIRD PARTIES, EVERY MECHANIC'S LIEN OR RIGHT OF LIEN WHICH ACCRUES TO IT UPON ANY REAL ESTATE BUILDING OR STRUCTURE OF SUCH THIRD PARTIES, AS A RESULT OF THE PERFORMANCE OF THE WORK.

SUBCONTRACTOR SHALL ASSUME ALL RESPONSIBILTY FOR, INCLUDING CONTROL AND REMOVAL OF, AND PROTECT, DEFEND, AND SAVE HARMLESS CONTRACTOR AND COMPANY FROM AND AGAINST ALL CLAIMS CAUSED BY SUBCONTRACTOR OR SUBCONTRACTOR'S EMPLOYEES, AGENTS REPRESENTATIVES, INVITEES OR ITS SUBCONTRACTORS, ARISING FROM POLLUTION OR CONTAMINATION, WHICH MAY BE IMPOSED UPON OR INCURRED BY OR ASSERTED AGAINST COMPANY BY ANY OTHER PARTY OR PARTIES (INCLUDING GOVERNMENTAL ENTITIES), IN CONNECTION WITH ANY ENVIRONMENTAL CONDITIONS INCLUDING ANY ALLEGED EXPOSURE OF ANY PERSON TO ENVIRONMENTAL CONDITIONS) OR THE REMEDIATION OF ANY ENVIRONMENTAL CONDITIONS (WHETHER NOW KNOWN OR HEREAFTER DISCOVERED) OR ANY ENVIRONMENTAL NONCOMPLIANCE ARISING OUT OF, RESULTING FROM OR ATTRIBUTABLE TO THE PERFORMANCE OF OR FAILURE TO PERFORM THE WORK OR THE PROVISIONS OF THIS CONTRACT.

CONTRACTOR DOES NOT GIVE SUBCONTRACTOR ANY INDEMNITY OF ANY KIND IN CONNECTION WITH THIS CONTRACT OR THE WORK, AND NO SUCH INDEMNITY SHALL BE IMPLIED BY THE TERMS OF THIS AGREEMENT, THE CONDUCT OF THE PARTIES, THE RELATIONSHIP OF THE PARTIES, OR OTHERWISE.

Contractor shall notify Subcontractor of any claim that has given or could give rise to a right of indemnification hereunder or that may be presented to it by any party. Subcontractor shall, at its sole cost and expense, investigate, handle, respond to, and provide defense for any claim for which it gives indemnity herein; provided that Contractor shall have the right and opportunity to participate in any such investigation and defense. At Contractor's sole discretion and option, exercisable at any time, Contractor may itself undertake the defense, litigation, settlement or satisfaction of any such claim, reserving the right to seek indemnification against Subcontractor until after the claim is resolved, or Contractor may direct Subcontractor to contest, defend, litigate, settle or satisfy any claim made against Contractor provided that Subcontractor shall not settle any claim without Contractor's prior written consent, such consent not to be unreasonably withheld. In the event the Subcontractor, after receipt of notice of a Claim, fails to furnish a defense and indemnity as provided for under this provision, the Contractor shall be entitled to receive from the Subcontractor its attorney's fees, costs, expenses and any amounts paid in the enforcement of this Agreement.

In the event Subcontractor engages a subcontractor to perform any portion of the Work, Subcontractor agrees that it will obtain from each such subcontractor indemnity provisions for the benefit of Company that are at least as extensive as those provided by Subcontractor to Contractor. If Subcontractor fails to obtain an indemnity provision from any of its subcontractors, Subcontractor agrees to protect, defend, indemnify and hold harmless, Contractor and Company in the same extend as provided above, as if subcontractor were its subcontractors and shall carry contractual indemnity insurance therefore. Subcontractor's subcontractors shall carry insurance policies substantially similar to those policies as required of Contractor hereunder.

15.0 Consequential Damages:

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, BUT SUBJECT TO THE EXPRESS EXCEPTION DESCRIBED AT THE END OF THIS CLAUSE, NEITHER PARTY HERETO NOR ANY OF THEIR RESPECTIVE PERSONNEL SHALL BE LIABLE FOR INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, CONSEQUENTIAL, OR EXEMPLARY DAMAGES, INCLUDING LOSS OF PROFITS OR REVENUE, LOSS OF USE, COST OF CAPITAL, DOWN TIME COSTS, LOSS OF OPPORTUNITY, LOSS OF GOODWILL, AND/OR CLAIMS OF CUSTOMERS OF THE OTHER PARTY FOR SUCH DAMAGES AND HEREBY WAIVE ANY RIGHT TO THE SAME; AND EACH PARTY HEREBY RELEASES THE OTHER PARTY AND THEIR RESPECTIVE PERSONNEL FROM LIABILITY TO THE OTHER FOR SUCH DAMAGE. SUBCONTRACTOR AGREES, HOWEVER, TO INDEMNIFY CONTRACTOR AND COMPANY FOR CONSEQUENTIAL DAMAGES, SUCH AS LOSS OF USE AND LOSS OF REVENUE, TO THE EXTENT THEY ARE CAUSED BY THE GROSS NEGLIGENCE AND WILLFUL MISCONDUCT OF SUBCONTRACTOR'S PROJECT MANAGER, PROJECT ENGINEERING MANAGER, CONSTRUCTION MANAGER, AND SUPERINTENDENT FOR SUBCONTRACTOR, WHILE WORKING ON THE PROJECT. GROSS NEGLIGENCE AND WILLFUL MISCONDUCT SHALL BE DEFINED AS THE INTENTIONAL FAILURE TO PERFORM A MANIFEST DUTY IN RECKLESS DISREGARD OF THE CONSEQUENCES AS AFFECTING THE LIFE OR PROPERTY OF ANOTHER.

16.0 Warranty:

The Subcontractor warrants that the workmanship and materials provided by Subcontractor will be of proper quality; will be performed in accordance with the generally accepted practices of the industry; will meet the requirements of the Owner's specification; and shall be in full compliance with the requirements of the Contract Documents. Subcontractor's warranty for services provided shall extend for eighteen (18) months from the final completion of Subcontractor's scope of work. This warranty shall be in addition to, and shall not limit, any warranty of materials provided by any manufacturer or supplier of equipment or materials incorporated in the work nor any other remedies that may be pursuant by applicable law or regulatory requirements.

Subcontractor's obligations to correct defective Work shall be reinstated for longer of (1) the remainder of the original warranty period or (2) a six (6) month period from the date on which the corrected Work is accepted.

In the event the Work performed by Subcontractor is incorrect, defective or otherwise in error, the Subcontractor shall indemnify and hold Contractor and Company, its parent and affiliated companies harmless from and against all damages, losses, costs and expenses which are incurred by reason of Subcontractor's error.

The warranties set forth herein shall not affect or limit any other rights or remedies provided by the Contract or applicable law and shall not be deemed to establish a period of limitation or prescription within which such other rights or remedies must be asserted.

17.0 Health and Safety

Subcontractor must follow Contractor and Owner safety requirements, where there is a discrepancy, the more stringent of the two will be required. Subcontractor shall comply with all applicable OSHA regulations, and local and federal safety and health requirements. Project specific training is required.

Subcontractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work of this Agreement. Subcontractor shall take all necessary and appropriate precautions to protect its employees. All accidents and near misses must be reported immediately to the Contractor's representative.

While Subcontractor remains exclusively liable for safety aspects of the Work under the Agreement, Subcontractor agrees to provide the Contractor a copy of all reports related to injuries or illnesses at the work site filed by Subcontractor with any state or federal agency (such as OSHA, Workers Compensation Bureau, etc.) within twenty-four hours of filing such a report with the agency.

Subcontractor shall be solely responsible for conducting operations under this subcontract to avoid risk of harm to the health and safety of persons and property and for inspecting and monitoring all equipment, materials and work practices used in the Work to ensure compliance with its obligations under this subcontract.

Subcontractor shall immediately report to Contractor any death, injury or damage to property incurred or caused by Subcontractor's employees

As it Pertains to Project	Sunoco Logistics -- ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

17.1 Drug Testing

The Subcontractor acknowledges Contractor's drug free workplace policy and agrees employees shall be subject to pre-employment drug testing prior to project mobilization and random testing if required. Subcontractor must have a drug testing program in place, at the sole cost to the Subcontractor, and upon request of Contractor can certify that all employees working at the jobsite are compliant prior to mobilization. No work may begin under this Agreement if Subcontractor is noncompliant. Furthermore, Subcontractor agrees that any failure to comply with Contractor's standards, policies and procedures for maintaining a drug free workplace is a breach of this Contract and constitutes grounds for immediate termination of this Contract. Contractor will not provide drug testing to Subcontractor's employees. Drug testing must be performed prior to mobilization to the jobsite and documentation may be requested by Contractor prior to the start of work.

17.2 OQ

If Subcontractor is performing safety sensitive work as defined in the Department of Transportation's (D.O.T.) regulations in 49 CFR Parts 40, 199 and 382, Subcontractor shall fully comply with such regulations. Subcontractor shall provide Contractor's representative with its plan documents, testing information and all other information required for verification of Subcontractor's compliance with such regulations, unless directed otherwise by Contractor. Subcontractor shall defend (at Contractor's option), indemnify and hold harmless Contractor and Owner from and against all Claims that arise in connection with Subcontractor's development, implementation or administration of, or failure to develop, implement or administer, drug and alcohol testing plans in compliance with such federal regulations.

If Subcontractor is providing services identified as covered tasks by the Operator Qualification regulations / D.O.T. regulations, or Owner deems an OQ task be D.O.T compliant, Contractor requires and Subcontractor agrees that Subcontractor shall fully comply with all provisions of the D.O.T's regulations regarding operator qualification (49 *CPR* Part 192), at Subcontractor's sole expense, and shall provide Contractor's Representative with Subcontractor's plan documents and records showing its compliance if and as required by the applicable regulations.

17.3 Clean-up

Subcontractor must at all times keep the site free from trash and debris. As soon as practicable after the completion of all Work, Subcontractor shall remove all of its equipment and any remaining trash or debris, and restore the area if damaged.

Subcontractor must have a spill prevention plan in place prior to mobilization, which must be presented to Contractor upon request. Subcontractor is solely responsible for all clean-up, removal, and remediation of any hazardous substance for which subcontractor has introduced at the jobsite.

17.4 Asbestos

Subcontractor's handling any PACM must adhere to all OSHA, State, Federal, City, and Owner regulations governing asbestos handling and must be licensed to perform asbestos work in the state in which the work resides. The work area must be kept free from any loose asbestos material and properly contained at all times. Contractor is not liable for Subcontractor's negligent acts while testing, handling, transporting, storing or disposing of any known or presumed asbestos material.

17.4 Personal Protective Equipment

Subcontractor is responsible for all personal protective equipment (PPE) that is required to perform work on the ROW of a pipeline project. This includes but is not limited to; hard hats, hard toe boots, eye protection, ear protection (if required), gloves, reflective vests, air monitors and FRC (if required). Furthermore, Subcontractor must provide their craft with suitable PPE to perform work specific to the scope of work under this agreement. Contractor will not provide PPE to Subcontractor to perform any work required under this agreement.

17.5 Safety Data Sheets

Subcontractor may contact Contractor's Safety Departments to request access to Safety Data Sheets (SDS) for areas where Work is to be performed prior to commencing any Work. Subcontractor shall review the SDS and ensure that its employees are advised of the location and accessibility of this hazard information. Subcontractor shall furnish copies of SDS to Contractor for all substances to be used while performing Work at the project site prior to use of such substances. Subcontractor shall maintain duplicate copies of said SDS in its field office or vehicles at the Work site.

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

Subcontractor shall not specify for use in the project any hazardous materials, including, without limitation, asbestos or PCBs, unless expressly authorized to do so in a writing signed by Contractor.

18.0 Confidentiality

All plans, drawings, design and specifications supplied by Contractor to Subcontractor for this project shall remain the property of Company, and any information derived therefrom or otherwise communicated to Subcontractor from Contractor, shall be regarded by Subcontractor as confidential and shall not be disclosed to any third party without the prior written consent of Contractor.

