Filing Receipt

Received - 2022-04-13 02:41:28 PM
Control Number - 52485
ItemNumber - 149

SOAH DOCKET NO. 473-22-1073
DOCKET NO. 52485

APPLICATION OF SOUTHWESTERN PUBLIC SERVICE COMPANY TO AMEND ITS CERTIFICATE OF CONVENIENCE AND NECESSITY TO CONVERT HARRINGTON GENERATING STATION FROM COAL TO NATURAL GAS	**§ § § § § § § §**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

REBUTTAL TESTIMONY
of
MARK LYTAL

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

(*Filename*: LytalRebuttal.docx; *Total Pages*:110)

Table of Contents

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
AXM	Alliance of Xcel Municipalities
Commission	Public Utility Commission of Texas
FEED	Front End Engineering Study
GADS	Generating Availability Data System
Harrington	Harrington Generating Station
kW	Kilowatt
MW	Megawatt
O&M	Operations and Maintenance
SPS	Southwestern Public Service Company, a New Mexico corporation
Xcel Energy	Xcel Energy Inc.

LIST OF ATTACHMENTS

Attachment	Description
ML-R-1	Harrington FEED Study *(Filename:* Attachment ML-R-1.pdf*)*

REBUTTAL TESTIMONY
OF
MARK LYTAL

I. WITNESS IDENTIFICATION

Q. Please state your name and business address.

A. My name is Mark Lytal. My business address is 790 Buchanan Street, Amarillo, Texas 79101.

Q. By whom are you employed and in what position?

A. I am employed by Xcel Energy Services Inc., the service company subsidiary of Xcel Energy Inc. ("Xcel Energy"), as Director, Regional Capital Projects in the Projects Department of Energy Supply, which is the generation operation and maintenance ("O&M") business unit of Xcel Energy.

Q. On whose behalf are you testifying in this docket?

A. I am testifying on behalf of Southwestern Public Service Company, a New Mexico corporation ("SPS").

Q. Are you the same Mark Lytal who filed direct testimony on behalf of SPS in this docket?

A. Yes.

II. SUMMARY OF TESTIMONY

Q. What is the scope of your rebuttal testimony?

A. My rebuttal testimony responds to certain issues raised and recommendations proposed by the following Intervenor and Staff witnesses:

- Scott Norwood, who testifies on behalf of the Alliance of Xcel Municipalities ("AXM");
- Devi Glick, who testifies on behalf of the Sierra Club; and
- John Poole, who testifies on behalf of Public Utility Commission of Texas ("Commission") Staff.

Q. Please summarize your rebuttal testimony.

A. In short, Mr. Norwood's testimony does not accurately portray Harrington Generating Station's ("Harrington") ability to act as a peaking resource in the Southwest Power Pool day-ahead market. His recommendations to extend the life of certain other SPS gas-fired facilities would also carry their own costs and thus are not practical. Mr. Norwood's suggestion that certain units at Harrington could be "mothballed" for a time period also carries the potential for significant added costs. Additionally, SPS's projected ongoing capital expenditures for Harrington and the projected cost of building a pipeline in different sizes to the plant, are all reasonable and are based on SPS's actual experience in operating similar assets. Ms. Glick's testimony generally includes no specific challenge to any of SPS's estimates and simply speculates that certain costs may be higher in the future. The Commission should give greater weight to SPS's actual experience in evaluating the evidence presented in this case and, consistent with

Commission Staff's recommendation, approve SPS's request to convert all Harrington units to natural gas-fired generation. Finally, SPS has reviewed Mr. Poole's recommendations related to working with landowners during the pipeline construction and has no objection to those recommendations.

III. RESPONSE TO AXM WITNESS MR. SCOTT NORWOOD

Q. Mr. Norwood argues that the Harrington units are not ideally suited for daily cycling operations and that because all the units are more than 40 years old, they may experience lower operating availability. Do you have any thoughts on Mr. Norwood's concerns?

A. Yes. As SPS witness William A. Grant notes in his rebuttal testimony, the Harrington units are easily capable of serving as a peaking resource in the day-ahead Southwest Power Pool market and their ramp rates are easily sufficient in the event of an unexpected loss of voltage or capacity on the system. Under the circumstances in which the plant is expected to run and, given the relatively good shape that the plant is in due to SPS's diligent maintenance, the units are not expected to experience lower operating availability. In fact, Harrington has been operating in the day-ahead market for several years and has been modifying its operational procedures and equipment to allow the units to be more versatile in the market. Thus, Harrington is already acting like a peaking plant at different times during the year with its units able to start each day, even today, while operating on coal. With gas as the fuel source, it is anticipated that the units will be even more responsive and flexible. One should remember also that Harrington not only offers energy into the market, it also has huge reactive power capability, voltage support, and frequency support.

Q. Mr. Norwood also suggests that SPS might defer the need for replacement of Harrington by deferring the planned retirements of 650 megawatts ("MW") of capacity supplied by other SPS gas-fired units. Do you agree with Mr. Norwood that deferring the planned retirement of other gas-fired SPS units is possible?

A. I do not agree that deferring retirements of SPS's oldest gas plants is a viable choice. First, some of the units that are scheduled to retire in the near future or have been retired recently have issues that would require significant capital investment to be able to safely operate any longer. For instance, Cunningham 1 would need to have the Low-Pressure Turbine replaced, which would require a $10 million investment to get the turbine in a condition to run. This investment would not address the remaining issues in the plant.

Additionally, the other units referenced by Mr. Norwood would require even more investment to operate reliably and efficiently. To this end, five of SPS's gas plants would not be good candidates for extension solely due to the need to invest substantial amounts for renewed safe operation. Of SPS's remaining units scheduled to be retired between now and 2030, only 515 MW of generation could be potentially maintained, which is less than half of the capacity of Harrington and less than the 650 MW proposed by Mr. Norwood. Many of these units will also have reached 60 years of service by the end of 2024 and have issues that may also impact the ability to be extend their lives by that date. In fact, SPS's current

estimate for additional capital necessary to extend the 515 MW provided by potentially maintainable units to 2030 is $35 million. Extensions beyond 2030 would require additional life management studies and would, if feasible, require even more additional capital to gain more life. A chart summarizing SPS's gas fleet, retirement dates, lives, and MW gained by potential extension is provided below.

UNIT NAME	NET DEPENDABLE CAPACITY (MW)[5]	IN-SERVICE DATE	CURRENT LIFE	SERVICE LIFE	PLANNING RETIREMENT DATE	MW GAIN BY EXTENDING LIFE TO 2030	COMMENTS
Steam Production - Gas/Oil							
Jones Unit 1	243	1971	51	60	2031		
Jones Unit 2	243	1974	48	60	2034		
Plant X Unit 1	38	1952	70	67	2019	0	Units have reached end of life. Extensive Costs to extend
Plant X Unit 2	90	1953	69	66	2019	0	Units have reached end of life. Extensive Costs to extend
Plant X Unit 3	0	1955	67	67	2022[7]	0	Unit retired in 2022.
Plant X Unit 4	190	1964	58	63	2027	190	
Steam Production - Gas							
Cunningham Unit 1	68	1957	65	62	2019	0	Units have reached end of life. Extensive Costs to extend
Cunningham Unit 2	171	1965	57	60	2025	0	Environmental commitments require retirement by 2028
Maddox Unit 1	112	1967	55	61	2028	112	
Nichols Unit 1	107	1960	62	62	2022	107	
Nichols Unit 2	106	1962	60	61	2023	106	
Nichols Unit 3	244	1968	54	62	2030		
Other Production - Combustion Turbine (Gas)							
Cunningham Unit 3	106	1997	25	43	2040		
Cunningham Unit 4	103	1997	25	43	2040		
Jones Unit 3	166	2011	11	45	2056		
Jones Unit 4	168	2013	9	45	2058		
Maddox Unit 2	61	1975	47	50	2025[4]	61	
Maddox Unit 3	See Note 3	1963	59	62	2025[4]		
Other Production - Combustion Turbine (Oil)							
Quay County	17	2013	9	21	2034		
Total Gas Dependable Capacity	**2233**		**Total Gas Dependable Capacity Retained**			**515**	

Q. Would it be possible to "mothball" any units at Harrington under the deferred retirements strategy suggested by Mr. Norwood?

A. It might be possible to "mothball" the units at Harrington. Mothball is a status recognized by the Southwest Power Pool (North American Electric Reliability Corporation Generating Availability Data System("GADS") and is defined by Institute of Electrical and Electronic Engineers Standard 762 and GADS as "the state in which a unit is unavailable for service but can be brought back into service after some repairs with appropriate amount of

notification, typically weeks or months." However, there are costs associated with "mothballing" a unit and associated risks.

Q. Please explain what costs might be involved if SPS were to attempt to "mothball" any of the Harrington units for a period of time.

A. As described above, the equipment would have to be maintained and "laid-up" in a way to maintain its integrity and prevent damage from occurring while not in operation. Special shut down procedures would have to be developed and implemented. Use of blanketing gases on steam cycle components, chemical treatment of water systems, treatment and ongoing conditioning of oil systems, maintenance of freeze prevention systems, and exercise of certain mechanical systems are some examples, but not all, of ongoing work needed to maintain a facility. Depending on the length of downtime, the startup of the unit after mothball status can be extensive. Even with the best procedures for laying up equipment, much of the equipment will need to be inspected prior to startup to verify integrity and functionality. All of these efforts associated with both in laying up a unit and restoring a unit for service are costly and the cost to maintain the equipment during down time should be factored in.

Q. Do you have additional concerns with mothballing the generating units at Harrington?

A. Yes. If the unit is down for more than three years, it also will forfeit its interconnection rights into the transmission system. To then reconnect to the system, the generation would need to go through the expensive and time-

consuming Generator Interconnection Process through the Southwest Power Pool.

Q. If SPS loses the name plate capacity at Harrington, how much might it cost to regain that nameplate capacity?

A. The last published interconnect study by the Southwest Power Pool stated a value of $934/kilowatt ("kW") for the upgrade costs for new generation interconnecting to the transmission system. As such, if SPS were to lose its interconnection rights, by "mothballing" Harrington for more than three years, the current costs to reestablish its interconnection rights to the grid would be $981 million and it would take 3-5 years to accomplish.

IV. RESPONSE TO SIERRA CLUB WITNESS MS. DEVI GLICK

Q. Ms. Glick argues that SPS's sustaining capital expenditure assumption of $3.75 million per year following conversion is "extremely low and unsupported." How do you respond?

A. SPS's estimate of sustaining capital expenditures at Harrington is based on its actual experience operating natural gas generation assets similar in nature to a converted Harrington plant. It is also based on a five-year capital budget that has been approved by SPS management. Put differently, SPS is planning (assuming SPS receives regulatory approval to convert the facility) to manage its capital expenditures consistent with the assumptions in SPS witness Ben R. Elsey's model - the number is not just a rough estimate.

Q. How did SPS arrive at its estimate of $3.75 million per year in sustaining capital expenditures for each Harrington unit?

A. SPS maintains a five-year capital budget that is prepared each year, updated based on actual projects that have been identified for review, and approved through the governance process of leadership at Xcel Energy. I utilized the actual projects costs included in that budget along with an emergent contingency to address unknown failures for the two years (2025 and 2026) to come up with ongoing capital requirement projections for Harrington. These values were then supplied to Mr. Elsey for modeling purposes.

Q. How do you respond to Ms. Glick's arguments related to the operation of Harrington as a coal plant, Sargent and Lundy's estimated capex for a gas plant, and reference to a prior SPS rate case?

A. The sources used by Ms. Glick are not useful in assessing the potential future capital needs at Harrington because none of them provide an "apples to apples" comparison with the type of facility that Harrington will be following conversion. To this end the Sargent and Lundy's study itself acknowledges that it includes average expenditures for all facilities in the U.S. and states:

> "Since the EMM is a large-scale model, it is conceptually designed to represent plant types as averages rather than as individual plants." (page 32 in the study).

More importantly, the Sargent and Lundy's study values are based on a plant that has an average capacity factor, for a plant that is 40 years old, of approximately 25% (graph on page 26). As Mr. Elsey's rebuttal testimony demonstrates, a capacity factor of 25% is not representative of the expected future capacity factor for Harrington and therefore any cost values based on it are flawed. With respect to Ms. Glick's reference to SPS's 2019 rate case, as I note below, past expenditures at Harrington or other SPS natural gas-fired facilities are not a good proxy for Harrington's future investment needs because the plant will run less often following conversion. For instance, as Mr. Elsey's rebuttal testimony demonstrates, Ms. Glick's estimate for ongoing sustaining capital investment using SPS's own power plants for her data source is largely driven by the inclusion of a 2019 Maddox Station

capital investment. Maddox Station is a relatively small natural gas-fired facility that needed more investment than normal in 2019. Under Ms. Glick's methodology, when the Maddox Station data is removed or revised consistent with a more normal year (such as the test year utilized for the 2021 Texas Rate Case (7/1/19-9/30/20) figure of $60,678.48 for necessary capital investment at Maddox Station), SPS's actual average of sustaining capital investment across its entire natural gas-fired generation fleet in 2019 begins to look much closer to the $3.75 million used by SPS – even if one does not account for the manner in which Harrington will operate post-conversion.

Q. How does the manner in which Harrington will operate post-conversion make Ms. Glick's future capital Harrington expenditure projection less reliable than SPS's?

A. Ms. Glick compares the need for on-going capital expenditures at Harrington with gas plants that run more frequently than Harrington will following conversion. Her comparisons might be "apples to apples" if Harrington were projected to run as a base load resource following conversion (similar to its historical use as coal-fired facility). However, as Ms. Glick's own direct testimony points out, Harrington is not expected to be used as frequently after conversion.[1] It is a matter of simple logic that a plant running 10% of the time should endure less "wear and tear" than the same plant running 50% of the time – in the same manner that a vehicle

[1] Direct Testimony of Devi Glick at 28-29.

putting 10,000 miles on its odometer per year will need less repair on an on-going basis than a vehicle putting 100,000 miles per year on its odometer. Given the number of hours per year that Harrington is expected to run after conversion, $3.75 million remains a reasonable estimate. Ms. Glick's alternate estimate, because it is neither based on Harrington itself or its actual expected use, is not.

Q. Ms. Glick also argues that SPS's assumptions for savings that SPS could experience if it shut down one or two units are substantially understated. Do you agree?

A. No. SPS estimated that the pipeline buildout costs might be $17.5 million less if only one Harrington unit were converted (two units retired). The reduced cost was determined, in consultation with a gas supply expert, by scaling the cost estimate for the proposed conversion of three units. However, as noted in my direct testimony, if either two or three units are converted at Harrington, the facility will require a 20" natural gas pipeline. Thus, the cost to build the pipeline stays the same in the two unit and three-unit conversion scenarios. The cost estimate was developed through a thorough Pipeline Front End Engineering Study ("FEED") prepared by EN Engineering, a third-party professional design firm. The FEED study is attached to my rebuttal testimony at Attachment ML-R1, for reference.

Q. What are the primary cost drivers of the pipeline build?

A. As provided in Attachment ML-1 to my direct testimony, the materials cost associated with the gas pipeline are only 39% of the project estimate. Labor,

land acquisition, permitting, and other costs associated with the pipeline build are unlikely to be lower using smaller pipe.

Q. Ms. Glick expresses a concern that SPS might not be able to secure a firm gas contract that will give it access to enough gas to run each plant at full capacity during only peak times. Do you share Ms. Glick's concern?

A. No. SPS currently has firm gas supply contracts for all of its natural gas-fired plants. The proposed pipeline would connect to two different intrastate natural gas pipelines so as to provide SPS with greater supply diversity. SPS has had preliminary discussions with the pipelines regarding supply and is confident that it will be able to secure gas for Harrington in the same manner that it has for its other natural gas plants.

Q. Does SPS's pipeline cost estimate remain reasonable?

A. Yes.

V. RESPONSE TO STAFF WITNESS MR. JOHN POOLE, P.E.

Q. Have you reviewed the testimony of Staff witness, Mr. John Poole, P.E.?

A. Yes.

Q. Does SPS have any objections to his recommendations related to construction of the pipeline?

A. As noted in the rebuttal testimonies of Mr. Jeffrey West and Ms. Anastacia Santos, SPS is generally unopposed to Mr. Poole's recommendations, subject to some clarification on certain perceived Texas Parks and Wildlife Department conditions that might be costly, if interpreted in too strict a manner or applied in unapplicable or unnecessary situations.

Q. Do you have comments on Mr. Poole's recommendations as they relate to working with landowners throughout the pipeline build?

A. Yes. As with any project, SPS will work collaboratively with affected landowners to implement any minor deviations, if necessary, and will return each affected landowner's property to its original contour and grade, so long as that original contour and grade permits safe operation and maintenance of the pipeline.

Q. Does this conclude your pre-filed rebuttal testimony?

A. Yes.

AFFIDAVIT

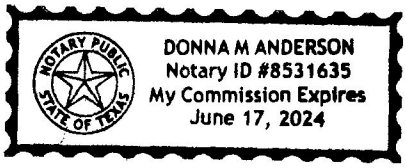
STATE OF TEXAS)
)
COUNTY OF POTTER)

MARK LYTAL first being sworn on his oath, states:

I am the witness identified in the preceding rebuttal testimony. I have read the testimony and the accompanying attachment(s) and am familiar with the contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate.

Mark Lytal
MARK LYTAL

Subscribed and sworn to before me this 12 day of April, 2022 by MARK LYTAL

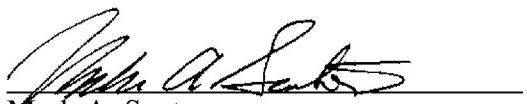


Donna M Anderson
Notary Public, State of Texas

My Commission Expires: 6/17/2024

CERTIFICATE OF SERVICE

I certify that, unless otherwise ordered by the presiding officer, notice of the filing of this document was provided to all parties of record via electronic mail on April 13, 2022, in accordance with the Order Suspending Rules, issued in Project No. 50664.



Mark A. Santos

Pipeline Feasibility Study

Xcel Energy - 20" Xcel Harrington Pipeline FEED

Prepared for:

Xcel Energy®

Chris Whiteside
790 S. Buchanan Street, 5th Floor
Amarillo, TX 79101

Prepared By:

ENGineering®

28100 Torch Parkway, Suite 400
Warrenville, Illinois 60555

June 12, 2020

Revision 0

Table of Contents

Attachments

Disclaimer:
This review has been prepared utilizing scope of work and information provided by Xcel Energy at the time of review. If the scope of work changes, additional review may be necessary. The review was conducted utilizing publicly available data and no project specific conversations have been completed with any agencies. There may be additional impacts and permitting that need to be explored and confirmed at later stages when conversations with agencies are more appropriate.

1.0 Executive Summary

EN Engineering (ENE) has completed a Front End Engineering Design (FEED) Study for Xcel Energy (Xcel) that assesses the feasibility to transport approximately 265,000 Dth/day of natural gas from an existing El Paso Natural Gas (EPNG) pipeline Northwest of Amarillo, TX, with an alternate supply connection from Natural Gas Pipeline Company of America (NGPL), to Xcel Energy's Harrington Generating Station. The project is comprised of a new 22 mile, 20-inch diameter pipeline with related facilities, including a custody transfer meter station at each 3rd party pipeline tie-in, pig launching and receiving facilities, mainline block valves, and a check meter/regulator station at the delivery point for pressure/flow control. The pipeline will feed the Harrington Power Plant after the conversion of existing coal-fired units to natural gas units.

Items analyzed for this project, and contained within this study, are project cost estimates, project schedule, pipeline design/route review, construction and risk analysis, and environmental regulatory information.

The quality of the Google Earth aerial imagery and elevation data allowed ENE to conduct the study without the need for a site visit. There are two (2) areas of interest where the pipeline crosses a railroad or a major highway (US Hwy. 287), where a Horizontal Directional Drill (HDD) will be utilized. There are additional crossings through streams or wetland that will utilize HDDs or conventional bores to eliminate the need for a U.S. Army Corps of Engineers (USACE) Section 401/404 permit.

2.0 Cost Estimate

2.1 Overview

Cost estimates are within a +/- 20% accuracy level based on available information and preliminary scope. Estimates were prepared by ENE with good faith and care using third party vendors, contractor estimates, and recent project costs, where available. Below, Table 1 summarizes the estimates in each major category for current pricing. See Attachment A for the full estimate.

Total Installed Cost (TIC) Estimate	
Categories	**Total Cost**
Materials	$10,498,700
Construction	$20,187,300
Survey	$711,100
Right-of-Way	$3,261,500
Legal & Public Affairs	$215,000
Environmental	$217,300
Inspection	$774,000
Engineering	$812,900
Admin & Gen	$458,500
Line Pack	$41,000
Contingency	$5,576,600
Total	**$42,753,900**

Table 1 – Harrington Pipeline Estimate Summary

2.2 Assumptions

Estimate assumptions are listed below.

1. Estimates are based on current market conditions and assumes adequate labor resources are available at the time of construction.
2. All pipe is assumed to be triple random lengths (TRL). Freight for FBE-coated TRL pipe is assumed to be by truck at $10/ft, but the shipping price could decrease to $6/ft if shipped by rail.
3. Sales tax is estimated as 8.25% and assumed to be the same at time of purchase.
4. The pipeline construction costs are based on budgetary contractor estimates and recent historic unit pricing from competitive bids for various other Texas pipeline jobs. The contractors have done similar work in Texas and have experience with pipeline construction projects of this size.
5. Budgetary estimates for the facility construction work (meter station, control valves, tie-ins) were generated from recent historical pricing for similar items. Equipment costs were based on a combination of budgetary estimates and recent historic pricing.

6. Pipeline survey budgetary costs were provided by local surveyors, and an approximate average cost was used. Survey includes the preliminary pipeline route and cadastral survey with plat development, pre-construction staking, and as-built/construction survey. These costs include all anticipated personnel and expenses over the course of the survey duration.
7. Estimated ROW costs, including damages along the pipeline corridor along with costs for additional surface easements and workspace, were determined with an estimate from a Texas Land Management company.
8. Estimated environmental costs include desktop and on-site surveys, biological and cultural surveys, reporting, mitigation, restoration, environmental training, post-construction monitoring, and permitting from agencies. Budgetary estimate was provided by a Texas Environmental Firm.
9. Project contingency is assumed as 15% of the overall cost of the project.
10. Costs associated with in-line pipeline inspection using caliper and smart pigs are estimated costs based on previous projects. Both caliper and smart pig runs have been accounted for in the attached TIC.

Additional assumptions are reflected in the Comments section of Attachment A as they apply to specific cost items.

2.3 Comparable Projects

ENE researched comparable projects using the FERC database of approved major pipeline projects. While no data was available for actual costs, all FERC 7(c) submittals require a project cost estimate to be included with the application. The categories included in these high-level estimates varied by project, so ENE combined categories as necessary to consolidate the estimates into ten (10) major categories – Materials, Construction, Right-of-Way, Survey, Engineering & Inspection, Environmental, Legal & Public Affairs, Line Pack, Admin & General, and Contingency. See Attachment B for a list of eight (8) projects that were considered comparable to the Harrington pipeline and the associated costs. The comparable projects were chosen based on similarities to the Harrington pipeline in terms of pipeline size.

The primary consideration for direct comparison between these projects and the Harrington pipeline is that FERC projects often have more stringent environmental, construction, and inspection requirements. Although the Harrington pipeline will not require a FERC permit, many permitting agencies have been requiring more detailed survey and permit submittals in recent years. While it is impossible to predict the future requirements of these agencies, it is clear that they are currently trending toward FERC requirements.

Also shown in Attachment B is a breakdown of the cost for each category as a percentage of the overall project cost.

2.4 Operating & Maintenance

After the line has been constructed and commissioned, Xcel will need to consider long-term operating and maintenance (O&M) costs. These costs may include but are not limited to:

- Additional personnel required to operate and maintain the pipeline
- Tools and equipment
- Inline inspection
- Aerial inspection and patrol
- Annual pipeline and valve maintenance
- Anomaly repairs
- Cathodic Protection[1]

Costs may vary significantly based on pipeline operator's O&M philosophy.

3.0 Schedule

The project is expected to be completed in a total of 42-50 weeks after the project is sanctioned. The critical path milestones are survey permission, land acquisition, pipe procurement, and installation. A preliminary Level 3 schedule is provided in Attachment G.

4.0 Procurement

4.1 Procurement Strategy

Xcel, with assistance from the design firm, will identify qualified bidders for the various material required for the project. The procurement team will provide specifications, solicit quotations, analyze bids, provide recommendations, and/or suggest third party inspection teams as needed for material procurement.

It is imperative that pipe mills are engaged directly instead of utilizing a distributor in order to maintain control of the production and inspection schedules. Depending on market conditions existing at the time of project kick-off, it may be prudent to commit to the necessary steel as soon as possible for the pipe.

Qualified mainline construction contractors will be identified as soon as the bid package is nearing completion. A list of contractors with experience in the Texas area are listed below in Section 9.2. Early identification assures a robust pool of contractors with available labor and equipment. Xcel, with assistance from the design firm, will develop bid documents, solicit quotations, analyze bids, and select a contractor.

[1] Cathodic Protection (CP) - a technique used to control the corrosion of the pipeline by making it the cathode of an electrochemical cell. CP for this project consists of a Groundbed and a Rectifier with test stations for monitoring.

4.2 Market Pricing Sensitivities

Whether or not tariffs exist as the project rolls out will play a major factor as to price and availability for some of the material, especially pipe. As pipe is the primary material cost for this project, Xcel should be aware that tariffs on imported steel drive up domestic prices. Consolidations, mergers and acquisitions can also affect pricing. Budgetary line pipe estimates were secured through US steel mills with domestic product.

The current market conditions due to depressed oil pricing and COVID-19 create additional risks and opportunities. The pipe mills contacted for estimates have stated that COVID-19 has not seemed to have a direct impact on steel pricing or availability. They are still in production as essential businesses and future impacts are not expected from that issue. However, current crude pricing has put a damper on new oil pipeline projects leading to an excess supply of pipe. Further, estimates received for materials, construction, survey, etc. for this exercise may be lower than usual, as vendors are pushing to win projects, even in the budgetary phase. This creates an opportunity to take advantage of the lower prices in the current market, but also creates a risk in increased pricing if the project is not executed until after the market corrects.

4.3 Lead Times for Major Material

The quantity and size of the pipe for this project is expected to have a lead-time of 12-18 weeks, depending on mill space. The remaining material should have lead times not to exceed 18 weeks, including any drawings for approval. Material lead times are not expected to be the critical path for this project unless market conditions change significantly.

4.4 Other Known Projects Impacting Material Acquisition

There are currently no known projects that would affect this project if material is procured as outlined above.

5.0 Land Use and Acquisition

For the purpose of this FEED study, ENE has assumed a 100-foot working corridor, with the pipeline laid within a 50-foot permanent easement, and the additional 50 feet considered as Temporary Workspace (TWS).

Analysis has been conducted based on land ownership in Potter County, TX. The total estimated number of directly impacted parcels is thirty-two (32). Land use has been evaluated based on agricultural, residential, and commercial usage. Current land use for much of the project is for agricultural purposes.

Land values for Right of Way (ROW) will be reflective of the land use and the demand created by competition for land rights in the specific locale. Additionally, it will be dependent upon the stage of acquisition negotiations.

Since this project is not expected to be certificated under FERC authority, eminent domain is not anticipated to be exercised. If required, it may be possible as a utility project to use eminent domain. A good faith effort to negotiate land rights is required. All negotiations should be documented and made in writing.

6.0 Survey Strategy

6.1 General

Several survey phases will be required for the project. The design phase will include control survey, design survey, subsurface utility exploration (SUE), and boundary survey. Construction staking will begin prior to mobilization for each spread. As-Built survey will be completed throughout the construction phase.

6.2 Control Survey

The Survey Vendor is to establish control monuments within proximity of the proposed pipeline corridor. Control monuments are to be permanent in nature and set with 5/8" rebar at locations presumed not impacted by construction activity. The horizontal datum for this project will be State Plane Texas North (4201), NAD 83 and vertical datum NAVD 88. Monument recovery sheets are to be prepared and should include reference ties to survey control and corresponding photos.

The Survey Contractor is to assume a control pair will be required every five (5) miles along the route; therefore, five (5) control pairs will be required.

6.3 Design Survey

Survey Vendor will conduct a preliminary survey of the project route to support the Engineering Design Phase. The survey is to extend 100 feet each way from the proposed centerline (200-foot wide corridor). Items to be included in this task include:

- Topographic Survey sufficient to produce 2-foot contours
- Edge of Road Crossings
- Centerline of Road Crossings
- Road ROW Limits
- Water Body Crossings including centerline and top & bottom of banks
- Ditch Lines
- Fence Lines
- Crop/Tree Lines
- Underground Utilities
- Overhead Utility Crossings (including heights)
- Utility Poles (including pole identification numbers)
- Environmental Features
- Any other feature that affects the constructability

Survey Vendor is to utilize sub-centimeter GPS survey equipment to complete this work. In areas where GPS is not available, survey is to be completed using conventional survey methods.

