

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed \$100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed \$1,000,000 as provided in 49 USC 60122.		OMB NO: 2137-0047 EXPIRATION DATE: 01/31/2014
 U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration	Original Report Date:	08/05/2010
	No.	20100166 - 17790 ----- (DOT Use Only)

ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0047. Public reporting for this collection of information is estimated to be approximately 10 hours per response (5 hours for a small release), including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

INSTRUCTIONS

Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at <http://www.phmsa.dot.gov/pipeline>.

PART A - KEY REPORT INFORMATION

Report Type: (select all that apply)	Original:	Supplemental:	Final:
		Yes	Yes
Last Revision Date:	04/03/2013		
1. Operator's OPS-issued Operator Identification Number (OPID):	32334		
2. Name of Operator	TC OIL PIPELINE OPERATIONS INC		
3. Address of Operator:			
3a. Street Address	717 TEXAS AVE		
3b. City	HOUSTON		
3c. State	Texas		
3d. Zip Code	77002		
4. Local time (24-hr clock) and date of the Accident:	06/23/2010 12:00		
5. Location of Accident:			
Latitude:	43.965346		
Longitude:	-97.694305		
6. National Response Center Report Number (if applicable):	945213		
7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable):	06/23/2010 17:00		
8. Commodity released: (select only one, based on predominant volume released)	Crude Oil		
- Specify Commodity Subtype:			
- If "Other" Subtype, Describe:			
- If Biofuel/Alternative Fuel and Commodity Subtype is Ethanol Blend, then % Ethanol Blend:	%		
- If Biofuel/Alternative Fuel and Commodity Subtype is Biodiesel, then Biodiesel Blend (e.g. B2, B20, B100):	B		
9. Estimated volume of commodity released unintentionally (Barrels):	2.38		
10. Estimated volume of intentional and/or controlled release/blowdown (Barrels):			
11. Estimated volume of commodity recovered (Barrels):	2.38		
12. Were there fatalities?	No		
- If Yes, specify the number in each category:			
12a. Operator employees			
12b. Contractor employees working for the Operator			
12c. Non-Operator emergency responders			
12d. Workers working on the right-of-way, but NOT associated with this Operator			
12e. General public			
12f. Total fatalities (sum of above)			
13. Were there injuries requiring inpatient hospitalization?	No		
- If Yes, specify the number in each category:			
13a. Operator employees			
13b. Contractor employees working for the Operator			
13c. Non-Operator emergency responders			

13d. Workers working on the right-of-way, but NOT associated with this Operator	
13e. General public	
13f. Total injuries (sum of above)	
14. Was the pipeline/facility shut down due to the Accident?	No
- If No, Explain:	Isolated at the pump station, sump pump
- If Yes, complete Questions 14a and 14b: (use local time, 24-hr clock)	
14a. Local time and date of shutdown:	
14b. Local time pipeline/facility restarted:	
- Still shut down? (* Supplemental Report Required)	
15. Did the commodity ignite?	No
16. Did the commodity explode?	No
17. Number of general public evacuated:	0
18. Time sequence (use local time, 24-hour clock):	
18a. Local time Operator identified Accident:	06/23/2010 12:00
18b. Local time Operator resources arrived on site:	06/23/2010 12:00
PART B - ADDITIONAL LOCATION INFORMATION	
1. Was the origin of Accident onshore?	Yes
<i>If Yes, Complete Questions (2-12)</i>	
<i>If No, Complete Questions (13-15)</i>	
- If Onshore:	
2. State:	South Dakota
3. Zip Code:	57349
4. City:	Howard
5. County or Parish:	Miner
6. Operator-designated location:	Milepost/Valve Station
Specify:	358.3
7. Pipeline/Facility name:	Roswell Pump Station
8. Segment name/ID:	Glacial Lakes
9. Was Accident on Federal land, other than the Outer Continental Shelf (OCS)?	No
10. Location of Accident:	Totally contained on Operator-controlled property
11. Area of Accident (as found):	Aboveground
Specify:	Typical aboveground facility piping or appurtenance
- If Other, Describe:	
Depth-of-Cover (in):	
12. Did Accident occur in a crossing?	No
- If Yes, specify below:	
- If Bridge crossing –	
Cased/ Uncased:	
- If Railroad crossing –	
Cased/ Uncased/ Bored/drilled	
- If Road crossing –	
Cased/ Uncased/ Bored/drilled	
- If Water crossing –	
Cased/ Uncased	
- Name of body of water, if commonly known:	
- Approx. water depth (ft) at the point of the Accident:	
- Select:	
- If Offshore:	
13. Approximate water depth (ft) at the point of the Accident:	
14. Origin of Accident:	
- In State waters - Specify:	
- State:	
- Area:	
- Block/Tract #:	
- Nearest County/Parish:	
- On the Outer Continental Shelf (OCS) - Specify:	
- Area:	
- Block #:	
15. Area of Accident:	
PART C - ADDITIONAL FACILITY INFORMATION	
1. Is the pipeline or facility:	Interstate
2. Part of system involved in Accident:	Onshore Pump/Meter Station Equipment and Piping
- If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify:	
3. Item involved in Accident:	Pump

- If Pipe, specify:	
3a. Nominal diameter of pipe (in):	
3b. Wall thickness (in):	
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	
3d. Pipe specification:	
3e. Pipe Seam , specify:	
- If Other, Describe:	
3f. Pipe manufacturer:	
3g. Year of manufacture:	
3h. Pipeline coating type at point of Accident, specify:	
- If Other, Describe:	
- If Weld, including heat-affected zone, specify:	
- If Other, Describe:	
- If Valve, specify:	
- If Mainline, specify:	
- If Other, Describe:	
3i. Manufactured by:	
3j. Year of manufacture:	
- If Tank/Vessel, specify:	
- If Other - Describe:	
- If Other, describe:	
4. Year item involved in Accident was installed:	2009
5. Material involved in Accident:	Carbon Steel
- If Material other than Carbon Steel, specify:	
6. Type of Accident Involved:	Leak
- If Mechanical Puncture – Specify Approx. size:	
in. (axial) by	
in. (circumferential)	
- If Leak - Select Type:	Connection Failure
- If Other, Describe:	
- If Rupture - Select Orientation:	
- If Other, Describe:	
Approx. size: in. (widest opening) by	
in. (length circumferentially or axially)	
- If Other – Describe:	
PART D - ADDITIONAL CONSEQUENCE INFORMATION	
1. Wildlife impact:	No
1a. If Yes, specify all that apply:	
- Fish/aquatic	
- Birds	
- Terrestrial	
2. Soil contamination:	Yes
3. Long term impact assessment performed or planned:	No
4. Anticipated remediation:	Yes
4a. If Yes, specify all that apply:	
- Surface water	
- Groundwater	
- Soil	Yes
- Vegetation	
- Wildlife	
5. Water contamination:	No
5a. If Yes, specify all that apply:	
- Ocean/Seawater	
- Surface	
- Groundwater	
- Drinking water: (Select one or both)	
- Private Well	
- Public Water Intake	
5b. Estimated amount released in or reaching water (Barrels):	
5c. Name of body of water, if commonly known:	
6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program?	No
7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?	No
7a. If Yes, specify HCA type(s): (Select all that apply)	
- Commercially Navigable Waterway:	
Was this HCA identified in the "could affect"	