19.0 Subcontractors

Subcontractor shall be solely responsible for the engagement and management of its subcontractors in the performance of the Work in accordance with the terms of this Contract, for the performance of the Work by its subcontractors and for all acts or omissions of subcontractors. Subcontractor shall ensure that its subcontractor meet all governmental agency regulations as well as Company and local requirements under this Agreement and that all Work furnished or performed by its subcontractors conforms to the requirements of this Contract. No contract or agreement with any subcontractor shall bind, or purport to bind, Contractor, Company, or give the subcontractor a right to seek compensation or damages from Contractor or Company. Subcontractor shall remain responsible for all Work performed by its subcontractors.

20.0 Representations

Subcontractor represents and warrants that Subcontractor is engaged in the business of, and has developed the requisite expertise for performing the Work. Subcontractor and its agents, employees, and its subcontractors have the capability, experience, expertise and means required to perform the Work and the Work will be performed using personnel, equipment, and materials qualified and/or suitable to do the work requested. Subcontractor shall perform the Work:

(1) with due diligence and in a safe, workmanlike, and competent manner, in accordance with sound construction practices and standards and Company approved practices and standards;

(2) in compliance with all applicable laws, codes, regulations or other standards applied by any governmental entity having jurisdiction over the Work and shall secure, at its expense, all necessary permits and licenses, including but not limited to applicable state subcontractor licenses, for the performance and completion of the Work, including by not limited to the operation, hauling and transportation of all materials and/or equipment needed, used or supplied in and for the Work, and Subcontractor shall pay in connection therewith, without reimbursement from Contractor, all valid and applicable fees, assessments or taxes levied by units of government with jurisdiction imposed by law on Contractor or Sunoco as a result of Work performed by Subcontractor, its subcontractors, vendors, agents or representatives,

(3) in accordance with all applicable manufacturer's requirements;

(4) in accordance with all applicable standards and codes; and

(5) in accordance with the provisions of this Contract.

21.0 Project Examination

Subcontractor represents that, before executing this Contract, it has, acting as a skilled and experienced subcontractor, conducted a careful investigation and examination of the information provided by Contractor prior to execution of the Contract and any specifically identified project site to ascertain the nature and location of the site and other reasonably discoverable conditions that may affect its Work, including topographical features, water on or near the site, roads, the size and shape and topography of the site and its ability to accommodate the various trades and any required storage, features affecting transportation, vegetation or physical barriers, rocks, rubble, or existing structures or impediments to construction, and the like as it pertains to Subcontractors work. Subcontractor also represents that it has independently verified the location of all utilities via the one call system.

22.0 Site Review

It shall be the responsibility of the Subcontractor to examine, and Subcontractor specifically represents that it has carefully examined the sites and routes of the Work, and is acquainted thoroughly with all conditions likely to be encountered in performing the Work. In relation to the project site, Subcontractor has taken into account all facets of the job, including, but not limited to, the items listed below as they relate to the specifications and the conditions which may be encountered in performing the Work required under this Contract, and Subcontractor's price reflects consideration of all of them, to wit:

As it Pertains to Project	Sunoco Logistics – ME2 OPP1, PPP1, PPP5	Subcontract Number	2016-SL_ME2-02

1. Low areas, which could be wet during construction
2. Normal and abnormal weather conditions other than Force Majeure event;
3. Completion of project in order to meet the In-Service Date;
4. Labor conditions and availability;
5. Rail locations;
6. Material type and size, fuel costs, and equipment availability;
7. Road load limits;
8. Special taxes, assessments, or use fee;
9. Availability and disposal of clean, non-alkaline water for hydrostatic testing;
10. Crossing of Company or third party pipelines;
11. Equal Opportunity/Affirmative Action/Drug Testing responsibilities
12. Applicable federal, state and local laws, ordinances, statutes, rules, regulations, permits and orders;
13. Applicable federal, state and local environmental and safety standards;
14. All rock removal and disposal;
15. All underground structures and subsurface conditions, including, but not limited to underground utilities
16. Crop irrigation systems;
17. Utilities or Rights of Way;
18. Water crossings of any kind;
19. All surface and subsurface conditions including, but not limited to timber, crop fields, or berms;
20. The existence of any federal or state classified threatened and or endangered species and/or birds covered u under the Migratory Bird Treaty Act;
21. Access and limitations to work area due to physical structures or operational policies that are communicated by a Contractor Representative; and
22. The likelihood or existence errors or omissions in plans, specifications, or drawings provided to Subcontractor. Once Subcontractor is aware, or notes any errors or omissions in plans specifications, or drawings provided, they will notify Contractor of same. Costs incurred for work and rework resulting from work performed with failure to notify, shall be borne by Subcontractor.

23.0 Ingress and Egress

Subcontractor acknowledges that it must perform its work within the right-of-way area or project limits as described in the plans, specifications, and this Agreement or any related part thereto. Subcontractor further acknowledges that in the event Subcontractor, its agents, its subcontractors, vendors or representatives deviate from the right of way area, Subcontractor may incur, amongst other things, trespass damages. Subcontractor shall not deviate from the right-of-way area, unless directed or approved by Contractor in writing. SUBCONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS CONTRACTOR AND COMPANY FOR ANY AND ALL COSTS, EXPENSES, AND LIABILITIES AS A RESULT OF ANY DEVIATION FROM THE PROPOSED RIGHT-OF-WAY BY SUBCONTRACTOR, ITS AGENTS, ITS SUBCONTRACTORS, VENDORS OR REPRESENTATIVES, EXCLUDING HOWEVER, ANY AND ALL COSTS, EXPENSES AND LIABILITIES RESULTING FROM A DEVIATION DIRECTED BY CONTRACTOR OR ITS REPRESENTATIVE IN WRITING.

24.0 Assignment

Subcontractor shall not assign this Agreement, or any part of this Agreement, or any right to any monies to be paid under this Agreement, without, on each occasion, obtaining the prior written consent of Contractor. In no case, shall approval by Contractor of the assignment of any monies to be paid under this Agreement, relieve Subcontractor from its obligations.

hereunder, or change the remaining terms of this Agreement. Any purported assignment in violation of this Section shall be of no effect

SAFETY REQUIREMENTS
Exhibit H

The Health, Safety and Environmental (HSE) Rules and Regulations contained herein are to be used as a guideline and are not all inclusive. All legal standards not specifically referenced in these rules & regulations shall apply when applicable.

HSE responsibilities are integral to the way Welded does business and Company management at all levels is dedicated to protecting the environment and to preventing harm to employees, clients, communities, and all others who could be affected by our activities

This HSE Attachment has been prepared to assist each project Work site Subcontractor in satisfying its moral, contractual and legal HSE responsibilities, in such a manner that a safe, efficient operation is assured. For additional advice and assistance each employer should consult with its HSE organization, insurance carrier or similar available sources.

It is Contractor's obligation to undertake any action, which may be necessary or required to establish and maintain safe working conditions at the Work Site.

Welded Construction has the right to stop Work whenever HSE violations are observed which could jeopardize the well being of personnel, equipment, or facilities. The expense of any such work stoppage and resultant standby time shall be to the Subcontractor's account. The failure or refusal of Subcontractor to correct the observed violation may result in the termination of the Subcontract, and/or the dismissal from the Work Site of those employees responsible for such failure or refusal.

This material must not be considered to be all inclusive as to the hazards that might be encountered, safe practices that should be performed, or safe conditions that should be maintained during the course of this project.

1.0 SUBCONTRACTOR RESPONSIBLITIES

1.1 Subcontractor's HSE Representative

1.1.1 Frequent and regular inspections of the Work site shall be made by a competent onsite HSE representative designated by Subcontractor. Unsafe acts and/or conditions noted during inspections shall be corrected immediately.

1.1.2 Subcontractor shall provide a designated onsite competent HSE representative. Such Representatives shall be fully qualified to perform the responsibilities of the position and they, or a fully qualified alternate, shall be present on the Work Site at all times when Contractor is onsite and working. Additional competent HSE personnel may be required due to geographic location, specific hazards, client requirements, or local regulatory requirements.

1.1.3 The HSE representative who, because of training and experience, shall be capable of identifying existing or potential hazards in the job(s) being performed, identifying working conditions that are unsanitary, hazardous, or dangerous to the safety and health of employees, has the



authority to take prompt action in assuring a safe work environment.

1.1.4 The HSE representative will be responsible for a continuing survey of its operations, to ensure that the probable causes of injury, accident, or incident are controlled and that operating equipment, tools and facilities are used, inspected and maintained as required by applicable HSE regulations.

1.2 Subcontractor's General Obligations

1.2.1 Subcontractor shall provide to Contractor a copy of all reports made to government agencies or insurance companies relating to any Work site accident, injury, or incident during Subcontractor's performance of the Work.

1.2.2 Subcontractor is responsible for providing and requiring the use of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.

1.2.3 Subcontractor is responsible for the development of a fire protection and prevention program conforming to OSHA, NFPA, or equivalent in-country standards. Contractor shall also comply with all fire and safety rules and regulations established on the project.

1.2.4 Any Work site HSE regulation, which exceeds the minimum standards established by regulation, shall be incorporated in Subcontractor's safety program.

1.2.5 Appropriate methods, equipment, devices and material shall be provided by Subcontractor to assure a safe work place.

1.3 Hazardous Substances

Subcontractor shall comply with the hazardous substance disclosure requirements.

1.3.1 Subcontractor is responsible for notifying Welded's HSE representative for approval of any hazardous chemicals or substances that are brought or cause to have been brought on Work site. Subcontractor shall provide Contractor with a copy of Subcontractor's Hazard Communication Program and the Material Safety Data Sheet(s) (MSDS) for the chemical(s) or substance(s) intended for use on the site. Contractor is responsible for keeping this information current.

1.3.2 The legal storage, use and disposal of wastes of any hazardous chemicals or substances are the responsibility of subcontractor.



SAFETY REQUIREMENTS
Exhibit H

1.4 **Regulatory Permits and Programs**

1.4.1 Subcontractor shall initiate and maintain such permits and programs as may be necessary to comply with requirements set forth by local, state, federal, or country specific regulations.

A copy of all such permits will be provided to Contractor upon request.

2.0 JHA – Job Hazard Analysis/ JSA - Job Safety Analysis

Subcontractor designee is required to plan their work each day and review the known hazards and corrective actions to safeguard the work with their employees by utilizing a daily JHA.

3.0 RECORDKEEPING OF INCIDENTS AND TRAINING

It is Subcontractor's responsibility to maintain all records required by OSHA, Worker's Compensation Insurance, or similar in-country regulations. This includes the maintenance of an accident log, annual summary and the posting of all prescribed posters.

4.0 SUBSTANCE ABUSE PREVENTION

The possession, use, manufacture, distribution or dispensation of any illegal drug or controlled substance is prohibited on R-O-W property. In addition, Subcontractor personnel working on Owner property are expected to report to work in proper condition and not under the influence of any controlled substance.

Subcontractor agrees to provide for work on the R-O-W or Owner property only those personnel who understand the requirement of this Article and who will comply. Subcontractor agrees that, **prior to assignment** to work under this Contract, such personnel shall be chemically screened. Subcontractor employees will also be required to submit to (urinalysis) testing based upon **reasonable** suspicion, including aberrant behavior and **post accidents**.

In addition, depending upon job requirements, Subcontractor employees may be subject to periodic random (urinalysis) testing. Subcontractor employees failing to conform to testing requirements or failing such tests will be removed from the Work site immediately.

Violation of this Article may, at Contractor's option, be deemed by Contractor to be a material breach of this Contract and subject the Contract to termination for default, as well as other remedies under contract, law, or equity.

SAFETY REQUIREMENTS
Exhibit H

5.0 FIRE PROTECTION/PREVENTION

5.1 Subcontractor shall be responsible for fire protection in its work and operational areas, including offices, tool rooms, and storage areas 24 hours per day, seven days per week through the duration of this Contract.

5.2 Subcontractor must provide approved fire-fighting equipment in adequate quantities, and its employees must be trained in the usage of such equipment.

5.3 Subcontractor is responsible for the development of a fire protection and prevention program conforming to OSHA, NFPA, or equivalent standards.

