

**ANR Pipeline Company
Transmission TNS Estimate**

Pipeline TNS Estimate and Miles by State

State	Pipeline Length (miles)	Estimated Cost (2015\$)
Arkansas	64.38	\$3,098,914
Illinois	636.08	\$120,246,043
Indiana	976.05	\$97,524,834
Iowa	600.19	\$71,582,153
Kansas	832.24	\$95,364,796
Kentucky	278.12	\$18,530,573
Louisiana	1187.36	\$76,679,136
Michigan	1119.42	\$159,240,637
Mississippi	372.96	\$20,876,114
Missouri	272.21	\$39,789,312
Nebraska	8.64	\$1,153,677
Ohio	316.31	\$28,884,563
Oklahoma	356.24	\$22,229,267
Tennessee	328.74	\$22,542,320
Texas	142.29	\$7,244,291
Wisconsin	1823.32	\$207,764,879
Grand Total:	9314.55	\$992,751,509

ANR Pipeline Company									
Transmission TNS Estimate									
Pipeline TNS Estimate by Pipeline Diameter and State									
Pipeline Diameter	Arkansas	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Michigan	Mississippi
2.365			\$169,623	\$652,915					
3.5		\$211,242		\$609,372					
4.5		\$2,300,105	\$2,917,848	\$10,245,683	\$640,928	\$150,783	\$242,127	\$4,197,534	
6.625			\$1,576,857	\$10,219,044			\$914,000	\$9,509,427	
8.625				\$2,970,843			\$2,513,221	\$2,816,657	
10.75		\$985,680		\$1,425,675			\$1,114,572	\$2,765,428	
12.75		\$2,487,406	\$836,930	\$2,084,307			\$2,084,541	\$5,391,245	
14									
16		\$657,166	\$176,904	\$1,529,518	\$542,850		\$5,144,865	\$2,202,496	
18								\$207,218	
20		\$1,543,276	\$225,631		\$4,492,779		\$6,914,207	\$7,847,162	
22		\$23,320,519	\$10,365,579					\$26,486,245	
24	\$442,118	\$56,291,574	\$3,836,509	\$39,101,693	\$83,096,834	\$419,737	\$6,774,100	\$23,314,036	\$570,551
26			\$334,401			\$293,837	\$4,875,946	\$236,102	
30	\$1,613,292	\$25,155,869	\$57,358,754	\$2,743,103	\$6,591,405	\$14,276,682	\$40,451,698	\$45,927,086	\$15,427,169
36	\$1,043,504		\$13,948,653			\$3,389,534	\$5,649,859	\$8,076,699	\$4,878,394
42		\$7,293,206	\$5,777,145					\$20,263,302	
Grand Total	\$3,098,914	\$120,246,043	\$97,524,834	\$71,582,153	\$95,364,796	\$18,530,573	\$76,679,136	\$159,240,637	\$20,876,114
Pipeline Diameter	Missouri	Nebraska	Ohio	Oklahoma	Tennessee	Texas	Wisconsin	Grand Total	
2.365	\$269,575						\$844,159	\$1,936,272	
3.5	\$322,254							\$1,142,868	
4.5	\$5,705,398		\$1,067,566			\$134,640	\$18,404,544	\$46,007,156	
6.625	\$676,989		\$680,940	\$133,023		\$138,461	\$29,501,621	\$53,350,362	
8.625				\$1,613,185			\$19,436,145	\$29,350,051	
10.75	\$320,926			\$1,324,369		\$1,190,849	\$19,068,603	\$28,196,102	
12.75			\$3,988,838	\$132,967	\$143,122		\$25,526,365	\$42,675,721	
14							\$5,902,701	\$5,902,701	
16				\$7,239,716		\$997,012	\$22,548,469	\$41,038,996	
18							\$287,785	\$495,003	
20			\$2,220,787	\$7,712,608		\$4,505,358	\$8,632,491	\$44,094,299	
22			\$1,202,611				\$3,292,511	\$64,667,465	
24	\$29,625,362	\$1,153,677	\$1,789,048	\$4,073,399		\$277,971	\$18,835,631	\$269,602,240	
26								\$5,740,286	
30	\$2,868,808		\$15,471,893		\$16,837,949		\$35,483,854	\$280,207,562	
36			\$2,462,880		\$5,561,249			\$45,010,772	
42								\$33,333,653	
Grand Total	\$39,789,312	\$1,153,677	\$28,884,563	\$22,229,267	\$22,542,320	\$7,244,291	\$207,764,879	\$992,751,509	

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 9-Nov-2015
Line Segment	: All 24" Lines in Arkansas		
State	: Arkansas		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 3.88	PL Crossings	: 0
Roads	: 4	Water Crossings	: 0
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.08	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	6,245
2.	PIPELINE MATERIALS:	TB000	15,875
3.	CONSTRUCTION:	TC000	321,077
	a. Prime contract	TC100	319,427
	i) Pipeline Abandon in Place		88,677
	ii) Road Crossing		167,773
	iii) Valve Removals		29,559
	iv) Pipeline Removal		19,880
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		13,538
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,650
4.	PIPE SALVAGE COST:		(5,024)
5.	ENGINEERING: 2.25 %	TD000	8,030
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	10,706
7.	LAND - DAMAGES:	TF000	19,923
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	17,844
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,649
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(11,859)
11.	Sub-Total - Direct Cost		\$ 386,466
12.	Contingency: 10.00 %	TY000	38,647
13.	Sub-Total:		425,113
14.	Overhead: 4.00 %	TZ000	17,005
15.	Sub-Total:		442,118
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 442,118

Cost / Mile	\$	113,807
Cost / Foot	\$	21.55
Cost / Meter	0	70.72

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Arkansas 24"

2% Percent of total mileage Removed
0.08 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		3.88	=	5
Abandonment Crew	14,779.53 / day	x	6	=	88,677
Roads Crossing Crew	13,981.11 / day	x	12	=	167,773
Valve Crew	14,779.53 / day	x	2	=	29,559
Pipeline Removal	19,879.76 / day	x	1	=	19,880
Launcher/Receiver Crew	14,779.53 / day	x	0	=	-
Pipeline Cleaning Crew	6,768.77 / day	x	2	=	13,538
Pipeline Crossing Crew	13,981.11 / day	x	0	=	-
Water Crossing Crew	13,981.11 / day	x	0	=	-
Gas Pump Down	3.88 miles	x	424.78	=	1,650

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	4	=	43.70 total/cy	100.00	= 4,370.40
Steel Plate	16 pieces	x	4.0000	=	64.00 total/sf	5.30	= 339.20
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	769.27	= 4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	3.88	=	164.59 total/gal.	30.00	= 4,937.83
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			713.15
State Taxes			6.00	%			898.57
							15,875.00

Land Damages

Spot Dig Sites	10 # of digs	x	1,500.00	=	15,000.00	each dig = 50 ft
Footage of Removed Pipe	410.24 # of feet	x	12.00	=	4,922.84	damages = \$ 12.00 / ft
					19,922.84	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.900	=	14,779.53
Roads	15,534.56	x	0.900	=	13,981.11
Valves	16,421.70	x	0.900	=	14,779.53
Cleaning	7,520.85	x	0.900	=	6,768.77
Pipeline Crossing	15,534.56	x	0.900	=	13,981.11
Water Crossing	15,534.56	x	0.900	=	13,981.11
Pipe Removal	22,088.62	x	0.900	=	19,879.76
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	25.76	=	25.764	x	(195.00)	(5,024.06)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 9-Nov-2015
Line Segment	: All 30" Lines in Arkansas		
State	: Arkansas		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 40.65	PL Crossings	: 0
Roads	: 11	Water Crossings	: 6
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.81	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	25,163
2.	PIPELINE MATERIALS:	TB000	147,867
3.	CONSTRUCTION:	TC000	1,183,016
	a. Prime contract	TC100	1,165,749
	i) Pipeline Abandon in Place		103,457
	ii) Road Crossing		461,377
	iii) Valve Removals		88,677
	iv) Pipeline Removal		310,621
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		33,844
	vii) Pipeline Crossing		-
	viii) Water Crossing		167,773
	b. Pipeline Pump Down Contract	TC600	17,267
4.	PIPE SALVAGE COST:		(65,994)
5.	ENGINEERING: 2.25 %	TD000	32,353
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	43,137
7.	LAND - DAMAGES:	TF000	107,012
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	71,895
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	59,658
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(193,887)
11.	Sub-Total - Direct Cost		\$ 1,410,220
12.	Contingency: 10.00 %	TY000	141,022
13.	Sub-Total:		1,551,242
14.	Overhead: 4.00 %	TZ000	62,050
15.	Sub-Total:		1,613,292
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,613,292

Cost / Mile	\$	39,687
Cost / Foot	\$	7.52
Cost / Meter	0	24.66

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Arkansas - 30"

2% Percent of total mileage Removed
0.81 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		40.65	=	18
Abandonment Crew	14,779.53 / day	x	7	=	103,457
Roads Crossing Crew	13,981.11 / day	x	33	=	461,377
Valve Crew	14,779.53 / day	x	6	=	88,677
Pipeline Removal	31,062.13 / day	x	10	=	310,621
Launcher/Receiver Crew	14,779.53 / day	x	0	=	-
Pipeline Cleaning Crew	6,768.77 / day	x	5	=	33,844
Pipeline Crossing Crew	13,981.11 / day	x	0	=	-
Water Crossing Crew	13,981.11 / day	x	12	=	167,773
Gas Pump Down	40.65 miles	x	424.78	=	17,267

10 4 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	17.296 cy/road	x	11	=	190.26 total/cy	100.00	= 19,025.60
Steel Plate	68 pieces	x	6.2500	=	425.00 total/sf	5.30	= 2,252.50
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	961.58	= 5,769.48
Cleaning Compounds	78.2522 gal/mile/clean	x	40.65	=	3,180.97 total/gal.	30.00	= 95,429.11
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	17.296 cy/pipeline	x	6	=	103.78 total/cy	100.00	= 10,377.60
Misc. Materials			5.00	%			= 6,642.71
State Taxes			6.00	%			= 8,369.82
							147,867.00

Land Damages

Spot Dig Sites	37 # of digs	x	1,500.00	=	55,500.00	each dig = 50 ft
Footage of Removed Pipe	4292.66 # of feet	x	12.00	=	51,511.98	damages = \$ 12.00 / ft
					107,011.98	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.900	=	14,779.53
Roads	15,534.56	x	0.900	=	13,981.11
Valves	16,421.70	x	0.900	=	14,779.53
Cleaning	7,520.85	x	0.900	=	6,768.77
Pipeline Crossing	15,534.56	x	0.900	=	13,981.11
Water Crossing	15,534.56	x	0.900	=	13,981.11
Pipe Removal	34,513.47	x	0.900	=	31,062.13
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		338.43	=	338.428	x	(195.00) (65,993.52)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 9-Nov-2015
Line Segment	: All 36" Lines in Arkansas		
State	: Arkansas		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 19.85	PL Crossings	: 0
Roads	: 6	Water Crossings	: 5
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.40	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	16,333
2.	PIPELINE MATERIALS:	TB000	117,599
3.	CONSTRUCTION:	TC000	751,558
	a. Prime contract	TC100	743,127
	i) Pipeline Abandon in Place		(29,559)
	ii) Road Crossing		251,660
	iii) Valve Removals		118,236
	iv) Pipeline Removal		242,673
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		20,306
	vii) Pipeline Crossing		-
	viii) Water Crossing		139,811
	b. Pipeline Pump Down Contract	TC600	8,431
4.	PIPE SALVAGE COST:		(38,775)
5.	ENGINEERING: 2.25 %	TD000	20,999
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	27,999
7.	LAND - DAMAGES:	TF000	64,151
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	46,665
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	41,944
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(136,319)
11.	Sub-Total - Direct Cost		\$ 912,154
12.	Contingency: 10.00 %	TY000	91,215
13.	Sub-Total:		1,003,369
14.	Overhead: 4.00 %	TZ000	40,135
15.	Sub-Total:		1,043,504
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,043,504

Cost / Mile	\$	52,576
Cost / Foot	\$	9.96
Cost / Meter	0	32.67

**ANR Pipeline Company
 Transmission TNS Estimate
 Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Arkansas 36"

2% Percent of total mileage Removed
 0.40 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		19.85	=	9
Abandonment Crew	14,779.53 / day	x	(2)	=	(29,559)
Roads Crossing Crew	13,981.11 / day	x	18	=	251,660
Valve Crew	14,779.53 / day	x	8	=	118,236
Pipeline Removal	48,534.57 / day	x	5	=	242,673
Launcher/Receiver Crew	14,779.53 / day	x	0	=	-
Pipeline Cleaning Crew	6,768.77 / day	x	3	=	20,306
Pipeline Crossing Crew	13,981.11 / day	x	0	=	-
Water Crossing Crew	13,981.11 / day	x	10	=	139,811
Gas Pump Down	19.85 miles	x	424.78	=	8,431

5
 2 Day M&D
 3 Mile/Day
 3 Days/Road or Pipeline
 5 Days/L&R
 2 Days/Valve
 12 Days/ Mile of Pipeline Removal
 3 Minimum Days / Segment
 2 Days/Water
 36" line equals 3 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	25.111 cy/road	x	6	=	150.67 total/cy	100.00	= 15,066.60
Steel Plate	44 pieces	x	9.0000	=	396.00 total/sf	5.30	= 2,098.80
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	= 3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	19.85	=	2,415.91 total/gal.	30.00	= 72,477.22
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	25.111 cy/pipeline	x	5	=	125.56 total/cy	100.00	= 12,555.50
Misc. Materials			5.00	%			= 5,282.99
State Taxes			6.00	%			= 6,656.57
							117,599.00

Land Damages

Spot Dig Sites	26 # of digs	x	1,500.00	=	39,000.00	each dig = 50 ft
Footage of Removed Pipe	2095.90 # of feet	x	12.00	=	25,150.81	damages = \$ 12.00 / ft
					64,150.81	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.900	=	14,779.53
Roads	15,534.56	x	0.900	=	13,981.11
Valves	16,421.70	x	0.900	=	14,779.53
Cleaning	7,520.85	x	0.900	=	6,768.77
Pipeline Crossing	15,534.56	x	0.900	=	13,981.11
Water Crossing	15,534.56	x	0.900	=	13,981.11
Pipe Removal	53,927.30	x	0.900	=	48,534.57
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	198.85	=	198.846	x	(195.00)	(38,774.97)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 3.5" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 3.500		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,885
2.	PIPELINE MATERIALS:	TB000	394
3.	CONSTRUCTION:	TC000	161,470
	a. Prime contract	TC100	161,469
	i) Pipeline Abandon in Place		95,903
	ii) Road Crossing		45,361
	iii) Valve Removals		-
	iv) Pipeline Removal		9,225
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		10,980
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1
4.	PIPE SALVAGE COST:		(1)
5.	ENGINEERING: 2.25 %	TD000	3,710
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	4,946
7.	LAND - DAMAGES:	TF000	3,004
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	8,243
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	-
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(0)
11.	Sub-Total - Direct Cost		\$ 184,652
12.	Contingency: 10.00 %	TY000	18,465
13.	Sub-Total:		203,117
14.	Overhead: 4.00 %	TZ000	8,125
15.	Sub-Total:		211,242
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 211,242

Cost / Mile	\$	61,968,702
Cost / Foot	\$	11,736.50
Cost / Meter	0	38,505.57

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 3.5"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.00	=	3
Abandonment Crew	23,975.68 / day	x	4	=	95,903
Roads Crossing Crew	22,680.46 / day	x	2	=	45,361
Valve Crew	23,975.68 / day	x	0	=	-
Pipeline Removal	9,224.58 / day	x	1	=	9,225
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	1	=	10,980
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	0	=	-
Gas Pump Down	0.00 miles	x	425.2	=	1

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

3.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost						
Road Fill Concrete	0.152 cy/road	x	1	=	0.15 total/cy	100.00	= 15.20
Steel Plate	4 pieces	x	0.0851	=	0.34 total/sf	5.30	= 1.80
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	112.18	= 336.54
Cleaning Compounds	0.086 gal/mile/clean	x	0.00	=	0.00 total/gal.	30.00	= 0.01
Pipeline Fill Concrete	0.076 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.152 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			17.68
State Taxes			6.25	%			23.20
							394.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	0.36 # of feet	x	12.00	=	4.32	damages = \$ 12.00 / ft
					3,004.32	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	6,318.21	x	1.460	=	9,224.58
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.00	=	0.003	x	(195.00)	(0.56)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	--------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 4.5" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 8.90	PL Crossings	: 0
Roads	: 14	Water Crossings	: 2
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.18	# of Line Segments	: 9

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	31,456
2.	PIPELINE MATERIALS:	TB000	4,968
3.	CONSTRUCTION:	TC000	1,727,257
	a. Prime contract	TC100	1,723,473
	i) Pipeline Abandon in Place		911,076
	ii) Road Crossing		635,053
	iii) Valve Removals		47,951
	iv) Pipeline Removal		29,130
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		54,902
	vii) Pipeline Crossing		-
	viii) Water Crossing		45,361
	b. Pipeline Pump Down Contract	TC600	3,784
4.	PIPE SALVAGE COST:		(1,959)
5.	ENGINEERING: 2.25 %	TD000	40,444
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	53,925
7.	LAND - DAMAGES:	TF000	65,276
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	89,875
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	294
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(955)
11.	Sub-Total - Direct Cost		\$ 2,010,581
12.	Contingency: 10.00 %	TY000	201,058
13.	Sub-Total:		2,211,639
14.	Overhead: 4.00 %	TZ000	88,466
15.	Sub-Total:		2,300,105
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,300,105

Cost / Mile	\$	258,488
Cost / Foot	\$	48.96
Cost / Meter	0	160.62

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 4.5"

2% Percent of total mileage Removed
0.18 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		8.90	=	20
Abandonment Crew	23,975.68 / day	x	38	=	911,076
Roads Crossing Crew	22,680.46 / day	x	28	=	635,053
Valve Crew	23,975.68 / day	x	2	=	47,951
Pipeline Removal	9,710.09 / day	x	3	=	29,130
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	5	=	54,902
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	2	=	45,361
Gas Pump Down	8.90 miles	x	425.2	=	3,784

45 18 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
27 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	14	=	3.99 total/cy	100.00	= 399.00
Steel Plate	64 pieces	x	0.1406	=	9.00 total/sf	5.30	= 47.69
Cleaning Pigs	3 pig/cleaning	x	9	=	27 total pigs	144.24	= 3,894.48
Cleaning Compounds	0.2074 gal/mile/clean	x	8.90	=	1.85 total/gal.	30.00	= 55.37
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	2	=	0.57 total/cy	100.00	= 57.00
Misc. Materials			5.00	%			222.68
State Taxes			6.25	%			292.26
							4,968.00

Land Damages

Spot Dig Sites	36 # of digs	x	1,500.00	=	54,000.00	each dig = 50 ft
Footage of Removed Pipe	939.66 # of feet	x	12.00	=	11,275.92	damages = \$ 12.00 / ft
					65,275.92	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	6,650.74	x	1.460	=	9,710.09
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	10.04	=	10.045	x	(195.00)	(1,958.77)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 10.75" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 5.61	PL Crossings	: 0
Roads	: 13	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.11	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	13,549
2.	PIPELINE MATERIALS:	TB000	5,019
3.	CONSTRUCTION:	TC000	721,613
	a. Prime contract	TC100	719,226
	i) Pipeline Abandon in Place		71,927
	ii) Road Crossing		589,692
	iii) Valve Removals		23,976
	iv) Pipeline Removal		22,651
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		10,980
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2,387
4.	PIPE SALVAGE COST:		(3,166)
5.	ENGINEERING: 2.25 %	TD000	17,421
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	23,227
7.	LAND - DAMAGES:	TF000	47,613
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	38,712
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,058
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(3,438)
11.	Sub-Total - Direct Cost		\$ 861,608
12.	Contingency: 10.00 %	TY000	86,161
13.	Sub-Total:		947,769
14.	Overhead: 4.00 %	TZ000	37,911
15.	Sub-Total:		985,680
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 985,680

Cost / Mile	\$	175,607
Cost / Foot	\$	33.26
Cost / Meter	0	109.12

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 10.75"

2% Percent of total mileage Removed
0.11 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		5.61	=	4
Abandonment Crew	23,975.68 / day	x	3	=	71,927
Roads Crossing Crew	22,680.46 / day	x	26	=	589,692
Valve Crew	23,975.68 / day	x	1	=	23,976
Pipeline Removal	11,325.37 / day	x	2	=	22,651
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	1	=	10,980
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	0	=	-
Gas Pump Down	5.61 miles	x	425.2	=	2,387

5
2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	13	=	26.48 total/cy	100.00	= 2,648.10
Steel Plate	52 pieces	x	0.8025	=	41.73 total/sf	5.30	= 221.17
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	344.57	= 1,033.71
Cleaning Compounds	3.538 gal/mile/clean	x	5.61	=	19.86 total/gal.	30.00	= 595.76
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			224.94
State Taxes			6.25	%			295.23
							5,019.00

Land Damages

Spot Dig Sites	27 # of digs	x	1,500.00	=	40,500.00	each dig = 50 ft
Footage of Removed Pipe	592.73 # of feet	x	12.00	=	7,112.79	damages = \$ 12.00 / ft
					47,612.79	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	7,757.10	x	1.460	=	11,325.37
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	16.24	=	16.237	x	(195.00)	(3,166.17)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 12.75" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 18.80	PL Crossings	: 0
Roads	: 15	Water Crossings	: 7
Valves	: 8	Above Ground Facilities	: 0
Pipe Removal	: 0.38	# of Line Segments	: 7

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	34,347
2.	PIPELINE MATERIALS:	TB000	21,136
3.	CONSTRUCTION:	TC000	1,839,713
	a. Prime contract	TC100	1,831,720
	i) Pipeline Abandon in Place		623,368
	ii) Road Crossing		680,414
	iii) Valve Removals		95,903
	iv) Pipeline Removal		59,607
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		54,902
	vii) Pipeline Crossing		-
	viii) Water Crossing		317,526
	b. Pipeline Pump Down Contract	TC600	7,993
4.	PIPE SALVAGE COST:		(12,673)
5.	ENGINEERING: 2.25 %	TD000	44,160
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	58,880
7.	LAND - DAMAGES:	TF000	101,822
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	98,134
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	4,983
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(16,196)
11.	Sub-Total - Direct Cost		\$ 2,174,306
12.	Contingency: 10.00 %	TY000	217,431
13.	Sub-Total:		2,391,737
14.	Overhead: 4.00 %	TZ000	95,669
15.	Sub-Total:		2,487,406
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,487,406

Cost / Mile	\$	132,315
Cost / Foot	\$	25.06
Cost / Meter	0	82.22

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 12.75"

2% Percent of total mileage Removed
0.38 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		18.80	=	18
Abandonment Crew	23,975.68 / day	x	26	=	623,368
Roads Crossing Crew	22,680.46 / day	x	30	=	680,414
Valve Crew	23,975.68 / day	x	4	=	95,903
Pipeline Removal	11,921.44 / day	x	5	=	59,607
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	5	=	54,902
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	14	=	317,526
Gas Pump Down	18.80 miles	x	425.2	=	7,993

35 14 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
21 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	15	=	43.89 total/cy	100.00	= 4,389.00
Steel Plate	88 pieces	x	1.1289	=	99.34 total/sf	5.30	= 526.52
Cleaning Pigs	3 pig/cleaning	x	7	=	21 total pigs	408.67	= 8,582.07
Cleaning Compounds	6.0282 gal/mile/clean	x	18.80	=	113.32 total/gal.	30.00	= 3,399.74
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	7	=	20.48 total/cy	100.00	= 2,048.20
Misc. Materials			5.00	%			947.28
State Taxes			6.25	%			1,243.30
							21,136.00

Land Damages

Spot Dig Sites	52 # of digs	x	1,500.00	=	78,000.00	each dig = 50 ft
Footage of Removed Pipe	1985.18 # of feet	x	12.00	=	23,822.19	damages = \$ 12.00 / ft
					101,822.19	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	8,165.37	x	1.460	=	11,921.44
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	64.99	=	64.991	x	(195.00)	(12,673.27)
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 16" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 0.74	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 4

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	8,996
2.	PIPELINE MATERIALS:	TB000	7,732
3.	CONSTRUCTION:	TC000	499,410
	a. Prime contract	TC100	499,097
	i) Pipeline Abandon in Place		359,635
	ii) Road Crossing		45,361
	iii) Valve Removals		47,951
	iv) Pipeline Removal		13,209
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		32,941
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	313
4.	PIPE SALVAGE COST:		(627)
5.	ENGINEERING: 2.25 %	TD000	11,567
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	15,422
7.	LAND - DAMAGES:	TF000	6,932
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	25,704
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	307
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(998)
11.	Sub-Total - Direct Cost		\$ 574,445
12.	Contingency: 10.00 %	TY000	57,445
13.	Sub-Total:		631,890
14.	Overhead: 4.00 %	TZ000	25,276
15.	Sub-Total:		657,166
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 657,166

Cost / Mile	\$	893,769
Cost / Foot	\$	169.27
Cost / Meter	0	555.36

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 16"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.74	=	9
Abandonment Crew	23,975.68 / day	x	15	=	359,635
Roads Crossing Crew	22,680.46 / day	x	2	=	45,361
Valve Crew	23,975.68 / day	x	2	=	47,951
Pipeline Removal	13,209.35 / day	x	1	=	13,209
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	3	=	32,941
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	0	=	-
Gas Pump Down	0.74 miles	x	425.2	=	313

20 8 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
12 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost					
Road Fill Concrete	4.704 cy/road	x	1	=	4.70 total/cy	100.00 = 470.40
Steel Plate	4 pieces	x	1.7778	=	7.11 total/sf	5.30 = 37.69
Cleaning Pigs	3 pig/cleaning	x	4	=	12 total pigs	512.84 = 6,154.08
Cleaning Compounds	12.16 gal/mile/clean	x	0.74	=	8.94 total/gal.	30.00 = 268.23
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00 = -
Water Crossing Concrete	4.704 cy/pipeline	x	0	=	- total/cy	100.00 = -
Misc. Materials			5.00	%		346.52
State Taxes			6.25	%		454.81
						7,732.00

Land Damages

Spot Dig Sites	4 # of digs	x	1,500.00	=	6,000.00	each dig = 50 ft
Footage of Removed Pipe	77.65 # of feet	x	12.00	=	931.74	damages = \$ 12.00 / ft
					6,931.74	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	9,047.50	x	1.460	=	13,209.35
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	3.22	=	3.216	x	(195.00)	(627.19)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 20" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 4.12	PL Crossings	: 0
Roads	: 12	Water Crossings	: 2
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.08	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	21,242
2.	PIPELINE MATERIALS:	TB000	20,230
3.	CONSTRUCTION:	TC000	1,143,377
	a. Prime contract	TC100	1,141,625
	i) Pipeline Abandon in Place		143,854
	ii) Road Crossing		816,497
	iii) Valve Removals		47,951
	iv) Pipeline Removal		20,640
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		21,961
	vii) Pipeline Crossing		-
	viii) Water Crossing		90,722
	b. Pipeline Pump Down Contract	TC600	1,752
4.	PIPE SALVAGE COST:		(4,423)
5.	ENGINEERING: 2.25 %	TD000	27,311
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	36,415
7.	LAND - DAMAGES:	TF000	50,223
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	60,691
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,688
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(8,737)
11.	Sub-Total - Direct Cost		\$ 1,349,017
12.	Contingency: 10.00 %	TY000	134,902
13.	Sub-Total:		1,483,919
14.	Overhead: 4.00 %	TZ000	59,357
15.	Sub-Total:		1,543,276
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,543,276

Cost / Mile	\$	374,454
Cost / Foot	\$	70.92
Cost / Meter	0	232.68

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 20"

2% Percent of total mileage Removed
0.08 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		4.12	=	6
Abandonment Crew	23,975.68 / day	x	6	=	143,854
Roads Crossing Crew	22,680.46 / day	x	36	=	816,497
Valve Crew	23,975.68 / day	x	2	=	47,951
Pipeline Removal	20,639.61 / day	x	1	=	20,640
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	2	=	21,961
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	4	=	90,722
Gas Pump Down	4.12 miles	x	425.2	=	1,752

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	12	=	89.77 total/cy	100.00	= 8,977.20
Steel Plate	56 pieces	x	2.7778	=	155.56 total/sf	5.30	= 824.45
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	641.05	= 3,846.30
Cleaning Compounds	24.1776 gal/mile/clean	x	4.12	=	99.65 total/gal.	30.00	= 2,989.37
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	2	=	14.96 total/cy	100.00	= 1,496.20
Misc. Materials			5.00	%			906.68
State Taxes			6.25	%			1,190.01
							20,230.00

Land Damages

Spot Dig Sites	30 # of digs	x	1,500.00	=	45,000.00	each dig = 50 ft
Footage of Removed Pipe	435.22 # of feet	x	12.00	=	5,222.64	damages = \$ 12.00 / ft
					50,222.64	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	14,136.72	x	1.460	=	20,639.61
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	22.68	=	22.681	x	(195.00)	(4,422.78)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 22" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 120.23	PL Crossings	: 0
Roads	: 206	Water Crossings	: 37
Valves	: 13	Above Ground Facilities	: 0
Pipe Removal	: 2.40	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	324,075
2.	PIPELINE MATERIALS:	TB000	401,360
3.	CONSTRUCTION:	TC000	17,216,380
	a. Prime contract	TC100	17,165,258
	i) Pipeline Abandon in Place		311,684
	ii) Road Crossing		14,016,526
	iii) Valve Removals		311,684
	iv) Pipeline Removal		748,186
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		98,824
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,678,354
	b. Pipeline Pump Down Contract	TC600	51,122
4.	PIPE SALVAGE COST:		(142,256)
5.	ENGINEERING: 2.25 %	TD000	416,668
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	555,558
7.	LAND - DAMAGES:	TF000	900,856
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	925,930
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	94,890
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(308,393)
11.	Sub-Total - Direct Cost		\$ 20,385,069
12.	Contingency: 10.00 %	TY000	2,038,507
13.	Sub-Total:		22,423,576
14.	Overhead: 4.00 %	TZ000	896,943
15.	Sub-Total:		23,320,519
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 23,320,519

Cost / Mile	\$	193,965
Cost / Foot	\$	36.74
Cost / Meter	0	120.52

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 22"

2% Percent of total mileage Removed
2.40 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		120.23	=	35
Abandonment Crew	23,975.68 / day	x	13	=	311,684
Roads Crossing Crew	22,680.46 / day	x	618	=	14,016,526
Valve Crew	23,975.68 / day	x	13	=	311,684
Pipeline Removal	25,799.51 / day	x	29	=	748,186
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	9	=	98,824
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	74	=	1,678,354
Gas Pump Down	120.23 miles	x	425.2	=	51,122

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

22" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	9.111 cy/road	x	206	=	1,876.87 total/cy	100.00	= 187,686.60
Steel Plate	972 pieces	x	3.3611	=	3,266.99 total/sf	5.30	= 17,315.04
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	705.16	= 4,230.96
Cleaning Compounds	32.3875 gal/mile/clean	x	120.23	=	3,893.96 total/gal.	30.00	= 116,818.94
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	9.111 cy/pipeline	x	37	=	337.11 total/cy	100.00	= 33,710.70
Misc. Materials			5.00	%			= 17,988.11
State Taxes			6.25	%			= 23,609.40
							401,360.00

Land Damages

Spot Dig Sites	499 # of digs	x	1,500.00	=	748,500.00	each dig = 50 ft
Footage of Removed Pipe	12696.34 # of feet	x	12.00	=	152,356.07	damages = \$ 12.00 / ft
					900,856.07	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	17,670.90	x	1.460	=	25,799.51
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		729.52	=	729.516	x	(195.00) (142,255.58)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 24" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 321.52	PL Crossings	: 0
Roads	: 458	Water Crossings	: 129
Valves	: 28	Above Ground Facilities	: 0
Pipe Removal	: 6.43	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	785,956
2.	PIPELINE MATERIALS:	TB000	1,234,695
3.	CONSTRUCTION:	TC000	41,466,666
	a. Prime contract	TC100	41,329,955
	i) Pipeline Abandon in Place		887,100
	ii) Road Crossing		31,162,955
	iii) Valve Removals		671,319
	iv) Pipeline Removal		2,515,452
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		241,570
	vii) Pipeline Crossing		-
	viii) Water Crossing		5,851,559
	b. Pipeline Pump Down Contract	TC600	136,711
4.	PIPE SALVAGE COST:		(415,809)
5.	ENGINEERING: 2.25 %	TD000	1,010,515
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	1,347,354
7.	LAND - DAMAGES:	TF000	2,210,431
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	2,245,590
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	301,990
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(981,467)
11.	Sub-Total - Direct Cost		\$ 49,205,921
12.	Contingency: 10.00 %	TY000	4,920,592
13.	Sub-Total:		54,126,513
14.	Overhead: 4.00 %	TZ000	2,165,061
15.	Sub-Total:		56,291,574
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 56,291,574

Cost / Mile	\$	175,079
Cost / Foot	\$	33.16
Cost / Meter	0	108.79

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 24"

2% Percent of total mileage Removed
6.43 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		321.52	=	87
Abandonment Crew	23,975.68 / day	x	37	=	887,100
Roads Crossing Crew	22,680.46 / day	x	1374	=	31,162,955
Valve Crew	23,975.68 / day	x	28	=	671,319
Pipeline Removal	32,249.39 / day	x	78	=	2,515,452
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	22	=	241,570
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	258	=	5,851,559
Gas Pump Down	321.52 miles	x	425.2	=	136,711

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water
24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	458	=	5,004.11 total/cy	100.00	= 500,410.80
Steel Plate	2348 pieces	x	4.0000	=	9,392.00 total/sf	5.30	= 49,777.60
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	769.27	= 6,923.43
Cleaning Compounds	42.3686 gal/mile/clean	x	321.52	=	13,622.40 total/gal.	30.00	= 408,671.90
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	129	=	1,409.45 total/cy	100.00	= 140,945.40
Misc. Materials			5.00	%			= 55,336.46
State Taxes			6.25	%			= 72,629.10
							1,234,695.00

Land Damages

Spot Dig Sites	1202 # of digs	x	1,500.00	=	1,803,000.00	each dig = 50 ft
Footage of Removed Pipe	33952.62 # of feet	x	12.00	=	407,431.47	damages = \$ 12.00 / ft
					2,210,431.47	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	22,088.62	x	1.460	=	32,249.39
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		2,132.35	=	2132.352 x	(195.00) (415,808.65)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 30" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 127.43	PL Crossings	: 0
Roads	: 205	Water Crossings	: 39
Valves	: 14	Above Ground Facilities	: 0
Pipe Removal	: 2.55	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	353,391
2.	PIPELINE MATERIALS:	TB000	856,714
3.	CONSTRUCTION:	TC000	18,422,601
	a. Prime contract	TC100	18,368,418
	i) Pipeline Abandon in Place		263,733
	ii) Road Crossing		13,948,484
	iii) Valve Removals		671,319
	iv) Pipeline Removal		1,562,080
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		153,726
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,769,076
	b. Pipeline Pump Down Contract	TC600	54,183
4.	PIPE SALVAGE COST:		(206,874)
5.	ENGINEERING: 2.25 %	TD000	454,360
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	605,814
7.	LAND - DAMAGES:	TF000	914,477
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,009,690
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	187,012
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(607,790)
11.	Sub-Total - Direct Cost		\$ 21,989,396
12.	Contingency: 10.00 %	TY000	2,198,940
13.	Sub-Total:		24,188,336
14.	Overhead: 4.00 %	TZ000	967,533
15.	Sub-Total:		25,155,869
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 25,155,869

Cost / Mile	\$	197,412
Cost / Foot	\$	37.39
Cost / Meter	0	122.67

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 30"

2% Percent of total mileage Removed
2.55 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		127.43	=	53
Abandonment Crew	23,975.68 / day	x	11	=	263,733
Roads Crossing Crew	22,680.46 / day	x	615	=	13,948,484
Valve Crew	23,975.68 / day	x	28	=	671,319
Pipeline Removal	50,389.67 / day	x	31	=	1,562,080
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	14	=	153,726
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	78	=	1,769,076
Gas Pump Down	127.43 miles	x	425.2	=	54,183

25 10 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	17.296 cy/road	x	205	=	3,545.68 total/cy	100.00	= 354,568.00
Steel Plate	976 pieces	x	6.2500	=	6,100.00 total/sf	5.30	= 32,330.00
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	961.58	= 14,423.70
Cleaning Compounds	78.2522 gal/mile/clean	x	127.43	=	9,971.57 total/gal.	30.00	= 299,146.96
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	17.296 cy/pipeline	x	39	=	674.54 total/cy	100.00	= 67,454.40
Misc. Materials			5.00	%			38,396.15
State Taxes			6.25	%			50,394.95
							856,714.00

Land Damages

Spot Dig Sites	502 # of digs	x	1,500.00	=	753,000.00	each dig = 50 ft
Footage of Removed Pipe	13456.46 # of feet	x	12.00	=	161,477.47	damages = \$ 12.00 / ft
					914,477.47	

Contract Labour Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68	\$ 14,494.00
Roads	15,534.56	x	1.460	=	22,680.46	\$ 13,711.00
Valves	16,421.70	x	1.460	=	23,975.68	\$ 14,494.00
Cleaning	7,520.85	x	1.460	=	10,980.45	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46	\$ 13,711.00
Water Crossing	15,534.56	x	1.460	=	22,680.46	\$ 13,711.00
Pipe Removal	34,513.47	x	1.460	=	50,389.67	\$ 53,927.30
						Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		1,060.89	=	1060.890	x	(195.00) (206,873.59)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 42" Lines in Illinois		
State	: Illinois		
Pipe Dia.	: 42.000		
Pipe Length (mi)	: 28.73	PL Crossings	: 0
Roads	: 64	Water Crossings	: 0
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 0.57	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	103,543
2.	PIPELINE MATERIALS:	TB000	460,697
3.	CONSTRUCTION:	TC000	5,220,131
	a. Prime contract	TC100	5,207,915
	i) Pipeline Abandon in Place		(23,976)
	ii) Road Crossing		4,354,649
	iii) Valve Removals		239,757
	iv) Pipeline Removal		604,544
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		32,941
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	12,216
4.	PIPE SALVAGE COST:		(65,617)
5.	ENGINEERING: 2.25 %	TD000	133,127
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	177,502
7.	LAND - DAMAGES:	TF000	235,908
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	295,837
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	82,643
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(268,591)
11.	Sub-Total - Direct Cost		\$ 6,375,180
12.	Contingency: 10.00 %	TY000	637,518
13.	Sub-Total:		7,012,698
14.	Overhead: 4.00 %	TZ000	280,508
15.	Sub-Total:		7,293,206
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 7,293,206

Cost / Mile	\$	253,846
Cost / Foot	\$	48.08
Cost / Meter	0	157.73

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Illinois - 42"

2% Percent of total mileage Removed
0.57 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		28.73		12
Abandonment Crew	23,975.68 / day	x	(1)	=	(23,976)
Roads Crossing Crew	22,680.46 / day	x	192	=	4,354,649
Valve Crew	23,975.68 / day	x	10	=	239,757
Pipeline Removal	86,363.38 / day	x	7	=	604,544
Launcher/Receiver Crew	23,975.68 / day	x	0	=	-
Pipeline Cleaning Crew	10,980.45 / day	x	3	=	32,941
Pipeline Crossing Crew	22,680.46 / day	x	0	=	-
Water Crossing Crew	22,680.46 / day	x	0	=	-
Gas Pump Down	28.73 miles	x	425.2	=	12,216

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

42" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	34.37 cy/road	x	64	=	2,199.68 total/cy	100.00	= 219,968.00
Steel Plate	256 pieces	x	12.2500	=	3,136.00 total/sf	5.30	= 16,620.80
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1346.21	= 4,038.63
Cleaning Compounds	199.9267 gal/mile/clean	x	28.73	=	5,744.07 total/gal.	30.00	= 172,322.04
Pipeline Fill Concrete	17.185 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	34.37 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			20,647.47
State Taxes			6.25	%			27,099.81
							<u>460,697.00</u>

Land Damages

Spot Dig Sites	133 # of digs	x	1,500.00	=	199,500.00	each dig = 50 ft
Footage of Removed Pipe	3033.98 # of feet	x	12.00	=	36,407.76	damages = \$ 12.00 / ft
					<u>235,907.76</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.460	=	23,975.68
Roads	15,534.56	x	1.460	=	22,680.46
Valves	16,421.70	x	1.460	=	23,975.68
Cleaning	7,520.85	x	1.460	=	10,980.45
Pipeline Crossing	15,534.56	x	1.460	=	22,680.46
Water Crossing	15,534.56	x	1.460	=	22,680.46
Pipe Removal	59,153.00	x	1.460	=	86,363.38
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost Valve (t/mi) Pipe (t/mi)
 336.49 = 336.495 x (195.00) (65,616.51) **Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 2.365" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 2.365		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,317
2.	PIPELINE MATERIALS:	TB000	262
3.	CONSTRUCTION:	TC000	124,618
	a. Prime contract	TC100	124,616
	i) Pipeline Abandon in Place		37,113
	ii) Road Crossing		35,108
	iii) Valve Removals		37,113
	iv) Pipeline Removal		6,783
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,499
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2
4.	PIPE SALVAGE COST:		(0)
5.	ENGINEERING: 2.25 %	TD000	2,979
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,972
7.	LAND - DAMAGES:	TF000	7,505
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	6,619
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	-
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(0)
11.	Sub-Total - Direct Cost		\$ 148,272
12.	Contingency: 10.00 %	TY000	14,827
13.	Sub-Total:		163,099
14.	Overhead: 4.00 %	TZ000	6,524
15.	Sub-Total:		169,623
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 169,623

Cost / Mile	\$	41,448,707
Cost / Foot	\$	7,850.13
Cost / Meter	0	25,755.03

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Indiana - 2.365"

2% Percent of total mileage Removed
 0.00 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.00	=	3
Abandonment Crew	18,556.52 / day	x	2	=	37,113
Roads Crossing Crew	17,554.06 / day	x	2	=	35,108
Valve Crew	18,556.52 / day	x	2	=	37,113
Pipeline Removal	6,782.59 / day	x	1	=	6,783
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	1	=	8,499
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	0	=	-
Gas Pump Down	0.00 miles	x	425.39	=	2

5
 2 Day M&D
 6 Mile/Day
 2 Days/Road or Pipeline
 2 Days/L&R
 0.5 Days/Valve
 12 Days/ Mile of Pipeline Removal
 3 Minimum Days / Segment
 1 Days/Water
 2.365" line equals 6 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.052 cy/road	x	1	=	0.05 total/cy	100.00	= 5.20
Steel Plate	4 pieces	x	0.0388	=	0.16 total/sf	5.30	= 0.82
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	75.80	= 227.40
Cleaning Compounds	0.0199 gal/mile/clean	x	0.00	=	0.00 total/gal.	30.00	= 0.00
Pipeline Fill Concrete	0.026 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.052 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			11.67
State Taxes			7.00	%			17.16
							262.00

