

**ANR Pipeline Company
Storage TNS Estimate**

Storage TNS Estimate Summary

All Storage Fields

Component	Estimated Cost (\$2015)
Storage well plug and abandonment estimate	\$13,683,421
Storage pipeline TNS estimate	\$35,867,367
Storage compressor station TNS estimate	\$28,490,952
Storage meter station estimate	\$3,037,268
Total:	\$81,079,008

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate Summary

All Storage Fields

Wholly-Owned Storage Fields	No. of Wells	Cost to P&A all Wells
Charlton	10	\$816,871
Chester	9	\$649,009
Cold Springs 1	7	\$507,140
Muttonville	17	\$738,466
Winfield	96	\$8,713,635
Subtotal:	139	\$11,425,121
Leased Storage Fields	No. of Wells	Cost to P&A all Wells
Austin	11	\$989,700
Goodwell	19	\$178,000
Loreed	9	\$1,020,700
Reed City	1	\$69,900
Subtotal:	40	\$2,258,300
Total All Fields:	179	\$13,683,421

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

Description of Work

Estimates below reflect work required to P&A injection/withdrawal, observation, and disposal wells and remove well head equipment. Estimates also include environmental inspection, pipeline company inspection, and pipeline company management and overhead costs. Environmental contractor monitors work and checks for presence of hazardous materials. Work involves inspection, sampling, evaluation, and report writing.

I. Charlton storage field

A. Well contractor cost

	Field	Well No.	Type of Well	2014 Estimated P&A Cost	Escalation Factor	2015 Estimated P&A Cost
1	Charlton	Brown 4-1	Category 1	\$45,700	1.03	\$47,071
2	Charlton	CHA 6-1	Category 1	\$45,700	1.03	\$47,071
3	Charlton	CHA 7-1	Category 1	\$45,700	1.03	\$47,071
4	Charlton	CHA 8-1	Category 1	\$45,700	1.03	\$47,071
5	Charlton	CHA 9-1	Category 1	\$45,700	1.03	\$47,071
6	Charlton	CHA 11-1 "Skid Hole"	Category 2	\$35,700	1.03	\$36,771
7	Charlton	CHA 10-1	Category 2	\$35,700	1.03	\$36,771
8	Charlton	CHA 13-1	Category 3	\$94,800	1.03	\$97,644
9	Charlton	Rosen-Simpson 1-7	Category 3	\$94,800	1.03	\$97,644
10	Charlton	Campbell 1-1	Category 4	\$70,600	1.03	\$72,718
Subtotal:				\$560,100		\$576,903

Total well contractor cost: \$576,903

B. Environmental contractor costs (5% of well contractor cost)

\$28,845
 Total environmental contractor cost: \$28,845

C. Pipeline company inspection costs

	No. of Wells	Days Per Well	Total No. of Days
1. Number of inspector days	10	4	40
2. Company cost per day			1,000
Total company inspection cost:			\$40,000

D. Pipeline company management and overhead costs (15% of A + B + C)

\$96,862
 Total management and overhead cost: \$96,862

E. Contingency (10% of A + B + C + D) \$74,261

F. Total estimated cost to P&A Charlton storage wells (A + B + C + D + E): \$816,871

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

II. Chester storage field

A. Well contractor cost

	Field	Well No.	Type of Well	2014 Estimated P&A Cost	Escalation Factor	2015 Estimated P&A Cost
1	Chester	M.W.P.L. Co. CH-2	Category 1	\$45,700	1.03	\$47,071
2	Chester	M.W.P.L. Co. CH-3	Category 1	\$45,700	1.03	\$47,071
3	Chester	M.W.P.L. Co. CH-4	Category 1	\$45,700	1.03	\$47,071
4	Chester	M.W.P.L. Co. CH-5	Category 1	\$45,700	1.03	\$47,071
5	Chester	M.W.P.L. Co. CH-6	Category 1	\$45,700	1.03	\$47,071
6	Chester	M.W.P.L. Co. CH-7	Category 2	\$35,700	1.03	\$36,771
7	Chester	M.W.P.L. Co. CH-8A	Category 2	\$35,700	1.03	\$36,771
8	Chester	State Chester N-1	Category 4	\$70,600	1.03	\$72,718
9	Chester	St.Chest. HE-1(Antrim)	Category 4	\$70,600	1.03	\$72,718
				\$441,100		\$454,333

Total well contractor cost: \$454,333

B. Environmental contractor costs (5% of well contractor cost)

Total environmental contractor cost: \$22,717

C. Pipeline company inspection costs

	No. of Wells	Days Per Well	Total No. of Days
1. Number of inspector days	9	4	36
2. Company cost per day			\$1,000
Total company inspection cost:			\$36,000

D. Pipeline company management and overhead costs (15% of A + B + C)

Total management and overhead cost: \$76,958

E. Contingency (10% of A + B + C + D)

\$59,001

F. Total estimated cost to P&A Charlton storage wells (A + B + C + D + E):

\$649,009

III. Cold Springs 1

A. Well contractor cost

	Field	Well No.	Type of Well	2014 Estimated P&A Cost	Escalation Factor	2015 Estimated P&A Cost
1	Cold Springs 1	CS1-1HD1	Category 1	\$45,700	1.03	\$47,071
2	Cold Springs 1	CS1-2HD1	Category 1	\$45,700	1.03	\$47,071
3	Cold Springs 1	CS1-3HD1	Category 1	\$45,700	1.03	\$47,071
4	Cold Springs 1	CS1-4HD1	Category 1	\$45,700	1.03	\$47,071
5	Cold Springs 1	CS1-5HD1	Category 1	\$45,700	1.03	\$47,071
6	Cold Springs 1	CS1-6HD1	Category 1	\$45,700	1.03	\$47,071
7	Cold Springs 1	State Blue Lake 1-6	Category 4	\$70,600	1.03	\$72,718
Subtotal:				\$344,800		\$355,144

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

III. Cold Springs 1 (continued)

A. Well contractor cost	Total well contractor cost:	\$355,144
B. Environmental contractor costs (5% of well contractor cost)		
		<u>\$17,757</u>
	Total environmental contractor cost:	\$17,757
C. Pipeline company inspection costs		
		<u>\$1,000</u>
1. Number of inspector days	No. of Wells	7
2. Company cost per day	Days Per Well	4
	Total No. of Days	28
		<u>\$1,000</u>
	Total company inspection cost:	\$28,000
D. Pipeline company management and overhead costs (15% of A + B + C)		
		<u>\$60,135</u>
	Total management and overhead cost:	\$60,135
E. Contingency (10% of A + B + C + D)		\$46,104
F. Total estimated cost to P&A Cold Springs storage wells (A + B + C + D + E):		\$507,140

IV. Muttonville

A. Well contractor cost

	Field	Well No.	Type of Well	2014 Estimated P&A Cost	Escalation Factor	2015 Estimated P&A Cost
1	Muttonville	C.W. Faw. et al 1	Category 1	\$27,300	1.03	\$28,119
2	Muttonville	C.W. Faw. et al 2	Category 1	\$27,300	1.03	\$28,119
3	Muttonville	G. Kethe 1	Category 1	\$27,300	1.03	\$28,119
4	Muttonville	D. Paonessa 1	Category 1	\$27,300	1.03	\$28,119
5	Muttonville	G.K. Claggett et al 1	Category 1	\$27,300	1.03	\$28,119
6	Muttonville	G. Kethe 3	Category 1	\$27,300	1.03	\$28,119
7	Muttonville	W.B.D. Paonessa 2	Category 1	\$27,300	1.03	\$28,119
8	Muttonville	M.W.P.L. Co. M-4	Category 1	\$27,300	1.03	\$28,119
9	Muttonville	M.W.P.L. Co. M-5	Category 1	\$27,300	1.03	\$28,119
10	Muttonville	M.W.P.L. Co. M-6	Category 1	\$27,300	1.03	\$28,119
11	Muttonville	Mi.W.P.L. Co. M-7	Category 1	\$27,300	1.03	\$28,119
12	Muttonville	M.W.P.L. Co. M-8	Category 1	\$27,300	1.03	\$28,119
13	Muttonville	M.W.P.L. Co. M-9	Category 1	\$27,300	1.03	\$28,119
14	Muttonville	M.W.P.L. Co. M-10	Category 2	\$30,500	1.03	\$31,415
15	Muttonville	M.W.P.L. Co. M-11	Category 2	\$30,500	1.03	\$31,415
16	Muttonville	M.W.P.L. Co. M-12	Category 2	\$30,500	1.03	\$31,415
17	Muttonville	M.W.P.L. Co. M-13	Category 2	\$30,500	1.03	\$31,415
			Subtotal:	\$476,900		\$491,207