6.0 Clothing Requirements

6.1 Fire Retardant Clothing (FRC) may be required

6.2 Sandals, tennis shoes, or any other street type shoe will not be permitted. Only sturdy, leather, Safety Toed work boots are permitted.

6.3 Loose fitting clothes or jewelry shall not be worn around moving machinery, grinding operations, etc.

6.4 Hair, which could come in contact with, or be caught in machinery, shall be protected by a hard hat or hair net, as appropriate.

6.5 Contamination or cleanliness protocol may dictate the necessity to wear special Personal Protective Equipment (PPE).

6.6 Life jackets will be worn, if working over water or within 4 feet of a water body, in accordance with U.S. Coast Guard regulations.

7.0 Personal Protective Equipment

7.1 Approved hard hats meeting specifications contained in American National Standards Institute (ANSI), Z89.1-1981, Z89.2-1971, or equivalent in-country standards must be worn at all times in construction areas, lay-down yards, warehouse, fabrication shops and other designated areas.

7.2 Safety toe boots with a defined heel are required.

7.3 Safety glasses meeting specifications of ANSI Z87, or equivalent in-



country standard, with rigid side shields are required in all plant and construction areas at all times.

7.4 Approved eye and face protection (2X eye protection) is required to be properly worn at all times when in the area of operations, such as when welding, burning, grinding, chipping, chemical handling, corrosive liquids or molten materials, drilling, sawing, cutting, breaking ,hammering or otherwise impacting one object with another, driving nails, power actuated tools, concrete pouring,

7.5 To prevent hand and finger injuries, appropriate hand protection is required at all times.

7.6 NIOSH, MSHA, or equivalent in-country approved hearing and respiratory equipment shall be worn when required. The selection, fitting and maintenance requirements shall be met by Subcontractor.

7.7 Subcontractors shall provide for all necessary clothing and protective equipment required by their employees in the execution of their contract work.

8.0 Fall Protection

8.1 Fall protection shall be worn by all employees when working six feet or more above the ground or when working in a precarious position. Safety harnesses shall also be worn and attached to the tie-off rail when working out of extensible and articulating boom platforms and to vertical drop lines when working from suspended scaffolding.

8.2 Safety nets shall be provided when work places are more than 25 feet above the ground where the use of other fall protection devices is impractical.

9.0 Signs, Signals, Barricades and Lights

9.1 Signs, signals and barricades shall be visible at all times where a hazard exists.

9.2 All streets, roads, highways, and other public thoroughfares, which are closed to traffic, shall be protected by effective barricades on which shall be placed acceptable and highly visible warning signs. Barricades shall be located at the nearest intersecting public highway or street on each side of the blocked section. All signage shall comply with MUTCD, State and Local requirements.

9.3 All open trenches and other excavations shall be provided with a barricades, signs, and lights to the extent that adequate protection is provided to the public. Obstructions, such as material piles and



equipment, shall be provided with similar warning signs and lights.

9.4 All barricades and obstructions shall be illuminated by means of warning lights from sunset to sunrise. Materials stored upon or alongside public streets and highways shall be so placed, and the work at all times shall be so conducted, as to cause the minimum obstruction and inconvenience to the traveling public.

9.5 All barricades, signs, lights and other protective devices shall be installed and maintained in conformity with applicable statutory requirements and, where within railroad and highway right-of-way, as required by the authority having jurisdiction there-over.

9.6 When any work is performed at night or where daylight is shut off or obscured, Subcontractor shall, at its expense, provide artificial light sufficient to permit work to be carried on efficiently, satisfactorily a n d safely, and to permit thorough inspection. During such time periods the access to the place of work shall also be clearly illuminated. All wiring for electric light and power shall be installed and maintained in a first- class manner, securely fastened in place at all points, and shall be kept as far as possible from telephone wires, signal wires, and wires used for firing blasts.

9.7 Signs, signals and barricades shall be removed when the hazard no longer exists.

9.8 Yellow barricades are to be used for caution. Red barricades are to be used to prohibit entry.

9.9 Subcontractor's employees working in an area of potential traffic hazard shall wear approved reflective type vests in accordance with State and Local regulations.

10.0 Rigging Equipment

10.1 All rigging equipment shall be free from defects, in good operating condition and maintained in a safe condition.

10.2 Equipment shall be inspected by a designated, competent employee of Subcontractor prior to use on the Work site. Inspections shall be documented.

10.3 Subcontractor's damaged equipment shall be immediately removed from service by Subcontractor.

11.0 Hand and Power Tools

11.1 All hand and power tools, whether furnished by Subcontractor, or by Subcontractor's employee, shall be maintained in a safe condition.

11.2 Contractors shall not issue nor permit the use of unsafe hand or power tools.

11.3 All hand and power tool must be used in accordance with the manufacturer's recommendations. No handles shall be removed from power tools. All files must have handles.

11.4 Only properly trained Contractor's employees shall operate powder actuated tools.

11.5 All grinding machines shall conform to OSHA, ANSI, or equivalent in-country standards and requirements.

11.6 Cords, leads and hoses shall be kept at whatever height is necessary to be protected from traffic and creating tripping hazards.

12.0 Compressed Gas Cylinders

12.1 Compressed gas cylinders shall be secured in an upright position at all times.

12.2 When transporting, moving and storing cylinders, valve protection caps shall be in place and secured.

12.3 Cylinders shall not be hoisted by magnets or choker slings. Valve protection caps shall not be used for hoisting cylinders.

12.4 Cylinders shall be kept away from sparks, hot slag and flames, or be adequately protected.

12.5 Cylinders shall not be placed where they can become part of an electrical circuit.

12.6 Cylinders shall be labeled as to the nature of their contents.

12.7 Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials by a minimum of 20 feet (6 m), or by a non-combustible barrier at least five feet (1.5 m) high having a fire resistant rating of at least one-half hour and empty cylinders shall be separated as above from full cylinders and stored with like cylinders.

12.8 "No Smoking" signs shall be posted at storage areas and signs shall clearly indicate contents of cylinders.

12.9 Anti-flash back valves shall be provided on all oxygen and acetylene lines.

12.10 All Compressed Air Cylinders must be removed from operating plant when no longer in use and at the end of the shift.

13.0 Scaffolds

13.1 Scaffold Erection will be in compliance with OSHA 29 CFR 1926.450 or equivalent in-country standard. Workers erecting, dismantling or using scaffolds shall be trained in accordance with applicable regulations. Scaffolding shall be erected, moved or dismantled under the direction of a competent person qualified in scaffold erection.

13.2 No unstable objects such as concrete blocks shall be used to support scaffolds or planks.

13.3 Any part of a scaffold weakened or damaged shall be repaired or replaced immediately.

13.4 Safe access shall be provided to the scaffold platform. Specifically, a ladder with a safe means of access to the platform from the ladder.

13.5 Scaffolding not adaptable to guard rails shall require the use of safety harness with two lanyards attached to a secure substantial object.

13.6 Only competent person qualified in scaffolding may perform Scaffolding Work. All Scaffolds must have gates install for aggress and egress.

14.0 Jobsite Transportation Rules

14.1 Drivers of motor vehicles shall be instructed to exercise judgment as well as observe posted speed limits.

14.2 Seat belts shall be worn by all employees operating any motor vehicle and any equipment with rollover protection structures during performance of the work.

14.3 All Subcontractors' means of ingress and egress routes will be adequately marked as such, since their employees are to travel these routes only.

14.4 Use of the car's horn shall be employed for safety at blind corners, when passing, etc.

14.5 Established hand signals or turn signals are to be used.

14.6 Reckless driving or other non-observance of these instructions will be

cause for disciplinary action up to and including removal from Work site.

15.0 Equipment and Motor Vehicles

15.1 All equipment must be inspected daily and documented, before use, by Contractors' operator. Formal inspections must also be made by Contractor competent person at 90-day intervals with proper documentation maintained at the Work site.

15.2 Defective equipment shall be repaired or removed from service immediately.

15.3 All rubber-tired, self-propelled scrapers, rubber-tired, front-end loaders, rubber-tired dozers, wheel-type agricultural and industrial tractors, crawler tractors, crawler-type loaders and motor graders shall be equipped with rollover protective structures and seat harnesses.

15.4 All of Subcontractor's employees, who operate Motorized Equipment including forklifts, lulls, etc., shall be properly licensed and certified by a competent person. Copies of the certifications shall be maintained on Work site.

15.1 All equipment shall have reverse signal alarm. Any equipment with an obstructed view to the rear must have a flagman and escorted in operating units or congested areas.

15.2 Seatbelts shall be worn by all employees operating any motor vehicle and any equipment with rollover protection structures during performance of the work.

16.0 Electrical

16.1 All electrical work, installation and wire capacities shall be in accordance with the pertinent provisions of the National Electrical Code, ANSI, OSHA, or equivalent in-country standard.

16.2 Contractor to follow project lock out/tag out procedure and strictly adhere to the use of this procedure.

17.0 Ladders

17.1 The use of ladders with broken or missing rungs or steps, broken or split rails or other defective construction is prohibited.

17.2 Ladders shall extend no less than 36 inches (1 m) above landing and be secured to prevent displacement.



17.3 Portable ladders must be equipped with safety shoes.

17.4 Ladders shall be inspected before each use.

18.0 Excavations and Trenching

18.1 Prior to opening any excavation or trench, Subcontractor shall contact any necessary personnel to determine whether underground hazards, i.e., contaminated soil, containers or equipment, or installations, i.e. sewer, telephone, fuel, electric lines, etc., may be encountered and where they are located.

18.2 Excavations and trenches shall be inspected by a competent person daily and after every rainfall to determine if they are safe and have the correct documentation.

18.3 Ladders or steps shall be provided in all trenches 4 feet or more in depth. Ladders or steps shall be located to require no more than 25 feet of lateral travel before having access or egress.

18.4 Material excavated shall be stored at least 2 feet from the edge of the excavation or trench shall be shored to prevent material from falling into the excavation.

18.5 All trenches and excavations shall be properly barricaded to prevent persons from walking into them.

18.6 All walkways or ramps crossing over excavations shall be securely fastened and equipped with standard guardrails.

18.1 Excavations and trenches 4 feet in depth and greater shall be classified as a confined space.

18.2 Subcontractor will comply with all OSHA regulations.

19.0 Housekeeping and Waste

19.1 Subcontractor shall at all times keep its work area in a neat, clean and safe condition and remove from the Owner's premises and the vicinity thereof and properly dispose of all debris and rubbish caused by Subcontractor's operations. Subcontractor's cleanup responsibilities shall be continuous.

19.2 During the course of construction, all debris and scrap material shall be kept away from the work area.

19.3 Garbage and other waste shall be disposed of at frequent and regular intervals.

19.1 Subcontractor shall not pour, bury, burn, nor in any way dispose of a chemical on the Work site.

19.2 Subcontractor shall clear all combustible debris to an authorized solid waste disposal site.

20.0 Environmental Protection

20.1 Subcontractor shall determine the relevance of the environmental protection requirements contained in national, federal, state, regional and local statutes, regulations, and requirements, including permit conditions, as applicable to the scope of this Contract. Subcontractor shall comply with all applicable environmental protection requirements.

20.2 Subcontractor shall notify Contractor HSE representative of any hazardous waste it will generate during performance of the work. Contractor has the direct responsibility of maintaining proper management of these wastes while on the Work Site.

20.3 Subcontractor shall develop a Waste Management Plan that identifies the quantity and characteristics of projected waste streams, and the methods used to manage, store, transport, and dispose of the wastes. The Waste Management Plan shall address solid waste, recycled waste, hazardous waste, and any other projected waste stream.

20.4 Subcontractor shall identify and document:-

20.5 Erosion control measures to be used at the Work Site.

20.6 Air emission sources and control measures associated with the Work.

20.7 Storm-water Controls.

20.8 Liquid effluent sources and control measures, associated with the Work.

20.9 Subcontractor shall ensure personnel receive appropriate environmental training as required for the Work and that such training is documented.