Land Damages

Spot Dig Sites	5 # of digs	x	1,500.00	=	7,500.00	each dig = 50 ft
Footage of Removed Pipe	0.43 # of feet	x	12.00	=	5.19	damages = \$ 12.00 / ft
					7,505.19	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	6,002.30	x	1.130	=	6,782.59
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost Valve (t/mi) Pipe (t/mi) 0.00 = 0.002 x (195.00) (0.42) **Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 16-Nov-2015
Line Segment	: All 4.5" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 29.60	PL Crossings	: 0
Roads	: 32	Water Crossings	: 3
Valves	: 20	Above Ground Facilities	: 0
Pipe Removal	: 0.59	# of Line Segments	: 10

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	39,989
2.	PIPELINE MATERIALS:	TB000	6,306
3.	CONSTRUCTION:	TC000	2,106,257
	a. Prime contract	TC100	2,093,665
	i) Pipeline Abandon in Place		612,365
	ii) Road Crossing		1,123,460
	iii) Valve Removals		185,565
	iv) Pipeline Removal		60,123
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		59,490
	vii) Pipeline Crossing		-
	viii) Water Crossing		52,662
	b. Pipeline Pump Down Contract	TC600	12,592
4.	PIPE SALVAGE COST:		(6,516)
5.	ENGINEERING: 2.25 %	TD000	51,414
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	68,552
7.	LAND - DAMAGES:	TF000	172,509
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	114,254
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	977
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(3,177)
11.	Sub-Total - Direct Cost		\$ 2,550,566
12.	Contingency: 10.00 %	TY000	255,057
13.	Sub-Total:		2,805,623
14.	Overhead: 4.00 %	TZ000	112,225
15.	Sub-Total:		2,917,848
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,917,848

Cost / Mile	\$	98,576
Cost / Foot	\$	18.67
Cost / Meter	0	61.25

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 4.5"

2% Percent of total mileage Removed
0.59 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		29.60	=	25
Abandonment Crew	18,556.52 / day	x	33	=	612,365
Roads Crossing Crew	17,554.06 / day	x	64	=	1,123,460
Valve Crew	18,556.52 / day	x	10	=	185,565
Pipeline Removal	7,515.34 / day	x	8	=	60,123
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	7	=	59,490
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	3	=	52,662
Gas Pump Down	29.60 miles	x	425.39	=	12,592

20 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
30 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	32	=	9.12 total/cy	100.00	= 912.00
Steel Plate	140 pieces	x	0.1406	=	19.68 total/sf	5.30	= 104.33
Cleaning Pigs	3 pig/cleaning	x	10	=	30 total pigs	144.24	= 4,327.20
Cleaning Compounds	0.2074 gal/mile/clean	x	29.60	=	6.14 total/gal.	30.00	= 184.17
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	3	=	0.86 total/cy	100.00	= 85.50
Misc. Materials			5.00	%			280.66
State Taxes			7.00	%			412.57
							6,306.00

Land Damages

Spot Dig Sites	90 # of digs	x	1,500.00	=	135,000.00	each dig = 50 ft
Footage of Removed Pipe	3125.75 # of feet	x	12.00	=	37,509.00	damages = \$ 12.00 / ft
					172,509.00	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	6,650.74	x	1.130	=	7,515.34
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	33.41	=	33.414	x	(195.00)	=	(6,515.78)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	---	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 6.625" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 28.22	PL Crossings	: 0
Roads	: 22	Water Crossings	: 2
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 0.56	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	21,757
2.	PIPELINE MATERIALS:	TB000	4,936
3.	CONSTRUCTION:	TC000	1,123,042
	a. Prime contract	TC100	1,111,037
	i) Pipeline Abandon in Place		167,009
	ii) Road Crossing		772,378
	iii) Valve Removals		55,670
	iv) Pipeline Removal		55,376
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,496
	vii) Pipeline Crossing		-
	viii) Water Crossing		35,108
	b. Pipeline Pump Down Contract	TC600	12,005
4.	PIPE SALVAGE COST:		(9,513)
5.	ENGINEERING: 2.25 %	TD000	27,973
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	37,297
7.	LAND - DAMAGES:	TF000	115,263
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	62,162
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,020
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(6,564)
11.	Sub-Total - Direct Cost		\$ 1,378,372
12.	Contingency: 10.00 %	TY000	137,837
13.	Sub-Total:		1,516,209
14.	Overhead: 4.00 %	TZ000	60,648
15.	Sub-Total:		1,576,857
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,576,857

Cost / Mile	\$	55,874
Cost / Foot	\$	10.58
Cost / Meter	0	34.72

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 6.625"

2% Percent of total mileage Removed
0.56 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		28.22	=	11
Abandonment Crew	18,556.52 / day	x	9	=	167,009
Roads Crossing Crew	17,554.06 / day	x	44	=	772,378
Valve Crew	18,556.52 / day	x	3	=	55,670
Pipeline Removal	7,910.88 / day	x	7	=	55,376
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	3	=	25,496
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	2	=	35,108
Gas Pump Down	28.22 miles	x	425.39	=	12,005

15 6 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	0.704 cy/road	x	22	=	15.49 total/cy	100.00	=	1,548.80
Steel Plate	96 pieces	x	0.3048	=	29.26 total/sf	5.30	=	155.08
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	212.35	=	1,911.15
Cleaning Compounds	0.7531 gal/mile/clean	x	28.22	=	21.25 total/gal.	30.00	=	637.61
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.704 cy/pipeline	x	2	=	1.41 total/cy	100.00	=	140.80
Misc. Materials			5.00	%				219.67
State Taxes			7.00	%				322.92
								4,936.00

Land Damages

Spot Dig Sites	53 # of digs	x	1,500.00	=	79,500.00	each dig = 50 ft
Footage of Removed Pipe	2980.21 # of feet	x	12.00	=	35,762.54	damages = \$ 12.00 / ft
					115,262.54	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	\$ 14,494.00
Roads	15,534.56	x	1.130	=	\$ 13,711.00
Valves	16,421.70	x	1.130	=	\$ 14,494.00
Cleaning	7,520.85	x	1.130	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.130	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.130	=	\$ 13,711.00
Pipe Removal	7,000.78	x	1.130	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost Valve (t/mi) Pipe (t/mi) 48.78 = 48.783 x (195.00) (9,512.74) **Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 12.75" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 18.96	PL Crossings	: 0
Roads	: 13	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.38	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	11,807
2.	PIPELINE MATERIALS:	TB000	9,853
3.	CONSTRUCTION:	TC000	601,828
	a. Prime contract	TC100	593,762
	i) Pipeline Abandon in Place		74,226
	ii) Road Crossing		456,405
	iii) Valve Removals		-
	iv) Pipeline Removal		46,134
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		16,997
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	8,066
4.	PIPE SALVAGE COST:		(12,783)
5.	ENGINEERING: 2.25 %	TD000	15,181
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	20,241
7.	LAND - DAMAGES:	TF000	63,029
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	33,736
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	5,027
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(16,336)
11.	Sub-Total - Direct Cost		\$ 731,582
12.	Contingency: 10.00 %	TY000	73,158
13.	Sub-Total:		804,740
14.	Overhead: 4.00 %	TZ000	32,190
15.	Sub-Total:		836,930
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 836,930

Cost / Mile	\$	44,136
Cost / Foot	\$	8.36
Cost / Meter	0	27.43

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 12.75"

2% Percent of total mileage Removed
0.38 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		18.96	=	6
Abandonment Crew	18,556.52 / day	x	4	=	74,226
Roads Crossing Crew	17,554.06 / day	x	26	=	456,405
Valve Crew	18,556.52 / day	x	0	=	-
Pipeline Removal	9,226.87 / day	x	5	=	46,134
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	2	=	16,997
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	0	=	-
Gas Pump Down	18.96 miles	x	425.39	=	8,066

5 2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	13	=	38.04 total/cy	100.00	= 3,803.80
Steel Plate	52 pieces	x	1.1289	=	58.70 total/sf	5.30	= 311.12
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	408.67	= 1,226.01
Cleaning Compounds	6.0282 gal/mile/clean	x	18.96	=	114.31 total/gal.	30.00	= 3,429.27
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			438.51
State Taxes			7.00	%			644.61
							9,853.00

Land Damages

Spot Dig Sites	26 # of digs	x	1,500.00	=	39,000.00	each dig = 50 ft
Footage of Removed Pipe	2002.42 # of feet	x	12.00	=	24,029.10	damages = \$ 12.00 / ft
					63,029.10	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	8,165.37	x	1.130	=	9,226.87
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	65.56	=	65.556	x	(195.00)	(12,783.35)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 16" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 0.42	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,428
2.	PIPELINE MATERIALS:	TB000	2,470
3.	CONSTRUCTION:	TC000	128,236
	a. Prime contract	TC100	128,058
	i) Pipeline Abandon in Place		18,557
	ii) Road Crossing		35,108
	iii) Valve Removals		55,670
	iv) Pipeline Removal		10,224
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,499
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	178
4.	PIPE SALVAGE COST:		(356)
5.	ENGINEERING: 2.25 %	TD000	3,122
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	4,162
7.	LAND - DAMAGES:	TF000	8,029
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	6,937
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	174
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(566)
11.	Sub-Total - Direct Cost		\$ 154,636
12.	Contingency: 10.00 %	TY000	15,464
13.	Sub-Total:		170,100
14.	Overhead: 4.00 %	TZ000	6,804
15.	Sub-Total:		176,904
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 176,904

Cost / Mile	\$	423,798
Cost / Foot	\$	80.26
Cost / Meter	0	263.34

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Indiana - 16"

2% Percent of total mileage Removed
 0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.42		3
Abandonment Crew	18,556.52 / day	x	1	=	18,557
Roads Crossing Crew	17,554.06 / day	x	2	=	35,108
Valve Crew	18,556.52 / day	x	3	=	55,670
Pipeline Removal	10,223.68 / day	x	1	=	10,224
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	1	=	8,499
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	0	=	-
Gas Pump Down	0.42 miles	x	425.39	=	178

5 2 Day M&D
 5 Mile/Day
 2 Days/Road or Pipeline
 3 Days/L&R
 1 Days/Valve
 12 Days/ Mile of Pipeline Removal
 3 Minimum Days / Segment
 2 Days/Water
 16" line equals 5 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	4.704 cy/road	x	1	=	4.70 total/cy	100.00	= 470.40
Steel Plate	4 pieces	x	1.7778	=	7.11 total/sf	5.30	= 37.69
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	512.84	= 1,538.52
Cleaning Compounds	12.16 gal/mile/clean	x	0.42	=	5.08 total/gal.	30.00	= 152.28
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	4.704 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			109.94
State Taxes			7.00	%			161.62
							2,470.00

Land Damages

Spot Dig Sites	5 # of digs	x	1,500.00	=	7,500.00	each dig = 50 ft
Footage of Removed Pipe	44.08 # of feet	x	12.00	=	528.96	damages = \$ 12.00 / ft
					8,028.96	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	9,047.50	x	1.130	=	10,223.68
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	1.83	=	1.826	x	(195.00)	(356.06)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 20" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 5.00	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.10	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,280
2.	PIPELINE MATERIALS:	TB000	7,142
3.	CONSTRUCTION:	TC000	169,464
	a. Prime contract	TC100	167,337
	i) Pipeline Abandon in Place		55,670
	ii) Road Crossing		52,662
	iii) Valve Removals		18,557
	iv) Pipeline Removal		31,949
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,499
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2,127
4.	PIPE SALVAGE COST:		(5,366)
5.	ENGINEERING: 2.25 %	TD000	4,217
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	5,623
7.	LAND - DAMAGES:	TF000	10,836
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	9,372
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,261
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(10,599)
11.	Sub-Total - Direct Cost		\$ 197,230
12.	Contingency: 10.00 %	TY000	19,723
13.	Sub-Total:		216,953
14.	Overhead: 4.00 %	TZ000	8,678
15.	Sub-Total:		225,631
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 225,631

Cost / Mile	\$	45,126
Cost / Foot	\$	8.55
Cost / Meter	0	28.04

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 20"

2% Percent of total mileage Removed
0.10 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		5.00	=	4
Abandonment Crew	18,556.52 / day	x	3	=	55,670
Roads Crossing Crew	17,554.06 / day	x	3	=	52,662
Valve Crew	18,556.52 / day	x	1	=	18,557
Pipeline Removal	15,974.49 / day	x	2	=	31,949
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	1	=	8,499
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	0	=	-
Gas Pump Down	5.00 miles	x	425.39	=	2,127

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	1	=	7.48 total/cy	100.00	= 748.10
Steel Plate	4 pieces	x	2.7778	=	11.11 total/sf	5.30	= 58.89
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	641.05	= 1,923.15
Cleaning Compounds	24.1776 gal/mile/clean	x	5.00	=	120.89 total/gal.	30.00	= 3,626.64
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			317.84
State Taxes			7.00	%			467.22
							7,142.00

Land Damages

Spot Dig Sites	3 # of digs	x	1,500.00	=	4,500.00	each dig = 50 ft
Footage of Removed Pipe	528.00 # of feet	x	12.00	=	6,336.00	damages = \$ 12.00 / ft
					10,836.00	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	14,136.72	x	1.130	=	15,974.49
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	27.52	=	27.516	x	(195.00)	=	(5,365.63)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	---	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 22" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 108.40	PL Crossings	: 0
Roads	: 122	Water Crossings	: 2
Valves	: 9	Above Ground Facilities	: 0
Pipe Removal	: 2.17	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	146,587
2.	PIPELINE MATERIALS:	TB000	259,937
3.	CONSTRUCTION:	TC000	7,593,597
	a. Prime contract	TC100	7,547,486
	i) Pipeline Abandon in Place		278,348
	ii) Road Crossing		6,424,785
	iii) Valve Removals		167,009
	iv) Pipeline Removal		539,139
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		67,989
	vii) Pipeline Crossing		-
	viii) Water Crossing		70,216
	b. Pipeline Pump Down Contract	TC600	46,111
4.	PIPE SALVAGE COST:		(128,253)
5.	ENGINEERING: 2.25 %	TD000	188,469
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	251,292
7.	LAND - DAMAGES:	TF000	522,859
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	418,820
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	85,550
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(278,037)
11.	Sub-Total - Direct Cost		\$ 9,060,821
12.	Contingency: 10.00 %	TY000	906,082
13.	Sub-Total:		9,966,903
14.	Overhead: 4.00 %	TZ000	398,676
15.	Sub-Total:		10,365,579
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 10,365,579

Cost / Mile	\$	95.627
Cost / Foot	\$	18.11
Cost / Meter	0	59.42

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 22"

2% Percent of total mileage Removed
2.17 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		108.40	=	32
Abandonment Crew	18,556.52 / day	x	15	=	278,348
Roads Crossing Crew	17,554.06 / day	x	366	=	6,424,785
Valve Crew	18,556.52 / day	x	9	=	167,009
Pipeline Removal	19,968.12 / day	x	27	=	539,139
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	8	=	67,989
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	4	=	70,216
Gas Pump Down	108.40 miles	x	425.39	=	46,111

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

22" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	9.111 cy/road	x	122	=	1,111.54 total/cy	100.00	= 111,154.20
Steel Plate	496 pieces	x	3.3611	=	1,667.11 total/sf	5.30	= 8,835.66
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	705.16	= 4,230.96
Cleaning Compounds	32.3875 gal/mile/clean	x	108.40	=	3,510.68 total/gal.	30.00	= 105,320.32
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	9.111 cy/pipeline	x	2	=	18.22 total/cy	100.00	= 1,822.20
Misc. Materials			5.00	%			11,568.17
State Taxes			7.00	%			17,005.21
							259,937.00

Land Damages

Spot Dig Sites	257 # of digs	x	1,500.00	=	385,500.00	each dig = 50 ft
Footage of Removed Pipe	11446.62 # of feet	x	12.00	=	137,359.49	damages = \$ 12.00 / ft
					522,859.49	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	17,670.90	x	1.130	=	19,968.12
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		657.71	=	657.709	x (195.00) (128,253.20)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 24" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 61.99	PL Crossings	: 0
Roads	: 29	Water Crossings	: 14
Valves	: 10	Above Ground Facilities	: 0
Pipe Removal	: 1.24	# of Line Segments	: 4

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	55,700
2.	PIPELINE MATERIALS:	TB000	155,780
3.	CONSTRUCTION:	TC000	2,804,498
	a. Prime contract	TC100	2,778,127
	i) Pipeline Abandon in Place		148,452
	ii) Road Crossing		1,527,203
	iii) Valve Removals		185,565
	iv) Pipeline Removal		374,402
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		50,991
	vii) Pipeline Crossing		-
	viii) Water Crossing		491,514
	b. Pipeline Pump Down Contract	TC600	26,371
4.	PIPE SALVAGE COST:		(80,173)
5.	ENGINEERING: 2.25 %	TD000	71,614
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	95,485
7.	LAND - DAMAGES:	TF000	222,558
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	159,142
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	58,227
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(189,239)
11.	Sub-Total - Direct Cost		\$ 3,353,592
12.	Contingency: 10.00 %	TY000	335,359
13.	Sub-Total:		3,688,951
14.	Overhead: 4.00 %	TZ000	147,558
15.	Sub-Total:		3,836,509
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 3,836,509

Cost / Mile	\$	61,886
Cost / Foot	\$	11.72
Cost / Meter	0	38.45

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 24"

2% Percent of total mileage Removed
1.24 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		61.99	=	24
Abandonment Crew	18,556.52 / day	x	8	=	148,452
Roads Crossing Crew	17,554.06 / day	x	87	=	1,527,203
Valve Crew	18,556.52 / day	x	10	=	185,565
Pipeline Removal	24,960.14 / day	x	15	=	374,402
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	6	=	50,991
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	28	=	491,514
Gas Pump Down	61.99 miles	x	425.39	=	26,371

20 8 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
12 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	10.926 cy/road	x	29	=	316.85 total/cy	100.00	=	31,685.40
Steel Plate	172 pieces	x	4.0000	=	688.00 total/sf	5.30	=	3,646.40
Cleaning Pigs	3 pig/cleaning	x	4	=	12 total pigs	769.27	=	9,231.24
Cleaning Compounds	42.3686 gal/mile/clean	x	61.99	=	2,626.56 total/gal.	30.00	=	78,796.80
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	10.926 cy/pipeline	x	14	=	152.96 total/cy	100.00	=	15,296.40
Misc. Materials			5.00	%				6,932.81
State Taxes			7.00	%				10,191.23
								<u>155,780.00</u>

Land Damages

Spot Dig Sites	96 # of digs	x	1,500.00	=	144,000.00	each dig = 50 ft
Footage of Removed Pipe	6546.47 # of feet	x	12.00	=	78,557.64	damages = \$ 12.00 / ft
					<u>222,557.64</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52	\$ 14,494.00
Roads	15,534.56	x	1.130	=	17,554.06	\$ 13,711.00
Valves	16,421.70	x	1.130	=	18,556.52	\$ 14,494.00
Cleaning	7,520.85	x	1.130	=	8,498.57	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06	\$ 13,711.00
Water Crossing	15,534.56	x	1.130	=	17,554.06	\$ 13,711.00
Pipe Removal	22,088.62	x	1.130	=	24,960.14	\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	411.14	=	411.143	x	(195.00)	(80,172.85)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 26" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 26.000		
Pipe Length (mi)	: 0.01	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	4,568
2.	PIPELINE MATERIALS:	TB000	7,188
3.	CONSTRUCTION:	TC000	249,314
	a. Prime contract	TC100	249,312
	i) Pipeline Abandon in Place		129,896
	ii) Road Crossing		52,662
	iii) Valve Removals		18,557
	iv) Pipeline Removal		31,200
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		16,997
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2
4.	PIPE SALVAGE COST:		(8)
5.	ENGINEERING: 2.25 %	TD000	5,873
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	7,830
7.	LAND - DAMAGES:	TF000	4,507
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	13,050
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	6
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(21)
11.	Sub-Total - Direct Cost		\$ 292,308
12.	Contingency: 10.00 %	TY000	29,231
13.	Sub-Total:		321,539
14.	Overhead: 4.00 %	TZ000	12,862
15.	Sub-Total:		334,401
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 334,401

Cost / Mile	\$	57,885,931
Cost / Foot	\$	10,963.24
Cost / Meter	0	35,968.65

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 26"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		0.01	=	5
Abandonment Crew	18,556.52 / day	x	7	=	129,896
Roads Crossing Crew	17,554.06 / day	x	3	=	52,662
Valve Crew	18,556.52 / day	x	1	=	18,557
Pipeline Removal	31,200.18 / day	x	1	=	31,200
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	2	=	16,997
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	0	=	-
Gas Pump Down	0.01 miles	x	425.39	=	2

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

26" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	12.889 cy/road	x	1	=	12.89 total/cy	100.00	=	1,288.90
Steel Plate	4 pieces	x	4.6944	=	18.78 total/sf	5.30	=	99.52
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	833.37	=	5,000.22
Cleaning Compounds	54.1466 gal/mile/clean	x	0.01	=	0.31 total/gal.	30.00	=	9.38
Pipeline Fill Concrete	6.444 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	12.889 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Misc. Materials			5.00	%				319.90
State Taxes			7.00	%				470.25
								7,188.00

Land Damages

Spot Dig Sites	3 # of digs	x	1,500.00	=	4,500.00	each dig = 50 ft
Footage of Removed Pipe	0.61 # of feet	x	12.00	=	7.32	damages = \$ 12.00 / ft
					4,507.32	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	\$ 14,494.00
Roads	15,534.56	x	1.130	=	\$ 13,711.00
Valves	16,421.70	x	1.130	=	\$ 14,494.00
Cleaning	7,520.85	x	1.130	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.130	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.130	=	\$ 13,711.00
Pipe Removal	27,610.78	x	1.130	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.04	=	0.042	x	(195.00)	(8.11)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	--------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 30" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 581.46	PL Crossings	: 0
Roads	: 566	Water Crossings	: 82
Valves	: 48	Above Ground Facilities	: 0
Pipe Removal	: 11.63	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	828,168
2.	PIPELINE MATERIALS:	TB000	2,905,470
3.	CONSTRUCTION:	TC000	41,665,608
	a. Prime contract	TC100	41,418,259
	i) Pipeline Abandon in Place		1,057,722
	ii) Road Crossing		29,806,787
	iii) Valve Removals		1,781,426
	iv) Pipeline Removal		5,460,032
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		433,427
	vii) Pipeline Crossing		-
	viii) Water Crossing		2,878,865
	b. Pipeline Pump Down Contract	TC600	247,349
4.	PIPE SALVAGE COST:		(943,975)
5.	ENGINEERING: 2.25 %	TD000	1,064,788
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	1,419,717
7.	LAND - DAMAGES:	TF000	2,752,830
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	2,366,195
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	853,346
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,773,376)
11.	Sub-Total - Direct Cost		\$ 50,138,771
12.	Contingency: 10.00 %	TY000	5,013,877
13.	Sub-Total:		55,152,648
14.	Overhead: 4.00 %	TZ000	2,206,106
15.	Sub-Total:		57,358,754
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 57,358,754

Cost / Mile	\$	98,646
Cost / Foot	\$	18.68
Cost / Meter	0	61.30

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 30"

2% Percent of total mileage Removed
11.63 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		581.46	=	204
Abandonment Crew	18,556.52 / day	x	57	=	1,057,722
Roads Crossing Crew	17,554.06 / day	x	1698	=	29,806,787
Valve Crew	18,556.52 / day	x	96	=	1,781,426
Pipeline Removal	39,000.23 / day	x	140	=	5,460,032
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	51	=	433,427
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	164	=	2,878,865
Gas Pump Down	581.46 miles	x	425.39	=	247,349

25 10 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	566	=	9,789.54 total/cy	100.00	=	978,953.60
Steel Plate	2592 pieces	x	6.2500	=	16,200.00 total/sf	5.30	=	85,860.00
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	961.58	=	14,423.70
Cleaning Compounds	78.2522 gal/mile/clean	x	581.46	=	45,500.77 total/gal.	30.00	=	1,365,023.20
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	82	=	1,418.27 total/cy	100.00	=	141,827.20
Misc. Materials			5.00	%				129,304.39
State Taxes			7.00	%				190,077.45
								<u>2,905,470.00</u>

Land Damages

Spot Dig Sites	1344 # of digs	x	1,500.00	=	2,016,000.00	each dig = 50 ft
Footage of Removed Pipe	61402.51 # of feet	x	12.00	=	736,830.15	damages = \$ 12.00 / ft
					<u>2,752,830.15</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	34,513.47	x	1.130	=	39,000.23
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		4,840.90	=	4840.897	x	(195.00) (943,974.98)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 36" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 114.01	PL Crossings	: 0
Roads	: 127	Water Crossings	: 26
Valves	: 16	Above Ground Facilities	: 0
Pipe Removal	: 2.28	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	202,465
2.	PIPELINE MATERIALS:	TB000	936,084
3.	CONSTRUCTION:	TC000	10,005,845
	a. Prime contract	TC100	9,957,346
	i) Pipeline Abandon in Place		(37,113)
	ii) Road Crossing		6,688,095
	iii) Valve Removals		593,809
	iv) Pipeline Removal		1,706,260
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		93,484
	vii) Pipeline Crossing		-
	viii) Water Crossing		912,811
	b. Pipeline Pump Down Contract	TC600	48,499
4.	PIPE SALVAGE COST:		(222,736)
5.	ENGINEERING: 2.25 %	TD000	260,312
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	347,082
7.	LAND - DAMAGES:	TF000	627,474
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	578,470
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	240,941
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(783,060)
11.	Sub-Total - Direct Cost		\$ 12,192,878
12.	Contingency: 10.00 %	TY000	1,219,288
13.	Sub-Total:		13,412,166
14.	Overhead: 4.00 %	TZ000	536,487
15.	Sub-Total:		13,948,653
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 13,948,653

Cost / Mile	\$	122,345
Cost / Foot	\$	23.17
Cost / Meter	0	76.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 36"

2% Percent of total mileage Removed
2.28 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		114.01	=	41
Abandonment Crew	18,556.52 / day	x	(2)	=	(37,113)
Roads Crossing Crew	17,554.06 / day	x	381	=	6,688,095
Valve Crew	18,556.52 / day	x	32	=	593,809
Pipeline Removal	60,937.85 / day	x	28	=	1,706,260
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	11	=	93,484
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	52	=	912,811
Gas Pump Down	114.01 miles	x	425.39	=	48,499

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	25.111 cy/road	x	127	=	3,189.10 total/cy	100.00	= 318,909.70
Steel Plate	612 pieces	x	9,000	=	5,508.00 total/sf	5.30	= 29,192.40
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	= 3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	114.01	=	13,877.76 total/gal.	30.00	= 416,332.75
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	25.111 cy/pipeline	x	26	=	652.89 total/cy	100.00	= 65,288.60
Misc. Materials			5.00	%			41,659.26
State Taxes			7.00	%			61,239.11
							936,084.00

Land Damages

Spot Dig Sites	322 # of digs	x	1,500.00	=	483,000.00	each dig = 50 ft
Footage of Removed Pipe	12039.54 # of feet	x	12.00	=	144,474.47	damages = \$ 12.00 / ft
					627,474.47	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	53,927.30	x	1.130	=	60,937.85
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		1,142.24	=	1142.236	x	(195.00) (222,736.07)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 42" Lines in Indiana		
State	: Indiana		
Pipe Dia.	: 42.000		
Pipe Length (mi)	: 27.97	PL Crossings	: 0
Roads	: 61	Water Crossings	: 4
Valves	: 6	Above Ground Facilities	: 0
Pipe Removal	: 0.56	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	82,733
2.	PIPELINE MATERIALS:	TB000	463,003
3.	CONSTRUCTION:	TC000	4,025,128
	a. Prime contract	TC100	4,013,228
	i) Pipeline Abandon in Place		(55,670)
	ii) Road Crossing		3,212,392
	iii) Valve Removals		222,678
	iv) Pipeline Removal		467,900
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,496
	vii) Pipeline Crossing		-
	viii) Water Crossing		140,432
	b. Pipeline Pump Down Contract	TC600	11,900
4.	PIPE SALVAGE COST:		(63,888)
5.	ENGINEERING: 2.25 %	TD000	106,371
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	141,827
7.	LAND - DAMAGES:	TF000	239,449
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	236,379
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	80,467
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(261,517)
11.	Sub-Total - Direct Cost		\$ 5,049,952
12.	Contingency: 10.00 %	TY000	504,995
13.	Sub-Total:		5,554,947
14.	Overhead: 4.00 %	TZ000	222,198
15.	Sub-Total:		5,777,145
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,777,145

Cost / Mile	\$	206,517
Cost / Foot	\$	39.11
Cost / Meter	0	128.32

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Indiana - 42"

2% Percent of total mileage Removed
0.56 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		27.97	=	12
Abandonment Crew	18,556.52 / day	x	(3)	=	(55,670)
Roads Crossing Crew	17,554.06 / day	x	183	=	3,212,392
Valve Crew	18,556.52 / day	x	12	=	222,678
Pipeline Removal	66,842.89 / day	x	7	=	467,900
Launcher/Receiver Crew	18,556.52 / day	x	0	=	-
Pipeline Cleaning Crew	8,498.57 / day	x	3	=	25,496
Pipeline Crossing Crew	17,554.06 / day	x	0	=	-
Water Crossing Crew	17,554.06 / day	x	8	=	140,432
Gas Pump Down	27.97 miles	x	425.39	=	11,900

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
42" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	34.37 cy/road	x	61	=	2,096.57 total/cy	100.00	= 209,657.00
Steel Plate	260 pieces	x	12.2500	=	3,185.00 total/sf	5.30	= 16,880.50
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1346.21	= 4,038.63
Cleaning Compounds	199.9267 gal/mile/clean	x	27.97	=	5,592.78 total/gal.	30.00	= 167,783.36
Pipeline Fill Concrete	17.185 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	34.37 cy/pipeline	x	4	=	137.48 total/cy	100.00	= 13,748.00
Misc. Materials			5.00	%			20,605.37
State Taxes			7.00	%			30,289.90
							463,003.00

Land Damages

Spot Dig Sites	136 # of digs	x	1,500.00	=	204,000.00	each dig = 50 ft
Footage of Removed Pipe	2954.07 # of feet	x	12.00	=	35,448.84	damages = \$ 12.00 / ft
					239,448.84	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.130	=	18,556.52
Roads	15,534.56	x	1.130	=	17,554.06
Valves	16,421.70	x	1.130	=	18,556.52
Cleaning	7,520.85	x	1.130	=	8,498.57
Pipeline Crossing	15,534.56	x	1.130	=	17,554.06
Water Crossing	15,534.56	x	1.130	=	17,554.06
Pipe Removal	59,153.00	x	1.130	=	66,842.89
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost Valve (t/mi) Pipe (t/mi) 327.63 = 327.632 x (195.00) (63,888.28) **Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 2.365" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 2.365		
Pipe Length (mi)	: 1.97	PL Crossings	: 0
Roads	: 12	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.04	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	8,921
2.	PIPELINE MATERIALS:	TB000	335
3.	CONSTRUCTION:	TC000	470,961
	a. Prime contract	TC100	470,121
	i) Pipeline Abandon in Place		68,314
	ii) Road Crossing		387,743
	iii) Valve Removals		-
	iv) Pipeline Removal		6,242
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		7,822
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	840
4.	PIPE SALVAGE COST:		(203)
5.	ENGINEERING: 2.25 %	TD000	11,470
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	15,294
7.	LAND - DAMAGES:	TF000	38,502
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	25,490
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	18
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(59)
11.	Sub-Total - Direct Cost		\$ 570,730
12.	Contingency: 10.00 %	TY000	57,073
13.	Sub-Total:		627,803
14.	Overhead: 4.00 %	TZ000	25,112
15.	Sub-Total:		652,915
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 652,915

Cost / Mile	\$	330,717
Cost / Foot	\$	62.64
Cost / Meter	0	205.50

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 2.365"

2% Percent of total mileage Removed
0.04 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		1.97	=	3
Abandonment Crew	17,078.57 / day	x	4	=	68,314
Roads Crossing Crew	16,155.95 / day	x	24	=	387,743
Valve Crew	17,078.57 / day	x	0	=	-
Pipeline Removal	6,242.39 / day	x	1	=	6,242
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	1	=	7,822
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	0	=	-
Gas Pump Down	1.97 miles	x	425.29	=	840

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

2.365" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.052 cy/road	x	12	=	0.62 total/cy	100.00	= 62.40
Steel Plate	48 pieces	x	0.0388	=	1.86 total/sf	5.30	= 9.87
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	75.80	= 227.40
Cleaning Compounds	0.0199 gal/mile/clean	x	1.97	=	0.04 total/gal.	30.00	= 1.18
Pipeline Fill Concrete	0.026 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.052 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			15.04
State Taxes			6.00	%			18.95
							335.00

Land Damages

Spot Dig Sites	24 # of digs	x	1,500.00	=	36,000.00	each dig = 50 ft
Footage of Removed Pipe	208.48 # of feet	x	12.00	=	2,501.76	damages = \$ 12.00 / ft
					38,501.76	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	6,002.30	x	1.040	=	6,242.39
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	1.04	=	1.039	x	(195.00)	(202.63)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 3.5" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 3.500		
Pipe Length (mi)	: 2.57	PL Crossings	: 0
Roads	: 11	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.05	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	8,331
2.	PIPELINE MATERIALS:	TB000	590
3.	CONSTRUCTION:	TC000	439,231
	a. Prime contract	TC100	438,138
	i) Pipeline Abandon in Place		68,314
	ii) Road Crossing		355,431
	iii) Valve Removals		-
	iv) Pipeline Removal		6,571
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		7,822
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,093
4.	PIPE SALVAGE COST:		(424)
5.	ENGINEERING: 2.25 %	TD000	10,712
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	14,282
7.	LAND - DAMAGES:	TF000	36,258
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	23,804
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	51
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(167)
11.	Sub-Total - Direct Cost		\$ 532,668
12.	Contingency: 10.00 %	TY000	53,267
13.	Sub-Total:		585,935
14.	Overhead: 4.00 %	TZ000	23,437
15.	Sub-Total:		609,372
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 609,372

Cost / Mile	\$	237,001
Cost / Foot	\$	44.89
Cost / Meter	0	147.27

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 3.5"

2% Percent of total mileage Removed
0.05 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		2.57		3
Abandonment Crew	17,078.57 / day	x	4	=	68,314
Roads Crossing Crew	16,155.95 / day	x	22	=	355,431
Valve Crew	17,078.57 / day	x	0	=	-
Pipeline Removal	6,570.93 / day	x	1	=	6,571
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	1	=	7,822
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	0	=	-
Gas Pump Down	2.57 miles	x	425.29	=	1,093

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

3.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost					
Road Fill Concrete	0.152 cy/road	x	11	=	1.67 total/cy	100.00 = 167.20
Steel Plate	44 pieces	x	0.0851	=	3.74 total/sf	5.30 = 19.85
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	112.18 = 336.54
Cleaning Compounds	0.086 gal/mile/clean	x	2.57	=	0.22 total/gal.	30.00 = 6.63
Pipeline Fill Concrete	0.076 cy/pipeline	x	0	=	- total/cy	100.00 = -
Water Crossing Concrete	0.152 cy/pipeline	x	0	=	- total/cy	100.00 = -
Misc. Materials			5.00	%		26.51
State Taxes			6.00	%		33.40
						590.00

Land Damages

Spot Dig Sites	22 # of digs	x	1,500.00	=	33,000.00	each dig = 50 ft
Footage of Removed Pipe	271.52 # of feet	x	12.00	=	3,258.20	damages = \$ 12.00 / ft
					36,258.20	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	6,318.21	x	1.040	=	6,570.93
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	2.18 =	2.177 x	(195.00)	(424.49)
------------------------------	--------------	-------------	--------	---------	----------	----------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 4.5" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 97.75	PL Crossings	: 0
Roads	: 138	Water Crossings	: 29
Valves	: 18	Above Ground Facilities	: 0
Pipe Removal	: 1.95	# of Line Segments	: 28

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	140,387
2.	PIPELINE MATERIALS:	TB000	20,014
3.	CONSTRUCTION:	TC000	7,350,257
	a. Prime contract	TC100	7,308,685
	i) Pipeline Abandon in Place		1,912,800
	ii) Road Crossing		4,459,041
	iii) Valve Removals		153,707
	iv) Pipeline Removal		166,003
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		148,612
	vii) Pipeline Crossing		-
	viii) Water Crossing		468,522
	b. Pipeline Pump Down Contract	TC600	41,572
4.	PIPE SALVAGE COST:		(21,518)
5.	ENGINEERING: 2.25 %	TD000	180,498
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	240,664
7.	LAND - DAMAGES:	TF000	651,869
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	401,107
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,228
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(10,490)
11.	Sub-Total - Direct Cost		\$ 8,956,016
12.	Contingency: 10.00 %	TY000	895,602
13.	Sub-Total:		9,851,618
14.	Overhead: 4.00 %	TZ000	394,065
15.	Sub-Total:		10,245,683
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 10,245,683

Cost / Mile	\$	104,815
Cost / Foot	\$	19.85
Cost / Meter	0	65.13

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 4.5"

2% Percent of total mileage Removed
1.95 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		97.75	=	73
Abandonment Crew	17,078.57 / day	x	112	=	1,912,800
Roads Crossing Crew	16,155.95 / day	x	276	=	4,459,041
Valve Crew	17,078.57 / day	x	9	=	153,707
Pipeline Removal	6,916.77 / day	x	24	=	166,003
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	19	=	148,612
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	29	=	468,522
Gas Pump Down	97.75 miles	x	425.29	=	41,572

140 56 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
84 Minimum Days / Segment
1 Days/Water
4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	0.285 cy/road	x	138	=	39.33 total/cy	100.00	=	3,933.00
Steel Plate	668 pieces	x	0.1406	=	93.92 total/sf	5.30	=	497.78
Cleaning Pigs	3 pig/cleaning	x	28	=	84 total pigs	144.24	=	12,116.16
Cleaning Compounds	0.2074 gal/mile/clean	x	97.75	=	20.27 total/gal.	30.00	=	608.20
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.285 cy/pipeline	x	29	=	8.27 total/cy	100.00	=	826.50
Misc. Materials			5.00	%				899.08
State Taxes			6.00	%				1,132.84
								<u>20,014.00</u>

Land Damages

Spot Dig Sites	352 # of digs	x	1,500.00	=	528,000.00	each dig = 50 ft
Footage of Removed Pipe	10322.38 # of feet	x	12.00	=	123,868.52	damages = \$ 12.00 / ft
					<u>651,868.52</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	6,650.74	x	1.040	=	6,916.77
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		110.35	=	110.346	x (195.00) (21,517.51)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 6.625" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 101.88	PL Crossings	: 0
Roads	: 182	Water Crossings	: 35
Valves	: 13	Above Ground Facilities	: 0
Pipe Removal	: 2.04	# of Line Segments	: 7

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	140,367
2.	PIPELINE MATERIALS:	TB000	26,089
3.	CONSTRUCTION:	TC000	7,195,267
	a. Prime contract	TC100	7,151,937
	i) Pipeline Abandon in Place		341,571
	ii) Road Crossing		5,880,764
	iii) Valve Removals		119,550
	iv) Pipeline Removal		182,020
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		62,574
	vii) Pipeline Crossing		-
	viii) Water Crossing		565,458
	b. Pipeline Pump Down Contract	TC600	43,330
4.	PIPE SALVAGE COST:		(34,342)
5.	ENGINEERING: 2.25 %	TD000	180,472
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	240,629
7.	LAND - DAMAGES:	TF000	799,608
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	401,048
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	7,292
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(23,699)
11.	Sub-Total - Direct Cost		\$ 8,932,731
12.	Contingency: 10.00 %	TY000	893,273
13.	Sub-Total:		9,826,004
14.	Overhead: 4.00 %	TZ000	393,040
15.	Sub-Total:		10,219,044
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 10,219,044

Cost / Mile	\$	100,300
Cost / Foot	\$	19.00
Cost / Meter	0	62.32

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 6.625"

2% Percent of total mileage Removed
2.04 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		101.88	=	31
Abandonment Crew	17,078.57 / day	x	20	=	341,571
Roads Crossing Crew	16,155.95 / day	x	364	=	5,880,764
Valve Crew	17,078.57 / day	x	7	=	119,550
Pipeline Removal	7,280.81 / day	x	25	=	182,020
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	8	=	62,574
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	35	=	565,458
Gas Pump Down	101.88 miles	x	425.29	=	43,330

35 14 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
21 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.704 cy/road	x	182	=	128.13 total/cy	100.00	= 12,812.80
Steel Plate	868 pieces	x	0.3048	=	264.57 total/sf	5.30	= 1,402.20
Cleaning Pigs	3 pig/cleaning	x	7	=	21 total pigs	212.35	= 4,459.35
Cleaning Compounds	0.7531 gal/mile/clean	x	101.88	=	76.73 total/gal.	30.00	= 2,301.87
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.704 cy/pipeline	x	35	=	24.64 total/cy	100.00	= 2,464.00
Misc. Materials			5.00	%			1,172.01
State Taxes			6.00	%			1,476.73
							26,089.00

Land Damages

Spot Dig Sites	447 # of digs	x	1,500.00	=	670,500.00	each dig = 50 ft
Footage of Removed Pipe	10758.99 # of feet	x	12.00	=	129,107.89	damages = \$ 12.00 / ft
					799,607.89	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	7,000.78	x	1.040	=	7,280.81
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		176.11	=	176.115	x	(195.00) (34,342.35)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 8.625" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 22.77	PL Crossings	: 0
Roads	: 53	Water Crossings	: 7
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.46	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	40,833
2.	PIPELINE MATERIALS:	TB000	13,242
3.	CONSTRUCTION:	TC000	2,109,697
	a. Prime contract	TC100	2,100,014
	i) Pipeline Abandon in Place		187,864
	ii) Road Crossing		1,712,530
	iii) Valve Removals		17,079
	iv) Pipeline Removal		45,984
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		23,465
	vii) Pipeline Crossing		-
	viii) Water Crossing		113,092
	b. Pipeline Pump Down Contract	TC600	9,683
4.	PIPE SALVAGE COST:		(10,180)
5.	ENGINEERING: 2.25 %	TD000	52,499
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	69,999
7.	LAND - DAMAGES:	TF000	210,351
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	116,664
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,762
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(8,976)
11.	Sub-Total - Direct Cost		\$ 2,596,891
12.	Contingency: 10.00 %	TY000	259,689
13.	Sub-Total:		2,856,580
14.	Overhead: 4.00 %	TZ000	114,263
15.	Sub-Total:		2,970,843
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,970,843

Cost / Mile	\$	130,488
Cost / Foot	\$	24.71
Cost / Meter	0	81.08

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 8.625"

2% Percent of total mileage Removed
0.46 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		22.77	=	10
Abandonment Crew	17,078.57 / day	x	11	=	187,864
Roads Crossing Crew	16,155.95 / day	x	106	=	1,712,530
Valve Crew	17,078.57 / day	x	1	=	17,079
Pipeline Removal	7,664.02 / day	x	6	=	45,984
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	3	=	23,465
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	7	=	113,092
Gas Pump Down	22.77 miles	x	425.29	=	9,683

15 6 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
1 Days/Water

8.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	1.259 cy/road	x	53	=	66.73 total/cy	100.00	=	6,672.70
Steel Plate	240 pieces	x	0.5166	=	123.98 total/sf	5.30	=	657.12
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	276.45	=	2,488.05
Cleaning Compounds	1.7547 gal/mile/clean	x	22.77	=	39.95 total/gal.	30.00	=	1,198.48
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	1.259 cy/pipeline	x	7	=	8.81 total/cy	100.00	=	881.30
Misc. Materials			5.00	%				594.88
State Taxes			6.00	%				749.55
								13,242.00