Total well contractor cost: \$491,207

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

IV. Muttonville (continued)

B. Environmental contractor costs (5% of well contractor cost)		<u>\$24,560</u>									
	Total environmental contractor cost:	\$24,560									
C. Pipeline company inspection costs											
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">No. of Wells</th> <th style="text-align: center;">Days Per Well</th> <th style="text-align: center;">Total No. of Days</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">17</td> <td style="text-align: center;">4</td> <td style="text-align: center;">68</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: right;"><u>\$1,000</u></td> </tr> </tbody> </table>	No. of Wells	Days Per Well	Total No. of Days	17	4	68			<u>\$1,000</u>	
No. of Wells	Days Per Well	Total No. of Days									
17	4	68									
		<u>\$1,000</u>									
1. Number of inspector days											
2. Company cost per day											
	Total company inspection cost:	\$68,000									
D. Pipeline company management and overhead costs (15% of A + B + C)		<u>\$87,565</u>									
	Total management and overhead cost:	\$87,565									
E. Contingency (10% of A + B + C + D)		\$67,133									
F. Total estimated cost to P&A Muttonville storage wells (A + B + C + D + E):		\$738,466									

V. Winfield

A. Well contractor cost

	Field	Well No.	Type of Well	2014 Estimated P&A Cost	Escalation Factor	2015 Estimated P&A Cost
1	Winfield	J. Baxter 1	Category 1	\$30,800	1.03	\$31,724
2	Winfield	Briggs 1	Category 1	\$30,800	1.03	\$31,724
3	Winfield	C.L. Crimmins 1	Category 1	\$30,800	1.03	\$31,724
4	Winfield	C.L. Crimmins 3	Category 1	\$30,800	1.03	\$31,724
5	Winfield	Croff 1	Category 1	\$30,800	1.03	\$31,724
6	Winfield	W. Jack 1	Category 1	\$30,800	1.03	\$31,724
7	Winfield	W. Jack 2	Category 1	\$30,800	1.03	\$31,724
8	Winfield	Jack-Schnick 4	Category 1	\$30,800	1.03	\$31,724
9	Winfield	H. Knapp 1	Category 1	\$30,800	1.03	\$31,724
10	Winfield	Hansen 14	Category 1	\$30,800	1.03	\$31,724
11	Winfield	M, S, M Lovegran 1	Category 1	\$30,800	1.03	\$31,724
12	Winfield	M, S, M Lovegran 2	Category 1	\$30,800	1.03	\$31,724
13	Winfield	Lovegran-Crimmins 20	Category 1	\$30,800	1.03	\$31,724
14	Winfield	Frank Schnick 1	Category 4	\$94,800	1.03	\$97,644
15	Winfield	Schnick A-1	Category 4	\$94,800	1.03	\$97,644
16	Winfield	Schnick A-2	Category 4	\$94,800	1.03	\$97,644
17	Winfield	Schnick A-3	Category 4	\$94,800	1.03	\$97,644
18	Winfield	Schnick 2	Category 4	\$94,800	1.03	\$97,644
19	Winfield	Schnick 3	Category 4	\$94,800	1.03	\$97,644
20	Winfield	Frank Schnick 4	Category 4	\$94,800	1.03	\$97,644
21	Winfield	Schnick 5	Category 4	\$94,800	1.03	\$97,644
22	Winfield	S-B-O 11	Category 4	\$94,800	1.03	\$97,644
23	Winfield	Frank Schnick T-1	Category 4	\$94,800	1.03	\$97,644
24	Winfield	Schnick T-2	Category 4	\$94,800	1.03	\$97,644

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

V. Winfield (continued)

25	Winfield	Schnick-Hayes 21	Category 4	\$94,800	1.03	\$97,644
26	Winfield	J. Staffen 1	Category 4	\$94,800	1.03	\$97,644
27	Winfield	J. Staffen 2	Category 4	\$94,800	1.03	\$97,644
28	Winfield	J. Staffen 3	Category 4	\$94,800	1.03	\$97,644
29	Winfield	Weatherby 1	Category 4	\$94,800	1.03	\$97,644
30	Winfield	Weatherby 2	Category 4	\$94,800	1.03	\$97,644
31	Winfield	A. Weikert 1	Category 4	\$94,800	1.03	\$97,644
32	Winfield	R. Weikert 2	Category 4	\$94,800	1.03	\$97,644
33	Winfield	Weikert-Schnick 13	Category 4	\$94,800	1.03	\$97,644
34	Winfield	Workings-Jack 19	Category 4	\$94,800	1.03	\$97,644
35	Winfield	Winfield 22	Category 4	\$94,800	1.03	\$97,644
36	Winfield	Winfield 23	Category 4	\$94,800	1.03	\$97,644
37	Winfield	Winfield 24	Category 4	\$94,800	1.03	\$97,644
38	Winfield	Winfield 25	Category 4	\$94,800	1.03	\$97,644
39	Winfield	Winfield 26	Category 2	\$53,000	1.03	\$54,590
40	Winfield	Winfield 27	Category 2	\$53,000	1.03	\$54,590
41	Winfield	Winfield 28	Category 2	\$53,000	1.03	\$54,590
42	Winfield	Winfield 29	Category 2	\$53,000	1.03	\$54,590
43	Winfield	Winfield 30	Category 1	\$30,800	1.03	\$31,724
44	Winfield	Winfield 31	Category 1	\$30,800	1.03	\$31,724
45	Winfield	Winfield 32	Category 1	\$30,800	1.03	\$31,724
46	Winfield	Winfield 33	Category 1	\$30,800	1.03	\$31,724
47	Winfield	Winfield 34	Category 1	\$30,800	1.03	\$31,724
48	Winfield	Winfield 35	Category 1	\$30,800	1.03	\$31,724
49	Winfield	Winfield 36	Category 1	\$30,800	1.03	\$31,724
50	Winfield	Winfield 37	Category 1	\$30,800	1.03	\$31,724
51	Winfield	Winfield 38	Category 1	\$30,800	1.03	\$31,724
52	Winfield	Winfield 39	Category 1	\$30,800	1.03	\$31,724
53	Winfield	Winfield 40	Category 1	\$30,800	1.03	\$31,724
54	Winfield	Winfield 41	Category 1	\$30,800	1.03	\$31,724
55	Winfield	Winfield 42	Category 1	\$30,800	1.03	\$31,724
56	Winfield	Winfield 43	Category 1	\$30,800	1.03	\$31,724
57	Winfield	Winfield 44	Category 1	\$30,800	1.03	\$31,724
58	Winfield	Winfield 45	Category 1	\$30,800	1.03	\$31,724
59	Winfield	Winfield 46	Category 1	\$30,800	1.03	\$31,724
60	Winfield	Winfield 47	Category 1	\$30,800	1.03	\$31,724
61	Winfield	Winfield 48	Category 1	\$30,800	1.03	\$31,724
62	Winfield	Winfield 49	Category 1	\$30,800	1.03	\$31,724
63	Winfield	Winfield 50	Category 1	\$30,800	1.03	\$31,724
64	Winfield	Winfield 51	Category 1	\$30,800	1.03	\$31,724
65	Winfield	Winfield 52	Category 1	\$30,800	1.03	\$31,724
66	Winfield	Winfield 53	Category 1	\$30,800	1.03	\$31,724
67	Winfield	Winfield 54	Category 1	\$30,800	1.03	\$31,724
68	Winfield	Winfield 55	Category 1	\$30,800	1.03	\$31,724
69	Winfield	Winfield 56	Category 1	\$30,800	1.03	\$31,724
70	Winfield	Winfield 57	Category 1	\$30,800	1.03	\$31,724
71	Winfield	Winfield 58	Category 1	\$30,800	1.03	\$31,724