20.10 Contractor shall effectively integrate environmental compliance activities with new and ongoing actions.

21.1 Resource Protection

Resources, to the extent practical, are to be preserved in their existing condition. Construction activities are confined to areas necessary to conduct the work as required by the Contract schedule, plans, and specifications. Environmental protective measures and procedures are provided to limit

habitat disruption and mitigate environmental damages that may occur during construction. Site features subject to environment protection include, but are not limited to:

- Existing roads and access routes
- Cultural and archeological sites
- Threatened and endangered wildlife and habitat.

21.1 Subcontractor's personnel shall not deface, injure, or destroy shrubs, grass, or other landscaping in the project or surrounding area, or remove or cut same without permission from Contractor.

21.2 Impacts to existing landscape shall be minimized when selecting sites for field offices and storage areas.

21.3 Construction activities shall be confined to areas defined by the Contract.

22.0 Sanitary Waste

Sewage is normally disposed of through connections to a sanitary sewage system. Where such systems are not available, sanitary conveniences shall be provided.

22.1 Sanitary conveniences shall be properly secluded form public observation and maintained.

22.2 Upon completion of the work, sanitary conveniences shall be removed from the premises, leaving the premises clean and free from nuisance.

23.0 Temporary Facilities and Work Areas

Field offices, staging areas, stockpile storage areas, and temporary buildings must be placed in designated areas. Temporary movement or relocation of facilities is to be made only when approved by Contractor.

23.1 Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby waters.

23.2 Temporary excavation and embankments for work areas shall be controlled to protect adjacent areas from despoilment.

23.3 Signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or other vestiges of construction shall be obliterated prior to final acceptance of the Work.

SAFETY REQUIREMENTS
Exhibit H

24.0 **Historical and Archaeological Resources**

If historical or archaeological resources such as artifacts, features, deposits, human bones, or other cultural remains are encountered, work is to be stopped in that area and Contractor shall be immediately notified.

25.0 **Noise**

25.1 The noise standard shall not be exceeded unless a variance is granted pursuant to the appropriate local regulation.

26.0 **Erosion and Sediment Control**

26.1.1 Erosion and sediment control measures shall be provided in accordance with applicable requirements.

26.1.2 Reasonable precautions shall be employed to prevent run-on/run-off from construction areas, other than through approved environmental controls, especially where the water may be exposed to soils and excavated areas.

26.1.3 Precautions shall be employed to prevent storm water and other run-off from leaving the site, other than through approved environmental controls, during activities such as excavation and trenching.

26.1.4 Precautions shall be employed to prevent or limit the impoundment of water, or conditions which could lead to or increase the impoundment of water, within the construction areas.

26.1.5 Areas of bare soils exposed by construction activities are to be held to a minimum.

26.1.6 Side slopes and back slopes shall be protected upon completion of rough grading.

26.1.7 Earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils.

27.0 **Pollution Prevention / Waste Minimization**

27.1 Activities shall be conducted such that the use of toxic substances is minimized, and pollutants released into the environment are eliminated or minimized.

27.2 Priorities of an effective pollution prevention and waste minimization program shall include:

- Source reduction
- Minimizing packaging waste
- Salvage and reuse
- Salvage for resale or donation
- Recycling
- Compliant disposal

28.0 General

28.1 Contractor reserves the right to regulate smoking, open fires, carrying matches, and welding permits when and where deemed necessary in the interest of safety. Subcontractor shall be responsible for and so enforce Subcontractor's personnel.

28.2 The fire watch shall be maintained during lunchtime and other breaks and shall continue for 30 minutes after welding operations have been completed. This individual shall keep the area clear of unauthorized personnel during welding operations.

28.3 No matches except safety matches are permitted on the Work site.

28.4 No firearms or ammunition are allowed on the Work site.

29.0 FIRST AID & INJURY REPORTING REQUIREMENTS
Subcontractor's Responsibilities

29.1.0 To treat all First Aid cases and report to Contractor.

29.1.0.1 Provide adequate number of first aid kits and supplies. First aid kits shall be easily accessible, and shall be in a weatherproof container with individual sealed packages for each type of item.

29.1.0.2 Subcontractors must orally notify Contractor's HSE representative, or Superintendent IMMEDIATELY after any injury to Subcontractor's employee(s) or employee(s); equipment or motor vehicle damage; or fire or property damage.

29.1.1 **Incidents and Medical Procedures**

29.1.1.1 Incidents Including Near Misses

All incidents (near misses included) shall be communicated immediately to Contractor's HSE representative or designee.

29.1.2 First Aid (minor cuts, scratches, bruises, etc.)

29.1.2.1 Each occupational illness or injury shall be reported by Subcontractor's to Contractor's HSE representative.

All incidents are to reported in writing within 24 hours to contractor Root cause analysis within 48 hours Disposition of Recordability within 7 days

EXHIBIT I

Attachment F

Contractor Safety & Security Requirements

Contractor Prequalification:

Those contractors not in the ISNET system must go through the "Manual Prequalification" process (PQF). Contractors represent and warrant that: (1) it has received, reviewed and completed the Sunoco Contractor Prequalification Package, which includes the Sunoco Contractor Prequalification form (PQF); (2) all of the representations, warranties and other information provided by Contractor in the PQF are complete and accurate as of the date of the execution of this Contract; and (3) if any facts or circumstances arise that render Contractor's representations and warranties in the PQF inaccurate or incomplete, Contractor will provide prompt written notice to the Contract Specialist, updating the information in the PQF and explaining the circumstances requiring the update. Contractor's failure to comply with the requirements of this Section shall constitute a material breach of this Contract and justify termination. Further, Sunoco, in its sole discretion, may terminate this Contract if it determines that the updated information provided by Contractor impacts Contractor's qualifications or ability to perform the Work. The PQF completed by Contractor and all updates thereto are incorporated into this Contract by reference.

General

It is the goal of Sunoco Logistics Partners L.P. (Owner) to manage all construction projects to a plan of "Zero Incidents." Owner's contract representative will provide all general contractors working in and around projects with an overview of Owner's Safety and Security requirements. Each contractor will comply with all federal, state and local regulations, and any safety requirements Owner has listed pertinent to the job. The standard safety practices for general industry, construction, and the petroleum business must also be followed. All Sub-Contractors are also bound by the same regulations as the general contractor, and it is the general contractor's responsibility to inform and require all sub-contractors to follow Owner's safety and security regulations. The Contractor shall conduct operations in a manner which shall prevent personal injury and property damage through fires, accidents, or otherwise, and to this end the Contractor shall furnish all necessary protective equipment and devices as stated in the Work Permit or other documentation, unless specified otherwise in the Contract. **Contractor shall provide at no cost to Owner all personal protective equipment, air monitoring devices, and other safety equipment unless otherwise specified by the Contract.**

Applicable to Nederland Terminal, Marcus Hook Industrial Complex, and Eagle Point Only:
All Contractor and subcontractor's personnel, who shall be working at Nederland Terminal, regardless of the type or duration of Work, shall have at no cost to Owner successfully completed "Basic Orientation Plus" and "Sunoco Logistics Site Specific" training through the Industrial Safety Training Council (ISTC) or an Association of Reciprical Safety Councils (ARSC) training facility. Proof of completed training will be required prior to entering the facility.

Owner's representative will conduct a Pre-Bid meeting, a Pre-Construction meeting, or both. During these meetings, OWNER'S representative will provide an overview of the contents of this document, discussing the minimum general and project specific safety requirements. Each contractor is then required to designate a project safety representative, develop a project

Attachment F

specific Site Safety Plan and train all project personnel and subcontractor personnel in the project specific Site Safety Plan **PRIOR** to the commencement of any work. The plan and its contents are discussed in more detail in this document.

Pre-Construction Meeting

All Contractor and subcontractor's personnel, who shall be working at Owner facilities or Right of Ways, regardless of the type or duration of Work, shall attend a pre-construction safety meeting. This meeting shall be conducted by Owner's representative, and shall generally cover Owner's facility safety procedures and operating procedures. Safety Data Sheets (SDSs) for Owner's hazardous materials present at the worksite will also be reviewed at this meeting. Also at that time if the contractor will be introducing chemicals or hazardous materials to the Sunoco site they must provide these SDS's to Sunoco prior to bringing them onsite.

Owner's representative and all Contractor personnel during the safety meeting shall review this Section, Safety and Security Requirements. A safety meeting attendance sheet shall be completed and filed in Owner's facility project files.
All subsequent workers, primary contractor employees, or sub-contracted employees must have the same information presented to them. This communication and acquisition of signatures is the responsibility of the Primary Contractor Rep.

The Work Permit form shall be reviewed during the Safety Kick-off meeting.

Start-of-Work

Upon daily entrance onto Owner's work sites, all Contractor personnel shall identify themselves to Owner's representative, and will sign-in. Owner's representative shall be notified whenever entering or exiting Owner's facility. The prime contractor shall require all sub-contractors to also sign-in and inform the Owner representative of their arrival and departure.
The Contractor shall obtain the required Work Permit(s), before starting any work. The Contractor must inform Owner's representative of all work to be conducted at the worksite and any safety concerns on a daily basis. Owner's representative shall be involved in the general supervision and direction of the work dealing solely with the contractor and **not** with subcontractors. Owner's representative shall have full authority to stop the work when such stoppage may be deemed necessary for safety purposes and/or to ensure proper execution of the contract.

Safety Procedures

Health & Safety Plan

The Contractor shall prepare a Health & Safety Plan for the Work that is being performed. This will include:

- An organization structure chart with the safety representative designated,
- A work plan with a list of tasks,
- Emergency Procedures with directions to the closest hospital,
- Emergency phone number list,
- Specific safety requirements for each task listed in the work plan.

Additional procedures may be required, examples of which are in the list below. A copy of this plan shall be available to Owner or other outside authorities on-site for inspection.

Attachment F

The project specific "Site Safety Plan" shall address the following items to the satisfaction of the construction manager. The construction manager will review the site-specific safety hazards with the contractor before the starting of any work activities. The site safety plan need only address the items that pertain to the work being conducted, which may include:

- Work Permits, including Hot Work (Owner procedure will take precedence)
- Confined Space
- API Tank Ventilation Procedure
- Tank Entry and Work Area Ventilation
- Excavations and Trenching (Owner procedure will take precedence)
- Flammable and explosion Hazards
- Cranes, Rigging and Cribbing (Owner procedure will take precedence)
- Ladders and Scaffolding requirements
- Electrical Lockout and Tagout Procedures
- Emergency Response Requirements
- Emergency Response contact list
- Accident and Injury reporting
- Hazard Communication
- Proper Personal Protective equipment required (Owner procedure will take precedence)
- Product Transfer on Site - (Tank to Tank or Tank to Truck)
- Line and Tank Purging of Product
- The Contractor is encouraged to contact the Owner Health, Environmental & Safety (HES) Department or facility representative for assistance in developing the project-specific "Site Safety Plan."

Emergency Procedure

- Each site shall develop, post, distribute, and maintain an emergency response list. This emergency response list shall be maintained by the general contractor, managed by the construction group and issued before the start of construction. The general contractor shall update the list as changes occur. An evacuation area will be designated for each job site.
- Owner reserves the right to have the Contractor stop all Work at any time job conditions occur which would endanger personnel or property of either Owner or the Contractor should such Work continue. The Contractor's personnel shall follow the instructions given by Owner's representative during an emergency.
- If a hazardous material spill occurs, only properly trained personnel should attempt cleanup activities. All other personnel should notify Owner's representative immediately.

- The Contractor will make each of his Sub-Contractors aware of these procedures and requirements.

Electrical Equipment - Lockout and Tagout Procedures

- Before any Work is started on electrical equipment, the electrical circuit must be de-energized by turning the control switch to the off position and then locked or sealed in that position.
- Owner's representative must be advised of such de-energizing before work. All OSHA lockout / tag-out procedures must be followed.

Asbestos

Some pipeline coatings may contain non-friable asbestos. Worker exposure monitoring for airborne asbestos has been conducted while removing the pipeline coatings using methods described below. All contractors conducting pipeline coating removal must use the methods listed below and ensure that contractors' employees have been trained in these methods as well as the requirements specified in the OSHA Asbestos Construction standard (29 CFR 1926.1101). Refer to the Training section of this document for more information regarding training requirements for working with pipeline coatings containing asbestos.