Land Damages

Spot Dig Sites	121 # of digs	x	1,500.00	=	181,500.00	each dig = 50 ft
Footage of Removed Pipe	2404.21 # of feet	x	12.00	=	28,850.50	damages = \$ 12.00 / ft
					210,350.50	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	\$ 14,494.00
Roads	15,534.56	x	1.040	=	\$ 13,711.00
Valves	16,421.70	x	1.040	=	\$ 14,494.00
Cleaning	7,520.85	x	1.040	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.040	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.040	=	\$ 13,711.00
Pipe Removal	7,369.25	x	1.040	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	52.21	=	52.205	x	(195.00)	(10,180.00)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 10.75" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 12.97	PL Crossings	: 0
Roads	: 27	Water Crossings	: 2
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.26	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	19,672
2.	PIPELINE MATERIALS:	TB000	9,806
3.	CONSTRUCTION:	TC000	1,009,397
	a. Prime contract	TC100	1,003,882
	i) Pipeline Abandon in Place		34,157
	ii) Road Crossing		872,421
	iii) Valve Removals		17,079
	iv) Pipeline Removal		32,270
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		15,643
	vii) Pipeline Crossing		-
	viii) Water Crossing		32,312
	b. Pipeline Pump Down Contract	TC600	5,515
4.	PIPE SALVAGE COST:		(7,315)
5.	ENGINEERING: 2.25 %	TD000	25,293
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	33,724
7.	LAND - DAMAGES:	TF000	104,932
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	56,207
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,444
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(7,942)
11.	Sub-Total - Direct Cost		\$ 1,246,219
12.	Contingency: 10.00 %	TY000	124,622
13.	Sub-Total:		1,370,841
14.	Overhead: 4.00 %	TZ000	54,834
15.	Sub-Total:		1,425,675
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,425,675

Cost / Mile	\$	109,944
Cost / Foot	\$	20.82
Cost / Meter	0	68.32

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 10.75"

2% Percent of total mileage Removed
0.26 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		12.97	=	5
Abandonment Crew	17,078.57 / day	x	2	=	34,157
Roads Crossing Crew	16,155.95 / day	x	54	=	872,421
Valve Crew	17,078.57 / day	x	1	=	17,079
Pipeline Removal	8,067.38 / day	x	4	=	32,270
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	2	=	15,643
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	2	=	32,312
Gas Pump Down	12.97 miles	x	425.29	=	5,515

2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	27	=	55.00 total/cy	100.00	= 5,499.90
Steel Plate	116 pieces	x	0.8025	=	93.09 total/sf	5.30	= 493.38
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	344.57	= 1,033.71
Cleaning Compounds	3.538 gal/mile/clean	x	12.97	=	45.88 total/gal.	30.00	= 1,376.34
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	2	=	4.07 total/cy	100.00	= 407.40
Misc. Materials			5.00	%			440.54
State Taxes			6.00	%			555.08
							9,806.00

Land Damages

Spot Dig Sites	59 # of digs	x	1,500.00	=	88,500.00	each dig = 50 ft
Footage of Removed Pipe	1369.34 # of feet	x	12.00	=	16,432.08	damages = \$ 12.00 / ft
					104,932.08	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	7,757.10	x	1.040	=	8,067.38
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	37.51	=	37.511	x	(195.00)	(7,314.55)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 12.75" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 21.35	PL Crossings	: 0
Roads	: 31	Water Crossings	: 6
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 0.43	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	28,892
2.	PIPELINE MATERIALS:	TB000	21,425
3.	CONSTRUCTION:	TC000	1,483,978
	a. Prime contract	TC100	1,474,900
	i) Pipeline Abandon in Place		153,707
	ii) Road Crossing		1,001,669
	iii) Valve Removals		51,236
	iv) Pipeline Removal		50,952
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		23,465
	vii) Pipeline Crossing		-
	viii) Water Crossing		193,871
	b. Pipeline Pump Down Contract	TC600	9,078
4.	PIPE SALVAGE COST:		(14,390)
5.	ENGINEERING: 2.25 %	TD000	37,146
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	49,529
7.	LAND - DAMAGES:	TF000	145,549
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	82,548
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	5,658
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(18,389)
11.	Sub-Total - Direct Cost		\$ 1,821,946
12.	Contingency: 10.00 %	TY000	182,195
13.	Sub-Total:		2,004,141
14.	Overhead: 4.00 %	TZ000	80,166
15.	Sub-Total:		2,084,307
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,084,307

Cost / Mile	\$	97,647
Cost / Foot	\$	18.49
Cost / Meter	0	60.67

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 12.75"

2% Percent of total mileage Removed
0.43 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		21.35	=	11
Abandonment Crew	17,078.57 / day	x	9	=	153,707
Roads Crossing Crew	16,155.95 / day	x	62	=	1,001,669
Valve Crew	17,078.57 / day	x	3	=	51,236
Pipeline Removal	8,491.98 / day	x	6	=	50,952
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	3	=	23,465
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	12	=	193,871
Gas Pump Down	21.35 miles	x	425.29	=	9,078

15 6 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	31	=	90.71 total/cy	100.00	= 9,070.60
Steel Plate	148 pieces	x	1.1289	=	167.08 total/sf	5.30	= 885.51
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	408.67	= 3,678.03
Cleaning Compounds	6.0282 gal/mile/clean	x	21.35	=	128.67 total/gal.	30.00	= 3,860.22
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	6	=	17.56 total/cy	100.00	= 1,755.60
Misc. Materials			5.00	%			962.50
State Taxes			6.00	%			1,212.75
							<u>21,425.00</u>

Land Damages

Spot Dig Sites	79 # of digs	x	1,500.00	=	118,500.00	each dig = 50 ft
Footage of Removed Pipe	2254.07 # of feet	x	12.00	=	27,048.84	damages = \$ 12.00 / ft
					<u>145,548.84</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	8,165.37	x	1.040	=	8,491.98
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	73.79	=	73.794	x	(195.00)	(14,389.84)
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 16" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 10.54	PL Crossings	: 0
Roads	: 23	Water Crossings	: 5
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.21	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	21,186
2.	PIPELINE MATERIALS:	TB000	23,537
3.	CONSTRUCTION:	TC000	1,089,713
	a. Prime contract	TC100	1,085,232
	i) Pipeline Abandon in Place		136,629
	ii) Road Crossing		743,173
	iii) Valve Removals		-
	iv) Pipeline Removal		28,228
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		15,643
	vii) Pipeline Crossing		-
	viii) Water Crossing		161,559
	b. Pipeline Pump Down Contract	TC600	4,481
4.	PIPE SALVAGE COST:		(8,988)
5.	ENGINEERING: 2.25 %	TD000	27,239
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	36,318
7.	LAND - DAMAGES:	TF000	97,352
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	60,530
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	4,399
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(14,295)
11.	Sub-Total - Direct Cost		\$ 1,336,991
12.	Contingency: 10.00 %	TY000	133,699
13.	Sub-Total:		1,470,690
14.	Overhead: 4.00 %	TZ000	58,828
15.	Sub-Total:		1,529,518
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,529,518

Cost / Mile	\$	145,159
Cost / Foot	\$	27.49
Cost / Meter	0	90.20

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 16"

2% Percent of total mileage Removed
0.21 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		10.54	=	7
Abandonment Crew	17,078.57 / day	x	8	=	136,629
Roads Crossing Crew	16,155.95 / day	x	46	=	743,173
Valve Crew	17,078.57 / day	x	0	=	-
Pipeline Removal	9,409.40 / day	x	3	=	28,228
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	2	=	15,643
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	10	=	161,559
Gas Pump Down	10.54 miles	x	425.29	=	4,481

10 4 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	23	=	108.19 total/cy	100.00	=	10,819.20
Steel Plate	112 pieces	x	1.7778	=	199.11 total/sf	5.30	=	1,055.30
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	512.84	=	3,077.04
Cleaning Compounds	12.16 gal/mile/clean	x	10.54	=	128.13 total/gal.	30.00	=	3,843.84
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	5	=	23.52 total/cy	100.00	=	2,352.00
Misc. Materials			5.00	%				1,057.37
State Taxes			6.00	%				1,332.28
								23,537.00

Land Damages

Spot Dig Sites	56 # of digs	x	1,500.00	=	84,000.00	each dig = 50 ft
Footage of Removed Pipe	1112.69 # of feet	x	12.00	=	13,352.28	damages = \$ 12.00 / ft
					97,352.28	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	9,047.50	x	1.040	=	9,409.40
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	46.09	=	46.092	x	(195.00)	(8,987.90)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 24" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 309.06	PL Crossings	: 0
Roads	: 430	Water Crossings	: 132
Valves	: 23	Above Ground Facilities	: 0
Pipe Removal	: 6.18	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	550,510
2.	PIPELINE MATERIALS:	TB000	1,178,826
3.	CONSTRUCTION:	TC000	28,166,740
	a. Prime contract	TC100	28,035,301
	i) Pipeline Abandon in Place		648,986
	ii) Road Crossing		20,841,170
	iii) Valve Removals		392,807
	iv) Pipeline Removal		1,722,913
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		164,255
	vii) Pipeline Crossing		-
	viii) Water Crossing		4,265,170
	b. Pipeline Pump Down Contract	TC600	131,439
4.	PIPE SALVAGE COST:		(399,689)
5.	ENGINEERING: 2.25 %	TD000	707,798
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	943,731
7.	LAND - DAMAGES:	TF000	2,112,136
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,572,885
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	290,282
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(943,418)
11.	Sub-Total - Direct Cost		\$ 34,179,802
12.	Contingency: 10.00 %	TY000	3,417,980
13.	Sub-Total:		37,597,782
14.	Overhead: 4.00 %	TZ000	1,503,911
15.	Sub-Total:		39,101,693
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 39,101,693

Cost / Mile	\$	126,520
Cost / Foot	\$	23.96
Cost / Meter	0	78.62

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 24"

2% Percent of total mileage Removed
6.18 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		309.06	=	82
Abandonment Crew	17,078.57 / day	x	38	=	648,986
Roads Crossing Crew	16,155.95 / day	x	1290	=	20,841,170
Valve Crew	17,078.57 / day	x	23	=	392,807
Pipeline Removal	22,972.17 / day	x	75	=	1,722,913
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	21	=	164,255
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	264	=	4,265,170
Gas Pump Down	309.06 miles	x	425.29	=	131,439

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost								
Road Fill Concrete	10.926 cy/road	x	430	=	4,698.18	total/cy	100.00	=	469,818.00
Steel Plate	2248 pieces	x	4.0000	=	8,992.00	total/sf	5.30	=	47,657.60
Cleaning Pigs	3 pig/cleaning	x	2	=	6	total pigs	769.27	=	4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	309.06	=	13,094.28	total/gal.	30.00	=	392,828.55
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	-	total/cy	100.00	=	-
Water Crossing Concrete	10.926 cy/pipeline	x	132	=	1,442.23	total/cy	100.00	=	144,223.20
Misc. Materials			5.00	%					52,957.15
State Taxes			6.00	%					66,726.01
									<u>1,178,826.00</u>

Land Damages

Spot Dig Sites	1147 # of digs	x	1,500.00	=	1,720,500.00	each dig = 50 ft
Footage of Removed Pipe	32636.35 # of feet	x	12.00	=	391,636.21	damages = \$ 12.00 / ft
					<u>2,112,136.21</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	22,088.62	x	1.040	=	22,972.17
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		2,049.69	=	2049.685	x	(195.00) (399,688.61)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 30" Lines in Iowa		
State	: Iowa		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 19.34	PL Crossings	: 0
Roads	: 23	Water Crossings	: 16
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.39	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	38,954
2.	PIPELINE MATERIALS:	TB000	134,567
3.	CONSTRUCTION:	TC000	1,945,380
	a. Prime contract	TC100	1,937,156
	i) Pipeline Abandon in Place		-
	ii) Road Crossing		1,114,760
	iii) Valve Removals		102,471
	iv) Pipeline Removal		179,470
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		23,465
	vii) Pipeline Crossing		-
	viii) Water Crossing		516,990
	b. Pipeline Pump Down Contract	TC600	8,224
4.	PIPE SALVAGE COST:		(31,395)
5.	ENGINEERING: 2.25 %	TD000	50,084
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	66,779
7.	LAND - DAMAGES:	TF000	146,005
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	111,298
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	28,381
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(92,237)
11.	Sub-Total - Direct Cost		\$ 2,397,817
12.	Contingency: 10.00 %	TY000	239,782
13.	Sub-Total:		2,637,599
14.	Overhead: 4.00 %	TZ000	105,504
15.	Sub-Total:		2,743,103
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,743,103

Cost / Mile	\$	141,849
Cost / Foot	\$	26.87
Cost / Meter	0	88.14

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Iowa - 30"

2% Percent of total mileage Removed
0.39 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		19.34	=	9
Abandonment Crew	17,078.57 / day	x	-	=	-
Roads Crossing Crew	16,155.95 / day	x	69	=	1,114,760
Valve Crew	17,078.57 / day	x	6	=	102,471
Pipeline Removal	35,894.01 / day	x	5	=	179,470
Launcher/Receiver Crew	17,078.57 / day	x	0	=	-
Pipeline Cleaning Crew	7,821.69 / day	x	3	=	23,465
Pipeline Crossing Crew	16,155.95 / day	x	0	=	-
Water Crossing Crew	16,155.95 / day	x	32	=	516,990
Gas Pump Down	19.34 miles	x	425.29	=	8,224

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	23	=	397.81 total/cy	100.00	=	39,780.80
Steel Plate	156 pieces	x	6.2500	=	975.00 total/sf	5.30	=	5,167.50
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	961.58	=	2,884.74
Cleaning Compounds	78.2522 gal/mile/clean	x	19.34	=	1,513.26 total/gal.	30.00	=	45,397.84
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	16	=	276.74 total/cy	100.00	=	27,673.60
Misc. Materials			5.00	%				6,045.22
State Taxes			6.00	%				7,616.98
								134,567.00

Land Damages

Spot Dig Sites	81 # of digs	x	1,500.00	=	121,500.00	each dig = 50 ft
Footage of Removed Pipe	2042.12 # of feet	x	12.00	=	24,505.44	damages = \$ 12.00 / ft
					146,005.44	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.040	=	17,078.57
Roads	15,534.56	x	1.040	=	16,155.95
Valves	16,421.70	x	1.040	=	17,078.57
Cleaning	7,520.85	x	1.040	=	7,821.69
Pipeline Crossing	15,534.56	x	1.040	=	16,155.95
Water Crossing	15,534.56	x	1.040	=	16,155.95
Pipe Removal	34,513.47	x	1.040	=	35,894.01
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		161.00	=	160.998	x	(195.00) (31,394.65)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 20-Nov-2015
Line Segment	: All 4.5" Lines in Kansas		
State	: Kansas		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 2.83	PL Crossings	: 0
Roads	: 6	Water Crossings	: 4
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.06	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	8,767
2.	PIPELINE MATERIALS:	TB000	1,803
3.	CONSTRUCTION:	TC000	465,583
	a. Prime contract	TC100	464,379
	i) Pipeline Abandon in Place		204,943
	ii) Road Crossing		178,958
	iii) Valve Removals		-
	iv) Pipeline Removal		6,385
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		14,440
	vii) Pipeline Crossing		-
	viii) Water Crossing		59,653
	b. Pipeline Pump Down Contract	TC600	1,204
4.	PIPE SALVAGE COST:		(622)
5.	ENGINEERING: 2.25 %	TD000	11,272
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	15,029
7.	LAND - DAMAGES:	TF000	33,583
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	25,048
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	93
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(303)
11.	Sub-Total - Direct Cost		\$ 560,252
12.	Contingency: 10.00 %	TY000	56,025
13.	Sub-Total:		616,277
14.	Overhead: 4.00 %	TZ000	24,651
15.	Sub-Total:		640,928
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 640,928

Cost / Mile	\$	226,649
Cost / Foot	\$	42.93
Cost / Meter	0	140.83

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kansas - 4.5"

2% Percent of total mileage Removed
0.06 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		2.83	=	7
Abandonment Crew	15,764.83 / day	x	13	=	204,943
Roads Crossing Crew	14,913.18 / day	x	12	=	178,958
Valve Crew	15,764.83 / day	x	0	=	-
Pipeline Removal	6,384.71 / day	x	1	=	6,385
Launcher/Receiver Crew	15,764.83 / day	x	0	=	-
Pipeline Cleaning Crew	7,220.02 / day	x	2	=	14,440
Pipeline Crossing Crew	14,913.18 / day	x	0	=	-
Water Crossing Crew	14,913.18 / day	x	4	=	59,653
Gas Pump Down	2.83 miles	x	425.68	=	1,204

15 6 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost						
Road Fill Concrete	0.285 cy/road	x	6	=	1.71 total/cy	100.00	= 171.00
Steel Plate	40 pieces	x	0.1406	=	5.62 total/sf	5.30	= 29.81
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	144.24	= 1,298.16
Cleaning Compounds	0.2074 gal/mile/clean	x	2.83	=	0.59 total/gal.	30.00	= 17.59
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	4	=	1.14 total/cy	100.00	= 114.00
Misc. Materials			5.00	%			= 81.53
State Taxes			5.30	%			= 90.74
							1,803.00

Land Damages

Spot Dig Sites	20 # of digs	x	1,500.00	=	30,000.00	each dig = 50 ft
Footage of Removed Pipe	298.62 # of feet	x	12.00	=	3,583.44	damages = \$ 12.00 / ft
					33,583.44	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.960	=	15,764.83
Roads	15,534.56	x	0.960	=	14,913.18
Valves	16,421.70	x	0.960	=	15,764.83
Cleaning	7,520.85	x	0.960	=	7,220.02
Pipeline Crossing	15,534.56	x	0.960	=	14,913.18
Water Crossing	15,534.56	x	0.960	=	14,913.18
Pipe Removal	6,650.74	x	0.960	=	6,384.71
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	3.19	=	3.192	x	(195.00)	(622.49)
------------------------------	--------------	-------------	------	---	-------	---	----------	----------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 16" Lines in Kansas		
State	: Kansas		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 1.86	PL Crossings	: 0
Roads	: 3	Water Crossings	: 5
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.04	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	7,467
2.	PIPELINE MATERIALS:	TB000	8,648
3.	CONSTRUCTION:	TC000	388,649
	a. Prime contract	TC100	387,856
	i) Pipeline Abandon in Place		94,589
	ii) Road Crossing		89,479
	iii) Valve Removals		31,530
	iv) Pipeline Removal		8,686
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		14,440
	vii) Pipeline Crossing		-
	viii) Water Crossing		149,132
	b. Pipeline Pump Down Contract	TC600	793
4.	PIPE SALVAGE COST:		(1,590)
5.	ENGINEERING: 2.25 %	TD000	9,600
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	12,800
7.	LAND - DAMAGES:	TF000	29,361
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	21,333
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	778
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,528)
11.	Sub-Total - Direct Cost		\$ 474,519
12.	Contingency: 10.00 %	TY000	47,452
13.	Sub-Total:		521,971
14.	Overhead: 4.00 %	TZ000	20,879
15.	Sub-Total:		542,850
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 542,850

Cost / Mile	\$	291,315
Cost / Foot	\$	55.17
Cost / Meter	0	181.01

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kansas - 16"

2% Percent of total mileage Removed
0.04 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		1.86	=	5
Abandonment Crew	15,764.83 / day	x	6	=	94,589
Roads Crossing Crew	14,913.18 / day	x	6	=	89,479
Valve Crew	15,764.83 / day	x	2	=	31,530
Pipeline Removal	8,685.60 / day	x	1	=	8,686
Launcher/Receiver Crew	15,764.83 / day	x	0	=	-
Pipeline Cleaning Crew	7,220.02 / day	x	2	=	14,440
Pipeline Crossing Crew	14,913.18 / day	x	0	=	-
Water Crossing Crew	14,913.18 / day	x	10	=	149,132
Gas Pump Down	1.86 miles	x	425.68	=	793

10 4 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	3	=	14.11 total/cy	100.00	=	1,411.20
Steel Plate	32 pieces	x	1.7778	=	56.89 total/sf	5.30	=	301.51
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	512.84	=	3,077.04
Cleaning Compounds	12.16 gal/mile/clean	x	1.86	=	22.66 total/gal.	30.00	=	679.79
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	5	=	23.52 total/cy	100.00	=	2,352.00
Misc. Materials			5.00	%				391.08
State Taxes			5.30	%				435.27
								8,648.00

Land Damages

Spot Dig Sites	18 # of digs	x	1,500.00	=	27,000.00	each dig = 50 ft
Footage of Removed Pipe	196.78 # of feet	x	12.00	=	2,361.36	damages = \$ 12.00 / ft
					29,361.36	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.960	=	15,764.83
Roads	15,534.56	x	0.960	=	14,913.18
Valves	16,421.70	x	0.960	=	15,764.83
Cleaning	7,520.85	x	0.960	=	7,220.02
Pipeline Crossing	15,534.56	x	0.960	=	14,913.18
Water Crossing	15,534.56	x	0.960	=	14,913.18
Pipe Removal	9,047.50	x	0.960	=	8,685.60
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	8.15	=	8.151	x	(195.00)	(1,589.52)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 20" Lines in Kansas		
State	: Kansas		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 71.03	PL Crossings	: 0
Roads	: 50	Water Crossings	: 14
Valves	: 6	Above Ground Facilities	: 0
Pipe Removal	: 1.42	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	64,183
2.	PIPELINE MATERIALS:	TB000	120,450
3.	CONSTRUCTION:	TC000	3,256,154
	a. Prime contract	TC100	3,225,916
	i) Pipeline Abandon in Place		189,178
	ii) Road Crossing		2,236,977
	iii) Valve Removals		94,589
	iv) Pipeline Removal		244,283
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		43,320
	vii) Pipeline Crossing		-
	viii) Water Crossing		417,569
	b. Pipeline Pump Down Contract	TC600	30,238
4.	PIPE SALVAGE COST:		(76,229)
5.	ENGINEERING: 2.25 %	TD000	82,521
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	110,029
7.	LAND - DAMAGES:	TF000	291,015
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	183,381
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	46,333
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(150,582)
11.	Sub-Total - Direct Cost		\$ 3,927,255
12.	Contingency: 10.00 %	TY000	392,725
13.	Sub-Total:		4,319,980
14.	Overhead: 4.00 %	TZ000	172,799
15.	Sub-Total:		4,492,779
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,492,779

Cost / Mile	\$	63,248
Cost / Foot	\$	11.98
Cost / Meter	0	39.30

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kansas - 20"

2% Percent of total mileage Removed
1.42 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		71.03	=	24
Abandonment Crew	15,764.83 / day	x	12	=	189,178
Roads Crossing Crew	14,913.18 / day	x	150	=	2,236,977
Valve Crew	15,764.83 / day	x	6	=	94,589
Pipeline Removal	13,571.25 / day	x	18	=	244,283
Launcher/Receiver Crew	15,764.83 / day	x	0	=	-
Pipeline Cleaning Crew	7,220.02 / day	x	6	=	43,320
Pipeline Crossing Crew	14,913.18 / day	x	0	=	-
Water Crossing Crew	14,913.18 / day	x	28	=	417,569
Gas Pump Down	71.03 miles	x	425.68	=	30,238

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water
20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	7.481 cy/road	x	50	=	374.05 total/cy	100.00	=	37,405.00
Steel Plate	256 pieces	x	2.7778	=	711.12 total/sf	5.30	=	3,768.92
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	641.05	=	5,769.45
Cleaning Compounds	24.1776 gal/mile/clean	x	71.03	=	1,717.45 total/gal.	30.00	=	51,523.37
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	7.481 cy/pipeline	x	14	=	104.73 total/cy	100.00	=	10,473.40
Misc. Materials			5.00	%				5,447.01
State Taxes			5.30	%				6,062.52
								120,450.00

Land Damages

Spot Dig Sites	134 # of digs	x	1,500.00	=	201,000.00	each dig = 50 ft
Footage of Removed Pipe	7501.25 # of feet	x	12.00	=	90,015.02	damages = \$ 12.00 / ft
					291,015.02	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.960	=	15,764.83
Roads	15,534.56	x	0.960	=	14,913.18
Valves	16,421.70	x	0.960	=	15,764.83
Cleaning	7,520.85	x	0.960	=	7,220.02
Pipeline Crossing	15,534.56	x	0.960	=	14,913.18
Water Crossing	15,534.56	x	0.960	=	14,913.18
Pipe Removal	14,136.72	x	0.960	=	13,571.25
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	390.92	=	390.918	x	(195.00)	(76,229.08)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 24" Lines in Kansas		
State	: Kansas		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 704.00	PL Crossings	: 0
Roads	: 932	Water Crossings	: 380
Valves	: 48	Above Ground Facilities	: 0
Pipe Removal	: 14.08	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,172,427
2.	PIPELINE MATERIALS:	TB000	2,704,968
3.	CONSTRUCTION:	TC000	59,390,744
	a. Prime contract	TC100	59,091,066
	i) Pipeline Abandon in Place		1,387,305
	ii) Road Crossing		41,697,253
	iii) Valve Removals		756,712
	iv) Pipeline Removal		3,583,658
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		332,121
	vii) Pipeline Crossing		-
	viii) Water Crossing		11,334,017
	b. Pipeline Pump Down Contract	TC600	299,678
4.	PIPE SALVAGE COST:		(910,450)
5.	ENGINEERING: 2.25 %	TD000	1,507,406
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	2,009,875
7.	LAND - DAMAGES:	TF000	4,900,107
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	3,349,791
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	661,234
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,149,009)
11.	Sub-Total - Direct Cost		\$ 72,637,093
12.	Contingency: 10.00 %	TY000	7,263,709
13.	Sub-Total:		79,900,802
14.	Overhead: 4.00 %	TZ000	3,196,032
15.	Sub-Total:		83,096,834
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 83,096,834

Cost / Mile	\$	118,035
Cost / Foot	\$	22.36
Cost / Meter	0	73.34

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kansas - 24"

2% Percent of total mileage Removed
14.08 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		704.00	=	182
Abandonment Crew	15,764.83 / day	x	88	=	1,387,305
Roads Crossing Crew	14,913.18 / day	x	2796	=	41,697,253
Valve Crew	15,764.83 / day	x	48	=	756,712
Pipeline Removal	21,205.08 / day	x	169	=	3,583,658
Launcher/Receiver Crew	15,764.83 / day	x	0	=	-
Pipeline Cleaning Crew	7,220.02 / day	x	46	=	332,121
Pipeline Crossing Crew	14,913.18 / day	x	0	=	-
Water Crossing Crew	14,913.18 / day	x	760	=	11,334,017
Gas Pump Down	704.00 miles	x	425.68	=	299,678

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water
24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	10.926 cy/road	x	932	=	10,183.03 total/cy	100.00	=	1,018,303.20
Steel Plate	5248 pieces	x	4.0000	=	20,992.00 total/sf	5.30	=	111,257.60
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	769.27	=	6,923.43
Cleaning Compounds	42.3686 gal/mile/clean	x	704.00	=	29,827.44 total/gal.	30.00	=	894,823.15
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	10.926 cy/pipeline	x	380	=	4,151.88 total/cy	100.00	=	415,188.00
Misc. Materials			5.00	%				122,324.77
State Taxes			5.30	%				136,147.47
								<u>2,704,968.00</u>

Land Damages

Spot Dig Sites	2672 # of digs	x	1,500.00	=	4,008,000.00	each dig = 50 ft
Footage of Removed Pipe	74342.26 # of feet	x	12.00	=	892,107.12	damages = \$ 12.00 / ft
					<u>4,900,107.12</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.960	=	15,764.83
Roads	15,534.56	x	0.960	=	14,913.18
Valves	16,421.70	x	0.960	=	15,764.83
Cleaning	7,520.85	x	0.960	=	7,220.02
Pipeline Crossing	15,534.56	x	0.960	=	14,913.18
Water Crossing	15,534.56	x	0.960	=	14,913.18
Pipe Removal	22,088.62	x	0.960	=	21,205.08
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		4,668.97	=	4668.973	x	(195.00) (910,449.68)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 25-Nov-2015
Line Segment	: All 30" Lines in Kansas		
State	: Kansas		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 52.52	PL Crossings	: 0
Roads	: 73	Water Crossings	: 23
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 1.05	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	94,069
2.	PIPELINE MATERIALS:	TB000	337,148
3.	CONSTRUCTION:	TC000	4,677,649
	a. Prime contract	TC100	4,655,294
	i) Pipeline Abandon in Place		110,354
	ii) Road Crossing		3,265,987
	iii) Valve Removals		126,119
	iv) Pipeline Removal		430,728
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		36,100
	vii) Pipeline Crossing		-
	viii) Water Crossing		686,006
	b. Pipeline Pump Down Contract	TC600	22,355
4.	PIPE SALVAGE COST:		(85,257)
5.	ENGINEERING: 2.25 %	TD000	120,945
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	161,260
7.	LAND - DAMAGES:	TF000	360,549
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	268,767
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	77,072
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(250,484)
11.	Sub-Total - Direct Cost		\$ 5,761,717
12.	Contingency: 10.00 %	TY000	576,172
13.	Sub-Total:		6,337,889
14.	Overhead: 4.00 %	TZ000	253,516
15.	Sub-Total:		6,591,405
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 6,591,405

Cost / Mile	\$	125,512
Cost / Foot	\$	23.77
Cost / Meter	0	77.99

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kansas - 30"

2% Percent of total mileage Removed
1.05 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		52.52	=	20
Abandonment Crew	15,764.83 / day	x	7	=	110,354
Roads Crossing Crew	14,913.18 / day	x	219	=	3,265,987
Valve Crew	15,764.83 / day	x	8	=	126,119
Pipeline Removal	33,132.93 / day	x	13	=	430,728
Launcher/Receiver Crew	15,764.83 / day	x	0	=	-
Pipeline Cleaning Crew	7,220.02 / day	x	5	=	36,100
Pipeline Crossing Crew	14,913.18 / day	x	0	=	-
Water Crossing Crew	14,913.18 / day	x	46	=	686,006
Gas Pump Down	52.52 miles	x	425.68	=	22,355

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	73	=	1,262.61 total/cy	100.00	=	126,260.80
Steel Plate	384 pieces	x	6.2500	=	2,400.00 total/sf	5.30	=	12,720.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	961.58	=	2,884.74
Cleaning Compounds	78.2522 gal/mile/clean	x	52.52	=	4,109.52 total/gal.	30.00	=	123,285.45
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	23	=	397.81 total/cy	100.00	=	39,780.80
Misc. Materials			5.00	%				15,246.59
State Taxes			5.30	%				16,969.45
								<u>337,148.00</u>

Land Damages

Spot Dig Sites	196 # of digs	x	1,500.00	=	294,000.00	each dig = 50 ft
Footage of Removed Pipe	5545.72 # of feet	x	12.00	=	66,548.64	damages = \$ 12.00 / ft
					<u>360,548.64</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.960	=	15,764.83
Roads	15,534.56	x	0.960	=	14,913.18
Valves	16,421.70	x	0.960	=	15,764.83
Cleaning	7,520.85	x	0.960	=	7,220.02
Pipeline Crossing	15,534.56	x	0.960	=	14,913.18
Water Crossing	15,534.56	x	0.960	=	14,913.18
Pipe Removal	34,513.47	x	0.960	=	33,132.93
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	437.22	=	437.218	x	(195.00)	(85,257.44)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 4.5" Lines in Kentucky		
State	: Kentucky		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 3.80	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.08	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,077
2.	PIPELINE MATERIALS:	TB000	543
3.	CONSTRUCTION:	TC000	110,324
	a. Prime contract	TC100	108,709
	i) Pipeline Abandon in Place		64,373
	ii) Road Crossing		30,448
	iii) Valve Removals		-
	iv) Pipeline Removal		6,518
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		7,370
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,615
4.	PIPE SALVAGE COST:		(837)
5.	ENGINEERING: 2.25 %	TD000	2,670
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,560
7.	LAND - DAMAGES:	TF000	7,816
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,934
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	125
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(408)
11.	Sub-Total - Direct Cost		\$ 131,804
12.	Contingency: 10.00 %	TY000	13,180
13.	Sub-Total:		144,984
14.	Overhead: 4.00 %	TZ000	5,799
15.	Sub-Total:		150,783
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 150,783

Cost / Mile	\$	39,676
Cost / Foot	\$	7.51
Cost / Meter	0	24.65

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kentucky - 4.5"

2% Percent of total mileage Removed
0.08 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		3.80	=	3
Abandonment Crew	16,093.27 / day	x	4	=	64,373
Roads Crossing Crew	15,223.87 / day	x	2	=	30,448
Valve Crew	16,093.27 / day	x	0	=	-
Pipeline Removal	6,517.73 / day	x	1	=	6,518
Launcher/Receiver Crew	16,093.27 / day	x	0	=	-
Pipeline Cleaning Crew	7,370.44 / day	x	1	=	7,370
Pipeline Crossing Crew	15,223.87 / day	x	0	=	-
Water Crossing Crew	15,223.87 / day	x	0	=	-
Gas Pump Down	3.80 miles	x	424.98	=	1,615

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	1	=	0.29 total/cy	100.00	= 28.50
Steel Plate	4 pieces	x	0.1406	=	0.56 total/sf	5.30	= 2.98
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	144.24	= 432.72
Cleaning Compounds	0.2074 gal/mile/clean	x	3.80	=	0.79 total/gal.	30.00	= 23.65
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			24.39
State Taxes			6.00	%			30.73
							543.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	401.32 # of feet	x	12.00	=	4,815.84	damages = \$ 12.00 / ft
					7,815.84	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.980	=	16,093.27
Roads	15,534.56	x	0.980	=	15,223.87
Valves	16,421.70	x	0.980	=	16,093.27
Cleaning	7,520.85	x	0.980	=	7,370.44
Pipeline Crossing	15,534.56	x	0.980	=	15,223.87
Water Crossing	15,534.56	x	0.980	=	15,223.87
Pipe Removal	6,650.74	x	0.980	=	6,517.73
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	4.29	=	4.290	x	(195.00)	(836.57)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 24" Lines in Kentucky		
State	: Kentucky		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 0.97	PL Crossings	: 0
Roads	: 1	Water Crossings	: 3
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.02	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	5,784
2.	PIPELINE MATERIALS:	TB000	11,750
3.	CONSTRUCTION:	TC000	302,562
	a. Prime contract	TC100	302,150
	i) Pipeline Abandon in Place		96,560
	ii) Road Crossing		45,672
	iii) Valve Removals		32,187
	iv) Pipeline Removal		21,647
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		14,741
	vii) Pipeline Crossing		-
	viii) Water Crossing		91,343
	b. Pipeline Pump Down Contract	TC600	412
4.	PIPE SALVAGE COST:		(1,253)
5.	ENGINEERING: 2.25 %	TD000	7,437
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	9,916
7.	LAND - DAMAGES:	TF000	16,228
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	16,527
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	910
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,958)
11.	Sub-Total - Direct Cost		\$ 366,903
12.	Contingency: 10.00 %	TY000	36,690
13.	Sub-Total:		403,593
14.	Overhead: 4.00 %	TZ000	16,144
15.	Sub-Total:		419,737
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 419,737

Cost / Mile	\$	433,201
Cost / Foot	\$	82.05
Cost / Meter	0	269.18

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Kentucky - 24"

2% Percent of total mileage Removed
 0.02 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		0.97	=	5
Abandonment Crew	16,093.27 / day	x	6	=	96,560
Roads Crossing Crew	15,223.87 / day	x	3	=	45,672
Valve Crew	16,093.27 / day	x	2	=	32,187
Pipeline Removal	21,646.85 / day	x	1	=	21,647
Launcher/Receiver Crew	16,093.27 / day	x	0	=	-
Pipeline Cleaning Crew	7,370.44 / day	x	2	=	14,741
Pipeline Crossing Crew	15,223.87 / day	x	0	=	-
Water Crossing Crew	15,223.87 / day	x	6	=	91,343
Gas Pump Down	0.97 miles	x	424.98	=	412

10 4 Day M&D
 4 Mile/Day
 3 Days/Road or Pipeline
 4 Days/L&R
 1 Days/Valve
 12 Days/ Mile of Pipeline Removal
 6 Minimum Days / Segment
 2 Days/Water
 24" line equals 4 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	1	=	10.93 total/cy	100.00	= 1,092.60
Steel Plate	16 pieces	x	4.0000	=	64.00 total/sf	5.30	= 339.20
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	769.27	= 4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	0.97	=	41.05 total/gal.	30.00	= 1,231.55
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	3	=	32.78 total/cy	100.00	= 3,277.80
Misc. Materials			5.00	%			527.84
State Taxes			6.00	%			665.08
							11,750.00

Land Damages

Spot Dig Sites	10 # of digs	x	1,500.00	=	15,000.00	each dig = 50 ft
Footage of Removed Pipe	102.32 # of feet	x	12.00	=	1,227.82	damages = \$ 12.00 / ft
					16,227.82	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.980	=	16,093.27
Roads	15,534.56	x	0.980	=	15,223.87
Valves	16,421.70	x	0.980	=	16,093.27
Cleaning	7,520.85	x	0.980	=	7,370.44
Pipeline Crossing	15,534.56	x	0.980	=	15,223.87
Water Crossing	15,534.56	x	0.980	=	15,223.87
Pipe Removal	22,088.62	x	0.980	=	21,646.85
					Inflation Adjustment (2015) 113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	6.43	=	6.426	x	(195.00)	(1,253.06)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 26" Lines in Kentucky		
State	: Kentucky		
Pipe Dia.	: 26.000		
Pipe Length (mi)	: 0.01	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	4,014
2.	PIPELINE MATERIALS:	TB000	7,126
3.	CONSTRUCTION:	TC000	216,223
	a. Prime contract	TC100	216,219
	i) Pipeline Abandon in Place		96,560
	ii) Road Crossing		45,672
	iii) Valve Removals		32,187
	iv) Pipeline Removal		27,059
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		14,741
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	4
4.	PIPE SALVAGE COST:		(12)
5.	ENGINEERING: 2.25 %	TD000	5,161
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	6,881
7.	LAND - DAMAGES:	TF000	6,011
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	11,468
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	9
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(30)
11.	Sub-Total - Direct Cost		\$ 256,851
12.	Contingency: 10.00 %	TY000	25,685
13.	Sub-Total:		282,536
14.	Overhead: 4.00 %	TZ000	11,301
15.	Sub-Total:		293,837
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 293,837

Cost / Mile	\$	34,783,920
Cost / Foot	\$	6,587.86
Cost / Meter	0	21,613.73

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kentucky - 26"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		0.01	=	5
Abandonment Crew	16,093.27 / day	x	6	=	96,560
Roads Crossing Crew	15,223.87 / day	x	3	=	45,672
Valve Crew	16,093.27 / day	x	2	=	32,187
Pipeline Removal	27,058.56 / day	x	1	=	27,059
Launcher/Receiver Crew	16,093.27 / day	x	0	=	-
Pipeline Cleaning Crew	7,370.44 / day	x	2	=	14,741
Pipeline Crossing Crew	15,223.87 / day	x	0	=	-
Water Crossing Crew	15,223.87 / day	x	0	=	-
Gas Pump Down	0.01 miles	x	424.98	=	4

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

26" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	12.889 cy/road	x	1	=	12.89 total/cy	100.00	= 1,288.90
Steel Plate	4 pieces	x	4.6944	=	18.78 total/sf	5.30	= 99.52
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	833.37	= 5,000.22
Cleaning Compounds	54.1466 gal/mile/clean	x	0.01	=	0.46 total/gal.	30.00	= 13.72
Pipeline Fill Concrete	6.444 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	12.889 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			320.12
State Taxes			6.00	%			403.35
							7,126.00

Land Damages

Spot Dig Sites	4 # of digs	x	1,500.00	=	6,000.00	each dig = 50 ft
Footage of Removed Pipe	0.89 # of feet	x	12.00	=	10.70	damages = \$ 12.00 / ft
					6,010.70	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.980	=	16,093.27
Roads	15,534.56	x	0.980	=	15,223.87
Valves	16,421.70	x	0.980	=	16,093.27
Cleaning	7,520.85	x	0.980	=	7,370.44
Pipeline Crossing	15,534.56	x	0.980	=	15,223.87
Water Crossing	15,534.56	x	0.980	=	15,223.87
Pipe Removal	27,610.78	x	0.980	=	27,058.56
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.06	=	0.061	x	(195.00)	(11.85)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	---------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 30" Lines in Kentucky		
State	: Kentucky		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 229.49	PL Crossings	: 0
Roads	: 125	Water Crossings	: 49
Valves	: 16	Above Ground Facilities	: 0
Pipe Removal	: 4.59	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	212,656
2.	PIPELINE MATERIALS:	TB000	969,870
3.	CONSTRUCTION:	TC000	10,345,080
	a. Prime contract	TC100	10,247,552
	i) Pipeline Abandon in Place		482,798
	ii) Road Crossing		5,708,952
	iii) Valve Removals		514,985
	iv) Pipeline Removal		1,894,099
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		154,779
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,491,939
	b. Pipeline Pump Down Contract	TC600	97,528
4.	PIPE SALVAGE COST:		(372,564)
5.	ENGINEERING: 2.25 %	TD000	273,415
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	364,553
7.	LAND - DAMAGES:	TF000	836,809
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	607,588
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	336,795
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,094,585)
11.	Sub-Total - Direct Cost		\$ 12,479,617
12.	Contingency: 10.00 %	TY000	1,247,962
13.	Sub-Total:		13,727,579
14.	Overhead: 4.00 %	TZ000	549,103
15.	Sub-Total:		14,276,682
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 14,276,682

Cost / Mile	\$	62,211
Cost / Foot	\$	11.78
Cost / Meter	0	38.66

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kentucky - 30"

2% Percent of total mileage Removed
4.59 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		229.49	=	83
Abandonment Crew	16,093.27 / day	x	30	=	482,798
Roads Crossing Crew	15,223.87 / day	x	375	=	5,708,952
Valve Crew	16,093.27 / day	x	32	=	514,985
Pipeline Removal	33,823.20 / day	x	56	=	1,894,099
Launcher/Receiver Crew	16,093.27 / day	x	0	=	-
Pipeline Cleaning Crew	7,370.44 / day	x	21	=	154,779
Pipeline Crossing Crew	15,223.87 / day	x	0	=	-
Water Crossing Crew	15,223.87 / day	x	98	=	1,491,939
Gas Pump Down	229.49 miles	x	424.98	=	97,528

15 6 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water
30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	125	=	2,162.00 total/cy	100.00	=	216,200.00
Steel Plate	696 pieces	x	6.2500	=	4,350.00 total/sf	5.30	=	23,055.00
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	961.58	=	8,654.22
Cleaning Compounds	78.2522 gal/mile/clean	x	229.49	=	17,958.07 total/gal.	30.00	=	538,741.99
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	49	=	847.50 total/cy	100.00	=	84,750.40
Misc. Materials			5.00	%				43,570.08
State Taxes			6.00	%				54,898.30
								<u>969,870.00</u>