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

V. Winfield (continued)

72	Winfield	Winfield 59	Category 1	\$30,800	1.03	\$31,724
73	Winfield	Winfield 60	Category 4	\$94,800	1.03	\$97,644
74	Winfield	Winfield 61	Category 4	\$94,800	1.03	\$97,644
75	Winfield	Winfield 62	Category 4	\$94,800	1.03	\$97,644
76	Winfield	Winfield 63	Category 4	\$94,800	1.03	\$97,644
77	Winfield	Winfield 64	Category 4	\$94,800	1.03	\$97,644
78	Winfield	Winfield 65	Category 4	\$94,800	1.03	\$97,644
79	Winfield	Underwood 2	Category 4	\$94,800	1.03	\$97,644
80	Winfield	Underwood 1	Category 4	\$94,800	1.03	\$97,644
81	Winfield	D. C. Blair 1	Category 4	\$94,800	1.03	\$97,644
82	Winfield	J. & F. Nicholson 1	Category 4	\$94,800	1.03	\$97,644
83	Winfield	M.C.G.C. 1	Category 4	\$94,800	1.03	\$97,644
84	Winfield	Heminger 1	Category 4	\$94,800	1.03	\$97,644
85	Winfield	Williams 2	Category 4	\$94,800	1.03	\$97,644
86	Winfield	A. Olsen 1	Category 4	\$94,800	1.03	\$97,644
87	Winfield	Leo Olsen 1	Category 4	\$64,100	1.03	\$66,023
88	Winfield	Underwood A-1	Category 5	\$94,800	1.03	\$97,644
89	Winfield	Winfield 67	Category 3	\$72,000	1.03	\$74,160
90	Winfield	Winfield 68HD	Category 4	\$94,800	1.03	\$97,644
91	Winfield	Winfield 69HD	Category 4	\$94,800	1.03	\$97,644
92	Winfield	Charles Buck 1	Category 3	\$72,000	1.03	\$74,160
93	Winfield	K-Anderson 2 (Stray)	Category 3	\$72,000	1.03	\$74,160
94	Winfield	Lint-Heirs 1 (Stray)	Category 3	\$72,000	1.03	\$74,160
95	Winfield	M.C.G.C. 2 (Stray)	Category 3	\$72,000	1.03	\$74,160
96	Winfield	Nicholson A-1 (Stray)	Category 3	\$72,000	1.03	\$74,160
Subtotal:				\$6,014,100		\$6,194,523

Total well contractor cost: \$6,194,523

B. Environmental contractor costs (5% of storage contractor costs)

\$309,726
 Total environmental contractor cost: \$309,726

C. Pipeline company inspection costs

	No. of Wells	Days Per Well	Total No. of Days
1. Number of inspector days	96	4	384
2. Company cost per day			\$1,000
Total company inspection cost:			<u>\$384,000</u>

D. Pipeline company management and overhead costs (15% of A + B + C)

\$1,033,237
 Total management and overhead cost: \$1,033,237

E. Contingency (10% of A + B + C + D) \$792,149

F. Total estimated cost to P&A Winfield storage wells (A + B + C + D + E): \$8,713,635

**ANR Pipeline Company
 Storage TNS Estimate**

Well Plug and Abandonment Estimate

VI. Miscellaneous Wells in Leased Storage Fields 1/

A. Well plug and abandonment costs.

	Field	Type of Well	No. of Wells	Estimated Ret. Year	2015 Estimated P&A Cost
1	Goodwell	Warer well	18	2016	\$68,900
2	Loreed	Monitoring well	4	2016	\$471,400
3	Austin	Monitoring well	7	2016	\$529,800
4	Goodwell	Monitoring well	1	2017	\$109,100
5	Austin	Monitoring well	4	2017	\$459,900
6	Loreed	Monitoring well	5	2017	\$549,300
7	Reed City	Monitoring well	1	2017	\$69,900
			40		\$2,258,300

1/ Producing fields converted to storage fields. ANR responsible for plug and abandonment of monitoring wells and water wells based on agreement with Michigan DEQ. Plug and abandonment cost estimate provided by ANR. Refer to storage TNS estimate supporting documents.

Well Plug and Abandonment Summary

Wholly-Owned Storage Fields	No. of Wells	Est. Cost to P&A all Wells
I. Charlton	10	\$816,871
II. Chester	9	\$649,009
III. Cold Springs 1	7	\$507,140
IV. Muttonville	17	\$738,466
V. Winfield	96	\$8,713,635
Subtotal:	139	\$11,425,121
Leased Storage Fields	No. of Wells	Est. Cost to P&A all Wells
VI. Miscellaneous wells		
A. Austin	11	\$989,700
B. Goodwell	19	\$178,000
C. Loreed	9	\$1,020,700
D. Reed City	1	\$69,900
	40	\$2,258,300
Total All Fields:	179	\$13,683,421

**ANR Pipeline Company
Storage TNS Estimate**

Storage Pipeline TNS Estimate Summary

All Storage Fields

Pipeline Diameter (in)	Pipeline Length (miles)	Estimated Cost (2015\$)
3.5	0.381	\$287,758
4.5	101.763	\$15,840,599
6.625	56.015	\$8,041,344
8.625	30.858	\$4,171,915
10.75	9.729	\$1,280,346
12.75	18.897	\$2,739,498
14	0.002	\$126,648
16	17.810	\$2,514,594
18	0.002	\$131,333
20	6.662	\$281,497
22	2.445	\$141,993
24	1.439	\$150,634
26	0.001	\$159,208
Grand Total:	246.004	\$35,867,367

**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate - Storage	Date	: 23-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	: 0	Water Crossings	: 0
Valves	: 86	Above Ground Facilities	: 0
Pipe Removal	: 0.01	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	3,931
2.	PIPELINE MATERIALS:	TB000	376
3.	CONSTRUCTION:	TC000	94,798
	a. Prime contract	TC100	94,636
	i) Pipeline Abandon in Place		(762,131)
	ii) Road Crossing		-
	iii) Valve Removals		840,298
	iv) Pipeline Removal		7,519
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	162
4.	PIPE SALVAGE COST:		(63)
5.	ENGINEERING: 2.25 %	TD000	5,055
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	6,740
7.	LAND - DAMAGES:	TF000	129,483
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	11,233
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	8
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(25)
11.	Sub-Total - Direct Cost		\$ 251,536
12.	Contingency: 10.00 %	TY000	25,154
13.	Sub-Total:		276,690
14.	Overhead: 4.00 %	TZ000	11,068
15.	Sub-Total:		287,758
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 287,758

Cost / Mile	\$	755,132
Cost / Foot	\$	143.02
Cost / Meter	0	469.22

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 3.5" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		0.38	=	3
Abandonment Crew	19,541.83 / day	x	(39)	=	(762,131)
Roads Crossing Crew	18,486.13 / day	x	0	=	-
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	1	=	8,950
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	0.38 miles	x	425.41	=	162

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	0	=	-	total/cy	100.00 = -
Steel Plate	0 pieces	x	0.0851	=	-	total/sf	5.30 = -
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	112.18 = 336.54
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	%			16.88
State Taxes			6.00	%			21.26
							376.00

Land Damages

Spot Dig Sites	86 # of digs	x	1,500.00	=	129,000.00	each dig = 50 ft
Footage of Removed Pipe	40.24 # of feet	x	12.00	=	482.89	damages = \$ 12.00 / ft
					129,482.89	

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
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 4.5" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 4.500		
Pipe Length (mi)	: 101.76	PL Crossings	: 0
Roads	: 13	Water Crossings	: 7
Valves	: 1284	Above Ground Facilities	: 0
Pipe Removal	: 2.04	# of Line Segments	: 102

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	216,822
2.	PIPELINE MATERIALS:	TB000	50,530
3.	CONSTRUCTION:	TC000	10,224,372
	a. Prime contract	TC100	10,181,081
	i) Pipeline Abandon in Place		(3,673,863)
	ii) Road Crossing		480,639
	iii) Valve Removals		12,545,852
	iv) Pipeline Removal		197,860
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		501,190
	vii) Pipeline Crossing		-
	viii) Water Crossing		129,403
	b. Pipeline Pump Down Contract	TC600	43,291
4.	PIPE SALVAGE COST:		(22,401)
5.	ENGINEERING: 2.25 %	TD000	278,772
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	371,696
7.	LAND - DAMAGES:	TF000	2,114,954
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	619,493
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,360
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(10,921)
11.	Sub-Total - Direct Cost		\$ 13,846,677
12.	Contingency: 10.00 %	TY000	1,384,668
13.	Sub-Total:		15,231,345
14.	Overhead: 4.00 %	TZ000	609,254
15.	Sub-Total:		15,840,599
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 15,840,599