determination for this Accident site in the Operator's Integrity Management Program?	
- High Population Area:	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
- Other Populated Area	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
- Unusually Sensitive Area (USA) - Drinking Water	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
- Unusually Sensitive Area (USA) - Ecological	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
8. Estimated Property Damage:	
8a. Estimated cost of public and non-Operator private property damage	\$ 0
8b. Estimated cost of commodity lost	\$ 167
8c. Estimated cost of Operator's property damage & repairs	\$ 250
8d. Estimated cost of Operator's emergency response	\$ 5,000
8e. Estimated cost of Operator's environmental remediation	\$ 25,000
8f. Estimated other costs	\$ 0
Describe:	
8g. Total estimated property damage (sum of above)	\$ 30,417
PART E - ADDITIONAL OPERATING INFORMATION	
1. Estimated pressure at the point and time of the Accident (psig):	500.00
2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig):	1,440.00
3. Describe the pressure on the system or facility relating to the Accident (psig):	Pressure did not exceed MOP
4. Not including pressure reductions required by PHMSA regulations (such as for repairs and pipe movement), was the system or facility relating to the Accident operating under an established pressure restriction with pressure limits below those normally allowed by the MOP?	No
- If Yes, Complete 4.a and 4.b below:	
4a. Did the pressure exceed this established pressure restriction?	
4b. Was this pressure restriction mandated by PHMSA or the State?	
5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2?	No
- If Yes - (Complete 5a. - 5e. below)	
5a. Type of upstream valve used to initially isolate release source:	
5b. Type of downstream valve used to initially isolate release source:	
5c. Length of segment isolated between valves (ft):	
5d. Is the pipeline configured to accommodate internal inspection tools?	
- If No, Which physical features limit tool accommodation? (select all that apply)	
- Changes in line pipe diameter	
- Presence of unsuitable mainline valves	
- Tight or mitered pipe bends	
- Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.)	
- Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools)	
- Other -	
- If Other, Describe:	
5e. For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run?	
- If Yes, Which operational factors complicate execution? (select all that apply)	
- Excessive debris or scale, wax, or other wall buildup	

- Low operating pressure(s)	
- Low flow or absence of flow	
- Incompatible commodity	
- Other -	
- If Other, Describe:	
5f. Function of pipeline system:	> 20% SMYS Regulated Trunkline/Transmission
6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?	Yes
If Yes -	
6a. Was it operating at the time of the Accident?	Yes
6b. Was it fully functional at the time of the Accident?	Yes
6c. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?	No
6d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?	No
7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?	Yes
- If Yes:	
7a. Was it operating at the time of the Accident?	Yes
7b. Was it fully functional at the time of the Accident?	Yes
7c. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?	No
7d. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?	No
8. How was the Accident initially identified for the Operator?	Local Operating Personnel, including contractors
- If Other, Specify:	
8a. If "Controller", "Local Operating Personnel", including contractors", "Air Patrol", or "Guard Patrol by Operator or its contractor" is selected in Question 8, specify the following:	Operator employee
9. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Accident?	No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: (provide an explanation for why the Operator did not investigate)
- If No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: (provide an explanation for why the operator did not investigate)	The sump pump was in manual operation by the local operations personnel at the time of the accident.
- If Yes, specify investigation result(s): (select all that apply)	
- Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
- Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
Provide an explanation for why not:	
- Investigation identified no control room issues	
- Investigation identified no controller issues	
- Investigation identified incorrect controller action or controller error	
- Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response	
- Investigation identified incorrect procedures	
- Investigation identified incorrect control room equipment operation	
- Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response	
- Investigation identified areas other than those above:	
Describe:	
PART F - DRUG & ALCOHOL TESTING INFORMATION	
1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	No
- If Yes:	
1a. Specify how many were tested:	
1b. Specify how many failed:	

2. As a result of this Accident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations? - If Yes:	No
2a. Specify how many were tested:	
2b. Specify how many failed:	
PART G – APPARENT CAUSE	
<i>Select only one box from PART G in shaded column on left representing the APPARENT Cause of the Accident, and answer the questions on the right. Describe secondary, contributing or root causes of the Accident in the narrative (PART H).</i>	
Apparent Cause:	G6 - Equipment Failure
G1 - Corrosion Failure - only one sub-cause can be picked from shaded left-hand column	
External Corrosion:	
Internal Corrosion:	
- If External Corrosion:	
1. Results of visual examination: - If Other, Describe:	
2. Type of corrosion: <i>(select all that apply)</i>	
- Galvanic	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
- If Other, Describe:	
3. The type(s) of corrosion selected in Question 2 is based on the following: <i>(select all that apply)</i>	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
4. Was the failed item buried under the ground? - If Yes :	
<input type="checkbox"/> 4a. Was failed item considered to be under cathodic protection at the time of the Accident? If Yes - Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at the point of the Accident?	
4c. Has one or more Cathodic Protection Survey been conducted at the point of the Accident? If "Yes, CP Annual Survey" – Most recent year conducted: If "Yes, Close Interval Survey" – Most recent year conducted: If "Yes, Other CP Survey" – Most recent year conducted:	
- If No:	
4d. Was the failed item externally coated or painted?	
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?	
- If Internal Corrosion:	
6. Results of visual examination: - Other:	
7. Type of corrosion <i>(select all that apply):</i> -	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Erosion	
- Other:	
- If Other, Describe:	
8. The cause(s) of corrosion selected in Question 7 is based on the following <i>(select all that apply):</i> -	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
9. Location of corrosion <i>(select all that apply):</i> -	
- Low point in pipe	
- Elbow	
- Other:	

- If Other, Describe:	
10. Was the commodity treated with corrosion inhibitors or biocides?	
11. Was the interior coated or lined with protective coating?	
12. Were cleaning/dewatering pigs (or other operations) routinely utilized?	
13. Were corrosion coupons routinely utilized?	
Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Tank/Vessel.	
14. List the year of the most recent inspections:	
14a. API Std 653 Out-of-Service Inspection	
- No Out-of-Service Inspection completed	
14b. API Std 653 In-Service Inspection	
- No In-Service Inspection completed	
Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.	
15. Has one or more internal inspection tool collected data at the point of the Accident?	
15a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage Tool	Most recent year:
- Ultrasonic	Most recent year:
- Geometry	Most recent year:
- Caliper	Most recent year:
- Crack	Most recent year:
- Hard Spot	Most recent year:
- Combination Tool	Most recent year:
- Transverse Field/Triaxial	Most recent year:
- Other	Most recent year:
Describe:	
16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
If Yes -	
Most recent year tested:	
Test pressure:	
17. Has one or more Direct Assessment been conducted on this segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident::	
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	
18. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
18a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	Most recent year conducted:
- Guided Wave Ultrasonic	Most recent year conducted:
- Handheld Ultrasonic Tool	Most recent year conducted:
- Wet Magnetic Particle Test	Most recent year conducted:
- Dry Magnetic Particle Test	Most recent year conducted:
- Other	Most recent year conducted:
Describe:	
G2 - Natural Force Damage - only one sub-cause can be picked from shaded left-handed column	
Natural Force Damage – Sub-Cause:	
- If Earth Movement, NOT due to Heavy Rains/Floods:	
1. Specify:	