Land Damages

Spot Dig Sites	364 # of digs	x	1,500.00	=	546,000.00	each dig = 50 ft
Footage of Removed Pipe	24234.10 # of feet	x	12.00	=	290,809.23	damages = \$ 12.00 / ft
					<u>836,809.23</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.980	=	16,093.27
Roads	15,534.56	x	0.980	=	15,223.87
Valves	16,421.70	x	0.980	=	16,093.27
Cleaning	7,520.85	x	0.980	=	7,370.44
Pipeline Crossing	15,534.56	x	0.980	=	15,223.87
Water Crossing	15,534.56	x	0.980	=	15,223.87
Pipe Removal	34,513.47	x	0.980	=	33,823.20
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		1,910.59	=	1910.586	x (195.00) (372,564.33)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 36" Lines in Kentucky		
State	: Kentucky		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 43.86	PL Crossings	: 0
Roads	: 32	Water Crossings	: 5
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.88	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	50,892
2.	PIPELINE MATERIALS:	TB000	293,366
3.	CONSTRUCTION:	TC000	2,443,677
	a. Prime contract	TC100	2,425,039
	i) Pipeline Abandon in Place		96,560
	ii) Road Crossing		1,461,492
	iii) Valve Removals		96,560
	iv) Pipeline Removal		581,336
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		36,852
	vii) Pipeline Crossing		-
	viii) Water Crossing		152,239
	b. Pipeline Pump Down Contract	TC600	18,638
4.	PIPE SALVAGE COST:		(85,679)
5.	ENGINEERING: 2.25 %	TD000	65,433
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	87,244
7.	LAND - DAMAGES:	TF000	171,074
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	145,406
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	92,682
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(301,216)
11.	Sub-Total - Direct Cost		\$ 2,962,879
12.	Contingency: 10.00 %	TY000	296,288
13.	Sub-Total:		3,259,167
14.	Overhead: 4.00 %	TZ000	130,367
15.	Sub-Total:		3,389,534
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 3,389,534

Cost / Mile	\$	77,288
Cost / Foot	\$	14.64
Cost / Meter	0	48.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Kentucky - 36"

2% Percent of total mileage Removed
0.88 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		43.86	=	17
Abandonment Crew	16,093.27 / day	x	6	=	96,560
Roads Crossing Crew	15,223.87 / day	x	96	=	1,461,492
Valve Crew	16,093.27 / day	x	6	=	96,560
Pipeline Removal	52,848.75 / day	x	11	=	581,336
Launcher/Receiver Crew	16,093.27 / day	x	0	=	-
Pipeline Cleaning Crew	7,370.44 / day	x	5	=	36,852
Pipeline Crossing Crew	15,223.87 / day	x	0	=	-
Water Crossing Crew	15,223.87 / day	x	10	=	152,239
Gas Pump Down	43.86 miles	x	424.98	=	18,638

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	25.111 cy/road	x	32	=	803.55 total/cy	100.00	=	80,355.20
Steel Plate	148 pieces	x	9.0000	=	1,332.00 total/sf	5.30	=	7,059.60
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	=	3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	43.86	=	5,338.30 total/gal.	30.00	=	160,148.99
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	5	=	125.56 total/cy	100.00	=	12,555.50
Misc. Materials			5.00	%				13,179.05
State Taxes			6.00	%				16,605.60
								<u>293,366.00</u>

Land Damages

Spot Dig Sites	77 # of digs	x	1,500.00	=	115,500.00	each dig = 50 ft
Footage of Removed Pipe	4631.20 # of feet	x	12.00	=	55,574.40	damages = \$ 12.00 / ft
					<u>171,074.40</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.980	=	16,093.27
Roads	15,534.56	x	0.980	=	15,223.87
Valves	16,421.70	x	0.980	=	16,093.27
Cleaning	7,520.85	x	0.980	=	7,370.44
Pipeline Crossing	15,534.56	x	0.980	=	15,223.87
Water Crossing	15,534.56	x	0.980	=	15,223.87
Pipe Removal	53,927.30	x	0.980	=	52,848.75
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	439.38	=	439.379	x	(195.00)	(85,678.96)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 4.5" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 0.60	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,310
2.	PIPELINE MATERIALS:	TB000	983
3.	CONSTRUCTION:	TC000	184,390
	a. Prime contract	TC100	184,136
	i) Pipeline Abandon in Place		131,374
	ii) Road Crossing		31,069
	iii) Valve Removals		-
	iv) Pipeline Removal		6,651
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		15,042
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	254
4.	PIPE SALVAGE COST:		(131)
5.	ENGINEERING: 2.25 %	TD000	4,255
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	5,674
7.	LAND - DAMAGES:	TF000	3,757
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	9,456
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	20
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(64)
11.	Sub-Total - Direct Cost		\$ 211,649
12.	Contingency: 10.00 %	TY000	21,165
13.	Sub-Total:		232,814
14.	Overhead: 4.00 %	TZ000	9,313
15.	Sub-Total:		242,127
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 242,127

Cost / Mile	\$	405,350
Cost / Foot	\$	76.77
Cost / Meter	0	251.87

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 4.5"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.60	=	5
Abandonment Crew	16,421.70 / day	x	8	=	131,374
Roads Crossing Crew	15,534.56 / day	x	2	=	31,069
Valve Crew	16,421.70 / day	x	0	=	-
Pipeline Removal	6,650.74 / day	x	1	=	6,651
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	2	=	15,042
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	0	=	-
Gas Pump Down	0.60 miles	x	425.6	=	254

10 4 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost						
Road Fill Concrete	0.285 cy/road	x	1	=	0.29 total/cy	100.00	= 28.50
Steel Plate	4 pieces	x	0.1406	=	0.56 total/sf	5.30	= 2.98
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	144.24	= 865.44
Cleaning Compounds	0.2074 gal/mile/clean	x	0.60	=	0.12 total/gal.	30.00	= 3.72
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			45.03
State Taxes			4.00	%			37.83
							983.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	63.08 # of feet	x	12.00	=	756.94	damages = \$ 12.00 / ft
					3,756.94	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	6,650.74	x	1.000	=	6,650.74
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.67	=	0.674	x	(195.00)	(131.49)
------------------------------	--------------	-------------	------	---	-------	---	----------	----------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 6.625" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 11.74	PL Crossings	: 0
Roads	: 8	Water Crossings	: 9
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.23	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	12,575
2.	PIPELINE MATERIALS:	TB000	3,804
3.	CONSTRUCTION:	TC000	642,887
	a. Prime contract	TC100	637,890
	i) Pipeline Abandon in Place		180,639
	ii) Road Crossing		248,553
	iii) Valve Removals		32,843
	iv) Pipeline Removal		21,002
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		15,042
	vii) Pipeline Crossing		-
	viii) Water Crossing		139,811
	b. Pipeline Pump Down Contract	TC600	4,997
4.	PIPE SALVAGE COST:		(3,958)
5.	ENGINEERING: 2.25 %	TD000	16,168
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	21,557
7.	LAND - DAMAGES:	TF000	71,880
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	35,929
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	840
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,731)
11.	Sub-Total - Direct Cost		\$ 798,951
12.	Contingency: 10.00 %	TY000	79,895
13.	Sub-Total:		878,846
14.	Overhead: 4.00 %	TZ000	35,154
15.	Sub-Total:		914,000
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 914,000

Cost / Mile	\$	77,839
Cost / Foot	\$	14.74
Cost / Meter	0	48.37

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Louisiana - 6.625"

2% Percent of total mileage Removed
 0.23 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		11.74	=	8
Abandonment Crew	16,421.70 / day	x	11	=	180,639
Roads Crossing Crew	15,534.56 / day	x	16	=	248,553
Valve Crew	16,421.70 / day	x	2	=	32,843
Pipeline Removal	7,000.78 / day	x	3	=	21,002
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	2	=	15,042
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	9	=	139,811
Gas Pump Down	11.74 miles	x	425.6	=	4,997

15 6 Day M&D
 6 Mile/Day
 2 Days/Road or Pipeline
 2 Days/L&R
 0.5 Days/Valve
 12 Days/ Mile of Pipeline Removal
 9 Minimum Days / Segment
 1 Days/Water
 6.625" line equals 6 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

Materials	Unit Cost						
Road Fill Concrete	0.704 cy/road	x	8	=	5.63 total/cy	100.00	= 563.20
Steel Plate	68 pieces	x	0.3048	=	20.73 total/sf	5.30	= 109.85
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	212.35	= 1,911.15
Cleaning Compounds	0.7531 gal/mile/clean	x	11.74	=	8.84 total/gal.	30.00	= 265.29
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.704 cy/pipeline	x	9	=	6.34 total/cy	100.00	= 633.60
Misc. Materials			5.00	%			174.15
State Taxes			4.00	%			146.29
							3,804.00

Land Damages

Spot Dig Sites	38 # of digs	x	1,500.00	=	57,000.00	each dig = 50 ft
Footage of Removed Pipe	1239.98 # of feet	x	12.00	=	14,879.76	damages = \$ 12.00 / ft
					71,879.76	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	7,000.78	x	1.000	=	7,000.78
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	20.30	=	20.297	x	(195.00)	(3,957.98)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 8.625" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 41.75	PL Crossings	: 0
Roads	: 24	Water Crossings	: 17
Valves	: 7	Above Ground Facilities	: 0
Pipe Removal	: 0.84	# of Line Segments	: 9

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	34,796
2.	PIPELINE MATERIALS:	TB000	16,678
3.	CONSTRUCTION:	TC000	1,785,249
	a. Prime contract	TC100	1,767,480
	i) Pipeline Abandon in Place		558,338
	ii) Road Crossing		745,659
	iii) Valve Removals		65,687
	iv) Pipeline Removal		81,062
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		52,646
	vii) Pipeline Crossing		-
	viii) Water Crossing		264,088
	b. Pipeline Pump Down Contract	TC600	17,769
4.	PIPE SALVAGE COST:		(18,669)
5.	ENGINEERING: 2.25 %	TD000	44,738
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	59,650
7.	LAND - DAMAGES:	TF000	186,408
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	99,417
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	5,065
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(16,460)
11.	Sub-Total - Direct Cost		\$ 2,196,872
12.	Contingency: 10.00 %	TY000	219,687
13.	Sub-Total:		2,416,559
14.	Overhead: 4.00 %	TZ000	96,662
15.	Sub-Total:		2,513,221
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,513,221

Cost / Mile	\$	60,195
Cost / Foot	\$	11.40
Cost / Meter	0	37.40

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 8.625"

2% Percent of total mileage Removed
0.84 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		41.75	=	25
Abandonment Crew	16,421.70 / day	x	34	=	558,338
Roads Crossing Crew	15,534.56 / day	x	48	=	745,659
Valve Crew	16,421.70 / day	x	4	=	65,687
Pipeline Removal	7,369.25 / day	x	11	=	81,062
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	7	=	52,646
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	17	=	264,088
Gas Pump Down	41.75 miles	x	425.6	=	17,769

45 18 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
27 Minimum Days / Segment
1 Days/Water

8.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	1.259 cy/road	x	24	=	30.22 total/cy	100.00	=	3,021.60
Steel Plate	164 pieces	x	0.5166	=	84.72 total/sf	5.30	=	449.03
Cleaning Pigs	3 pig/cleaning	x	9	=	27 total pigs	276.45	=	7,464.15
Cleaning Compounds	1.7547 gal/mile/clean	x	41.75	=	73.26 total/gal.	30.00	=	2,197.85
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	1.259 cy/pipeline	x	17	=	21.40 total/cy	100.00	=	2,140.30
Misc. Materials			5.00	%				763.65
State Taxes			4.00	%				641.46
								16,678.00

Land Damages

Spot Dig Sites	89 # of digs	x	1,500.00	=	133,500.00	each dig = 50 ft
Footage of Removed Pipe	4408.97 # of feet	x	12.00	=	52,907.63	damages = \$ 12.00 / ft
					186,407.63	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	7,369.25	x	1.000	=	7,369.25
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	95.74	=	95.737	x	(195.00)	(18,668.64)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 10.75" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 14.53	PL Crossings	: 0
Roads	: 15	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.29	# of Line Segments	: 4

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	15,447
2.	PIPELINE MATERIALS:	TB000	9,815
3.	CONSTRUCTION:	TC000	804,981
	a. Prime contract	TC100	798,797
	i) Pipeline Abandon in Place		246,326
	ii) Road Crossing		466,037
	iii) Valve Removals		32,843
	iv) Pipeline Removal		31,028
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		22,563
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	6,184
4.	PIPE SALVAGE COST:		(8,196)
5.	ENGINEERING: 2.25 %	TD000	19,861
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	26,481
7.	LAND - DAMAGES:	TF000	67,913
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	44,135
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,738
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(8,899)
11.	Sub-Total - Direct Cost		\$ 974,276
12.	Contingency: 10.00 %	TY000	97,428
13.	Sub-Total:		1,071,704
14.	Overhead: 4.00 %	TZ000	42,868
15.	Sub-Total:		1,114,572
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,114,572

Cost / Mile	\$	76,706
Cost / Foot	\$	14.53
Cost / Meter	0	47.66

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 10.75"

2% Percent of total mileage Removed
0.29 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		14.53	=	11
Abandonment Crew	16,421.70 / day	x	15	=	246,326
Roads Crossing Crew	15,534.56 / day	x	30	=	466,037
Valve Crew	16,421.70 / day	x	2	=	32,843
Pipeline Removal	7,757.10 / day	x	4	=	31,028
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	3	=	22,563
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	0	=	-
Gas Pump Down	14.53 miles	x	425.6	=	6,184

20 8 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
12 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	15	=	30.56 total/cy	100.00	= 3,055.50
Steel Plate	60 pieces	x	0.8025	=	48.15 total/sf	5.30	= 255.20
Cleaning Pigs	3 pig/cleaning	x	4	=	12 total pigs	344.57	= 4,134.84
Cleaning Compounds	3.538 gal/mile/clean	x	14.53	=	51.41 total/gal.	30.00	= 1,542.25
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			449.39
State Taxes			4.00	%			377.49
							9,815.00

Land Damages

Spot Dig Sites	33 # of digs	x	1,500.00	=	49,500.00	each dig = 50 ft
Footage of Removed Pipe	1534.41 # of feet	x	12.00	=	18,412.88	damages = \$ 12.00 / ft
					67,912.88	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	7,757.10	x	1.000	=	7,757.10
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	42.03	=	42.032	x	(195.00)	=	(8,196.28)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	---	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 12.75" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 59.53	PL Crossings	: 0
Roads	: 7	Water Crossings	: 15
Valves	: 15	Above Ground Facilities	: 0
Pipe Removal	: 1.19	# of Line Segments	: 9

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	29,653
2.	PIPELINE MATERIALS:	TB000	31,410
3.	CONSTRUCTION:	TC000	1,499,107
	a. Prime contract	TC100	1,473,772
	i) Pipeline Abandon in Place		476,229
	ii) Road Crossing		217,484
	iii) Valve Removals		131,374
	iv) Pipeline Removal		122,481
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		60,167
	vii) Pipeline Crossing		-
	viii) Water Crossing		466,037
	b. Pipeline Pump Down Contract	TC600	25,335
4.	PIPE SALVAGE COST:		(40,131)
5.	ENGINEERING: 2.25 %	TD000	38,125
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	50,834
7.	LAND - DAMAGES:	TF000	163,935
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	84,723
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	15,780
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(51,285)
11.	Sub-Total - Direct Cost		\$ 1,822,151
12.	Contingency: 10.00 %	TY000	182,215
13.	Sub-Total:		2,004,366
14.	Overhead: 4.00 %	TZ000	80,175
15.	Sub-Total:		2,084,541
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,084,541

Cost / Mile	\$	35,018
Cost / Foot	\$	6.63
Cost / Meter	0	21.76

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 12.75"

2% Percent of total mileage Removed
1.19 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		59.53	=	30
Abandonment Crew	16,421.70 / day	x	29	=	476,229
Roads Crossing Crew	15,534.56 / day	x	14	=	217,484
Valve Crew	16,421.70 / day	x	8	=	131,374
Pipeline Removal	8,165.37 / day	x	15	=	122,481
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	8	=	60,167
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	30	=	466,037
Gas Pump Down	59.53 miles	x	425.6	=	25,335

45 18 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
27 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	2.926 cy/road	x	7	=	20.48 total/cy	100.00	=	2,048.20
Steel Plate	88 pieces	x	1.1289	=	99.34 total/sf	5.30	=	526.52
Cleaning Pigs	3 pig/cleaning	x	9	=	27 total pigs	408.67	=	11,034.09
Cleaning Compounds	6.0282 gal/mile/clean	x	59.53	=	358.85 total/gal.	30.00	=	10,765.49
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	2.926 cy/pipeline	x	15	=	43.89 total/cy	100.00	=	4,389.00
Misc. Materials			5.00	%				1,438.17
State Taxes			4.00	%				1,208.06
								31,410.00

Land Damages

Spot Dig Sites	59 # of digs	x	1,500.00	=	88,500.00	each dig = 50 ft
Footage of Removed Pipe	6286.21 # of feet	x	12.00	=	75,434.52	damages = \$ 12.00 / ft
					163,934.52	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	8,165.37	x	1.000	=	8,165.37
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	205.80	=	205.799	x	(195.00)	(40,130.75)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 16" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 103.57	PL Crossings	: 0
Roads	: 6	Water Crossings	: 71
Valves	: 10	Above Ground Facilities	: 0
Pipe Removal	: 2.07	# of Line Segments	: 14

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	73,170
2.	PIPELINE MATERIALS:	TB000	107,503
3.	CONSTRUCTION:	TC000	3,696,400
	a. Prime contract	TC100	3,652,319
	i) Pipeline Abandon in Place		771,820
	ii) Road Crossing		186,415
	iii) Valve Removals		164,217
	iv) Pipeline Removal		226,188
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		97,771
	vii) Pipeline Crossing		-
	viii) Water Crossing		2,205,908
	b. Pipeline Pump Down Contract	TC600	44,081
4.	PIPE SALVAGE COST:		(88,349)
5.	ENGINEERING: 2.25 %	TD000	94,076
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	125,435
7.	LAND - DAMAGES:	TF000	377,250
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	209,058
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	43,237
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(140,520)
11.	Sub-Total - Direct Cost		\$ 4,497,260
12.	Contingency: 10.00 %	TY000	449,726
13.	Sub-Total:		4,946,986
14.	Overhead: 4.00 %	TZ000	197,879
15.	Sub-Total:		5,144,865
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,144,865

Cost / Mile	\$	49,673
Cost / Foot	\$	9.41
Cost / Meter	0	30.87

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 16"

2% Percent of total mileage Removed
2.07 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		103.57	=	49
Abandonment Crew	16,421.70 / day	x	47	=	771,820
Roads Crossing Crew	15,534.56 / day	x	12	=	186,415
Valve Crew	16,421.70 / day	x	10	=	164,217
Pipeline Removal	9,047.50 / day	x	25	=	226,188
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	13	=	97,771
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	142	=	2,205,908
Gas Pump Down	103.57 miles	x	425.6	=	44,081

70 28 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
42 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	6	=	28.22 total/cy	100.00	=	2,822.40
Steel Plate	308 pieces	x	1.7778	=	547.56 total/sf	5.30	=	2,902.08
Cleaning Pigs	3 pig/cleaning	x	14	=	42 total pigs	512.84	=	21,539.28
Cleaning Compounds	12.16 gal/mile/clean	x	103.57	=	1,259.47 total/gal.	30.00	=	37,784.05
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	71	=	333.98 total/cy	100.00	=	33,398.40
Misc. Materials			5.00	%				4,922.31
State Taxes			4.00	%				4,134.74
								<u>107,503.00</u>

Land Damages

Spot Dig Sites	164 # of digs	x	1,500.00	=	246,000.00	each dig = 50 ft
Footage of Removed Pipe	10937.49 # of feet	x	12.00	=	131,249.87	damages = \$ 12.00 / ft
					<u>377,249.87</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70	\$ 14,494.00
Roads	15,534.56	x	1.000	=	15,534.56	\$ 13,711.00
Valves	16,421.70	x	1.000	=	16,421.70	\$ 14,494.00
Cleaning	7,520.85	x	1.000	=	7,520.85	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56	\$ 13,711.00
Water Crossing	15,534.56	x	1.000	=	15,534.56	\$ 13,711.00
Pipe Removal	9,047.50	x	1.000	=	9,047.50	\$ 53,927.30
						Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	453.07	=	453.072	x	(195.00)	(88,349.01)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 20" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 130.90	PL Crossings	: 0
Roads	: 44	Water Crossings	: 59
Valves	: 9	Above Ground Facilities	: 0
Pipe Removal	: 2.62	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	99,632
2.	PIPELINE MATERIALS:	TB000	204,949
3.	CONSTRUCTION:	TC000	4,999,950
	a. Prime contract	TC100	4,944,238
	i) Pipeline Abandon in Place		377,699
	ii) Road Crossing		2,050,562
	iii) Valve Removals		147,795
	iv) Pipeline Removal		452,375
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		82,729
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,833,078
	b. Pipeline Pump Down Contract	TC600	55,712
4.	PIPE SALVAGE COST:		(140,474)
5.	ENGINEERING: 2.25 %	TD000	128,099
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	170,798
7.	LAND - DAMAGES:	TF000	488,379
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	284,664
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	85,382
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(277,491)
11.	Sub-Total - Direct Cost		\$ 6,043,887
12.	Contingency: 10.00 %	TY000	604,389
13.	Sub-Total:		6,648,276
14.	Overhead: 4.00 %	TZ000	265,931
15.	Sub-Total:		6,914,207
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 6,914,207

Cost / Mile	\$	52,820
Cost / Foot	\$	10.00
Cost / Meter	0	32.82

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 20"

2% Percent of total mileage Removed
2.62 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		130.90	=	43
Abandonment Crew	16,421.70 / day	x	23	=	377,699
Roads Crossing Crew	15,534.56 / day	x	132	=	2,050,562
Valve Crew	16,421.70 / day	x	9	=	147,795
Pipeline Removal	14,136.72 / day	x	32	=	452,375
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	11	=	82,729
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	118	=	1,833,078
Gas Pump Down	130.90 miles	x	425.6	=	55,712

25 10 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	44	=	329.16 total/cy	100.00	= 32,916.40
Steel Plate	412 pieces	x	2.7778	=	1,144.45 total/sf	5.30	= 6,065.60
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	641.05	= 9,615.75
Cleaning Compounds	24.1776 gal/mile/clean	x	130.90	=	3,164.89 total/gal.	30.00	= 94,946.72
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	59	=	441.38 total/cy	100.00	= 44,137.90
Misc. Materials			5.00	%			9,384.12
State Taxes			4.00	%			7,882.66
							<u>204,949.00</u>

Land Damages

Spot Dig Sites	215 # of digs	x	1,500.00	=	322,500.00	each dig = 50 ft
Footage of Removed Pipe	13823.23 # of feet	x	12.00	=	165,878.72	damages = \$ 12.00 / ft
					<u>488,378.72</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	14,136.72	x	1.000	=	14,136.72
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		720.38	=	720.380	x (195.00) (140,474.13)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 24" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 103.87	PL Crossings	: 0
Roads	: 47	Water Crossings	: 49
Valves	: 14	Above Ground Facilities	: 0
Pipe Removal	: 2.08	# of Line Segments	: 7

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	98,051
2.	PIPELINE MATERIALS:	TB000	285,247
3.	CONSTRUCTION:	TC000	4,877,045
	a. Prime contract	TC100	4,832,836
	i) Pipeline Abandon in Place		262,747
	ii) Road Crossing		2,190,373
	iii) Valve Removals		229,904
	iv) Pipeline Removal		552,216
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		75,209
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,522,387
	b. Pipeline Pump Down Contract	TC600	44,209
4.	PIPE SALVAGE COST:		(134,336)
5.	ENGINEERING: 2.25 %	TD000	126,066
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	168,088
7.	LAND - DAMAGES:	TF000	440,630
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	280,146
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	97,564
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(317,084)
11.	Sub-Total - Direct Cost		\$ 5,921,416
12.	Contingency: 10.00 %	TY000	592,142
13.	Sub-Total:		6,513,558
14.	Overhead: 4.00 %	TZ000	260,542
15.	Sub-Total:		6,774,100
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 6,774,100

Cost / Mile	\$	65,214
Cost / Foot	\$	12.35
Cost / Meter	0	40.52

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Louisiana - 24"

2% Percent of total mileage Removed
 2.08 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		103.87		40
Abandonment Crew	16,421.70 / day	x	16	=	262,747
Roads Crossing Crew	15,534.56 / day	x	141	=	2,190,373
Valve Crew	16,421.70 / day	x	14	=	229,904
Pipeline Removal	22,088.62 / day	x	25	=	552,216
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	10	=	75,209
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	98	=	1,522,387
Gas Pump Down	103.87 miles	x	425.6	=	44,209

35 14 Day M&D
 4 Mile/Day
 3 Days/Road or Pipeline
 4 Days/L&R
 1 Days/Valve
 12 Days/ Mile of Pipeline Removal
 21 Minimum Days / Segment
 2 Days/Water
 24" line equals 4 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	47	=	513.52 total/cy	100.00	= 51,352.20
Steel Plate	384 pieces	x	4.0000	=	1,536.00 total/sf	5.30	= 8,140.80
Cleaning Pigs	3 pig/cleaning	x	7	=	21 total pigs	769.27	= 16,154.67
Cleaning Compounds	42.3686 gal/mile/clean	x	103.87	=	4,401.01 total/gal.	30.00	= 132,030.34
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	49	=	535.37 total/cy	100.00	= 53,537.40
Misc. Materials			5.00	%			13,060.77
State Taxes			4.00	%			10,971.05
							285,247.00

Land Damages

Spot Dig Sites	206 # of digs	x	1,500.00	=	309,000.00	each dig = 50 ft
Footage of Removed Pipe	10969.13 # of feet	x	12.00	=	131,629.59	damages = \$ 12.00 / ft
					440,629.59	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	22,088.62	x	1.000	=	22,088.62
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		688.90	=	688.903 x	(195.00) (134,336.02)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 26" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 26.000		
Pipe Length (mi)	: 56.34	PL Crossings	: 0
Roads	: 31	Water Crossings	: 43
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 1.13	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	70,015
2.	PIPELINE MATERIALS:	TB000	220,316
3.	CONSTRUCTION:	TC000	3,482,663
	a. Prime contract	TC100	3,458,687
	i) Pipeline Abandon in Place		197,060
	ii) Road Crossing		1,444,714
	iii) Valve Removals		49,265
	iv) Pipeline Removal		386,551
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		45,125
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,335,972
	b. Pipeline Pump Down Contract	TC600	23,976
4.	PIPE SALVAGE COST:		(79,057)
5.	ENGINEERING: 2.25 %	TD000	90,020
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	120,026
7.	LAND - DAMAGES:	TF000	297,888
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	200,043
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	62,100
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(201,824)
11.	Sub-Total - Direct Cost		\$ 4,262,191
12.	Contingency: 10.00 %	TY000	426,219
13.	Sub-Total:		4,688,410
14.	Overhead: 4.00 %	TZ000	187,536
15.	Sub-Total:		4,875,946
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,875,946

Cost / Mile	\$	86,552
Cost / Foot	\$	16.39
Cost / Meter	0	53.78

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 26"

2% Percent of total mileage Removed
1.13 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		56.34	=	21
Abandonment Crew	16,421.70 / day	x	12	=	197,060
Roads Crossing Crew	15,534.56 / day	x	93	=	1,444,714
Valve Crew	16,421.70 / day	x	3	=	49,265
Pipeline Removal	27,610.78 / day	x	14	=	386,551
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	6	=	45,125
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	86	=	1,335,972
Gas Pump Down	56.34 miles	x	425.6	=	23,976

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

26" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	12.889 cy/road	x	31	=	399.56 total/cy	100.00	=	39,955.90
Steel Plate	296 pieces	x	4.6944	=	1,389.54 total/sf	5.30	=	7,364.57
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	833.37	=	7,500.33
Cleaning Compounds	54.1466 gal/mile/clean	x	56.34	=	3,050.37 total/gal.	30.00	=	91,511.14
Pipeline Fill Concrete	6.444 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	12.889 cy/pipeline	x	43	=	554.23 total/cy	100.00	=	55,422.70
Misc. Materials			5.00	%				10,087.73
State Taxes			4.00	%				8,473.69
								<u>220,316.00</u>

Land Damages

Spot Dig Sites	151 # of digs	x	1,500.00	=	226,500.00	each dig = 50 ft
Footage of Removed Pipe	5949.02 # of feet	x	12.00	=	71,388.24	damages = \$ 12.00 / ft
					<u>297,888.24</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	27,610.78	x	1.000	=	27,610.78
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		405.42	=	405.418	x (195.00) (79,056.56)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 30" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 598.17	PL Crossings	: 0
Roads	: 279	Water Crossings	: 247
Valves	: 54	Above Ground Facilities	: 0
Pipe Removal	: 11.96	# of Line Segments	: 14

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	598,534
2.	PIPELINE MATERIALS:	TB000	2,647,103
3.	CONSTRUCTION:	TC000	29,137,823
	a. Prime contract	TC100	28,883,243
	i) Pipeline Abandon in Place		1,034,567
	ii) Road Crossing		13,002,429
	iii) Valve Removals		1,773,544
	iv) Pipeline Removal		4,969,940
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		428,689
	vii) Pipeline Crossing		-
	viii) Water Crossing		7,674,074
	b. Pipeline Pump Down Contract	TC600	254,580
4.	PIPE SALVAGE COST:		(971,092)
5.	ENGINEERING: 2.25 %	TD000	769,543
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	1,026,058
7.	LAND - DAMAGES:	TF000	2,416,997
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,710,096
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	877,860
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,853,046)
11.	Sub-Total - Direct Cost		\$ 35,359,875
12.	Contingency: 10.00 %	TY000	3,535,988
13.	Sub-Total:		38,895,863
14.	Overhead: 4.00 %	TZ000	1,555,835
15.	Sub-Total:		40,451,698
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 40,451,698

Cost / Mile	\$	67.626
Cost / Foot	\$	12.81
Cost / Meter	0	42.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 30"

2% Percent of total mileage Removed
11.96 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		598.17	=	228
Abandonment Crew	16,421.70 / day	x	63	=	1,034,567
Roads Crossing Crew	15,534.56 / day	x	837	=	13,002,429
Valve Crew	16,421.70 / day	x	108	=	1,773,544
Pipeline Removal	34,513.47 / day	x	144	=	4,969,940
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	57	=	428,689
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	494	=	7,674,074
Gas Pump Down	598.17 miles	x	425.6	=	254,580

70 28 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
42 Minimum Days / Segment
2 Days/Water
30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	279	=	4,825.58 total/cy	100.00	=	482,558.40
Steel Plate	2104 pieces	x	6.2500	=	13,150.00 total/sf	5.30	=	69,695.00
Cleaning Pigs	3 pig/cleaning	x	14	=	42 total pigs	961.58	=	40,386.36
Cleaning Compounds	78.2522 gal/mile/clean	x	598.17	=	46,807.87 total/gal.	30.00	=	1,404,235.95
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	247	=	4,272.11 total/cy	100.00	=	427,211.20
Misc. Materials			5.00	%				121,204.35
State Taxes			4.00	%				101,811.65
								<u>2,647,103.00</u>

Land Damages

Spot Dig Sites	1106 # of digs	x	1,500.00	=	1,659,000.00	each dig = 50 ft
Footage of Removed Pipe	63166.41 # of feet	x	12.00	=	757,996.92	damages = \$ 12.00 / ft
					<u>2,416,996.92</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	34,513.47	x	1.000	=	34,513.47
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		4,979.96	=	4979.961	x	(195.00) (971,092.36)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 36" Lines in Louisiana		
State	: Louisiana		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 66.36	PL Crossings	: 0
Roads	: 39	Water Crossings	: 31
Valves	: 12	Above Ground Facilities	: 0
Pipe Removal	: 1.33	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	84,123
2.	PIPELINE MATERIALS:	TB000	474,938
3.	CONSTRUCTION:	TC000	4,020,004
	a. Prime contract	TC100	3,991,761
	i) Pipeline Abandon in Place		(98,530)
	ii) Road Crossing		1,817,544
	iii) Valve Removals		394,121
	iv) Pipeline Removal		862,837
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		52,646
	vii) Pipeline Crossing		-
	viii) Water Crossing		963,143
	b. Pipeline Pump Down Contract	TC600	28,243
4.	PIPE SALVAGE COST:		(129,645)
5.	ENGINEERING: 2.25 %	TD000	108,158
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	144,211
7.	LAND - DAMAGES:	TF000	312,093
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	240,352
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	140,242
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(455,787)
11.	Sub-Total - Direct Cost		\$ 4,938,688
12.	Contingency: 10.00 %	TY000	493,869
13.	Sub-Total:		5,432,557
14.	Overhead: 4.00 %	TZ000	217,302
15.	Sub-Total:		5,649,859
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,649,859

Cost / Mile	\$	85,138
Cost / Foot	\$	16.12
Cost / Meter	0	52.90

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Louisiana - 36"

2% Percent of total mileage Removed
1.33 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		66.36	=	25
Abandonment Crew	16,421.70 / day	x	(6)	=	(98,530)
Roads Crossing Crew	15,534.56 / day	x	117	=	1,817,544
Valve Crew	16,421.70 / day	x	24	=	394,121
Pipeline Removal	53,927.30 / day	x	16	=	862,837
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	7	=	52,646
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	62	=	963,143
Gas Pump Down	66.36 miles	x	425.6	=	28,243

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	25.111 cy/road	x	39	=	979.33 total/cy	100.00	=	97,932.90
Steel Plate	280 pieces	x	9.0000	=	2,520.00 total/sf	5.30	=	13,356.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	=	3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	66.36	=	8,077.67 total/gal.	30.00	=	242,330.14
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	31	=	778.44 total/cy	100.00	=	77,844.10
Misc. Materials			5.00	%				21,746.24
State Taxes			4.00	%				18,266.84
								<u>474,938.00</u>

Land Damages

Spot Dig Sites	152 # of digs	x	1,500.00	=	228,000.00	each dig = 50 ft
Footage of Removed Pipe	7007.72 # of feet	x	12.00	=	84,092.64	damages = \$ 12.00 / ft
					<u>312,092.64</u>	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	53,927.30	x	1.000	=	53,927.30
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		664.85	=	664.849	x (195.00) (129,645.49)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 3.5" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 3.500		
Pipe Length (mi)	: 0.38	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 86	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 139

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	228,714
2.	PIPELINE MATERIALS:	TB000	52,085
3.	CONSTRUCTION:	TC000	12,884,780
	a. Prime contract	TC100	12,884,618
	i) Pipeline Abandon in Place		11,373,342
	ii) Road Crossing		36,972
	iii) Valve Removals		840,298
	iv) Pipeline Removal		7,519
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		626,487
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	162
4.	PIPE SALVAGE COST:		(63)
5.	ENGINEERING: 2.25 %	TD000	294,060
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	392,080
7.	LAND - DAMAGES:	TF000	132,483
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	653,467
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	8
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(25)
11.	Sub-Total - Direct Cost		\$ 14,637,589
12.	Contingency: 10.00 %	TY000	1,463,759
13.	Sub-Total:		16,101,348
14.	Overhead: 4.00 %	TZ000	644,054
15.	Sub-Total:		16,745,402
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 16,745,402

Cost / Mile	\$	43,943,099
Cost / Foot	\$	8,322.56
Cost / Meter	0	27,304.98

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 3.5"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.38		279
Abandonment Crew	19,541.83 / day	x	582	=	11,373,342
Roads Crossing Crew	18,486.13 / day	x	2	=	36,972
Valve Crew	19,541.83 / day	x	43	=	840,298
Pipeline Removal	7,518.67 / day	x	1	=	7,519
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	70	=	626,487
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	0.38 miles	x	425.41	=	162

278 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
417 Minimum Days / Segment
1 Days/Water

3.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.152 cy/road	x	1	=	0.15 total/cy	100.00	= 15.20
Steel Plate	4 pieces	x	0.0851	=	0.34 total/sf	5.30	= 1.80
Cleaning Pigs	3 pig/cleaning	x	139	=	417 total pigs	112.18	= 46,779.06
Cleaning Compounds	0.086 gal/mile/clean	x	0.38	=	0.03 total/gal.	30.00	= 0.98
Pipeline Fill Concrete	0.076 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.152 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			2,339.85
State Taxes			6.00	%			2,948.21
							52,085.00

Land Damages

Spot Dig Sites	88 # of digs	x	1,500.00	=	132,000.00	each dig = 50 ft
Footage of Removed Pipe	40.24 # of feet	x	12.00	=	482.89	damages = \$ 12.00 / ft
					132,482.89	

Contract Labour Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	6,318.21	x	1.190	=	7,518.67
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.32	=	0.323	x	(195.00)	(62.91)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	---------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 4.5" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 40.11	PL Crossings	: 0
Roads	: 43	Water Crossings	: 6
Valves	: 7	Above Ground Facilities	: 0
Pipe Removal	: 0.80	# of Line Segments	: 14

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	57,515
2.	PIPELINE MATERIALS:	TB000	8,737
3.	CONSTRUCTION:	TC000	3,069,529
	a. Prime contract	TC100	3,052,467
	i) Pipeline Abandon in Place		1,113,884
	ii) Road Crossing		1,589,807
	iii) Valve Removals		78,167
	iv) Pipeline Removal		79,144
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		80,548
	vii) Pipeline Crossing		-
	viii) Water Crossing		110,917
	b. Pipeline Pump Down Contract	TC600	17,062
4.	PIPE SALVAGE COST:		(8,829)
5.	ENGINEERING: 2.25 %	TD000	73,948
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	98,598
7.	LAND - DAMAGES:	TF000	208,325
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	164,330
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,324
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(4,304)
11.	Sub-Total - Direct Cost		\$ 3,669,173
12.	Contingency: 10.00 %	TY000	366,917
13.	Sub-Total:		4,036,090
14.	Overhead: 4.00 %	TZ000	161,444
15.	Sub-Total:		4,197,534
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,197,534

Cost / Mile	\$	104,655
Cost / Foot	\$	19.82
Cost / Meter	0	65.03

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 4.5"

2% Percent of total mileage Removed
0.80 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		40.11	=	35
Abandonment Crew	19,541.83 / day	x	57	=	1,113,884
Roads Crossing Crew	18,486.13 / day	x	86	=	1,589,807
Valve Crew	19,541.83 / day	x	4	=	78,167
Pipeline Removal	7,914.39 / day	x	10	=	79,144
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	9	=	80,548
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	6	=	110,917
Gas Pump Down	40.11 miles	x	425.41	=	17,062

70 28 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
42 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	43	=	12.26 total/cy	100.00	= 1,225.50
Steel Plate	196 pieces	x	0.1406	=	27.56 total/sf	5.30	= 146.06
Cleaning Pigs	3 pig/cleaning	x	14	=	42 total pigs	144.24	= 6,058.08
Cleaning Compounds	0.2074 gal/mile/clean	x	40.11	=	8.32 total/gal.	30.00	= 249.55
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	6	=	1.71 total/cy	100.00	= 171.00
Misc. Materials			5.00	%			392.51
State Taxes			6.00	%			494.56
							8,737.00

Land Damages

Spot Dig Sites	105 # of digs	x	1,500.00	=	157,500.00	each dig = 50 ft
Footage of Removed Pipe	4235.42 # of feet	x	12.00	=	50,825.00	damages = \$ 12.00 / ft
					208,325.00	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	6,650.74	x	1.190	=	7,914.39
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	45.28	=	45.277	x	(195.00)	(8,828.94)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 6.625" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 97.25	PL Crossings	: 0
Roads	: 139	Water Crossings	: 11
Valves	: 28	Above Ground Facilities	: 0
Pipe Removal	: 1.95	# of Line Segments	: 14

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	130,639
2.	PIPELINE MATERIALS:	TB000	25,204
3.	CONSTRUCTION:	TC000	6,824,629
	a. Prime contract	TC100	6,783,257
	i) Pipeline Abandon in Place		859,840
	ii) Road Crossing		5,139,144
	iii) Valve Removals		273,586
	iv) Pipeline Removal		199,942
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		107,398
	vii) Pipeline Crossing		-
	viii) Water Crossing		203,347
	b. Pipeline Pump Down Contract	TC600	41,372
4.	PIPE SALVAGE COST:		(32,781)
5.	ENGINEERING: 2.25 %	TD000	167,964
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	223,952
7.	LAND - DAMAGES:	TF000	615,236
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	373,253
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	6,960
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(22,621)
11.	Sub-Total - Direct Cost		\$ 8,312,436
12.	Contingency: 10.00 %	TY000	831,244
13.	Sub-Total:		9,143,680
14.	Overhead: 4.00 %	TZ000	365,747
15.	Sub-Total:		9,509,427
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 9,509,427

Cost / Mile	\$	97,782
Cost / Foot	\$	18.52
Cost / Meter	0	60.76

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 6.625"

2% Percent of total mileage Removed
1.95 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		97.25	=	45
Abandonment Crew	19,541.83 / day	x	44	=	859,840
Roads Crossing Crew	18,486.13 / day	x	278	=	5,139,144
Valve Crew	19,541.83 / day	x	14	=	273,586
Pipeline Removal	8,330.93 / day	x	24	=	199,942
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	12	=	107,398
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	11	=	203,347
Gas Pump Down	97.25 miles	x	425.41	=	41,372

70 28 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
42 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost							
Road Fill Concrete	0.704 cy/road	x	139	=	97.86 total/cy	100.00	=	9,785.60
Steel Plate	600 pieces	x	0.3048	=	182.88 total/sf	5.30	=	969.26
Cleaning Pigs	3 pig/cleaning	x	14	=	42 total pigs	212.35	=	8,918.70
Cleaning Compounds	0.7531 gal/mile/clean	x	97.25	=	73.24 total/gal.	30.00	=	2,197.19
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.704 cy/pipeline	x	11	=	7.74 total/cy	100.00	=	774.40
Misc. Materials			5.00	%				1,132.26
State Taxes			6.00	%				1,426.64
								<u>25,204.00</u>

Land Damages

Spot Dig Sites	328 # of digs	x	1,500.00	=	492,000.00	each dig = 50 ft
Footage of Removed Pipe	10269.69 # of feet	x	12.00	=	123,236.33	damages = \$ 12.00 / ft
					<u>615,236.33</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	7,000.78	x	1.190	=	8,330.93
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		168.11	=	168.105	x (195.00) (32,780.53)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 8.625" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 29.58	PL Crossings	: 0
Roads	: 44	Water Crossings	: 2
Valves	: 15	Above Ground Facilities	: 0
Pipe Removal	: 0.59	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	38,803
2.	PIPELINE MATERIALS:	TB000	11,509
3.	CONSTRUCTION:	TC000	2,007,840
	a. Prime contract	TC100	1,995,257
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		1,626,779
	iii) Valve Removals		156,335
	iv) Pipeline Removal		70,155
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		26,849
	vii) Pipeline Crossing		-
	viii) Water Crossing		36,972
	b. Pipeline Pump Down Contract	TC600	12,583
4.	PIPE SALVAGE COST:		(13,226)
5.	ENGINEERING: 2.25 %	TD000	49,890
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	66,520
7.	LAND - DAMAGES:	TF000	197,983
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	110,867
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,588
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(11,661)
11.	Sub-Total - Direct Cost		\$ 2,462,113
12.	Contingency: 10.00 %	TY000	246,211
13.	Sub-Total:		2,708,324
14.	Overhead: 4.00 %	TZ000	108,333
15.	Sub-Total:		2,816,657
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,816,657

Cost / Mile	\$	95,224
Cost / Foot	\$	18.03
Cost / Meter	0	59.17

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 8.625"