Topographic surveys are to be performed at all surface site locations including contractor yards, pipe yards, valve sites, and meter stations. Topographic and existing features are to be captured at each location suitable to produce 1-foot contours to be used for Engineering Design.

Survey Vendor is to locate the centerline of all proposed access roads determined through the course of the Detailed Design Phase of the project. These roads are to be surveyed from the public road to the construction footprint. Feedback from Xcel S&LR team has indicated that access roads on the entire ROW are not required as long as there is sufficient access to above-grade utilities such as valve sets, test stations, etc. One (1) access road was assumed, totaling 1,800 feet, for access to the upstream meter station at the EPNG tie-in. It is assumed that no additional access roads are required for the meter station at the NGPL tie-in or for anywhere else along the pipe route.

6.4 Subsurface Utility Exploration

Survey Vendor will perform a Level A-D SUE Investigation per CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data. Level B-D SUE Investigations are to be completed within the ROW limits of each road crossing. Level A Test holes will be completed at each utility crossing.

Items to be field verified include, but are not limited to:

- Overhead power or telecommunication lines (With High and Low Wire Sag Heights)
- Underground pipelines
- Underground telecommunications
- Uncapped/Capped/Abandoned Shallow Wells

6.5 Boundary Survey

Survey Vendor will perform partial boundary surveys to generate a parcel mosaic to support the ROW acquisition phase. The boundary mosaic is to be field verified by at least two property corners or sufficient cadastral evidence is to be located to tie down all parcel lines that will be crossed or paralleled by the proposed project footprint. Xcel will provide an updated Line List identifying parcels that have survey permissions and will inform survey of any changes as they occur. All Boundary efforts are to be collected to meet Texas Board of Professional Engineers and Land Surveyors minimum survey requirements.

Survey Vendor will develop approximately thirty-two (32) certified plats and legal descriptions for easement acquisition and recordation in accordance with the Texas Board Rules and Regulations relative to the practice of land surveying. The Survey Vendor will be responsible for depicting the construction footprint provided by the design team on each parcel and providing all necessary survey information required to support the land acquisition. All certified plats will be completed on an as-needed basis when the Company ROW team specifies the schedule.

6.6 Construction Staking

Survey Vendor will stake the construction footprint at the beginning of the construction phase. Pipeline route will be staked on both sides of the ROW and along the centerline of the pipe route at 100-foot station intervals with additional staking at each Point of Intersect[2] (PI). All TWS, access roads, contractor yards, and pipe yards are to be staked during this phase to clearly define the limits.

6.7 As-Built Survey

Survey Vendor is required to complete an in-ditch as-built survey through the course of the construction phase. The Survey Vendor will tally the pipe electronically/manually, locate the alignment of the pipeline in the ditch and will locate all appurtenances including, but not limited to: welds along with welder ID's and weld numbers, x-rays, heat numbers, joint numbers, serial numbers, coating type, side bends, sags, over bends, factory bends, pups, wall thickness changes, cad welds, depth of cover, test leads, breakers, rock shields, pipe weights, and all other pertinent data required to support Xcel's data requirements.

7.0 Pipeline Design Review

7.1 Project Design Parameters

Table 2 lists the project design parameters used for preliminary design.

Description	Value	Unit
Pipeline MAOP	1,125	PSIG
Estimated Inlet Pressure (EPNG)	600	PSIG
Estimated Inlet Pressure (from NGPL)	600	PSIG
Minimum Delivery Pressure (at Harrington)	100	PSIG
Peak Hour	11,042	DTH/HR
Ambient Conditions	-20 to 120	°F
Design Gas Temperature	60	°F
Piping Design Velocity	< 100	FPS
Minimum Depth of Cover	4	FT

Table 2 – Project Design Parameters

7.2 Class Locations

Class locations are based on CFR Part 192 criteria. The majority of the pipeline was determined to be Class 1 from review of aerial imagery along the route. All trenchless crossings and fabrications are required to meet Class 2 in these areas. To account for future development, the entire pipeline is designed to Class 3 locations. The 20", 0.375" W.T. X60 pipe selected meets a pipeline MAOP of 1,125 psig for Class 3 areas. If a higher MAOP is required, the pipe grade or wall thickness will need to be increased or the location classification should be assessed further.

[2] Point of Intersect (PI) - where the direction of the pipeline changes

7.3 Valve Spacing

Valve spacing is based on the CFR Part 192 criteria below.

Class 1 – 20 miles
Class 2 – 14 miles
Class 3 – 8 miles
Class 4 – 5 miles

To meet Class 3 location requirements, two (2) mainline valve sets are included in the estimate, which equates to approximately 7-mile spacing between the launcher/receivers and valve sites. See Attachment D for a preliminary Process Flow Diagram (PFD) of proposed pipeline facilities and Attachment J for the Pipeline Route Exhibits.

7.4 Route Adjustments

During the early stages of the FEED Study, Xcel and ENE assessed the original route provided with the request. An alternate route to the North was selected and refined to minimize the quantity of PIs and remove one of the railroad crossings. The final FEED route does not completely follow existing access roads to minimize the quantity of PIs, but should have sufficient access to all above grade components such as valve sets, cathodic test stations, coupon test stations, etc.

7.5 Feature Crossings

There are sixteen (16) feature crossings along the pipeline route. These include roads, railroads, streams, rivers, and wetlands. ENE took a conservative approach and considered all features to be installed via trenchless technology. See Attachment C for the Feature Crossing List.

Crossings marked as bore will be installed via conventional auger/slick bore method. The maximum length for this method was approximated to be 250 feet but may change based on soil types determined by future geotechnical investigations.

Crossings marked as HDD will be installed via Horizontal Directional Drilling. There are five (5) major crossings, totaling an estimated 6,000 feet. These crossings are anticipated to be large-scale HDD operations that require large clearances from highways, railroads, or waterbodies due to terrain. In general, waterbodies should be drilled with a minimum clearance of 25 feet from the riverbed and be outside of any floodplain with the channel. On-Site Environmental Field Surveys should be conducted to determine the exact extents of the natural resources. The depth under the highway will be limited by the geometry and bend radius for 20" pipe and is anticipated to be at least 25 feet.

Minor wetland and stream crossings marked as HDD might be able to utilize a small-scale HDD rig that is capable of lower entry and exit angles. This allows for a shorter, shallower HDD with lower drilling fluid pressures. Some of the wetland and stream crossings are in a ravine and will require a longer and deeper HDD due to due to the natural elevation, entry, and exit points.

7.6 Meter Station & Control Valve Stations

The start of the pipeline occurs at the receipt point from EPNG, which includes a custody transfer meter and a pipeline pig launcher. An alternate gas supply from NGPL includes a custody transfer meter; this facility will be located along the proposed pipeline near Mile Post 4. The pipeline termination occurs at the Harrington Plant, which includes a pipeline pig receiver, check meter, and pressure control valves.

The metering and control valve facilities are assumed to be field-built, not skid manufactured, in order to minimize total facility cost. The meters are expected to be 4-path ultrasonic meters. The control valves are expected to operate in a monitor/worker setup with bypasses around each. Preliminary equipment sizing was completed as part of this study but should be verified during detailed design. A budgetary estimate was received for the meters, while all other material and construction costs were based on recent historical costs.

It is assumed that the 3rd party supply pipelines have an MAOP of 1125 psig or less, therefore, costs associated with over-pressure protection (OPP) are not included.

Access roads are to be placed only where needed and when existing roads are not present. At this time, it is expected that an 1800-foot access road will only be required for the facility at the EPNG tie-in. This road will originate at the existing railroad frontage road and terminate at the EPNG facility. The facility at the NGPL tie-in has sufficient existing access roads. No additional access roads are expected to be needed.

8.0 Geotechnical Review

8.1 Overview

Subsurface conditions along the pipeline corridor were evaluated using the National Cooperative Soil Survey from the USDA Natural Resources Conservation Service (NRCS). The available data has analysis of the top few layers of soil, which extends 60-80 inches below the surface in most locations.

The soil conditions were found to be favorable for conventional pipeline construction, at the assumed minimum pipeline depth of cover of 4 feet. The majority of the corridor is made up of various combinations of silt, sand, clay, and loam. Little to no rock is expected in the open cut sections – assumed 5% of the length.

8.2 Major Crossings

A thorough geotechnical investigation is critical for the major crossings listed in Section 7.5. This investigation should include at least two soil bores at each major HDD, as well as additional soil bores at strategic locations along the pipeline route to give the contractor a full understanding of anticipated subsurface conditions. The soil bores for HDD designs should reach a depth greater than the expected HDD depth and should core through rock, if encountered.

For each of the HDD crossings, bedrock is assumed to be encountered 75% of the time. For each of the conventional bores, bedrock is assumed to be encountered 50% of the time including in the bell holes at each end of the operation.

9.0 Constructability

9.1 Construction Workspace

The location of the pipeline allows for ample workspace through agricultural fields. The standard permanent easement will be 50 feet wide with 50 additional feet to be acquired for TWS. This allows for a total construction ROW width of 100 feet. This width is appropriate for typical mainline construction.

9.2 Qualified Bidders

Based on the size, length, and complexity of the project, ENE recommends limiting the bid list to nationally known, major mainline contractors. For the purpose of this study, ENE was in contact with Holloman, Strike Construction, and U.S. Pipeline. Table 3 shows a list of qualified contractors to be considered for this project.

Name	Location
Holloman	Houston, TX
Strike Construction	The Woodlands, TX
U.S. Pipeline	Houston, TX
Troy Construction	Houston, TX
Price Gregory	Katy, TX
Bobcat	Hillsboro, TX
Lonestar Pipeline	Midland, TX
Driver Pipeline	Dallas, TX

Table 3 – Qualified Bidders

10.0 Risk Analysis

There are different levels of risk associated with each phase of this project. The primary risk is cost escalation due to uncertain market conditions. From a schedule standpoint, the critical path items outlined in Section 3.0 are: survey permission, land acquisition, pipe procurement, and installation.

Risks for land acquisition include public opposition and escalation in land prices. These issues can affect negotiations with landowners for both permanent easement and TWS. If agreements cannot be reached, Xcel may need to exercise eminent domain, which can be time consuming and costly. Public outreach can play a big role in pipeline projects to help reduce public opposition.

Permitting risks vary depending on the type of permit, but environmental permitting will be the most challenging. It is crucial that permit requirements are identified early in the design phase so every possible measure can be taken to adhere to the requirements. Discovery of protected species/habitats and archaeological sites will require immediate attention so the design can be adjusted to avoid or mitigate environmental impacts. Any impacts to US Waters would require an Individual Permit as court ruling has vacated the USACE Nationwide Permit 12; the current design utilizes HDDs and conventional bores for all crossings under US Waters to avoid the need for this extensive permitting.

Risks for procurement are discussed in Sections 4.1 and 4.2. Overall, market sensitivities will play a big role in scheduling procurement milestones.

Design survey, subsurface utility exploration, boundary survey, geotechnical investigations, and environmental surveying are all key parts that are essential for the Engineering Design Phase to progress. These surveys will require effective coordination between Xcel, the design firm, subcontractors, and landowners. If mobilizations are delayed due to reasons such as weather, physical access issues, landowner permissions, access permits, etc., this may have a negative impact on the overall project schedule and subsequent milestones.

Additional risks and opportunities are listed below:

Opportunities:

- Current market conditions appear to be driving pricing down and could provide an opportunity to save on material, installation, and other sub-contractor costs if the project occurs before the market corrects.
- Shipping pipe via rail is an opportunity to reduce cost.

Risks:

- Budgetary estimates are lower than expected, which is in-line with the current market conditions. Pricing could escalate once the industry rebounds.
- If ROW acquisition for the current route presents issues, a route change could increase the project cost and schedule.
- If MAOP needs to be increased, the pipe wall thickness or grade will need to be increased leading to additional cost for both the pipe and installation.
- If 3rd party supply pipelines have MAOPs that are greater than 1125 psig, OPP will be required to protect the upstream facilities and pipeline. OPP could be achieved by adding control valves or slam-shut valves to the upstream facilities. These additional components will lead to increased material and installation costs.

- Installation contractors were asked to consider the terrain and depth of the conventional bores, but there is a risk of increased cost for installation once detailed drawings are made available for the pipeline bid.

Overall, many of these risks can be mitigated with effective planning and involvement of all project stakeholders. It is imperative that a detailed project schedule, communication plan, RACI Chart[3], change management plan, etc. are created and maintained throughout all phases of the project. This will help identify issues as soon as they arise, and then corrective action can be taken to minimize the total impact.

11.0 Value Engineering

Throughout all phases of the project, Xcel and the design firm will identify opportunities for time and cost savings through efficiencies. Some areas where value engineering can be applied include the following:

11.1 Engineering

The design should include a thorough constructability review of the project. Reroutes should be considered for areas that require costly construction methods or extensive permitting. Some examples include rerouting around environmentally sensitive areas, high-value land, existing infrastructure, or other obstructions. The route established during the FEED study accounted for these concerns but should be verified during detailed design.

The project should utilize previously completed engineering designs from comparable projects, incorporating any Xcel standards.

11.2 Design Survey

It is important to secure landowner permissions along extensive, continuous sections of the pipeline route prior to survey mobilization to eliminate move-arounds and move-backs.

The scope of work for subsurface utility explorations shall be evaluated during the design survey. Level B-D should be performed for all utility crossings, however, Level A (potholing) should be limited to areas where field changes would be difficult.

11.3 Construction

The preparation of a complete and detailed construction Scope of Work will ensure accurate bid pricing and will minimize future change orders. Bidding the project out to multiple pipeline contractors will ensure competitive pricing and provide valuable input including cost-saving recommendations based on local experience and available installation methods.

[3] RACI Chart - matrix used to assign parties who are Responsible, Accountable, Consulted, and Informed

12.0 Environmental and Permitting

12.1 Overview

ENE conducted a preliminary environmental assessment of the 20" Harrington Pipeline by performing a desktop review of base maps for the project area utilizing the most current and available digital imagery.

The scope of research covers the following topics:

- Current and historic site land use
- Topography
- Soils
- Public lands
- Public water supplies, sole source drinking water aquifers, and wellhead protection areas
- EPA Envirofact point locations
- Streams and waterways
- Wetlands
- Regulatory floodway and 100-year floodplain
- Federal/State threatened and endangered species
- National/State cultural resources
- Construction activities that may trigger environmental permitting

12.2 Waterways/Floodplain

The review was based on desktop research only. A Waters of the U.S. on-site field survey should be conducted to determine actual conditions and to identify all potential jurisdictional waters and wetlands.

All wetlands and streams are planned to be crossed via conventional bore or HDD to eliminate the need for an USACE 401/404 permit or individual permit. The utilization of a USACE Nationwide Permit 12 is no longer available, as it is currently held under litigation.

12.3 Threatened/Endangered Species

The Threatened/Endangered Species review was based on desktop research only, a Habitat Assessment Survey should be completed during the Waters of the U.S. Survey since the proposed pipeline corridor may provide potentially suitable habitat for threatened/endangered species. See Attachment H for a preliminary list of Threatened and Endangered Species that may be encountered along the route.

Assessments should be completed in accordance with the Texas Parks & Wildlife Department (TPWD) in concurrence with the US Fish and Wildlife Service (USFWS). The USFWS may require additional species-specific surveys and there may be seasonal restrictions for survey windows for listed species.

12.4 Cultural Resources

A desktop review indicates that no archeological or cultural sites will be impacted along the route. A field survey should be performed to ensure that no historic structures and/or archaeological sites are impacted by the construction of the proposed pipeline. Assessments should be complete in accordance with the Texas Historical Commission (THC) in concurrence with USACE.

12.5 Construction Activities that May Trigger Environmental Permitting

Even without applying for a USACE 401 permit, if hydrotest water is discharged to a surface water (or ground discharge with runoff to a surface water), a permit needs to be acquired through the Railroad Commission of Texas (RRC) and/or through the Texas Commission on Environmental Quality (TCEQ) in concurrence with USACE. Discharging hydrotest water directly to surface can be avoided by sourcing water from and later discharging back to the Harrington Plant; the feasibility of this approach should be confirmed during detailed design.

The State of Texas has deferred to the US EPA for permitting activities associated with the National Discharge Pollution Elimination System (NPDES) Construction General Permit. It is not anticipated that this project will disturb over one (1) acre of land. If it is later determined that water discharge will impact more than one (1) acre, a permit application shall be submitted to the EPA Region 6 office located in Dallas, Texas. The application will need to include a Stormwater Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) application. Environmental compliance monitoring during construction will be a requirement of the NPDES permit.

If non-hazardous waste is found during construction, THC shall be notified under Statewide Rule 8.

12.6 Other Construction Activities and Permitting

The RRC requires a T-4 Permit be obtained for operating a pipeline at least two weeks prior to commissioning. The RRC also requires additional permitting for new construction with notice provided at least 30 days prior to the start of construction. The RRC P-5 form must be completed prior to submitting these requests.

Railroad crossings need to be permitted through Union Pacific Railroad along with final crossing drawings. The Texas Department of Transportation (TxDOT) requires permitting for all major road crossings. Potter County may require conditional use permits and should be assessed during detailed design.

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
1	**MATERIAL**					
2	**Material**					
3	Line Pipe with FBE Coating (20" X 0.375" W.T.), including Freight	FOOT	110,580	$ 58.00	$ 6,413,640.00	$49/foot + $9/foot shipping
4	Bore Pipe with FBE & ARO Coating (20" X 0.375" W.T.), including Freight	FOOT	2,200	$ 79.00	$ 173,800.00	$68/foot + $11/foot shipping
5	HDD Pipe with FBE & Powercrete Coating (20" X 0.375" W.T.), including Freight	FOOT	6,060	$ 72.00	$ 436,320.00	$62/foot + $10/foot shipping
6	3D 45° Segmentable Fittings	EACH	46	$ 2,000.00	$ 92,000.00	18°<X<45°
7	3D 90° Segmentable Fittings	EACH	12	$ 3,500.00	$ 42,000.00	45°<X<90°
8	Meter (16" ANSI 600)	EACH	3	$ 75,000.00	$ 225,000.00	Budgetary estimate of four-path ultrasonic (2 for receipt stations, 1 for delivery station)
9	Control Valve (16" ANSI 600)	EACH	2	$ 200,000.00	$ 400,000.00	Ball valve, includes actuators,
10	Ball Valve (20" ANSI 600) Motor Operated	EACH	3	$ 42,500.00	$ 127,500.00	1 at launcher, 2 at receiver
11	Ball Valve (20" ANSI 600) Manual Gear Operated	EACH	4	$ 36,000.00	$ 144,000.00	2 mainline blocks, 2 at hot tap
12	Ball Valve (20" ANSI 600) Double-Acting RCV	EACH	2	$ 60,000.00	$ 120,000.00	1 NGPL isolation, 1 EPNG isolation
13	Ball Valve (16" ANSI 600) Motor Operated	EACH	8	$ 28,000.00	$ 224,000.00	1 at launcher, 1 at receiver, 6 at meters, 2 at control valves
14	Ball Valve (10" ANSI 600) Manual Gear Operated	EACH	2	$ 9,000.00	$ 18,000.00	1 at launcher kicker, 1 at receiver kicker
15	Ball Valve (4" ANSI 600) Manual Lever Operated	EACH	8	$ 3,100.00	$ 24,800.00	Vent / Drain / Misc
16	Plug Valve (16" ANSI 600) Motor Operated	EACH	10	$ 33,750.00	$ 337,500.00	6 at meters, 4 at control valves
17	Plug Valve (10" ANSI 600) Manual Gear Operated	EACH	4	$ 11,750.00	$ 47,000.00	Mainline bypass / blowdown
18	Check Valve (20" ANSI 600)	EACH	2	$ 22,000.00	$ 44,000.00	2 at u/s meters
19	Hot Tap Tee	EACH	2	$ 40,000.00	$ 80,000.00	
20	Pig Trap Pipe & Fittings	EACH	2	$ 50,000.00	$ 100,000.00	Flanges, reducers, elbows, pipe, misc small
21	Pig Trap Closure	EACH	2	$ 30,000.00	$ 60,000.00	
22	Meter Station Pipe & Fittings	LS	2	$ 45,000.00	$ 90,000.00	Station PV&F
23	Control Valve Station Pipe & Fittings	LS	1	$ 90,000.00	$ 90,000.00	Station PV&F
24	Pressure Transmitter	EACH	9	$ 3,000.00	$ 27,000.00	
25	Temperature Transmitter	EACH	3	$ 3,500.00	$ 10,500.00	
26	Marker Sign & Post	EACH	115	$ 20.00	$ 2,300.00	1 every 1000 feet
27	RTU / UPS / Solar / Communications	EACH	2	$ 100,000.00	$ 200,000.00	
28	Cathodic Test Station & Foreign Line Bond Box	EACH	19	$ 100.00	$ 1,900.00	
29	DC/Foreign Pipeline Crossing Test Stations	EACH	6	$ 300.00	$ 1,800.00	
30	Rectifier/Groundbed	EACH	1	$ 25,000.00	$ 25,000.00	
31	**Material Subtotal**				**$ 9,558,060.00**	
32	**Tax**					
33	Sales and/or Use Tax	%	8.25%	$ 788,539.95	$ 788,539.95	Amarillo, TX sales tax
34	**Material & Sales Tax Subtotal**				**$ 788,539.95**	
35	**Freight**					
36	Freight for all Non-Pipe Materials	%	6.0%	$ 2,534,300.00	$ 152,058.00	
37	**Freight Subtotal**				**$ 152,058.00**	
38	**TOTAL MATERIAL AND FREIGHT COST**				**$ 10,498,657.95**	

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
39	**INSTALLATION CONTRACTORS**					
40	**Pipeline**					
41	Off Load & Transport 20" Pipe to Storage Yard	MILE	22	$ 10,000.00	$ 218,657.20	Offload & Load Truck, Transport (Assume 2 Rail Sidings, Haul Up To 50 Mi. to 2 Pipe Yards)
42	Lay 20" Line Pipe Including Soil Sep., Coating Field Welds & All Tie-Ins	FOOT	115,451	$ 80.00	$ 9,236,080.00	
43	20" HDD (rock conditions) (In Addition to Lay Price)	FOOT	4,545	$ 400.00	$ 1,818,000.00	75% of HDD lengths
44	20" HDD (dirt conditions) (In Addition to Lay Price)	FOOT	1,515	$ 350.00	$ 530,250.00	25% of HDD lengths
45	20" Road Bore (rock conditions) (In Addition to Lay Price)	FOOT	1,100	$ 300.00	$ 330,000.00	50% of Bore Lengths
46	20" Road Bore (dirt conditions) (In Addition to Lay Price)	FOOT	1,100	$ 250.00	$ 275,000.00	50% of Bore Lengths
47	20" Open Cut Roads (dirt conditions)	EACH	41	$ 12,000.00	$ 492,000.00	Lease roads. Includes temp road stone
48	Mobilize to job site	LS	1	$ 250,000.00	$ 250,000.00	Allocated one mobilization
49	Demobilization from job site	LS	1	$ 250,000.00	$ 250,000.00	Allocated one demobilization
50	Foreign Pipeline Crossings	EACH	8	$ 7,000.00	$ 56,000.00	Estimated count
51	Utility Pipeline Crossing	EACH	20	$ 7,000.00	$ 140,000.00	Estimated count
52	PI's Segmentable 20"	EACH	70	$ 5,500.00	$ 385,000.00	2 per HDD, 2 per bore, 1 per direction change >18°
53	PI's Field Bends 20"	EACH	25	$ 3,250.00	$ 81,250.00	1 per direction change <18°
54	Hydro excavation Coordinator	DAYS	9	$ 2,250.00	$ 21,000.00	1 day per 3 crossings on average
55	Hydrostatic Test 20" Pipe	FOOT	115,451	$ 5.00	$ 577,255.00	
56	Dry 20" Pipe to (-)38° F	FOOT	115,451	$ 1.50	$ 173,176.50	
57	Caliper Pig 20" Pipe	FOOT	115,451	$ 1.00	$ 115,451.00	
58	Smart Pig 20" Pipe	LS	1	$ 235,000.00	$ 235,000.00	Tool run, including engineering support and analysis
59	Fabricate and Install 20" Launcher	EACH	1	$ 150,000.00	$ 150,000.00	Based on historic
60	Fabricate and Install 20" Receiver	EACH	1	$ 150,000.00	$ 150,000.00	Based on historic
61	Fabricate and Install 20" Mainline Valve Assembly	EACH	2	$ 100,000.00	$ 200,000.00	Based on historic
62	Degrubbing ROW	ACRE	133	$ 2,500.00	$ 332,500.00	Full ROW - x 50 wide, temporary workspace, temp workspace at bores HDDs
63	Reseeding	ACRE	133	$ 900.00	$ 119,700.00	Full ROW - x 50 wide, temporary workspace, temp workspace at bores HDDs
64	Supply and Install (One Time) Wood Mats [4' x 8" x 16']	EACH	2,500	$ 400.00	$ 1,000,000.00	
65	Supply and Install Sand Bags	EACH	2,886	$ 5.00	$ 14,431.38	2.5% of total pipeline
66	Supply and Install Concrete Set-on Weights	EACH	7	$ 2,300.00	$ 16,100.00	Quantity from open cut pipeline in flood plain
67	Installing Cathodic Test Stations	EACH	19	$ 400.00	$ 7,600.00	Estimated count
68	Installing Pipeline Marker Signs	EACH	115	$ 150.00	$ 17,250.00	1 Per 1000 feet
69	Supply and Installing Straw Bales	EACH	125	$ 25.00	$ 3,125.00	
70	Supply and Install Orange Safety Fence	FOOT	5,773	$ 5.00	$ 28,862.75	5% of total pipeline
71	Silt Fence for Erosion Control	FOOT	5,773	$ 7.00	$ 40,407.85	5% of total pipeline
72	Supply and Installing Geotextile Fabric	SQ. YD.	1389	$ 25.00	$ 34,722.22	(100' x 75' meter station) + (50' x50' x 2 valve sites)
73	Supply and Installing Erosion Control Fabric (Curlex)	SQ. YD.	2187	$ 8.00	$ 17,492.58	100 Sq. Yd. (2 Rolls) Per Mile
74	Extra Depth Ditch - 48" Cover	FOOT	11545	$ 1.50	$ 17,317.65	10% of total pipeline
75	Extra Depth Ditch - 60" Cover	FOOT	5773	$ 3.00	$ 17,317.65	5% of total pipeline
76	Extra Depth Ditch - 72" Cover	FOOT	5773	$ 4.50	$ 25,976.48	5% of total pipeline
77	Rock Trenching	FOOT	5773	$ 7.00	$ 40,407.85	5% of total pipeline

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
78	Rock Removal	CY	1000	$ 100.00	$ 100,000.00	Estimated
79	Ditching Padding	FOOT	5773	$ 2.50	$ 14,431.38	5% of total pipeline
80	Class 2 Road Base Caliche, delivered and installed	TON	1500	$ 82.00	$ 123,000.00	Access Road to El Paso Tie-In - 6" cover assumed, 15' wide, 1800' long
81	16' Steel Tube Gate (Single) Installed	EACH	0	$ 1,900.00	$ -	Parcel/fence crossing count
82	16' Steel Tube Gate (Double) Installed	EACH	25	$ 3,000.00	$ 75,000.00	Parcel/fence crossing count
83	Temporary Fence	FOOT	90,000	$ 8.00	$ 720,000.00	2-wire fence for trench cattle protection
84	Safety Fence	FOOT	11,500	$ 5.00	$ 57,500.00	~10% of pipeline
85	**PIPELINE SUBTOTAL**				**$ 18,507,262.47**	
86	**Facility**					
87	**Mechanical**					
88	CSM Mob / Demob	LS	1	$ 50,000.00	$ 50,000.00	
89	Install Receipt Meter Station	LS	2	$ 275,000.00	$ 550,000.00	
90	Install Delivery Meter / Control Valve Station	LS	1	$ 425,000.00	$ 425,000.00	
91	Tie-In Launcher	LS	1	$ 30,000.00	$ 30,000.00	
92	Tie-In Receiver	LS	1	$ 30,000.00	$ 30,000.00	
93	**Mechanical Subtotal**				**$ 1,085,000.00**	
94	**Structural**					
95	Foundations for RTU	EACH	2	$ 20,000.00	$ 40,000.00	
96	Foundations for Meter Piping	EACH	6	$ 5,000.00	$ 30,000.00	
97	Foundations for Control Valve Piping	EACH	8	$ 5,000.00	$ 40,000.00	
98	Rest Blocks	EACH	10	$ 1,000.00	$ 10,000.00	
99	**Structural Subtotal**				**$ 120,000.00**	
100	**Civil**					
101	Grading for Meter Station, including gravel	LS	2	$ 50,000.00	$ 100,000.00	
102	Installation of Fence with Drive Gate(s)	LS	2	$ 10,000.00	$ 20,000.00	Estimated 100' x 75'
103	**Civil Subtotal**				**$ 120,000.00**	
104	**Electrical**					
105	Electrical Mob / Demob	LS	1	$ 10,000.00	$ 10,000.00	
106	Install Ground Bed and Rectifiers	EACH	1	$ 20,000.00	$ 20,000.00	Includes Utility Power Drop
107	Utility / Transformer Installation for Rectifier	EACH	1	$ 15,000.00	$ 15,000.00	
108	Install Remote RTU / Solar / Communication at Meter Station	LS	2	$ 30,000.00	$ 60,000.00	Include Loop-Checks and Commissioning Support
109	Wire and Termination at Meter Station	LS	2	$ 75,000.00	$ 150,000.00	
110	Wire and Termination at Control Valve Station	LS	1	$ 100,000.00	$ 100,000.00	Assuming power and spare instrumentation available at Harrington Plant
111	**Electrical Subtotal**				**$ 355,000.00**	
112	**FACILITY SUBTOTAL**				**$ 1,680,000.00**	
113	**TOTAL INSTALLATION CONTRACTORS COST**				**$ 20,187,262.47**	