Unless there is evidence to the contrary, assume that the pipeline coating contains asbestos, and use the following procedures or equivalent:

- The material shall not be sanded, abraded, or ground.
- All removal or disturbance of pipeline asphaltic wrap shall be performed using wet methods.
- Manual methods, which prevent the material from becoming 'non-intact', shall be used as follows:
    - Wet down the pipe coating with amended water (water with a few drops of a mild dish soap such as Dawn)
    - Strike the coating with a hammer, cracking the coating into relatively large pieces, catching the pieces that fall on plastic sheeting below the pipe.
    - Scrape off any coating that remains on the pipe using a drawknife as needed to prepare the pipe for repair.
    - Decontaminate tools using amended water and double-bag and disposable PPE, plastic sheeting and pipe coating in 6 mil poly bags for disposal
    - Repair pipe as needed
    - Re-coat pipe with non-asbestos coating and backfill excavation.
- Use of respirators, labeled disposal bags, and performance of air monitoring are NOT required for removal of intact non-friable asbestos pipe coating.

Chemicals (Hazard Communication)

Upon request, the Contractor shall supply the Owner representative with MSDSs for all hazardous materials and supplies brought on the job site which are being used, stored, or installed.

Attachment F

Confined Space Entry Procedures

- Owner requires the Contractor to provide an Oxygen level meter, a combustible gas meter, and detectors for any hazardous substance that could be in or near the confined space. The Contractor is responsible for monitoring the atmosphere whenever his employees are working in a confined space.
- All contractors shall strictly comply with requirements of 29 CFR 1910.146, particularly as it pertains to the confined space attendant. This attendant must be positioned so that all contractor personnel working within the confined space can be kept under observation and communication shall be maintained at all times.
- The contractor shall provide a qualified confined space entry supervisor who shall be responsible for all health, safety, and environmental aspects of confined space work.
- For aboveground storage tanks containing petroleum products, an Oxygen meter and combustible gas meter are acceptable at most facilities. Owner's representative shall use the facility's own monitoring equipment to confirm proper operation of the Contractor's equipment. This shall be done upon issuance of the Work Permit requiring such equipment. The contractor must conduct follow up testing and continuous monitoring. To assure reliability, all air quality testing equipment must be calibrated before confined space entry.
- A Work Permit must be issued before entry into any confined space.
- Owner representative will discuss the following information regarding confined space entry with the Contractor:
    - The Contractor shall be informed that some Owner workplaces contain confined spaces requiring permits and that confined space entry is allowed only through compliance with the confined space entry program.
    - The Contractor shall be informed of the location of all confined spaces on the worksite.
    - The Contractor shall be apprised of the elements, including the hazards identified and Owner's experience with the confined space, that make the space in question a confined space requiring a permit.
    - The Contractor shall be apprised of any precautions or procedures that Owner has implemented for the protection of personnel in or near confined spaces where the Contractor shall be working.
- Owner shall coordinate confined space entry operations with the Contractor, when both Owner's personnel and Contractor's personnel will be working in or near the confined space.
- The Contractor shall be debriefed at the conclusion of the confined space entry operation regarding the confined space entry program followed and regarding any hazards confronted or created in confined spaces during entry operations.
- The Contractor shall obtain any available information regarding confined space entry hazards and entry operations from Owner.
- The Contractor shall inform Owner of the confined space entry program that the Contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation. These procedures are to be implemented according to Owner's Confined Space Entry Procedures.

Attachment F

Hot Work

- Hot work is defined as any operation or procedure involving sources of ignition or temperatures sufficient to cause ignition of a flammable mixture. This includes work requiring the use of welding, burning, grinding, or soldering equipment, blow torches, some power driven tools, portable electric equipment not intrinsically safe or contained with an explosion-proof housing, sand blasting, or operating internal combustion engines.
- Unless otherwise specified, the contractor shall provide the equipment and qualified personnel to test the work site with a calibrated combustible gas indicator, and hot work shall not commence until the area is tested and declared vapor free and safe for hot work. **A hot work permit** issued by Owner's representative will be used in conjunction with the monitoring. Adequate ventilation shall be provided to disperse gases, which might otherwise accumulate during progress of work. Where conditions are such that flammable vapors could be generated, the work site shall be kept under surveillance by a combustible gas monitor in continuous use. All hot work shall cease whenever the atmosphere in the vicinity of work reaches 10% of the lower flammable limit (LEL) or greater. Work shall not resume until the source of vapors has been located and controlled.

Fire Protection

- Fire protection and extinguishing equipment must be available and deployed as necessary in all work areas, especially where "Hot Work" is being performed. This includes one or more personnel designated as fire watches, as appropriate. The Contractor will furnish this equipment unless otherwise specifically agreed to in writing by Owner's representative. Before beginning work, the contractors shall determine the type and amount of fire equipment needed.
- The fire watch shall man extinguishers during hot work operations. Depending on the scope of hot work, more than one fire watch may be required.
- Whenever a fire extinguisher has been used, this fact must be reported immediately to Owner's representative. The used fire extinguisher must either be removed from the area or be identified as being spent, or immediately recharged.

Personal Protective Equipment (PPE)

- When working on a Owner job, the Contractor's personnel are required to wear ANSI-approved safety glasses with attached side shields and to be fully clothed, including appropriate foot wear and full length trousers. All PPE must be worn per the manufacturer's instructions. Owner's PPE requirements are attached to the end of this document.
- Special protection, such as particulate respirators or air breathing equipment, may be required especially when working in or around equipment, which has contained leaded gasoline or where exposure of friable asbestos has been identified. The contractor shall ask the Owner representative regarding the PPE requirements. The representative will specify other PPE requirements or exceptions on the work permit.
- For greenfield projects the contractor should follow the Owners welding PPE requirements.

Attachment F

Cranes, Rigging and Cribbing

All Contractors and their Subcontractors utilizing cranes, rigging and cribbing during execution of their work shall be solely responsible for the proper setup, inspection, operation, maintenance, and disassembly of said equipment. Contractor and/or

Subcontractor management shall not allow untrained or unauthorized personnel to perform any activities involving the assembly, use, and disassembly of cranes, rigging and/or cribbing.

Contractors and or their Subs should insure that they check with Sunoco safety as Sunoco has specific requirements for Crane Activities. Sunoco requires a lift plan for the following scenarios:

Lift Plans - A Crane Lift Plan is required under any one of the following conditions:

- The lift is greater than 70% of the cranes maximum capacity
- The lift is over pipeline that has the potential to contain product or residual
- The lift is within 20 ft of energized electrical lines
- The lift requires two or more cranes (a dual lift)
- Lifts while a diver is in the water
- The lifted load will be out of the view of the operator
- Personnel lift

The Lift Plan (Appendix A) must be completed and approved prior to work commencing. This means it must be completed in time for all applicable personnel to review and approve. Alternative lifting schemes must be evaluated with consequence potential considered. A trial/test lift (away from the equipment) will be required when possible. Redundant rigging must be considered, all of the rigging components (shackles, slings, etc.) must be inspected by the qualified personnel, and the rigging point for the object being lifted must be inspected. The Crane & Load placement and rigging diagram must be complete including dimensional placement of the crane showing any large.

Substance Abuse

- The use of or possession of alcohol, illegal drugs, or the improper use of legal drugs is prohibited within Owner facilities. The contractor's employees, agents, or suppliers shall not enter Owner facilities while under the influence of illegal drugs or alcohol.
- Entry onto the property of Owner constitutes consent on the part of all contractor employees to submit to a substance test when reasonable cause warrants such testing. Such testing shall be conducted at the direction of Owner and at the sole expense of the contractor. Any contractor employee testing positive for alcohol, illegal drugs or the improper use of legal drugs shall be removed from the facility.
- Any Contractor employee removed from Owner facilities under the Substance Abuse policy will be removed for a minimum of one year.

- Any contractor employees using prescription medicine shall notify their supervisor, and where the medication could affect the safe performance of the work, job reassignment will be made. Anyone violating the requirements of this section shall be removed from the facility.

Equipment Inspection

- All equipment, including heavy equipment, must be inspected before use for safe operations.

Training Requirements

GHS Hazard Comunication Training

- If any Contractor personnel handle potentially hazardous materials, then they are required to have the most up to date GHS Hazard Communication Training. This training includes a review of SDSs for materials being used as part of the Work, either Owner's or Contractor's materials, plus a review of safety precautions, first aid measures and personal protective equipment required for safe handling of these materials.

Asbestos

Some pipeline coatings may contain **non-friable** asbestos. Contractors conducting pipeline coating removal must ensure that contractors' employees have been trained in these methods as well as the requirements specified in the OSHA Asbestos Construction standard (29 CFR 1926.1101). Refer to the pipeline coating procedure on page three of this document. When installing, removing, repairing, or maintaining intact pipe line asphaltic wrap which contains asbestos fibers encapsulated or coated with bituminous or resinous compounds, compliance with all the requirements below are deemed to be in compliance with the OSHA Construction Standard for Asbestos, 29CFR1926.1101(g)(11) and (k)(9)(viii).

All employees performing work on intact pipeline asphaltic wrap shall be trained as follows under 29CFR1926.1101(k)(9)(viii).

- The training must be conducted in a manner that the employee can understand;
- The employee must be informed of the following:
  - Methods of recognizing asbestos;
  - The health effects associated with asbestos exposure
  - The relationship between smoking and asbestos in producing lung cancer
  - The nature of operations that could result in asbestos exposure, necessary protective controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, waste disposal procedures, and instruction in these control procedures
  - The purpose, proper use, fitting instructions, and limitations of respirators
  - The appropriate work practices for performing the asbestos job

- Medical surveillance program requirements (non-required for work tasks with Negative Exposure Assessment)
- The content of OSHA Standard 29CFR1926.1101
- The names, addresses, and phone numbers of public health organizations which provide information, materials and/or conduct programs concerning smoking cessation
- The requirements for posting signs and affixing labels and the meaning of the required legends for such signs and labels.

HAZWOPER (HAZardous Waste Operations and Emergency Response) Training

- For Contractors conducting emergency response or spill clean-up activities, the Contractor employees will have the required OSHA Hazwoper training (29 CFR 1910.120) prior to beginning work. All other contractors will have the Hazwoper Awareness Level training.
- If the Contractor may be involved in an uncontrolled release but will not clean up the hazardous material, then **First Responder awareness level** training is required. This level requires sufficient training or proven and documented experience in specific competencies. Hazardous communication training and general awareness as to the chemicals and hazards located at the site will meet this requirement. This type of training usually involves one to four hours at the work site
- If the Contractor may be involved in an uncontrolled release and will clean up a small release of hazardous material with absorbent pads, then **First Responder operations level** training is required. This is an 8-hour training course.
- If the Contractor may be involved in an uncontrolled release, plan on patching or plugging the release, and will clean up a large release of hazardous material, then **Technician level** training is required. This is a 24-hour training course.
- If the Contractor is going to be involved in disposal and/or clean up of hazardous materials from Owner's facility, then a 40-hour Hazwoper training course is required.

Electrical Equipment - Lockout and Tagout

- The Contractor's personnel are required to have Lock Out/Tag Out training if they will be performing the necessary task to de-energize, lockout and tag out electrical and power sources and equipment on Owner projects.

Confined Space Entry

- All contractor personnel shall have **Confined Space Entry** training prior to entering storage tanks or other areas with limited entrance/egress that are determined to be permit required confined spaces by the Owner representative.

Site Safety Plan

- Each contractor is required to train all project personnel and sub contractor personnel in the project specific site safety plan **PRIOR** to commencement of any work.

Attachment F

PPE

All contractor personnel shall be trained by the contractor on the proper use, care, and storage of the personal protection equipment required during the project.

Training Documentation

- **Before arriving on site** for the start of the Work requiring any of the above training, the Contractor shall give Owner's representative either copies of certificates from a training agency for each employee, or a letter from the Contractor. This letter shall state the names of Contractor employees who attended the training, the name of the trainer and Company who conducted the training, a brief description of the training session content, the length of the training session and when the training took place. No Work shall be allowed to start until the necessary documentation is received.
- Applicable to Nederland Terminal, Marcus Hook Industrial Complex, and Eagle Point Only:

  All Contractor and subcontractor's personnel, who shall be working at these locations, regardless of the type or duration of Work, shall have at no cost to Owner successfully completed "Basic Orientation Plus" and "Sunoco Logistics Site Specific" training through the Industrial Safety Training Council (ISTC) or an Association of Reciprical Safety Councils (ARSC) training facility.