2% Percent of total mileage Removed
0.59 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		29.58	=	11
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	88	=	1,626,779
Valve Crew	19,541.83 / day	x	8	=	156,335
Pipeline Removal	8,769.40 / day	x	8	=	70,155
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	3	=	26,849
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	2	=	36,972
Gas Pump Down	29.58 miles	x	425.41	=	12,583

15 6 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
1 Days/Water

8.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	1.259 cy/road	x	44	=	55.40 total/cy	100.00	= 5,539.60
Steel Plate	184 pieces	x	0.5166	=	95.05 total/sf	5.30	= 503.79
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	276.45	= 2,488.05
Cleaning Compounds	1.7547 gal/mile/clean	x	29.58	=	51.90 total/gal.	30.00	= 1,557.08
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	1.259 cy/pipeline	x	2	=	2.52 total/cy	100.00	= 251.80
Misc. Materials			5.00	%			= 517.02
State Taxes			6.00	%			= 651.44
							11,509.00

Land Damages

Spot Dig Sites	107 # of digs	x	1,500.00	=	160,500.00	each dig = 50 ft
Footage of Removed Pipe	3123.57 # of feet	x	12.00	=	37,482.81	damages = \$ 12.00 / ft
					197,982.81	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	7,369.25	x	1.190	=	8,769.40
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	67.83	=	67.825	x	(195.00)	=	(13,225.94)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	---	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 10.75" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 40.63	PL Crossings	: 0
Roads	: 44	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.81	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	38,398
2.	PIPELINE MATERIALS:	TB000	19,060
3.	CONSTRUCTION:	TC000	1,987,131
	a. Prime contract	TC100	1,969,847
	i) Pipeline Abandon in Place		175,876
	ii) Road Crossing		1,626,779
	iii) Valve Removals		39,084
	iv) Pipeline Removal		92,309
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		35,799
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	17,284
4.	PIPE SALVAGE COST:		(22,918)
5.	ENGINEERING: 2.25 %	TD000	49,369
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	65,825
7.	LAND - DAMAGES:	TF000	187,986
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	109,709
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	7,656
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(24,883)
11.	Sub-Total - Direct Cost		\$ 2,417,332
12.	Contingency: 10.00 %	TY000	241,733
13.	Sub-Total:		2,659,065
14.	Overhead: 4.00 %	TZ000	106,363
15.	Sub-Total:		2,765,428
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,765,428

Cost / Mile	\$	68,064
Cost / Foot	\$	12.89
Cost / Meter	0	42.29

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 10.75"

2% Percent of total mileage Removed
0.81 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		40.63		15
Abandonment Crew	19,541.83 / day	x	9	=	175,876
Roads Crossing Crew	18,486.13 / day	x	88	=	1,626,779
Valve Crew	19,541.83 / day	x	2	=	39,084
Pipeline Removal	9,230.95 / day	x	10	=	92,309
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	4	=	35,799
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	40.63 miles	x	425.41	=	17,284

6 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	44	=	89.63 total/cy	100.00	= 8,962.80
Steel Plate	176 pieces	x	0.8025	=	141.24 total/sf	5.30	= 748.57
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	344.57	= 3,101.13
Cleaning Compounds	3.538 gal/mile/clean	x	40.63	=	143.75 total/gal.	30.00	= 4,312.44
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			856.25
State Taxes			6.00	%			1,078.87
							19,060.00

Land Damages

Spot Dig Sites	91 # of digs	x	1,500.00	=	136,500.00	each dig = 50 ft
Footage of Removed Pipe	4290.50 # of feet	x	12.00	=	51,486.00	damages = \$ 12.00 / ft
					187,986.00	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	7,757.10	x	1.190	=	9,230.95
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		117.53	=	117.530	x	(195.00) (22,918.39)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 12.75" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 57.23	PL Crossings	: 0
Roads	: 83	Water Crossings	: 6
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 1.14	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	74,771
2.	PIPELINE MATERIALS:	TB000	49,697
3.	CONSTRUCTION:	TC000	3,875,907
	a. Prime contract	TC100	3,851,560
	i) Pipeline Abandon in Place		312,669
	ii) Road Crossing		3,068,698
	iii) Valve Removals		58,625
	iv) Pipeline Removal		136,035
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		53,699
	vii) Pipeline Crossing		-
	viii) Water Crossing		221,834
	b. Pipeline Pump Down Contract	TC600	24,347
4.	PIPE SALVAGE COST:		(38,582)
5.	ENGINEERING: 2.25 %	TD000	96,134
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	128,179
7.	LAND - DAMAGES:	TF000	347,024
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	213,631
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	15,171
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(49,306)
11.	Sub-Total - Direct Cost		\$ 4,712,626
12.	Contingency: 10.00 %	TY000	471,263
13.	Sub-Total:		5,183,889
14.	Overhead: 4.00 %	TZ000	207,356
15.	Sub-Total:		5,391,245
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,391,245

Cost / Mile	\$	94,201
Cost / Foot	\$	17.84
Cost / Meter	0	58.53

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 12.75"

2% Percent of total mileage Removed
1.14 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		57.23	=	22
Abandonment Crew	19,541.83 / day	x	16	=	312,669
Roads Crossing Crew	18,486.13 / day	x	166	=	3,068,698
Valve Crew	19,541.83 / day	x	3	=	58,625
Pipeline Removal	9,716.79 / day	x	14	=	136,035
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	6	=	53,699
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	12	=	221,834
Gas Pump Down	57.23 miles	x	425.41	=	24,347

25 10 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	2.926 cy/road	x	83	=	242.86 total/cy	100.00	=	24,285.80
Steel Plate	356 pieces	x	1.1289	=	401.89 total/sf	5.30	=	2,130.01
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	408.67	=	6,130.05
Cleaning Compounds	6.0282 gal/mile/clean	x	57.23	=	345.00 total/gal.	30.00	=	10,350.09
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	2.926 cy/pipeline	x	6	=	17.56 total/cy	100.00	=	1,755.60
Misc. Materials			5.00	%				2,232.58
State Taxes			6.00	%				2,813.05
								<u>49,697.00</u>

Land Damages

Spot Dig Sites	183 # of digs	x	1,500.00	=	274,500.00	each dig = 50 ft
Footage of Removed Pipe	6043.65 # of feet	x	12.00	=	72,523.77	damages = \$ 12.00 / ft
					<u>347,023.77</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	8,165.37	x	1.190	=	9,716.79
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		197.86	=	197.858	x	(195.00) (38,582.25)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 16" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 17.99	PL Crossings	: 0
Roads	: 26	Water Crossings	: 1
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 0.36	# of Line Segments	: 6

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	30,586
2.	PIPELINE MATERIALS:	TB000	32,848
3.	CONSTRUCTION:	TC000	1,603,624
	a. Prime contract	TC100	1,595,970
	i) Pipeline Abandon in Place		410,378
	ii) Road Crossing		961,279
	iii) Valve Removals		97,709
	iv) Pipeline Removal		53,833
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		35,799
	vii) Pipeline Crossing		-
	viii) Water Crossing		36,972
	b. Pipeline Pump Down Contract	TC600	7,654
4.	PIPE SALVAGE COST:		(15,346)
5.	ENGINEERING: 2.25 %	TD000	39,325
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	52,433
7.	LAND - DAMAGES:	TF000	111,298
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	87,389
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	7,510
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(24,408)
11.	Sub-Total - Direct Cost		\$ 1,925,259
12.	Contingency: 10.00 %	TY000	192,526
13.	Sub-Total:		2,117,785
14.	Overhead: 4.00 %	TZ000	84,711
15.	Sub-Total:		2,202,496
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,202,496

Cost / Mile	\$	122,422
Cost / Foot	\$	23.19
Cost / Meter	0	76.07

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 16"

2% Percent of total mileage Removed
0.36 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		17.99	=	16
Abandonment Crew	19,541.83 / day	x	21	=	410,378
Roads Crossing Crew	18,486.13 / day	x	52	=	961,279
Valve Crew	19,541.83 / day	x	5	=	97,709
Pipeline Removal	10,766.53 / day	x	5	=	53,833
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	4	=	35,799
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	2	=	36,972
Gas Pump Down	17.99 miles	x	425.41	=	7,654

30 12 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
18 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	26	=	122.30 total/cy	100.00	=	12,230.40
Steel Plate	108 pieces	x	1.7778	=	192.00 total/sf	5.30	=	1,017.61
Cleaning Pigs	3 pig/cleaning	x	6	=	18 total pigs	512.84	=	9,231.12
Cleaning Compounds	12.16 gal/mile/clean	x	17.99	=	218.77 total/gal.	30.00	=	6,563.10
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	1	=	4.70 total/cy	100.00	=	470.40
Misc. Materials			5.00	%				1,475.63
State Taxes			6.00	%				1,859.30
								32,848.00

Land Damages

Spot Dig Sites	59 # of digs	x	1,500.00	=	88,500.00	each dig = 50 ft
Footage of Removed Pipe	1899.85 # of feet	x	12.00	=	22,798.15	damages = \$ 12.00 / ft
					111,298.15	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	9,047.50	x	1.190	=	10,766.53
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	78.70	=	78.699	x	(195.00)	(15,346.25)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 18" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 18.000		
Pipe Length (mi)	: 0.13	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,835
2.	PIPELINE MATERIALS:	TB000	2,724
3.	CONSTRUCTION:	TC000	156,089
	a. Prime contract	TC100	156,033
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		55,458
	iii) Valve Removals		-
	iv) Pipeline Removal		13,458
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	56
4.	PIPE SALVAGE COST:		(126)
5.	ENGINEERING: 2.25 %	TD000	3,645
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	4,859
7.	LAND - DAMAGES:	TF000	3,166
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	8,099
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	69
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(225)
11.	Sub-Total - Direct Cost		\$ 181,135
12.	Contingency: 10.00 %	TY000	18,113
13.	Sub-Total:		199,248
14.	Overhead: 4.00 %	TZ000	7,970
15.	Sub-Total:		207,218
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 207,218

Cost / Mile	\$	1,578,803
Cost / Foot	\$	299.02
Cost / Meter	0	981.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 18"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.13		3
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	3	=	55,458
Valve Crew	19,541.83 / day	x	0	=	-
Pipeline Removal	13,458.16 / day	x	1	=	13,458
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	1	=	8,950
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	0.13 miles	x	425.41	=	56

5
2 Day M&D
5 Mile/Day
3 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

18" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	6 cy/road	x	1	=	6.00 total/cy	100.00	= 600.00
Steel Plate	4 pieces	x	2.2500	=	9.00 total/sf	5.30	= 47.70
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	576.95	= 1,730.85
Cleaning Compounds	17.4499 gal/mile/clean	x	0.13	=	2.29 total/gal.	30.00	= 68.71
Pipeline Fill Concrete	3 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	6 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			122.36
State Taxes			6.00	%			154.18
							2,724.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	13.86 # of feet	x	12.00	=	166.32	damages = \$ 12.00 / ft
					3,166.32	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	11,309.38	x	1.190	=	13,458.16
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.65	=	0.648	x	(195.00)	(126.40)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 20" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 57.94	PL Crossings	: 0
Roads	: 80	Water Crossings	: 5
Valves	: 13	Above Ground Facilities	: 0
Pipe Removal	: 1.16	# of Line Segments	: 10

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	109,478
2.	PIPELINE MATERIALS:	TB000	144,525
3.	CONSTRUCTION:	TC000	5,763,462
	a. Prime contract	TC100	5,738,813
	i) Pipeline Abandon in Place		547,171
	ii) Road Crossing		4,436,671
	iii) Valve Removals		254,044
	iv) Pipeline Removal		235,518
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		80,548
	vii) Pipeline Crossing		-
	viii) Water Crossing		184,861
	b. Pipeline Pump Down Contract	TC600	24,649
4.	PIPE SALVAGE COST:		(62,178)
5.	ENGINEERING: 2.25 %	TD000	140,758
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	187,677
7.	LAND - DAMAGES:	TF000	347,922
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	312,795
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	37,792
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(122,825)
11.	Sub-Total - Direct Cost		\$ 6,859,407
12.	Contingency: 10.00 %	TY000	685,941
13.	Sub-Total:		7,545,348
14.	Overhead: 4.00 %	TZ000	301,814
15.	Sub-Total:		7,847,162
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 7,847,162

Cost / Mile	\$	135,434
Cost / Foot	\$	25.65
Cost / Meter	0	84.16

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 20"

2% Percent of total mileage Removed
1.16 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		57.94	=	35
Abandonment Crew	19,541.83 / day	x	28	=	547,171
Roads Crossing Crew	18,486.13 / day	x	240	=	4,436,671
Valve Crew	19,541.83 / day	x	13	=	254,044
Pipeline Removal	16,822.70 / day	x	14	=	235,518
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	9	=	80,548
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	10	=	184,861
Gas Pump Down	57.94 miles	x	425.41	=	24,649

20 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
30 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

	Unit Cost							
Road Fill Concrete	7.481 cy/road	x	80	=	598.48 total/cy	100.00	=	59,848.00
Steel Plate	340 pieces	x	2.7778	=	944.45 total/sf	5.30	=	5,005.60
Cleaning Pigs	3 pig/cleaning	x	10	=	30 total pigs	641.05	=	19,231.50
Cleaning Compounds	24.1776 gal/mile/clean	x	57.94	=	1,400.87 total/gal.	30.00	=	42,025.97
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	7.481 cy/pipeline	x	5	=	37.41 total/cy	100.00	=	3,740.50
Misc. Materials			5.00	%				6,492.58
State Taxes			6.00	%				8,180.65
								<u>144,525.00</u>

Land Damages

Spot Dig Sites	183 # of digs	x	1,500.00	=	274,500.00	each dig = 50 ft
Footage of Removed Pipe	6118.53 # of feet	x	12.00	=	73,422.39	damages = \$ 12.00 / ft
					<u>347,922.39</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	14,136.72	x	1.190	=	16,822.70
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		318.86	=	318.860	x	(195.00) (62,177.63)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 22" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 185.80	PL Crossings	: 0
Roads	: 307	Water Crossings	: 13
Valves	: 14	Above Ground Facilities	: 0
Pipe Removal	: 3.72	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	370,345
2.	PIPELINE MATERIALS:	TB000	555,510
3.	CONSTRUCTION:	TC000	19,390,620
	a. Prime contract	TC100	19,311,580
	i) Pipeline Abandon in Place		469,004
	ii) Road Crossing		17,025,726
	iii) Valve Removals		273,586
	iv) Pipeline Removal		946,277
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		116,348
	vii) Pipeline Crossing		-
	viii) Water Crossing		480,639
	b. Pipeline Pump Down Contract	TC600	79,040
4.	PIPE SALVAGE COST:		(219,834)
5.	ENGINEERING: 2.25 %	TD000	476,158
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	634,877
7.	LAND - DAMAGES:	TF000	1,216,443
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,058,129
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	146,638
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(476,574)
11.	Sub-Total - Direct Cost		\$ 23,152,312
12.	Contingency: 10.00 %	TY000	2,315,231
13.	Sub-Total:		25,467,543
14.	Overhead: 4.00 %	TZ000	1,018,702
15.	Sub-Total:		26,486,245
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 26,486,245

Cost / Mile	\$	142,554
Cost / Foot	\$	27.00
Cost / Meter	0	88.58

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 22"

2% Percent of total mileage Removed
3.72 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		185.80	=	51
Abandonment Crew	19,541.83 / day	x	24	=	469,004
Roads Crossing Crew	18,486.13 / day	x	921	=	17,025,726
Valve Crew	19,541.83 / day	x	14	=	273,586
Pipeline Removal	21,028.37 / day	x	45	=	946,277
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	13	=	116,348
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	26	=	480,639
Gas Pump Down	185.80 miles	x	425.41	=	79,040

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

22" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	9.111 cy/road	x	307	=	2,797.08 total/cy	100.00	=	279,707.70
Steel Plate	1280 pieces	x	3.3611	=	4,302.21 total/sf	5.30	=	22,801.70
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	705.16	=	4,230.96
Cleaning Compounds	32.3875 gal/mile/clean	x	185.80	=	6,017.53 total/gal.	30.00	=	180,525.78
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	9.111 cy/pipeline	x	13	=	118.44 total/cy	100.00	=	11,844.30
Misc. Materials			5.00	%				24,955.52
State Taxes			6.00	%				31,443.96
								<u>555,510.00</u>

Land Damages

Spot Dig Sites	654 # of digs	x	1,500.00	=	981,000.00	each dig = 50 ft
Footage of Removed Pipe	19620.25 # of feet	x	12.00	=	235,442.97	damages = \$ 12.00 / ft
					<u>1,216,442.97</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	17,670.90	x	1.190	=	21,028.37
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		1,127.35	=	1127.355	x (195.00) (219,834.20)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 24" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 171.10	PL Crossings	: 0
Roads	: 258	Water Crossings	: 12
Valves	: 31	Above Ground Facilities	: 0
Pipe Removal	: 3.42	# of Line Segments	: 11

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	327,536
2.	PIPELINE MATERIALS:	TB000	624,133
3.	CONSTRUCTION:	TC000	17,018,865
	a. Prime contract	TC100	16,946,076
	i) Pipeline Abandon in Place		332,211
	ii) Road Crossing		14,308,265
	iii) Valve Removals		605,797
	iv) Pipeline Removal		1,103,989
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		152,147
	vii) Pipeline Crossing		-
	viii) Water Crossing		443,667
	b. Pipeline Pump Down Contract	TC600	72,789
4.	PIPE SALVAGE COST:		(221,280)
5.	ENGINEERING: 2.25 %	TD000	421,117
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	561,490
7.	LAND - DAMAGES:	TF000	1,073,322
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	935,816
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	160,709
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(522,306)
11.	Sub-Total - Direct Cost		\$ 20,379,402
12.	Contingency: 10.00 %	TY000	2,037,940
13.	Sub-Total:		22,417,342
14.	Overhead: 4.00 %	TZ000	896,694
15.	Sub-Total:		23,314,036
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 23,314,036

Cost / Mile	\$	136,257
Cost / Foot	\$	25.81
Cost / Meter	0	84.67

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 24"

2% Percent of total mileage Removed
3.42 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		171.10	=	65
Abandonment Crew	19,541.83 / day	x	17	=	332,211
Roads Crossing Crew	18,486.13 / day	x	774	=	14,308,265
Valve Crew	19,541.83 / day	x	31	=	605,797
Pipeline Removal	26,285.46 / day	x	42	=	1,103,989
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	17	=	152,147
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	24	=	443,667
Gas Pump Down	171.10 miles	x	425.41	=	72,789

22 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
33 Minimum Days / Segment
2 Days/Water
24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	258	=	2,818.91 total/cy	100.00	= 281,890.80
Steel Plate	1080 pieces	x	4.0000	=	4,320.00 total/sf	5.30	= 22,896.00
Cleaning Pigs	3 pig/cleaning	x	11	=	33 total pigs	769.27	= 25,385.91
Cleaning Compounds	42.3686 gal/mile/clean	x	171.10	=	7,249.41 total/gal.	30.00	= 217,482.20
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	12	=	131.11 total/cy	100.00	= 13,111.20
Misc. Materials			5.00	%			28,038.31
State Taxes			6.00	%			35,328.27
							624,133.00

Land Damages

Spot Dig Sites	571 # of digs	x	1,500.00	=	856,500.00	each dig = 50 ft
Footage of Removed Pipe	18068.51 # of feet	x	12.00	=	216,822.09	damages = \$ 12.00 / ft
					1,073,322.09	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	22,088.62	x	1.190	=	26,285.46
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		1,134.77	=	1134.770	x	(195.00) (221,280.15)
						**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 26" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 26.000		
Pipe Length (mi)	: 0.32	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,244
2.	PIPELINE MATERIALS:	TB000	4,910
3.	CONSTRUCTION:	TC000	175,569
	a. Prime contract	TC100	175,432
	i) Pipeline Abandon in Place		58,625
	ii) Road Crossing		55,458
	iii) Valve Removals		19,542
	iv) Pipeline Removal		32,857
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	137
4.	PIPE SALVAGE COST:		(452)
5.	ENGINEERING: 2.25 %	TD000	4,171
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	5,562
7.	LAND - DAMAGES:	TF000	4,908
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	9,269
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	355
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,153)
11.	Sub-Total - Direct Cost		\$ 206,383
12.	Contingency: 10.00 %	TY000	20,638
13.	Sub-Total:		227,021
14.	Overhead: 4.00 %	TZ000	9,081
15.	Sub-Total:		236,102
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 236,102

Cost / Mile	\$	733,738
Cost / Foot	\$	138.97
Cost / Meter	0	455.92

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 26"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		0.32	=	3
Abandonment Crew	19,541.83 / day	x	3	=	58,625
Roads Crossing Crew	18,486.13 / day	x	3	=	55,458
Valve Crew	19,541.83 / day	x	1	=	19,542
Pipeline Removal	32,856.83 / day	x	1	=	32,857
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	1	=	8,950
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	0.32 miles	x	425.41	=	137

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

26" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	12.889 cy/road	x	1	=	12.89 total/cy	100.00	= 1,288.90
Steel Plate	4 pieces	x	4.6944	=	18.78 total/sf	5.30	= 99.52
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	833.37	= 2,500.11
Cleaning Compounds	54.1466 gal/mile/clean	x	0.32	=	17.42 total/gal.	30.00	= 522.70
Pipeline Fill Concrete	6.444 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	12.889 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			220.56
State Taxes			6.00	%			277.91
							4,910.00

Land Damages

Spot Dig Sites	3 # of digs	x	1,500.00	=	4,500.00	each dig = 50 ft
Footage of Removed Pipe	33.98 # of feet	x	12.00	=	407.76	damages = \$ 12.00 / ft
					4,907.76	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	27,610.78	x	1.190	=	32,856.83
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	2.32	=	2.316	x	(195.00)	(451.56)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 30" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 274.55	PL Crossings	: 0
Roads	: 504	Water Crossings	: 19
Valves	: 30	Above Ground Facilities	: 0
Pipe Removal	: 5.49	# of Line Segments	: 7

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	648,412
2.	PIPELINE MATERIALS:	TB000	1,823,760
3.	CONSTRUCTION:	TC000	33,266,437
	a. Prime contract	TC100	33,149,640
	i) Pipeline Abandon in Place		371,295
	ii) Road Crossing		27,951,029
	iii) Valve Removals		1,172,510
	iv) Pipeline Removal		2,710,688
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		241,645
	vii) Pipeline Crossing		-
	viii) Water Crossing		702,473
	b. Pipeline Pump Down Contract	TC600	116,797
4.	PIPE SALVAGE COST:		(445,719)
5.	ENGINEERING: 2.25 %	TD000	833,672
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	1,111,563
7.	LAND - DAMAGES:	TF000	1,961,911
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,852,605
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	402,927
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,309,513)
11.	Sub-Total - Direct Cost		\$ 40,146,055
12.	Contingency: 10.00 %	TY000	4,014,605
13.	Sub-Total:		44,160,660
14.	Overhead: 4.00 %	TZ000	1,766,426
15.	Sub-Total:		45,927,086
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 45,927,086

Cost / Mile	\$	167,281
Cost / Foot	\$	31.68
Cost / Meter	0	103.94

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 30"

2% Percent of total mileage Removed
5.49 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		274.55	=	106
Abandonment Crew	19,541.83 / day	x	19	=	371,295
Roads Crossing Crew	18,486.13 / day	x	1512	=	27,951,029
Valve Crew	19,541.83 / day	x	60	=	1,172,510
Pipeline Removal	41,071.03 / day	x	66	=	2,710,688
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	27	=	241,645
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	38	=	702,473
Gas Pump Down	274.55 miles	x	425.41	=	116,797

35 14 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
21 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost								
Road Fill Concrete	17.296 cy/road	x	504	=	8,717.18	total/cy	100.00	=	871,718.40
Steel Plate	2092 pieces	x	6.2500	=	13,075.00	total/sf	5.30	=	69,297.50
Cleaning Pigs	3 pig/cleaning	x	7	=	21	total pigs	961.58	=	20,193.18
Cleaning Compounds	78.2522 gal/mile/clean	x	274.55	=	21,484.23	total/gal.	30.00	=	644,526.92
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	-	total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	19	=	328.62	total/cy	100.00	=	32,862.40
Misc. Materials			5.00	%					81,929.92
State Taxes			6.00	%					103,231.70
									<u>1,823,760.00</u>

Land Damages

Spot Dig Sites	1076 # of digs	x	1,500.00	=	1,614,000.00	each dig = 50 ft
Footage of Removed Pipe	28992.60 # of feet	x	12.00	=	347,911.21	damages = \$ 12.00 / ft
					<u>1,961,911.21</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	\$ 14,494.00
Roads	15,534.56	x	1.190	=	\$ 13,711.00
Valves	16,421.70	x	1.190	=	\$ 14,494.00
Cleaning	7,520.85	x	1.190	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.190	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.190	=	\$ 13,711.00
Pipe Removal	34,513.47	x	1.190	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		2,285.74	=	2285.740	x	(195.00) (445,719.38)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 36" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 55.76	PL Crossings	: 0
Roads	: 81	Water Crossings	: 0
Valves	: 9	Above Ground Facilities	: 0
Pipe Removal	: 1.12	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	116,158
2.	PIPELINE MATERIALS:	TB000	481,772
3.	CONSTRUCTION:	TC000	5,828,682
	a. Prime contract	TC100	5,804,961
	i) Pipeline Abandon in Place		-
	ii) Road Crossing		4,492,130
	iii) Valve Removals		351,753
	iv) Pipeline Removal		898,429
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		62,649
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	23,721
4.	PIPE SALVAGE COST:		(108,936)
5.	ENGINEERING: 2.25 %	TD000	149,346
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	199,128
7.	LAND - DAMAGES:	TF000	327,160
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	331,881
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	117,840
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(382,979)
11.	Sub-Total - Direct Cost		\$ 7,060,052
12.	Contingency: 10.00 %	TY000	706,005
13.	Sub-Total:		7,766,057
14.	Overhead: 4.00 %	TZ000	310,642
15.	Sub-Total:		8,076,699
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 8,076,699

Cost / Mile	\$	144,846
Cost / Foot	\$	27.43
Cost / Meter	0	90.00

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 36"

2% Percent of total mileage Removed
1.12 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		55.76	=	25
Abandonment Crew	19,541.83 / day	x	-	=	-
Roads Crossing Crew	18,486.13 / day	x	243	=	4,492,130
Valve Crew	19,541.83 / day	x	18	=	351,753
Pipeline Removal	64,173.49 / day	x	14	=	898,429
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	7	=	62,649
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	55.76 miles	x	425.41	=	23,721

15 6 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost								
Road Fill Concrete	25.111 cy/road	x	81	=	2,033.99	total/cy	100.00	=	203,399.10
Steel Plate	324 pieces	x	9,000	=	2,916.00	total/sf	5.30	=	15,454.80
Cleaning Pigs	3 pig/cleaning	x	3	=	9	total pigs	1153.90	=	10,385.10
Cleaning Compounds	121.7232 gal/mile/clean	x	55.76	=	6,787.34	total/gal.	30.00	=	203,620.09
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	-	total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	0	=	-	total/cy	100.00	=	-
Misc. Materials			5.00	%					21,642.95
State Taxes			6.00	%					27,270.12
									481,772.00

Land Damages

Spot Dig Sites	171 # of digs	x	1,500.00	=	256,500.00	each dig = 50 ft
Footage of Removed Pipe	5888.30 # of feet	x	12.00	=	70,659.60	damages = \$ 12.00 / ft
					327,159.60	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83
Roads	15,534.56	x	1.190	=	18,486.13
Valves	16,421.70	x	1.190	=	19,541.83
Cleaning	7,520.85	x	1.190	=	8,949.82
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13
Water Crossing	15,534.56	x	1.190	=	18,486.13
Pipe Removal	53,927.30	x	1.190	=	64,173.49
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		558.65	=	558.645	x (195.00) (108,935.79)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 42" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 42.000		
Pipe Length (mi)	: 91.02	PL Crossings	: 0
Roads	: 213	Water Crossings	: 7
Valves	: 17	Above Ground Facilities	: 0
Pipe Removal	: 1.82	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	289,213
2.	PIPELINE MATERIALS:	TB000	1,517,292
3.	CONSTRUCTION:	TC000	14,208,342
	a. Prime contract	TC100	14,169,620
	i) Pipeline Abandon in Place		(195,418)
	ii) Road Crossing		11,812,637
	iii) Valve Removals		664,422
	iv) Pipeline Removal		1,548,625
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		80,548
	vii) Pipeline Crossing		-
	viii) Water Crossing		258,806
	b. Pipeline Pump Down Contract	TC600	38,722
4.	PIPE SALVAGE COST:		(207,879)
5.	ENGINEERING: 2.25 %	TD000	371,846
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	495,794
7.	LAND - DAMAGES:	TF000	800,843
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	826,324
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	261,822
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(850,921)
11.	Sub-Total - Direct Cost		\$ 17,712,676
12.	Contingency: 10.00 %	TY000	1,771,268
13.	Sub-Total:		19,483,944
14.	Overhead: 4.00 %	TZ000	779,358
15.	Sub-Total:		20,263,302
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 20,263,302

Cost / Mile	\$	222,620
Cost / Foot	\$	42.16
Cost / Meter	0	138.33

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Michigan - 42"

2% Percent of total mileage Removed
1.82 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		91.02	=	33
Abandonment Crew	19,541.83 / day	x	(10)	=	(195,418)
Roads Crossing Crew	18,486.13 / day	x	639	=	11,812,637
Valve Crew	19,541.83 / day	x	34	=	664,422
Pipeline Removal	70,392.07 / day	x	22	=	1,548,625
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	9	=	80,548
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	14	=	258,806
Gas Pump Down	91.02 miles	x	425.41	=	38,722

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
42" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost								
Road Fill Concrete	34.37 cy/road	x	213	=	7,320.81	total/cy	100.00	=	732,081.00
Steel Plate	880 pieces	x	12.2500	=	10,780.00	total/sf	5.30	=	57,134.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	1346.21	=	4,038.63
Cleaning Compounds	199.9267 gal/mile/clean	x	91.02	=	18,197.74	total/gal.	30.00	=	545,932.33
Pipeline Fill Concrete	17.185 cy/pipeline	x	0	=	-	total/cy	100.00	=	-
Water Crossing Concrete	34.37 cy/pipeline	x	7	=	240.59	total/cy	100.00	=	24,059.00
Misc. Materials			5.00	%					68,162.25
State Taxes			6.00	%					85,884.43
									<u>1,517,292.00</u>

Land Damages

Spot Dig Sites	457 # of digs	x	1,500.00	=	685,500.00	each dig = 50 ft
Footage of Removed Pipe	9611.93 # of feet	x	12.00	=	115,343.18	damages = \$ 12.00 / ft
					<u>800,843.18</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.190	=	19,541.83	\$ 14,494.00
Roads	15,534.56	x	1.190	=	18,486.13	\$ 13,711.00
Valves	16,421.70	x	1.190	=	19,541.83	\$ 14,494.00
Cleaning	7,520.85	x	1.190	=	8,949.82	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.190	=	18,486.13	\$ 13,711.00
Water Crossing	15,534.56	x	1.190	=	18,486.13	\$ 13,711.00
Pipe Removal	59,153.00	x	1.190	=	70,392.07	\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		1,066.05	=	1066.047	x	(195.00) (207,879.23)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 24" Lines in Mississippi		
State	: Mississippi		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 4.04	PL Crossings	: 0
Roads	: 5	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.08	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	8,008
2.	PIPELINE MATERIALS:	TB000	20,159
3.	CONSTRUCTION:	TC000	412,805
	a. Prime contract	TC100	411,085
	i) Pipeline Abandon in Place		139,584
	ii) Road Crossing		198,066
	iii) Valve Removals		41,875
	iv) Pipeline Removal		18,775
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		12,785
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,720
4.	PIPE SALVAGE COST:		(5,223)
5.	ENGINEERING: 2.25 %	TD000	10,296
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	13,727
7.	LAND - DAMAGES:	TF000	24,617
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	22,879
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,793
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(12,327)
11.	Sub-Total - Direct Cost		\$ 498,734
12.	Contingency: 10.00 %	TY000	49,873
13.	Sub-Total:		548,607
14.	Overhead: 4.00 %	TZ000	21,944
15.	Sub-Total:		570,551
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 570,551

Cost / Mile	\$	141,284
Cost / Foot	\$	26.76
Cost / Meter	0	87.79

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Mississippi - 24"

2% Percent of total mileage Removed
0.08 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		4.04	=	8
Abandonment Crew	13,958.45 / day	x	10	=	139,584
Roads Crossing Crew	13,204.38 / day	x	15	=	198,066
Valve Crew	13,958.45 / day	x	3	=	41,875
Pipeline Removal	18,775.33 / day	x	1	=	18,775
Launcher/Receiver Crew	13,958.45 / day	x	0	=	-
Pipeline Cleaning Crew	6,392.73 / day	x	2	=	12,785
Pipeline Crossing Crew	13,204.38 / day	x	0	=	-
Water Crossing Crew	13,204.38 / day	x	0	=	-
Gas Pump Down	4.04 miles	x	425.97	=	1,720

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	5	=	54.63 total/cy	100.00	= 5,463.00
Steel Plate	20 pieces	x	4.0000	=	80.00 total/sf	5.30	= 424.00
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	769.27	= 6,923.43
Cleaning Compounds	42.3686 gal/mile/clean	x	4.04	=	171.10 total/gal.	30.00	= 5,132.94
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			897.17
State Taxes			7.00	%			1,318.84
							20,159.00

Land Damages

Spot Dig Sites	13 # of digs	x	1,500.00	=	19,500.00	each dig = 50 ft
Footage of Removed Pipe	426.45 # of feet	x	12.00	=	5,117.36	damages = \$ 12.00 / ft
					24,617.36	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.850	=	13,958.45
Roads	15,534.56	x	0.850	=	13,204.38
Valves	16,421.70	x	0.850	=	13,958.45
Cleaning	7,520.85	x	0.850	=	6,392.73
Pipeline Crossing	15,534.56	x	0.850	=	13,204.38
Water Crossing	15,534.56	x	0.850	=	13,204.38
Pipe Removal	22,088.62	x	0.850	=	18,775.33
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	26.78	=	26.782	x	(195.00)	(5,222.58)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 30" Lines in Mississippi		
State	: Mississippi		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 293.33	PL Crossings	: 0
Roads	: 142	Water Crossings	: 75
Valves	: 22	Above Ground Facilities	: 0
Pipe Removal	: 5.87	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	233,283
2.	PIPELINE MATERIALS:	TB000	1,234,119
3.	CONSTRUCTION:	TC000	11,040,613
	a. Prime contract	TC100	10,915,663
	i) Pipeline Abandon in Place		446,670
	ii) Road Crossing		5,625,065
	iii) Valve Removals		614,172
	iv) Pipeline Removal		2,082,888
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		166,211
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,980,657
	b. Pipeline Pump Down Contract	TC600	124,950
4.	PIPE SALVAGE COST:		(476,208)
5.	ENGINEERING: 2.25 %	TD000	299,935
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	399,913
7.	LAND - DAMAGES:	TF000	1,055,709
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	666,522
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	430,488
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,399,087)
11.	Sub-Total - Direct Cost		\$ 13,485,287
12.	Contingency: 10.00 %	TY000	1,348,529
13.	Sub-Total:		14,833,816
14.	Overhead: 4.00 %	TZ000	593,353
15.	Sub-Total:		15,427,169
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 15,427,169

Cost / Mile	\$	52,593
Cost / Foot	\$	9.96
Cost / Meter	0	32.68

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Mississippi - 30"

2% Percent of total mileage Removed
5.87 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		293.33		102
Abandonment Crew	13,958.45 / day	x	32	=	446,670
Roads Crossing Crew	13,204.38 / day	x	426	=	5,625,065
Valve Crew	13,958.45 / day	x	44	=	614,172
Pipeline Removal	29,336.45 / day	x	71	=	2,082,888
Launcher/Receiver Crew	13,958.45 / day	x	0	=	-
Pipeline Cleaning Crew	6,392.73 / day	x	26	=	166,211
Pipeline Crossing Crew	13,204.38 / day	x	0	=	-
Water Crossing Crew	13,204.38 / day	x	150	=	1,980,657
Gas Pump Down	293.33 miles	x	425.97	=	124,950

10 4 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water
30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	142	=	2,456.03 total/cy	100.00	=	245,603.20
Steel Plate	868 pieces	x	6.2500	=	5,425.00 total/sf	5.30	=	28,752.50
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	961.58	=	5,769.48
Cleaning Compounds	78.2522 gal/mile/clean	x	293.33	=	22,953.81 total/gal.	30.00	=	688,614.44
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	75	=	1,297.20 total/cy	100.00	=	129,720.00
Misc. Materials			5.00	%				54,922.98
State Taxes			7.00	%				80,736.78
								<u>1,234,119.00</u>

Land Damages

Spot Dig Sites	456 # of digs	x	1,500.00	=	684,000.00	each dig = 50 ft
Footage of Removed Pipe	30975.78 # of feet	x	12.00	=	371,709.34	damages = \$ 12.00 / ft
					<u>1,055,709.34</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.850	=	13,958.45
Roads	15,534.56	x	0.850	=	13,204.38
Valves	16,421.70	x	0.850	=	13,958.45
Cleaning	7,520.85	x	0.850	=	6,392.73
Pipeline Crossing	15,534.56	x	0.850	=	13,204.38
Water Crossing	15,534.56	x	0.850	=	13,204.38
Pipe Removal	34,513.47	x	0.850	=	29,336.45
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		2,442.09	=	2442.092 x	(195.00) (476,207.87)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 26-Nov-2015
Line Segment	: All 36" Lines in Mississippi		
State	: Mississippi		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 75.59	PL Crossings	: 0
Roads	: 39	Water Crossings	: 25
Valves	: 12	Above Ground Facilities	: 0
Pipe Removal	: 1.51	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	74,554
2.	PIPELINE MATERIALS:	TB000	508,290
3.	CONSTRUCTION:	TC000	3,446,133
	a. Prime contract	TC100	3,413,934
	i) Pipeline Abandon in Place		(41,875)
	ii) Road Crossing		1,544,912
	iii) Valve Removals		335,003
	iv) Pipeline Removal		870,926
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		44,749
	vii) Pipeline Crossing		-
	viii) Water Crossing		660,219
	b. Pipeline Pump Down Contract	TC600	32,199
4.	PIPE SALVAGE COST:		(147,676)
5.	ENGINEERING: 2.25 %	TD000	95,855
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	127,806
7.	LAND - DAMAGES:	TF000	305,788
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	213,011
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	159,747
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(519,177)
11.	Sub-Total - Direct Cost		\$ 4,264,330
12.	Contingency: 10.00 %	TY000	426,433
13.	Sub-Total:		4,690,763
14.	Overhead: 4.00 %	TZ000	187,631
15.	Sub-Total:		4,878,394
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,878,394

Cost / Mile	\$	64,537
Cost / Foot	\$	12.22
Cost / Meter	0	40.10

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Mississippi - 36"

2% Percent of total mileage Removed
1.51 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		75.59	=	28
Abandonment Crew	13,958.45 / day	x	(3)	=	(41,875)
Roads Crossing Crew	13,204.38 / day	x	117	=	1,544,912
Valve Crew	13,958.45 / day	x	24	=	335,003
Pipeline Removal	45,838.21 / day	x	19	=	870,926
Launcher/Receiver Crew	13,958.45 / day	x	0	=	-
Pipeline Cleaning Crew	6,392.73 / day	x	7	=	44,749
Pipeline Crossing Crew	13,204.38 / day	x	0	=	-
Water Crossing Crew	13,204.38 / day	x	50	=	660,219
Gas Pump Down	75.59 miles	x	425.97	=	32,199

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	25.111 cy/road	x	39	=	979.33 total/cy	100.00	=	97,932.90
Steel Plate	256 pieces	x	9.0000	=	2,304.00 total/sf	5.30	=	12,211.20
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	=	3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	75.59	=	9,201.11 total/gal.	30.00	=	276,033.19
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	25	=	627.78 total/cy	100.00	=	62,777.50
Misc. Materials			5.00	%				22,620.82
State Taxes			7.00	%				33,252.61
								<u>508,290.00</u>

Land Damages

Spot Dig Sites	140 # of digs	x	1,500.00	=	210,000.00	each dig = 50 ft
Footage of Removed Pipe	7982.35 # of feet	x	12.00	=	95,788.17	damages = \$ 12.00 / ft
					<u>305,788.17</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.850	=	13,958.45
Roads	15,534.56	x	0.850	=	13,204.38
Valves	16,421.70	x	0.850	=	13,958.45
Cleaning	7,520.85	x	0.850	=	6,392.73
Pipeline Crossing	15,534.56	x	0.850	=	13,204.38
Water Crossing	15,534.56	x	0.850	=	13,204.38
Pipe Removal	53,927.30	x	0.850	=	45,838.21
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		757.32	=	757.315	x (195.00) (147,676.46)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 2.375" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 2.375		
Pipe Length (mi)	: 1.80	PL Crossings	: 0
Roads	: 3	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.04	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,685
2.	PIPELINE MATERIALS:	TB000	270
3.	CONSTRUCTION:	TC000	199,045
	a. Prime contract	TC100	198,280
	i) Pipeline Abandon in Place		75,540
	ii) Road Crossing		107,188
	iii) Valve Removals		-
	iv) Pipeline Removal		6,903
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,649
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	765
4.	PIPE SALVAGE COST:		(186)
5.	ENGINEERING: 2.25 %	TD000	4,738
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	6,318
7.	LAND - DAMAGES:	TF000	11,279
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	10,530
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	17
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(54)
11.	Sub-Total - Direct Cost		\$ 235,643
12.	Contingency: 10.00 %	TY000	23,564
13.	Sub-Total:		259,207
14.	Overhead: 4.00 %	TZ000	10,368
15.	Sub-Total:		269,575
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 269,575

Cost / Mile	\$	149,890
Cost / Foot	\$	28.39
Cost / Meter	0	93.14

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Missouri - 2.375"

2% Percent of total mileage Removed
0.04 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		1.80		3
Abandonment Crew	18,884.96 / day	x	4	=	75,540
Roads Crossing Crew	17,864.75 / day	x	6	=	107,188
Valve Crew	18,884.96 / day	x	0	=	-
Pipeline Removal	6,902.64 / day	x	1	=	6,903
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	1	=	8,649
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	0	=	-
Gas Pump Down	1.80 miles	x	425.09	=	765

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

2.375" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.052 cy/road	x	3	=	0.16 total/cy	100.00	= 15.60
Steel Plate	12 pieces	x	0.0392	=	0.47 total/sf	5.30	= 2.49
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	75.80	= 227.40
Cleaning Compounds	0.0199 gal/mile/clean	x	1.80	=	0.04 total/gal.	30.00	= 1.07
Pipeline Fill Concrete	0.026 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.052 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			12.33
State Taxes			4.23	%			10.94
							270.00