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
114	**SURVEY SERVICES**					
115	**Geotechnical**					
116	Geotechnical Surveys (Soil Borings at Major Directional Drills)	EACH	23	$ 5,000.00	$ 115,000.00	2 per HDD, 1 per bore, 1 per facility
117	**Sub-Total Geotechnical**				**$ 115,000.00**	
118	**Preconstruction Survey**					
119	Preliminary Survey	LS	1	$ 40,000.00	$ 40,000.00	
120	Legal Survey	LS	1	$ 35,000.00	$ 35,000.00	
121	Certified Plats	LS	1	$ 20,000.00	$ 20,000.00	
122	Alignment Sheets	LS	1	$ 40,000.00	$ 40,000.00	
123	**Sub-Total Preconstruction Survey**				**$ 135,000.00**	
124	**Construction Survey**					
125	Construction Staking	LS	1	$ 40,000.00	$ 40,000.00	
126	As-Built Survey	LS	1	$ 350,000.00	$ 350,000.00	
127	As-Built Alignment Sheets and Data Delivery	LS	1	$ 20,000.00	$ 20,000.00	
128	**Sub-Total Construction Survey**				**$ 410,000.00**	
129	**Subsurface Utility Exploration (SUE Level A-D)**					
130	Level B-D	EACH	35	$ 700.00	$ 24,500.00	
131	Level A Test Holes	EACH	28	$ 950.00	$ 26,600.00	
132	**Sub-Total Subsurface Utility Exploration**				**$ 51,100.00**	
133	**TOTAL SURVEY SERVICES COST**				**$ 711,100.00**	
134	**RIGHT-OF-WAY**					
135	**Easements & Workspace**					
136	50' Wide Permanent Easement	ROD	7,000	$ 400.00	$ 2,800,000.00	Includes damages (Temporary Workspace and Additional Temporary Workspace)
137	Valve Site Agreements	EACH	2	$ 5,000.00	$ 10,000.00	
138	Rectifier Sites Agreement	EACH	1	$ 5,000.00	$ 5,000.00	Separate easement for surface rights and rectifiers could be up to 1000 ft. from row
139	Facility Site Agreement	EACH	2	$ 10,000.00	$ 20,000.00	2 meter stations (EPNG & NGPL tie-in locaitons)
140	Permanent Access Road Agreement	ROD	110	$ 400.00	$ 44,000.00	1800ft = 110rod. New access road to EPNG tie-in from existing railroad frontage
141	Temporary Workspace for Construction - 100' x 100'	EACH	20	$ 3,000.00	$ 60,000.00	Including HHDs and Bores; TWS and ATWS; Pipe yard
142	Construction Access Roads	ACRE	0	$ 2,500.00	$ -	
143	Easement Recording fees	EACH	32	$ 75.00	$ 2,400.00	Number of parcels pipeline passes through
144	Land Management - Project Management	DAYS	190	$ 630.00	$ 119,700.00	
145	Land Management - Title Specialist/Abstractor	DAYS	160	$ 480.00	$ 76,800.00	
146	Land Management - Sr. Right of Way Agent	DAYS	240	$ 490.00	$ 117,600.00	
147	**Construction Damages Construction Subtotal**				**$ 3,255,500.00**	

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
148	**Permit Fees - Roads and Railroads**					
149	Roads	EACH	2	$ 500.00	$ 1,000.00	1 HWY; 1 paved road(s)
150	Railroads	EACH	1	$ 5,000.00	$ 5,000.00	
151	Survey Permits	EACH	0	$ 1,500.00	$ -	
152	**Permit Fees Subtotal**				**$ 6,000.00**	
153	**TOTAL RIGHT-OF-WAY COST**				**$ 3,261,500.00**	
154	**LEGAL AND PUBLIC AFFAIRS**					
155	Legal Fees	LOT	1	$ 215,000.00	$ 215,000.00	0.5% of TIC
156	Public Affairs Fees	HR	0	$ -	$ -	
157	Public Affairs Expenses - Printing, Travel, Etc.	LOT	0	$ -	$ -	
158	**TOTAL LEGAL AND PUBLIC AFFAIRS COST**				**$ 215,000.00**	
159	**ENVIRONMENTAL**					
160	**Surveys**					
161	WOTUS + T&E Habitat Assessment Survey/Report	LS	1	$ 20,000.00	$ 20,000.00	T&M estimate based on 4 miles/day; 2 man crew; expenses
162	Cultural Resources Pedestrian Survey	LS	1	$ 7,500.00	$ 7,500.00	
163	**Environmental Studies/Survey Subtotal**				**$ 27,500.00**	
164	**Permits**					
165	T&E Coordination	EACH	1	$ 12,000.00	$ 12,000.00	State & Federal Coordination
166	Cultural, Historical, Tribal Coordination	EACH	1	$ 12,000.00	$ 12,000.00	State & Federal Coordination
167	Texas Railroad Commission (Hydrostatic Test Water)	EACH	1	$ 6,000.00	$ 6,000.00	Section 8
168	Texas Railroad Commission (Pipeline & Drill Pits)	EACH	1	$ 12,000.00	$ 12,000.00	T-4 Application
169	US Army Corp of Engineers	EACH	0	$ 25,000.00	$ -	Section 404 Permit
170	US EPA	EACH	0	$ 25,000.00	$ -	Region 6, Section 401 - Water Quality
171	**Environmental Permits Subtotal**				**$ 42,000.00**	
172	**Construction**					
173	Environmental Inspection	DAY	110	$ 1,000.00	$ 110,000.00	NPDES-SWPPP Compliance Monitoring for duration of construction
174	**Construction Subtotal**				**$ 110,000.00**	
175	**Post Construction**					
176	Post-construction monitoring	DAY	18	$ 1,000.00	$ 18,000.00	3 working weeks - ensure site stabilization and permit closeout conditions are met
177	**Post Construction Subtotal**				**$ 18,000.00**	
178	**Project Management**					
179	**Project Management Subtotal**	%	10%	$ 197,500.00	**$ 19,750.00**	
180	**TOTAL ENVIRONMENTAL COST**				**$ 217,250.00**	

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
181	**INSPECTION SERVICES**					
182	**Material Inspection Services**					
183	Pipe Mill	DAYS	12	$ 1,000.00	$ 12,000.00	
184	Coating Mill	DAYS	12	$ 1,000.00	$ 12,000.00	
185	Valves, Hot Bends, Fittings, Etc.	MAN/WEEK	0	$ 6,000.00	$ -	
186	Pipeline Bends / Fittings	MAN/WEEK	0	$ 6,000.00	$ -	
187	PDC Building Inspection	DAYS	2	$ 1,000.00	$ 2,000.00	
188	**Material Inspection Services Subtotal**				**$ 26,000.00**	
189	**Construction Inspection Services**					
190	Construction Manager / Chief Inspector	DAYS	110	$ 1,000.00	$ 110,000.00	One (1) Construction Manager for duration of construction
191	Pipeline Inspectors	DAYS	110	$ 3,000.00	$ 330,000.00	Three (3) Inspectors for duration of pipeline construction
192	Facility Inspector	DAYS	60	$ 1,000.00	$ 60,000.00	One (1) Inspector for duration of facility construction
193	Clerk / Receivables	DAYS	48	$ 1,000.00	$ 48,000.00	For 6 weeks for material receipts and tracking
194	Loadout at Pipe Mill Inspector	LS	0	$ -	$ -	
195	Pipeline NDE	DAYS	100	$ 2,000.00	$ 200,000.00	2-man Crew during duration of pipeline construction
196	**Construction Inspection Services Subtotal**				**$ 748,000.00**	
197	**TOTAL INSPECTION SERVICES COST**				**$ 774,000.00**	
198	**ENGINEERING SERVICES**					
199	**Detailed Engineering**					
200	Project Management	LS	1	$ 98,700.00	$ 98,700.00	
201	Mechanical Engineering / Design	LS	1	$ 230,000.00	$ 230,000.00	
202	Electrical Engineering / Design	LS	1	$ 136,000.00	$ 136,000.00	
203	Structural Engineering / Design	LS	1	$ 38,500.00	$ 38,500.00	
204	Civil Engineering / Design	LS	1	$ 44,200.00	$ 44,200.00	
205	Corrosion Engineering / Design	LS	1	$ 34,400.00	$ 34,400.00	
206	Automation	LS	1	$ 122,000.00	$ 122,000.00	
207	As-Builts Engineering / Design	LS	1	$ 56,300.00	$ 56,300.00	
208	Procurement	LS	1	$ 29,600.00	$ 29,600.00	
209	Project Controls	LS	1	$ 5,200.00	$ 5,200.00	
210	**Detailed Engineering Subtotal**				**$ 794,900.00**	
211	**Construction Support**					
212	Construction Engineering Support (RFI)	WEEK	18	$ 1,000.00	$ 18,000.00	
213	**Construction Support Subtotal**				**$ 18,000.00**	
214	**TOTAL ENGINEERING SERVICES COST**				**$ 812,900.00**	

TOTAL INSTALLED COST - XCEL HARRINGTON 20" PIPELINE

PROJECT Xcel 20" Harrington Pipeline (22 Miles - 1125 PSIG MAOP) **LOCATION** Potter County, TX **REV** REV 0 - Issued for FEED

BY EN Engineering **DATE** June 12, 2020 **TYPE** FEED Study Estimate (+/- 20%)

LINE NUM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	AMOUNT	COMMENTS
215	**COMPANY ADMINISTRATION AND GENERAL**					
216	Xcel Internal Project Support	%	1.25%	$ 36,677,670.42	$ 458,470.88	% of total cost
217	**TOTAL COMPANY ADMINISTRATION AND GENERAL COST**				**$ 458,470.88**	
218	**LINE PACK**					
219	Gas Purge & Pack	MCF	16,000	$ 2.56	$ 41,008.00	Henry Hub for May 2021
220	**TOTAL LINE PACK COST**				**$ 41,008.00**	
221	**CONTINGENCY**					
222	**TOTAL CONTINGENCY**	%	15.00%	$ 37,177,149.30	**$ 5,576,572.40**	
223						
224	**TOTAL PROJECT COST**				**$ 42,753,721.70**	
225	**TOTAL COST PER MILE**	MILE	21.87	**$ 1,955,285.36**	$ 42,753,721.70	
226	**TOTAL COST PER FOOT**	FOOT	115,451	**$ 370.32**	$ 42,753,721.70	

Comparable Projects for Xcel 20" Harrington Pipeline

Project Name	Operator	Year	State	Miles	Diameter	Total Cost	Cost per Mile	Normalized Cost for 2020 $		
								CPI FACTOR	Total Cost	Cost per Mile
Dalton Expansion Project	Transcontinental Gas Pipeline Co. LLC	2016	GA, VA, NC	115	8 miles of 30" 51 miles of 24" 54 miles of 20" 2 miles of 16"	$321,390,825	$2,794,703	1.072	$344,530,964.40	$2,995,921.43
Virginia Southside Expansion Projects	Transcontinental Gas Pipeline Company	2013	NC, NJ, VA	98	24"	$220,810,315	$2,253,166	1.103	$243,553,777.45	$2,485,242.63
Midship Project	Midship Pipeline Company	2018	OK	233	200 miles of 36" 20 miles of 30" 13 miles of 16"	$585,372,569	$2,512,329	1.023	$598,836,138.09	$2,570,112.18
Spire STL Pipeline	Spire STL Pipeline, LLC	2018	IL, MO	66	59 miles of 24" 7 miles of 20"	$265,824,524	$4,027,644	1.023	$271,938,488.05	$4,120,280.12
Valley Expansion Pipeline	WBI Energy Transmission, Inc.	2018	MN, ND	37	16"	$46,260,671	$1,250,288	1.023	$47,324,666.43	$1,279,045.04
Northern Access Pipeline	National Fuel Supply Corporation & Empire Pipeline LLC	2017	NY, PA	100	24"	$326,253,497	$3,262,535	1.049	$342,239,918.35	$3,422,399.18
Willis Lateral	Gulf South Pipeline Company, LP	2018	TX	19	24"	$49,373,407	$2,598,600	1.023	$50,508,995.36	$2,658,368.18
Port Arthur Lateral	Florida Gas Transmission Company, LLC	2018	TX	11	16"	$26,349,928	$2,395,448	1.203	$26,955,976	$2,450,543
Harrington Pipeline	**Xcel Energy**	**-**	**TX**	**22**	**20"**	**$42,753,722**	**$1,955,285**	-	-	-
							Average of Comparable Projects:			$2,747,739

Project Name	Operator	Year	State	Miles	Diameter	% Cost Allocation									
						MATERIAL	CONSTRUCTION	RIGHT OF WAY	SURVEY	ENGINEERING & INSPECTION	ENVIRONMENTAL	LEGAL & PUBLIC AFFAIRS	LINE PACK	ADMIN & GEN	CONTINGENCY
Dalton Expansion Project	Transcontinental Gas Pipeline Co. LLC	2016	GA, VA, NC	115	8 miles of 30" 51 miles of 24" 54 miles of 20" 2 miles of 16"	16.0%	50.4%	7.9%	2.0%	7.9%	0.0%	1.4%	0.2%	1.0%	13.1%
Virginia Southside Expansion Projects	Transcontinental Gas Pipeline Company	2013	NC, NJ, VA	98	24"	26.6%	40.5%	2.5%	2.5%	15.6%	0.0%	0.0%	0.2%	2.9%	9.2%
Midship Project	Midship Pipeline Company	2018	OK	233	200 miles of 36" 20 miles of 30" 13 miles of 16"	31.5%	46.8%	5.9%	2.2%	1.4%	0.0%	0.3%	0.0%	0.9%	11.1%
Spire STL Pipeline	Spire STL Pipeline, LLC	2018	IL, MO	66	59 miles of 24" 7 miles of 20"	8.2%	72.0%	4.2%	0.0%	5.6%	1.4%	0.0%	0.0%	1.3%	7.2%
Valley Expansion Pipeline	WBI Energy Transmission, Inc.	2018	MN, ND	37	16"	24.0%	62.0%	5.3%	1.6%	6.2%	0.0%	0.2%	0.0%	0.6%	0.0%
Northern Access Pipeline	National Fuel Supply Corporation & Empire Pipeline LLC	2017	NY, PA	100	24"	16.8%	60.4%	5.6%	1.9%	3.6%	1.2%	0.5%	0.1%	1.0%	8.8%
Willis Lateral	Gulf South Pipeline Company, LP	2018	TX	19	24"	16.8%	59.1%	12.8%	3.0%	4.3%	2.4%	1.0%	-	1.3%	-
Port Arthur Lateral	Florida Gas Transmission Company, LLC	2018	TX	11	16"	13.7%	41.3%	17.4%	3.8%	7.9%	0.7%	0.7%	0.04%	3.5%	8.5%
					Average:	19.2%	54.1%	7.7%	2.1%	6.6%	0.7%	0.5%	0.1%	1.6%	8.3%
Harrington Pipeline	**Xcel Energy**	**-**	**TX**	**22**	**20"**	**24.6%**	**47.2%**	**7.6%**	**1.7%**	**3.7%**	**0.5%**	**0.5%**	**0.1%**	**1.1%**	**13.0%**

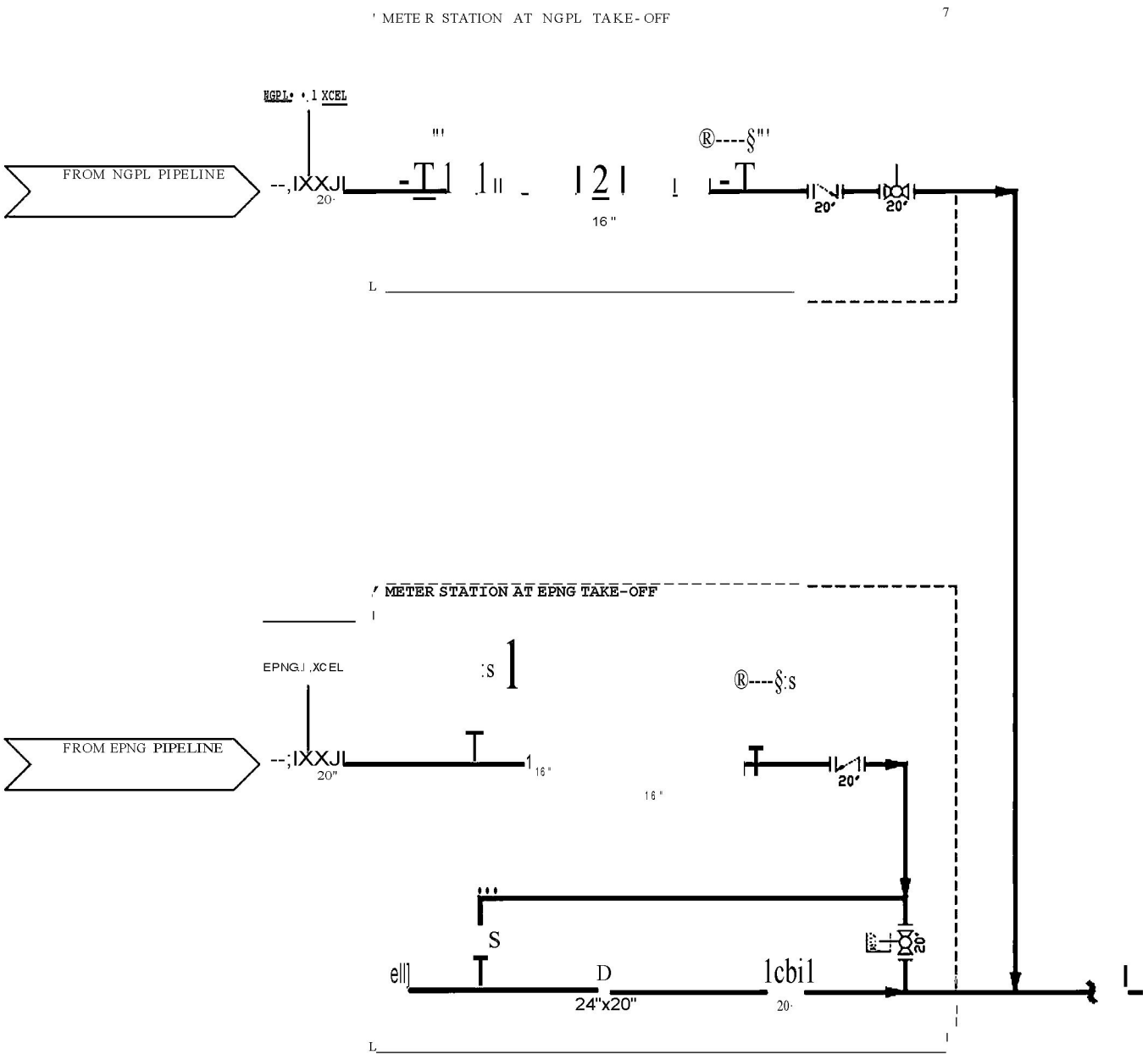
ATTACHMENT C
Feature Crossing List

Feature Crossing List for Xcel 20" Harrington Pipeline

Approximate Mile Post	Feature Name	Additional Information	Latitude	Longitude	County	Feature Type	Effective Feature Distance	Anticipated Installation Method	Anticipated Installation Length (ft)	Pipe Specification
0.16	Stream/Wetland	Riverine	35.386003	-102.046081	Potter	Waterbody/Wetland	869	Bore	200	NPS 20 X 0.375" W.T.
0.94	Stream/Wetland	Riverine	35.381886	-102.034392	Potter	Waterbody/Wetland	4974	HDD	1000	NPS 20 X 0.375" W.T.
1.68	Stream/Wetland	Riverine	35.381875	-102.021275	Potter	Waterbody/Wetland	8885	Bore	250	NPS 20 X 0.375" W.T.
3.49	Stream/Wetland	Multiple Riverine Crossings	35.381811	-101.989217	Potter	Waterbody/Wetland	18442	HDD	1500	NPS 20 X 0.375" W.T.
4.14	Stream/Wetland	Riverine	35.381767	-101.977806	Potter	Waterbody/Wetland	21844	Bore	100	NPS 20 X 0.375" W.T.
4.39	Stream/Wetland	Riverine	35.381756	-101.973400	Potter	Waterbody/Wetland	23158	Bore	100	NPS 20 X 0.375" W.T.
8.13	Stream/Wetland	Riverine	35.379322	-101.914014	Potter	Waterbody/Wetland	42930	HDD	1000	NPS 20 X 0.375" W.T.
10.70	Stream/Wetland	Riverine	35.381444	-101.874500	Potter	Waterbody/Wetland	56482	Bore	200	NPS 20 X 0.375" W.T.
12.70	Stream/Wetland	Riverine Split	35.381942	-101.839625	Potter	Waterbody/Wetland	66882	Bore	250	NPS 20 X 0.375" W.T.
13.00	State Highway 87	Highway	35.382097	-101.832200	Potter	Road	69096	HDD	1000	NPS 20 X 0.375" W.T.
17.70	Stream/Wetland	Riverine	35.322936	-101.813414	Potter	Waterbody/Wetland	93699	Bore	100	NPS 20 X 0.375" W.T.
18.00	Railroad	Riverine and Railroad	35.321578	-101.809575	Potter	Railroad	94998	HDD	1000	NPS 20 X 0.375" W.T.
18.90	Stream/Wetland	Riverine	35.317617	-101.793850	Potter	Waterbody/Wetland	99928	Bore	100	NPS 20 X 0.375" W.T.
20.00	Stream/Wetland	Riverine	35.312703	-101.776386	Potter	Waterbody/Wetland	105437	Bore	100	NPS 20 X 0.375" W.T.
21.30	Stream/Wetland	Freshwater Emergent Wetland	35.302256	-101.757292	Potter	Waterbody/Wetland	112632	Bore	250	NPS 20 X 0.375" W.T.
21.80	Railroad	Railroad	35.296308	-101.752703	Potter	Railroad	115348	Bore	250	NPS 20 X 0.375" W.T.

ATTACHMENT D
Process Flow Diagram

050

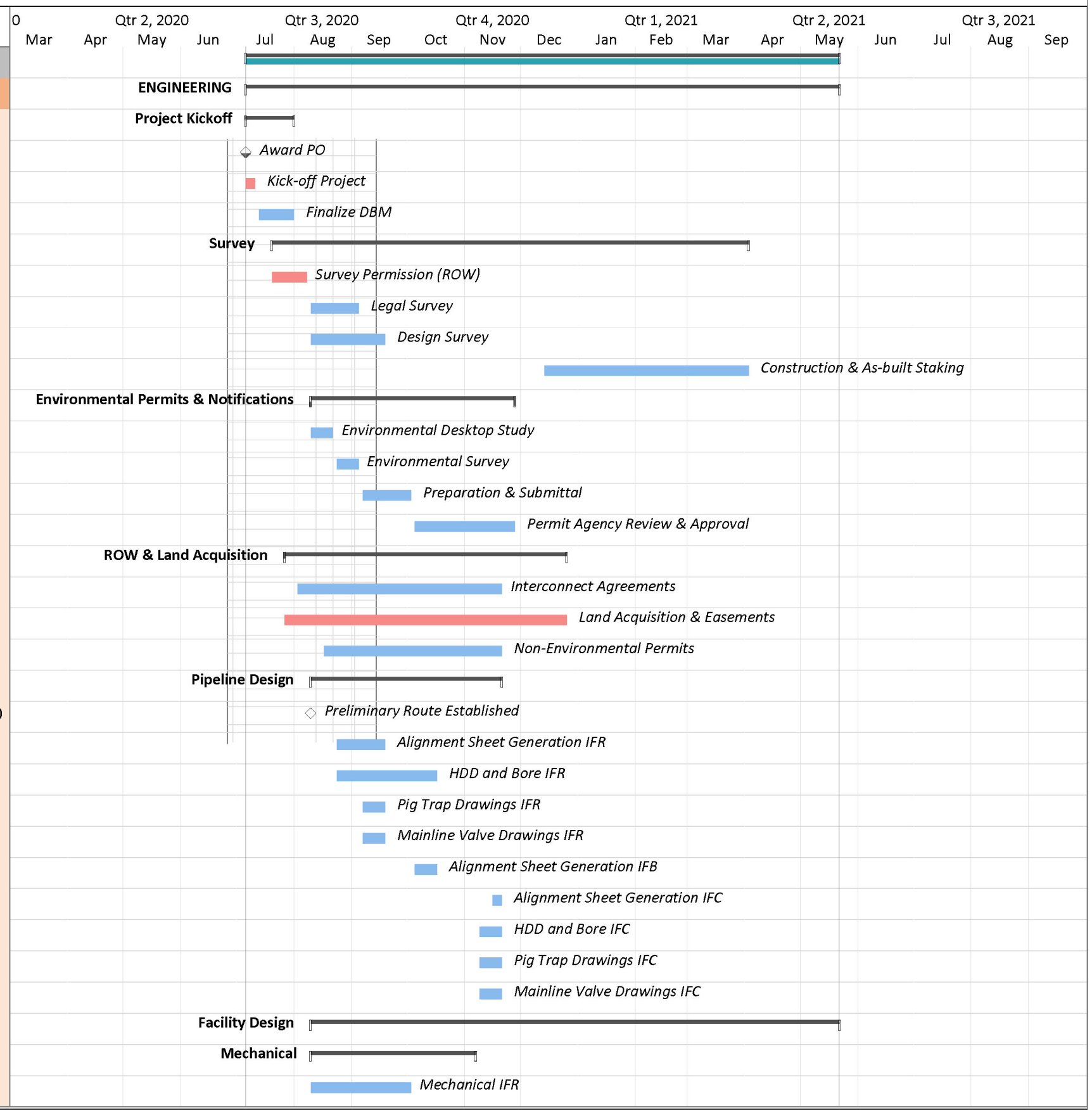

METER STATION AT NGPL TAKE-OFF
FROM NGPL PIPELINE
20"
16"
20"
20"
METER STATION AT EPNG TAKE-OFF
FROM EPNG PIPELINE
20"
16"
16"
20"
24"x20"
20"
20"