- If Other, Describe:	
- If Heavy Rains/Floods:	
2. Specify:	
- If Other, Describe:	
- If Lightning:	
3. Specify:	
- If Temperature:	
4. Specify:	
- If Other, Describe:	
- If High Winds:	
- If Other Natural Force Damage:	
5. Describe:	
Complete the following if any Natural Force Damage sub-cause is selected.	
6. Were the natural forces causing the Accident generated in conjunction with an extreme weather event?	
6a. If Yes, specify: <i>(select all that apply)</i>	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
- If Other, Describe:	
G3 - Excavation Damage - only one sub-cause can be picked from shaded left-hand column	
Excavation Damage – Sub-Cause:	
- If Excavation Damage by Operator (First Party):	
- If Excavation Damage by Operator's Contractor (Second Party):	
- If Excavation Damage by Third Party:	
- If Previous Damage due to Excavation Activity:	
Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.	
1. Has one or more internal inspection tool collected data at the point of the Accident?	
1a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage	Most recent year conducted:
- Ultrasonic	Most recent year conducted:
- Geometry	Most recent year conducted:
- Caliper	Most recent year conducted:
- Crack	Most recent year conducted:
- Hard Spot	Most recent year conducted:
- Combination Tool	Most recent year conducted:
- Transverse Field/Triaxial	Most recent year conducted:
- Other	Most recent year conducted:
Describe:	
2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	
3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	
Most recent year tested:	
Test pressure (psig):	
4. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident:	
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	

5. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
5a. If Yes, for each examination, conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
Complete the following if Excavation Damage by Third Party is selected as the sub-cause.	
6. Did the operator get prior notification of the excavation activity?	
6a. If Yes, Notification received from: <i>(select all that apply)</i> -	
- One-Call System	
- Excavator	
- Contractor	
- Landowner	
Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.	
7. Do you want PHMSA to upload the following information to CGA-DIRT (www.cga-dirt.com)?	
8. Right-of-Way where event occurred: <i>(select all that apply)</i> -	
- Public	
- If "Public", Specify:	
- Private	
- If "Private", Specify:	
- Pipeline Property/Easement	
- Power/Transmission Line	
- Railroad	
- Dedicated Public Utility Easement	
- Federal Land	
- Data not collected	
- Unknown/Other	
9. Type of excavator:	
10. Type of excavation equipment:	
11. Type of work performed:	
12. Was the One-Call Center notified?	
12a. If Yes, specify ticket number:	
12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:	
13. Type of Locator:	
14. Were facility locate marks visible in the area of excavation?	
15. Were facilities marked correctly?	
16. Did the damage cause an interruption in service?	
16a. If Yes, specify duration of the interruption (hours)	
17. Description of the CGA-DIRT Root Cause <i>(select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well):</i>	
Root Cause:	
- If One-Call Notification Practices Not Sufficient, specify:	
- If Locating Practices Not Sufficient, specify:	
- If Excavation Practices Not Sufficient, specify:	
- If Other/None of the Above, explain:	
G4 - Other Outside Force Damage - only one sub-cause can be selected from the shaded left-hand column	
Other Outside Force Damage – Sub-Cause:	
- If Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident:	
- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation:	
1. Vehicle/Equipment operated by:	
- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring:	

2. Select one or more of the following IF an extreme weather event was a factor:	
- Hurricane	
- Tropical Storm	
- Tornado	
- Heavy Rains/Flood	
- Other	
- If Other, Describe:	
- If Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation:	
- If Electrical Arcing from Other Equipment or Facility:	
- If Previous Mechanical Damage NOT Related to Excavation:	
Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.	
3. Has one or more internal inspection tool collected data at the point of the Accident?	
3a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:	
- Magnetic Flux Leakage	Most recent year conducted:
- Ultrasonic	Most recent year conducted:
- Geometry	Most recent year conducted:
- Caliper	Most recent year conducted:
- Crack	Most recent year conducted:
- Hard Spot	Most recent year conducted:
- Combination Tool	Most recent year conducted:
- Transverse Field/Triaxial	Most recent year conducted:
- Other	Most recent year conducted:
Describe:	
4. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	
5. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	
	Most recent year tested:
	Test pressure (psig):
6. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident:	
	Most recent year conducted:
- If Yes, but the point of the Accident was not identified as a dig site:	
	Most recent year conducted:
7. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
7a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	Most recent year conducted:
- Guided Wave Ultrasonic	Most recent year conducted:
- Handheld Ultrasonic Tool	Most recent year conducted:
- Wet Magnetic Particle Test	Most recent year conducted:
- Dry Magnetic Particle Test	Most recent year conducted:
- Other	Most recent year conducted:
Describe:	
- If Intentional Damage:	
8. Specify:	
- If Other, Describe:	
- If Other Outside Force Damage:	
9. Describe:	

G5 - Material Failure of Pipe or Weld - only one **sub-cause** can be selected from the shaded left-hand column

Use this section to report material failures ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."

Material Failure of Pipe or Weld – Sub-Cause:	
1. The sub-cause selected below is based on the following: <i>(select all that apply)</i>	
- Field Examination	
- Determined by Metallurgical Analysis	
- Other Analysis	
- If "Other Analysis", Describe:	
- Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required)	
- If Construction, Installation, or Fabrication-related:	
2. List contributing factors: <i>(select all that apply)</i>	
- Fatigue or Vibration-related	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
- If Original Manufacturing-related (NOT girth weld or other welds formed in the field):	
2. List contributing factors: <i>(select all that apply)</i>	
- Fatigue or Vibration-related:	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
- If Environmental Cracking-related:	
3. Specify:	
- Other - Describe:	
Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.	
4. Additional factors: <i>(select all that apply)</i> :	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Crack	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Other:	
- If Other, Describe:	
5. Has one or more internal inspection tool collected data at the point of the Accident?	
5a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:	
- Magnetic Flux Leakage	Most recent year run:
- Ultrasonic	Most recent year run:
- Geometry	Most recent year run:
- Caliper	Most recent year run:
- Crack	Most recent year run:
- Hard Spot	Most recent year run:
- Combination Tool	Most recent year run:
- Transverse Field/Triaxial	Most recent year run:
- Other	Most recent year run:

	Describe:	
6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?		
- If Yes:		
	Most recent year tested:	
	Test pressure (psig):	
7. Has one or more Direct Assessment been conducted on the pipeline segment?		
- If Yes, and an investigative dig was conducted at the point of the Accident -		
	Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site -		
	Most recent year conducted:	
8. Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002?		
8a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted: -		
- Radiography		
	Most recent year conducted:	
- Guided Wave Ultrasonic		
	Most recent year conducted:	
- Handheld Ultrasonic Tool		
	Most recent year conducted:	
- Wet Magnetic Particle Test		
	Most recent year conducted:	
- Dry Magnetic Particle Test		
	Most recent year conducted:	
- Other		
	Most recent year conducted:	
		Describe:
G6 – Equipment Failure - only one sub-cause can be selected from the shaded left-hand column		
Equipment Failure – Sub-Cause:		Threaded Connection/Coupling Failure
- If Malfunction of Control/Relief Equipment:		
1. Specify: <i>(select all that apply)</i> -		
- Control Valve		
- Instrumentation		
- SCADA		
- Communications		
- Block Valve		
- Check Valve		
- Relief Valve		
- Power Failure		
- Stopple/Control Fitting		
- ESD System Failure		
- Other		
		- If Other – Describe:
- If Pump or Pump-related Equipment:		
2. Specify:		
		- If Other – Describe:
- If Threaded Connection/Coupling Failure:		
3. Specify:		Pipe Nipple
		- If Other – Describe:
- If Non-threaded Connection Failure:		
4. Specify:		
		- If Other – Describe:
- If Defective or Loose Tubing or Fitting:		
- If Failure of Equipment Body (except Pump), Tank Plate, or other Material:		
- If Other Equipment Failure:		
5. Describe:		
Complete the following if any Equipment Failure sub-cause is selected.		
6. Additional factors that contributed to the equipment failure: <i>(select all that apply)</i>		
- Excessive vibration		
- Overpressurization		
- No support or loss of support		
- Manufacturing defect		

- Loss of electricity	
- Improper installation	Yes
- Mismatched items (different manufacturer for tubing and tubing fittings)	
- Dissimilar metals	
- Breakdown of soft goods due to compatibility issues with transported commodity	
- Valve vault or valve can contributed to the release	
- Alarm/status failure	
- Misalignment	
- Thermal stress	
- Other	
- If Other, Describe:	

G7 - Incorrect Operation - only one **sub-cause** can be selected from the shaded left-hand column

Incorrect Operation – Sub-Cause:

Damage by Operator or Operator’s Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage

Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow

1. Specify:

- If Other, Describe:

Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure

Pipeline or Equipment Overpressured

Equipment Not Installed Properly

Wrong Equipment Specified or Installed

Other Incorrect Operation

2. Describe:

Complete the following if any Incorrect Operation sub-cause is selected.

3. Was this Accident related to (*select all that apply*): -

- Inadequate procedure
- No procedure established
- Failure to follow procedure
- Other:

- If Other, Describe:

4. What category type was the activity that caused the Accident?

5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program?

5a. If Yes, were the individuals performing the task(s) qualified for the task(s)?

G8 - Other Accident Cause - only one **sub-cause** can be selected from the shaded left-hand column

Other Accident Cause – Sub-Cause:

- If Miscellaneous:

1. Describe:

- If Unknown:

2. Specify:

PART H - NARRATIVE DESCRIPTION OF THE ACCIDENT

The location of the release is a pump station owned and operated by TransCanada Keystone Pipeline, LP (TransCanada). The pump station is in a rural area located at approximately three miles south of Roswell, South Dakota. The release of petroleum was entirely contained on TransCanada property. The release occurred from a loose fitting on an above ground damper system associated with an injection pump. Oil was released from the loose fitting for an approximate 3 second period until the system was manually shut down. An estimated 100 gallons of oil sprayed over an area of approximately 60 feet by 110 feet within the pump station location. TransCanada personnel were onsite at time of the oil release, the injector pump was immediately shut down

and containment and recovery activities initiated. A maintenance team mobilized to the site upon notification of the release on June 23, 2010 at 12 noon CDT. The pulsation dampener on the injection pump was removed and visually inspected. The inspection revealed the threaded nipple was not installed properly and was not the correct length. The threaded nipple on the pulsation dampener was replaced.

File Full Name

PART I - PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name	Daniel Cerkoney
Preparer's Title	Manager Regulatory Compliance
Preparer's Telephone Number	7012901176
Preparer's E-mail Address	dan_cerkoney@transcanada.com
Preparer's Facsimile Number	7014831431
Authorized Signature's Name	Daniel Cerkoney
Authorized Signature Title	Manager Regulatory Compliance
Authorized Signature Telephone Number	7136936466
Authorized Signature Email	dan_cerkoney@transcanada.com
Date	04/03/2013

WRITTEN CONTAMINATION INCIDENT FOLLOW-UP REPORT

(Page 1 of 2)

RETURN COMPLETED FORM TO SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
GROUND WATER QUALITY PROGRAM
JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE SD 57501-3182

SITE NAME: TransCanada Keystone Pipeline-Roswell Pump StationSPILL LOCATION: 42592 236th Street, Roswell, SDLATITUDE: 43.965346 LONGITUDE : -97.694305LEGAL LOCATION (TOWNSHIP/RANGE): SE 1/4 SEC.20, T106N, R57WRESPONSIBLE PARTY: TransCanada Keystone Pipeline, LPMAILING ADDRESS: 13710 FNB ParkwayCITY: Omaha STATE : NE ZIP: 68154TELEPHONE: _____ (HOME) (402) 492-7300 (WORK)DATE OF SPILL OR WHEN DETECTED: 6/23/2010 TIME: 12 noon, CDTWHAT WAS THE DURATION OF THE RELEASE? Approx. 3 seconds of oil spray on 6/23/2010SUBSTANCE(S) RELEASED: Crude OilQUANTITY RELEASED: Approximately 100 gallonsCHEMICAL NAME: Canadian Sour Crude CAS #: _____
CAS # 8002.05.09 _____

IS SUBSTANCE ON THE "SARA 302 LIST"? YES NO DON'T KNOW _____
"CERCLA HAZARDOUS SUBSTANCE LIST"? YES NO DON'T KNOW _____
"SOUTH DAKOTA REGULATED SUBSTANCE"? YES NO DON'T KNOW _____

CONSULTANT: URS CorporationIDENTIFY KNOWN HEALTH RISKS: None knownWHAT PERTINENT MEDICAL ADVICE WAS ISSUED? None requiredLAND USE (RESIDENTIAL, INDUSTRIAL, RURAL, OTHER): Rural

UTILITIES INVESTIGATED (WATER, SEWER, TELEPHONE, CATV, STORM WATER, OTHER):

<u>Release occurred in rural setting. No utilities.</u>

FOLLOW-UP REPORT CONTINUED

(Page 2 of 2)

DENR FILE #: 2010.126

ENVIRONMENTAL MEDIA IMPACTED (SURFACE SOIL, SUBSURFACE SOIL > 3' BELOW GROUND, GROUND WATER, SURFACE WATER, INDOOR AIR, OUTDOOR AIR, ETC.):

Surface soil and surface rain water only.