Cost / Mile	\$	155,662
Cost / Foot	\$	29.48
Cost / Meter	0	96.72

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 4.5" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		101.76	=	221
Abandonment Crew	19,541.83 / day	x	(188)	=	(3,673,863)
Roads Crossing Crew	18,486.13 / day	x	26	=	480,639
Valve Crew	19,541.83 / day	x	642	=	12,545,852
Pipeline Removal	7,914.39 / day	x	25	=	197,860
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	56	=	501,190
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	7	=	129,403
Gas Pump Down	101.76 miles	x	425.41	=	43,291

510 204 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
 306 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	13	=	3.71 total/cy	100.00	= 370.50
Steel Plate	80 pieces	x	0.1406	=	11.25 total/sf	5.30	= 59.61
Cleaning Pigs	3 pig/cleaning	x	102	=	306 total pigs	144.24	= 44,137.44
Cleaning Compounds	0.2074 gal/mile/clean	x	101.76	=	21.11 total/gal.	30.00	= 633.17
Pipeline Fill Concrete	0.143 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	0.285 cy/pipeline	x	7	=	2.00 total/cy	100.00	= 199.50
Misc. Materials			5.00	%			2,270.01
State Taxes			6.00	%			2,860.21
							50,530.00

Land Damages

Spot Dig Sites	1324 # of digs	x	1,500.00	=	1,986,000.00	each dig = 50 ft
Footage of Removed Pipe	10746.18 # of feet	x	12.00	=	128,954.22	damages = \$ 12.00 / ft
					2,114,954.22	

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	6,650.74	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)				
		114.88	=	114.877	x	(195.00) (22,400.96)

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

**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 24-Nov-2015
Line Segment	: All 6.625" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 6.625		
Pipe Length (mi)	: 56.01	PL Crossings	: 0
Roads	: 4	Water Crossings	: 4
Valves	: 439	Above Ground Facilities	: 0
Pipe Removal	: 1.12	# of Line Segments	: 56

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	110,266
2.	PIPELINE MATERIALS:	TB000	41,799
3.	CONSTRUCTION:	TC000	5,505,655
	a. Prime contract	TC100	5,481,826
	i) Pipeline Abandon in Place		566,713
	ii) Road Crossing		147,889
	iii) Valve Removals		4,299,202
	iv) Pipeline Removal		116,633
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		277,444
	vii) Pipeline Crossing		-
	viii) Water Crossing		73,945
	b. Pipeline Pump Down Contract	TC600	23,829
4.	PIPE SALVAGE COST:		(18,881)
5.	ENGINEERING: 2.25 %	TD000	141,771
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	189,028
7.	LAND - DAMAGES:	TF000	753,482
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	315,047
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	4,009
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(13,029)
11.	Sub-Total - Direct Cost		\$ 7,029,147
12.	Contingency: 10.00 %	TY000	702,915
13.	Sub-Total:		7,732,062
14.	Overhead: 4.00 %	TZ000	309,282
15.	Sub-Total:		8,041,344
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 8,041,344

Cost / Mile	\$	143,558
Cost / Foot	\$	27.19
Cost / Meter	0	89.20

**ANR Pipeline Company
Storage TNS Estimate**

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

Michigan - 6.625" **Storage**

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

Contract

Contract	Unit Cost		# of Units		
Segment Miles	6 miles/day		56.01	=	122
Abandonment Crew	19,541.83 / day	x	29	=	566,713
Roads Crossing Crew	18,486.13 / day	x	8	=	147,889
Valve Crew	19,541.83 / day	x	220	=	4,299,202
Pipeline Removal	8,330.93 / day	x	14	=	116,633
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	31	=	277,444
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	4	=	73,945
Gas Pump Down	56.01 miles	x	425.41	=	23,829

280 112 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
168 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	4	=	2.82 total/cy	100.00	=	281.60
Steel Plate	32 pieces	x	0.3048	=	9.75 total/sf	5.30	=	51.69
Cleaning Pigs	3 pig/cleaning	x	56	=	168 total pigs	212.35	=	35,674.80
Cleaning Compounds	0.7531 gal/mile/clean	x	56.01	=	42.18 total/gal.	30.00	=	1,265.54
Pipeline Fill Concrete	0.352 cy/pipeline	x	0	=	- total/cy	100.00	=	-
Water Crossing Concrete	0.704 cy/pipeline	x	4	=	2.82 total/cy	100.00	=	281.60
Misc. Materials			5.00	%				1,877.76
State Taxes			6.00	%				2,365.98
								41,799.00

Land Damages

Spot Dig Sites	455 # of digs	x	1,500.00	=	682,500.00	each dig = 50 ft
Footage of Removed Pipe	5915.15 # of feet	x	12.00	=	70,981.79	damages = \$ 12.00 / ft
					753,481.79	

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	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)	96.83	=	96.825	x	(195.00)	(18,880.96)
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**Assume 0.500 W.T. & \$195/t salvage cost

**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 8.625" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 8.625		
Pipe Length (mi)	: 30.86	PL Crossings	: 0
Roads	: 2	Water Crossings	: 3
Valves	: 86	Above Ground Facilities	: 0
Pipe Removal	: 0.62	# of Line Segments	: 31

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	57,328
2.	PIPELINE MATERIALS:	TB000	31,185
3.	CONSTRUCTION:	TC000	3,061,603
	a. Prime contract	TC100	3,048,476
	i) Pipeline Abandon in Place		1,856,473
	ii) Road Crossing		73,945
	iii) Valve Removals		840,298
	iv) Pipeline Removal		70,155
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		152,147
	vii) Pipeline Crossing		-
	viii) Water Crossing		55,458
	b. Pipeline Pump Down Contract	TC600	13,127
4.	PIPE SALVAGE COST:		(13,798)
5.	ENGINEERING: 2.25 %	TD000	73,708
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	98,277
7.	LAND - DAMAGES:	TF000	183,103
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	163,795
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	3,743
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(12,166)
11.	Sub-Total - Direct Cost		\$ 3,646,779
12.	Contingency: 10.00 %	TY000	364,678
13.	Sub-Total:		4,011,457
14.	Overhead: 4.00 %	TZ000	160,458
15.	Sub-Total:		4,171,915
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 4,171,915

Cost / Mile	\$	135,197
Cost / Foot	\$	25.61
Cost / Meter	0	84.01

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 8.625" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	6 miles/day		30.86		68
Abandonment Crew	19,541.83 / day	x	95	=	1,856,473
Roads Crossing Crew	18,486.13 / day	x	4	=	73,945
Valve Crew	19,541.83 / day	x	43	=	840,298
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	17	=	152,147
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	3	=	55,458
Gas Pump Down	30.86 miles	x	425.41	=	13,127

155 62 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
 93 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	2	=	2.52 total/cy	100.00	= 251.80
Steel Plate	20 pieces	x	0.5166	=	10.33 total/sf	5.30	= 54.76
Cleaning Pigs	3 pig/cleaning	x	31	=	93 total pigs	276.45	= 25,709.85
Cleaning Compounds	1.7547 gal/mile/clean	x	30.86	=	54.15 total/gal.	30.00	= 1,624.40
Pipeline Fill Concrete	0.63 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	1.259 cy/pipeline	x	3	=	3.78 total/cy	100.00	= 377.70
Misc. Materials			5.00	%			1,400.93
State Taxes			6.00	%			1,765.17
							31,185.00

Land Damages

Spot Dig Sites	96 # of digs	x	1,500.00	=	144,000.00	each dig = 50 ft
Footage of Removed Pipe	3258.62 # of feet	x	12.00	=	39,103.40	damages = \$ 12.00 / ft
					183,103.40	

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	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)	70.76	=	70.758	x	(195.00)	(13,797.77)
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**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	: 24-Nov-2015
Line Segment	: All 10.75" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 10.750		
Pipe Length (mi)	: 9.73	PL Crossings	: 0
Roads	: 0	Water Crossings	: 0
Valves	: 25	Above Ground Facilities	: 0
Pipe Removal	: 0.19	# of Line Segments	: 10