  Proof of completed training will be required prior to entering the facility.
- Owner shall not be responsible for any costs incurred by the Contractor if Owner rejects any of their personnel due to a lack of Owner-required training.

Operational Procedures

Licenses

- The Contractor shall provide Owner with copies of all required Licenses prior to the start of the Work, as appropriate, e.g., lead abatement, asbestos removal, etc.

Area Restrictions

- Contractor personnel must **not** enter any area other than the one in which the Contractor is performing Work. In going to and from such work areas, Contractor's employees must remain on established routes specifically agreed to by Owner representatives.

Blocking Roadways

- In order that fire and emergency vehicles shall have clear access to all parts of the facility, tools, equipment, vehicles, debris, or mobile equipment should not block roadways.
- In the event it is necessary to block a roadway temporarily, permission must be secured from Owner's representative.

Compressed Gas Cylinders

- The following rules must be followed concerning all compressed gas cylinders, including but not limited to, air, oxygen, acetylene, nitrogen, ammonia and hydrocarbons:

- Cylinders must be removed immediately upon the completion of a job. Owner's representative must specifically authorize exceptions to this.
- Cylinders must be used, stored, and transported with extreme care.
- Cylinders must be securely fastened and supported at all times. Chains are recommended for fastening large equipment.
- Protective caps must be kept on all cylinders not in use; if a cylinder is left unattended with a hose and torch connected, the cylinder valve must be closed, regardless of the duration of time unattended
- Oxygen and acetylene cylinders stored in the same location must be segregated by a minimum distance of (20 ft), or a five-foot-tall non-combustible fire wall capable of withstanding a fire for one-half hour.
- The number of cylinders used on a job in an operating area must be kept to an absolute minimum.
- Cylinders being transported to or from a job by truck or other conveyance must have protective caps and be surely fastened and supported (or be in a suitable cylinder basket). They may not be carried in a choke hitch.
- Cylinders must be stored away from an operating area with protective caps in place and securely fastened or supported.
- Oxygen cylinders must not be used or stored where oil spills could come into contact with the valve or attached equipment.

Excavations

- All excavations over 5 feet are to be sloped, stepped back, or shored with adequate designed shoring to protect the contractor's and Owner's personnel and in accordance with federal OSHA standards. Excavations less than 5 feet will require sloping at the discretion of an Owner's competent person.
- All surface encumbrances must be removed or supported to safeguard employees.
- The location of underground utilities and other installations, such as sewer, power lines, water lines, etc. must be determined prior to initiation of excavation through use of the One Call system.
- Utility Companies or Owners shall be contacted and advised of proposed work prior to work.
- When excavations approach the approximate location of underground installations, the location of the installation shall be located using safe and acceptable methods.
- Structural ramps used by employees for entry and egress from the excavation must be designed by competent person
- No employee shall be permitted underneath loads handled by lifting or digging equipment.
- If there is the potential for a hazardous atmosphere, the Contractor will conduct appropriate air monitoring.

- Ventilation shall be provided, when necessary to assure that workers are not exposed to atmospheres containing concentrations of flammable gases in excess of 10 % of the Lower Explosive Limit (LEL)
- Workers may not work in excavations where water has accumulated or is accumulating unless adequate precautions have been taken to assure protection of workers form the hazards of such accumulation.
- Daily inspections of sites must be performed by a "competent person" to determine if cave-ins, failures of protective systems, hazardous atmospheres, or other hazardous conditions have developed.
- Owner's confined space entry procedures are to be followed for excavations, which meet the definition of a confined space.
- Contractor must also provide necessary guardrails and night lighting along trenches, roadways, or cross walks where operating personnel might be injured.
- Excavations greater than 20' depth require protection designed by a professional engineer.
- Protective shield systems must be from a shield manufacturer, not "home-made."
- Travel distance within an excavation shall not exceed 25' to the nearest ladder or other means of egress.

Dike Walls, Fire Walls and Operating Areas

- No cars, trucks or other internal combustion engine equipment, nor any fire or heat producing equipment shall be permitted inside storage tank dike walls or fire walls without first having obtained a Work Permit from Owner's representative. Contractor equipment must **not** be left operating while unattended in a hazardous area unless specifically authorized by Owner.
- A Work Permit shall be required for the opening of any dike wall or firewall. Any dike wall or firewall opened under authority of such permit shall be closed at the end of each and every workday. An exception to this requirement would involve a dike wall or firewall where **no liquid material is being stored.**

Temporary Lights & Flashlights

- Lights and flashlights used must be of the explosion-proof type approved as 'Permissible' by Underwriter's Laboratory and/or Mine Safety and Health Administration when used in a potentially explosive area.
- Portable electric lighting used in wet or moist location shall be operated at a maximum of 12 volts.
- No artificial lights, other than the Owner's-approved artificial lighting shall be used inside a storage tank until the tank has been tested and found to be gas free.

Housekeeping

- During the course of the project, all construction operations, alteration, or repairs, shall be performed in accordance with specific OSHA standards (29 CFR 1926.25) applying to housekeeping at worksites. The following general housekeeping requirements shall be strictly adhered to:

- Form and scrap lumber with protruding nails, and other debris, shall be kept cleared from work areas, passageways, and stairs
- Combustible scrap and debris shall be removed at regular intervals in a safe manner.
- Containers shall be provided and used for the collection and separation of waste, trash, oily and used rags, and other refuse.
- Over-weighting of floors and catwalks with equipment and debris is to be avoided.
- Curbing is to be installed on scaffolds, catwalks, and upper floor when necessary to prevent debris from falling or spilling overboard.
- Stairways and passageways are to be kept open and free of obstruction.

Injury to Contractor Employee

- It is the Contractor's responsibility to provide first aid injury treatment, transportation, hospital arrangements, investigation and OSHA reporting of all accidents occurring to Contractor's employee while on Owner's premises or job.
- The Contractor is requested to report such injury promptly to Owner's representative so that appropriate reports can also be filed in Owner's office.
- The Owner Incident Reporting and Investigation form (SIRIS form) shall be completed for each contractor injury on a Owner work site.

Line Shut-off

- The opening and closing of any of Owner's valves is to be performed only by Owner's representative, or under his direct supervision.

Parking

- Owner shall cooperate when possible in efforts to provide Contractor's employees parking space within a reasonable distance of the Work site.
- Advance notice of requirements must be given to Owner's representative, who shall advise the Contractor of the approved parking area and the gate which must be used by Contractor's employees to reach the designated area.
- Some facilities require vehicles to be backed into parking places. The Contractor will check with the Owner representative regarding the parking requirements.
- Contractor's employees must not use parking facilities provided for Owner's employees, unless Owner authorizes such action.
- All Contractor equipment or vehicles should be removed from hazardous areas (e.g.. tank farms) during non-working hours

Photographs

- Photographic equipment is prohibited, except as specifically authorized in writing by Owner.
- Photography using a flash requires a hot-work permit in an operations area.

Attachment F

Railroad Right-of-Ways and Railroad Cars

- Standard clearance of 10 feet from the closest rail shall be maintained so as not to interfere with use of the tracks.

Sanitary Facilities

- The Contractor and subcontractor shall provide sanitary facilities for their personnel, which shall meet applicable local codes.
- The Contractor's personnel are not to use Owner's toilet, locker room, or wash up facilities unless specifically authorized to do so by Owner's representative.

Ladders and Scaffolding

- Ladders and Scaffolds must be of standard approved construction, and must be erected to meet OSHA, state and local codes. The ladders and scaffolds must be constructed/used in accordance with the manufacturer's guidelines.

Signs

- The erection of signs by the Contractor on Owner's property should be discussed with Owner's representative.
- When necessary to erect signs, permission must be given by Owner's management.

Smoking

- Smoking by Contractor personnel in Owner's facility or other work areas is prohibited except where specifically designated by Owner.
- Owner's designated smoking areas or shelters may be used by the Contractor's employees if specifically authorized by Owner's representative. If overcrowding results because of the large number of Contractor employees, Owner's representative shall deny permission to use Owner's facilities.
- Requests for additional or alternate Contractor smoking areas must be submitted to Owner's representative. Written approval must be obtained prior to erection or use of such alternate facilities or area.

Temporary Buildings

- Temporary buildings must not be erected without first obtaining written approval of Owner's representative and then only in accordance with such approval.

Temporary Walks, Floors and Roadways

- Temporary walks, floors and roadways must be installed whenever an existing walk, floor or roadway is disturbed. Owner's representative must approve variance from this.

Utility Connection

- Connection to any of the facility's utility systems (water, electric, plant air, etc.) must be approved through Owner's representative.

Attachment F

Hazard Assessment
(Review with personnel & contractors before a project begins)

Location: _____ Date: _____

Emergency phone numbers:

Sunoco contact person _____ At _____ - _____
Ambulance phone # _____ - _____
Hospital phone # _____ - _____
Fire Department # _____ - _____
Directions to hospital: _____ - _____

_____

_____

_____

Potential Hazards[1]

_____ Exposure to vapor
_____ Pressure in the line
_____ Release of hydrocarbon with pressure
_____ Fire/explosion
_____ Equipment connections between underground and surface
_____ Electric exposure
_____ Welding flash
_____ Slips, Trips, Falls
_____ Terrain
  _____ Rocky
  _____ Slippery
  _____ Steep
  _____ Other

_____ Hydrogen Sulfide present
_____ Benzene present
_____ Trenching, sloping, shoring
_____ Confined space entry
_____ Unmarked pipelines, cables, and other hazards
_____ Poison ivy, oak, etc.
_____ Housekeeping
_____ Pinch points
_____ Slings/Rigging failing
_____ Falling objects
_____ Noisy Equipment
_____ Other Hazards _____
_____ Other Hazards _____

Required PPE under certain conditions

	Condition	**Precaution**
_____	Line is open	Flame resistant clothing
_____	Noisy Equipment	Hearing protection
_____	Handling materials	Work gloves appropriate for task
_____	Materials stored overhead	Hard hats
_____	Exposure to liquid hydrocarbons	Rubber gloves, e.g., Nitrile
_____	Welding	Welding goggles or hood
_____	When Total Hydrocarbons > 100PPM Measured with GasTech or Draeger tube	Respirators

Review MSDS for product hazards and chemical components

Attachment F

Insert contractor company name here

Site Safety Plan for

Insert Project Name

Insert Sunoco Logistics Facility Name here

Emergency Phone Numbers:

Fire 911

Ambulance 911

Police 911

Hospital

Hospital Name	Insert name here
Address	Insert address here
Directions	Insert detailed directions

Insert Contractor Company Name Emergency Phone Numbers:

Name	Title	Numbers

Sunoco Logistics Emergency Phone Numbers:

Name	Title	Numbers

Attachment F

Serious Incidents:

24 Hour Sunoco Logistics Emergency Number: 800-SUN-CALL (800-786-2255)

Sunoco Logistics Management: Insert Contact Name

Insert Phone No. (Office)

Inset Phone No. (Cell)

Insert Phone No. (Home)

Emergency Response:

In the event of a fire, the following steps will be taken:

1. The first person on the scene shall assess the situation and call Insert emergency number, 911 or direct dial giving the dispatcher all pertinent information including the terminal address, which is:
   Insert Sunoco Logistics Facility Address
2. Sunoco Logistics facility manager and operator will also be informed immediately.
3. After the initial steps of responding to an emergency are performed the Insert Contractor Company Name employees must report to the emergency assembly area.

In the event of an injury/incident, the following steps will be taken:

1. The first person on the scene shall assess the situation. If medical assistance above and beyond First Aid is needed an ambulance shall be called for. The person calling for an ambulance shall stay on the line and give the dispatcher all pertinent information including the facility address, which is:
   Insert Sunoco Logistics Facility Address
2. In the event of a minor injury that just requires first aid the first qualified person on the scene shall assist the injured person. If the minor injury requires medical attention the injured person should go to:
   Insert local hospital name and address
3. All injuries must be immediately reported to the Insert Contractor Company Nameforeman who will notify Sunoco Logistics representatives.