DISTANCE TO AND NAME OF CLOSEST SURFACE WATER OR DRAINAGE:

Road ditch along 236th Street with Twin Lakes 1 mile west of site.

DEPTH/DISTANCE TO AND NAME OF CLOSEST AQUIFER: 25-50 feet/0 feet to Floyd Aquifer

DEPTH/DISTANCE TO NEAREST DRINKING WATERWELL: Suspect farm 2 miles south

CUBIC YARDS OF SOIL EXCAVATED/TREATED: Approximately 200

WAS FREE PHASE OR POOLED PRODUCT PRESENT? Yes

DIMENSIONS OF EXCAVATION: 60 ft. by 110 ft.

CONTAMINATED MATERIALS DISPOSAL SITE: Waste Management-Spruce Ridge LF

DATE MATERIAL WAS DISPOSED OF: To be determined. Scheduled for late July, 2010.

IMMEDIATE CORRECTIVE ACTION TAKEN AND ADDITIONAL WORK PLANNED:

See attached text.

FORM COMPLETED BY: Hubert Huls, URS Corporation DATE: July 20, 2010

The location of the release is a pump station owned and operated by TransCanada Keystone Pipeline, LP (TransCanada). The pump station is in a rural area located at 42592 236th Street near the intersection with 426th Avenue (Figure 1), approximately three miles south of Roswell, South Dakota. The release of petroleum was entirely contained on TransCanada property.

The release occurred from a loose fitting on an above ground damper system associated with an injection pump. Oil was released from the loose fitting for an approximate 3 second period until the system was manually shut down. An estimated 100 gallons of oil sprayed over an area of approximately 60 feet by 110 feet within the pump station location.

TransCanada personnel were onsite at time of the oil release, the injector pump was immediately shut down and containment and recovery activities initiated. A maintenance team mobilized to the site upon notification of the release on June 23, 2010 at 12 noon CDT. A vac truck, skid-steer loader, hydrovac, and other equipment were mobilized to the site along with qualified response team personnel.

The site had been exposed to heavy rainfall prior to the release event. As such, saturated conditions were encountered below grade in the surface gravel at the site. The area of the spill was de-watered using shallow excavation sumps constructed to prevent the spread of product along the ground surface. Collected free product was pumped from shallow surface sumps and 80 gallons was recovered during initial response operations. Collected product was transferred to the on-site sump tank. Oily water was collected via vacuum truck and transported offsite for storage and proper disposal at a permitted facility.

Residual oil had accumulated around pipelines, cable racks, pump foundations and other structures, and over a portion of the gravel covered pump station yard. Visually stained soils were excavated around the structures using a hydrovac truck and the stained gravel yard area was scraped using an excavator. Impacted soil was placed in roll-off containers for later transfer to an approved landfill facility. All excavations were less than three feet in depth and groundwater was not encountered.

Soils were screened using a photoionization detector (PID) with 10.6 eV lamp after excavation and hydrovac removal activities to determine the required limits of excavation. In addition, the scraped surface yard was screened using the PID. This included four potholes locations dug to confirm clean conditions. Confirmation soil samples were collected at eight locations after excavation was completed. Sampling and PID screening locations and excavation areas are shown in Figures 2 and 3. Confirmation sample ROS-8 is a composite of three discrete samples collected in the south grass mowed area as shown in Figure 2.

The field PID screening and laboratory analytical results for benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, and Total Petroleum Hydrocarbons as Diesel (TPH-Diesel) are summarized on Table 1 and Table 2. In addition, two composite

waste soil samples were collected from the soil stockpiles and laboratory analysis results are shown in Table 2.

Based on field observations, measurements, and analytical data, the response excavation efforts have mitigated impacts to the surface and subsurface soils to below SD DENR Tier 1 action levels for BTEX, naphthalene, and TPH-Diesel. The excavated areas have been backfilled with clean material and no additional work is planned.

A total of 2,500 gallons of oily water was transported on July 7, 2010 by Safety-Kleen Systems for disposal at ESI in Indianapolis, IN. A receipt from Safety –Kleen is attached to this submittal. A total of approximately 200 cubic yards of impacted soil was stockpiled in roll-off containers and is waiting transport to the disposal landfill. The soils are planned to be hauled during late July, 2010 to the Waste Management –Spruce Ridge Landfill for disposal. Waste manifests and landfill tickets will be sent to SD DENR when disposal is completed.

**Table 1 - Laboratory Analysis Soil Verification
TransCanada Keystone Pipeline
Roswell Pump Station; Roswell, South Dakota**

Location	Units	ROS-1	ROS-2	ROS-3	ROS-4	ROS-5	ROS-6	ROS-7	ROS-8-COMP	Tier 1 Action Level
Sample Date		6/27/10	6/27/10	6/27/10	6/27/10	6/27/10	6/27/10	6/27/10	6/28/10	
Lithology		Gravel	Top soil							
Depth	(feet)	<3	<3	<3	<3	<3	<3	<3	<3	
PID	(ppm)*	0.20	0.20	0.35	2.55	36.00	2.35	0.60	0.0	
Chemical of Concern										
Benzene	µg/kg	<23.4	<25.1	<24.2	<22.0	<22.0	<23.4	<22.1	<25.9	200
Ethylbenzene	µg/kg	<58.5	<62.8	<60.4	<55.0	<55.0	<58.4	<55.2	<64.9	1,500
Toluene	µg/kg	<58.5	<62.8	<60.4	<55.0	<55.0	<58.4	<55.2	<64.9	1,000
Xylene (Total)	µg/kg	<176	<189	<181	<165	<165	<175	<165	<195	300,000
Naphthalene	µg/kg	<234	<251	<242	<220	<220	<234	<221	<259	25,000
Diesel Components	mg/kg	<11.5	<12.6	<13.3	<11.2	20	<11.5	<11.0	<13.2	500**

NOTES: mg/kg = Milligrams per kilogram, equivalent to parts per million (ppm) dry weight

µg/kg= Micrograms per kilogram dry weight

<x = Not detected to reporting limits of x

* = Total organic vapors (ppm as benzene)

** = Tier 1 "Trigger Level" for total petroleum hydrocarbons

COMP = Composite of three samples

< 3= less than three feet of excavation

**Table 2 - Yard (Pothole) Area PID Screening and Waste Soil Analysis
TransCanada Keystone Pipeline
Roswell Pump Station; Roswell, South Dakota**