ATTACHMENT E
Preliminary Project Schedule

052

Xcel Energy
Harrington 20" Pipeline FEED
Preliminary EPC Schedule

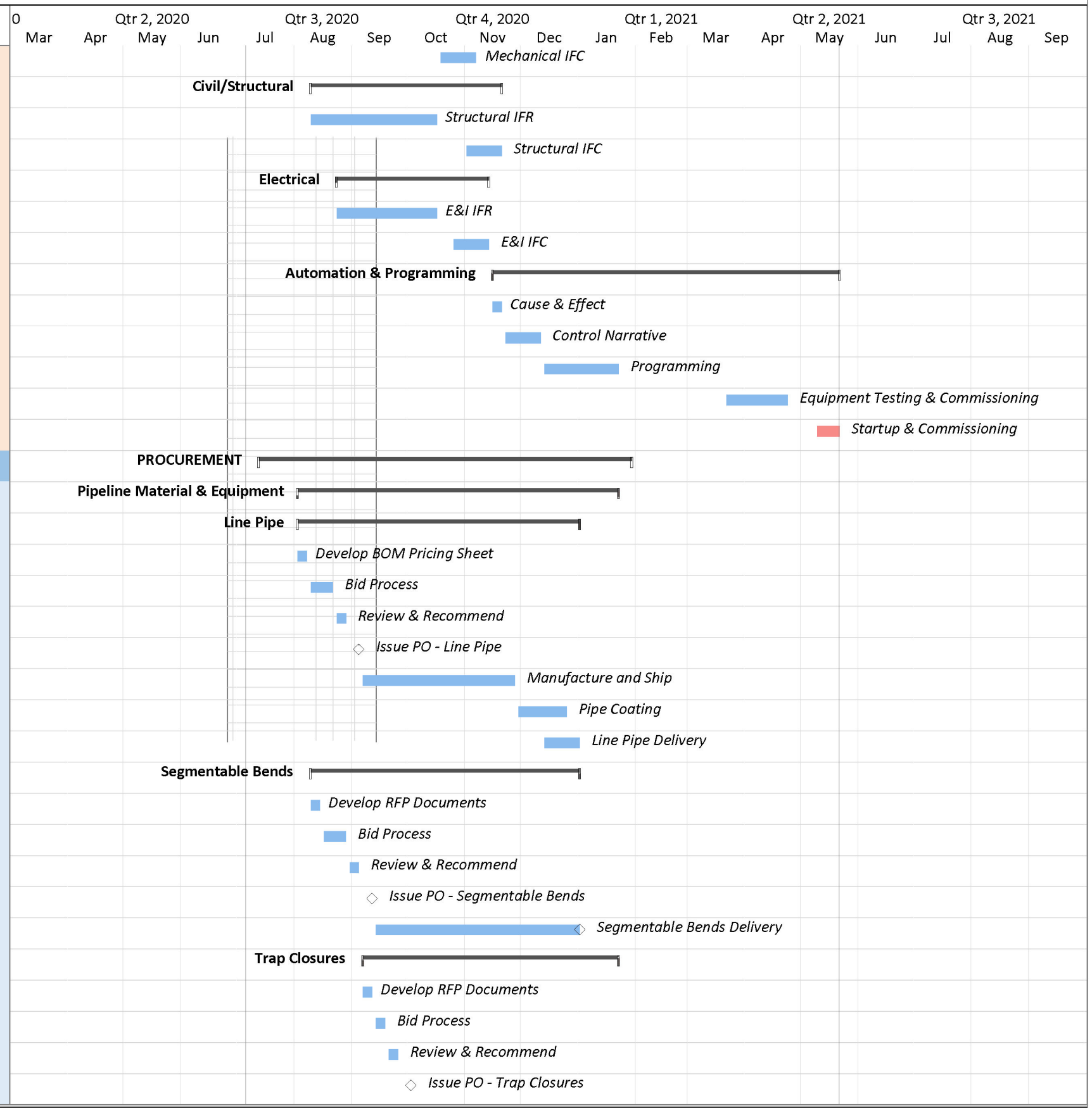
ID	Task Mo	Task Name	Duration	Start	Finish
1		**XCEL HARRINGTON 20" PIPELINE**	**230 days**	**Mon 7/6/20**	**Fri 5/21/21**
2		**ENGINEERING**	**230 days**	**Mon 7/6/20**	**Fri 5/21/21**
3		**Project Kickoff**	**20 days**	**Mon 7/6/20**	**Fri 7/31/20**
4		Award PO	0 days	Mon 7/6/20	Mon 7/6/20
5		Kick-off Project	1 wk	Mon 7/6/20	Fri 7/10/20
6		Finalize DBM	3 wks	Mon 7/13/20	Fri 7/31/20
7		**Survey**	**185 days**	**Mon 7/20/20**	**Fri 4/2/21**
8		Survey Permission (ROW)	3 wks	Mon 7/20/20	Fri 8/7/20
9		Legal Survey	4 wks	Mon 8/10/20	Fri 9/4/20
10		Design Survey	6 wks	Mon 8/10/20	Fri 9/18/20
11		Construction & As-built Staking	16 wks	Mon 12/14/20	Fri 4/2/21
12		**Environmental Permits & Notifications**	**80 days**	**Mon 8/10/20**	**Fri 11/27/20**
13		Environmental Desktop Study	2 wks	Mon 8/10/20	Fri 8/21/20
14		Environmental Survey	2 wks	Mon 8/24/20	Fri 9/4/20
15		Preparation & Submittal	4 wks	Mon 9/7/20	Fri 10/2/20
16		Permit Agency Review & Approval	8 wks	Mon 10/5/20	Fri 11/27/20
17		**ROW & Land Acquisition**	**110 days**	**Mon 7/27/20**	**Fri 12/25/20**
18		Interconnect Agreements	16 wks	Mon 8/3/20	Fri 11/20/20
19		Land Acquisition & Easements	22 wks	Mon 7/27/20	Fri 12/25/20
20		Non-Environmental Permits	14 wks	Mon 8/17/20	Fri 11/20/20
21		**Pipeline Design**	**75 days**	**Mon 8/10/20**	**Fri 11/20/20**
22		Preliminary Route Established	0 wks	Mon 8/10/20	Mon 8/10/20
23		Alignment Sheet Generation IFR	4 wks	Mon 8/24/20	Fri 9/18/20
24		HDD and Bore IFR	8 wks	Mon 8/24/20	Fri 10/16/20
25		Pig Trap Drawings IFR	2 wks	Mon 9/7/20	Fri 9/18/20
26		Mainline Valve Drawings IFR	2 wks	Mon 9/7/20	Fri 9/18/20
27		Alignment Sheet Generation IFB	2 wks	Mon 10/5/20	Fri 10/16/20
28		Alignment Sheet Generation IFC	1 wk	Mon 11/16/20	Fri 11/20/20
29		HDD and Bore IFC	2 wks	Mon 11/9/20	Fri 11/20/20
30		Pig Trap Drawings IFC	2 wks	Mon 11/9/20	Fri 11/20/20
31		Mainline Valve Drawings IFC	2 wks	Mon 11/9/20	Fri 11/20/20
32		**Facility Design**	**205 days**	**Mon 8/10/20**	**Fri 5/21/21**
33		**Mechanical**	**65 days**	**Mon 8/10/20**	**Fri 11/6/20**
34		Mechanical IFR	8 wks	Mon 8/10/20	Fri 10/2/20



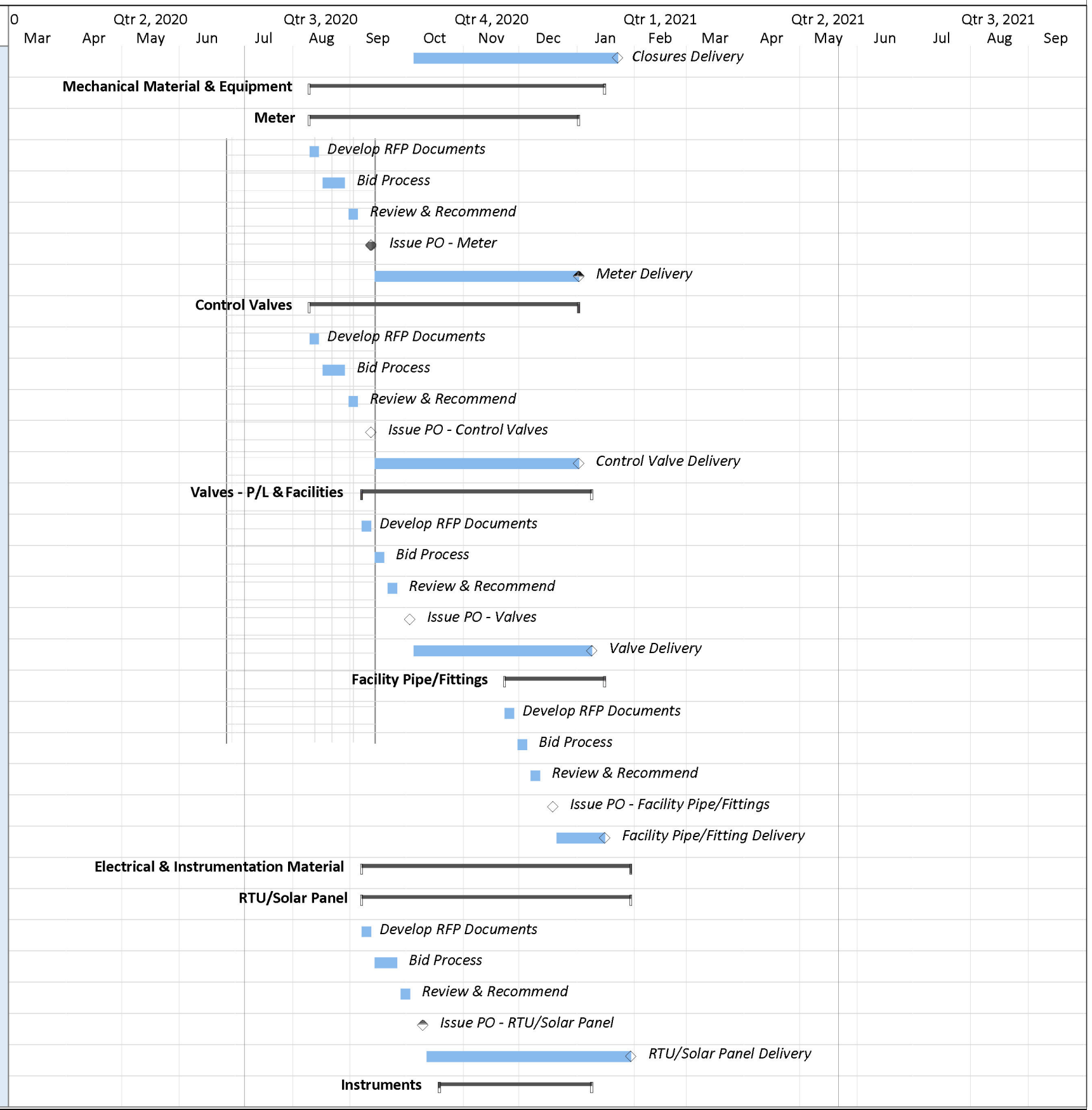
Revision 0 - 6/12/2020

Xcel Energy
Harrington 20" Pipeline FEED
Preliminary EPC Schedule

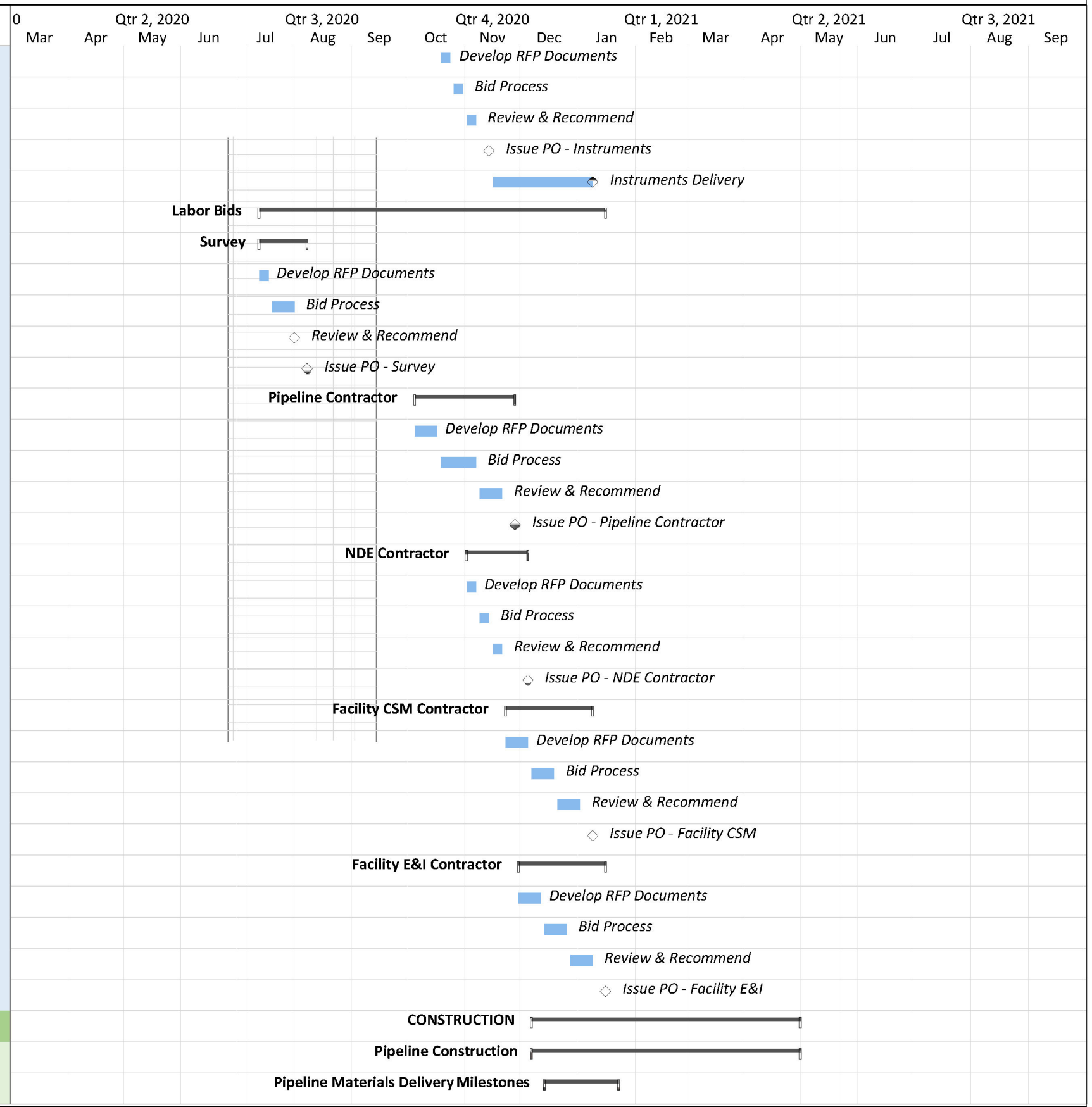
ID	Task Mo	Task Name	Duration	Start	Finish
35		Mechanical IFC	3 wks	Mon 10/19/20	Fri 11/6/20
36		**Civil/Structural**	**75 days**	**Mon 8/10/20**	**Fri 11/20/20**
37		Structural IFR	10 wks	Mon 8/10/20	Fri 10/16/20
38		Structural IFC	3 wks	Mon 11/2/20	Fri 11/20/20
39		**Electrical**	**60 days**	**Mon 8/24/20**	**Fri 11/13/20**
40		E&I IFR	8 wks	Mon 8/24/20	Fri 10/16/20
41		E&I IFC	3 wks	Mon 10/26/20	Fri 11/13/20
42		**Automation & Programming**	**135 days**	**Mon 11/16/2**	**Fri 5/21/21**
43		Cause & Effect	1 wk	Mon 11/16/20	Fri 11/20/20
44		Control Narrative	3 wks	Mon 11/23/20	Fri 12/11/20
45		Programming	6 wks	Mon 12/14/20	Fri 1/22/21
46		Equipment Testing & Commissioning	5 wks	Mon 3/22/21	Fri 4/23/21
47		Startup & Commissioning	2 wks	Mon 5/10/21	Fri 5/21/21
48		**PROCUREMENT**	**145 days**	**Mon 7/13/20**	**Fri 1/29/21**
49		**Pipeline Material & Equipment**	**125 days**	**Mon 8/3/20**	**Fri 1/22/21**
50		**Line Pipe**	**110 days**	**Mon 8/3/20**	**Fri 1/1/21**
51		Develop BOM Pricing Sheet	1 wk	Mon 8/3/20	Fri 8/7/20
52		Bid Process	2 wks	Mon 8/10/20	Fri 8/21/20
53		Review & Recommend	1 wk	Mon 8/24/20	Fri 8/28/20
54		Issue PO - Line Pipe	0 days	Fri 9/4/20	Fri 9/4/20
55		Manufacture and Ship	12 wks	Mon 9/7/20	Fri 11/27/20
56		Pipe Coating	4 wks	Mon 11/30/20	Fri 12/25/20
57		Line Pipe Delivery	3 wks	Mon 12/14/20	Fri 1/1/21
58		**Segmentable Bends**	**105 days**	**Mon 8/10/20**	**Fri 1/1/21**
59		Develop RFP Documents	1 wk	Mon 8/10/20	Fri 8/14/20
60		Bid Process	2 wks	Mon 8/17/20	Fri 8/28/20
61		Review & Recommend	1 wk	Mon 8/31/20	Fri 9/4/20
62		Issue PO - Segmentable Bends	0 wks	Fri 9/11/20	Fri 9/11/20
63		Segmentable Bends Delivery	16 wks	Mon 9/14/20	Fri 1/1/21
64		**Trap Closures**	**100 days**	**Mon 9/7/20**	**Fri 1/22/21**
65		Develop RFP Documents	1 wk	Mon 9/7/20	Fri 9/11/20
66		Bid Process	1 wk	Mon 9/14/20	Fri 9/18/20
67		Review & Recommend	1 wk	Mon 9/21/20	Fri 9/25/20
68		Issue PO - Trap Closures	0 wks	Fri 10/2/20	Fri 10/2/20



ID	Task Mo	Task Name	Duration	Start	Finish
69		Closures Delivery	16 wks	Mon 10/5/20	Fri 1/22/21
70		**Mechanical Material & Equipment**	**115 days**	**Mon 8/10/20**	**Fri 1/15/21**
71		**Meter**	**105 days**	**Mon 8/10/20**	**Fri 1/1/21**
72		Develop RFP Documents	1 wk	Mon 8/10/20	Fri 8/14/20
73		Bid Process	2 wks	Mon 8/17/20	Fri 8/28/20
74		Review & Recommend	1 wk	Mon 8/31/20	Fri 9/4/20
75		Issue PO - Meter	0 days	Fri 9/11/20	Fri 9/11/20
76		Meter Delivery	16 wks	Mon 9/14/20	Fri 1/1/21
77		**Control Valves**	**105 days**	**Mon 8/10/20**	**Fri 1/1/21**
78		Develop RFP Documents	1 wk	Mon 8/10/20	Fri 8/14/20
79		Bid Process	2 wks	Mon 8/17/20	Fri 8/28/20
80		Review & Recommend	1 wk	Mon 8/31/20	Fri 9/4/20
81		Issue PO - Control Valves	0 wks	Fri 9/11/20	Fri 9/11/20
82		Control Valve Delivery	16 wks	Mon 9/14/20	Fri 1/1/21
83		**Valves - P/L & Facilities**	**90 days**	**Mon 9/7/20**	**Fri 1/8/21**
84		Develop RFP Documents	1 wk	Mon 9/7/20	Fri 9/11/20
85		Bid Process	1 wk	Mon 9/14/20	Fri 9/18/20
86		Review & Recommend	1 wk	Mon 9/21/20	Fri 9/25/20
87		Issue PO - Valves	0 wks	Fri 10/2/20	Fri 10/2/20
88		Valve Delivery	14 wks	Mon 10/5/20	Fri 1/8/21
89		**Facility Pipe/Fittings**	**40 days**	**Mon 11/23/2**	**Fri 1/15/21**
90		Develop RFP Documents	1 wk	Mon 11/23/20	Fri 11/27/20
91		Bid Process	1 wk	Mon 11/30/20	Fri 12/4/20
92		Review & Recommend	1 wk	Mon 12/7/20	Fri 12/11/20
93		Issue PO - Facility Pipe/Fittings	0 days	Fri 12/18/20	Fri 12/18/20
94		Facility Pipe/Fitting Delivery	4 wks	Mon 12/21/20	Fri 1/15/21
95		**Electrical & Instrumentation Material**	**105 days**	**Mon 9/7/20**	**Fri 1/29/21**
96		**RTU/Solar Panel**	**105 days**	**Mon 9/7/20**	**Fri 1/29/21**
97		Develop RFP Documents	1 wk	Mon 9/7/20	Fri 9/11/20
98		Bid Process	2 wks	Mon 9/14/20	Fri 9/25/20
99		Review & Recommend	1 wk	Mon 9/28/20	Fri 10/2/20
100		Issue PO - RTU/Solar Panel	0 wks	Fri 10/9/20	Fri 10/9/20
101		RTU/Solar Panel Delivery	16 wks	Mon 10/12/20	Fri 1/29/21
102		**Instruments**	**60 days**	**Mon 10/19/2**	**Fri 1/8/21**

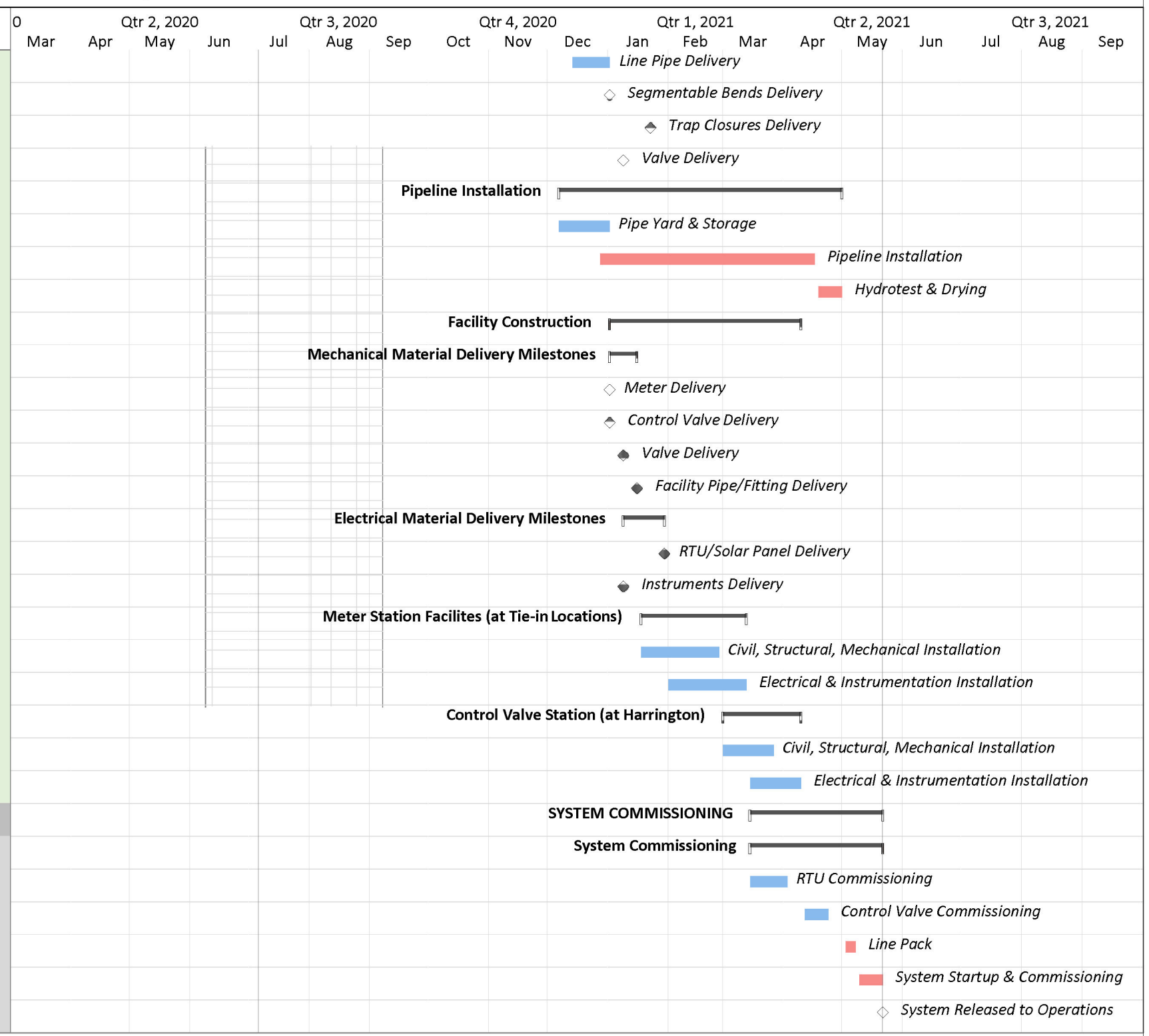


ID	Tas Mo	Task Name	Duration	Start	Finish
103		Develop RFP Documents	1 wk	Mon 10/19/20	Fri 10/23/20
104		Bid Process	1 wk	Mon 10/26/20	Fri 10/30/20
105		Review & Recommend	1 wk	Mon 11/2/20	Fri 11/6/20
106		Issue PO - Instruments	0 wks	Fri 11/13/20	Fri 11/13/20
107		Instruments Delivery	8 wks	Mon 11/16/20	Fri 1/8/21
108		**Labor Bids**	**135 days**	**Mon 7/13/20**	**Fri 1/15/21**
109		**Survey**	**20 days**	**Mon 7/13/20**	**Fri 8/7/20**
110		Develop RFP Documents	1 wk	Mon 7/13/20	Fri 7/17/20
111		Bid Process	2 wks	Mon 7/20/20	Fri 7/31/20
112		Review & Recommend	0 wks	Fri 7/31/20	Fri 7/31/20
113		Issue PO - Survey	0 wks	Fri 8/7/20	Fri 8/7/20
114		**Pipeline Contractor**	**40 days**	**Mon 10/5/20**	**Fri 11/27/20**
115		Develop RFP Documents	2 wks	Mon 10/5/20	Fri 10/16/20
116		Bid Process	3 wks	Mon 10/19/20	Fri 11/6/20
117		Review & Recommend	2 wks	Mon 11/9/20	Fri 11/20/20
118		Issue PO - Pipeline Contractor	0 wks	Fri 11/27/20	Fri 11/27/20
119		**NDE Contractor**	**25 days**	**Mon 11/2/20**	**Fri 12/4/20**
120		Develop RFP Documents	1 wk	Mon 11/2/20	Fri 11/6/20
121		Bid Process	1 wk	Mon 11/9/20	Fri 11/13/20
122		Review & Recommend	1 wk	Mon 11/16/20	Fri 11/20/20
123		Issue PO - NDE Contractor	0 wks	Fri 12/4/20	Fri 12/4/20
124		**Facility CSM Contractor**	**35 days**	**Mon 11/23/2**	**Fri 1/8/21**
125		Develop RFP Documents	2 wks	Mon 11/23/20	Fri 12/4/20
126		Bid Process	2 wks	Mon 12/7/20	Fri 12/18/20
127		Review & Recommend	2 wks	Mon 12/21/20	Fri 1/1/21
128		Issue PO - Facility CSM	0 wks	Fri 1/8/21	Fri 1/8/21
129		**Facility E&I Contractor**	**35 days**	**Mon 11/30/2**	**Fri 1/15/21**
130		Develop RFP Documents	2 wks	Mon 11/30/20	Fri 12/11/20
131		Bid Process	2 wks	Mon 12/14/20	Fri 12/25/20
132		Review & Recommend	2 wks	Mon 12/28/20	Fri 1/8/21
133		Issue PO - Facility E&I	0 wks	Fri 1/15/21	Fri 1/15/21
134		**CONSTRUCTION**	**105 days**	**Mon 12/7/20**	**Fri 4/30/21**
135		**Pipeline Construction**	**105 days**	**Mon 12/7/20**	**Fri 4/30/21**
136		**Pipeline Materials Delivery Milestones**	**30 days**	**Mon 12/14/2**	**Fri 1/22/21**



Xcel Energy
Harrington 20" Pipeline FEED
Preliminary EPC Schedule

ID	Task Mo	Task Name	Duration	Start	Finish
137		*Line Pipe Delivery*	*3 wks*	*Mon 12/14/20*	*Fri 1/1/21*
138		*Segmentable Bends Delivery*	*0 days*	*Fri 1/1/21*	*Fri 1/1/21*
139		*Trap Closures Delivery*	*0 days*	*Fri 1/22/21*	*Fri 1/22/21*
140		*Valve Delivery*	*0 days*	*Fri 1/8/21*	*Fri 1/8/21*
141		**Pipeline Installation**	**105 days**	**Mon 12/7/20**	**Fri 4/30/21**
142		Pipe Yard & Storage	4 wks	Mon 12/7/20	Fri 1/1/21
143		Pipeline Installation	16 wks	Mon 12/28/20	Fri 4/16/21
144		Hydrotest & Drying	2 wks	Mon 4/19/21	Fri 4/30/21
145		**Facility Construction**	**70 days**	**Fri 1/1/21**	**Fri 4/9/21**
146		**Mechanical Material Delivery Milestones**	**10 days**	**Fri 1/1/21**	**Fri 1/15/21**
147		*Meter Delivery*	*0 days*	*Fri 1/1/21*	*Fri 1/1/21*
148		*Control Valve Delivery*	*0 days*	*Fri 1/1/21*	*Fri 1/1/21*
149		*Valve Delivery*	*0 days*	*Fri 1/8/21*	*Fri 1/8/21*
150		*Facility Pipe/Fitting Delivery*	*0 days*	*Fri 1/15/21*	*Fri 1/15/21*
151		**Electrical Material Delivery Milestones**	**15 days**	**Fri 1/8/21**	**Fri 1/29/21**
152		*RTU/Solar Panel Delivery*	*0 days*	*Fri 1/29/21*	*Fri 1/29/21*
153		*Instruments Delivery*	*0 days*	*Fri 1/8/21*	*Fri 1/8/21*
154		**Meter Station Facilites (at Tie-in Locations)**	**40 days**	**Mon 1/18/21**	**Fri 3/12/21**
155		Civil, Structural, Mechanical Installation	6 wks	Mon 1/18/21	Fri 2/26/21
156		Electrical & Instrumentation Installation	6 wks	Mon 2/1/21	Fri 3/12/21
157		**Control Valve Station (at Harrington)**	**30 days**	**Mon 3/1/21**	**Fri 4/9/21**
158		Civil, Structural, Mechanical Installation	4 wks	Mon 3/1/21	Fri 3/26/21
159		Electrical & Instrumentation Installation	4 wks	Mon 3/15/21	Fri 4/9/21
160		**SYSTEM COMMISSIONING**	**50 days**	**Mon 3/15/21**	**Fri 5/21/21**
161		**System Commissioning**	**50 days**	**Mon 3/15/21**	**Fri 5/21/21**
162		RTU Commissioning	3 wks	Mon 3/15/21	Fri 4/2/21
163		Control Valve Commissioning	2 wks	Mon 4/12/21	Fri 4/23/21
164		Line Pack	1 wk	Mon 5/3/21	Fri 5/7/21
165		System Startup & Commissioning	2 wks	Mon 5/10/21	Fri 5/21/21
166		System Released to Operations	0 days	Fri 5/21/21	Fri 5/21/21