Emergency Assembly Area:

Employees will proceed Insert/specify designated assembly point (be specific). All personnel will remain there until everyone that signed in to the Insert Sunoco Logistics Facility Name are accounted for according to the evacuation plan posted in the facility office.

Hazard Communications:

MSDS for all chemicals that are being used on the job are Specify location of Contractor MSDSs. All MSDS for chemicals used by Insert Contractor Company Name employees are also held by their safety director Insert

Attachment F

Contractor Safety Director Name. MSDSs for all chemicals used by Sunoco Logistics can be found Insert specific Sunoco Logistics Location

Work Permits:

Upon daily entrance into the terminal, the contractor foreman must check in with Sunoco Logistics representatives and sign off on all work to be conducted on the worksite that day and any related safety concerns. The foreman shall acquire the appropriate permits before performing any work that day.

Energized Equipment – Lockout Tagout Procedures

Before any work is performed on and energized equipment, that equipment shall be locked and tagged out according to insert Contractor Company Nameand Sunoco Logistics Lockout / Tagout procedures.

Personal Protective Equipment:

All personnel will wear the personal protective equipment appropriate for the task(s) being performed. This will include the following:

- ☐ Hard Hat,
- ☐ Safety Glasses with ANSI Z87 approved side shields,
- ☐ Face shields,
- ☐ Gauntlet or welding style work gloves and long sleeve shirts will be worn when grinding, buffing, or torch cutting.
- ☐ Low voltage gloves (with a glove rating of 1KV) for performing hot tap procedure on CB-11.
- ☐ ABC type Fire extinguishers will be available for all employees performing hot permit work.
- ☐ Respirators will be worn for all employees working in areas that may have a hazardous atmosphere, which can be abated by the use of a respirator.
- ☐ Employees subject to working areas that have hazardous atmospheres must test that area before entering with the use of an air-sampling meter appropriate for gasses, mists or vapors present in that area.

Confined Space Work

All confined space work will be performed according to insert Contractor Company Name and Sunoco Logistics "Confined Space Entry" procedures.

Hot Work:

1. A hot work permit must be obtained from Sunoco Logistics representatives before performing any hot work.
2. Before and while performing any hot work within the terminal the work site must be tested with a combustible gas indicator. insert Contractor Company Name employees will use a calibrated combustible gas indicator that measures both LEL and oxygen. The air sampling equipment will be calibrated before its use each shift.
3. Two 30 lb. ABC type fire extinguishers will be present when any hot work is performed. A fire watch is required during hot work.

Fall Protection

All work over the height of 6' will be done according to 29 CFR 1926 Subpart M (Fall Protection).

Other:

Any work outside the scope of these safety guidelines will be followed according to the insert Contractor Company Name Safety Program or as directed by insert Contractor's Safety Directr name.

Attachment F

The following THREE EXAMPLES are provided to assist in completion of JSAs (Job Safety Analysis) for the project. Add, delete, or modify as necessary.

Insert company name here

JSA

Insert Project Name

Insert Sunoco Logistics Facility Name here

Job	*Hazards*	*Abatement*
Transporting personnel and equipment to the job site	-Vehicular Failures -Driver Failures -Environmental Failures	-Drivers will hold the appropriate licensing for the class of vehicle they are driving. -Driver will perform a pre trip inspection before vehicle departs.
Move in to the job site	-Personnel unfamiliar with job site -Lost of loads due to improper material handling procedures	-Hold a site specific safety meeting with all company personnel -Hold a pre-job safety meeting -Provide training for proper material handling and rigging. -Tour the work site and review the work to be done with all personnel.
Excavating & Dirt Removal	-Contaminated Soil -Damage to underground piping utilities or conduit -Back Injuries -Struck by injuries	-Observe and test soils for contamination during excavation. -Separate contaminated soil -Locate all underground utilities and other obstructions. -Barricade equipment-operating area. -Hand dig delicate obstructions. -Use proper hand digging techniques to avoid back injuries.

Attachment F

Insert company name here

JSA

Insert Project Name

Insert Sunoco Logistics Facility Name here

Job	*Hazards*	*Abatement*
Installation of Petroleum Counter, Blend Valve, and Temperature Probe.	-Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout PP2 at JB120
Energizing Tank Lighting and Offload area Lighting	- Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout PP2 at JB120
Installation of pump #2 (P-2)	-Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout motor starter #2 (MS-2) at (SW-3) disconnect/breaker.
Installation of pump #3 (P-3)	-Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout motor starter #3 (MS-3) at (SW-3) disconnect/breaker.
Installation of pump #4 (P-4)	-Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout motor starter #4 (MS-4) at (SW-3)
Remove motor starter #3 (MS-3)	-Possibility of Electrical Shock	-Lockout Tagout procedures will be followed to Lockout (SW-3)
Circuit Breaker 11 (CB-11) Hot Tap Procedure	-Possibility of Electrical Shock	-Employee will wear all appropriate PPE including but not limited to low voltage gloves (1KV), Hard Hat with face shield or goggles and Rubber insulated shoes or mat. -Employee will have a hot tap watch. -Employee will not wear any conductive or loose clothing.
Installation of lighting power conduit into terminal office	-Foreign object in eye	-Employee will wear appropriate eye and face protection during block drilling procedures.

Attachment F

Insert company name here

JSA

Insert Project Name

Insert Sunoco Logistics Facility Name here

Job	*Hazards*	*Abatement*
Wire Pulling	-Strained body -Lacerations to hands	-Employee will use correct body positioning when pulling wire. -If tension of wires being pulled exceeds that which is reasonably handled by one employee wire pulling equipment will be used. -Employee will wear appropriate gloves if there is a possibility of lacerations to the hands due to sharp objects near the pulling area
Cutting and Threading of rigid pipe.	-Lacerations to hands. -Foreign objects in eyes -Cutting Fluid -Employee being caught in cutting head of threading and cutting equipment. -Possibility of electrical shock	-Gloves will be worn when there is a chance of lacerations to the hands -Safety glasses will be worn at all times -MSDS for cutting fluid will be kept on site. -Employee will not wear loose clothing or other articles of clothing that could become caught in the cutting and threading head. -Cutting and threading equipment will be used with GFCI protection.
Electrical Grounding	-Possibility of burns from Cad welding process -Ignition possibilities	-Employee will wear gloves during Cadwelding operations. -Employee will follow all the guidelines of a hot work permit

Attachment F

		when performing Cadwelding procedures.
Installation of Tank Lighting	-Falling hazards	-Employee will wear appropriate fall protection when working off of unguarded surfaces over 6'.

SUNOCO PIPELINE LP
WELDING PROCEDURE SPECIFICATION

WPS No.: SP-332S$_C$-6G_X65
Rev.: 3 - 8/11/15
Page 1 of 1

Welding Process: Manual Shielded Metal-Arc	Pipe/Fitting Grades Qualified: Grade API 5L X65 ,
Diameter Group: > 12 3/4"	Wall Thickness Group: 3/16" Through 3/4"

TEST MATERIAL DATA

Diameter: 20"	Wall Thickness: 0.375"	Grade: API X65	Mfg.: As Specified

WELDING PARAMETERS

Pass Number	Electrode Size	AWS Class No.	Process	Amperage Range		Voltage Range		Travel Speed (IPM)			Heat Input Kjoules/in		
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	AVG.	MIN.	MAX.	AVG.
1 Root	1/8"	E6010	SMAW	90	140	20	34	4	12	8	9.00	71.40	40.20
2 Hot	5/32"	E8010-G	SMAW	110	160	20	34	6	14	10	9.43	54.40	31.91
3 Fill	5/32"	E8010-G	SMAW	110	160	20	34	6	14	10	9.43	54.40	31.91
4 Cap	3/16"	E8010-G	SMAW	110	200	20	34	6	14	10	9.43	68.00	38.71

Note: *E8010G, E8010-P1 and Arc 80 are in the same AWS Group and may be used interchangeably per project specification. Additional passes, if required due to wall thickness variations, shall be made in accordance with the parameters of the above.

Visual Inspection Results: Satisfactory	Radiographic Examination Results: N/A

TENSILE STRENGTH TEST DATA

Specimen Number	Fracture Location Pipe	Fracture Location Weld	Specimen Width	Specimen Thickness	Area Sq. In.	Load (Lbs.)	Ultimate Tensile Strength (PSI)
T-1	Pipe		1.12	0.383	0.429	37,654	87,770
T-2	Pipe		1.14	0.383	0.437	37,654	86,165
T-3	Pipe		1.14	0.384	0.438	38,952	88,931
T-4	Pipe		1.12	0.380	0.426	38,303	89,913

BEND and NICK BREAK TEST DATA

Root or Side Bend		Face or Side Bend		Nick Break Specimen	
Specimen No.	Results	Specimen No.	Results	Specimen No.	Results
RB-1	Satisfactory	FB-1	Satisfactory	NB-1	Satisfactory
RB-2	Satisfactory	FB-2	Satisfactory	NB-2	Satisfactory
RB-3	Satisfactory	FB-3	Satisfactory	NB-3	Satisfactory
RB-4	Satisfactory	FB-4	Satisfactory	NB-4	Satisfactory

Destructive Test Results: Acceptable

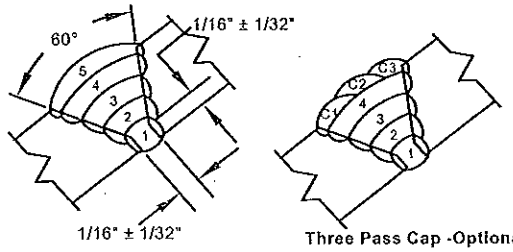
WELDING CONDITIONS

No. of Welders:	Root Pass	Remaining Passes	Welder Names: C Spoon / R. Copley
1Min-2 Preferred	1	4 or More As Required	Test Welding Temp. and Conditions: 80 degrees; In Shop

Welding Machines: Miller/Lincoln As Required	Welding Technique: Stringer/Weave; E6010 / E8010-G , E8010-P1 and ARC 80 may be used	
Cleaning: Power Brushing / Grinding	Welding Direction: Vertical Down	Position: 45^0 - Fixed (6G)
Clamp Type/Removal: External; After 50% of Root Pass completed		Current/Polarity: DCRP
Time Between Passes: Root/Hot Pass - 5 min.; Hot Pass/Remaining Passes - Completed without delay, not to exceed 72 hrs.		
Preheat Temperature: When Required Min.150 degree F../ Max 350 degree	Temp. Method: Propane	Temp. Control: Infared Pyrometer or Temp Stick

Preheat shall be applied at all ambient temperatures below 60 degrees F. and when C.E. is greater than 0.43%. Pipe to be dry.

Weld Joint Design



Three Pass Cap -Optional

Additional Information:

Voltage was measured across arc for procedure development.

A change from the above electrode size to one nominal size smaller or larger is permissible. See Above Parameters.

Tie-in and weld repairs require preheat as described above.

This procedure was prepared in accordance with API 1104 Twentieth Edition.

Sunoco Pipeline LP Representative: Jay Dresh Date: 8/11/15

WPS No.:
SP-332S$_{C/LH}$-6G_X65_6010-8018

SUNOCO PIPELINE LP
WELDING PROCEDURE SPECIFICATION

Rev.:0 8/11/15
Old Precedure - N/A (new)

Welding Process: Manual Shielded Metal-Arc	Pipe/Fitting Grades Qualified: API 5L X65
Diameter Group: > 12 3/4"	Wall Thickness Group: 3/16" Through 3/4"

TEST MATERIAL DATA

Diameter: 20"	Wall Thickness: 0.375"	Grade: API 5L X65	Mfg.: N/A

WELDING PARAMETERS

Pass Number	Electrode Size	AWS Class No.	Process	Amperage Range		Voltage Range		Travel Speed (IPM)			Heat Input - KJoules/In.		
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	AVG.	MIN.	MAX.	AVG.
1 (Root)	1/8"	E6010	SMAW	90	130	20	28	4.0	12.0	8.0	9.00	54.60	31.80
2 (Hot)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40
3 (Fill)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40
4 (Cap)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40

Note: Additional passes, if required due to wall thickness variations, shall be made in accordance with the parameters of the last pass.