Land Damages

Spot Dig Sites	6 # of digs	x	1,500.00	=	9,000.00	each dig = 50 ft
Footage of Removed Pipe	189.92 # of feet	x	12.00	=	2,279.04	damages = \$ 12.00 / ft
					11,279.04	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96
Roads	15,534.56	x	1.150	=	17,864.75
Valves	16,421.70	x	1.150	=	18,884.96
Cleaning	7,520.85	x	1.150	=	8,648.98
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75
Water Crossing	15,534.56	x	1.150	=	17,864.75
Pipe Removal	6,002.30	x	1.150	=	6,902.64
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.95	=	0.952	x	(195.00)	(185.58)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 3.5" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 3.500		
Pipe Length (mi)	: 3.11	PL Crossings	: 0
Roads	: 4	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.06	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	4,412
2.	PIPELINE MATERIALS:	TB000	452
3.	CONSTRUCTION:	TC000	235,696
	a. Prime contract	TC100	234,373
	i) Pipeline Abandon in Place		75,540
	ii) Road Crossing		142,918
	iii) Valve Removals		-
	iv) Pipeline Removal		7,266
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,649
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,323
4.	PIPE SALVAGE COST:		(514)
5.	ENGINEERING: 2.25 %	TD000	5,672
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	7,563
7.	LAND - DAMAGES:	TF000	15,945
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	12,605
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	62
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(202)
11.	Sub-Total - Direct Cost		\$ 281,691
12.	Contingency: 10.00 %	TY000	28,169
13.	Sub-Total:		309,860
14.	Overhead: 4.00 %	TZ000	12,394
15.	Sub-Total:		322,254
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 322,254

Cost / Mile	\$	103,510
Cost / Foot	\$	19.60
Cost / Meter	0	64.32

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Missouri - 3.5"

2% Percent of total mileage Removed
0.06 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		3.11		3
Abandonment Crew	18,884.96 / day	x	4	=	75,540
Roads Crossing Crew	17,864.75 / day	x	8	=	142,918
Valve Crew	18,884.96 / day	x	0	=	-
Pipeline Removal	7,265.94 / day	x	1	=	7,266
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	1	=	8,649
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	0	=	-
Gas Pump Down	3.11 miles	x	425.09	=	1,323

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

3.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.152 cy/road	x	4	=	0.61 total/cy	100.00	= 60.80
Steel Plate	16 pieces	x	0.0851	=	1.36 total/sf	5.30	= 7.22
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	112.18	= 336.54
Cleaning Compounds	0.086 gal/mile/clean	x	3.11	=	0.27 total/gal.	30.00	= 8.03
Pipeline Fill Concrete	0.076 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.152 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			20.63
State Taxes			4.23	%			18.30
							452.00

Land Damages

Spot Dig Sites	8 # of digs	x	1,500.00	=	12,000.00	each dig = 50 ft
Footage of Removed Pipe	328.76 # of feet	x	12.00	=	3,945.12	damages = \$ 12.00 / ft
					15,945.12	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96
Roads	15,534.56	x	1.150	=	17,864.75
Valves	16,421.70	x	1.150	=	18,884.96
Cleaning	7,520.85	x	1.150	=	8,648.98
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75
Water Crossing	15,534.56	x	1.150	=	17,864.75
Pipe Removal	6,318.21	x	1.150	=	7,265.94
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	2.64	=	2.636	x	(195.00)	(513.99)
------------------------------	--------------	-------------	------	---	-------	---	----------	----------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 4.5" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 52.05	PL Crossings	: 0
Roads	: 56	Water Crossings	: 24
Valves	: 14	Above Ground Facilities	: 0
Pipe Removal	: 1.04	# of Line Segments	: 18

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	78,165
2.	PIPELINE MATERIALS:	TB000	11,634
3.	CONSTRUCTION:	TC000	4,127,977
	a. Prime contract	TC100	4,105,850
	i) Pipeline Abandon in Place		1,340,832
	ii) Road Crossing		2,000,852
	iii) Valve Removals		132,195
	iv) Pipeline Removal		99,429
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		103,788
	vii) Pipeline Crossing		-
	viii) Water Crossing		428,754
	b. Pipeline Pump Down Contract	TC600	22,127
4.	PIPE SALVAGE COST:		(11,458)
5.	ENGINEERING: 2.25 %	TD000	100,498
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	133,997
7.	LAND - DAMAGES:	TF000	326,962
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	223,329
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,719
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(5,586)
11.	Sub-Total - Direct Cost		\$ 4,987,236
12.	Contingency: 10.00 %	TY000	498,724
13.	Sub-Total:		5,485,960
14.	Overhead: 4.00 %	TZ000	219,438
15.	Sub-Total:		5,705,398
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,705,398

Cost / Mile	\$	109,607
Cost / Foot	\$	20.76
Cost / Meter	0	68.11

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Missouri - 4.5"

2% Percent of total mileage Removed
 1.04 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		52.05	=	45
Abandonment Crew	18,884.96 / day	x	71	=	1,340,832
Roads Crossing Crew	17,864.75 / day	x	112	=	2,000,852
Valve Crew	18,884.96 / day	x	7	=	132,195
Pipeline Removal	7,648.36 / day	x	13	=	99,429
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	12	=	103,788
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	24	=	428,754
Gas Pump Down	52.05 miles	x	425.09	=	22,127

36 Day M&D
 6 Mile/Day
 2 Days/Road or Pipeline
 2 Days/L&R
 0.5 Days/Valve
 12 Days/ Mile of Pipeline Removal
 54 Minimum Days / Segment
 1 Days/Water
 4.5" line equals 6 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	0.285 cy/road	x	56	=	15.96 total/cy	100.00	=	1,596.00
Steel Plate	320 pieces	x	0.1406	=	44.99 total/sf	5.30	=	238.46
Cleaning Pigs	3 pig/cleaning	x	18	=	54 total pigs	144.24	=	7,788.96
Cleaning Compounds	0.2074 gal/mile/clean	x	52.05	=	10.80 total/gal.	30.00	=	323.88
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.285 cy/pipeline	x	24	=	6.84 total/cy	100.00	=	684.00
Misc. Materials			5.00	%				531.56
State Taxes			4.23	%				471.63
								11,634.00

Land Damages

Spot Dig Sites	174 # of digs	x	1,500.00	=	261,000.00	each dig = 50 ft
Footage of Removed Pipe	5496.82 # of feet	x	12.00	=	65,961.88	damages = \$ 12.00 / ft
					326,961.88	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96
Roads	15,534.56	x	1.150	=	17,864.75
Valves	16,421.70	x	1.150	=	18,884.96
Cleaning	7,520.85	x	1.150	=	8,648.98
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75
Water Crossing	15,534.56	x	1.150	=	17,864.75
Pipe Removal	6,650.74	x	1.150	=	7,648.36
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	58.76	=	58.761	x	(195.00)	(11,458.40)
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 6.625" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 5.14	PL Crossings	: 0
Roads	: 8	Water Crossings	: 1
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.10	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	9,286
2.	PIPELINE MATERIALS:	TB000	2,278
3.	CONSTRUCTION:	TC000	490,365
	a. Prime contract	TC100	488,181
	i) Pipeline Abandon in Place		113,310
	ii) Road Crossing		285,836
	iii) Valve Removals		37,770
	iv) Pipeline Removal		16,102
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		17,298
	vii) Pipeline Crossing		-
	viii) Water Crossing		17,865
	b. Pipeline Pump Down Contract	TC600	2,184
4.	PIPE SALVAGE COST:		(1,732)
5.	ENGINEERING: 2.25 %	TD000	11,940
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	15,920
7.	LAND - DAMAGES:	TF000	38,012
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	26,533
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	368
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,195)
11.	Sub-Total - Direct Cost		\$ 591,774
12.	Contingency: 10.00 %	TY000	59,177
13.	Sub-Total:		650,951
14.	Overhead: 4.00 %	TZ000	26,038
15.	Sub-Total:		676,989
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 676,989

Cost / Mile	\$	131,745
Cost / Foot	\$	24.95
Cost / Meter	0	81.86

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Missouri - 6.625"

2% Percent of total mileage Removed
 0.10 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		5.14	=	5
Abandonment Crew	18,884.96 / day	x	6	=	113,310
Roads Crossing Crew	17,864.75 / day	x	16	=	285,836
Valve Crew	18,884.96 / day	x	2	=	37,770
Pipeline Removal	8,050.90 / day	x	2	=	16,102
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	2	=	17,298
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	1	=	17,865
Gas Pump Down	5.14 miles	x	425.09	=	2,184

4 Day M&D
 6 Mile/Day
 2 Days/Road or Pipeline
 2 Days/L&R
 0.5 Days/Valve
 12 Days/ Mile of Pipeline Removal
 6 Minimum Days / Segment
 1 Days/Water

 6.625" line equals 6 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

Materials	Unit Cost						
Road Fill Concrete	0.704 cy/road	x	8	=	5.63 total/cy	100.00	= 563.20
Steel Plate	36 pieces	x	0.3048	=	10.97 total/sf	5.30	= 58.16
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	212.35	= 1,274.10
Cleaning Compounds	0.7531 gal/mile/clean	x	5.14	=	3.87 total/gal.	30.00	= 116.10
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.704 cy/pipeline	x	1	=	0.70 total/cy	100.00	= 70.40
Misc. Materials			5.00	%			104.10
State Taxes			4.23	%			92.36
							2,278.00

Land Damages

Spot Dig Sites	21 # of digs	x	1,500.00	=	31,500.00	each dig = 50 ft
Footage of Removed Pipe	542.64 # of feet	x	12.00	=	6,511.69	damages = \$ 12.00 / ft
					38,011.69	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	\$ 14,494.00
Roads	15,534.56	x	1.150	=	\$ 13,711.00
Valves	16,421.70	x	1.150	=	\$ 14,494.00
Cleaning	7,520.85	x	1.150	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.150	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.150	=	\$ 13,711.00
Pipe Removal	7,000.78	x	1.150	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	8.88	=	8.883	x	(195.00)	(1,732.09)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 10.75" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 0.38	PL Crossings	: 0
Roads	: 4	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	4,389
2.	PIPELINE MATERIALS:	TB000	2,141
3.	CONSTRUCTION:	TC000	236,188
	a. Prime contract	TC100	236,028
	i) Pipeline Abandon in Place		75,540
	ii) Road Crossing		142,918
	iii) Valve Removals		-
	iv) Pipeline Removal		8,921
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,649
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	160
4.	PIPE SALVAGE COST:		(212)
5.	ENGINEERING: 2.25 %	TD000	5,643
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	7,524
7.	LAND - DAMAGES:	TF000	12,477
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	12,540
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	71
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(231)
11.	Sub-Total - Direct Cost		\$ 280,530
12.	Contingency: 10.00 %	TY000	28,053
13.	Sub-Total:		308,583
14.	Overhead: 4.00 %	TZ000	12,343
15.	Sub-Total:		320,926
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 320,926

Cost / Mile	\$	852,360
Cost / Foot	\$	161.43
Cost / Meter	0	529.63

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Missouri - 10.75"

2% Percent of total mileage Removed
 0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.38		3
Abandonment Crew	18,884.96 / day	x	4	=	75,540
Roads Crossing Crew	17,864.75 / day	x	8	=	142,918
Valve Crew	18,884.96 / day	x	0	=	-
Pipeline Removal	8,920.67 / day	x	1	=	8,921
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	1	=	8,649
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	0	=	-
Gas Pump Down	0.38 miles	x	425.09	=	160

2 Day M&D
 5 Mile/Day
 2 Days/Road or Pipeline
 3 Days/L&R
 0.5 Days/Valve
 12 Days/ Mile of Pipeline Removal
 3 Minimum Days / Segment
 1 Days/Water

 10.75" line equals 5 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	4	=	8.15 total/cy	100.00	= 814.80
Steel Plate	16 pieces	x	0.8025	=	12.84 total/sf	5.30	= 68.05
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	344.57	= 1,033.71
Cleaning Compounds	3.538 gal/mile/clean	x	0.38	=	1.33 total/gal.	30.00	= 39.96
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			97.83
State Taxes			4.23	%			86.80
							2,141.00

Land Damages

Spot Dig Sites	8 # of digs	x	1,500.00	=	12,000.00	each dig = 50 ft
Footage of Removed Pipe	39.76 # of feet	x	12.00	=	477.12	damages = \$ 12.00 / ft
					12,477.12	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96
Roads	15,534.56	x	1.150	=	17,864.75
Valves	16,421.70	x	1.150	=	18,884.96
Cleaning	7,520.85	x	1.150	=	8,648.98
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75
Water Crossing	15,534.56	x	1.150	=	17,864.75
Pipe Removal	7,757.10	x	1.150	=	8,920.67
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	1.09	=	1.089	x	(195.00)	(212.38)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 189.73	PL Crossings	: 0
Roads	: 263	Water Crossings	: 146
Valves	: 17	Above Ground Facilities	: 0
Pipe Removal	: 3.79	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	414,729
2.	PIPELINE MATERIALS:	TB000	795,969
3.	CONSTRUCTION:	TC000	21,409,884
	a. Prime contract	TC100	21,329,230
	i) Pipeline Abandon in Place		415,469
	ii) Road Crossing		14,095,286
	iii) Valve Removals		321,044
	iv) Pipeline Removal		1,168,488
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		112,437
	vii) Pipeline Crossing		-
	viii) Water Crossing		5,216,506
	b. Pipeline Pump Down Contract	TC600	80,654
4.	PIPE SALVAGE COST:		(245,375)
5.	ENGINEERING: 2.25 %	TD000	533,223
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	710,964
7.	LAND - DAMAGES:	TF000	1,492,931
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,184,939
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	178,209
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(579,178)
11.	Sub-Total - Direct Cost		\$ 25,896,295
12.	Contingency: 10.00 %	TY000	2,589,630
13.	Sub-Total:		28,485,925
14.	Overhead: 4.00 %	TZ000	1,139,437
15.	Sub-Total:		29,625,362
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 29,625,362

Cost / Mile	\$	156,141
Cost / Foot	\$	29.57
Cost / Meter	0	97.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Missouri - 24"

2% Percent of total mileage Removed
3.79 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		189.73	=	52
Abandonment Crew	18,884.96 / day	x	22	=	415,469
Roads Crossing Crew	17,864.75 / day	x	789	=	14,095,286
Valve Crew	18,884.96 / day	x	17	=	321,044
Pipeline Removal	25,401.92 / day	x	46	=	1,168,488
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	13	=	112,437
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	292	=	5,216,506
Gas Pump Down	189.73 miles	x	425.09	=	80,654

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	10.926 cy/road	x	263	=	2,873.54 total/cy	100.00	=	287,353.80
Steel Plate	1636 pieces	x	4.0000	=	6,544.00 total/sf	5.30	=	34,683.20
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	769.27	=	4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	189.73	=	8,038.77 total/gal.	30.00	=	241,163.17
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	10.926 cy/pipeline	x	146	=	1,595.20 total/cy	100.00	=	159,519.60
Misc. Materials			5.00	%				36,366.77
State Taxes			4.23	%				32,266.42
								<u>795,969.00</u>

Land Damages

Spot Dig Sites	835 # of digs	x	1,500.00	=	1,252,500.00	each dig = 50 ft
Footage of Removed Pipe	20035.93 # of feet	x	12.00	=	240,431.17	damages = \$ 12.00 / ft
					<u>1,492,931.17</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96	\$ 14,494.00
Roads	15,534.56	x	1.150	=	17,864.75	\$ 13,711.00
Valves	16,421.70	x	1.150	=	18,884.96	\$ 14,494.00
Cleaning	7,520.85	x	1.150	=	8,648.98	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75	\$ 13,711.00
Water Crossing	15,534.56	x	1.150	=	17,864.75	\$ 13,711.00
Pipe Removal	22,088.62	x	1.150	=	25,401.92	\$ 53,927.30
						Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		1,258.33	=	1258.332	x	(195.00) (245,374.66) **Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 30" Lines in Missouri		
State	: Missouri		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 20.00	PL Crossings	: 0
Roads	: 24	Water Crossings	: 12
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.40	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	40,722
2.	PIPELINE MATERIALS:	TB000	127,891
3.	CONSTRUCTION:	TC000	2,061,225
	a. Prime contract	TC100	2,052,725
	i) Pipeline Abandon in Place		-
	ii) Road Crossing		1,286,262
	iii) Valve Removals		113,310
	iv) Pipeline Removal		198,452
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,947
	vii) Pipeline Crossing		-
	viii) Water Crossing		428,754
	b. Pipeline Pump Down Contract	TC600	8,500
4.	PIPE SALVAGE COST:		(32,463)
5.	ENGINEERING: 2.25 %	TD000	52,357
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	69,809
7.	LAND - DAMAGES:	TF000	137,840
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	116,348
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	29,347
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(95,377)
11.	Sub-Total - Direct Cost		\$ 2,507,699
12.	Contingency: 10.00 %	TY000	250,770
13.	Sub-Total:		2,758,469
14.	Overhead: 4.00 %	TZ000	110,339
15.	Sub-Total:		2,868,808
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,868,808

Cost / Mile	\$	143,465
Cost / Foot	\$	27.17
Cost / Meter	0	89.14

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Missouri - 30"

2% Percent of total mileage Removed
0.40 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		20.00	=	9
Abandonment Crew	18,884.96 / day	x	-	=	-
Roads Crossing Crew	17,864.75 / day	x	72	=	1,286,262
Valve Crew	18,884.96 / day	x	6	=	113,310
Pipeline Removal	39,690.49 / day	x	5	=	198,452
Launcher/Receiver Crew	18,884.96 / day	x	0	=	-
Pipeline Cleaning Crew	8,648.98 / day	x	3	=	25,947
Pipeline Crossing Crew	17,864.75 / day	x	0	=	-
Water Crossing Crew	17,864.75 / day	x	24	=	428,754
Gas Pump Down	20.00 miles	x	425.09	=	8,500

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	24	=	415.10 total/cy	100.00	=	41,510.40
Steel Plate	144 pieces	x	6.2500	=	900.00 total/sf	5.30	=	4,770.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	961.58	=	2,884.74
Cleaning Compounds	78.2522 gal/mile/clean	x	20.00	=	1,564.78 total/gal.	30.00	=	46,943.32
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	12	=	207.55 total/cy	100.00	=	20,755.20
Misc. Materials			5.00	%				5,843.18
State Taxes			4.23	%				5,184.36
								<u>127,891.00</u>

Land Damages

Spot Dig Sites	75 # of digs	x	1,500.00	=	112,500.00	each dig = 50 ft
Footage of Removed Pipe	2111.64 # of feet	x	12.00	=	25,339.68	damages = \$ 12.00 / ft
					<u>137,839.68</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.150	=	18,884.96
Roads	15,534.56	x	1.150	=	17,864.75
Valves	16,421.70	x	1.150	=	18,884.96
Cleaning	7,520.85	x	1.150	=	8,648.98
Pipeline Crossing	15,534.56	x	1.150	=	17,864.75
Water Crossing	15,534.56	x	1.150	=	17,864.75
Pipe Removal	34,513.47	x	1.150	=	39,690.49
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		166.48	=	166.479	x	(195.00) (32,463.42)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Nebraska		
State	: Nebraska		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 8.64	PL Crossings	: 0
Roads	: 5	Water Crossings	: 12
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.17	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	16,217
2.	PIPELINE MATERIALS:	TB000	39,456
3.	CONSTRUCTION:	TC000	822,291
	a. Prime contract	TC100	818,529
	i) Pipeline Abandon in Place		98,530
	ii) Road Crossing		233,018
	iii) Valve Removals		32,843
	iv) Pipeline Removal		66,266
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		15,042
	vii) Pipeline Crossing		-
	viii) Water Crossing		372,830
	b. Pipeline Pump Down Contract	TC600	3,762
4.	PIPE SALVAGE COST:		(11,178)
5.	ENGINEERING: 2.25 %	TD000	20,851
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	27,801
7.	LAND - DAMAGES:	TF000	64,953
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	46,335
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	8,118
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(26,385)
11.	Sub-Total - Direct Cost		\$ 1,008,459
12.	Contingency: 10.00 %	TY000	100,846
13.	Sub-Total:		1,109,305
14.	Overhead: 4.00 %	TZ000	44,372
15.	Sub-Total:		1,153,677
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,153,677

Cost / Mile	\$	133,474
Cost / Foot	\$	25.28
Cost / Meter	0	82.94

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Nebraska - 24"

2% Percent of total mileage Removed
0.17 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		8.64	=	7
Abandonment Crew	16,421.70 / day	x	6	=	98,530
Roads Crossing Crew	15,534.56 / day	x	15	=	233,018
Valve Crew	16,421.70 / day	x	2	=	32,843
Pipeline Removal	22,088.62 / day	x	3	=	66,266
Launcher/Receiver Crew	16,421.70 / day	x	0	=	-
Pipeline Cleaning Crew	7,520.85 / day	x	2	=	15,042
Pipeline Crossing Crew	15,534.56 / day	x	0	=	-
Water Crossing Crew	15,534.56 / day	x	24	=	372,830
Gas Pump Down	8.64 miles	x	435.22	=	3,762

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	5	=	54.63 total/cy	100.00	= 5,463.00
Steel Plate	68 pieces	x	4.0000	=	272.00 total/sf	5.30	= 1,441.60
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	769.27	= 4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	8.64	=	366.21 total/gal.	30.00	= 10,986.31
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	12	=	131.11 total/cy	100.00	= 13,111.20
Misc. Materials			5.00	%			= 1,780.89
State Taxes			5.50	%			= 2,056.92
							39,456.00

Land Damages

Spot Dig Sites	36 # of digs	x	1,500.00	=	54,000.00	each dig = 50 ft
Footage of Removed Pipe	912.75 # of feet	x	12.00	=	10,952.96	damages = \$ 12.00 / ft
					64,952.96	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.000	=	16,421.70
Roads	15,534.56	x	1.000	=	15,534.56
Valves	16,421.70	x	1.000	=	16,421.70
Cleaning	7,520.85	x	1.000	=	7,520.85
Pipeline Crossing	15,534.56	x	1.000	=	15,534.56
Water Crossing	15,534.56	x	1.000	=	15,534.56
Pipe Removal	22,088.62	x	1.000	=	22,088.62
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	57.32	=	57.324	x	(195.00)	(11,178.16)
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 4.5" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 7.14	PL Crossings	: 0
Roads	: 10	Water Crossings	: 0
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.14	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	14,614
2.	PIPELINE MATERIALS:	TB000	2,795
3.	CONSTRUCTION:	TC000	788,733
	a. Prime contract	TC100	785,694
	i) Pipeline Abandon in Place		364,562
	ii) Road Crossing		344,867
	iii) Valve Removals		36,456
	iv) Pipeline Removal		14,765
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,044
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	3,039
4.	PIPE SALVAGE COST:		(1,573)
5.	ENGINEERING: 2.25 %	TD000	18,789
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	25,052
7.	LAND - DAMAGES:	TF000	43,554
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	41,754
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	236
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(767)
11.	Sub-Total - Direct Cost		\$ 933,187
12.	Contingency: 10.00 %	TY000	93,319
13.	Sub-Total:		1,026,506
14.	Overhead: 4.00 %	TZ000	41,060
15.	Sub-Total:		1,067,566
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,067,566

Cost / Mile	\$	149,416
Cost / Foot	\$	28.30
Cost / Meter	0	92.84

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 4.5"

2% Percent of total mileage Removed
0.14 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		7.14	=	12
Abandonment Crew	18,228.09 / day	x	20	=	364,562
Roads Crossing Crew	17,243.36 / day	x	20	=	344,867
Valve Crew	18,228.09 / day	x	2	=	36,456
Pipeline Removal	7,382.33 / day	x	2	=	14,765
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	3	=	25,044
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	0	=	-
Gas Pump Down	7.14 miles	x	425.32	=	3,039

25 10 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	10	=	2.85 total/cy	100.00	= 285.00
Steel Plate	40 pieces	x	0.1406	=	5.62 total/sf	5.30	= 29.81
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	144.24	= 2,163.60
Cleaning Compounds	0.2074 gal/mile/clean	x	7.14	=	1.48 total/gal.	30.00	= 44.46
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			126.14
State Taxes			5.50	%			145.70
							2,795.00

Land Damages

Spot Dig Sites	23 # of digs	x	1,500.00	=	34,500.00	each dig = 50 ft
Footage of Removed Pipe	754.50 # of feet	x	12.00	=	9,054.03	damages = \$ 12.00 / ft
					43,554.03	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	\$ 14,494.00
Roads	15,534.56	x	1.110	=	\$ 13,711.00
Valves	16,421.70	x	1.110	=	\$ 14,494.00
Cleaning	7,520.85	x	1.110	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.110	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.110	=	\$ 13,711.00
Pipe Removal	6,650.74	x	1.110	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	8.07	=	8.066	x	(195.00)	(1,572.80)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 6.625" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 10.12	PL Crossings	: 0
Roads	: 11	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.20	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	9,379
2.	PIPELINE MATERIALS:	TB000	1,896
3.	CONSTRUCTION:	TC000	488,232
	a. Prime contract	TC100	483,927
	i) Pipeline Abandon in Place		72,912
	ii) Road Crossing		379,354
	iii) Valve Removals		-
	iv) Pipeline Removal		23,313
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,348
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	4,305
4.	PIPE SALVAGE COST:		(3,412)
5.	ENGINEERING: 2.25 %	TD000	12,059
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	16,079
7.	LAND - DAMAGES:	TF000	45,826
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	26,798
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	724
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,354)
11.	Sub-Total - Direct Cost		\$ 595,227
12.	Contingency: 10.00 %	TY000	59,523
13.	Sub-Total:		654,750
14.	Overhead: 4.00 %	TZ000	26,190
15.	Sub-Total:		680,940
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 680,940

Cost / Mile	\$	67,278
Cost / Foot	\$	12.74
Cost / Meter	0	41.80

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 6.625"

2% Percent of total mileage Removed
0.20 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		10.12	=	4
Abandonment Crew	18,228.09 / day	x	4	=	72,912
Roads Crossing Crew	17,243.36 / day	x	22	=	379,354
Valve Crew	18,228.09 / day	x	0	=	-
Pipeline Removal	7,770.87 / day	x	3	=	23,313
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	1	=	8,348
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	0	=	-
Gas Pump Down	10.12 miles	x	425.32	=	4,305

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	0.704 cy/road	x	11	=	7.74 total/cy	100.00	=	774.40
Steel Plate	44 pieces	x	0.3048	=	13.41 total/sf	5.30	=	71.08
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	212.35	=	637.05
Cleaning Compounds	0.7531 gal/mile/clean	x	10.12	=	7.62 total/gal.	30.00	=	228.67
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.704 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Misc. Materials			5.00	%				85.56
State Taxes			5.50	%				98.82
								1,896.00

Land Damages

Spot Dig Sites	22 # of digs	x	1,500.00	=	33,000.00	each dig = 50 ft
Footage of Removed Pipe	1068.81 # of feet	x	12.00	=	12,825.71	damages = \$ 12.00 / ft
					45,825.71	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	\$ 14,494.00
Roads	15,534.56	x	1.110	=	\$ 13,711.00
Valves	16,421.70	x	1.110	=	\$ 14,494.00
Cleaning	7,520.85	x	1.110	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.110	=	\$ 13,711.00
Water Crossing	15,534.56	x	1.110	=	\$ 13,711.00
Pipe Removal	7,000.78	x	1.110	=	\$ 53,927.30
					Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	17.50	=	17.495	x	(195.00)	(3,411.60)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 12.75" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 44.51	PL Crossings	: 0
Roads	: 70	Water Crossings	: 0
Valves	: 7	Above Ground Facilities	: 0
Pipe Removal	: 0.89	# of Line Segments	: 4

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	55,364
2.	PIPELINE MATERIALS:	TB000	38,894
3.	CONSTRUCTION:	TC000	2,847,863
	a. Prime contract	TC100	2,828,932
	i) Pipeline Abandon in Place		200,509
	ii) Road Crossing		2,414,071
	iii) Valve Removals		72,912
	iv) Pipeline Removal		99,699
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		41,741
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	18,931
4.	PIPE SALVAGE COST:		(30,006)
5.	ENGINEERING: 2.25 %	TD000	71,182
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	94,910
7.	LAND - DAMAGES:	TF000	276,903
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	158,183
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	11,799
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(38,346)
11.	Sub-Total - Direct Cost		\$ 3,486,746
12.	Contingency: 10.00 %	TY000	348,675
13.	Sub-Total:		3,835,421
14.	Overhead: 4.00 %	TZ000	153,417
15.	Sub-Total:		3,988,838
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 3,988,838

Cost / Mile	\$	89,617
Cost / Foot	\$	16.97
Cost / Meter	0	55.69

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 12.75"

2% Percent of total mileage Removed
0.89 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		44.51	=	17
Abandonment Crew	18,228.09 / day	x	11	=	200,509
Roads Crossing Crew	17,243.36 / day	x	140	=	2,414,071
Valve Crew	18,228.09 / day	x	4	=	72,912
Pipeline Removal	9,063.56 / day	x	11	=	99,699
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	5	=	41,741
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	0	=	-
Gas Pump Down	44.51 miles	x	425.32	=	18,931

20 8 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
12 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	70	=	204.82 total/cy	100.00	= 20,482.00
Steel Plate	280 pieces	x	1.1289	=	316.09 total/sf	5.30	= 1,675.29
Cleaning Pigs	3 pig/cleaning	x	4	=	12 total pigs	408.67	= 4,904.04
Cleaning Compounds	6.0282 gal/mile/clean	x	44.51	=	268.31 total/gal.	30.00	= 8,049.43
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			1,755.54
State Taxes			5.50	%			2,027.65
							38,894.00

Land Damages

Spot Dig Sites	147 # of digs	x	1,500.00	=	220,500.00	each dig = 50 ft
Footage of Removed Pipe	4700.24 # of feet	x	12.00	=	56,402.92	damages = \$ 12.00 / ft
					276,902.92	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	8,165.37	x	1.110	=	9,063.56
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	153.88	=	153.877	x	(195.00)	(30,006.04)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 20" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 36.37	PL Crossings	: 0
Roads	: 23	Water Crossings	: 1
Valves	: 5	Above Ground Facilities	: 0
Pipe Removal	: 0.73	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	31,776
2.	PIPELINE MATERIALS:	TB000	57,070
3.	CONSTRUCTION:	TC000	1,633,105
	a. Prime contract	TC100	1,617,635
	i) Pipeline Abandon in Place		127,597
	ii) Road Crossing		1,189,792
	iii) Valve Removals		91,140
	iv) Pipeline Removal		141,226
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		33,393
	vii) Pipeline Crossing		-
	viii) Water Crossing		34,487
	b. Pipeline Pump Down Contract	TC600	15,470
4.	PIPE SALVAGE COST:		(39,032)
5.	ENGINEERING: 2.25 %	TD000	40,855
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	54,473
7.	LAND - DAMAGES:	TF000	125,591
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	90,788
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	23,724
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(77,103)
11.	Sub-Total - Direct Cost		\$ 1,941,247
12.	Contingency: 10.00 %	TY000	194,125
13.	Sub-Total:		2,135,372
14.	Overhead: 4.00 %	TZ000	85,415
15.	Sub-Total:		2,220,787
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,220,787

Cost / Mile	\$	61,057
Cost / Foot	\$	11.56
Cost / Meter	0	37.94

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 20"

2% Percent of total mileage Removed
0.73 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		36.37	=	16
Abandonment Crew	18,228.09 / day	x	7	=	127,597
Roads Crossing Crew	17,243.36 / day	x	69	=	1,189,792
Valve Crew	18,228.09 / day	x	5	=	91,140
Pipeline Removal	15,691.76 / day	x	9	=	141,226
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	4	=	33,393
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	2	=	34,487
Gas Pump Down	36.37 miles	x	425.32	=	15,470

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	23	=	172.06 total/cy	100.00	= 17,206.30
Steel Plate	96 pieces	x	2.7778	=	266.67 total/sf	5.30	= 1,413.34
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	641.05	= 5,769.45
Cleaning Compounds	24.1776 gal/mile/clean	x	36.37	=	879.39 total/gal.	30.00	= 26,381.74
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	1	=	7.48 total/cy	100.00	= 748.10
Misc. Materials			5.00	%			= 2,575.95
State Taxes			5.50	%			= 2,975.22
							57,070.00

Land Damages

Spot Dig Sites	53 # of digs	x	1,500.00	=	79,500.00	each dig = 50 ft
Footage of Removed Pipe	3840.90 # of feet	x	12.00	=	46,090.80	damages = \$ 12.00 / ft
					125,590.80	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	14,136.72	x	1.110	=	15,691.76
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		200.16	=	200.164	x (195.00) (39,031.92)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 22" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 24.92	PL Crossings	: 0
Roads	: 8	Water Crossings	: 6
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.50	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	17,578
2.	PIPELINE MATERIALS:	TB000	44,401
3.	CONSTRUCTION:	TC000	883,460
	a. Prime contract	TC100	872,861
	i) Pipeline Abandon in Place		72,912
	ii) Road Crossing		413,841
	iii) Valve Removals		36,456
	iv) Pipeline Removal		117,688
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,044
	vii) Pipeline Crossing		-
	viii) Water Crossing		206,920
	b. Pipeline Pump Down Contract	TC600	10,599
4.	PIPE SALVAGE COST:		(29,486)
5.	ENGINEERING: 2.25 %	TD000	22,600
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	30,133
7.	LAND - DAMAGES:	TF000	76,579
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	50,222
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	19,668
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(63,922)
11.	Sub-Total - Direct Cost		\$ 1,051,234
12.	Contingency: 10.00 %	TY000	105,123
13.	Sub-Total:		1,156,357
14.	Overhead: 4.00 %	TZ000	46,254
15.	Sub-Total:		1,202,611
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,202,611

Cost / Mile	\$	48,258
Cost / Foot	\$	9.14
Cost / Meter	0	29.99

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 22"

2% Percent of total mileage Removed
0.50 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		24.92	=	9
Abandonment Crew	18,228.09 / day	x	4	=	72,912
Roads Crossing Crew	17,243.36 / day	x	24	=	413,841
Valve Crew	18,228.09 / day	x	2	=	36,456
Pipeline Removal	19,614.70 / day	x	6	=	117,688
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	3	=	25,044
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	12	=	206,920
Gas Pump Down	24.92 miles	x	425.32	=	10,599

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
22" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	9.111 cy/road	x	8	=	72.89 total/cy	100.00	=	7,288.80
Steel Plate	56 pieces	x	3.3611	=	188.22 total/sf	5.30	=	997.57
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	705.16	=	2,115.48
Cleaning Compounds	32.3875 gal/mile/clean	x	24.92	=	807.12 total/gal.	30.00	=	24,213.56
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	9.111 cy/pipeline	x	6	=	54.67 total/cy	100.00	=	5,466.60
Misc. Materials			5.00	%				2,004.10
State Taxes			5.50	%				2,314.74
								44,401.00

Land Damages

Spot Dig Sites	30 # of digs	x	1,500.00	=	45,000.00	each dig = 50 ft
Footage of Removed Pipe	2631.62 # of feet	x	12.00	=	31,579.49	damages = \$ 12.00 / ft
					76,579.49	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	17,670.90	x	1.110	=	19,614.70
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		151.21	=	151.210	x (195.00) (29,485.92)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 24.93	PL Crossings	: 0
Roads	: 17	Water Crossings	: 4
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.50	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	25,762
2.	PIPELINE MATERIALS:	TB000	65,044
3.	CONSTRUCTION:	TC000	1,309,483
	a. Prime contract	TC100	1,298,881
	i) Pipeline Abandon in Place		72,912
	ii) Road Crossing		879,412
	iii) Valve Removals		36,456
	iv) Pipeline Removal		147,110
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,044
	vii) Pipeline Crossing		-
	viii) Water Crossing		137,947
	b. Pipeline Pump Down Contract	TC600	10,602
4.	PIPE SALVAGE COST:		(32,237)
5.	ENGINEERING: 2.25 %	TD000	33,123
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	44,163
7.	LAND - DAMAGES:	TF000	97,588
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	73,606
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	23,413
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(76,092)
11.	Sub-Total - Direct Cost		\$ 1,563,853
12.	Contingency: 10.00 %	TY000	156,385
13.	Sub-Total:		1,720,238
14.	Overhead: 4.00 %	TZ000	68,810
15.	Sub-Total:		1,789,048
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,789,048

Cost / Mile	\$	71,771
Cost / Foot	\$	13.59
Cost / Meter	0	44.60

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 24"

2% Percent of total mileage Removed
0.50 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		24.93	=	9
Abandonment Crew	18,228.09 / day	x	4	=	72,912
Roads Crossing Crew	17,243.36 / day	x	51	=	879,412
Valve Crew	18,228.09 / day	x	2	=	36,456
Pipeline Removal	24,518.37 / day	x	6	=	147,110
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	3	=	25,044
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	8	=	137,947
Gas Pump Down	24.93 miles	x	425.32	=	10,602

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	17	=	185.74 total/cy	100.00	= 18,574.20
Steel Plate	84 pieces	x	4.0000	=	336.00 total/sf	5.30	= 1,780.80
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	769.27	= 2,307.81
Cleaning Compounds	42.3686 gal/mile/clean	x	24.93	=	1,056.13 total/gal.	30.00	= 31,683.77
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	4	=	43.70 total/cy	100.00	= 4,370.40
Misc. Materials			5.00	%			= 2,935.85
State Taxes			5.50	%			= 3,390.91
							65,044.00

Land Damages

Spot Dig Sites	44 # of digs	x	1,500.00	=	66,000.00	each dig = 50 ft
Footage of Removed Pipe	2632.30 # of feet	x	12.00	=	31,587.60	damages = \$ 12.00 / ft
					97,587.60	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	22,088.62	x	1.110	=	24,518.37
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		165.32	=	165.318	x (195.00) (32,237.07)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 30" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 148.88	PL Crossings	: 0
Roads	: 169	Water Crossings	: 5
Valves	: 16	Above Ground Facilities	: 0
Pipe Removal	: 2.98	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	222,777
2.	PIPELINE MATERIALS:	TB000	755,681
3.	CONSTRUCTION:	TC000	11,239,756
	a. Prime contract	TC100	11,176,432
	i) Pipeline Abandon in Place		182,281
	ii) Road Crossing		8,742,386
	iii) Valve Removals		583,299
	iv) Pipeline Removal		1,379,158
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		116,874
	vii) Pipeline Crossing		-
	viii) Water Crossing		172,434
	b. Pipeline Pump Down Contract	TC600	63,324
4.	PIPE SALVAGE COST:		(241,707)
5.	ENGINEERING: 2.25 %	TD000	286,427
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	381,903
7.	LAND - DAMAGES:	TF000	734,667
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	636,505
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	218,501
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(710,128)
11.	Sub-Total - Direct Cost		\$ 13,524,382
12.	Contingency: 10.00 %	TY000	1,352,438
13.	Sub-Total:		14,876,820
14.	Overhead: 4.00 %	TZ000	595,073
15.	Sub-Total:		15,471,893
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 15,471,893

Cost / Mile	\$	103,919
Cost / Foot	\$	19.68
Cost / Meter	0	64.57

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 30"

2% Percent of total mileage Removed
2.98 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		148.88	=	56
Abandonment Crew	18,228.09 / day	x	10	=	182,281
Roads Crossing Crew	17,243.36 / day	x	507	=	8,742,386
Valve Crew	18,228.09 / day	x	32	=	583,299
Pipeline Removal	38,309.96 / day	x	36	=	1,379,158
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	14	=	116,874
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	10	=	172,434
Gas Pump Down	148.88 miles	x	425.32	=	63,324

15 6 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	169	=	2,923.02 total/cy	100.00	=	292,302.40
Steel Plate	696 pieces	x	6.2500	=	4,350.00 total/sf	5.30	=	23,055.00
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	961.58	=	8,654.22
Cleaning Compounds	78.2522 gal/mile/clean	x	148.88	=	11,650.56 total/gal.	30.00	=	349,516.92
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	5	=	86.48 total/cy	100.00	=	8,648.00
Misc. Materials			5.00	%				34,108.83
State Taxes			5.50	%				39,395.70
								<u>755,681.00</u>

Land Damages

Spot Dig Sites	364 # of digs	x	1,500.00	=	546,000.00	each dig = 50 ft
Footage of Removed Pipe	15722.24 # of feet	x	12.00	=	188,666.83	damages = \$ 12.00 / ft
					<u>734,666.83</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	34,513.47	x	1.110	=	38,309.96
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		1,239.52	=	1239.521 x	(195.00) (241,706.68)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 36" Lines in Ohio		
State	: Ohio		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 19.43	PL Crossings	: 0
Roads	: 25	Water Crossings	: 1
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.39	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	35,675
2.	PIPELINE MATERIALS:	TB000	160,253
3.	CONSTRUCTION:	TC000	1,769,713
	a. Prime contract	TC100	1,761,449
	i) Pipeline Abandon in Place		(36,456)
	ii) Road Crossing		1,293,252
	iii) Valve Removals		145,825
	iv) Pipeline Removal		299,297
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		25,044
	vii) Pipeline Crossing		-
	viii) Water Crossing		34,487
	b. Pipeline Pump Down Contract	TC600	8,264
4.	PIPE SALVAGE COST:		(37,960)
5.	ENGINEERING: 2.25 %	TD000	45,868
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	61,158
7.	LAND - DAMAGES:	TF000	108,622
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	101,929
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	41,063
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(133,454)
11.	Sub-Total - Direct Cost		\$ 2,152,867
12.	Contingency: 10.00 %	TY000	215,287
13.	Sub-Total:		2,368,154
14.	Overhead: 4.00 %	TZ000	94,726
15.	Sub-Total:		2,462,880
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,462,880

Cost / Mile	\$	126,753
Cost / Foot	\$	24.01
Cost / Meter	0	78.76

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Ohio - 36"

2% Percent of total mileage Removed
0.39 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		19.43	=	9
Abandonment Crew	18,228.09 / day	x	(2)	=	(36,456)
Roads Crossing Crew	17,243.36 / day	x	75	=	1,293,252
Valve Crew	18,228.09 / day	x	8	=	145,825
Pipeline Removal	59,859.30 / day	x	5	=	299,297
Launcher/Receiver Crew	18,228.09 / day	x	0	=	-
Pipeline Cleaning Crew	8,348.15 / day	x	3	=	25,044
Pipeline Crossing Crew	17,243.36 / day	x	0	=	-
Water Crossing Crew	17,243.36 / day	x	2	=	34,487
Gas Pump Down	19.43 miles	x	425.32	=	8,264

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	25.111 cy/road	x	25	=	627.78 total/cy	100.00	=	62,777.50
Steel Plate	104 pieces	x	9.0000	=	936.00 total/sf	5.30	=	4,960.80
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	=	3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	19.43	=	2,365.14 total/gal.	30.00	=	70,954.25
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	1	=	25.11 total/cy	100.00	=	2,511.10
Misc. Materials			5.00	%				7,233.27
State Taxes			5.50	%				8,354.42
								<u>160,253.00</u>

Land Damages

Spot Dig Sites	56 # of digs	x	1,500.00	=	84,000.00	each dig = 50 ft
Footage of Removed Pipe	2051.86 # of feet	x	12.00	=	24,622.32	damages = \$ 12.00 / ft
					<u>108,622.32</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.110	=	18,228.09
Roads	15,534.56	x	1.110	=	17,243.36
Valves	16,421.70	x	1.110	=	18,228.09
Cleaning	7,520.85	x	1.110	=	8,348.15
Pipeline Crossing	15,534.56	x	1.110	=	17,243.36
Water Crossing	15,534.56	x	1.110	=	17,243.36
Pipe Removal	53,927.30	x	1.110	=	59,859.30
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		194.67	=	194.668	x (195.00) (37,960.19)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 6.625" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 0.48	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,821
2.	PIPELINE MATERIALS:	TB000	795
3.	CONSTRUCTION:	TC000	98,129
	a. Prime contract	TC100	97,924
	i) Pipeline Abandon in Place		43,353
	ii) Road Crossing		27,341
	iii) Valve Removals		14,451
	iv) Pipeline Removal		6,161
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		6,618
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	205
4.	PIPE SALVAGE COST:		(162)
5.	ENGINEERING: 2.25 %	TD000	2,341
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,121
7.	LAND - DAMAGES:	TF000	5,110
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,202
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	34
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(112)
11.	Sub-Total - Direct Cost		\$ 116,279
12.	Contingency: 10.00 %	TY000	11,628
13.	Sub-Total:		127,907
14.	Overhead: 4.00 %	TZ000	5,116
15.	Sub-Total:		133,023
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 133,023