ATTACHMENT F
Permit Matrix

058

Permit Matrix for Xcel 20" Harrington Pipeline

Agency	Requirements	Regulatory Reference	Applicability	Est. Review Time	Contacts	Applicable	Comments
FEDERAL PERMITS							
U.S. Army Corps of Engineers (USACE)	Waters of the US, (including Wetlands)	CWA, Section 401 & 404	Applies to discharge of fill in waters of the US. Nationwide Permit no longer applicable.	3 - 6 months	USACE Tulsa District 2488 East 81st Street Tulsa Oklahoma 74137	No	Installation under streams, wetlands, riverines, etc. are assumed to be via HDD or Bore, removing the need for a Section 401/404 Permit
US DOT - PHMSA (Pipeline and Hazardous Materials Safety Administration)	Operator Registry Notification - Form PHMSA F 1000.2	49CFR, Parts 191 & 195	Operator is required to submit notification of specified events to PHMSA in accordance with §191.22(c) or §195.64(c). Construction notifications are required 60 days prior to the "event." On September 12, 2014, PHMSA published an Advisory Bulletin describing the activities that constitute the "event" of construction, which determines the due date for the notification.	Due 60 days prior to construction	PHMSA Information Resources Manager https://portal.phmsa.dot.gov/phmsaportallanding	Yes	Completing these registration requirements could take several weeks. Plan to submit in advance of the report due date.
US DOT - PHMSA (Pipeline and Hazardous Materials Safety Administration)	Response Plan	49CFR, Part 194	Applies to an onshore oil pipeline that because of its location, could reasonably be expected to cause substantial harm, or significant and substantial harm to the environment by discharging oil into or on any navigable waters of the US or adjoining shorelines.	Due 60 days prior to operation	U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety 1200 New Jersey Avenue SE Washington, DC 20590	Yes	Response plans are to be resubmitted every five years. If a new or different operating condition or information would substantially affect the implementation of a response plan, the operator must immediately modify its response plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA.
United States Environmental Protection Agency (USEPA)	Clean Water Act NPDES Permit	CWA Section 402 NPDES	Applies to a discharge to Surface Waters of the US, including hydrostatic test water discharges. This doesn't not include stormwater, unless it is contact stormwater or otherwise contaminated. Discharge of contact stormwater is prohibited.	4 - 6 Months	EPA Region 6 Main Office 1201 Elm Street, Suite 500 Dallas, Texas 75270	No	Hydrotest test water assumed to be sourced from and discharged back to Harrington Refinery, removing the need for a Section 402 Permit. Applicability and feasibilty to be confirmed in detailed design.
STATE PERMITS							
Texas Railroad Commission (RRC)	Organization Report - Form P-5	16 TAC, Chapter 3	Prior to applying for any permit, applicant must file this form with the RRC. Must include some form of financial assurance: Form P-5PB(2), Letter of Credit (Form P-5LC), or Cash Deposit.		Railroad Commission of Texas Oil & Gas Division Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	Yes	Must Obtain Prior to Submitting an Application For an Environmental Permit or an Operating Permit With the Railroad Commission.
Texas Railroad Commission (RRC)	T-4 Application For Permit To Operate A Pipeline In Texas (Operating Permit)	16 TAC 3.70	Required so the division can have the new pipeline in their system prior to operation.	Min. 2 weeks prior to activating the pipeline	Railroad Commission of Texas Pipeline Safety Division Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	Yes	An entire, clear and detailed plat (USGA 7.5 minute Quad Map - scale 1"=2000') showing the size of the line, or an overview map (24" x 24" / 1" = 20 miles or less) and digital data must accompany the completed application. Requires submittal only - no obligation to wait for a response.
Texas Railroad Commission (RRC)	PS-48 New Construction Report; requires submittal only - no obligation to wait for a response.	16 TAC 8.115, 3.36, 3.106	Required so the division can send an observer during construction.	Min. 30 days prior to start of construction	Railroad Commission of Texas Pipeline Safety Division Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	Yes	Generally, the required form PS-48 pertains to transmission lines, gathering lines inside a (non-rural or) Class 2, 3 or 4 location and certain distribution systems.
Texas Railroad Commission (RRC)	Hydrostatic Test Water Permit (TPDES)	Rule 8(d)(6)(G)	If a discharge will enter surface waters. This does not include non-contact storm water runoff.	15 Days	Railroad Commission of Texas Oil & Gas Division - Environmental Permitting Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	No	Hydrotest test water assumed to be sourced from and discharged back to Harrington Refinery, removing the need for a RRC Permit. Applicability and feasibilty to be confirmed in detailed design.
Texas Railroad Commission (RRC)	Notification of Landfarmed Petroleum and Non-Hazardous Waste (RCRA-exempt and nonexempt nonhazardous oil and gas wastes)	Statewide Rule 8	If during construction, waste is encountered or generated and subsequently landfarmed/landtreated.		Railroad Commission of Texas Oil & Gas Division - Environmental Permitting Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	As Req'd	RRC is interested if non-hazardous waste is landfarmed, not if just hauled off.
Texas Department of Transportation (TxDOT)	Road Crossing Permit for state and federal roads and highways	Form 1082	Applies to any state or federal road crossing.	1-3 weeks	Texas Department of Transportation Amarillo District 5715 Canyon Drive Amarillo, Texas 79110	Yes	All O&G permits must be signed and sealed by a PE. Minimum depth is 5 to 6 feet from ditch grade.
Texas Historical Comission (THC)	National Historic Preservation Act and Antiquities Code of Texas		Review for Cultural Resource impact	30 days	Texas Historical Commission Main Office: 1511 Colorado Street, Austin TX 78701 Mailing address: P. O. Box 12276, Austin TX 78711	Yes	Required if desktop review and field survey confirm any impacted cultural resources. Covered by USACE 404 Permit as applicable, however USACE reviews in concurrance regardless. Projects involving state or local public land will also require review under the Antiquities Code of Texas.
Texas Parks & Wildlife (TPWD)	Endangered Species Review	Setion 12.0011	Wildlife Habitat Assessment Program	45 Days	Texas Parks & Wildlife Habitat Assessment 4200 Smith School Road Austin, TX 78744 tpwd.texas.gov/huntwild/wild/wildlife diversity/habitat assessment/	Yes	Covered by USACE 404 Permit as applicable, however USACE and US Fish and Wildlife review in concurrance regardless
LOCAL PERMITS							
Potter County	Utility Permit Request (for a county road crossing)		Need to complete an application form for each road crossing. Requires submittal and approval prior to initiating work.	TBD	Road & Bridge Department 2419 Willow Creek Amarillo, TX 79107	Yes	To be confirmed if Potter County has permit requirements or if they are deferred to TxDOT

Permit Matrix for Xcel 20" Harrington Pipeline

Agency	Requirements	Regulatory Reference	Applicability	Est. Review Time	Contacts	Applicable	Comments
OTHER							
Union Pacific Railroad	Railroad Crossing Permit		Required for rail crossing east of HWY 87	45-60 days minimum	up.com/real_estate/utilities/pipeline/pipeline_procedure/index.htm	Yes	May require additional permits and forms with Union Pacific and/or other regulatory agencies
U.S. Army Corps of Engineers (USACE)	Culturaland Historic Review	401 & 404 Supplementary	Required for Federal 401 & 404 Permit	3 - 6 months		No	USACE coordinates project with SHPO
Native American Tribal Lands	Comments fielded by USACE	401 & 404 Supplementary	Required for Federal 401 & 404 Permit	3 - 6 months		No	USACE coordinates project with Native tribes
US Fish & Wildlife Service (USF&W)	Endangered Species	401 & 404 Supplementary	Required for Federal 401 & 404 Permit	3 - 6 months		No	USACE coordinates project with FWS.
United States Environmental Protection Agency (USEPA)	Water Quality Certification - no action required by operator.	CWA, Section 401	Needed if a permit will be issued by a federal agency for potential discharge into surface waters of US from a point source.		EPA Region 6 Main Office 1201 Elm Street, Suite 500 Dallas, Texas 75270	No	Certification is required from the state in which the discharge would originate.
United States Environmental Protection Agency (USEPA)	Stormwater Permitting (non-contact)	CWA Section 402(l)(2)	No permit needed unless discharge contains reportable quantity or violates water quality standards of receiving water body. Follow Best Management Practices.		EPA Region 6 Main Office 1201 Elm Street, Suite 500 Dallas, Texas 75270	No	Contact storm water is considered oil and gas waste and discharge is prohibited.
Texas Railroad Commission (RRC)	Water Quality Certification (WQC) - no action is required by the operator.	CWA, Section 401	CWA compliance; required for larger projects; waived for smaller projects.	Certification is issued within 15 days of the close of public comment	Railroad Commission of Texas Oil & Gas Division - Environmental Permitting Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	No	The RRC comments to the USACE through the public notice process. As the agency with jurisdiction, the Commission normally issues the WQC when required.
Texas Railroad Commission (RRC)	NPDES	CWA, Section 402	Stormwater runoff into waters of the US.		Railroad Commission of Texas Oil & Gas Division - Environmental Permitting Main Office: 1701 North Congress, Austin TX 78701-1402 Mailing address: P. O. Box 12967, Austin TX 78711-2967	No	No permit is required for non-contact stormwater.

ATTACHMENT G
EPA Envirofact Point Locations
061

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

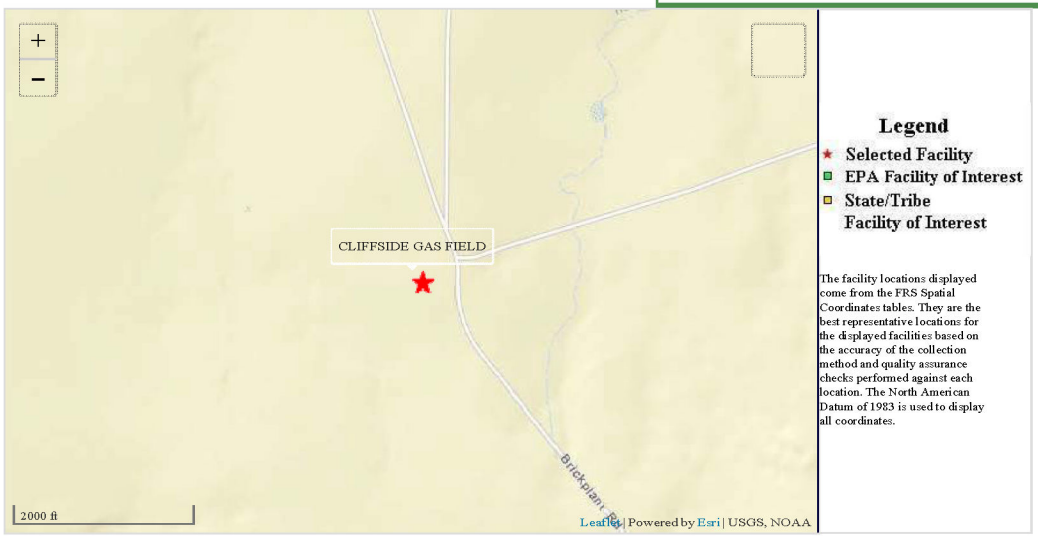
CLIFFSIDE GAS FIELD

EPA Registry Id: 110034702132
13301 BRICKPLANT RD
AMARILLO, TX 791243015

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
ELECTRONIC GREENHOUSE GAS REPORTING TOOL (E-GGRT)	CLIFFSIDE CRUDE HELIUM ENRICHMENT UNIT	1010750	GREENHOUSE GAS REPORTER	E-GGRT		
RISK MANAGEMENT PLAN	CLIFFSIDE HELIUM ENRICHMENT UNIT	100000185453	RMP REPORTER	RMP	05/11/2017	
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	CLIFFSIDE GAS FIELD	RN102614435	STATE MASTER	TX-TCEQ ACR		REGISTRATION-45144 AIR PROGRAM REGISTRATION-16178 UNDERGROUND STORAGE TANK PROGRAM ACCOUNT NUMBER-PG0195M AIR PROGRAM PERMIT-45144 AIR PROGRAM
ICIS-AIR (AIR)	CLIFFSIDE GAS FIELD	06000000483756E004	AIR EMISSIONS CLASSIFICATION UNKNOWN	AIR	10/19/2016	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	CLIFFSIDE GAS FIELD AND CRUDE HELIUM ENRICHMENT UNIT	1400003019	ENFORCEMENT/COMPLIANCE ACTIVITY	ICIS	09/15/2008	ICIS-06-2008-3615 FORMAL ENFORCEMENT ACTION
INTEGRATED COMPLIANCE INFORMATION SYSTEM	CLIFFSIDE GAS FIELD AND CRUDE HELIUM ENRICHMENT UNIT	1400003019	FORMAL ENFORCEMENT ACTION	ICIS	12/09/2008	ICIS-06-2008-3615 FORMAL ENFORCEMENT ACTION

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
TX-TCEQ ACR	1311	CRUDE PETROLEUM AND NATURAL GAS	

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	NO

Alternative Names

Alternative Name	Source of Data
U. S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT-CLIFFSIDE HELIUM	ICIS
CLIFFSIDE GAS FIELD AND CRUDE HELIUM ENRICHMENT UNIT	ICIS
CLIFFSIDE CRUDE HELIUM ENRICHMENT UNIT	E-GGRT
CLIFFSIDE HELIUM ENRICHMENT UNIT	RMP REPORTING FORM

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
JOINT PARENT COMPANY	US GOVERNMENT		E-GGRT	
OWNER	U.S. DEPARTMENT OF THE INTERIOR		TX-TCEQ ACR	View
OWNER	U.S.D.O.I. BUREAU OF LAND MANAGEMENT		TX-TCEQ ACR	View
OWNER/OPERATOR	CINDY SUNDBLAD		RMP	View
OWNER/OPERATOR	BUREAU OF LAND MANAGEMENT		RMP	View
OWNER/OPERATOR	U.S. DEPT. OF INTERIOR BUREAU OF LAND MANAGEMENT	108550208	RMP	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
ICIS	211112	NATURAL GAS LIQUID EXTRACTION.	
RMP	211112	NATURAL GAS LIQUID EXTRACTION.	
E-GGRT	325120	INDUSTRIAL GAS MANUFACTURING.	
RMP	32512	INDUSTRIAL GAS MANUFACTURING	

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
MAILING ADDRESS	13301 BRICKPLANT RD	AMARILLO	TX	791243015	TX-TCEQ ACR
OWNER/OPERATOR	BUREAU OF LAND MANAGEMENT	AMARILLO	TX	791063545	RMP
OWNER/OPERATOR MAILING ADDRESS	BUREAU OF LAND MANAGEMENT	AMARILLO	TX	791063545	RMP
OWNER	801 S FILLMORE ST STE 500	AMARILLO	TX	79101-3514	TX-TCEQ ACR
OWNER/OPERATOR	AMARILLO FIELD OFFICE - HELIUM OPS	AMARILLO	TX	791013545	RMP

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
RESPONSIBLE PARTY	SAMUEL R. M. BURTON	8064771296	RMP	
RESPONSIBLE PARTY ADDRESS	SAMUEL R. M. BURTON	8064771296	RMP	
RESPONSIBLE PARTY	JOHN HAMAK	8063561002	RMP	

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

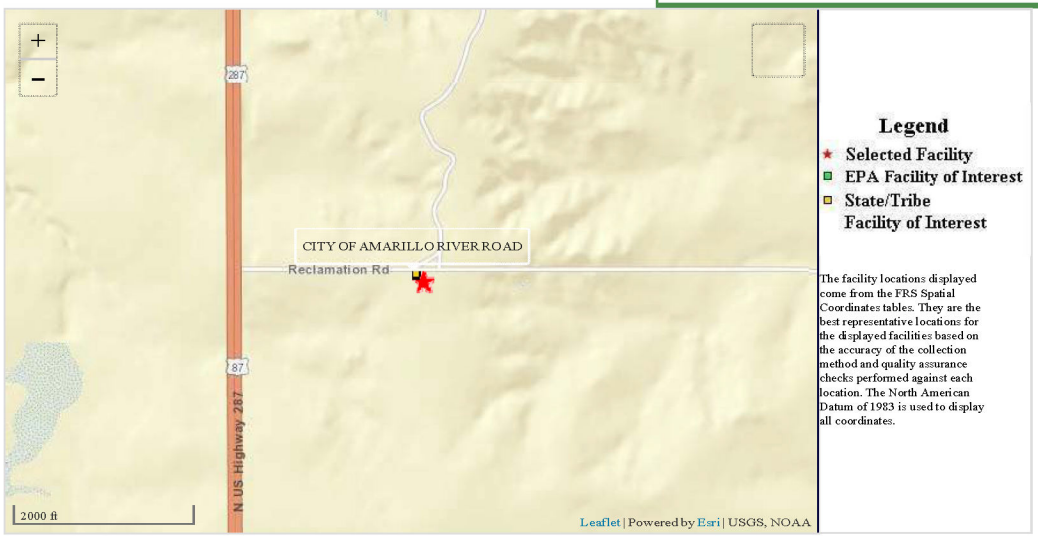
CITY OF AMARILLO RIVER ROAD

EPA Registry Id: 110042365650
12600 RECLAMATION PLANT RD
AMARILLO, TX 79108

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Data Type	Source	Last Updated Date	Supplemental Environmental Interests:
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	CITY OF AMARILLO RIVER ROAD	TXR05M353	ICIS-NPDES NON-MAJOR	ICIS	08/29/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	CITY OF AMARILLO RIVER ROAD	TXR05M353	STORM WATER INDUSTRIAL	ICIS	08/29/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports:	MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

No Facility Mailing Addresses returned.

Contacts

No Contacts returned.

Alternative Names

Alternative Name	Source of Data
AMARILLO CITY OF, RIVER ROAD & WWTF	ICIS

Organizations

No Organizations returned.

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

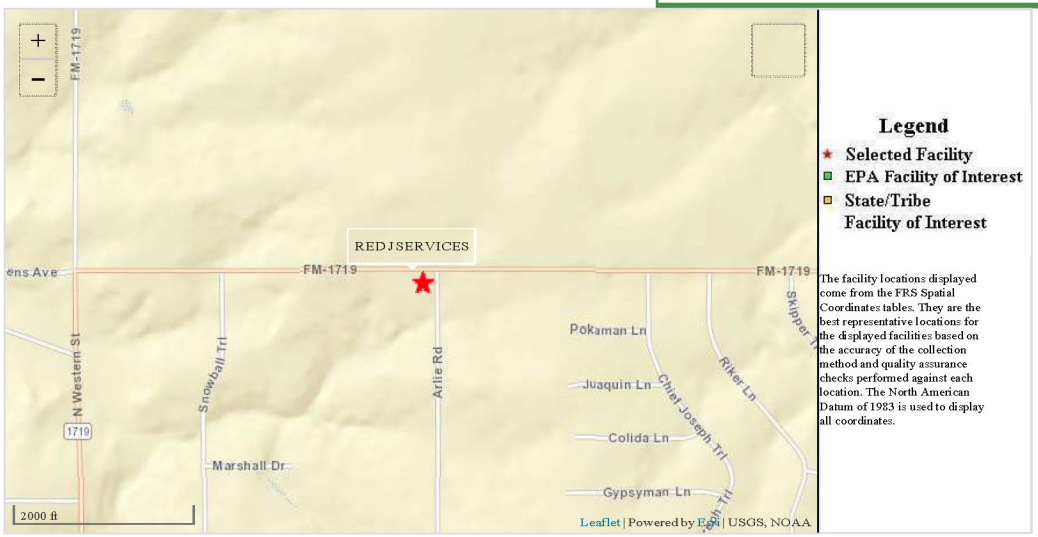
RED J SERVICES

EPA Registry Id: 110064671840
3101 GIVENS AVE
AMARILLO, TX 79108

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	RED J SERVICES	TXR000081692	TRANSPORTER (Y)	RCRAINFO	08/03/2015	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

No Facility Mailing Addresses returned.

Alternative Names

No Alternative Names returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	CASEY FISH	806-3831133	RCRAINFO	

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	RED J SERVICES LLC		RCRAINFO	
OPERATOR	RED J SERVICES LLC		RCRAINFO	

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

RIVER ROAD WATER RECLAMATION PLANT

EPA Registry Id: 110000711560
12600 RECLAIMATION ROAD
AMARILLO, TX 79108

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error

Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
AIR FACILITY SYSTEM	RIVER ROAD WATER RECLAMATION PLANT	4837500059	AIR MINOR (OPERATING)	AIRS/AFS	09/19/2011	
ICIS-AIR (AIR)	RIVER ROAD WATER RECLAMATION PLANT	TX0000004837500059	AIR MAJOR	ICIS	02/21/2019	
RISK MANAGEMENT PLAN	RIVER ROAD WATER RECLAMATION PLANT	100000055799	RMP REPORTER	RMP	06/16/2014	
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	RIVER ROAD WATER RECLAMATION PLANT	RN100221571	STATE MASTER	TX-TCEQ ACR		PERMIT-TXR05M353 NPDES STORMWATER PERMI ACCOUNT NUMBER-PG0176Q AIR PROGRAM PERMIT-TX0025801 NPDES PERMIT PERMIT-39845 AIR PROGRAM PERMIT-TPDES0025801 NPDES PERMIT EPA ID-TX0025801000 NPDES PRETREATMENT PROGRAM PERMIT-44227 AIR PROGRAM ACCOUNT NUMBER-PG0176Q AIR EMISSION INVENTORY EPA ID-TX0025801 NPDES PERMIT EPA ID-TX1039201 NPDES PERMIT REGISTRATION-44227 AIR PROGRAM AFS NUM-4837500059 AIR PROGRAM REGISTRATION-39845 AIR PROGRAM PERMIT-TPDES1039201 NPDES PERMIT PERMIT-WQ0010392001 NPDES PRETREATMENT PROGRAM PERMIT-WQ0010392001 NPDES PERMIT

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
AIR	4952	SEWERAGE SYSTEMS	
TX-TCEQ ACR	4952	SEWERAGE SYSTEMS	
AIRS/AFS	4952	SEWERAGE SYSTEMS	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
AIR	221320	SEWAGE TREATMENT FACILITIES.	
TX-TCEQ ACR	221320	SEWAGE TREATMENT FACILITIES.	
RMP	22132	SEWAGE TREATMENT FACILITIES	

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
OWNER/OPERATOR	1935 WILLOW LN	EAST TEXAS	PA	18046	TX-TCEQ ACR
MAILING ADDRESS	12600 RECLAMATION PLANT RD	AMARILLO	TX	79108	TX-TCEQ ACR
OWNER/OPERATOR	PO BOX 1971	AMARILLO	TX	79105-1971	RMP
OWNER/OPERATOR	PO BOX 1971	AMARILLO	TX	79105-1971	TX-TCEQ ACR

Alternative Names

Alternative Name	Source of Data
RIVER ROAD WATER RECLAMATION PLANT	FRS
RIVER ROAD WWTF	NPDES

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
UNKNOWN CONTACT	DUANE L. WARREN	8063783008	AIRS/AFS	
COMPLIANCE CONTACT	DUANE L. WARREN	8063783008	AIRS/AFS	
OWNER/OPERATOR	CRYSTAL E. KOCK	6103958502	TX-TCEQ ACR	View
RESPONSIBLE PARTY	TIMOTHY J. LOAN	8063783000	RMP	
COMPLIANCE CONTACT	DUANE L. WARREN	8063783008	AIR	
UNKNOWN CONTACT	DUANE L. WARREN	8063783008	AIR	

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER/OPERATOR	UTILITIES DIVISION		RMP	
OWNER/OPERATOR	CITY OF AMARILLO		TX-TCEQ ACR	View
PARENT COMPANY	CITY OF AMARILLO		RMP	
OWNER/OPERATOR	CITY OF AMARILLO		RMP	View

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

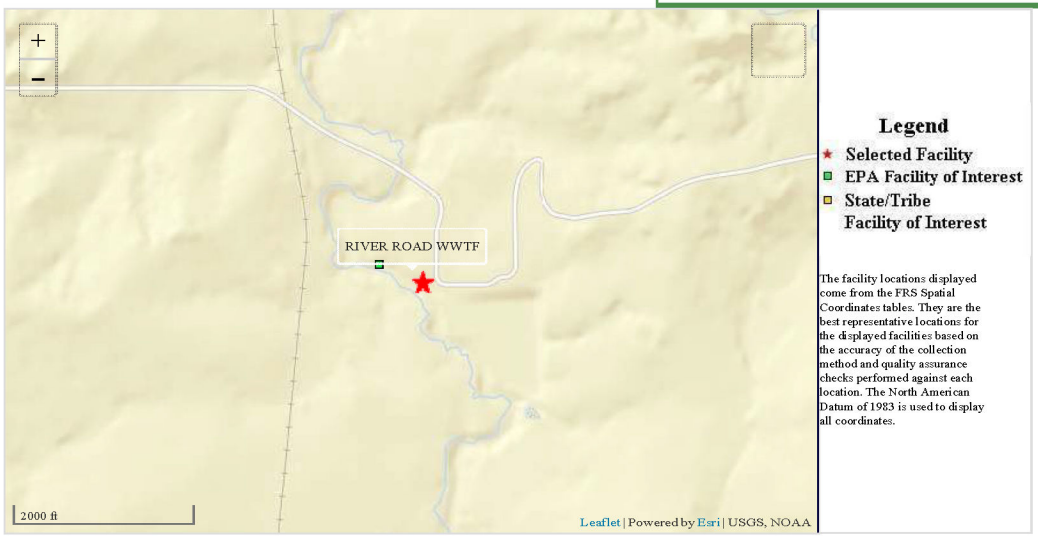
RIVER ROAD WWTF

EPA Registry Id: 110039858017
1.5 MI EAST OF USHWY 87
AMARILLO, TX 79105

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	RIVER ROAD WWTF	TX0025801	NPDES PRETREATMENT PROGRAM	ICIS		ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	RIVER ROAD WWTF	TX0025801	POTW	ICIS		ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	RIVER ROAD WWTF	TX0025801	ICIS-NPDES MAJOR	ICIS		ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
NPDES	4952	SEWERAGE SYSTEMS	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
COGNIZANT OFFICIAL	PO BOX 1971	AMARILLO	TX	79105-1971	NPDES
MAILING ADDRESS	PO BOX 1971	AMARILLO	TX	79105-1971	NPDES
OWNER	PO BOX 1971	AMARILLO	TX	79105-1971	NPDES
MAILING ADDRESS	C/O WASTEWATER TREATMENT SUPER	AMARILLO	TX	791051971	NPDES

Alternative Names

Alternative Name	Source of Data
RIVER ROAD WWTP	CWNS

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
COGNIZANT OFFICIAL	PAUL HARPOLE	8063783008	NPDES	View
COGNIZANT OFFICIAL	DEBRA MCCARTT	8063783010	NPDES	View

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	CITY OF AMARILLO		NPDES	View
MAILING ADDRESS	CITY OF AMARILLO		NPDES	View

Query executed on: APR-14-2020

Last updated on September 24, 2015

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

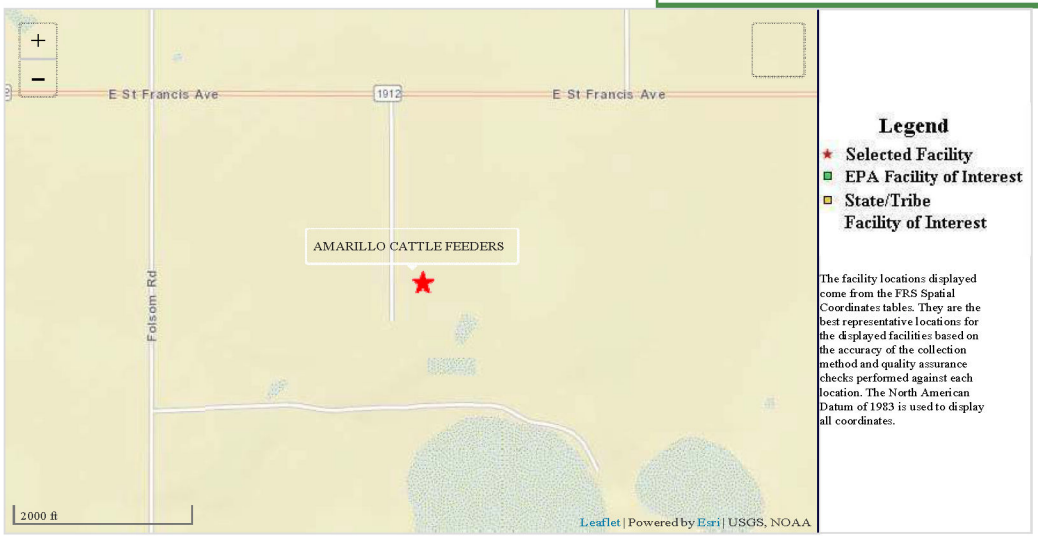
AMARILLO CATTLE FEEDERS

EPA Registry Id: 110039197017
MI E OF ITS INTERSCT W/ TX HWY
AMARILLO, TX 00000

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	AMARILLO CATTLE FEEDERS	TX0130290	ICIS-NPDES NON-MAJOR	ICIS	09/03/2003	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
NPDES	0211	BEEF CATTLE FEEDLOTS	

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11120301 /UPPER NORTH FORK RED
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name State Postal Code	Information System
MAILING ADDRESS	COMSTOCK CATTLE CORP	AMARILLO TX 791293352	NPDES
OWNER	PO BOX 33352	AMARILLO TX 79129	NPDES
OPERATOR	PO BOX 33352	AMARILLO TX 79129	NPDES

Alternative Names

Alternative Name	Source of Data
ON S SIDE OF FM 1912 APPROX 1	NPDES

Contacts

No Contacts returned.