Location	Units	East-1 Pothole	East-2 Pothole	South-3 Pothole	West-4 Pothole	GS-75	GS-30	ROS-1 Waste Comp	ROS-2 Waste Comp	Tier 1 Action Level
Sample Date		6/26/10	6/26/10	6/26/10	6/26/10	6/25/10	6/25/10	6/30/10	6/30/10	
Lithology		Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	
Depth	(feet)	<3	<3	<3	<3	<3	<3			
PID	(ppm)*	0.00	0.00	0.00	0.00	0.00	0.00			
Chemical of Concern										
Benzene	µg/kg							<22.0	<22.1	200
Ethylbenzene	µg/kg							208	<55.2	1,500
Toluene	µg/kg							104	<55.2	1,000
Xylene (Total)	µg/kg							1280	280	300,000
Diesel Components	mg/kg							895	1510	500**

NOTES: mg/kg = Milligrams per kilogram, equivalent to parts per million (ppm) dry weight

<x = Not detected to reporting limits of x

* = Total organic vapors (ppm as benzene)

** = Tier 1 "Trigger Level" for total petroleum hydrocarbons

COMP = Composite of several samples

< 3= less than three feet of excavation

Safety-Kleen Systems, Inc.

5360 Legacy Drive.
Building 2, Suite 100
Plano, Texas 75024
800-669-5740
605-332-0231

CUSTOMER# 10014347 TRANSCANADA KEYSTONE PIPELINE
19051 415TH AVENUE
CARPENTER SD 57322
PHONE 402-492-7464

REFERENCE NBR 51385840
SRVC WEEK: 2010-24
SRVC DATE: 07/09/10 16:56

PURCHASE ORDER# rswl ps

TAX EXEMPTION NBR

PRODUCT/SERVICES

SERVICE/ PRODUCT	QTY	UNIT PRICE	TAX	TOTAL CHARGE		
40423593/ 66666 VACUUM SVC LIQ (PQUAL) SERVICE TERM 52 VAC PH TEST: 8	2500.000	0.0000	0.00	0.00		
10901 VAC SVS SERVICEFEE 1	1.000	87.0000	3.48	90.48		
10970 FEE, VAC SVC NO SOLIDS	2500.000	0.9500	0.04	2375.00		
TOTAL SERVICE/PRODUCTS				87.9500	98.48	2560.48
TOTAL CHARGE					2560.48	
CREDITS					0.00	
TOTAL DUE					2560.48	

UNPAID BALANCE THIS RECEIPT 2560.48

Per SK BOG M420-001 the halogen detecting instrument has been zeroed and validated.

GENERATOR STATUS
CESQG: Non-vehicle

Customer certifies that (i) the above-named materials are properly classified, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and (ii) no material change has occurred either in the characteristics of the waste/material or in the process generating the waste/material. Customer agrees to pay the above charges and to be bound by the terms and conditions (1) set forth in (a) the General Terms and Conditions provided separately to Customer or (b) any SK agreement signed by Customer and SK, and (2) incorporated herein by reference. Unless otherwise indicated in the payment received section, SK is authorized to charge Customer's account for this transaction. Customer certifies that the individual signing this Service Acknowledgement is duly authorized to sign and bind Customer. The following provision is applicable to Safety-Kleen's parts cleaner and paint gun cleaner services: Customer agrees that it will not introduce any substance into the solvent or aqueous cleaning solution, including without limitation any hazardous waste or hazardous waste constituent, except to the extent such introduction is incidental to the normal use of the machine. Customer further agrees that it will not clean parts/paint guns that have been contaminated with or otherwise introduce polychlorinated biphenyls (PCB's), herbicides, pesticides, dioxins or listed hazardous waste into the solvent or aqueous cleaning solution. Safety-Kleen has the capacity and is permitted to accept, store, and/or reclaim the spent parts washer solvent; paint thinners, solvents and paints generated by customer; or dry cleaning filter cartridges, powder, and still residues containing perchloroethylene, petroleum naphtha, or trifluorotrichloroethane dry cleaning solvents. Safety-Kleen and customer agree that this agreement is intended to satisfy the requirements of 40 CFR 262.20(c). IN THE EVENT OF AN EMERGENCY CALL 1-800-468-1760 (24 hours)