Cost / Mile	\$	276,194
Cost / Foot	\$	52.31
Cost / Meter	0	171.62

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 6.625"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.48		3
Abandonment Crew	14,451.10 / day	x	3	=	43,353
Roads Crossing Crew	13,670.42 / day	x	2	=	27,341
Valve Crew	14,451.10 / day	x	1	=	14,451
Pipeline Removal	6,160.69 / day	x	1	=	6,161
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	1	=	6,618
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	0	=	-
Gas Pump Down	0.48 miles	x	425.13	=	205

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.704 cy/road	x	1	=	0.70 total/cy	100.00	= 70.40
Steel Plate	4 pieces	x	0.3048	=	1.22 total/sf	5.30	= 6.46
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	212.35	= 637.05
Cleaning Compounds	0.7531 gal/mile/clean	x	0.48	=	0.36 total/gal.	30.00	= 10.88
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.704 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			36.24
State Taxes			4.50	%			34.25
							795.00

Land Damages

Spot Dig Sites	3 # of digs	x	1,500.00	=	4,500.00	each dig = 50 ft
Footage of Removed Pipe	50.86 # of feet	x	12.00	=	610.32	damages = \$ 12.00 / ft
					5,110.32	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	7,000.78	x	0.880	=	6,160.69
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.83	=	0.833	x	(195.00)	(162.34)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 8.625" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 19.22	PL Crossings	: 0
Roads	: 27	Water Crossings	: 6
Valves	: 8	Above Ground Facilities	: 0
Pipe Removal	: 0.38	# of Line Segments	: 4

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	22,249
2.	PIPELINE MATERIALS:	TB000	9,705
3.	CONSTRUCTION:	TC000	1,126,341
	a. Prime contract	TC100	1,118,172
	i) Pipeline Abandon in Place		187,864
	ii) Road Crossing		738,202
	iii) Valve Removals		57,804
	iv) Pipeline Removal		32,425
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		19,855
	vii) Pipeline Crossing		-
	viii) Water Crossing		82,022
	b. Pipeline Pump Down Contract	TC600	8,169
4.	PIPE SALVAGE COST:		(8,592)
5.	ENGINEERING: 2.25 %	TD000	28,606
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	38,142
7.	LAND - DAMAGES:	TF000	135,350
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	63,570
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	2,331
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(7,575)
11.	Sub-Total - Direct Cost		\$ 1,410,126
12.	Contingency: 10.00 %	TY000	141,013
13.	Sub-Total:		1,551,139
14.	Overhead: 4.00 %	TZ000	62,046
15.	Sub-Total:		1,613,185
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,613,185

Cost / Mile	\$	83,953
Cost / Foot	\$	15.90
Cost / Meter	0	52.17

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 8.625"

2% Percent of total mileage Removed
0.38 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		19.22	=	12
Abandonment Crew	14,451.10 / day	x	13	=	187,864
Roads Crossing Crew	13,670.42 / day	x	54	=	738,202
Valve Crew	14,451.10 / day	x	4	=	57,804
Pipeline Removal	6,484.94 / day	x	5	=	32,425
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	3	=	19,855
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	6	=	82,022
Gas Pump Down	19.22 miles	x	425.13	=	8,169

20 8 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
12 Minimum Days / Segment
1 Days/Water

8.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost						
Road Fill Concrete	1.259 cy/road	x	27	=	33.99 total/cy	100.00	= 3,399.30
Steel Plate	132 pieces	x	0.5166	=	68.19 total/sf	5.30	= 361.41
Cleaning Pigs	3 pig/cleaning	x	4	=	12 total pigs	276.45	= 3,317.40
Cleaning Compounds	1.7547 gal/mile/clean	x	19.22	=	33.72 total/gal.	30.00	= 1,011.51
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	1.259 cy/pipeline	x	6	=	7.55 total/cy	100.00	= 755.40
Misc. Materials			5.00	%			442.25
State Taxes			4.50	%			417.93
							9,705.00

Land Damages

Spot Dig Sites	74 # of digs	x	1,500.00	=	111,000.00	each dig = 50 ft
Footage of Removed Pipe	2029.13 # of feet	x	12.00	=	24,349.54	damages = \$ 12.00 / ft
					135,349.54	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	7,369.25	x	0.880	=	6,484.94
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	44.06	=	44.061	x	(195.00)	(8,591.82)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 10.75" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 27.46	PL Crossings	: 0
Roads	: 28	Water Crossings	: 0
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.55	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	18,512
2.	PIPELINE MATERIALS:	TB000	11,113
3.	CONSTRUCTION:	TC000	924,944
	a. Prime contract	TC100	913,270
	i) Pipeline Abandon in Place		72,255
	ii) Road Crossing		765,543
	iii) Valve Removals		14,451
	iv) Pipeline Removal		47,784
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		13,237
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	11,674
4.	PIPE SALVAGE COST:		(15,490)
5.	ENGINEERING: 2.25 %	TD000	23,802
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	31,736
7.	LAND - DAMAGES:	TF000	121,798
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	52,893
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	5,175
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(16,818)
11.	Sub-Total - Direct Cost		\$ 1,157,665
12.	Contingency: 10.00 %	TY000	115,767
13.	Sub-Total:		1,273,432
14.	Overhead: 4.00 %	TZ000	50,937
15.	Sub-Total:		1,324,369
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,324,369

Cost / Mile	\$	48,228
Cost / Foot	\$	9.13
Cost / Meter	0	29.97

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 10.75"

2% Percent of total mileage Removed
0.55 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		27.46	=	8
Abandonment Crew	14,451.10 / day	x	5	=	72,255
Roads Crossing Crew	13,670.42 / day	x	56	=	765,543
Valve Crew	14,451.10 / day	x	1	=	14,451
Pipeline Removal	6,826.25 / day	x	7	=	47,784
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	2	=	13,237
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	0	=	-
Gas Pump Down	27.46 miles	x	425.13	=	11,674

2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	2.037 cy/road	x	28	=	57.04 total/cy	100.00	=	5,703.60
Steel Plate	112 pieces	x	0.8025	=	89.88 total/sf	5.30	=	476.36
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	344.57	=	1,033.71
Cleaning Compounds	3.538 gal/mile/clean	x	27.46	=	97.15 total/gal.	30.00	=	2,914.65
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	2.037 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Misc. Materials			5.00	%				506.42
State Taxes			4.50	%				478.56
								11,113.00

Land Damages

Spot Dig Sites	58 # of digs	x	1,500.00	=	87,000.00	each dig = 50 ft
Footage of Removed Pipe	2899.82 # of feet	x	12.00	=	34,797.84	damages = \$ 12.00 / ft
					121,797.84	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	\$ 14,494.00
Roads	15,534.56	x	0.880	=	\$ 13,711.00
Valves	16,421.70	x	0.880	=	\$ 14,494.00
Cleaning	7,520.85	x	0.880	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	0.880	=	\$ 13,711.00
Water Crossing	15,534.56	x	0.880	=	\$ 13,711.00
Pipe Removal	7,757.10	x	0.880	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	79.44	=	79.435	x	(195.00)	(15,489.85)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 12.75" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 0.18	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,820
2.	PIPELINE MATERIALS:	TB000	1,728
3.	CONSTRUCTION:	TC000	99,025
	a. Prime contract	TC100	98,949
	i) Pipeline Abandon in Place		57,804
	ii) Road Crossing		27,341
	iii) Valve Removals		-
	iv) Pipeline Removal		7,186
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		6,618
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	76
4.	PIPE SALVAGE COST:		(121)
5.	ENGINEERING: 2.25 %	TD000	2,340
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,119
7.	LAND - DAMAGES:	TF000	3,227
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,199
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	47
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(154)
11.	Sub-Total - Direct Cost		\$ 116,230
12.	Contingency: 10.00 %	TY000	11,623
13.	Sub-Total:		127,853
14.	Overhead: 4.00 %	TZ000	5,114
15.	Sub-Total:		132,967
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 132,967

Cost / Mile	\$	742,926
Cost / Foot	\$	140.71
Cost / Meter	0	461.63

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 12.75"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.18		3
Abandonment Crew	14,451.10 / day	x	4	=	57,804
Roads Crossing Crew	13,670.42 / day	x	2	=	27,341
Valve Crew	14,451.10 / day	x	0	=	-
Pipeline Removal	7,185.52 / day	x	1	=	7,186
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	1	=	6,618
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	0	=	-
Gas Pump Down	0.18 miles	x	425.13	=	76

2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	1	=	2.93 total/cy	100.00	= 292.60
Steel Plate	4 pieces	x	1.1289	=	4.52 total/sf	5.30	= 23.93
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	408.67	= 1,226.01
Cleaning Compounds	6.0282 gal/mile/clean	x	0.18	=	1.08 total/gal.	30.00	= 32.37
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			78.75
State Taxes			4.50	%			74.41
							1,728.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	18.90 # of feet	x	12.00	=	226.80	damages = \$ 12.00 / ft
					3,226.80	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	8,165.37	x	0.880	=	7,185.52
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.62	=	0.619	x	(195.00)	(120.66)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 16" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 148.77	PL Crossings	: 0
Roads	: 126	Water Crossings	: 28
Valves	: 16	Above Ground Facilities	: 0
Pipe Removal	: 2.98	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	103,048
2.	PIPELINE MATERIALS:	TB000	153,846
3.	CONSTRUCTION:	TC000	5,060,077
	a. Prime contract	TC100	4,996,830
	i) Pipeline Abandon in Place		202,315
	ii) Road Crossing		3,444,945
	iii) Valve Removals		231,218
	iv) Pipeline Removal		286,625
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		66,184
	vii) Pipeline Crossing		-
	viii) Water Crossing		765,543
	b. Pipeline Pump Down Contract	TC600	63,247
4.	PIPE SALVAGE COST:		(126,902)
5.	ENGINEERING: 2.25 %	TD000	132,490
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	176,653
7.	LAND - DAMAGES:	TF000	674,523
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	294,422
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	62,104
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(201,838)
11.	Sub-Total - Direct Cost		\$ 6,328,423
12.	Contingency: 10.00 %	TY000	632,842
13.	Sub-Total:		6,961,265
14.	Overhead: 4.00 %	TZ000	278,451
15.	Sub-Total:		7,239,716
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 7,239,716

Cost / Mile	\$	48,663
Cost / Foot	\$	9.22
Cost / Meter	0	30.24

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 16"

2% Percent of total mileage Removed
2.98 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		148.77	=	40
Abandonment Crew	14,451.10 / day	x	14	=	202,315
Roads Crossing Crew	13,670.42 / day	x	252	=	3,444,945
Valve Crew	14,451.10 / day	x	16	=	231,218
Pipeline Removal	7,961.80 / day	x	36	=	286,625
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	10	=	66,184
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	56	=	765,543
Gas Pump Down	148.77 miles	x	425.13	=	63,247

25 10 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	126	=	592.70 total/cy	100.00	=	59,270.40
Steel Plate	616 pieces	x	1.7778	=	1,095.12 total/sf	5.30	=	5,804.16
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	512.84	=	7,692.60
Cleaning Compounds	12.16 gal/mile/clean	x	148.77	=	1,809.06 total/gal.	30.00	=	54,271.84
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	28	=	131.71 total/cy	100.00	=	13,171.20
Misc. Materials			5.00	%				7,010.51
State Taxes			4.50	%				6,624.93
								<u>153,846.00</u>

Land Damages

Spot Dig Sites	324 # of digs	x	1,500.00	=	486,000.00	each dig = 50 ft
Footage of Removed Pipe	15710.27 # of feet	x	12.00	=	188,523.22	damages = \$ 12.00 / ft
					<u>674,523.22</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	9,047.50	x	0.880	=	7,961.80
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		650.78	=	650.778 x	(195.00) (126,901.75)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 20" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 101.85	PL Crossings	: 0
Roads	: 105	Water Crossings	: 16
Valves	: 8	Above Ground Facilities	: 0
Pipe Removal	: 2.04	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	109,384
2.	PIPELINE MATERIALS:	TB000	198,751
3.	CONSTRUCTION:	TC000	5,547,686
	a. Prime contract	TC100	5,504,387
	i) Pipeline Abandon in Place		274,571
	ii) Road Crossing		4,306,181
	iii) Valve Removals		115,609
	iv) Pipeline Removal		311,008
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		59,565
	vii) Pipeline Crossing		-
	viii) Water Crossing		437,453
	b. Pipeline Pump Down Contract	TC600	43,299
4.	PIPE SALVAGE COST:		(109,297)
5.	ENGINEERING: 2.25 %	TD000	140,636
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	187,515
7.	LAND - DAMAGES:	TF000	504,064
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	312,525
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	66,432
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(215,905)
11.	Sub-Total - Direct Cost		\$ 6,741,790
12.	Contingency: 10.00 %	TY000	674,179
13.	Sub-Total:		7,415,969
14.	Overhead: 4.00 %	TZ000	296,639
15.	Sub-Total:		7,712,608
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 7,712,608

Cost / Mile	\$	75.725
Cost / Foot	\$	14.34
Cost / Meter	0	47.05

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 20"

2% Percent of total mileage Removed
2.04 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		101.85	=	36
Abandonment Crew	14,451.10 / day	x	19	=	274,571
Roads Crossing Crew	13,670.42 / day	x	315	=	4,306,181
Valve Crew	14,451.10 / day	x	8	=	115,609
Pipeline Removal	12,440.31 / day	x	25	=	311,008
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	9	=	59,565
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	32	=	437,453
Gas Pump Down	101.85 miles	x	425.13	=	43,299

25 10 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	105	=	785.51 total/cy	100.00	= 78,550.50
Steel Plate	484 pieces	x	2.7778	=	1,344.46 total/sf	5.30	= 7,125.61
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	641.05	= 9,615.75
Cleaning Compounds	24.1776 gal/mile/clean	x	101.85	=	2,462.48 total/gal.	30.00	= 73,874.35
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	16	=	119.70 total/cy	100.00	= 11,969.60
Misc. Materials			5.00	%			= 9,056.79
State Taxes			4.50	%			= 8,558.67
							198,751.00

Land Damages

Spot Dig Sites	250 # of digs	x	1,500.00	=	375,000.00	each dig = 50 ft
Footage of Removed Pipe	10755.32 # of feet	x	12.00	=	129,063.78	damages = \$ 12.00 / ft
					504,063.78	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	14,136.72	x	0.880	=	12,440.31
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		560.50	=	560.500 x	(195.00) (109,297.46)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Oklahoma		
State	: Oklahoma		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 58.28	PL Crossings	: 0
Roads	: 58	Water Crossings	: 2
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 1.17	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	58,738
2.	PIPELINE MATERIALS:	TB000	161,329
3.	CONSTRUCTION:	TC000	2,936,748
	a. Prime contract	TC100	2,911,971
	i) Pipeline Abandon in Place		130,060
	ii) Road Crossing		2,378,652
	iii) Valve Removals		43,353
	iv) Pipeline Removal		272,132
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		33,092
	vii) Pipeline Crossing		-
	viii) Water Crossing		54,682
	b. Pipeline Pump Down Contract	TC600	24,777
4.	PIPE SALVAGE COST:		(75,373)
5.	ENGINEERING: 2.25 %	TD000	75,520
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	100,693
7.	LAND - DAMAGES:	TF000	258,354
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	167,822
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	54,741
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(177,908)
11.	Sub-Total - Direct Cost		\$ 3,560,664
12.	Contingency: 10.00 %	TY000	356,066
13.	Sub-Total:		3,916,730
14.	Overhead: 4.00 %	TZ000	156,669
15.	Sub-Total:		4,073,399
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,073,399

Cost / Mile	\$	69,892
Cost / Foot	\$	13.24
Cost / Meter	0	43.43

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Oklahoma - 24"

2% Percent of total mileage Removed
 1.17 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		58.28		17
Abandonment Crew	14,451.10 / day	x	9	=	130,060
Roads Crossing Crew	13,670.42 / day	x	174	=	2,378,652
Valve Crew	14,451.10 / day	x	3	=	43,353
Pipeline Removal	19,437.99 / day	x	14	=	272,132
Launcher/Receiver Crew	14,451.10 / day	x	0	=	-
Pipeline Cleaning Crew	6,618.35 / day	x	5	=	33,092
Pipeline Crossing Crew	13,670.42 / day	x	0	=	-
Water Crossing Crew	13,670.42 / day	x	4	=	54,682
Gas Pump Down	58.28 miles	x	425.13	=	24,777

5
 2 Day M&D
 4 Mile/Day
 3 Days/Road or Pipeline
 4 Days/L&R
 1 Days/Valve
 12 Days/ Mile of Pipeline Removal
 3 Minimum Days / Segment
 2 Days/Water
 24" line equals 4 miles/day
 Minimum Number of Days / Segment is 3 Days
 M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	10.926 cy/road	x	58	=	633.71 total/cy	100.00	=	63,370.80
Steel Plate	240 pieces	x	4,000	=	960.00 total/sf	5.30	=	5,088.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	769.27	=	2,307.81
Cleaning Compounds	42.3686 gal/mile/clean	x	58.28	=	2,469.30 total/gal.	30.00	=	74,078.93
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	10.926 cy/pipeline	x	2	=	21.85 total/cy	100.00	=	2,185.20
Misc. Materials			5.00	%				7,351.54
State Taxes			4.50	%				6,947.20
								<u>161,329.00</u>

Land Damages

Spot Dig Sites	123 # of digs	x	1,500.00	=	184,500.00	each dig = 50 ft
Footage of Removed Pipe	6154.51 # of feet	x	12.00	=	73,854.08	damages = \$ 12.00 / ft
					<u>258,354.08</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.880	=	14,451.10
Roads	15,534.56	x	0.880	=	13,670.42
Valves	16,421.70	x	0.880	=	14,451.10
Cleaning	7,520.85	x	0.880	=	6,618.35
Pipeline Crossing	15,534.56	x	0.880	=	13,670.42
Water Crossing	15,534.56	x	0.880	=	13,670.42
Pipe Removal	22,088.62	x	0.880	=	19,437.99
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)					
		386.53	=	386.526	x	(195.00)	(75,372.59)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 12.75" Lines in Tennessee		
State	: Tennessee		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 0.20	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,959
2.	PIPELINE MATERIALS:	TB000	1,773
3.	CONSTRUCTION:	TC000	106,903
	a. Prime contract	TC100	106,820
	i) Pipeline Abandon in Place		62,402
	ii) Road Crossing		29,516
	iii) Valve Removals		-
	iv) Pipeline Removal		7,757
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		7,145
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	83
4.	PIPE SALVAGE COST:		(132)
5.	ENGINEERING: 2.25 %	TD000	2,518
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,358
7.	LAND - DAMAGES:	TF000	3,249
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,596
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	52
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(169)
11.	Sub-Total - Direct Cost		\$ 125,106
12.	Contingency: 10.00 %	TY000	12,511
13.	Sub-Total:		137,617
14.	Overhead: 4.00 %	TZ000	5,505
15.	Sub-Total:		143,122
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 143,122

Cost / Mile	\$	728,722
Cost / Foot	\$	138.02
Cost / Meter	0	452.81

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Tennessee - 12.75"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.20	=	3
Abandonment Crew	15,600.62 / day	x	4	=	62,402
Roads Crossing Crew	14,757.83 / day	x	2	=	29,516
Valve Crew	15,600.62 / day	x	0	=	-
Pipeline Removal	7,757.10 / day	x	1	=	7,757
Launcher/Receiver Crew	15,600.62 / day	x	0	=	-
Pipeline Cleaning Crew	7,144.81 / day	x	1	=	7,145
Pipeline Crossing Crew	14,757.83 / day	x	0	=	-
Water Crossing Crew	14,757.83 / day	x	0	=	-
Gas Pump Down	0.20 miles	x	424.96	=	83

5
2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	2.926 cy/road	x	1	=	2.93 total/cy	100.00	=	292.60
Steel Plate	4 pieces	x	1.1289	=	4.52 total/sf	5.30	=	23.93
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	408.67	=	1,226.01
Cleaning Compounds	6.0282 gal/mile/clean	x	0.20	=	1.18 total/gal.	30.00	=	35.52
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	2.926 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Misc. Materials			5.00	%				78.90
State Taxes			7.00	%				115.99
								1,773.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	20.74 # of feet	x	12.00	=	248.88	damages = \$ 12.00 / ft
					3,248.88	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.950	=	15,600.62
Roads	15,534.56	x	0.950	=	14,757.83
Valves	16,421.70	x	0.950	=	15,600.62
Cleaning	7,520.85	x	0.950	=	7,144.81
Pipeline Crossing	15,534.56	x	0.950	=	14,757.83
Water Crossing	15,534.56	x	0.950	=	14,757.83
Pipe Removal	8,165.37	x	0.950	=	7,757.10
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.68	=	0.679	x	(195.00)	(132.40)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 30" Lines in Tennessee		
State	: Tennessee		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 254.64	PL Crossings	: 0
Roads	: 164	Water Crossings	: 52
Valves	: 20	Above Ground Facilities	: 0
Pipe Removal	: 5.09	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	249,574
2.	PIPELINE MATERIALS:	TB000	1,129,984
3.	CONSTRUCTION:	TC000	12,130,698
	a. Prime contract	TC100	12,022,486
	i) Pipeline Abandon in Place		405,616
	ii) Road Crossing		7,260,855
	iii) Valve Removals		624,025
	iv) Pipeline Removal		2,032,844
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		164,331
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,534,815
	b. Pipeline Pump Down Contract	TC600	108,212
4.	PIPE SALVAGE COST:		(413,397)
5.	ENGINEERING: 2.25 %	TD000	320,881
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	427,841
7.	LAND - DAMAGES:	TF000	1,000,682
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	713,068
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	373,708
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,214,551)
11.	Sub-Total - Direct Cost		\$ 14,718,487
12.	Contingency: 10.00 %	TY000	1,471,849
13.	Sub-Total:		16,190,336
14.	Overhead: 4.00 %	TZ000	647,613
15.	Sub-Total:		16,837,949
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 16,837,949

Cost / Mile	\$	66,124
Cost / Foot	\$	12.52
Cost / Meter	0	41.09

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Tennessee - 30"

2% Percent of total mileage Removed
5.09 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		254.64	=	89
Abandonment Crew	15,600.62 / day	x	26	=	405,616
Roads Crossing Crew	14,757.83 / day	x	492	=	7,260,855
Valve Crew	15,600.62 / day	x	40	=	624,025
Pipeline Removal	32,787.80 / day	x	62	=	2,032,844
Launcher/Receiver Crew	15,600.62 / day	x	0	=	-
Pipeline Cleaning Crew	7,144.81 / day	x	23	=	164,331
Pipeline Crossing Crew	14,757.83 / day	x	0	=	-
Water Crossing Crew	14,757.83 / day	x	104	=	1,534,815
Gas Pump Down	254.64 miles	x	424.96	=	108,212

10 4 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	17.296 cy/road	x	164	=	2,836.54 total/cy	100.00	=	283,654.40
Steel Plate	864 pieces	x	6.2500	=	5,400.00 total/sf	5.30	=	28,620.00
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	961.58	=	5,769.48
Cleaning Compounds	78.2522 gal/mile/clean	x	254.64	=	19,926.26 total/gal.	30.00	=	597,787.88
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	17.296 cy/pipeline	x	52	=	899.39 total/cy	100.00	=	89,939.20
Misc. Materials			5.00	%				50,288.55
State Taxes			7.00	%				73,924.17
								<u>1,129,984.00</u>

Land Damages

Spot Dig Sites	452 # of digs	x	1,500.00	=	678,000.00	each dig = 50 ft
Footage of Removed Pipe	26890.15 # of feet	x	12.00	=	322,681.79	damages = \$ 12.00 / ft
					<u>1,000,681.79</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.950	=	15,600.62
Roads	15,534.56	x	0.950	=	14,757.83
Valves	16,421.70	x	0.950	=	15,600.62
Cleaning	7,520.85	x	0.950	=	7,144.81
Pipeline Crossing	15,534.56	x	0.950	=	14,757.83
Water Crossing	15,534.56	x	0.950	=	14,757.83
Pipe Removal	34,513.47	x	0.950	=	32,787.80
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		2,119.99	=	2119.986	x (195.00) (413,397.22)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 36" Lines in Tennessee		
State	: Tennessee		
Pipe Dia.	: 36.000		
Pipe Length (mi)	: 73.90	PL Crossings	: 0
Roads	: 50	Water Crossings	: 15
Valves	: 12	Above Ground Facilities	: 0
Pipe Removal	: 1.48	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	83,704
2.	PIPELINE MATERIALS:	TB000	504,411
3.	CONSTRUCTION:	TC000	3,972,001
	a. Prime contract	TC100	3,940,594
	i) Pipeline Abandon in Place		(62,402)
	ii) Road Crossing		2,213,675
	iii) Valve Removals		374,415
	iv) Pipeline Removal		922,157
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		50,014
	vii) Pipeline Crossing		-
	viii) Water Crossing		442,735
	b. Pipeline Pump Down Contract	TC600	31,407
4.	PIPE SALVAGE COST:		(144,384)
5.	ENGINEERING: 2.25 %	TD000	107,619
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	143,492
7.	LAND - DAMAGES:	TF000	306,652
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	239,153
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	156,185
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(507,601)
11.	Sub-Total - Direct Cost		\$ 4,861,232
12.	Contingency: 10.00 %	TY000	486,123
13.	Sub-Total:		5,347,355
14.	Overhead: 4.00 %	TZ000	213,894
15.	Sub-Total:		5,561,249
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,561,249

Cost / Mile	\$	75,249
Cost / Foot	\$	14.25
Cost / Meter	0	46.76

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Tennessee - 36"

2% Percent of total mileage Removed
1.48 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	3 miles/day		73.90	=	27
Abandonment Crew	15,600.62 / day	x	(4)	=	(62,402)
Roads Crossing Crew	14,757.83 / day	x	150	=	2,213,675
Valve Crew	15,600.62 / day	x	24	=	374,415
Pipeline Removal	51,230.94 / day	x	18	=	922,157
Launcher/Receiver Crew	15,600.62 / day	x	0	=	-
Pipeline Cleaning Crew	7,144.81 / day	x	7	=	50,014
Pipeline Crossing Crew	14,757.83 / day	x	0	=	-
Water Crossing Crew	14,757.83 / day	x	30	=	442,735
Gas Pump Down	73.90 miles	x	424.96	=	31,407

5
2 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
5 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

36" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	25.111 cy/road	x	50	=	1,255.55 total/cy	100.00	=	125,555.00
Steel Plate	260 pieces	x	9.0000	=	2,340.00 total/sf	5.30	=	12,402.00
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	1153.90	=	3,461.70
Cleaning Compounds	121.7232 gal/mile/clean	x	73.90	=	8,995.95 total/gal.	30.00	=	269,878.47
Pipeline Fill Concrete	12.556 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	25.111 cy/pipeline	x	15	=	376.67 total/cy	100.00	=	37,666.50
Misc. Materials			5.00	%				22,448.18
State Taxes			7.00	%				32,998.83
								<u>504,411.00</u>

Land Damages

Spot Dig Sites	142 # of digs	x	1,500.00	=	213,000.00	each dig = 50 ft
Footage of Removed Pipe	7804.36 # of feet	x	12.00	=	93,652.37	damages = \$ 12.00 / ft
					<u>306,652.37</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.950	=	15,600.62
Roads	15,534.56	x	0.950	=	14,757.83
Valves	16,421.70	x	0.950	=	15,600.62
Cleaning	7,520.85	x	0.950	=	7,144.81
Pipeline Crossing	15,534.56	x	0.950	=	14,757.83
Water Crossing	15,534.56	x	0.950	=	14,757.83
Pipe Removal	53,927.30	x	0.950	=	51,230.94
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	740.43	=	740.429	x	(195.00)	(144,383.72)
------------------------------	--------------	-------------	--------	---	---------	---	----------	--------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 4.5" Lines in Texas		
State	: Texas		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 0.43	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 0	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,841
2.	PIPELINE MATERIALS:	TB000	521
3.	CONSTRUCTION:	TC000	101,128
	a. Prime contract	TC100	100,944
	i) Pipeline Abandon in Place		59,775
	ii) Road Crossing		28,273
	iii) Valve Removals		-
	iv) Pipeline Removal		6,052
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		6,844
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	184
4.	PIPE SALVAGE COST:		(95)
5.	ENGINEERING: 2.25 %	TD000	2,367
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,156
7.	LAND - DAMAGES:	TF000	3,548
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,260
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	14
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(46)
11.	Sub-Total - Direct Cost		\$ 117,693
12.	Contingency: 10.00 %	TY000	11,769
13.	Sub-Total:		129,462
14.	Overhead: 4.00 %	TZ000	5,178
15.	Sub-Total:		134,640
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 134,640

Cost / Mile	\$	311,389
Cost / Foot	\$	58.98
Cost / Meter	0	193.49

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 4.5"

2% Percent of total mileage Removed
0.01 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.43	=	3
Abandonment Crew	14,943.75 / day	x	4	=	59,775
Roads Crossing Crew	14,136.45 / day	x	2	=	28,273
Valve Crew	14,943.75 / day	x	0	=	-
Pipeline Removal	6,052.18 / day	x	1	=	6,052
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	1	=	6,844
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	0	=	-
Gas Pump Down	0.43 miles	x	426.49	=	184

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	1	=	0.29 total/cy	100.00	= 28.50
Steel Plate	4 pieces	x	0.1406	=	0.56 total/sf	5.30	= 2.98
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	144.24	= 432.72
Cleaning Compounds	0.2074 gal/mile/clean	x	0.43	=	0.09 total/gal.	30.00	= 2.69
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			23.34
State Taxes			6.25	%			30.64
							521.00

Land Damages

Spot Dig Sites	2 # of digs	x	1,500.00	=	3,000.00	each dig = 50 ft
Footage of Removed Pipe	45.66 # of feet	x	12.00	=	547.92	damages = \$ 12.00 / ft
					3,547.92	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	14,943.75
Roads	15,534.56	x	0.910	=	14,136.45
Valves	16,421.70	x	0.910	=	14,943.75
Cleaning	7,520.85	x	0.910	=	6,843.98
Pipeline Crossing	15,534.56	x	0.910	=	14,136.45
Water Crossing	15,534.56	x	0.910	=	14,136.45
Pipe Removal	6,650.74	x	0.910	=	6,052.18
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.49	=	0.488	x	(195.00)	(95.18)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	---------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 6.625" Lines in Texas		
State	: Texas		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 1	Water Crossings	: 0
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	1,891
2.	PIPELINE MATERIALS:	TB000	797
3.	CONSTRUCTION:	TC000	101,265
	a. Prime contract	TC100	101,263
	i) Pipeline Abandon in Place		44,831
	ii) Road Crossing		28,273
	iii) Valve Removals		14,944
	iv) Pipeline Removal		6,371
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		6,844
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2
4.	PIPE SALVAGE COST:		(1)
5.	ENGINEERING: 2.25 %	TD000	2,432
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,242
7.	LAND - DAMAGES:	TF000	6,005
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,403
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	-
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1)
11.	Sub-Total - Direct Cost		\$ 121,033
12.	Contingency: 10.00 %	TY000	12,103
13.	Sub-Total:		133,136
14.	Overhead: 4.00 %	TZ000	5,325
15.	Sub-Total:		138,461
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 138,461

Cost / Mile	\$	34,811,907
Cost / Foot	\$	6,593.16
Cost / Meter	0	21,631.12

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 6.625"

2% Percent of total mileage Removed
0.00 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.00	=	3
Abandonment Crew	14,943.75 / day	x	3	=	44,831
Roads Crossing Crew	14,136.45 / day	x	2	=	28,273
Valve Crew	14,943.75 / day	x	1	=	14,944
Pipeline Removal	6,370.71 / day	x	1	=	6,371
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	1	=	6,844
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	0	=	-
Gas Pump Down	0.00 miles	x	426.49	=	2

5
2 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost						
Road Fill Concrete	0.704 cy/road	x	1	=	0.70 total/cy	100.00	= 70.40
Steel Plate	4 pieces	x	0.3048	=	1.22 total/sf	5.30	= 6.46
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	212.35	= 637.05
Cleaning Compounds	0.7531 gal/mile/clean	x	0.00	=	0.00 total/gal.	30.00	= 0.09
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.704 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			35.70
State Taxes			6.25	%			46.86
							797.00

Land Damages

Spot Dig Sites	4 # of digs	x	1,500.00	=	6,000.00	each dig = 50 ft
Footage of Removed Pipe	0.42 # of feet	x	12.00	=	5.04	damages = \$ 12.00 / ft
					6,005.04	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	14,943.75
Roads	15,534.56	x	0.910	=	14,136.45
Valves	16,421.70	x	0.910	=	14,943.75
Cleaning	7,520.85	x	0.910	=	6,843.98
Pipeline Crossing	15,534.56	x	0.910	=	14,136.45
Water Crossing	15,534.56	x	0.910	=	14,136.45
Pipe Removal	7,000.78	x	0.910	=	6,370.71
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	0.01	=	0.007	x	(195.00)	(1.34)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	--------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 10.75" Lines in Texas		
State	: Texas		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 25.47	PL Crossings	: 0
Roads	: 21	Water Crossings	: 5
Valves	: 2	Above Ground Facilities	: 0
Pipe Removal	: 0.51	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	16,658
2.	PIPELINE MATERIALS:	TB000	10,572
3.	CONSTRUCTION:	TC000	828,042
	a. Prime contract	TC100	817,177
	i) Pipeline Abandon in Place		74,719
	ii) Road Crossing		593,731
	iii) Valve Removals		14,944
	iv) Pipeline Removal		49,413
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		13,688
	vii) Pipeline Crossing		-
	viii) Water Crossing		70,682
	b. Pipeline Pump Down Contract	TC600	10,865
4.	PIPE SALVAGE COST:		(14,370)
5.	ENGINEERING: 2.25 %	TD000	21,418
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	28,557
7.	LAND - DAMAGES:	TF000	113,281
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	47,595
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	4,800
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(15,602)
11.	Sub-Total - Direct Cost		\$ 1,040,952
12.	Contingency: 10.00 %	TY000	104,095
13.	Sub-Total:		1,145,047
14.	Overhead: 4.00 %	TZ000	45,802
15.	Sub-Total:		1,190,849
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,190,849

Cost / Mile	\$	46,746
Cost / Foot	\$	8.85
Cost / Meter	0	29.05

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 10.75"

2% Percent of total mileage Removed
0.51 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		25.47	=	8
Abandonment Crew	14,943.75 / day	x	5	=	74,719
Roads Crossing Crew	14,136.45 / day	x	42	=	593,731
Valve Crew	14,943.75 / day	x	1	=	14,944
Pipeline Removal	7,058.96 / day	x	7	=	49,413
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	2	=	13,688
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	5	=	70,682
Gas Pump Down	25.47 miles	x	426.49	=	10,865

5
2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	2.037 cy/road	x	21	=	42.78 total/cy	100.00	=	4,277.70
Steel Plate	104 pieces	x	0.8025	=	83.46 total/sf	5.30	=	442.34
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	344.57	=	1,033.71
Cleaning Compounds	3.538 gal/mile/clean	x	25.47	=	90.13 total/gal.	30.00	=	2,703.88
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	2.037 cy/pipeline	x	5	=	10.19 total/cy	100.00	=	1,018.50
Misc. Materials			5.00	%				473.81
State Taxes			6.25	%				621.87
								10,572.00

Land Damages

Spot Dig Sites	54 # of digs	x	1,500.00	=	81,000.00	each dig = 50 ft
Footage of Removed Pipe	2690.12 # of feet	x	12.00	=	32,281.44	damages = \$ 12.00 / ft
					113,281.44	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	\$ 14,494.00
Roads	15,534.56	x	0.910	=	\$ 13,711.00
Valves	16,421.70	x	0.910	=	\$ 14,494.00
Cleaning	7,520.85	x	0.910	=	\$ 6,638.00
Pipeline Crossing	15,534.56	x	0.910	=	\$ 13,711.00
Water Crossing	15,534.56	x	0.910	=	\$ 13,711.00
Pipe Removal	7,757.10	x	0.910	=	\$ 53,927.30

Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	73.69	=	73.691	x	(195.00)	(14,369.70)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	-------	---	--------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 16" Lines in Texas		
State	: Texas		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 25.61	PL Crossings	: 0
Roads	: 14	Water Crossings	: 4
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.51	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	14,335
2.	PIPELINE MATERIALS:	TB000	24,060
3.	CONSTRUCTION:	TC000	702,608
	a. Prime contract	TC100	691,684
	i) Pipeline Abandon in Place		44,831
	ii) Road Crossing		395,821
	iii) Valve Removals		59,775
	iv) Pipeline Removal		57,633
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		20,532
	vii) Pipeline Crossing		-
	viii) Water Crossing		113,092
	b. Pipeline Pump Down Contract	TC600	10,924
4.	PIPE SALVAGE COST:		(21,848)
5.	ENGINEERING: 2.25 %	TD000	18,430
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	24,574
7.	LAND - DAMAGES:	TF000	92,458
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	40,956
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	10,692
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(34,750)
11.	Sub-Total - Direct Cost		\$ 871,514
12.	Contingency: 10.00 %	TY000	87,151
13.	Sub-Total:		958,665
14.	Overhead: 4.00 %	TZ000	38,347
15.	Sub-Total:		997,012
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 997,012

Cost / Mile	\$	38,925
Cost / Foot	\$	7.37
Cost / Meter	0	24.19

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 16"

2% Percent of total mileage Removed
0.51 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		25.61	=	10
Abandonment Crew	14,943.75 / day	x	3	=	44,831
Roads Crossing Crew	14,136.45 / day	x	28	=	395,821
Valve Crew	14,943.75 / day	x	4	=	59,775
Pipeline Removal	8,233.23 / day	x	7	=	57,633
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	3	=	20,532
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	8	=	113,092
Gas Pump Down	25.61 miles	x	426.49	=	10,924

10 4 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	14	=	65.86 total/cy	100.00	=	6,585.60
Steel Plate	72 pieces	x	1.7778	=	128.00 total/sf	5.30	=	678.41
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	512.84	=	3,077.04
Cleaning Compounds	12.16 gal/mile/clean	x	25.61	=	311.46 total/gal.	30.00	=	9,343.86
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	4	=	18.82 total/cy	100.00	=	1,881.60
Misc. Materials			5.00	%				1,078.33
State Taxes			6.25	%				1,415.30
								<u>24,060.00</u>

Land Damages

Spot Dig Sites	40 # of digs	x	1,500.00	=	60,000.00	each dig = 50 ft
Footage of Removed Pipe	2704.80 # of feet	x	12.00	=	32,457.62	damages = \$ 12.00 / ft
					<u>92,457.62</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	14,943.75
Roads	15,534.56	x	0.910	=	14,136.45
Valves	16,421.70	x	0.910	=	14,943.75
Cleaning	7,520.85	x	0.910	=	6,843.98
Pipeline Crossing	15,534.56	x	0.910	=	14,136.45
Water Crossing	15,534.56	x	0.910	=	14,136.45
Pipe Removal	9,047.50	x	0.910	=	8,233.23
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		112.04	=	112.043 x	(195.00) (21,848.39)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 20" Lines in Texas		
State	: Texas		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 89.05	PL Crossings	: 0
Roads	: 47	Water Crossings	: 22
Valves	: 6	Above Ground Facilities	: 0
Pipe Removal	: 1.78	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	65,070
2.	PIPELINE MATERIALS:	TB000	136,322
3.	CONSTRUCTION:	TC000	3,253,133
	a. Prime contract	TC100	3,215,156
	i) Pipeline Abandon in Place		179,325
	ii) Road Crossing		1,993,240
	iii) Valve Removals		89,662
	iv) Pipeline Removal		283,017
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		47,908
	vii) Pipeline Crossing		-
	viii) Water Crossing		622,004
	b. Pipeline Pump Down Contract	TC600	37,977
4.	PIPE SALVAGE COST:		(95,558)
5.	ENGINEERING: 2.25 %	TD000	83,662
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	111,549
7.	LAND - DAMAGES:	TF000	328,839
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	185,915
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	58,081
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(188,764)
11.	Sub-Total - Direct Cost		\$ 3,938,250
12.	Contingency: 10.00 %	TY000	393,825
13.	Sub-Total:		4,332,075
14.	Overhead: 4.00 %	TZ000	173,283
15.	Sub-Total:		4,505,358
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,505,358

Cost / Mile	\$	50,596
Cost / Foot	\$	9.58
Cost / Meter	0	31.44

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 20"

2% Percent of total mileage Removed
1.78 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	4 miles/day		89.05	=	25
Abandonment Crew	14,943.75 / day	x	12	=	179,325
Roads Crossing Crew	14,136.45 / day	x	141	=	1,993,240
Valve Crew	14,943.75 / day	x	6	=	89,662
Pipeline Removal	12,864.41 / day	x	22	=	283,017
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	7	=	47,908
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	44	=	622,004
Gas Pump Down	89.05 miles	x	426.49	=	37,977

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	7.481 cy/road	x	47	=	351.61 total/cy	100.00	=	35,160.70
Steel Plate	276 pieces	x	2.7778	=	766.67 total/sf	5.30	=	4,063.37
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	641.05	=	1,923.15
Cleaning Compounds	24.1776 gal/mile/clean	x	89.05	=	2,152.92 total/gal.	30.00	=	64,587.57
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	7.481 cy/pipeline	x	22	=	164.58 total/cy	100.00	=	16,458.20
Misc. Materials			5.00	%				6,109.65
State Taxes			6.25	%				8,018.91
								<u>136,322.00</u>

Land Damages

Spot Dig Sites	144 # of digs	x	1,500.00	=	216,000.00	each dig = 50 ft
Footage of Removed Pipe	9403.26 # of feet	x	12.00	=	112,839.12	damages = \$ 12.00 / ft
					<u>328,839.12</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	14,943.75
Roads	15,534.56	x	0.910	=	14,136.45
Valves	16,421.70	x	0.910	=	14,943.75
Cleaning	7,520.85	x	0.910	=	6,843.98
Pipeline Crossing	15,534.56	x	0.910	=	14,136.45
Water Crossing	15,534.56	x	0.910	=	14,136.45
Pipe Removal	14,136.72	x	0.910	=	12,864.41
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	490.04	=	490.039	x	(195.00)	(95,557.63)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Texas		
State	: Texas		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 1.72	PL Crossings	: 0
Roads	: 2	Water Crossings	: 1
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.03	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,888
2.	PIPELINE MATERIALS:	TB000	8,951
3.	CONSTRUCTION:	TC000	200,545
	a. Prime contract	TC100	199,812
	i) Pipeline Abandon in Place		44,831
	ii) Road Crossing		84,819
	iii) Valve Removals		14,944
	iv) Pipeline Removal		20,101
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		6,844
	vii) Pipeline Crossing		-
	viii) Water Crossing		28,273
	b. Pipeline Pump Down Contract	TC600	733
4.	PIPE SALVAGE COST:		(2,221)
5.	ENGINEERING: 2.25 %	TD000	4,999
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	6,665
7.	LAND - DAMAGES:	TF000	12,677
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	11,109
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,613
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(5,243)
11.	Sub-Total - Direct Cost		\$ 242,982
12.	Contingency: 10.00 %	TY000	24,298
13.	Sub-Total:		267,280
14.	Overhead: 4.00 %	TZ000	10,691
15.	Sub-Total:		277,971
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 277,971