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	17,637
2.	PIPELINE MATERIALS:	TB000	12,654
3.	CONSTRUCTION:	TC000	945,372
	a. Prime contract	TC100	941,233
	i) Pipeline Abandon in Place		605,797
	ii) Road Crossing		-
	iii) Valve Removals		254,044
	iv) Pipeline Removal		27,693
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		53,699
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	4,139
4.	PIPE SALVAGE COST:		(5,488)
5.	ENGINEERING: 2.25 %	TD000	22,677
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	30,236
7.	LAND - DAMAGES:	TF000	49,828
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	50,393
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,833
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(5,958)
11.	Sub-Total - Direct Cost		\$ 1,119,184
12.	Contingency: 10.00 %	TY000	111,918
13.	Sub-Total:		1,231,102
14.	Overhead: 4.00 %	TZ000	49,244
15.	Sub-Total:		1,280,346
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 1,280,346

Cost / Mile	\$	131,604
Cost / Foot	\$	24.92
Cost / Meter	0	81.77

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 10.75" **Storage**

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

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		9.73	=	22
Abandonment Crew	19,541.83 / day	x	31	=	605,797
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	13	=	254,044
Pipeline Removal	9,230.95 / day	x	3	=	27,693
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	0	=	-
Gas Pump Down	9.73 miles	x	425.41	=	4,139

20 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
 30 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	0	=	-	total/cy	100.00	=	-
Steel Plate	0 pieces	x	0.8025	=	-	total/sf	5.30	=	-
Cleaning Pigs	3 pig/cleaning	x	10	=	30	total pigs	344.57	=	10,337.10
Cleaning Compounds	3.538 gal/mile/clean	x	9.73	=	34.42	total/gal.	30.00	=	1,032.61
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	%					568.49
State Taxes			6.00	%					716.29
									12,654.00

Land Damages

Spot Dig Sites	25 # of digs	x	1,500.00	=	37,500.00	each dig = 50 ft
Footage of Removed Pipe	1027.36 # of feet	x	12.00	=	12,328.34	damages = \$ 12.00 / ft
					49,828.34	

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	7,757.10	x	1.190	=	9,230.95
					\$ 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)	28.14	=	28.143	x	(195.00)	=	(5,487.81)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 12.75" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 12.750		
Pipe Length (mi)	: 18.90	PL Crossings	: 0
Roads	: 4	Water Crossings	: 3
Valves	: 18	Above Ground Facilities	: 0
Pipe Removal	: 0.38	# of Line Segments	: 19

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	37,792
2.	PIPELINE MATERIALS:	TB000	32,196
3.	CONSTRUCTION:	TC000	2,055,390
	a. Prime contract	TC100	2,047,351
	i) Pipeline Abandon in Place		1,465,637
	ii) Road Crossing		147,889
	iii) Valve Removals		175,876
	iv) Pipeline Removal		48,584
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		98,448
	vii) Pipeline Crossing		-
	viii) Water Crossing		110,917
	b. Pipeline Pump Down Contract	TC600	8,039
4.	PIPE SALVAGE COST:		(12,739)
5.	ENGINEERING: 2.25 %	TD000	48,589
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	64,786
7.	LAND - DAMAGES:	TF000	71,946
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	107,977
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	5,009
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(16,280)
11.	Sub-Total - Direct Cost		\$ 2,394,666
12.	Contingency: 10.00 %	TY000	239,467
13.	Sub-Total:		2,634,133
14.	Overhead: 4.00 %	TZ000	105,365
15.	Sub-Total:		2,739,498
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,739,498

Cost / Mile	\$	144,969
Cost / Foot	\$	27.46
Cost / Meter	0	90.08

**ANR Pipeline Company
Storage TNS Estimate**

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

Michigan - 12.75" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		18.90	=	42
Abandonment Crew	19,541.83 / day	x	75	=	1,465,637
Roads Crossing Crew	18,486.13 / day	x	8	=	147,889
Valve Crew	19,541.83 / day	x	9	=	175,876
Pipeline Removal	9,716.79 / day	x	5	=	48,584
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	11	=	98,448
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	6	=	110,917
Gas Pump Down	18.90 miles	x	425.41	=	8,039

95 38 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
57 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	4	=	11.70 total/cy	100.00	= 1,170.40
Steel Plate	28 pieces	x	1.1289	=	31.61 total/sf	5.30	= 167.53
Cleaning Pigs	3 pig/cleaning	x	19	=	57 total pigs	408.67	= 23,294.19
Cleaning Compounds	6.0282 gal/mile/clean	x	18.90	=	113.92 total/gal.	30.00	= 3,417.47
Pipeline Fill Concrete	1.463 cy/pipeline	x	0	=	- total/cy	100.00	= -
Water Crossing Concrete	2.926 cy/pipeline	x	3	=	8.78 total/cy	100.00	= 877.80
Misc. Materials			5.00	%			= 1,446.37
State Taxes			6.00	%			= 1,822.43
							32,196.00

Land Damages

Spot Dig Sites	32 # of digs	x	1,500.00	=	48,000.00	each dig = 50 ft
Footage of Removed Pipe	1995.54 # of feet	x	12.00	=	23,946.45	damages = \$ 12.00 / ft
					71,946.45	

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	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)	65.33	=	65.330	x	(195.00)	(12,739.38)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 14" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 14.000		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 0	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	1,730
2.	PIPELINE MATERIALS:	TB000	1,499
3.	CONSTRUCTION:	TC000	97,346
	a. Prime contract	TC100	97,345
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		-
	iii) Valve Removals		-
	iv) Pipeline Removal		10,228
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1
4.	PIPE SALVAGE COST:		(1)
5.	ENGINEERING: 2.25 %	TD000	2,224
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	2,965
7.	LAND - DAMAGES:	TF000	2
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	4,942
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(2)
11.	Sub-Total - Direct Cost		\$ 110,706
12.	Contingency: 10.00 %	TY000	11,071
13.	Sub-Total:		121,777
14.	Overhead: 4.00 %	TZ000	4,871
15.	Sub-Total:		126,648
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 126,648

Cost / Mile	\$	70,672,828
Cost / Foot	\$	13,385.01
Cost / Meter	0	43,914.06

**ANR Pipeline Company
 Transmission TNS Estimate**

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

Michigan - 14" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.00		3
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	0	=	-
Pipeline Removal	10,228.20 / day	x	1	=	10,228
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	0.00 miles	x	425.41	=	1

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	0	=	-	total/cy	100.00 = -
Steel Plate	0 pieces	x	1.3611	=	-	total/sf	5.30 = -
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	448.74 = 1,346.22
Cleaning Compounds	8.0427 gal/mile/clean	x	0.00	=	0.01	total/gal.	30.00 = 0.43
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	%			67.33
State Taxes			6.00	%			84.84
							1,499.00

Land Damages

Spot Dig Sites	0 # of digs	x	1,500.00	=	-	each dig = 50 ft
Footage of Removed Pipe	0.19 # of feet	x	12.00	=	2.27	damages = \$ 12.00 / ft
					2.27	

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	8,595.13	x	1.190	=	10,228.20
					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)	(1.33)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 16" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 16.000		
Pipe Length (mi)	: 17.81	PL Crossings	: 0
Roads	: 0	Water Crossings	: 5
Valves	: 9	Above Ground Facilities	: 0
Pipe Removal	: 0.36	# of Line Segments	: 18

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	34,844
2.	PIPELINE MATERIALS:	TB000	40,881
3.	CONSTRUCTION:	TC000	1,899,114
	a. Prime contract	TC100	1,891,538
	i) Pipeline Abandon in Place		1,387,470
	ii) Road Crossing		-
	iii) Valve Removals		175,876
	iv) Pipeline Removal		53,833
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		89,498
	vii) Pipeline Crossing		-
	viii) Water Crossing		184,861
	b. Pipeline Pump Down Contract	TC600	7,576
4.	PIPE SALVAGE COST:		(15,192)
5.	ENGINEERING: 2.25 %	TD000	44,799
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	59,732
7.	LAND - DAMAGES:	TF000	51,069
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	99,553
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	7,435
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(24,163)
11.	Sub-Total - Direct Cost		\$ 2,198,072
12.	Contingency: 10.00 %	TY000	219,807
13.	Sub-Total:		2,417,879
14.	Overhead: 4.00 %	TZ000	96,715
15.	Sub-Total:		2,514,594
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 2,514,594