X Bob M. Baumgartner

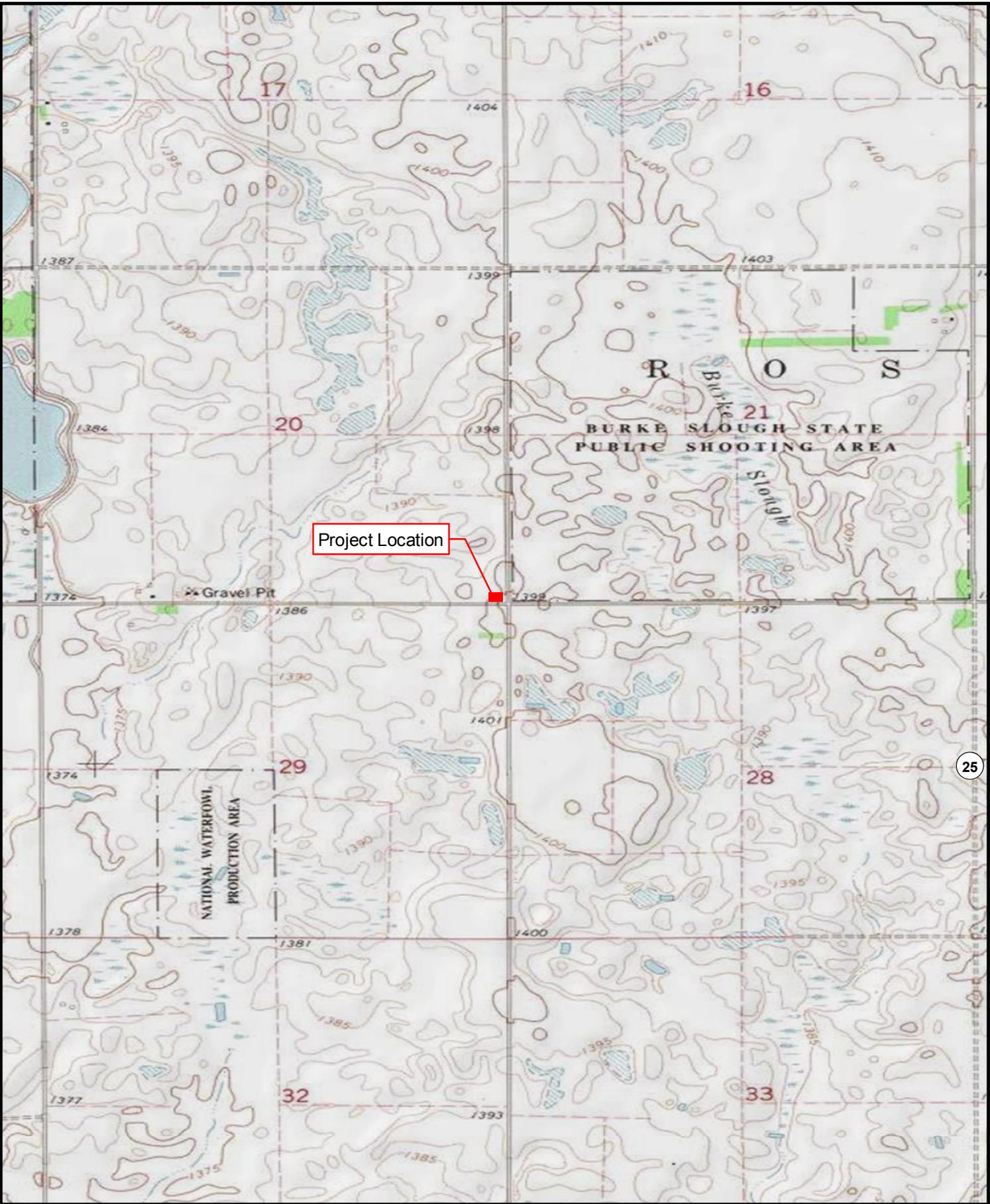
CUSTOMER / GENERATOR :bob baumgartner

X Bgalvin

TRANSPORTER :bgalvin

www.safety-kleen.com // Safety-Kleen

URS Corporation V:\Envir Mng\Projects\TransCanada\Roswell, SD\Technical\GIS\Figure1.mxd Date: 7/15/2010 10:21:36 AM Name: firm_schutz



25



2,000



Feet

Source:
USGS Bitter Lake, SD.
Quad dated 1973

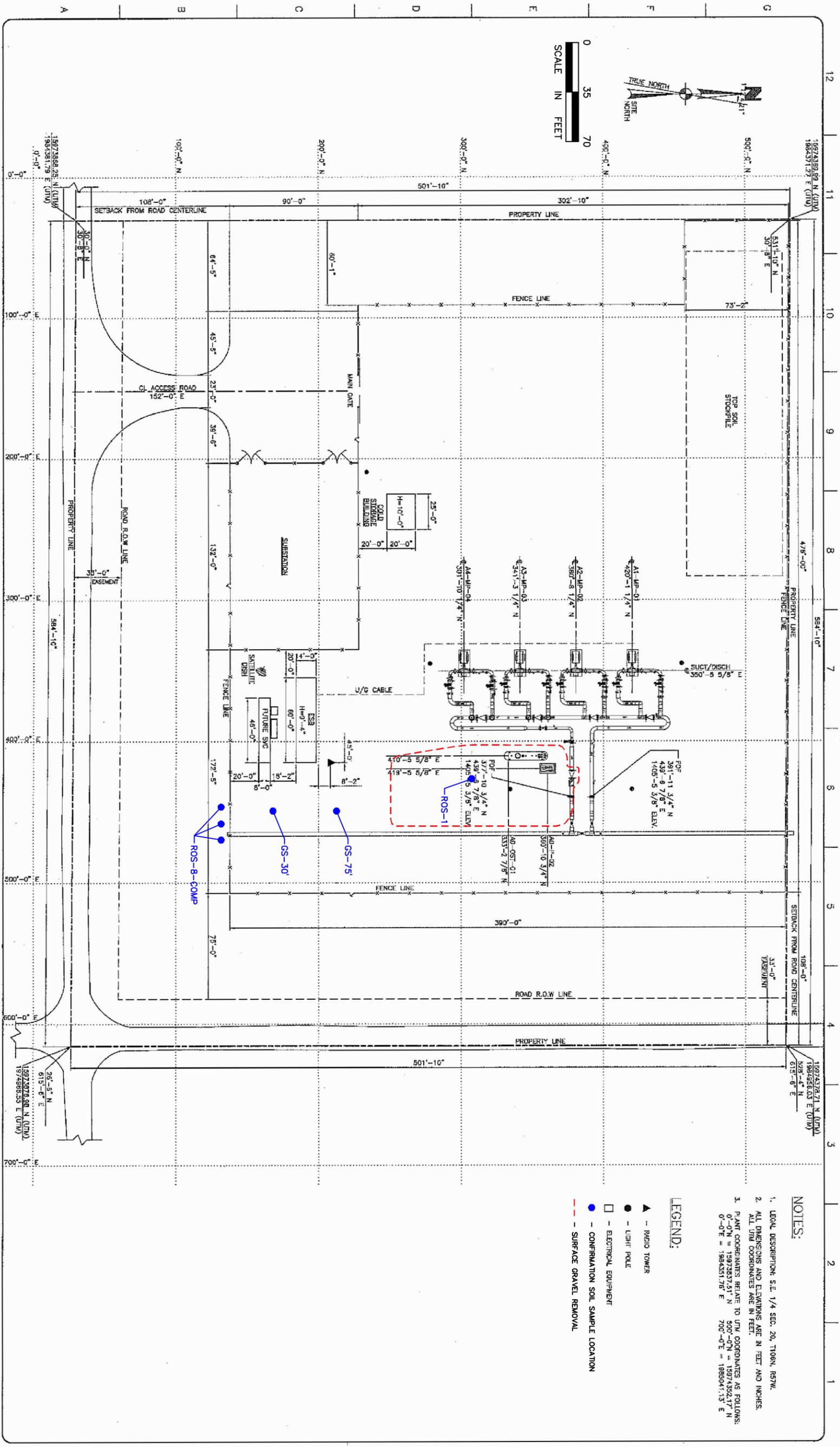


SITE LOCATION MAP
TRANSCANADA KEystone PIPELINE
ROSWELL, SOUTH DAKOTA

Fifth Street Towers
 100 South Fifth Street,
 Suite 1500
 Minneapolis, MN 55402
 612.370.0700 Tel
 612.370.1378 Fax



DRN BY: TS	DATE: 5/17/10	PROJECT NO.	FIG. NO.
CHK'D BY: HH	DATE: 5/17/10	31810187	1



NOTES:

1. LEGAL DESCRIPTION: S.E. 1/4 SEC. 20, T108N, R57W.
2. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET AND INCHES. ALL UTM COORDINATES ARE IN FEET.
3. PLANT COORDINATES RELATE TO UTM COORDINATES AS FOLLOWS:
 0+00N = 1897287.251 N
 0+00E = 1884251.718 E
 700+00N = 1897432.171 N
 700+00E = 1885041.113 E

LEGEND:

- ▲ - RADIO TOWER
- - LIGHT POLE
- - ELECTRICAL EQUIPMENT
- - CONFIRMATION SOIL SAMPLE LOCATION
- - - SURFACE GRAVEL REMOVAL