Cost / Mile	\$	161,833
Cost / Foot	\$	30.65
Cost / Meter	0	100.56

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Texas - 24"

2% Percent of total mileage Removed
0.03 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		1.72		3
Abandonment Crew	14,943.75 / day	x	3	=	44,831
Roads Crossing Crew	14,136.45 / day	x	6	=	84,819
Valve Crew	14,943.75 / day	x	1	=	14,944
Pipeline Removal	20,100.65 / day	x	1	=	20,101
Launcher/Receiver Crew	14,943.75 / day	x	0	=	-
Pipeline Cleaning Crew	6,843.98 / day	x	1	=	6,844
Pipeline Crossing Crew	14,136.45 / day	x	0	=	-
Water Crossing Crew	14,136.45 / day	x	2	=	28,273
Gas Pump Down	1.72 miles	x	426.49	=	733

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water
24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	2	=	21.85 total/cy	100.00	= 2,185.20
Steel Plate	12 pieces	x	4.0000	=	48.00 total/sf	5.30	= 254.40
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	769.27	= 2,307.81
Cleaning Compounds	42.3686 gal/mile/clean	x	1.72	=	72.77 total/gal.	30.00	= 2,183.22
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	1	=	10.93 total/cy	100.00	= 1,092.60
Misc. Materials			5.00	%			401.16
State Taxes			6.25	%			526.52
							8,951.00

Land Damages

Spot Dig Sites	7 # of digs	x	1,500.00	=	10,500.00	each dig = 50 ft
Footage of Removed Pipe	181.38 # of feet	x	12.00	=	2,176.59	damages = \$ 12.00 / ft
					12,676.59	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	0.910	=	14,943.75
Roads	15,534.56	x	0.910	=	14,136.45
Valves	16,421.70	x	0.910	=	14,943.75
Cleaning	7,520.85	x	0.910	=	6,843.98
Pipeline Crossing	15,534.56	x	0.910	=	14,136.45
Water Crossing	15,534.56	x	0.910	=	14,136.45
Pipe Removal	22,088.62	x	0.910	=	20,100.65
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	11.39	=	11.392	x	(195.00)	(2,221.35)
------------------------------	--------------	-------------	-------	---	--------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 2.375" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 2.375		
Pipe Length (mi)	: 2.91	PL Crossings	: 0
Roads	: 11	Water Crossings	: 1
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.06	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	11,535
2.	PIPELINE MATERIALS:	TB000	583
3.	CONSTRUCTION:	TC000	612,892
	a. Prime contract	TC100	611,654
	i) Pipeline Abandon in Place		118,236
	ii) Road Crossing		410,112
	iii) Valve Removals		39,412
	iv) Pipeline Removal		7,203
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		18,050
	vii) Pipeline Crossing		-
	viii) Water Crossing		18,641
	b. Pipeline Pump Down Contract	TC600	1,238
4.	PIPE SALVAGE COST:		(300)
5.	ENGINEERING: 2.25 %	TD000	14,831
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	19,775
7.	LAND - DAMAGES:	TF000	45,687
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	32,958
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	27
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(87)
11.	Sub-Total - Direct Cost		\$ 737,901
12.	Contingency: 10.00 %	TY000	73,790
13.	Sub-Total:		811,691
14.	Overhead: 4.00 %	TZ000	32,468
15.	Sub-Total:		844,159
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 844,159

Cost / Mile	\$	290,142
Cost / Foot	\$	54.95
Cost / Meter	0	180.29

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 2.375"

2% Percent of total mileage Removed
0.06 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		2.91	=	5
Abandonment Crew	19,706.04 / day	x	6	=	118,236
Roads Crossing Crew	18,641.48 / day	x	22	=	410,112
Valve Crew	19,706.04 / day	x	2	=	39,412
Pipeline Removal	7,202.76 / day	x	1	=	7,203
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	2	=	18,050
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	1	=	18,641
Gas Pump Down	2.91 miles	x	425.38	=	1,238

10 4 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
1 Days/Water

2.375" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.052 cy/road	x	11	=	0.57 total/cy	100.00	= 57.20
Steel Plate	48 pieces	x	0.0392	=	1.88 total/sf	5.30	= 9.97
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	75.80	= 454.80
Cleaning Compounds	0.0199 gal/mile/clean	x	2.91	=	0.06 total/gal.	30.00	= 1.74
Pipeline Fill Concrete	0.026 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.052 cy/pipeline	x	1	=	0.05 total/cy	100.00	= 5.20
Misc. Materials			5.00	%			26.45
State Taxes			5.00	%			27.77
							583.00

Land Damages

Spot Dig Sites	28 # of digs	x	1,500.00	=	42,000.00	each dig = 50 ft
Footage of Removed Pipe	307.24 # of feet	x	12.00	=	3,686.88	damages = \$ 12.00 / ft
					45,686.88	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	6,002.30	x	1.200	=	7,202.76
					Inflation Adjustment (2015)
					113.3%
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	1.54	=	1.540	x	(195.00)	(300.21)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	------	---	-------	---	----------	----------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 4.5" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 188.17	PL Crossings	: 0
Roads	: 197	Water Crossings	: 12
Valves	: 59	Above Ground Facilities	: 0
Pipe Removal	: 3.76	# of Line Segments	: 59

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	252,239
2.	PIPELINE MATERIALS:	TB000	36,692
3.	CONSTRUCTION:	TC000	13,423,008
	a. Prime contract	TC100	13,342,964
	i) Pipeline Abandon in Place		4,473,272
	ii) Road Crossing		7,344,741
	iii) Valve Removals		591,181
	iv) Pipeline Removal		367,121
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		342,951
	vii) Pipeline Crossing		-
	viii) Water Crossing		223,698
	b. Pipeline Pump Down Contract	TC600	80,044
4.	PIPE SALVAGE COST:		(41,422)
5.	ENGINEERING: 2.25 %	TD000	324,307
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	432,410
7.	LAND - DAMAGES:	TF000	953,951
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	720,683
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	6,214
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(20,194)
11.	Sub-Total - Direct Cost		\$ 16,087,888
12.	Contingency: 10.00 %	TY000	1,608,789
13.	Sub-Total:		17,696,677
14.	Overhead: 4.00 %	TZ000	707,867
15.	Sub-Total:		18,404,544
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 18,404,544

Cost / Mile	\$	97,807
Cost / Foot	\$	18.52
Cost / Meter	0	60.77

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 4.5"

2% Percent of total mileage Removed
3.76 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		188.17	=	150
Abandonment Crew	19,706.04 / day	x	227	=	4,473,272
Roads Crossing Crew	18,641.48 / day	x	394	=	7,344,741
Valve Crew	19,706.04 / day	x	30	=	591,181
Pipeline Removal	7,980.89 / day	x	46	=	367,121
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	38	=	342,951
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	12	=	223,698
Gas Pump Down	188.17 miles	x	425.38	=	80,044

295 118 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
177 Minimum Days / Segment
1 Days/Water

4.5" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	0.285 cy/road	x	197	=	56.15 total/cy	100.00	= 5,614.50
Steel Plate	836 pieces	x	0.1406	=	117.54 total/sf	5.30	= 622.97
Cleaning Pigs	3 pig/cleaning	x	59	=	177 total pigs	144.24	= 25,530.48
Cleaning Compounds	0.2074 gal/mile/clean	x	188.17	=	39.03 total/gal.	30.00	= 1,170.80
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	12	=	3.42 total/cy	100.00	= 342.00
Misc. Materials			5.00	%			= 1,664.04
State Taxes			5.00	%			= 1,747.24
							36,692.00

Land Damages

Spot Dig Sites	477 # of digs	x	1,500.00	=	715,500.00	each dig = 50 ft
Footage of Removed Pipe	19870.90 # of feet	x	12.00	=	238,450.83	damages = \$ 12.00 / ft
					953,950.83	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	6,650.74	x	1.200	=	7,980.89
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		212.42	=	212.420 x	(195.00) (41,421.89)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 6.625" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 295.03	PL Crossings	: 0
Roads	: 396	Water Crossings	: 161
Valves	: 53	Above Ground Facilities	: 0
Pipe Removal	: 5.90	# of Line Segments	: 28

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	405,236
2.	PIPELINE MATERIALS:	TB000	74,215
3.	CONSTRUCTION:	TC000	20,957,752
	a. Prime contract	TC100	20,832,253
	i) Pipeline Abandon in Place		1,694,720
	ii) Road Crossing		14,764,049
	iii) Valve Removals		532,063
	iv) Pipeline Removal		596,467
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		243,676
	vii) Pipeline Crossing		-
	viii) Water Crossing		3,001,278
	b. Pipeline Pump Down Contract	TC600	125,499
4.	PIPE SALVAGE COST:		(99,445)
5.	ENGINEERING: 2.25 %	TD000	521,017
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	694,690
7.	LAND - DAMAGES:	TF000	2,124,359
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,157,816
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	21,115
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(68,624)
11.	Sub-Total - Direct Cost		\$ 25,788,130
12.	Contingency: 10.00 %	TY000	2,578,813
13.	Sub-Total:		28,366,943
14.	Overhead: 4.00 %	TZ000	1,134,678
15.	Sub-Total:		29,501,621
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 29,501,621

Cost / Mile	\$	99,996
Cost / Foot	\$	18.94
Cost / Meter	0	62.13

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 6.625"

2% Percent of total mileage Removed
5.90 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		295.03	=	106
Abandonment Crew	19,706.04 / day	x	86	=	1,694,720
Roads Crossing Crew	18,641.48 / day	x	792	=	14,764,049
Valve Crew	19,706.04 / day	x	27	=	532,063
Pipeline Removal	8,400.94 / day	x	71	=	596,467
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	27	=	243,676
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	161	=	3,001,278
Gas Pump Down	295.03 miles	x	425.38	=	125,499

140 56 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
84 Minimum Days / Segment
1 Days/Water

6.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	0.704 cy/road	x	396	=	278.78 total/cy	100.00	=	27,878.40
Steel Plate	2228 pieces	x	0.3048	=	679.09 total/sf	5.30	=	3,599.20
Cleaning Pigs	3 pig/cleaning	x	28	=	84 total pigs	212.35	=	17,837.40
Cleaning Compounds	0.7531 gal/mile/clean	x	295.03	=	222.19 total/gal.	30.00	=	6,665.56
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.704 cy/pipeline	x	161	=	113.34 total/cy	100.00	=	11,334.40
Misc. Materials			5.00	%				3,365.75
State Taxes			5.00	%				3,534.04
								74,215.00

Land Damages

Spot Dig Sites	1167 # of digs	x	1,500.00	=	1,750,500.00	each dig = 50 ft
Footage of Removed Pipe	31154.90 # of feet	x	12.00	=	373,858.79	damages = \$ 12.00 / ft
					2,124,358.79	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Roads	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Valves	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Cleaning	7,520.85	x	1.200	=	9,025.02	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Water Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Pipe Removal	7,000.78	x	1.200	=	8,400.94	\$ 53,927.30
						Inflation Adjustment (2015) 113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	509.98	=	509.976	x	(195.00)	(99,445.42)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 8.625" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 193.91	PL Crossings	: 0
Roads	: 318	Water Crossings	: 5
Valves	: 42	Above Ground Facilities	: 0
Pipe Removal	: 3.88	# of Line Segments	: 17

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	267,645
2.	PIPELINE MATERIALS:	TB000	75,532
3.	CONSTRUCTION:	TC000	13,940,732
	a. Prime contract	TC100	13,858,246
	i) Pipeline Abandon in Place		926,184
	ii) Road Crossing		11,855,978
	iii) Valve Removals		413,827
	iv) Pipeline Removal		415,625
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		153,425
	vii) Pipeline Crossing		-
	viii) Water Crossing		93,207
	b. Pipeline Pump Down Contract	TC600	82,486
4.	PIPE SALVAGE COST:		(86,705)
5.	ENGINEERING: 2.25 %	TD000	344,115
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	458,820
7.	LAND - DAMAGES:	TF000	1,277,724
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	764,699
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	23,522
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(76,448)
11.	Sub-Total - Direct Cost		\$ 16,989,637
12.	Contingency: 10.00 %	TY000	1,698,964
13.	Sub-Total:		18,688,601
14.	Overhead: 4.00 %	TZ000	747,544
15.	Sub-Total:		19,436,145
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 19,436,145

Cost / Mile	\$	100,232
Cost / Foot	\$	18.98
Cost / Meter	0	62.28

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 8.625"

2% Percent of total mileage Removed
3.88 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		193.91		67
Abandonment Crew	19,706.04 / day	x	47	=	926,184
Roads Crossing Crew	18,641.48 / day	x	636	=	11,855,978
Valve Crew	19,706.04 / day	x	21	=	413,827
Pipeline Removal	8,843.09 / day	x	47	=	415,625
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	17	=	153,425
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	5	=	93,207
Gas Pump Down	193.91 miles	x	425.38	=	82,486

85 34 Day M&D
6 Mile/Day
2 Days/Road or Pipeline
2 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
51 Minimum Days / Segment
1 Days/Water

8.625" line equals 6 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	1.259 cy/road	x	318	=	400.36 total/cy	100.00	= 40,036.20
Steel Plate	1292 pieces	x	0.5166	=	667.45 total/sf	5.30	= 3,537.47
Cleaning Pigs	3 pig/cleaning	x	17	=	51 total pigs	276.45	= 14,098.95
Cleaning Compounds	1.7547 gal/mile/clean	x	193.91	=	340.26 total/gal.	30.00	= 10,207.67
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	1.259 cy/pipeline	x	5	=	6.30 total/cy	100.00	= 629.50
Misc. Materials			5.00	%			3,425.49
State Taxes			5.00	%			3,596.76
							75,532.00

Land Damages

Spot Dig Sites	688 # of digs	x	1,500.00	=	1,032,000.00	each dig = 50 ft
Footage of Removed Pipe	20477.01 # of feet	x	12.00	=	245,724.16	damages = \$ 12.00 / ft
					1,277,724.16	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	7,369.25	x	1.200	=	8,843.09
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	444.64	=	444.639	x	(195.00)	(86,704.63)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 10.75" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 173.44	PL Crossings	: 0
Roads	: 324	Water Crossings	: 8
Valves	: 33	Above Ground Facilities	: 0
Pipe Removal	: 3.47	# of Line Segments	: 11

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	263,121
2.	PIPELINE MATERIALS:	TB000	113,619
3.	CONSTRUCTION:	TC000	13,656,572
	a. Prime contract	TC100	13,582,795
	i) Pipeline Abandon in Place		492,651
	ii) Road Crossing		12,079,676
	iii) Valve Removals		335,003
	iv) Pipeline Removal		390,958
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		135,375
	vii) Pipeline Crossing		-
	viii) Water Crossing		149,132
	b. Pipeline Pump Down Contract	TC600	73,777
4.	PIPE SALVAGE COST:		(97,833)
5.	ENGINEERING: 2.25 %	TD000	338,298
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	451,064
7.	LAND - DAMAGES:	TF000	1,265,281
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	751,774
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	32,683
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(106,220)
11.	Sub-Total - Direct Cost		\$ 16,668,359
12.	Contingency: 10.00 %	TY000	1,666,836
13.	Sub-Total:		18,335,195
14.	Overhead: 4.00 %	TZ000	733,408
15.	Sub-Total:		19,068,603
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 19,068,603

Cost / Mile	\$	109,945
Cost / Foot	\$	20.82
Cost / Meter	0	68.32

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 10.75"

2% Percent of total mileage Removed
3.47 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		173.44	=	57
Abandonment Crew	19,706.04 / day	x	25	=	492,651
Roads Crossing Crew	18,641.48 / day	x	648	=	12,079,676
Valve Crew	19,706.04 / day	x	17	=	335,003
Pipeline Removal	9,308.52 / day	x	42	=	390,958
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	15	=	135,375
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	8	=	149,132
Gas Pump Down	173.44 miles	x	425.38	=	73,777

22 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
33 Minimum Days / Segment
1 Days/Water

10.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.037 cy/road	x	324	=	659.99 total/cy	100.00	= 65,998.80
Steel Plate	1328 pieces	x	0.8025	=	1,065.72 total/sf	5.30	= 5,648.32
Cleaning Pigs	3 pig/cleaning	x	11	=	33 total pigs	344.57	= 11,370.81
Cleaning Compounds	3.538 gal/mile/clean	x	173.44	=	613.62 total/gal.	30.00	= 18,408.70
Pipeline Fill Concrete	1.019 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.037 cy/pipeline	x	8	=	16.30 total/cy	100.00	= 1,629.60
Misc. Materials			5.00	%			= 5,152.81
State Taxes			5.00	%			= 5,410.45
							113,619.00

Land Damages

Spot Dig Sites	697 # of digs	x	1,500.00	=	1,045,500.00	each dig = 50 ft
Footage of Removed Pipe	18315.04 # of feet	x	12.00	=	219,780.51	damages = \$ 12.00 / ft
					1,265,280.51	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	7,757.10	x	1.200	=	9,308.52
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)				
		501.71	=	501.706	x	(195.00) (97,832.72)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 12.75" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 223.33	PL Crossings	: 0
Roads	: 403	Water Crossings	: 39
Valves	: 27	Above Ground Facilities	: 0
Pipe Removal	: 4.47	# of Line Segments	: 13

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	353,078
2.	PIPELINE MATERIALS:	TB000	216,349
3.	CONSTRUCTION:	TC000	18,310,053
	a. Prime contract	TC100	18,215,051
	i) Pipeline Abandon in Place		768,536
	ii) Road Crossing		15,025,029
	iii) Valve Removals		275,885
	iv) Pipeline Removal		529,116
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		162,450
	vii) Pipeline Crossing		-
	viii) Water Crossing		1,454,035
	b. Pipeline Pump Down Contract	TC600	95,002
4.	PIPE SALVAGE COST:		(150,559)
5.	ENGINEERING: 2.25 %	TD000	453,958
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	605,277
7.	LAND - DAMAGES:	TF000	1,649,509
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,008,796
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	59,202
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(192,407)
11.	Sub-Total - Direct Cost		\$ 22,313,256
12.	Contingency: 10.00 %	TY000	2,231,326
13.	Sub-Total:		24,544,582
14.	Overhead: 4.00 %	TZ000	981,783
15.	Sub-Total:		25,526,365
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 25,526,365

Cost / Mile	\$	114,297
Cost / Foot	\$	21.65
Cost / Meter	0	71.02

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 12.75"

2% Percent of total mileage Removed
4.47 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		223.33		71
Abandonment Crew	19,706.04 / day	x	39	=	768,536
Roads Crossing Crew	18,641.48 / day	x	806	=	15,025,029
Valve Crew	19,706.04 / day	x	14	=	275,885
Pipeline Removal	9,798.44 / day	x	54	=	529,116
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	18	=	162,450
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	78	=	1,454,035
Gas Pump Down	223.33 miles	x	425.38	=	95,002

65 26 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
0.5 Days/Valve
12 Days/ Mile of Pipeline Removal
39 Minimum Days / Segment
2 Days/Water

12.75" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	2.926 cy/road	x	403	=	1,179.18 total/cy	100.00	= 117,917.80
Steel Plate	1768 pieces	x	1.1289	=	1,995.90 total/sf	5.30	= 10,578.24
Cleaning Pigs	3 pig/cleaning	x	13	=	39 total pigs	408.67	= 15,938.13
Cleaning Compounds	6.0282 gal/mile/clean	x	223.33	=	1,346.30 total/gal.	30.00	= 40,389.11
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	39	=	114.11 total/cy	100.00	= 11,411.40
Misc. Materials			5.00	%			9,811.73
State Taxes			5.00	%			10,302.32
							<u>216,349.00</u>

Land Damages

Spot Dig Sites	911 # of digs	x	1,500.00	=	1,366,500.00	each dig = 50 ft
Footage of Removed Pipe	23584.10 # of feet	x	12.00	=	283,009.22	damages = \$ 12.00 / ft
					<u>1,649,509.22</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	8,165.37	x	1.200	=	9,798.44
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		772.10	=	772.099	x (195.00) (150,559.35)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 14" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 14.000		
Pipe Length (mi)	: 36.17	PL Crossings	: 0
Roads	: 106	Water Crossings	: 0
Valves	: 6	Above Ground Facilities	: 0
Pipe Removal	: 0.72	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	81,447
2.	PIPELINE MATERIALS:	TB000	56,036
3.	CONSTRUCTION:	TC000	4,225,224
	a. Prime contract	TC100	4,209,837
	i) Pipeline Abandon in Place		19,706
	ii) Road Crossing		3,951,993
	iii) Valve Removals		118,236
	iv) Pipeline Removal		92,827
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		27,075
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	15,387
4.	PIPE SALVAGE COST:		(26,873)
5.	ENGINEERING: 2.25 %	TD000	104,717
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	139,623
7.	LAND - DAMAGES:	TF000	372,837
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	232,705
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	11,561
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(37,573)
11.	Sub-Total - Direct Cost		\$ 5,159,704
12.	Contingency: 10.00 %	TY000	515,970
13.	Sub-Total:		5,675,674
14.	Overhead: 4.00 %	TZ000	227,027
15.	Sub-Total:		5,902,701
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 5,902,701

Cost / Mile	\$	163,184
Cost / Foot	\$	30.91
Cost / Meter	0	101.40

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 14"

2% Percent of total mileage Removed
0.72 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		36.17	=	10
Abandonment Crew	19,706.04 / day	x	1	=	19,706
Roads Crossing Crew	18,641.48 / day	x	212	=	3,951,993
Valve Crew	19,706.04 / day	x	6	=	118,236
Pipeline Removal	10,314.15 / day	x	9	=	92,827
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	3	=	27,075
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	0	=	-
Gas Pump Down	36.17 miles	x	425.38	=	15,387

5
2 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

14" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	3.556 cy/road	x	106	=	376.94 total/cy	100.00	= 37,693.60
Steel Plate	424 pieces	x	1.3611	=	577.11 total/sf	5.30	= 3,058.66
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	448.74	= 1,346.22
Cleaning Compounds	8.0427 gal/mile/clean	x	36.17	=	290.92 total/gal.	30.00	= 8,727.63
Pipeline Fill Concrete	1.778 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	3.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			= 2,541.31
State Taxes			5.00	%			= 2,668.37
							56,036.00

Land Damages

Spot Dig Sites	218 # of digs	x	1,500.00	=	327,000.00	each dig = 50 ft
Footage of Removed Pipe	3819.77 # of feet	x	12.00	=	45,837.24	damages = \$ 12.00 / ft
					372,837.24	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	8,595.13	x	1.200	=	10,314.15
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	137.81	=	137.813	x	(195.00)	(26,873.44)	**Assume 0.500 W.T. & \$195/t salvage cost
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------	--

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 16" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 213.15	PL Crossings	: 0
Roads	: 374	Water Crossings	: 12
Valves	: 30	Above Ground Facilities	: 0
Pipe Removal	: 4.26	# of Line Segments	: 11

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	313,941
2.	PIPELINE MATERIALS:	TB000	320,609
3.	CONSTRUCTION:	TC000	16,145,766
	a. Prime contract	TC100	16,055,098
	i) Pipeline Abandon in Place		354,709
	ii) Road Crossing		13,943,824
	iii) Valve Removals		591,181
	iv) Pipeline Removal		564,564
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		153,425
	vii) Pipeline Crossing		-
	viii) Water Crossing		447,395
	b. Pipeline Pump Down Contract	TC600	90,668
4.	PIPE SALVAGE COST:		(181,813)
5.	ENGINEERING: 2.25 %	TD000	403,638
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	538,184
7.	LAND - DAMAGES:	TF000	1,473,098
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	896,974
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	88,977
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(289,175)
11.	Sub-Total - Direct Cost		\$ 19,710,200
12.	Contingency: 10.00 %	TY000	1,971,020
13.	Sub-Total:		21,681,220
14.	Overhead: 4.00 %	TZ000	867,249
15.	Sub-Total:		22,548,469
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 22,548,469

Cost / Mile	\$	105,789
Cost / Foot	\$	20.04
Cost / Meter	0	65.73

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 16"

2% Percent of total mileage Removed
4.26 # of Miles to Remove

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		213.15	=	65
Abandonment Crew	19,706.04 / day	x	18	=	354,709
Roads Crossing Crew	18,641.48 / day	x	748	=	13,943,824
Valve Crew	19,706.04 / day	x	30	=	591,181
Pipeline Removal	10,857.00 / day	x	52	=	564,564
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	17	=	153,425
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	24	=	447,395
Gas Pump Down	213.15 miles	x	425.38	=	90,668

22 Day M&D
5 Mile/Day
2 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
33 Minimum Days / Segment
2 Days/Water

16" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

Materials	Unit Cost							
Road Fill Concrete	4.704 cy/road	x	374	=	1,759.30 total/cy	100.00	=	175,929.60
Steel Plate	1544 pieces	x	1.7778	=	2,744.92 total/sf	5.30	=	14,548.09
Cleaning Pigs	3 pig/cleaning	x	11	=	33 total pigs	512.84	=	16,923.72
Cleaning Compounds	12.16 gal/mile/clean	x	213.15	=	2,591.85 total/gal.	30.00	=	77,755.48
Pipeline Fill Concrete	2.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	4.704 cy/pipeline	x	12	=	56.45 total/cy	100.00	=	5,644.80
Misc. Materials			5.00	%				14,540.08
State Taxes			5.00	%				15,267.09
								<u>320,609.00</u>

Land Damages

Spot Dig Sites	802 # of digs	x	1,500.00	=	1,203,000.00	each dig = 50 ft
Footage of Removed Pipe	22508.17 # of feet	x	12.00	=	270,097.99	damages = \$ 12.00 / ft
					<u>1,473,097.99</u>	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Roads	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Valves	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Cleaning	7,520.85	x	1.200	=	9,025.02	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Water Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Pipe Removal	9,047.50	x	1.200	=	10,857.00	\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	932.37	=	932.373	x	(195.00)	(181,812.66)
------------------------------	--------------	-------------	--------	---	---------	---	----------	--------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 18" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 18.000		
Pipe Length (mi)	: 1.44	PL Crossings	: 0
Roads	: 2	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.03	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,979
2.	PIPELINE MATERIALS:	TB000	4,167
3.	CONSTRUCTION:	TC000	213,881
	a. Prime contract	TC100	213,269
	i) Pipeline Abandon in Place		59,118
	ii) Road Crossing		111,849
	iii) Valve Removals		19,706
	iv) Pipeline Removal		13,571
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		9,025
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	612
4.	PIPE SALVAGE COST:		(1,387)
5.	ENGINEERING: 2.25 %	TD000	5,116
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	6,821
7.	LAND - DAMAGES:	TF000	9,324
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	11,369
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	761
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2,472)
11.	Sub-Total - Direct Cost		\$ 251,560
12.	Contingency: 10.00 %	TY000	25,156
13.	Sub-Total:		276,716
14.	Overhead: 4.00 %	TZ000	11,069
15.	Sub-Total:		287,785
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 287,785

Cost / Mile	\$	199,882
Cost / Foot	\$	37.86
Cost / Meter	0	124.20

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 18"

2% Percent of total mileage Removed
0.03 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		1.44		3
Abandonment Crew	19,706.04 / day	x	3	=	59,118
Roads Crossing Crew	18,641.48 / day	x	6	=	111,849
Valve Crew	19,706.04 / day	x	1	=	19,706
Pipeline Removal	13,571.25 / day	x	1	=	13,571
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	1	=	9,025
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	0	=	-
Gas Pump Down	1.44 miles	x	425.38	=	612

5 2 Day M&D
5 Mile/Day
3 Days/Road or Pipeline
3 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

18" line equals 5 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	6 cy/road	x	2	=	12.00 total/cy	100.00	= 1,200.00
Steel Plate	8 pieces	x	2.2500	=	18.00 total/sf	5.30	= 95.40
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	576.95	= 1,730.85
Cleaning Compounds	17.4499 gal/mile/clean	x	1.44	=	25.12 total/gal.	30.00	= 753.72
Pipeline Fill Concrete	3 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	6 cy/pipeline	x	0	=	- total/cy	100.00	= -
Misc. Materials			5.00	%			189.00
State Taxes			5.00	%			198.45
							4,167.00

Land Damages

Spot Dig Sites	5 # of digs	x	1,500.00	=	7,500.00	each dig = 50 ft
Footage of Removed Pipe	152.04 # of feet	x	12.00	=	1,824.48	damages = \$ 12.00 / ft
					9,324.48	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	11,309.38	x	1.200	=	13,571.25
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	7.11	=	7.111	x	(195.00)	(1,386.59)
------------------------------	--------------	-------------	------	---	-------	---	----------	------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 20" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 47.53	PL Crossings	: 0
Roads	: 103	Water Crossings	: 1
Valves	: 9	Above Ground Facilities	: 0
Pipe Removal	: 0.95	# of Line Segments	: 3

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	119,791
2.	PIPELINE MATERIALS:	TB000	136,899
3.	CONSTRUCTION:	TC000	6,322,589
	a. Prime contract	TC100	6,302,371
	i) Pipeline Abandon in Place		78,824
	ii) Road Crossing		5,760,216
	iii) Valve Removals		177,354
	iv) Pipeline Removal		203,569
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		45,125
	vii) Pipeline Crossing		-
	viii) Water Crossing		37,283
	b. Pipeline Pump Down Contract	TC600	20,218
4.	PIPE SALVAGE COST:		(51,006)
5.	ENGINEERING: 2.25 %	TD000	154,017
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	205,357
7.	LAND - DAMAGES:	TF000	385,730
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	342,261
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	31,002
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(100,756)
11.	Sub-Total - Direct Cost		\$ 7,545,884
12.	Contingency: 10.00 %	TY000	754,588
13.	Sub-Total:		8,300,472
14.	Overhead: 4.00 %	TZ000	332,019
15.	Sub-Total:		8,632,491
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 8,632,491

Cost / Mile	\$	181,622
Cost / Foot	\$	34.40
Cost / Meter	0	112.85

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 20"

2% Percent of total mileage Removed
0.95 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		47.53	=	18
Abandonment Crew	19,706.04 / day	x	4	=	78,824
Roads Crossing Crew	18,641.48 / day	x	309	=	5,760,216
Valve Crew	19,706.04 / day	x	9	=	177,354
Pipeline Removal	16,964.06 / day	x	12	=	203,569
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	5	=	45,125
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	2	=	37,283
Gas Pump Down	47.53 miles	x	425.38	=	20,218

15 6 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
9 Minimum Days / Segment
2 Days/Water

20" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	7.481 cy/road	x	103	=	770.54 total/cy	100.00	= 77,054.30
Steel Plate	416 pieces	x	2.7778	=	1,155.56 total/sf	5.30	= 6,124.49
Cleaning Pigs	3 pig/cleaning	x	3	=	9 total pigs	641.05	= 5,769.45
Cleaning Compounds	24.1776 gal/mile/clean	x	47.53	=	1,149.16 total/gal.	30.00	= 34,474.82
Pipeline Fill Concrete	3.741 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	7.481 cy/pipeline	x	1	=	7.48 total/cy	100.00	= 748.10
Misc. Materials			5.00	%			= 6,208.56
State Taxes			5.00	%			= 6,518.99
							136,899.00

Land Damages

Spot Dig Sites	217 # of digs	x	1,500.00	=	325,500.00	each dig = 50 ft
Footage of Removed Pipe	5019.17 # of feet	x	12.00	=	60,229.99	damages = \$ 12.00 / ft
					385,729.99	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	14,136.72	x	1.200	=	16,964.06
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	261.57	=	261.568	x	(195.00)	(51,005.67)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 22" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 39.10	PL Crossings	: 0
Roads	: 35	Water Crossings	: 1
Valves	: 3	Above Ground Facilities	: 0
Pipe Removal	: 0.78	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	46,777
2.	PIPELINE MATERIALS:	TB000	83,203
3.	CONSTRUCTION:	TC000	2,427,749
	a. Prime contract	TC100	2,411,118
	i) Pipeline Abandon in Place		118,236
	ii) Road Crossing		1,957,355
	iii) Valve Removals		59,118
	iv) Pipeline Removal		212,051
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		27,075
	vii) Pipeline Crossing		-
	viii) Water Crossing		37,283
	b. Pipeline Pump Down Contract	TC600	16,631
4.	PIPE SALVAGE COST:		(46,259)
5.	ENGINEERING: 2.25 %	TD000	60,142
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	80,190
7.	LAND - DAMAGES:	TF000	162,043
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	133,650
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	30,857
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(100,284)
11.	Sub-Total - Direct Cost		\$ 2,878,069
12.	Contingency: 10.00 %	TY000	287,807
13.	Sub-Total:		3,165,876
14.	Overhead: 4.00 %	TZ000	126,635
15.	Sub-Total:		3,292,511
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 3,292,511

Cost / Mile	\$	84,214
Cost / Foot	\$	15.95
Cost / Meter	0	52.33

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 22"

2% Percent of total mileage Removed
0.78 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		39.10	=	12
Abandonment Crew	19,706.04 / day	x	6	=	118,236
Roads Crossing Crew	18,641.48 / day	x	105	=	1,957,355
Valve Crew	19,706.04 / day	x	3	=	59,118
Pipeline Removal	21,205.08 / day	x	10	=	212,051
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	3	=	27,075
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	2	=	37,283
Gas Pump Down	39.10 miles	x	425.38	=	16,631

5
2 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
3 Minimum Days / Segment
2 Days/Water

22" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	9.111 cy/road	x	35	=	318.89 total/cy	100.00	= 31,888.50
Steel Plate	144 pieces	x	3.3611	=	484.00 total/sf	5.30	= 2,565.19
Cleaning Pigs	3 pig/cleaning	x	1	=	3 total pigs	705.16	= 2,115.48
Cleaning Compounds	32.3875 gal/mile/clean	x	39.10	=	1,266.25 total/gal.	30.00	= 37,987.43
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	9.111 cy/pipeline	x	1	=	9.11 total/cy	100.00	= 911.10
Misc. Materials			5.00	%			= 3,773.39
State Taxes			5.00	%			= 3,962.05
							83,203.00

Land Damages

Spot Dig Sites	75 # of digs	x	1,500.00	=	112,500.00	each dig = 50 ft
Footage of Removed Pipe	4128.62 # of feet	x	12.00	=	49,543.47	damages = \$ 12.00 / ft
					162,043.47	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	17,670.90	x	1.200	=	21,205.08
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)	237.23	=	237.225	x	(195.00)	(46,258.97)
------------------------------	--------------	-------------	--------	---	---------	---	----------	-------------

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 24" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 131.98	PL Crossings	: 0
Roads	: 213	Water Crossings	: 9
Valves	: 11	Above Ground Facilities	: 0
Pipe Removal	: 2.64	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	264,286
2.	PIPELINE MATERIALS:	TB000	478,217
3.	CONSTRUCTION:	TC000	13,774,109
	a. Prime contract	TC100	13,717,966
	i) Pipeline Abandon in Place		315,297
	ii) Road Crossing		11,911,903
	iii) Valve Removals		216,766
	iv) Pipeline Removal		848,203
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		90,250
	vii) Pipeline Crossing		-
	viii) Water Crossing		335,547
	b. Pipeline Pump Down Contract	TC600	56,143
4.	PIPE SALVAGE COST:		(170,688)
5.	ENGINEERING: 2.25 %	TD000	339,797
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	453,062
7.	LAND - DAMAGES:	TF000	849,749
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	755,104
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	123,966
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(402,889)
11.	Sub-Total - Direct Cost		\$ 16,464,713
12.	Contingency: 10.00 %	TY000	1,646,471
13.	Sub-Total:		18,111,184
14.	Overhead: 4.00 %	TZ000	724,447
15.	Sub-Total:		18,835,631
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 18,835,631

Cost / Mile	\$	142,712
Cost / Foot	\$	27.03
Cost / Meter	0	88.68

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 24"

2% Percent of total mileage Removed
2.64 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		131.98	=	37
Abandonment Crew	19,706.04 / day	x	16	=	315,297
Roads Crossing Crew	18,641.48 / day	x	639	=	11,911,903
Valve Crew	19,706.04 / day	x	11	=	216,766
Pipeline Removal	26,506.35 / day	x	32	=	848,203
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	10	=	90,250
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	18	=	335,547
Gas Pump Down	131.98 miles	x	425.38	=	56,143

10 4 Day M&D
4 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
1 Days/Valve
12 Days/ Mile of Pipeline Removal
6 Minimum Days / Segment
2 Days/Water

24" line equals 4 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	10.926 cy/road	x	213	=	2,327.24 total/cy	100.00	= 232,723.80
Steel Plate	888 pieces	x	4.0000	=	3,552.00 total/sf	5.30	= 18,825.60
Cleaning Pigs	3 pig/cleaning	x	2	=	6 total pigs	769.27	= 4,615.62
Cleaning Compounds	42.3686 gal/mile/clean	x	131.98	=	5,591.94 total/gal.	30.00	= 167,758.30
Pipeline Fill Concrete	5.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	10.926 cy/pipeline	x	9	=	98.33 total/cy	100.00	= 9,833.40
Misc. Materials			5.00	%			21,687.84
State Taxes			5.00	%			22,772.23
							478,217.00

Land Damages

Spot Dig Sites	455 # of digs	x	1,500.00	=	682,500.00	each dig = 50 ft
Footage of Removed Pipe	13937.43 # of feet	x	12.00	=	167,249.11	damages = \$ 12.00 / ft
					849,749.11	

Contract Labor Rates

	LA Rate (2015)		State Adjust		LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04
Roads	15,534.56	x	1.200	=	18,641.48
Valves	16,421.70	x	1.200	=	19,706.04
Cleaning	7,520.85	x	1.200	=	9,025.02
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48
Water Crossing	15,534.56	x	1.200	=	18,641.48
Pipe Removal	22,088.62	x	1.200	=	26,506.35
					\$ 14,494.00
					\$ 13,711.00
					\$ 14,494.00
					\$ 6,638.00
					\$ 13,711.00
					\$ 13,711.00
					\$ 53,927.30

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		875.32	=	875.323 x	(195.00) (170,687.91)

**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Transmission TNS Estimate**

**Pipeline and Appurtenances
 TNS Estimate - 2015 U.S. Dollars**

Project	: ANR TNS Estimate	Date	: 27-Nov-2015
Line Segment	: All 30" Lines in Wisconsin		
State	: Wisconsin		
Pipe Dia.	: 30.000		
Pipe Length (mi)	: 277.16	PL Crossings	: 0
Roads	: 369	Water Crossings	: 15
Valves	: 32	Above Ground Facilities	: 0
Pipe Removal	: 5.54	# of Line Segments	: 5

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	505,977
2.	PIPELINE MATERIALS:	TB000	1,521,595
3.	CONSTRUCTION:	TC000	25,840,157
	a. Prime contract	TC100	25,722,257
	i) Pipeline Abandon in Place		256,179
	ii) Road Crossing		20,636,113
	iii) Valve Removals		1,261,187
	iv) Pipeline Removal		2,774,883
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		234,651
	vii) Pipeline Crossing		-
	viii) Water Crossing		559,244
	b. Pipeline Pump Down Contract	TC600	117,900
4.	PIPE SALVAGE COST:		(449,962)
5.	ENGINEERING: 2.25 %	TD000	650,542
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	867,389
7.	LAND - DAMAGES:	TF000	1,551,223
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	1,445,649
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	406,762
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(1,321,977)
11.	Sub-Total - Direct Cost		\$ 31,017,355
12.	Contingency: 10.00 %	TY000	3,101,735
13.	Sub-Total:		34,119,090
14.	Overhead: 4.00 %	TZ000	1,364,764
15.	Sub-Total:		35,483,854
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 35,483,854

Cost / Mile	\$	128,025
Cost / Foot	\$	24.25
Cost / Meter	0	79.55

**ANR Pipeline Company
Transmission TNS Estimate**

**Pipeline and Appurtenances
TNS Estimate - 2015 U.S. Dollars**

Wisconsin - 30"

2% Percent of total mileage Removed
5.54 # of Miles to Remove

Contract

	Unit Cost		# of Units		
Segment Miles	3 miles/day		277.16		103
Abandonment Crew	19,706.04 / day	x	13	=	256,179
Roads Crossing Crew	18,641.48 / day	x	1107	=	20,636,113
Valve Crew	19,706.04 / day	x	64	=	1,261,187
Pipeline Removal	41,416.17 / day	x	67	=	2,774,883
Launcher/Receiver Crew	19,706.04 / day	x	0	=	-
Pipeline Cleaning Crew	9,025.02 / day	x	26	=	234,651
Pipeline Crossing Crew	18,641.48 / day	x	0	=	-
Water Crossing Crew	18,641.48 / day	x	30	=	559,244
Gas Pump Down	277.16 miles	x	425.38	=	117,900

25 10 Day M&D
3 Mile/Day
3 Days/Road or Pipeline
4 Days/L&R
2 Days/Valve
12 Days/ Mile of Pipeline Removal
15 Minimum Days / Segment
2 Days/Water

30" line equals 3 miles/day
Minimum Number of Days / Segment is 3 Days
M&D equals 2 days/segment

Materials

					Unit Cost		
Road Fill Concrete	17.296 cy/road	x	369	=	6,382.22 total/cy	100.00	= 638,222.40
Steel Plate	1536 pieces	x	6.2500	=	9,600.00 total/sf	5.30	= 50,880.00
Cleaning Pigs	3 pig/cleaning	x	5	=	15 total pigs	961.58	= 14,423.70
Cleaning Compounds	78.2522 gal/mile/clean	x	277.16	=	21,688.72 total/gal.	30.00	= 650,661.67
Pipeline Fill Concrete	8.648 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	17.296 cy/pipeline	x	15	=	259.44 total/cy	100.00	= 25,944.00
Misc. Materials			5.00	%			69,006.59
State Taxes			5.00	%			72,456.92
							1,521,595.00

Land Damages

Spot Dig Sites	800 # of digs	x	1,500.00	=	1,200,000.00	each dig = 50 ft
Footage of Removed Pipe	29268.56 # of feet	x	12.00	=	351,222.70	damages = \$ 12.00 / ft
					1,551,222.70	

Contract Labor Rates

	LA Rate (2015)		State Adjust			LA Rate (2009)
Abandon	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Roads	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Valves	16,421.70	x	1.200	=	19,706.04	\$ 14,494.00
Cleaning	7,520.85	x	1.200	=	9,025.02	\$ 6,638.00
Pipeline Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Water Crossing	15,534.56	x	1.200	=	18,641.48	\$ 13,711.00
Pipe Removal	34,513.47	x	1.200	=	41,416.17	\$ 53,927.30

Inflation Adjustment (2015)
113.3%

Material Salvage Cost	Valve (t/mi)	Pipe (t/mi)			
		2,307.50	=	2307.497	x (195.00) (449,961.83)

**Assume 0.500 W.T. & \$195/t salvage cost