Cost / Mile	\$	141,192
Cost / Foot	\$	26.74
Cost / Meter	0	87.73

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 16" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	5 miles/day		17.81	=	40
Abandonment Crew	19,541.83 / day	x	71	=	1,387,470
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	9	=	175,876
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	10	=	89,498
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	10	=	184,861
Gas Pump Down	17.81 miles	x	425.41	=	7,576

36 Day M&D
 5 Mile/Day
 2 Days/Road or Pipeline
 3 Days/L&R
 1 Days/Valve
 12 Days/ Mile of Pipeline Removal
 54 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	0	=	-	total/cy	100.00	=	-
Steel Plate	20 pieces	x	1.7778	=	35.56	total/sf	5.30	=	188.45
Cleaning Pigs	3 pig/cleaning	x	18	=	54	total pigs	512.84	=	27,693.36
Cleaning Compounds	12.16 gal/mile/clean	x	17.81	=	216.57	total/gal.	30.00	=	6,497.02
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	%					1,836.54
State Taxes			6.00	%					2,314.04
									40,881.00

Land Damages

Spot Dig Sites	19 # of digs	x	1,500.00	=	28,500.00	each dig = 50 ft
Footage of Removed Pipe	1880.72 # of feet	x	12.00	=	22,568.59	damages = \$ 12.00 / ft
					51,068.59	

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	9,047.50	x	1.190	=	10,766.53
					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)	77.91	=	77.906	x	(195.00)	=	(15,191.73)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 18" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 18.000		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 0	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	1,794
2.	PIPELINE MATERIALS:	TB000	1,928
3.	CONSTRUCTION:	TC000	100,576
	a. Prime contract	TC100	100,575
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		-
	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	1
4.	PIPE SALVAGE COST:		(2)
5.	ENGINEERING: 2.25 %	TD000	2,306
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,075
7.	LAND - DAMAGES:	TF000	2
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,125
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(3)
11.	Sub-Total - Direct Cost		\$ 114,802
12.	Contingency: 10.00 %	TY000	11,480
13.	Sub-Total:		126,282
14.	Overhead: 4.00 %	TZ000	5,051
15.	Sub-Total:		131,333
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 131,333

Cost / Mile	\$	67,657,095
Cost / Foot	\$	12,813.84
Cost / Meter	0	42,040.17

**ANR Pipeline Company
Storage TNS Estimate**

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

Michigan - 18" **Storage**

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

Contract

Contract	Unit Cost		# of Units		
Segment Miles	5 miles/day		0.00	=	3
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	0	=	-
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	0.00 miles	x	425.41	=	1

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

Materials	Unit Cost								
Road Fill Concrete	6 cy/road	x	0	=	-	total/cy	100.00	=	-
Steel Plate	0 pieces	x	2.2500	=	-	total/sf	5.30	=	-
Cleaning Pigs	3 pig/cleaning	x	1	=	-	3 total pigs	576.95	=	1,730.85
Cleaning Compounds	17.4499 gal/mile/clean	x	0.00	=	0.03	total/gal.	30.00	=	1.02
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	%					86.59
State Taxes			6.00	%					109.11
									1,928.00

Land Damages

Spot Dig Sites	0 # of digs	x	1,500.00	=	-	each dig = 50 ft
Footage of Removed Pipe	0.20 # of feet	x	12.00	=	2.46	damages = \$ 12.00 / ft
					2.46	

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	11,309.38	x	1.190	=	13,458.16
					\$ 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	=	0.010	x	(195.00)	(1.87)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 20" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 20.000		
Pipe Length (mi)	: 6.66	PL Crossings	: 0
Roads	: 0	Water Crossings	: 0
Valves	: 4	Above Ground Facilities	: 0
Pipe Removal	: 0.13	# of Line Segments	: 2

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	4,109
2.	PIPELINE MATERIALS:	TB000	9,659
3.	CONSTRUCTION:	TC000	210,713
	a. Prime contract	TC100	207,879
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		-
	iii) Valve Removals		78,167
	iv) Pipeline Removal		33,645
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		17,900
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	2,834
4.	PIPE SALVAGE COST:		(7,149)
5.	ENGINEERING: 2.25 %	TD000	5,283
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	7,044
7.	LAND - DAMAGES:	TF000	14,442
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	11,741
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	4,345
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(14,123)
11.	Sub-Total - Direct Cost		\$ 246,064
12.	Contingency: 10.00 %	TY000	24,606
13.	Sub-Total:		270,670
14.	Overhead: 4.00 %	TZ000	10,827
15.	Sub-Total:		281,497
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 281,497

Cost / Mile	\$	42,253
Cost / Foot	\$	8.00
Cost / Meter	0	26.26

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 20" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		6.66	=	6
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	4	=	78,167
Pipeline Removal	16,822.70 / day	x	2	=	33,645
Launcher/Receiver Crew	19,541.83 / day	x	0	=	-
Pipeline Cleaning Crew	8,949.82 / day	x	2	=	17,900
Pipeline Crossing Crew	18,486.13 / day	x	0	=	-
Water Crossing Crew	18,486.13 / day	x	0	=	-
Gas Pump Down	6.66 miles	x	425.41	=	2,834

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	0	=	-	total/cy	100.00	=	-
Steel Plate	0 pieces	x	2.7778	=	-	total/sf	5.30	=	-
Cleaning Pigs	3 pig/cleaning	x	2	=	6	total pigs	641.05	=	3,846.30
Cleaning Compounds	24.1776 gal/mile/clean	x	6.66	=	161.07	total/gal.	30.00	=	4,832.22
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	%					433.93
State Taxes			6.00	%					546.75
									9,659.00

Land Damages

Spot Dig Sites	4 # of digs	x	1,500.00	=	6,000.00	each dig = 50 ft
Footage of Removed Pipe	703.52 # of feet	x	12.00	=	8,442.24	damages = \$ 12.00 / ft
					14,442.24	

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	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)	36.66	=	36.663	x	(195.00)	=	(7,149.30)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 22" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 22.000		
Pipe Length (mi)	: 2.45	PL Crossings	: 0
Roads	: 0	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	2,052
2.	PIPELINE MATERIALS:	TB000	4,999
3.	CONSTRUCTION:	TC000	109,185
	a. Prime contract	TC100	108,145
	i) Pipeline Abandon in Place		78,167
	ii) Road Crossing		-
	iii) Valve Removals		-
	iv) Pipeline Removal		21,028
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	1,040
4.	PIPE SALVAGE COST:		(2,893)
5.	ENGINEERING: 2.25 %	TD000	2,639
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,518
7.	LAND - DAMAGES:	TF000	3,099
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	5,864
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,930
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(6,272)
11.	Sub-Total - Direct Cost		\$ 124,120
12.	Contingency: 10.00 %	TY000	12,412
13.	Sub-Total:		136,532
14.	Overhead: 4.00 %	TZ000	5,461
15.	Sub-Total:		141,993
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 141,993

Cost / Mile	\$	58,069
Cost / Foot	\$	11.00
Cost / Meter	0	36.08

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 22" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		2.45		3
Abandonment Crew	19,541.83 / day	x	4	=	78,167
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	0	=	-
Pipeline Removal	21,028.37 / day	x	1	=	21,028
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	2.45 miles	x	425.41	=	1,040

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	0	=	-	total/cy	100.00 = -
Steel Plate	0 pieces	x	3.3611	=	-	total/sf	5.30 = -
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	705.16 = 2,115.48
Cleaning Compounds	32.3875 gal/mile/clean	x	2.45	=	79.20	total/gal.	30.00 = 2,375.88
Pipeline Fill Concrete	4.556 cy/pipeline	x	0	=	-	total/cy	100.00 = -
Water Crossing Concrete	9.111 cy/pipeline	x	0	=	-	total/cy	100.00 = -
Misc. Materials			5.00	%			224.57
State Taxes			6.00	%			282.96
							4,999.00

Land Damages

Spot Dig Sites	0 # of digs	x	1,500.00	=	-	each dig = 50 ft
Footage of Removed Pipe	258.22 # of feet	x	12.00	=	3,098.64	damages = \$ 12.00 / ft
					3,098.64	