URS

SOIL SAMPLING LOCATIONS & YARD REMOVAL AREA
 TRANSCANADA KEYSTONE PIPELINE
 ROSWELL, SOUTH DAKOTA

PLOT PLAN

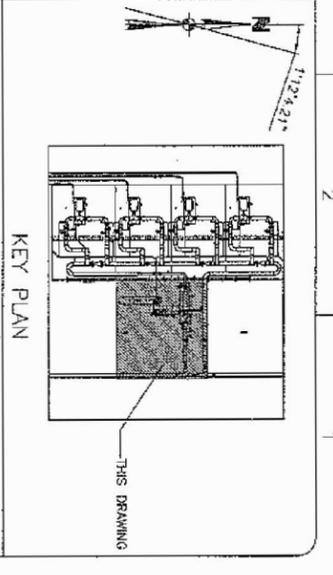
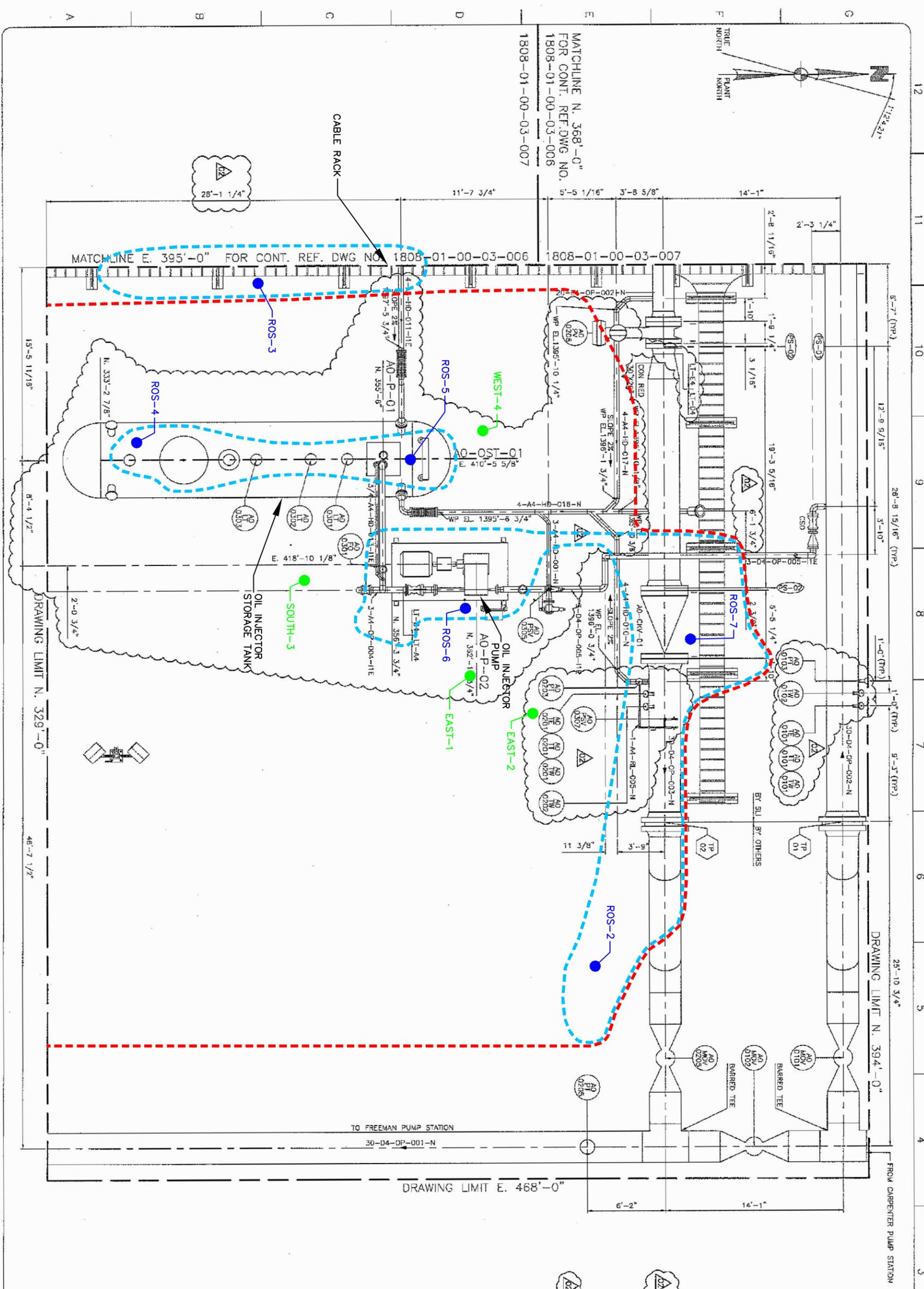
DRN BY: TS DATE: 7/15/10

CHK'D BY: HH DATE: 7/15/10

PROJECT NO. 31810187

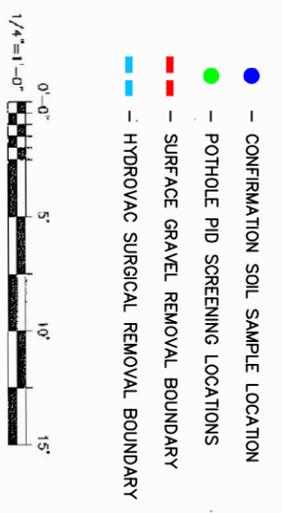
FIG NO. 2

700 SOUTH STREET, SUITE 1500
 MINNEAPOLIS, MINNESOTA 55402
 612.370.1378 FAX
 URS@URS.COM



NOTES:

1. ALL DIMENSIONS, ELEVATION AND COORDINATES ARE IN FEET AND INCHES.
2. ALL BARRIED PIPING TO MAINTAIN A MINIMUM DEPTH COVER OF 1'-6"
3. FOR PIPE SUPPORT DETAILS SEE DWG NO. 1503-01-06-03-001/002/003
4. ALL LIVE PIPING TO BE COATED AND WRAPPED AS PER SPECIFICATION S/J/017-01 AND 018-0005
5. ALL DRAIN PIPING TO HAVE A MINIMUM 1'-6" DEPTH OF COVER AND MINIMUM OF 2% SLOPE.
6. TEMPORARY STRAINER REMOVED AFTER COMMISSIONING.
7. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS, COORDINATES AND ELEVATION ON SITE PRIOR TO FABRICATION.
8. ALL PIPING A/G SHALL BE PAINTED AS PER SPECIFICATION S/J/017&17-4000-45E5-0014.
9. ALL DRAIN PIPING TO BE TRACED AND INSULATED TO GRADE.
10. ALL THE DRAIN LINES TO BE TRACED AND INSULATED TO GRADE.



URRS SOIL SAMPLING, PID SCREENING LOCATIONS & EXCAVATION AREAS
TRANSCANADA KEYSTONE PIPELINE
ROSWELL, SOUTH DAKOTA

7201 STREET GINNERS
100 SOUTH MAIN
MINNEAPOLIS, MINNESOTA 55402
612.270.1378 FAX
URRSDRPP.COM

DRN BY:	TS	DATE:	7/15/10	PROJECT NO.	31810187	FIG NO.	3
CHK'D BY:	HH	DATE:	7/15/10				