Visual Inspection Results: Acceptable	Radiographic Examination Results: N/A

TENSILE STRENGTH TEST DATA

Specimen Number	Fracture Location Pipe	Fracture Location Weld	Specimen Width	Specimen Thickness	Area Sq. In.	Load (Lbs.)	Ultimate Tensile Strength (PSI)
T-1	Pipe		1.12	0.378	0.423	38,952	92,007
T-2	Pipe		1.11	0.379	0.421	38,303	91,048
T-3	Pipe		1.14	0.376	0.429	38,302	89,357
T-4	Pipe		1.14	0.380	0.433	38,952	89,917

BEND and NICK BREAK TEST DATA

Root or Side Bend		Face or Side Bend		Nick Break Specimen	
Specimen No.	Results	Specimen No.	Results	Specimen No.	Results
RB-1	Passed	FB-1	Passed	NB-1	Passed
RB-2	Passed	FB-2	Passed	NB-2	Passed
RB-3	Passed	FB-3	Passed	NB-3	Passed
RB-4	Passed	FB-4	Passed	NB-4	Passed

Destructive Test Results: Acceptable

WELDING CONDITIONS

No. of Welders	Root Pass	Remaining Passes	Welder Name: Ryan Copley/ Cory Spoon
1 Min. ; 2 Preferred	1	2 through 12; As Required	Test Welding Temp. and Conditions: 80 deg Icedale Weld Shop

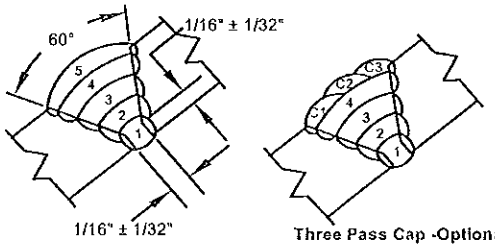
Welding Machines: Lincoln/Miller or as required		Welding Technique: Stringer Bead
Cleaning: Power Brush / Grinder	Welding Direction: Pass 1 Downhill / Pass 2 through 12 Uphill	Pipe Position: 6G
Clamp Type/Removal: External / Remove upon 50% Root Complete		Current/Polarity: DCRP

Time Between Passes: Max 5 min. between Root and Hot Pass, remaining passess completed without delay, not to exceed 72 hrs

Preheat Temperature: Min 150 ^{0}F; Max 350 ^{0}F	Method: Propane	Temp. Control: Infared Pyrometer or temp. stick

Preheat shall be applied at all temperatures below 60 ^{0}F. and when C.E. is greater than 0.43%. Pipe to be dry.

Weld Joint Design



Additional Information:

Voltage was measured across arc for procedure development.

Low Hydrogen electrodes shall be properly stored in a holding oven, at min 250 ^{0}F, during welding process.

A change from the above electrode size to one nominal size smaller or larger is permissible. See Below.

Tie-in and weld repairs require preheat as described above.

Optional Welding Parameters

Electrode Dia.	Amps	Volts	Travel Speed (IPM)
1/8" 8018	90 -135	20 - 28	3 -9

This procedure was prepared in accordance with the Twentieth Edition of API 1104

Sunoco Pipeline LP Representative: Jay Dresh / Albert Smith	Date: 8/11/15

SUNOCO PIPELINE LP
WELDING PROCEDURE SPECIFICATION

WPS No.: SP-432S$_C$-6G_X70
Rev.: 0 - 6/19/15

Welding Process: Manual Shielded Metal-Arc	Pipe/FittingGrades Qualified: Grade API 5L X70
Diameter Group: > 12 3/4"	Wall Thickness Group: 3/16" Through 3/4"

TEST MATERIAL DATA

Diameter: 16"	Wall Thickness: 0.375"	Grade: API X70	Mfg.: N/A

WELDING PARAMETERS

Pass Number	Electrode Size	AWS Class No.	Process	Amperage Range		Voltage Range		Travel Speed (IPM)			Heat Input KJoules		
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	AVG.	MIN.	MAX.	AVG.
1 Root	1/8"	E6010	SMAW	90	140	20	34	4	12	8	9.00	71.40	40.20
2 Hot	5/32"	E8010-G	SMAW	110	160	20	34	6	14	10	9.43	54.40	31.91
3 Fill	5/32"	E8010-G	SMAW	110	160	20	34	6	14	10	9.43	54.40	31.91
4 Cap	3/16"	E8010-G	SMAW	110	200	20	34	6	14	10	9.43	68.00	38.71

Note: *E8010G, E8010-P1 and Arc 80 are in the same AWS Group and may be used interchangeably, per project specification. Additional passes, if required due to wall thickness variations, shall be made in accordance with the parameters above.

Visual Inspection Results: Satisfactory	Radiographic Examination Results: N/A

TENSILE STRENGTH TEST DATA

Specimen Number	Fracture Location Pipe	Fracture Location Weld	Specimen Width	Specimen Thickness	Area Sq. In.	Load (Lbs.)	Ultimate Tensile Strength (PSI)
T-1	Pipe		1.030	0.375	0.386	37,004	95,804
T-2	Pipe		1.040	0.375	0.390	36,355	93,218
T-3	Pipe		1.030	0.373	0.384	37,004	96,318
T-4	Pipe		0.967	0.377	0.365	35,057	96,162

BEND and NICK BREAK TEST DATA

Root or Side Bend		Face or Side Bend		Nick Break Specimen	
Specimen No.	Results	Specimen No.	Results	Specimen No.	Results
RB-1	Passed	FB-1	Passed	NB-1	Passed
RB-2	Passed	FB-2	Passed	NB-2	Passed
RB-3	Passed	FB-3	Passed	NB-3	Passed
RB-4	Passed	FB-4	Passed	NB-4	Passed

Destructive Test Results: Acceptable

WELDING CONDITIONS

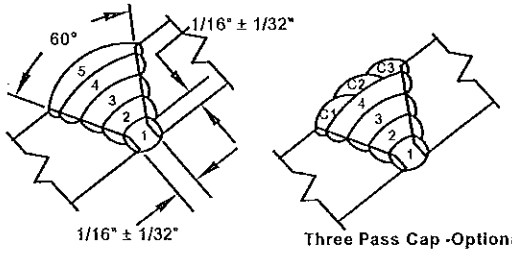
No. of Welders:	Root Pass	Remaining Passes	Welder Names: R. Copley/J. Peters
1 Min; 2 preferred	1	4 or As Required	Test Welding Temp. and Conditions: 80 degrees; In Shop
Welding Machines: Miller/Lincoln as required		Welding Technique: Stringer/Weave; E6010 / E8010-G , E8010-P1 and ARC 80 may be used interchangeably	
Cleaning: Power Brushing / Grinding		Welding Direction: Vertical Down	Position: 45^0 - Fixed (6G)
Clamp Type/Removal: External; After 50% of Root Pass completed			Current/Polarity: DCRP

Time Between Passes: Root/Hot Pass - 5 min.; Hot Pass/Remaining Passes - Completed without delay, not to exceed 72 hrs.

Preheat Temperature: Min 150 degree ^{0}F./ Max 350 degree ^{0}F	Preheat Method: Propane	Temp. Control: Infared Pyrometer or Temp Stick

Preheat shall be applied at all ambient temperatures below 60 ^{0}F. and when C.E. is greater than 0.43%. Pipe to be dry.

Weld Joint Design



Additional Information:

Voltage was measured across arc for procedure development.

A change from the above electrode size to one nominal size smaller or larger is permissible. See Above Parameters.

Tie-in and weld repairs require preheat as described above.

This procedure was prepared in accordance with API 1104 Twentieth Edition.

Sunoco Pipeline LP Representative: Jay Dresh Date: 6/19/15

WPS No.:
SP-432S$_{C/LH}$6G_X70_6010-8018

SUNOCO PIPELINE LP
WELDING PROCEDURE SPECIFICATION

Rev.:0 8/11/15
Old Precedure - N/A (new)

Welding Process: Manual Shielded Metal-Arc	Pipe/Fitting Grades Qualified: API 5L X70
Diameter Group: > 12 3/4"	Wall Thickness Group: 3/16" Through 3/4"

TEST MATERIAL DATA

Diameter: 16"	wall Thickness: 0.375"	Grade: API 5L X70	Mfg.: N/A

WELDING PARAMETERS

Pass Number	Electrode Size	AWS Class No.	Process	Amperage Range		Voltage Range		Travel Speed (IPM)			Heat Input - KJoules/In.		
				MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	AVG.	MIN.	MAX.	AVG.
1 (Root)	1/8"	E6010	SMAW	90	130	20	28	4.0	12.0	8.0	9.00	54.60	31.80
2 (Hot)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40
3 (Fill)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40
4 (Cap)	3/32"	E8018	SMAW	80	105	20	28	3.0	8.0	5.5	12.00	58.80	35.40

Note: Additional passes, if required due to wall thickness variations, shall be made in accordance with the parameters of the last pass.

Visual Inspection Results: Acceptable	Radiographic Examination Results: N/A

TENSILE STRENGTH TEST DATA

Specimen Number	Fracture Location		Specimen Width	Specimen Thickness	Area Sq. In.	Load (Lbs.)	Ultimate Tensile Strength (PSI)
	Pipe	Weld					
T-1	Pipe		1.170	0.375	0.439	40,250	91,738
T-2	Pipe		1.110	0.372	0.413	37,654	91,190
T-3	Pipe		1.120	0.373	0.418	38,302	91,684
T-4	Pipe		1.110	0.374	0.415	38,952	93,829

BEND and NICK BREAK TEST DATA

Root or Side Bend		Face or Side Bend		Nick Break Specimen	
Specimen No.	Results	Specimen No.	Results	Specimen No.	Results
RB-1	Passed	FB-1	Passed	NB-1	Passed
RB-2	Passed	FB-2	Passed	NB-2	Passed
RB-3	Passed	FB-3	Passed	NB-3	Passed
RB-4	Passed	FB-4	Passed	NB-4	Passed

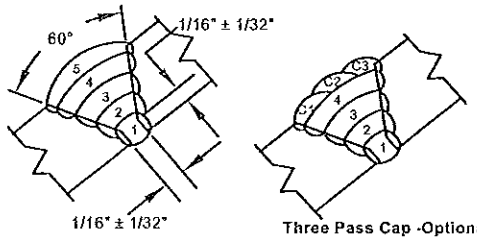
Destructive Test Results: Acceptable

WELDING CONDITIONS

No. of Welders	Root Pass	Remaining Passes	Welder Name: Ryan Copley/ Cory Spoon
1 Min. 2 Prefered	1	2 through 12, as required	Test Welding Temp. and Conditions: 80 deg Icedale Weld Shop

Welding Machines: Lincoln/Miller or as required		Welding Technique: Stringer Bead
Cleaning: Power Brush / Grinder	Welding Direction: Pass 1 Downhill / Pass 2 through 12 Uphill	Pipe Position: 45^0 - Fixed 6G
Clamp Type/Removal: External / Remove upon 50% Root Complete		Current/Polarity: DCRP
Time Between Passes: Max 5 min. between Root and Hot Pass, remaining passess completed without delay, not to exceed 72 hrs		
Preheat Temperature: Min 150 ^{0}F; Max 350 ^{0}F	Preheat Method: Propane	Temp. Control: Infared Pyrometer or temp. stick
Preheat shall be applied at all ambient temperatures below 60 ^{0}F. and when C.E. is greater than 0.43%. Pipe to be dry.		

Weld Joint Design



Additional Information:

Voltage was measured across arc for procedure development.

Low Hydrogen electrodes shall be properly stored in a holding oven, at min 250 ^{0}F, during welding process.

A change from the above LH electrode size to one nominal size larger is permissible. See Below.

Tie-in and weld repairs require preheat as described above.

Optional Welding Parameters

Electrode Dia.	Amps	Volts	Travel Speed (IPM)
1/8" 8018	90 -135	20 - 28	3 -9

This procedure was prepared in accordance with the Twentieth Edition of API 1104

Sunoco Pipeline LP Representative: Jay Dresh / Albert Smith	Date: 8/11/15