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	17,670.90	x	1.190	=	21,028.37
					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)	14.84	=	14.837	x	(195.00)	(2,893.21)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 24" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 24.000		
Pipe Length (mi)	: 1.44	PL Crossings	: 0
Roads	: 0	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	2,134
2.	PIPELINE MATERIALS:	TB000	4,605
3.	CONSTRUCTION:	TC000	114,014
	a. Prime contract	TC100	113,402
	i) Pipeline Abandon in Place		58,625
	ii) Road Crossing		-
	iii) Valve Removals		19,542
	iv) Pipeline Removal		26,285
	v) Launchers or Receivers		-
	vi) Pipeline Cleaning		8,950
	vii) Pipeline Crossing		-
	viii) Water Crossing		-
	b. Pipeline Pump Down Contract	TC600	612
4.	PIPE SALVAGE COST:		(1,861)
5.	ENGINEERING: 2.25 %	TD000	2,744
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,658
7.	LAND - DAMAGES:	TF000	3,324
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	6,097
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1,352
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(4,393)
11.	Sub-Total - Direct Cost		\$ 131,673
12.	Contingency: 10.00 %	TY000	13,167
13.	Sub-Total:		144,840
14.	Overhead: 4.00 %	TZ000	5,794
15.	Sub-Total:		150,634
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 150,634

Cost / Mile	\$	104,665
Cost / Foot	\$	19.82
Cost / Meter	0	65.04

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 24" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		1.44		3
Abandonment Crew	19,541.83 / day	x	3	=	58,625
Roads Crossing Crew	18,486.13 / day	x	0	=	-
Valve Crew	19,541.83 / day	x	1	=	19,542
Pipeline Removal	26,285.46 / day	x	1	=	26,285
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	1.44 miles	x	425.41	=	612

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	0	=	-	total/cy	100.00 = -
Steel Plate	0 pieces	x	4.0000	=	-	total/sf	5.30 = -
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	769.27 = 2,307.81
Cleaning Compounds	42.3686 gal/mile/clean	x	1.44	=	60.98	total/gal.	30.00 = 1,829.31
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	%			206.86
State Taxes			6.00	%			260.64
							4,605.00

Land Damages

Spot Dig Sites	1 # of digs	x	1,500.00	=	1,500.00	each dig = 50 ft
Footage of Removed Pipe	151.98 # of feet	x	12.00	=	1,823.76	damages = \$ 12.00 / ft
					3,323.76	

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	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)	9.54	=	9.545	x	(195.00)	(1,861.26)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Storage TNS Estimate**

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

Project	: ANR TNS Estimate	Date	: 23-Nov-2015
Line Segment	: All 26" Lines in Michigan		
State	: Michigan		
Pipe Dia.	: 26.000		
Pipe Length (mi)	: 0.00	PL Crossings	: 0
Roads	: 0	Water Crossings	: 0
Valves	: 1	Above Ground Facilities	: 0
Pipe Removal	: 0.00	# of Line Segments	: 1

ITEM	DESCRIPTION	CBS CODE	AMOUNT
1.	PROJECT MANAGEMENT: 1.75 %	TA100	2,175
2.	PIPELINE MATERIALS:	TB000	2,784
3.	CONSTRUCTION:	TC000	119,974
	a. Prime contract	TC100	119,974
	i) Pipeline Abandon in Place		58,625
	ii) Road Crossing		-
	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	-
4.	PIPE SALVAGE COST:		(1)
5.	ENGINEERING: 2.25 %	TD000	2,796
6.	CONSTRUCTION MANAGEMENT: 3.00 %	TE000	3,728
7.	LAND - DAMAGES:	TF000	1,501
8.	ENVIRONMENTAL MONITORING: 5.00 %	TX000	6,213
9.	BLOW DOWN GAS @ 200 PSIG:	TX000	1
10.	RECOVERABLE LINE PACK @ 850 PSIG:		(3)
11.	Sub-Total - Direct Cost		\$ 139,168
12.	Contingency: 10.00 %	TY000	13,917
13.	Sub-Total:		153,085
14.	Overhead: 4.00 %	TZ000	6,123
15.	Sub-Total:		159,208
16.	AFUDC: 0.00 %	TZ000	-
17.	GRAND TOTAL		\$ 159,208

Cost / Mile	\$	210,189,282
Cost / Foot	\$	39,808.58
Cost / Meter	0	130,605.56

**ANR Pipeline Company
 Storage TNS Estimate**

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

Michigan - 26" **Storage**

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

Contract

	Unit Cost		# of Units		
Segment Miles	4 miles/day		0.00		3
Abandonment Crew	19,541.83 / day	x	3	=	58,625
Roads Crossing Crew	18,486.13 / day	x	0	=	-
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	0.00 miles	x	425.41	=	-

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	0	=	-	total/cy	100.00 = -
Steel Plate	0 pieces	x	4.6944	=	-	total/sf	5.30 = -
Cleaning Pigs	3 pig/cleaning	x	1	=	3	total pigs	833.37 = 2,500.11
Cleaning Compounds	54.1466 gal/mile/clean	x	0.00	=	0.04	total/gal.	30.00 = 1.23
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	%			125.07
State Taxes			6.00	%			157.58
							2,784.00

Land Damages

Spot Dig Sites	1 # of digs	x	1,500.00	=	1,500.00	each dig = 50 ft
Footage of Removed Pipe	0.08 # of feet	x	12.00	=	0.96	damages = \$ 12.00 / ft
					1,500.96	

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	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)	0.01 =	0.005 x	(195.00)	(1.06)	**Assume 0.500 W.T. & \$195/t salvage cost
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**ANR Pipeline Company
 Compressor Station TNS Estimate**

Storage Compressor Station TNS Estimate Summary

Description	Amount
Demolition Cost - Buildings	\$20,702,810
Environmental Sampling Cost (5% of Demolition Cost)	\$1,035,140
Deactivation Cost (20% of Demolition Cost)	\$4,140,562
Contamination Removal Cost	\$1,541,345
Fenced Property - Agricultural Use	\$1,237,500
Cost of Removal Subtotal:	\$28,657,357
Contingency (10%)	\$2,865,736
Cost of Removal Total:	\$31,523,093
Bldg Scrap Metal Salvage Value (5% of Demolition Cost)	(\$1,035,140)
CS Unit Salvage Value from Salvage Table	(\$1,997,000)
Gross Salvage Total:	(\$3,032,140)
Storage Compressor Station TNS Estimate:	\$28,490,952

**ANR Pipeline Company
Storage TNS Estimate**

Storage Compressor Station TNS Estimate

Compressor Station	State	Bldg	Unit HP Range	No. of Units	Year Range	Demolition Cost Per Building	Sampling Cost (5%)	Deactivation Cost (20%)	Contamination Removal Cost	Agricultural Use	C.O.R. Excl. Contingency
Central Charlton	Michigan	A	0-5,000 HP	2	1981 - 1990	\$1,109,384	\$55,469	\$221,877	\$0	\$82,500	\$1,469,230
Cold Springs 1	Michigan	A	5,000-10,500 HP	1	Post - 1991	\$970,149	\$48,507	\$194,030	\$0	\$82,500	\$1,295,187
Goodwell	Michigan	B	5,000-10,500 HP	2	Post - 1991	\$1,275,922	\$63,796	\$255,184	\$0	\$82,500	\$1,677,402
Lincoln	Michigan	A	5,000-10,500 HP	1	1971 - 1980	\$970,149	\$48,507	\$194,030	\$97,015	\$82,500	\$1,392,202
Lincoln	Michigan	A	0-5,000 HP	2	1971 - 1980	\$1,109,384	\$55,469	\$221,877	\$110,938	\$82,500	\$1,580,169
Muttonville	Michigan	A	0-5,000 HP	2	1971 - 1980	\$1,109,384	\$55,469	\$221,877	\$110,938	\$82,500	\$1,580,169
Reed City	Michigan	A	5,000-10,500 HP	1	1971 - 1980	\$970,149	\$48,507	\$194,030	\$97,015	\$82,500	\$1,392,202
Reed City	Michigan	A	0-5,000 HP	6	Pre - 1970	\$2,248,827	\$112,441	\$449,765	\$224,883	\$82,500	\$3,118,416
Reed City	Michigan	A1	0-5,000 HP	2	1971 - 1980	\$1,109,384	\$55,469	\$221,877	\$110,938	\$82,500	\$1,580,169
South Chester	Michigan	A	0-5,000 HP	2	1981 - 1990	\$1,109,384	\$55,469	\$221,877	\$0	\$82,500	\$1,469,230
Winfield	Michigan	A	0-5,000 HP	3	1971 - 1980	\$1,394,245	\$69,712	\$278,849	\$139,424	\$82,500	\$1,964,731
Woolfolk	Michigan	A	0-5,000 HP	13	Pre - 1970	\$4,242,851	\$212,143	\$848,570	\$424,285	\$82,500	\$5,810,348
Woolfolk	Michigan	B	0-5,000 HP	2	Pre - 1970	\$1,109,384	\$55,469	\$221,877	\$110,938	\$82,500	\$1,580,169
Woolfolk	Michigan	C	10,500-21,000 HP	1	Pre - 1970	\$1,149,689	\$57,484	\$229,938	\$114,969	\$82,500	\$1,634,580
Woolfolk	Michigan	D	0-5,000 HP	1	1981 - 1990	\$824,524	\$41,226	\$164,905	\$0	\$82,500	\$1,113,155
Total:				41		\$20,702,810	\$1,035,140	\$4,140,562	\$1,541,345	\$1,237,500	\$28,657,357