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OPERATOR	COMSTOCK CATTLE CORP		NPDES	View
MAILING ADDRESS	CODY RAY ELLIOTT/SHARON JONES		NPDES	View
OWNER	ELLIOTT, CODY RAY AND JONES, S		NPDES	View

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

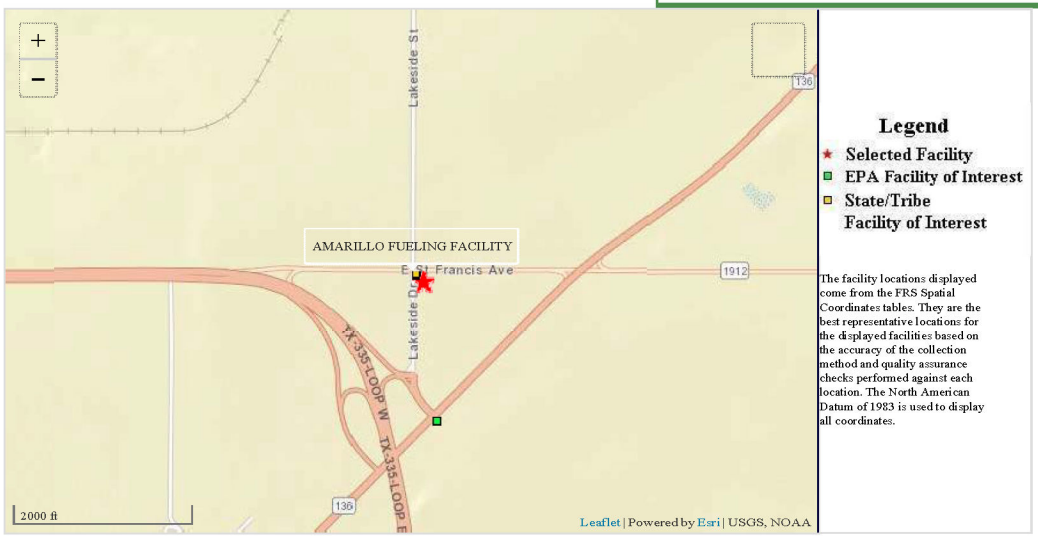
AMARILLO FUELING FACILITY

EPA Registry Id: 110070375619
7201 N LAKESIDE DR
AMARILLO, TX 79108-5713

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Data Type	Source	Last Updated Date	Supplemental Environmental Interests:
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	AMARILLO FUELING FACILITY	TXR05V301	STORM WATER INDUSTRIAL	ICIS	07/10/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	AMARILLO FUELING FACILITY	TXR05V301	ICIS-NPDES NON-MAJOR	ICIS	07/10/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

No Facility Mailing Addresses returned.

Contacts

No Contacts returned.

Alternative Names

No Alternative Names returned.

Organizations

No Organizations returned.

Query executed on: APR-14-2020

Last updated on September 24, 2015

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

ASARCO AMARILLO COPPER REFINERY

EPA Registry Id: 110000743955
7901 NORTH HIGHWAY 136
AMARILLO, TX 791080200

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error

Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interest
TOXIC SUBSTANCES CONTROL ACT	ASARCO LLC AMARILLO COPPER RE FINERY	100604711	TSCA SUBMITTER	TSCA	08/01/2016	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ASARCO INCORPORATED AMARILLO COPPER REFINERY	34597	ENFORCEMENT/COMPLIANCE ACTIVITY	ICIS	07/06/2005	ICIS-06-1999-0400 FORMAL ENFORCEMENT ACTION ICIS-06-1997-0338 FORMAL ENFORCEMENT ACTION ICIS-06-1998-0955 FORMAL ENFORCEMENT ACTION
RACT/BACT/LAER CLEARINGHOUSE	AMARILLO COPPER REFINE	25568	AIR MAJOR	RBLC		
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	ASARCO LLC	TX0118460	ICIS-NPDES NON-MAJOR	ICIS		ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
TOXIC SUBSTANCES CONTROL ACT	ASARCO LLC AMARILLO COPPER RE FINERY	TSCA5922	TSCA SUBMITTER	TSCA		
ELECTRONIC GREENHOUSE GAS REPORTING TOOL (E-GGRT)	ASARCO LLC AMARILLO COPPER REFINERY	1002494	GREENHOUSE GAS REPORTER	E-GGRT	11/05/2016	
AIR FACILITY SYSTEM	AMARILLO COPPER REFINERY	4837500020	AIR MAJOR (OPERATING)	AIRS/AFS	05/12/2014	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
EMISSION INVENTORY SYSTEM (EIS)	AMARILLO COPPER REFINERY	5778711	HAZARDOUS AIR POLLUTANT MAJOR	EIS	12/06/2019	
INTEGRATED COMPLIANCE INFORMATION SYSTEM	ASARCO INCORPORATED AMARILLO COPPER REFINERY	34597	FORMAL ENFORCEMENT ACTION	ICIS	07/14/2000	ICIS-06-1999-0400 FORMAL ENFORCEMENT ACTION ICIS-06-1997-0338 FORMAL ENFORCEMENT ACTION ICIS-06-1998-0955 FORMAL ENFORCEMENT ACTION
ICIS-AIR (AIR)	AMARILLO COPPER REFINERY	TX0000004837500020	AIR MAJOR	ICIS	09/12/2015	
RISK MANAGEMENT PLAN	ASARCO LLC / AMARILLO COPPER REFINERY	100000037293	RMP REPORTER	RMP	06/13/2019	
TOXICS RELEASE INVENTORY SYSTEM	ASARCO LLC AMARILLO COPPER REFINERY	79120SRCNCHWY13	TRI REPORTER	TRIS	06/22/2018	
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	AMARILLO COPPER REFINERY	RN101701654	STATE MASTER	TX-TCEQ ACR		PERMIT-598 AIR PROGRAM SOLID WASTE REGISTRA-30089 HAZARDOUS WASTE PROGRAM PERMIT-TX0118460 NPDES PERMIT PERMIT-15012 AIR PROGRAM REGISTRATION-82699 AIR PROGRAM ACCOUNT NUMBER-PG0005V AIR PROGRAM EPA ID-PSDTX847 AIR PROGRAM SOLID WASTE REGISTRA-30089 CORRECTIVE ACTION EPA ID-TXD087491973 HAZARDOUS WASTE PROGRAM PERMIT-2079 AIR PROGRAM ACCOUNT NUMBER-PG0005V AIR EMISSION INVENTORY AFS NUM-4837500020 AIR PROGRAM PERMIT-1304 AIR PROGRAM PERMIT-594 AIR PROGRAM PERMIT-TPDES0118460 NPDES PERMIT ACCOUNT NUMBER-PG0005V AIR PROGRAM PERMIT-3234 AIR PROGRAM PERMIT-46612 AIR PROGRAM PERMIT-WDW273 UIC REGISTRATION-85278 AIR PROGRAM SOLID WASTE REGISTRA-52033 CORRECTIVE ACTION PERMIT-596 AIR PROGRAM PERMIT-597 AIR PROGRAM PERMIT-WDW324 UIC PERMIT-WQ0001978000 NPDES PERMIT REGISTRATION-15012 AIR PROGRAM REGISTRATION-46612 AIR PROGRAM PERMIT-11288 AIR PROGRAM PERMIT-591 AIR PROGRAM PERMIT-599 AIR PROGRAM PERMIT-595 AIR PROGRAM PERMIT-WQ0000313000 NPDES PERMIT REGISTRATION-21746 UNDERGROUND STORAGE TANK PROGRAM PERMIT-592 AIR PROGRAM PERMIT-600 AIR PROGRAM PERMIT-WDW129 UIC PERMIT-593 AIR PROGRAM

COMPLIANCE AND EMISSIONS DATA REPORTING INTERFACE	ASARCO AMARILLO COPPER REFINERY	CEDRI90661	COMPLIANCE AND EMISSIONS REPORTING	CEDRI	01/07/2016
NATIONAL COMPLIANCE DATABASE	ASARCO INC	D06#VI-614C	COMPLIANCE ACTIVITY	NCDB	
NATIONAL COMPLIANCE DATABASE	ASARCO INC	I06#19920623TX002 1	COMPLIANCE ACTIVITY	NCDB	
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	ASARCO AMARILLO COPPER REFINERY	TXD087491973	LQG (Y)	RCRAINFO	12/12/2019

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
AIR	2819	INDUSTRIAL INORGANIC CHEMICALS, NOT ELSEWHERE CLASSIFIED	
NCDB	3331	PRIMARY SMELTING AND REFINING OF COPPER	
RBLC	3331	PRIMARY SMELTING AND REFINING OF COPPER	
TX-TCEQ ACR	3331	PRIMARY SMELTING AND REFINING OF COPPER	
ICIS	3341	SECONDARY SMELTING AND REFINING OF NONFERROUS METALS	
AIR	3331	PRIMARY SMELTING AND REFINING OF COPPER	
NPDES	3331	PRIMARY SMELTING AND REFINING OF COPPER	
AIRS/AFS	3331	PRIMARY SMELTING AND REFINING OF COPPER	
AIRS/AFS	2819	INDUSTRIAL INORGANIC CHEMICALS, NOT ELSEWHERE CLASSIFIED	

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	01
HUC Code/Watershed:	11090105/LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Alternative Names

Alternative Name	Source of Data
AMARILLO COPPER REFINERY	TX-TCEQ ACR
COPPER REFINERY	EIS
ASARCO, INCORPORATED	NPDES PERMIT
ASARCO LLC AMARILLO COPPERRE FINERY	E-GGRT
AMARILLO COPPER REFINE	RBLC
ASARCO COPPER REFINERY	FRS

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	ASARCO INCORPORATED		TX-TCEQ ACR	View
PARENT COMPANY	ASARCO LLC		EIS	
OWNER	ASARCO LLC		RCRAINFO	View
OWNER/OPERATOR	ASARCO LLC		RMP	View
PARENT COMPANY	AMERICAS MINING CORP	037766875	TSCA	View
PARENT COMPANY	AMERICAS MINING CORP	037766875	TRIS	
MAILING ADDRESS	THOMAS ALDRICH		NPDES	View
PARENT COMPANY	ASARCO, LLC		EIS	
OWNER	ASARCO LLC		NPDES	View
OPERATOR	ASARCO LLC		RCRAINFO	View
MAILING ADDRESS	ASARCO LLC		NPDES	View
OWNER/OPERATOR	ASARCO INCORPORATED		TX-TCEQ ACR	View
PARENT COMPANY	AMERICAS MINING CORPORATION		E-GGRT	
PARENT COMPANY	AMERICAS MINING CORP		E-GGRT	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primar
RMP	33141	NONFERROUS METAL (EXCEPT ALUMINUM) SMELTING AND REFINING	
RMP	331411	PRIMARY SMELTING AND REFINING OF COPPER.	
E-GGRT	331410		
AIRS/AFS	331411	PRIMARY SMELTING AND REFINING OF COPPER.	
TX-TCEQ ACR	331411	PRIMARY SMELTING AND REFINING OF COPPER.	
AIR	331411	PRIMARY SMELTING AND REFINING OF COPPER.	
TRIS	331410		
EIS	331410		
TRIS	331420		

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
OWNER	PO BOX 30200	AMARILLO	TX	79120-0200	TX-TCEQ ACR
PUBLIC CONTACT	PO BOX 30200	AMARILLO	TX	79120-0200	RBLC
PARENT COMPANY	1440 EAST MISSOURI	PHOENIX	AZ	85014	TSCA
MAILING ADDRESS	AMARILLO COPPER REFINERY	AMARILLO	TX	791200200	NPDES
OWNER	PO BOX 30200	AMARILLO	TX	79120-0200	NPDES
REGULATORY CONTACT	PO BOX 30200	AMARILLO	TX	79120200	RCRAINFO
COGNIZANT OFFICIAL	5285 E WILLIAMS CIRCLE STE 2000	TUCSON	AZ	85711	NPDES
OWNER/OPERATOR	PO BOX 30200	AMARILLO	TX	791200200	RMP
MAILING ADDRESS	PO BOX 30200	AMARILLO	TX	79120-0200	CEDRI
FACILITY MAILING ADDRESS	8 MI. N.E. OF AMARILLO, TX., O	AMARILLO	TX	79108	AIR
MAILING ADDRESS	P.O. BOX 30200	AMARILLO	TX	79120	TRIS
OWNER/OPERATOR	PO BOX 30200	AMARILLO	TX	79120-0200	TX-TCEQ ACR
OWNER/OPERATOR	PO BOX 30200	AMARILLO	TX	79120-0200	RMP
OPERATOR	PO BOX 30200	AMARILLO	TX	791200200	RCRAINFO
MAILING ADDRESS	5285 E WILLIAMS CIRCLE STE 2000	TUCSON	AZ	85711	NPDES
MAILING ADDRESS	7901 N STATE HIGHWAY 136	AMARILLO	TX	79108	TX-TCEQ ACR
FACILITY MAILING ADDRESS	PO BOX 30200	AMARILLO	TX	79120-0200	RCRAINFO
OWNER	PO BOX 30200	AMARILLO	TX	791200200	RCRAINFO
FACILITY MAILING ADDRESS	8 MI. N.E. OF AMARILLO, TX., O	AMARILLO	TX	79108	AIRS/AFS

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
EMERGENCY CONTACT	ALONZO RAMOS	8064684251	RMP	
TECHNICAL CONTACT	ALONZO RAMOS	8064684251	TRIS	
REGULATORY CONTACT	ALONZO RAMOS	8064684251	RCRAINFO	View
UNKNOWN CONTACT	PATRICK J. DONOVAN	8063813281	AIR	
RESPONSIBLE PARTY	JARROD DUNAVIN	8064684000	RMP	
COGNIZANT OFFICIAL	JERROD DUNAVIN	8064684034	NPDES	
COMPLIANCE CONTACT	PATRICK J. DONOVAN	8063813281	AIRS/AFS	
COGNIZANT OFFICIAL	THOMAS ALDRICH	5207987749	NPDES	View
UNKNOWN CONTACT	PATRICK J. DONOVAN	8063813281	AIRS/AFS	
COMPLIANCE CONTACT	PATRICK J. DONOVAN	8063813281	AIR	
PUBLIC CONTACT	PATRICK DONOVAN	806-468-4134	RBLC	View
PUBLIC CONTACT	STEVEN S. JONES	8064684121	TRIS	
TECHNICAL CONTACT	MR. PATRICK J DONOVAN		TSCA	

Query executed on: APR-14-2020

Additional information for CERCLIS or TRI sites:

This information resource is not maintained, managed, or owned by the Environmental Protection Agency (EPA) or the Envirofacts Support Team. Neither the EPA nor the Envirofacts Support Team is responsible for their content or site operation. The Envirofacts Warehouse provides this reference only as a convenience to our Internet users.

- National Library of Medicine (NLM) EXIT DISCLAIMER TOXMAP

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

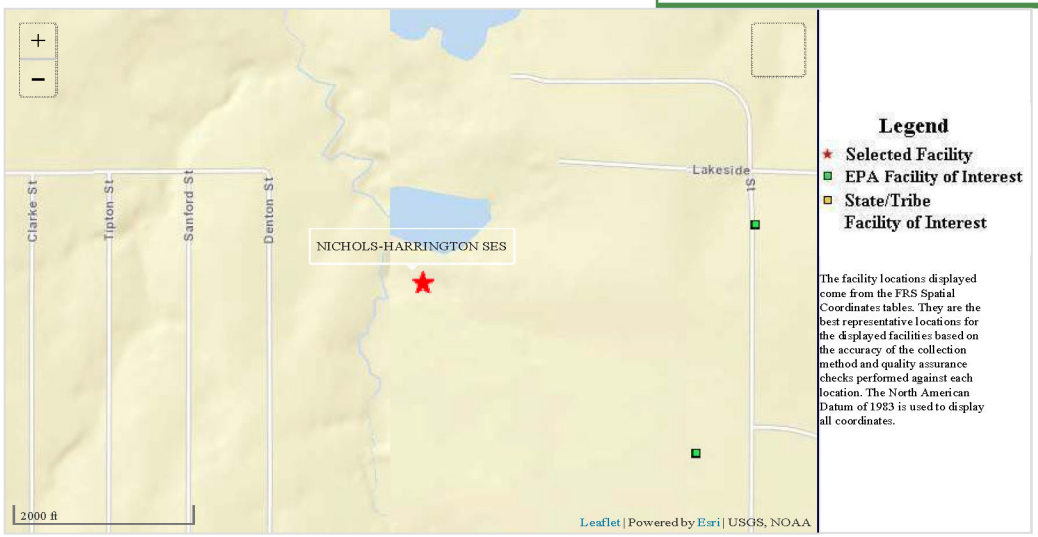
NICHOLS-HARRINGTON SES

EPA Registry Id: 110055045464
ST HWY 136 AND 6 MILES NE
AMARILLO, TX 79105

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests
COMPLIANCE AND EMISSIONS DATA REPORTING INTERFACE	NICHOLS-HARRINGTON STATION	CEDRI10001608	COMPLIANCE AND EMISSIONS REPORTING	API	01/04/2017	
TOXIC SUBSTANCES CONTROL ACT	NICHOLS-HARRINGTON STATION	TSCA121201	TSCA SUBMITTER	TSCA	08/11/2016	
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	NICHOLS-HARRINGTON SES	TX0124575	ICIS-NPDES MAJOR	ICIS		ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
NPDES	4911	ELECTRIC SERVICES	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	01
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
COGNIZANT OFFICIAL	PO BOX 1261	AMARILLO	TX	791051261	NPDES
COGNIZANT OFFICIAL	PO BOX 1261	AMARILLO	TX	79105	NPDES
MAILING ADDRESS	PO BOX 1261	AMARILLO	TX	791051261	NPDES
MAILING ADDRESS	790 SOUTH BUCHANAN STREET	AMARILLO	TX	79101	NPDES
OWNER	PO BOX 1261	AMARILLO	TX	791051261	NPDES

Alternative Names

Alternative Name	Source of Data
NICHOLS-HARRINGTON STATION	NPDES

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	SOUTHWESTERN PUBLIC SERVICE CO		NPDES	View
MAILING ADDRESS	SOUTHWESTERN PUBLIC SERVICE CO		NPDES	View

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
COGNIZANT OFFICIAL	RILEY HILL	8063782922	NPDES	View
COGNIZANT OFFICIAL	RILEY HILL	8063782922	NPDES	View

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

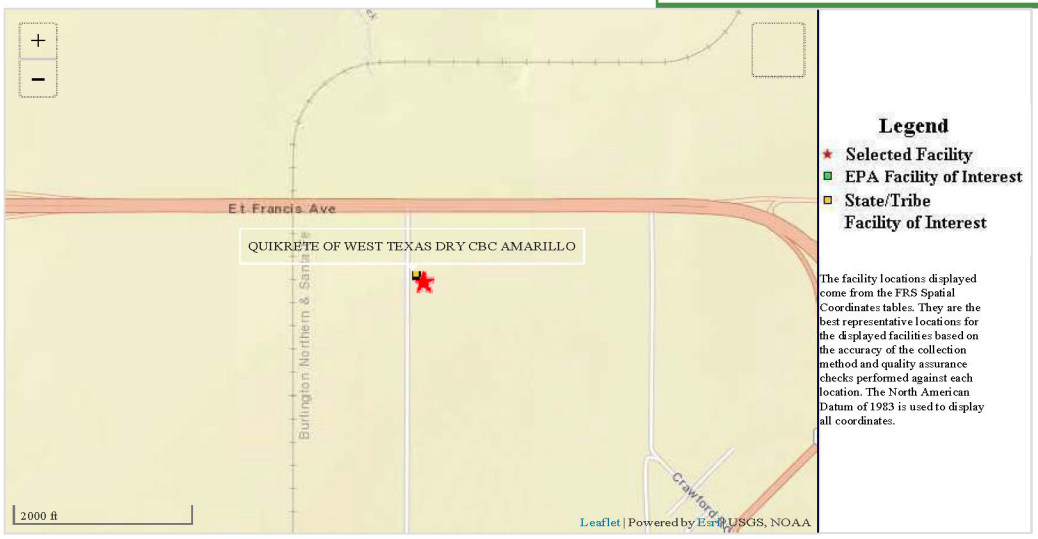
QUIKRETE OF WEST TEXAS DRY CBC AMARILLO

EPA Registry Id: 110070374599
5501 N WHITAKER RD
AMARILLO, TX 79108-7610

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	QUIKRETE OF WEST TEXAS DRY CBC AMARILLO	TXR05V489	STORM WATER INDUSTRIAL	ICIS	09/27/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (ICIS-NPDES)	QUIKRETE OF WEST TEXAS DRY CBC AMARILLO	TXR05V489	ICIS-NPDES NON-MAJOR	ICIS	09/27/2017	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Mailing Addresses

No Facility Mailing Addresses returned.

Contacts

No Contacts returned.

Alternative Names

No Alternative Names returned.

Organizations

No Organizations returned.

Query executed on: APR-14-2020

Last updated on September 24, 2015

EPA United States Environmental Protection Agency

Related Topics: Envirofacts

FRS

FRS Facility Detail Report

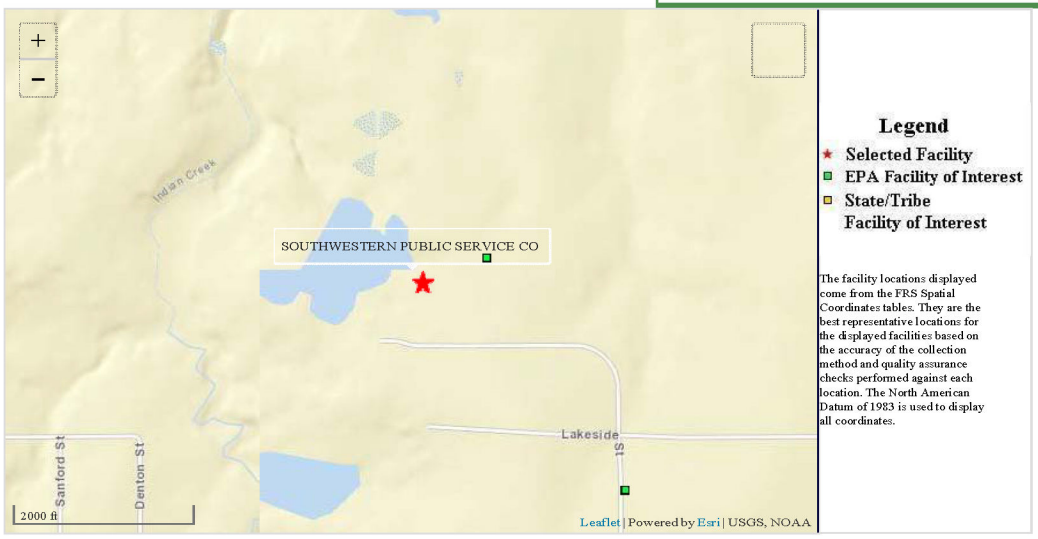
SOUTHWESTERN PUBLIC SERVICE CO

EPA Registry Id: 110042010999
LAKESIDE HIGHWAY 136 6 MIN
AMARILLO, TX 79108

Facility Registry Service Links:

- Facility Registry Service (FRS) Overview
- FRS Facility Query
- FRS Organization Query
- EZ Query
- FRS Physical Data Model
- FRS Geospatial Model

Report an Error



Environmental Interests

Information System	System Facility Name	Information System Id/Report Link	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interest
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	SAVAGE-HARRINGTON ENERGY SERVICES	TXD982289613	CESQG (Y)	RCRAINFO	03/12/2019	
ELECTRONIC GREENHOUSE GAS REPORTING TOOL (E-GGRT)	NICHOLS STATION	1000939	GREENHOUSE GAS REPORTER	E-GGRT		
ICIS-AIR (AIR)	NICHOLS STATION POWER PLANT SOUTHWESTERN PUBLIC SERVICE	TX0000004837500004	AIR MAJOR	ICIS	09/12/2015	
TOXICS RELEASE INVENTORY SYSTEM	CO HARRINGTON STATION	79108STHWSNLAKE	TRI REPORTER	TRIS	06/23/2017	
AIR FACILITY SYSTEM	NICHOLS STATION POWER PLANT	4837500004	AIR MAJOR (OPERATING)	AIRS/AFS	01/25/2013	
CLEAN AIR MARKETS DIVISION (CAMD) BUSINESS SYSTEMS	NICHOLS STATION	3484	AIR PROGRAM	CAMDBS	09/30/2011	
COMPLIANCE AND EMISSIONS DATA REPORTING INTERFACE	HARRINGTON STATION	CEDRI10004190	COMPLIANCE AND EMISSIONS REPORTING	CEDRI		
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	HARRINGTON STATION POWER PLANT	RN100224849	STATE MASTER	TX-TCEQ ACR		PERMIT-16383 AIR PROGRAM REGISTRATION-93027 AIR PROGRAM SOLID WASTE REGISTRA-74303 HAZARDOUS WASTE PROGRAM EPA ID-PSDTX631M1 AIR PROGRAM EPA ID-PSDTX017M2 AIR PROGRAM EPA ID-PSDTX631 AIR PROGRAM REGISTRATION-84932 AIR PROGRAM ACCOUNT NUMBER-PG0041R AIR EMISSION INVENTORY EPA ID-PSDTX017M1 AIR PROGRAM ACCOUNT NUMBER-PG0041R AIR PROGRAM REGISTRATION-45703 AIR PROGRAM EPA ID-TXD982289613 HAZARDOUS WASTE PROGRAM REGISTRATION-16383 AIR PROGRAM REGISTRATION-52255 AIR PROGRAM REGISTRATION-45591 AIR PROGRAM ACCOUNT NUMBER-PG0041R AIR PROGRAM SOLID WASTE REGISTRA-33242 HAZARDOUS WASTE PROGRAM PERMIT-5300 AIR PROGRAM PERMIT-15 AIR PROGRAM PERMIT-6111 AIR PROGRAM PERMIT-5129 AIR PROGRAM PERMIT-3080 AIR PROGRAM PERMIT-45703 AIR PROGRAM PERMIT-1388 AIR PROGRAM PERMIT-52255 AIR PROGRAM AFS NUM-4837500022 AIR PROGRAM PERMIT-1389 AIR PROGRAM REGISTRATION-81171 AIR PROGRAM REGISTRATION-8752 UNDERGROUND STORAGE TANK PROGRAM EPA ID-TXD000750745 HAZARDOUS WASTE PROGRAM
ENERGY INFORMATION ADMINISTRATION-860 (EIA-860) DATABASE	HARRINGTON	6193	ELECTRIC GENERATOR	EIA-860	10/06/2016	
EMISSIONS & GENERATION RESOURCE INTEGRATED DATABASE	NICHOLS STATION	3484	ELECTRIC POWER GENERATOR (GAS BASED)	EGRID	02/24/2018	
ICIS-AIR (AIR)	HARRINGTON STATION POWER PLANT	TX0000004837500022	AIR MAJOR	ICIS	09/12/2015	
COMPLIANCE AND EMISSIONS DATA REPORTING INTERFACE	SOUTHWESTERN PUBLIC SERVICE CO HARRINGTON STATION	CEDRI76382	COMPLIANCE AND EMISSIONS REPORTING	CEDRI	01/16/2018	
CLEAN AIR MARKETS DIVISION (CAMD) BUSINESS SYSTEMS	HARRINGTON STATION	6193	AIR PROGRAM	CAMDBS	09/30/2011	
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	SAVAGE HARRINGTON ENERGY SERVICE	RN100219187	STATE MASTER	TX-TCEQ ACR		AFS NUM-4837500023 AIR PROGRAM EPA ID-TXD982289613 HAZARDOUS WASTE PROGRAM ACCOUNT NUMBER-PG0044L AIR PROGRAM SOLID WASTE REGISTRA-74303 HAZARDOUS WASTE PROGRAM PERMIT-897 AIR PROGRAM
EMISSION INVENTORY SYSTEM (EIS)	NICHOLS STATION POWER PLANT	5678011	HAZARDOUS AIR POLLUTANT MAJOR	EIS	02/28/2020	
ELECTRONIC GREENHOUSE GAS REPORTING TOOL (E-GGRT)	HARRINGTON STATION	1001042	GREENHOUSE GAS REPORTER	E-GGRT		
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	SOUTHWESTERN PUBLIC SERVICE NICHOLS STATION	TXD007369713	TRANSPORTER (Y)	RCRAINFO	10/15/2019	
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	SOUTHWESTERN PUBLIC SERVICE NICHOLS STATION	TXD007369713	SQG (Y)	RCRAINFO	10/15/2019	
AIR FACILITY SYSTEM	HARRINGTON STATION POWER PLANT	4837500022	AIR MAJOR (OPERATING)	AIRS/AFS	05/20/2014	ICIS-ENFORCEMENT/COMPLIANCE ACTIVITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - AGENCY CENTRAL REGISTRY	NICHOLS STATION POWER PLANT	RN100224641	STATE MASTER	TX-TCEQ ACR		PERMIT-TPDES0124575 NPDES PERMIT PERMIT-15815 AIR PROGRAM SOLID WASTE REGISTRA-30099 HAZARDOUS WASTE PROGRAM REGISTRATION-45589 AIR PROGRAM AFS NUM-4837500004 AIR PROGRAM REGISTRATION-75244 AIR PROGRAM PERMIT-WDW338 UIC PERMIT-WDW339 UIC PERMIT-WDW340 UIC PERMIT-WDW341 UIC PERMIT-WQ0001990000 NPDES PERMIT PERMIT-13 AIR PROGRAM ACCOUNT NUMBER-PG0040'T AIR PROGRAM ACCOUNT NUMBER-PG0040'T AIR PROGRAM EPA ID-TXD007369713 HAZARDOUS WASTE PROGRAM PERMIT-18162 AIR PROGRAM PERMIT-TX0124575 NPDES PERMIT PERMIT-WDW342 UIC EPA ID-PSDTX726 AIR PROGRAM
EMISSIONS & GENERATION RESOURCE INTEGRATED DATABASE	HARRINGTON STATION	6193	ELECTRIC POWER GENERATOR (COAL BASED)	EGRID	02/24/2018	
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	SOUTHWESTERN PUBLIC SERVICE HARRINGTON STATION	TXD000750745	SQG (Y)	RCRAINFO	02/28/2018	
ENERGY INFORMATION ADMINISTRATION-860 (EIA-860) DATABASE	NICHOLS	3484	ELECTRIC GENERATOR	EIA-860	10/06/2016	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Facility Coordinates Viewer Environmental Justice Map Viewer Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
CAMDBS	4911	ELECTRIC SERVICES	
AIR	4911	ELECTRIC SERVICES	
AIR	4911	ELECTRIC SERVICES	
TX-TCEQ ACR	4911	ELECTRIC SERVICES	
AIRS/AFS	4911	ELECTRIC SERVICES	
TX-TCEQ ACR	4911	ELECTRIC SERVICES	
CAMDBS	4911	ELECTRIC SERVICES	
AIRS/AFS	4911	ELECTRIC SERVICES	
TX-TCEQ ACR	1221	BITUMINOUS COAL AND LIGNITE SURFACE MINING	

Facility Codes and Flags

EPA Region:	06
Duns Number:	
Congressional District Number:	13
Legislative District Number:	01
HUC Code/Watershed:	11090105 / LAKE MEREDITH
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Alternative Names

Alternative Name	Source of Data
NICHOLS	EGRID
SPS NICHOLS STATION	RCRAINFO
HARRINGTON STATION POWER PLANT	TSCA
HARRINGTON STATION	E-GGRT
NICHOLS-HARRINGTON STATION	PCS
HARRINGTON	EGRID
SAVAGE-HARRINGTON ENERGY SERVICES LTD LL	RCRAINFO
SPS HARRINGTON STATION	RCRAINFO
NICHOLS STATION	EIS
SAVAGE HARRINGTON ENERGY SERVICES	RCRAINFO
Southwestern Public Service NICHOLS STATION	NOTIFICATION (RCRA)
WCSC - HARRINGTON STATION DIVISION	NOTIFICATION (RCRA)
SOUTH WESTERN PUBLIC SERVICE	NPDES PERMIT
SOUTHWESTERN PUBLIC SERVICE HARRINGTON STATION	RCRAINFO
NICHOLS STATION POWER PLANT	TX-TCEQ ACR
SAVAGE HARRINGTON ENERGY STATION	RCRAINFO

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
PARENT COMPANY	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
PARENT COMPANY	SOUTHWESTERN PUBLIC SERVICE COMPANY		EIA-860	View
OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		RCRAINFO	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
PARENT COMPANY	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EGRID	
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE COMPANY	007369713	CAMDBS	
OPERATOR	SAVAGEHARRINGTON ENERGY SERVICES LTD LL		RCRAINFO	View
OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		RCRAINFO	View
OWNER	SOUTHWESTERN PUBLIC SERVICE CO		RCRAINFO	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
OWNER/OPERATOR	SAVAGE-HARRINGTON ENERGY SERVICES LTD., L.L.P.		TX-TCEQ ACR	View
OWNER	SOUTHWESTERN PUBLIC SERVICE CO		RCRAINFO	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
OWNER/OPERATOR MAILING ADDRESS	SOUTHWESTERN PUBLIC SERVICE COMPANY		EIA-860	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EIA-860	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE COMPANY	007369713	TX-TCEQ ACR	View
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE CO		EGRID	
PARENT COMPANY	XCEL ENERGY		E-GGRT	
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE COMPANY	007369713	CAMDBS	
OWNER/OPERATOR	SOUTHWESTERN PUBLIC SERVICE COMPANY	007369713	TX-TCEQ ACR	View
OWNER	SAVAGEHARRINGTON ENERGY SERVICES LTD LL		RCRAINFO	View
PARENT COMPANY	XCEL ENERGY		E-GGRT	
PARENT COMPANY	SOUTHWESTERN PUBLIC SERVICE COMPANY		EIA-860	View
PARENT COMPANY	SOUTHWESTERN PUBLIC SERVICE CO		EIS	
PARENT COMPANY	XCEL ENERGY	848381245	TRIS	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
TX-TCEQ ACR	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
TX-TCEQ ACR	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
AIR	221122	ELECTRIC POWER DISTRIBUTION.	
EIA-860	22		
TX-TCEQ ACR	221122	ELECTRIC POWER DISTRIBUTION.	
EIS	22111	ELECTRIC POWER GENERATION	
CAMDBS	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
E-GGRT	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
AIRS/AFS	221111	HYDROELECTRIC POWER GENERATION.	
AIR	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
TX-TCEQ ACR	221122	ELECTRIC POWER DISTRIBUTION.	
TRIS	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
AIR	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
TX-TCEQ ACR	221119	OTHER ELECTRIC POWER GENERATION.	
EIA-860	22		
AIR	221111	HYDROELECTRIC POWER GENERATION.	
AIRS/AFS	221111	HYDROELECTRIC POWER GENERATION.	
CAMDBS	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
E-GGRT	221112	FOSSIL FUEL ELECTRIC POWER GENERATION.	
AIR	221111	HYDROELECTRIC POWER GENERATION.	
AIR	221122	ELECTRIC POWER DISTRIBUTION.	

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
REGULATORY CONTACT	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	RCRAINFO
FACILITY MAILING ADDRESS	790 S BUCHANAN ST	AMARILLO	TX	79101-2510	RCRAINFO
MAILING ADDRESS	790 SOUTH BUCHANAN STREET	AMARILLO	TX	79101	TRIS
UNKNOWN CONTACT	5530 MARSHALL STREET	ARVADA	CO	80002	CAMDBS
REGULATORY CONTACT	1445 ROSS AVENUE	DALLAS	TX	75202	CAMDBS
FACILITY MAILING ADDRESS	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	RCRAINFO
FACILITY MAILING ADDRESS	P.O. BOX 1261	AMARILLO	TX	79170	AIRS/AFS
OWNER/OPERATOR	P O BOX 1261SPS TOWER TYLER AT	AMARILLO	TX		EIA-860
MAILING ADDRESS	PO BOX 1261	AMARILLO	TX	791051261	CEDRI
REGULATORY CONTACT	PO BOX 1261	AMARILLO	TX	791051261	CAMDBS
OWNER/OPERATOR	PO BOX 1261	AMARILLO	TX	791051261	TX-TCEQ ACR
PARENT COMPANY	P O BOX 1261SPS TOWER TYLER AT	AMARILLO	TX		EIA-860
OWNER	790 S BUCHANAN ST	AMARILLO	TX	79101-2510	RCRAINFO
UNKNOWN CONTACT	P.O. BOX 1261	AMARILLO	TX	79105-1261	CAMDBS
MAILING ADDRESS	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	TX-TCEQ ACR
OWNER/OPERATOR	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	TX-TCEQ ACR
OWNER	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	RCRAINFO
REGULATORY CONTACT	PO BOX 1261	AMARILLO	TX	79105	CAMDBS
PRIMARY FACILITY SITE CONTACT	P.O. BOX 1261	AMARILLO	TX	79105	CAMDBS
FACILITY MAILING ADDRESS	P.O. BOX 1261	AMARILLO	TX	79170	AIR
OPERATOR	790 S BUCHANAN ST	AMARILLO	TX	79101-2510	RCRAINFO
OWNER/OPERATOR	4653 TABLE MOUNTAIN DR.	GOLDEN	CO	80207	EIA-860
OPERATOR	8400 N LAKESIDE DR	AMARILLO	TX	79108-5712	RCRAINFO
UNKNOWN CONTACT	PO BOX 1261	AMARILLO	TX	79105	CAMDBS
MAILING ADDRESS	7201 N LAKESIDE DR	AMARILLO	TX	791085713	TX-TCEQ ACR
REGULATORY CONTACT	P.O. BOX 1261	AMARILLO	TX	79105-1261	RCRAINFO
OWNER/OPERATOR MAILING ADDRESS	P O BOX 1261SPS TOWER TYLER AT	AMARILLO	TX		EIA-860
UNKNOWN CONTACT	PO BOX 1261	AMARILLO	TX	791051261	CAMDBS
PRIMARY FACILITY SITE CONTACT	P.O. BOX 1261	AMARILLO	TX	791051261	CAMDBS
REGULATORY CONTACT	790 S BUCHANAN ST	AMARILLO	TX	79101-2510	RCRAINFO
MAILING ADDRESS	PO BOX 1261	AMARILLO	TX	79105	CEDRI
UNKNOWN CONTACT	1600 W TACOMA STREET	BROKEN ARROW	OK	74012	CAMDBS
MAILING ADDRESS	8300 N LAKESIDE DR	AMARILLO	TX	791085725	TX-TCEQ ACR

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
PUBLIC CONTACT	WES REEVES	8063782714	TRIS	
REGULATORY CONTACT	JOYCE A JOHNSON	2146658548	CAMDBS	View
COMPLIANCE CONTACT	JOHN A. HUDSPETH P.E	8063782195	AIRS/AFS	
UNKNOWN CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
REGULATORY CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
UNKNOWN CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
COMPLIANCE CONTACT	JOHN A. HUDSPETH P.E	8063782195	AIR	
COMPLIANCE CONTACT	JOHN A. HUDSPETH	8063782195	AIR	
UNKNOWN CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
REGULATORY CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
UNKNOWN CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
PRIMARY FACILITY SITE CONTACT	DAVID A LOW	8063782730	CAMDBS	View
UNKNOWN CONTACT	THOMAS GRAHAM	9183078865X4170	CAMDBS	View

REGULATORY CONTACT	CLIFF SCOTT	806-381-0261 (5)	RCRAINFO	View
REGULATORY CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
UNKNOWN CONTACT	DEAN METCALF	8063782194	CAMDBS	View
REGULATORY CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
UNKNOWN CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
REGULATORY CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
UNKNOWN CONTACT	DEAN METCALF	8063782194	CAMDBS	View
UNKNOWN CONTACT	JOHN A. HUDSPETH	8063782195	AIRS/AFS	
UNKNOWN CONTACT	JOHN A. HUDSPETH P.E	8063782195	AIRS/AFS	
UNKNOWN CONTACT	JOHN A. HUDSPETH	8063782195	AIR	
UNKNOWN CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
REGULATORY CONTACT	KARALEE SNYDER	8063782195	CAMDBS	View
TECHNICAL CONTACT	KARALEE SNYDER	8063782195	TRIS	
UNKNOWN CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
REGULATORY CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
UNKNOWN CONTACT	STEVE THURMAN	8063782518	CAMDBS	View
UNKNOWN CONTACT	KARL BREUER	3034205949X35	CAMDBS	View
PRIMARY FACILITY SITE CONTACT	DAVID A LOW	8063782730	CAMDBS	View
REGULATORY CONTACT	JOYCE A JOHNSON	2146658548	CAMDBS	View
REGULATORY CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
COMPLIANCE CONTACT	JOHN A. HUDSPETH	8063782195	AIRS/AFS	
UNKNOWN CONTACT	JOHN A. HUDSPETH P.E	8063782195	AIR	
UNKNOWN CONTACT	KEVIN L WORLEY	8063782185	CAMDBS	View
PRIMARY FACILITY SITE CONTACT	DAVID A LOW	8063782730	CAMDBS	View
UNKNOWN CONTACT	STEVE THURMAN	8063782518	CAMDBS	View
PRIMARY FACILITY SITE CONTACT	DAVID A LOW	8063782730	CAMDBS	View

Query executed on: APR-14-2020

Additional information for CERCLIS or TRI sites:

This information resource is not maintained, managed, or owned by the Environmental Protection Agency (EPA) or the Envirofacts Support Team. Neither the EPA nor the Envirofacts Support Team is responsible for their content or site operation. The Envirofacts Warehouse provides this reference only as a convenience to our Internet users.

- National Library of Medicine (NLM) EXIT EPA TOXMAP

Last updated on September 24, 2015

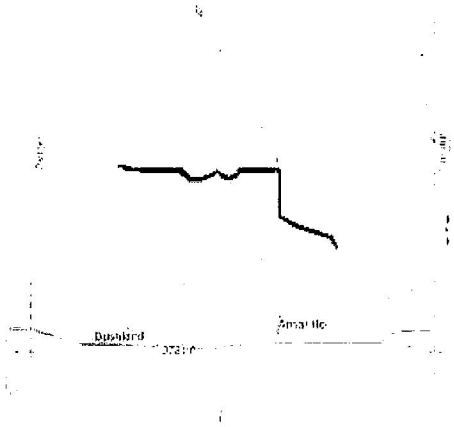
ATTACHMENT H
Federally Listed Threatened and Endangered Species
088

and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Potter County, Texas



impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this

There is final critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/6039

Red Knot Calidris canutus rufa — Threatened

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1864

Whooping Crane Grus americana — Endangered

There is final critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/758

Fishes

NAME	STATUS
Arkansas River Shiner Notropis girardi	Threatened

There is final critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/4364

https://ecos.fws.gov/ecp/species/9737

Cassin's Sparrow Aimophila cassinii — Breeds Aug 1 to Oct 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9512

Lark Bunting Calamospiza melanocorys — Breeds May 10 to Aug 15
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Mccown's Longspur Calcarius mccownii — Breeds May 1 to Aug 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9292

Semipalmated Sandpiper Calidris pusilla — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in

is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

(AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

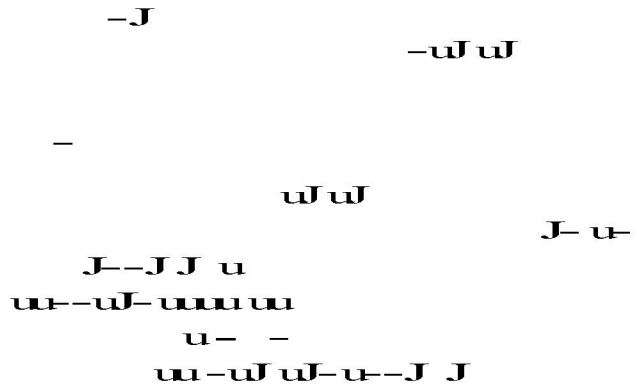
FRESHWATER EMERGENT WETLAND
Palustrine

RIVERINE
Riverine

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in



Xcel 20" Harrington Pipeline
FEED Study - Attachment J

2-Wire Test Statoin
Coupon Test Station
Rectifier/Groundbed

Gas Transmission Major Crossings Segments

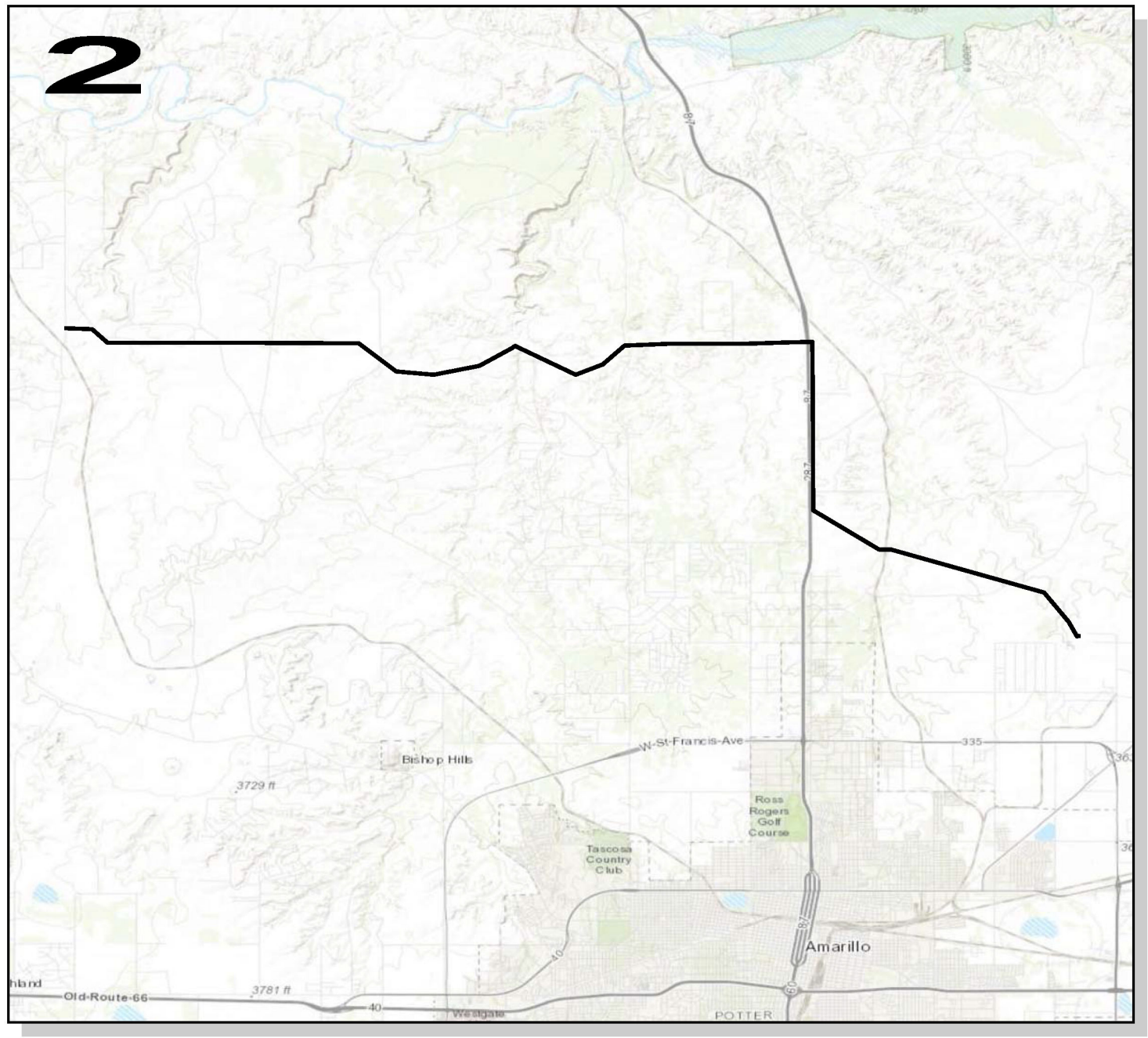
- Bore
- HDD
- 20" Harrington Route
- Access Road
- Railroad
- Archeological Project Line
- Archeological Sites
- Temporary Workspace
- Permanent Easement

Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- River
- BLM Land
- Parcels

USA Flood Hazard Areas

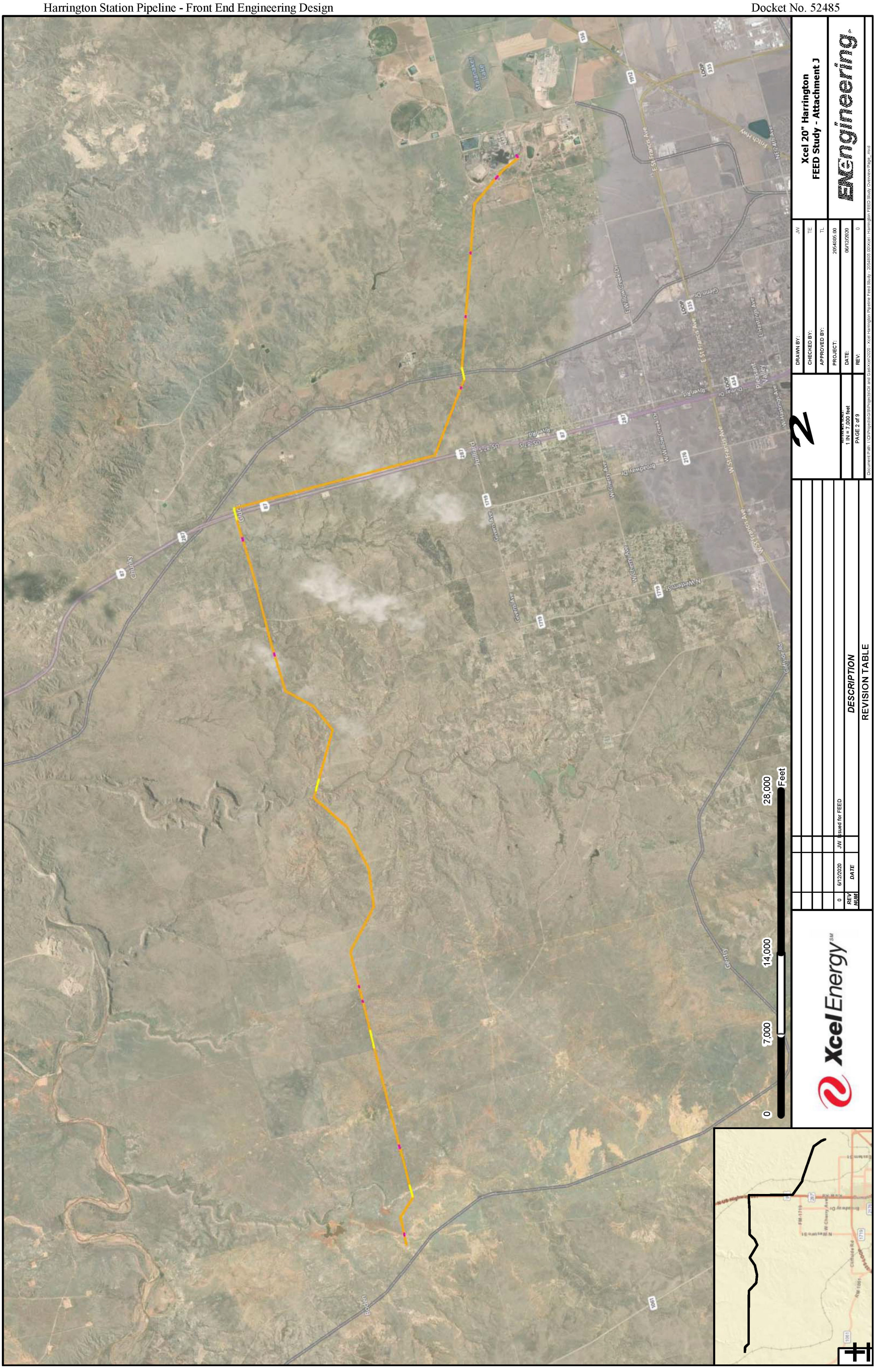
- 0.2% Annual Chance Flood Hazard
- 1% Annual Chance Flood Hazard

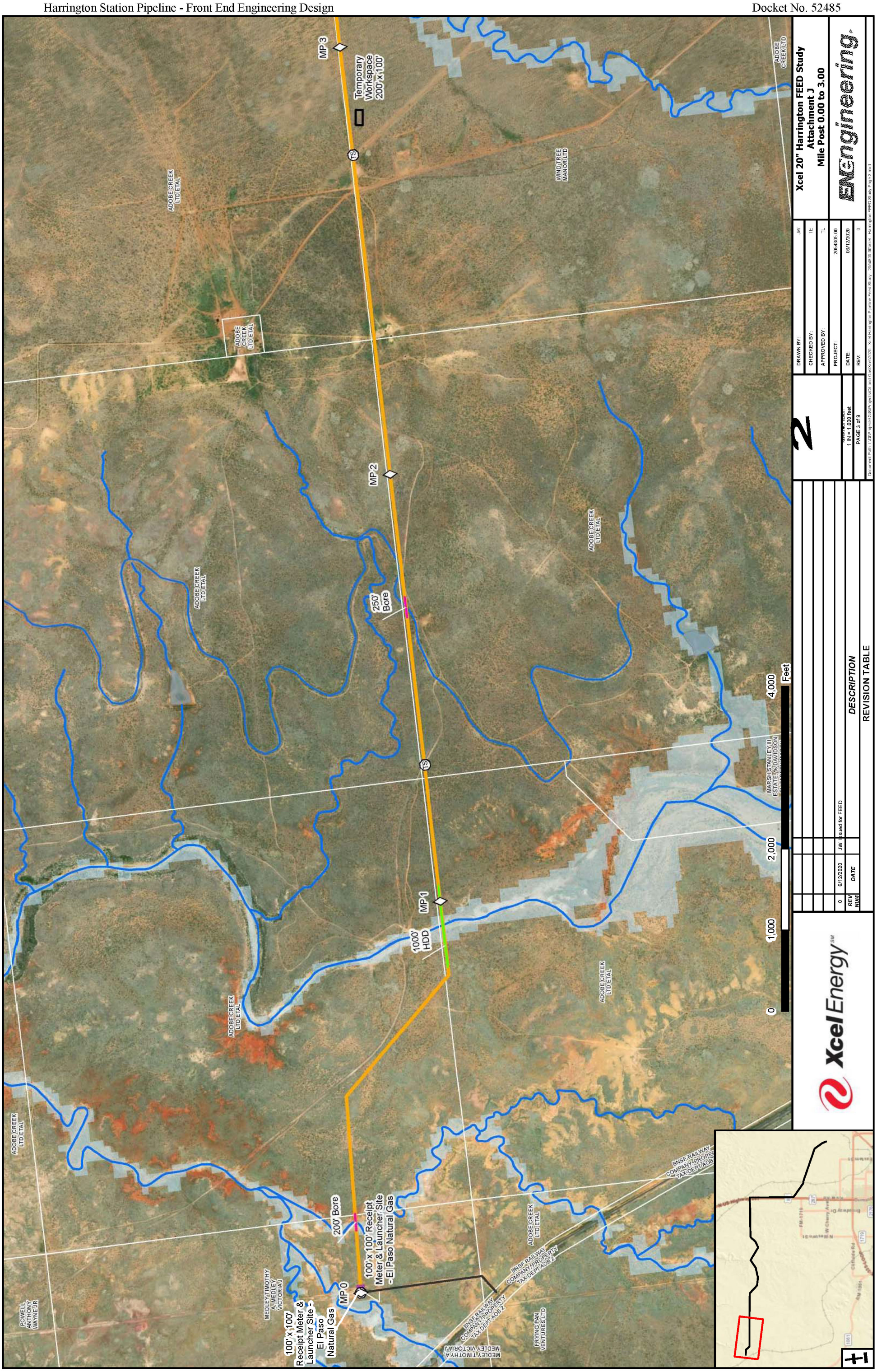


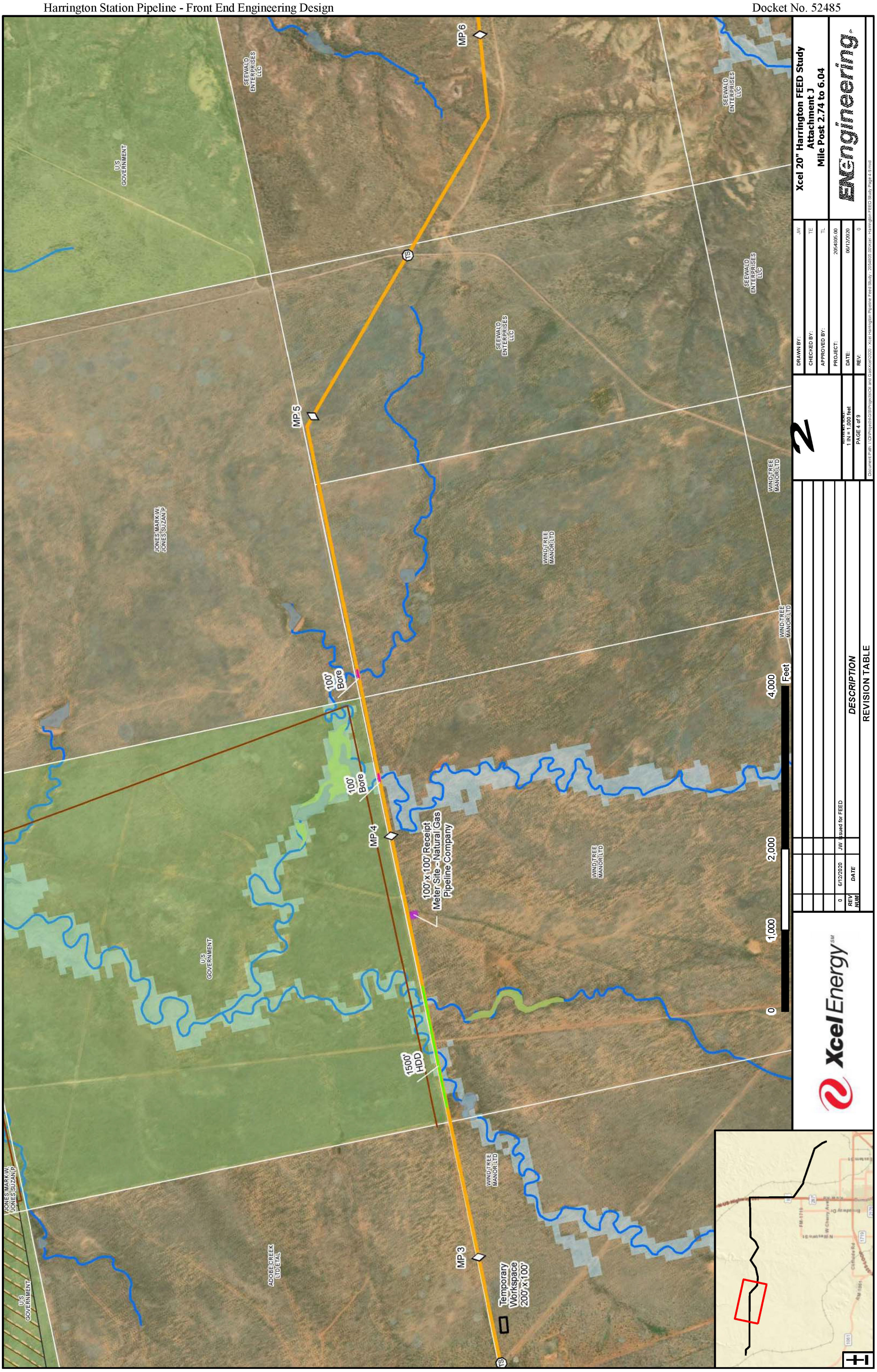
Xcel Energy	DRAWN BY:	JW
	CHECKED BY:	TE
	APPROVED BY:	TL
	PROJECT:	2054805.00
	DATE:	06/12/2020
	REV:	0

ENGineering

Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2054805.00\Xcel - Harrington FEED Study Title Page.mxd


Xcel 20" Harrington
FEED Study - Attachment J
Engineering
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 2054805.00
DATE: 06/12/2020
REV: 0
REFERENCE SCALE: 1 IN = 7,000 feet
PAGE 2 of 9
Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2054805.00\Xcel - Harrington FEED Study Overview Page_mxd
REVISION TABLE
REV NUM
DATE
DESCRIPTION
0
6/12/2020
JW
Issued for FEED
28,000
Feet
14,000
7,000
0
Xcel Energy SM
Stanaxar Lake
E St Francis Ave
NE 24th Ave
Frith Hwy
E Willow Creek Dr
Glenn Dr
E Hastings Ave
Pleasant Valley
River Rd
Durnal Dr
W Willow Creek Dr
W St Francis Ave
Broadway Dr
W Cherry Ave
Gwen Ave
N Western St
Cliffside Rd
Juniard
US-87S
Glick
Chunky
Gentry
Borden
FM-1176
1061


MP 3
Temporary Workspace 200' x 100'
TS
ADOBE CREEK LTD ETAL
WINDTREE MANOR LTD
MP 2
250' Bore
MP 1
1000' HDD
MP 0
200' Bore
100' x 100' Receipt Meter & Launcher Site - El Paso Natural Gas
100' x 100' Receipt Meter & Launcher Site - El Paso Natural Gas
BNSF RAILWAY COMPANY PROPERTY TAX DEPT AOB 2
MARSH STANLEY III ESTATE % DAVIDSON
FRYING PAN VENTURES LTD
POWELL ANTHONY WAYNE JR
MEDLEY TIMOTHY A MEDLEY VICTORIA J
4,000
2,000
1,000
0
Feet
Xcel 20" Harrington FEED Study
Attachment J
Mile Post 0.00 to 3.00
Engineering
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 2054805.00
DATE: 06/12/2020
REV: 0
1 IN = 1,000 feet
PAGE 3 of 9
Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2054805.00\Xcel - Harrington FEED Study Page 3.mxd
REVISION TABLE
REV NUM
DATE
DESCRIPTION
0
6/12/2020
JW
Issued for FEED
Xcel Energy SM


MP 6
MP 5
MP 4
MP 3
SEEWALD ENTERPRISES LLC
U.S GOVERNMENT
JONES MARK W.
JONES SUZAN P
WIND TREE MANOR LTD
ADOBE CREEK LTD ETAL
100' Bore
100' Bore
100'x100' Receipt Meter Site - Natural Gas Pipeline Company
1500' HDD
Temporary Workspace 200'x100'
4,000
2,000
1,000
0
Feet
Xcel 20" Harrington FEED Study
Attachment J
Mile Post 2.74 to 6.04
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 205480S.00
DATE: 06/12/2020
REV: 0
REFERENCE SCALE: 1 IN = 1,000 feet
PAGE 4 of 9
Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 205480S.00\Xcel - Harrington FEED Study Page 4-9.mxd
Engineering
Xcel Energy SM
REVISION TABLE
REV NUM
DATE
DESCRIPTION
0
6/12/2020
JW
Issued for FEED

REV NUM	DATE		DESCRIPTION
0	6/12/2020	JW	Issued for FEED

REVISION TABLE

Xcel Energy℠

2

DRAWN BY:	JW
CHECKED BY:	TE
APPROVED BY:	TL
PROJECT:	2054805.00
DATE:	06/12/2020
REV:	0

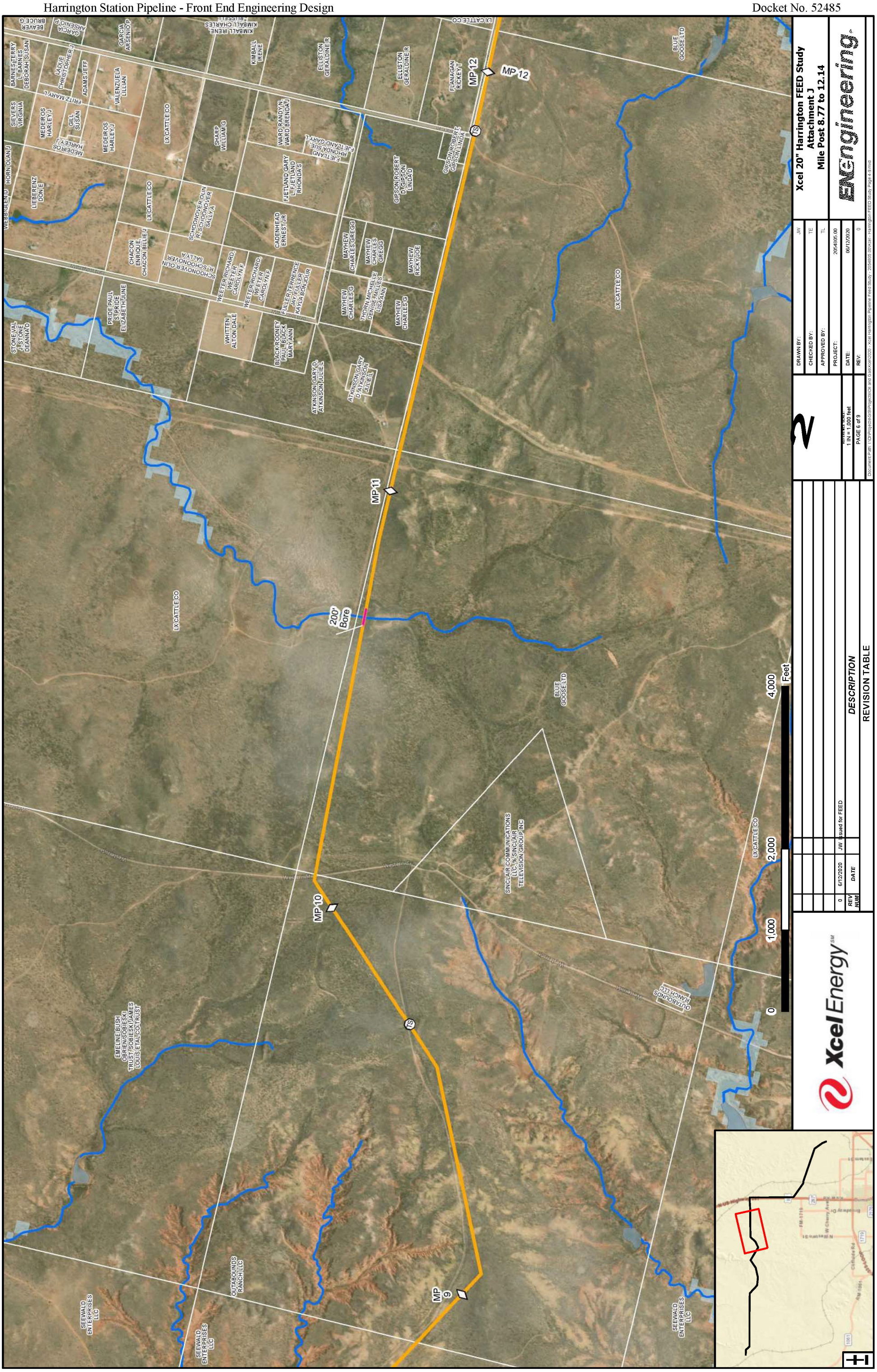
1 IN = 1,000 feet

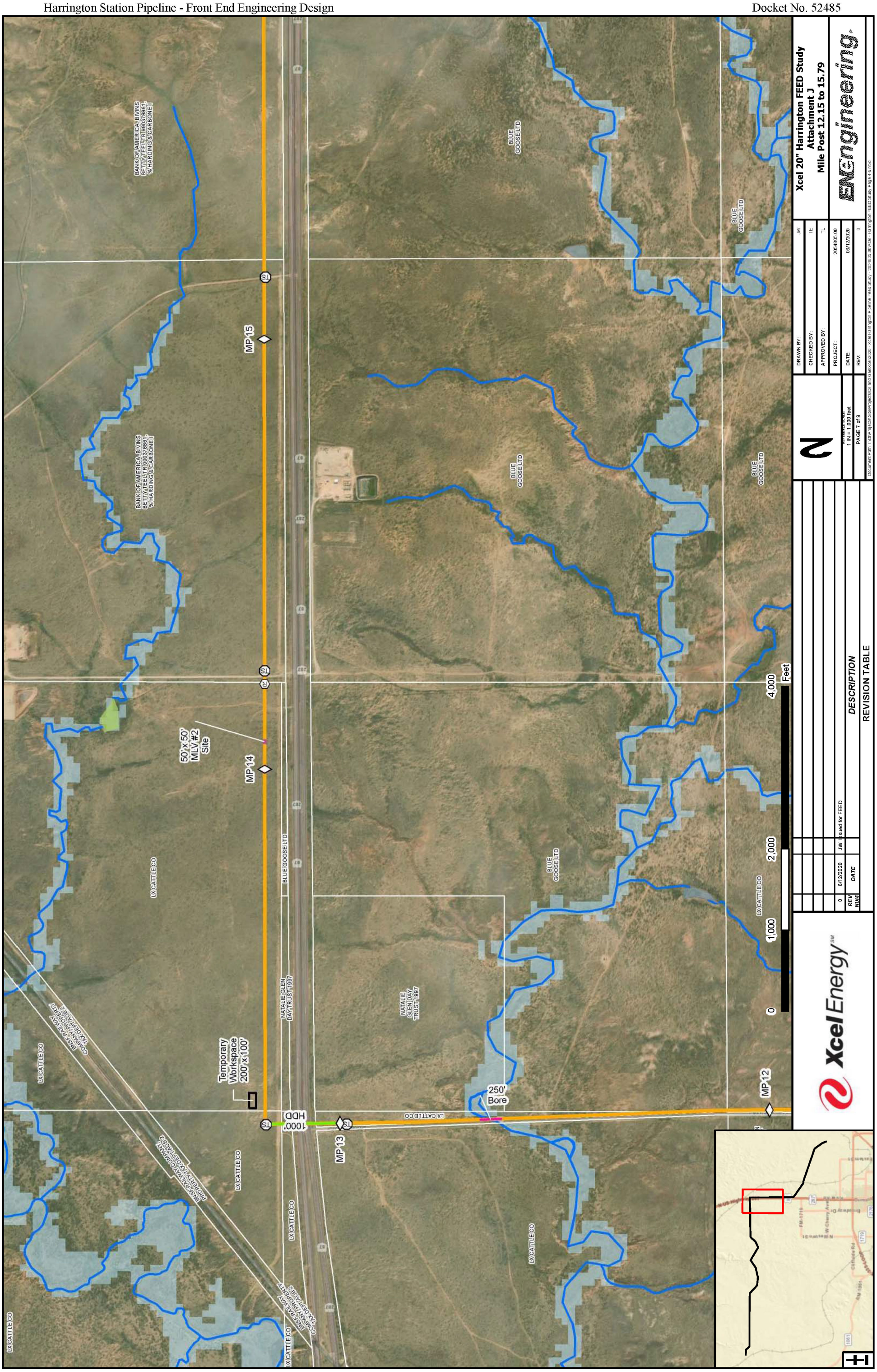
PAGE 5 of 9

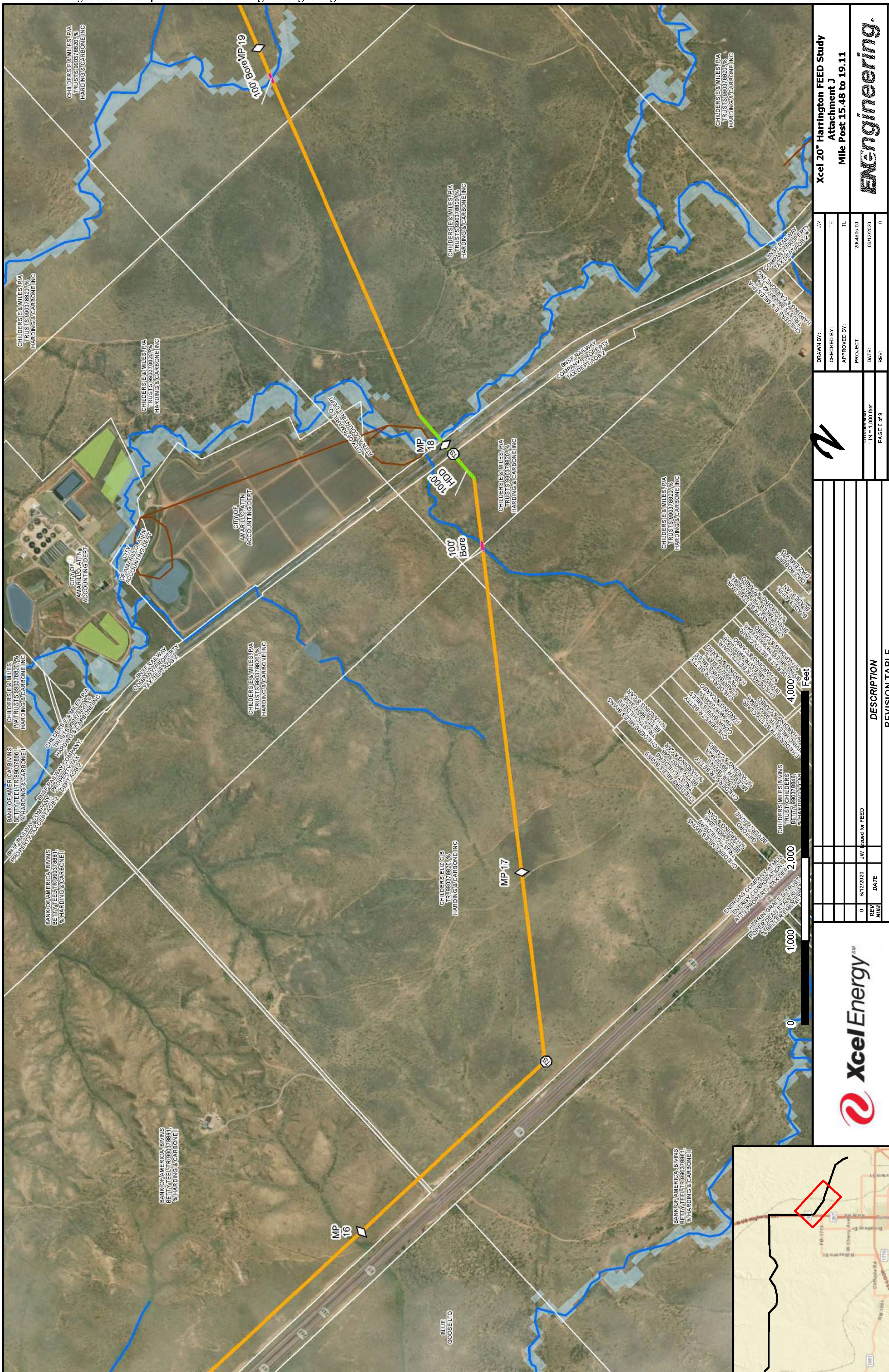
Xcel 20" Harrington FEED Study
Attachment J
Mile Post 5.69 to 9.17

ENEngineering

Document Path: I:\Dr\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2054805.00\Xcel - Harrington FEED Study Page 4-9.mxd

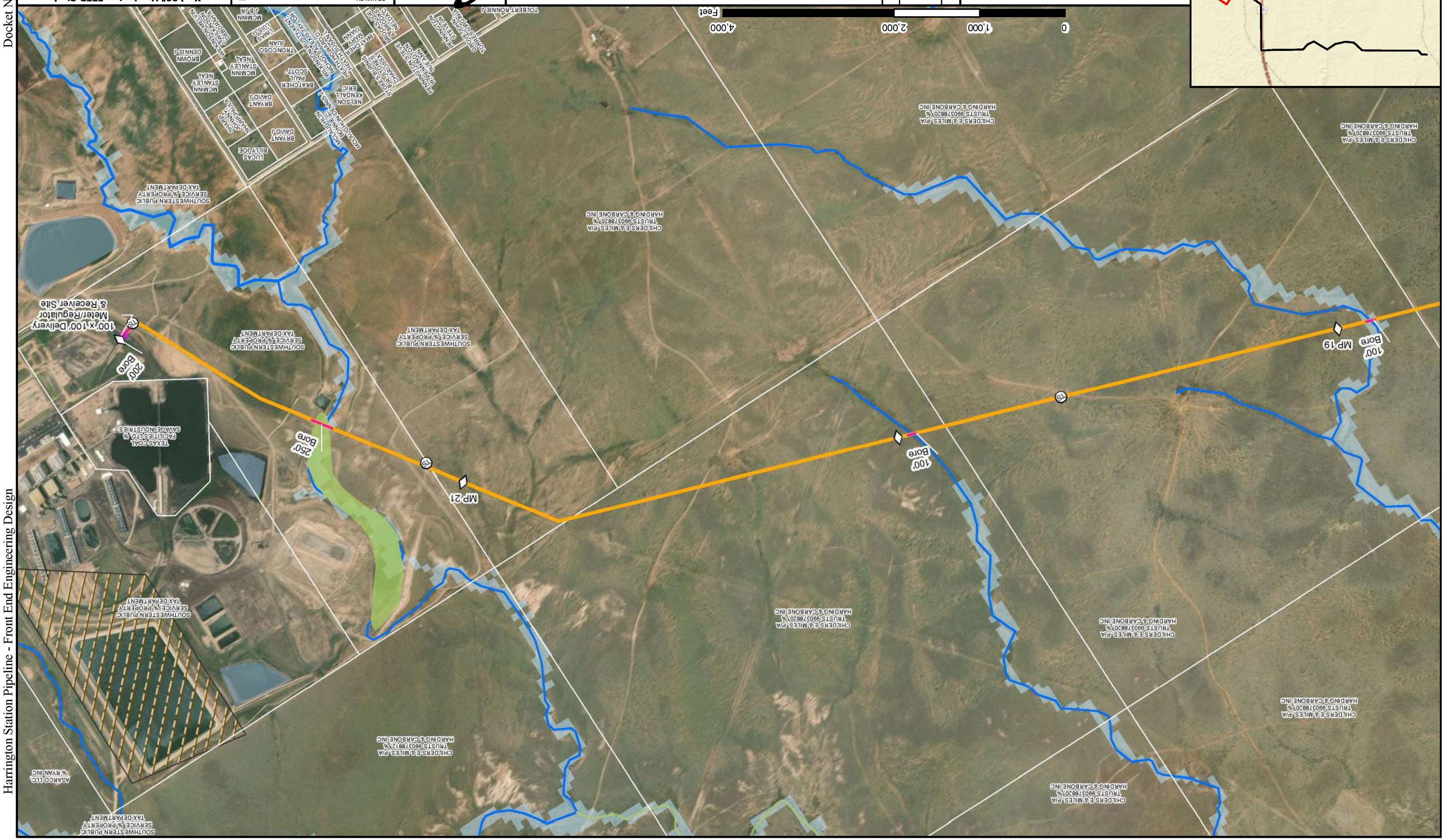

Xcel 20" Harrington FEED Study
Attachment J
Mile Post 8.77 to 12.14
Engineering
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 20S4805.00
DATE: 06/12/2020
REV: 0
REFERENCE SCALE: 1 IN = 1,000 feet
PAGE 6 of 9
Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 20S4805.00\Xcel - Harrington FEED Study Page 4-9.mxd
REVISION TABLE
REV NUM
DATE
DESCRIPTION
0
6/12/2020
JW
Issued for FEED
Xcel Energy
MP 12
MP 11
MP 10
MP 9
200' Bore
LX CATTLE CO
BLUE GOOSE LTD
SINCLAIR COMMUNICATIONS LLC % SINCLAIR TELEVISION GROUP INC
OUTABOUNDS RANCH LLC
SEEWALD ENTERPRISES LLC
EMELINE BUSH OBRIEN/SOBIESKI TRUST/SOBIESKI JAMES LOUIS ETAL CO-TRUST
GIPSON ROBERT D/GIPSON LINDA
ELLISTON GERALDINE R
FLANAGAN RICKEY T
KIMBALL IRENE
GARCIA ARSENIO P
SHARP WILLIAM G
WARD RANDY N/WARD BRENDA M
FJETLAND GARY L/FJETLAND RHONDA S
CADENHEAD ERNEST JR
MAYHEW CHARLES G/REGG
MAYHEW CHARLES/GREGG
MAYHEW RICKY/JOE
THORN MICHELLE DENISE MILLES/LISA ANN
WEETER RICHARD/WEETER CAROLYN F
FULLER TERRENCE/JAY FULLER KAYLA BONJOUR
SCHOONOVER JOLIN R/SCHOONOVER SALLY A
CHACON ENRIQUE/CHACON BILLIE J
LIEBERENZ DON E
HORN CLAN J
MEDEIROS HARLEY J
GILL SUSAN
SIEVERS VIRGINIA
BARNES TERRY L/BARNES DEBORAH SUSAN
LADUE CHRISTOPHER J
ADAMS JEFF
VALENZUELA LILLIAN
FRITZ MARY L
PRIDE PAUL S/PRIDE ELIZABETH JUNE
STONE VAL J/STONE DEANNA D
WHITTEN ALTON DALE
BLACK RODNEY PAUL/BLACK MARY ANN
ATKINSON GARY D/ATKINSON JULIE L
4,000
2,000
1,000
0
Feet


Xcel 20" Harrington FEED Study
Attachment J
Mile Post 12.15 to 15.79
Engineering
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 2064805.00
DATE: 06/12/2020
REV: 0
REFERENCE SCALE: 1 IN = 1,000 feet
PAGE 7 of 9
Document Path: I:\DI\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2064805.00\Xcel - Harrington FEED Study Page 4-9.mxd
REVISION TABLE
REV NUM
DATE
DESCRIPTION
0
6/12/2020
JW
Issued for FEED
Xcel Energy SM
MP 15
MP 14
MP 13
MP 12
50' x 50' MLV #2 Site
Temporary Workspace 200' x 100'
HDD 1000'
250' Bore
BLUE GOOSE LTD
LX CATTLE CO
NATALIE GLEN DAY TRUST 1997
BANK OF AMERICA BIVINS BETTY TEEL TR (890378861) % HARDING & CARBONE II
BNSF RAILWAY COMPANY PROPERTY TAX DEPT TX082
Feet
4,000
2,000
1,000
0


Xcel 20" Harrington FEED Study
Attachment J
Mile Post 15.48 to 19.11
ENGineering
DRAWN BY: JW
CHECKED BY: TE
APPROVED BY: TL
PROJECT: 2054805.00
DATE: 06/12/2020
REV: 0
REFERENCE SCALE:
1 IN = 1,000 feet
PAGE 8 of 9
Document Path: I:\D\Projects\GIS\Projects\Oil and Gas\Xcel\2020 - Xcel Harrington Pipeline Feed Study - 2054805.00\Xcel - Harrington FEED Study Page 4-9.mxd
0 6/12/2020 JW Issued for FEED
REV NUM
DATE
DESCRIPTION
REVISION TABLE
Xcel Energy
0
1,000
2,000
4,000
Feet
MP 19
100' Bore
MP 18
1000' HDD
100' Bore
MP 17
MP 16
CHILDERS E & MILES, P/A TRUSTS 990378820, % HARDING & CARBONE INC
CITY OF AMARILLO, ATTN ACCOUNTING DEPT
BNSF RAILWAY COMPANY, PROPERTY TAX DEPT AOB 2
BANK OF AMERICA, BIVINS BETTY TEEL TR 990378861, % HARDING & CARBONE I
CHILDERS ELIZ C B TR, 990378820, % HARDING & CARBONE INC
CHILDERS MILES BIVINS TRUST, CHILDERS BETTY 990378846, % HARDING & CAR
ENERGAS COMPANY, ATMOS ENERGY CORPORATION, ATTN PROPERTY TAX DEPT
HERRIN GRACE G TRUST, ROPER DEAN ET AL TRUST, % BELLER EMILY
GIFFORD BEVERLY JUNE
BLADES JOHN, BLADES JAN
DIAZ ROBERT, DIAZ EMILY G
BLUE GOOSE LTD

Southwestern Public Service Company

Harrington Station Pipeline - Front End Engineering Design



Southwestern Public Service Company

Harrington Station Pipeline - Front End Engineering Design

Xcel Energy SM

REV NUM	DATE	DESCRIPTION		
0	6/12/2020	Issued for FEED	JW	

REVISION TABLE

Xcel 20" Harrington FEED Study
Attachment J
Mile Post 18.77 to 21.86

DRAWN BY:	JW
CHECKED BY:	TE
APPROVED BY:	TL
PROJECT:	205480500
DATE:	06/12/2020
REV:	0
PAGE 9 of 9	
1 IN = 1,000 feet	

ENGineering

Document Path: I:\Civil\projects\Xcel\Harrington Pipeline Feed Study - 205480500\xcel - harrington FEED Study Page 4-9.mxd