Compressor Station	Contingency (10%)	C.O.R. Incl. Contingency	Building Scrap Value (5%)	Equip. Salvage Value	Total Salvage	Comp. Station TNS Cost	
Central Charlton	\$146,923	\$1,616,153	(\$55,469)	(\$104,000)	(\$159,469)	\$1,456,684	
Cold Springs 1	\$129,519	\$1,424,705	(\$48,507)	(\$132,000)	(\$180,507)	\$1,244,198	
Goodwell	\$167,740	\$1,845,142	(\$63,796)	(\$264,000)	(\$327,796)	\$1,517,346	
Lincoln	\$139,220	\$1,531,422	(\$48,507)	(\$80,000)	(\$128,507)	\$1,402,914	
Lincoln	\$158,017	\$1,738,186	(\$55,469)	(\$82,000)	(\$137,469)	\$1,600,716	
Muttonville	\$158,017	\$1,738,186	(\$55,469)	(\$82,000)	(\$137,469)	\$1,600,716	
Reed City	\$139,220	\$1,531,422	(\$48,507)	(\$80,000)	(\$128,507)	\$1,402,914	
Reed City	\$311,842	\$3,430,257	(\$112,441)	(\$198,000)	(\$310,441)	\$3,119,816	
Reed City	\$158,017	\$1,738,186	(\$55,469)	(\$82,000)	(\$137,469)	\$1,600,716	
South Chester	\$146,923	\$1,616,153	(\$55,469)	(\$104,000)	(\$159,469)	\$1,456,684	
Winfield	\$196,473	\$2,161,204	(\$69,712)	(\$123,000)	(\$192,712)	\$1,968,491	
Woolfolk	\$581,035	\$6,391,383	(\$212,143)	(\$429,000)	(\$641,143)	\$5,750,241	
Woolfolk	\$158,017	\$1,738,186	(\$55,469)	(\$66,000)	(\$121,469)	\$1,616,716	
Woolfolk	\$163,458	\$1,798,038	(\$57,484)	(\$119,000)	(\$176,484)	\$1,621,554	
Woolfolk	\$111,315	\$1,224,470	(\$41,226)	(\$52,000)	(\$93,226)	\$1,131,244	
Total:		\$2,865,736	\$31,523,093	(\$1,035,140)	(\$1,997,000)	(\$3,032,140)	\$28,490,952

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Central Charlton, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,500		\$249,371.71
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						1,437		\$156,576.82
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						534		\$49,350.42
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

Central Charlton, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
6,577	\$103.96	\$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Cold Springs 1, A, 5,000-10,500 HP
 State: Michigan
 Capacity: 5,000-10,500 HP

Storage

of Compressors 1

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		1.00	ea	495.00	495.00	\$99.64	\$49,319.83
	(b) Remove air intake systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(c) Remove exhaust systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(d) Remove glycol coolers	6C		1.00	ea	250.00	250.00	\$99.64	\$24,909.01
	(e) Remove lighting system	3E		1.00	Lot	120.00	120.00	\$79.25	\$9,510.40
	(f) Remove associated piping system	6B		1.00	Lot	240.00	240.00	\$101.97	\$24,472.80
	(g) Remove miscellaneous valves	6E		1.00	Lot	45.00	45.00	\$123.13	\$5,541.05
	(h) Removed compressed air system	6D		1.00	Lot	60.00	60.00	\$116.98	\$7,018.94
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	60.00	60.00	\$101.97	\$6,118.20
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	30.00	30.00	\$101.97	\$3,059.10
	SUB TOTAL SYSTEM A: STATION LAYOUT						1,780		\$177,774.61
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(b) Remove engine blocks	2A		124.26	cy	2.45	304.00	\$109.49	\$33,285.91
	(c) Remove operating floor structural slab	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(d) Remove yard equipment foundations	2A		13.08	cy	2.45	32.00	\$109.49	\$3,503.78
	(e) Remove above grade pipe piers & valve supports	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		78.48	cy	0.10	7.80	\$139.63	\$1,089.12
	(b) Backfill with excavated native material	2C		78.48	cy	0.21	16.80	\$102.25	\$1,717.85
	(c) Backfill with imported gravel	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						719		\$78,288.41
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		182.99	sy	0.48	88.74	\$80.64	\$7,155.60
	(b) Remove metal roof deck	3B		182.99	sy	0.14	26.01	\$98.81	\$2,570.02
	(c) Remove wall cladding, door windows & louvers	3C		104.05	sy	0.18	19.14	\$88.17	\$1,687.57
	(d) Remove structural steel frame (roof, walls & columns)	3C		877.96	cy	0.09	80.55	\$88.17	\$7,102.10
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		5.28	ton	10.00	52.80	\$116.67	\$6,159.91
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						267		\$24,675.21
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	229.62	ft	0.74	170.80	\$101.97	\$17,416.48
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	65.61	ft	0.51	33.40	\$101.97	\$3,405.80
	- NPS 10 HP above grade suction & discharge	6B	10	65.61	ft	0.30	19.60	\$101.97	\$1,998.61
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	8.00	ea	7.20	57.60	\$133.97	\$7,716.44
	- NPS 16	6A	16	4.00	ea	1.61	6.44	\$133.97	\$862.74
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	6.00	ea	1.09	6.54	\$133.97	\$876.14
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(b) 1:2-DC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(c) L1-SB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(d) L1-DB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	SUB TOTAL SYSTEM K: ELECTRICAL						94		\$7,449.81
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			2.00	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	44.00	440.00	\$143.89	\$63,312.04
	(b) Safety Coordinator			1.00	ea	44.00	440.00	\$96.31	\$42,374.20
	(c) Mechanic			1.00	ea	44.00	440.00	\$71.38	\$31,406.76
	(d) Truck Driver			1.00	ea	44.00	440.00	\$78.18	\$34,397.88
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	44.00	440.00	\$27.19	\$11,964.48
	(b) Truck, Mechanic Rig 4x4			1.00	ea	44.00	440.00	\$38.52	\$16,949.68
	3. Miscellaneous Expenses								
	(a) Trailer Office			2.00	mo			\$230.00	\$460.00
	(b) Telephone			2.00	mo			\$1,150.00	\$2,300.00
	(c) Cellular Phones			2.00	mo			\$1,150.00	\$2,300.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			2.00	mo			\$1,150.00	\$2,300.00
	(e) Utility Bills: Electric, Water, etc.			2.00	mo			\$575.00	\$1,150.00
	(f) Daily Consumables			44.00	day			\$172.50	\$7,590.00
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						2,640		\$216,505.04
	SUB TOTAL: SYSTEMS A TO L						7,309		\$703,478.91
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			9.00	days			\$4,500.00	\$40,500.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		15.00	days			\$85.00	\$1,275.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			969.00	Mdays			\$130.00	\$125,970.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$88,195.39
	SUB TOTAL ADDITIONAL ITEMS						0		\$266,670.39
	GRAND TOTAL						7,309		\$970,149.30

Cold Springs 1, A, 5,000-10,500 HP Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
4,669	\$104.31	\$486,973.87

ANR Pipeline Company Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
Location: Goodwell, B, 5,000-10,500 HP
State: Michigan
Capacity: 5,000-10,500 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	<i>(a) Remove engines and compressors</i>	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	<i>(b) Remove air intake systems</i>	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	<i>(c) Remove exhaust systems</i>	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	<i>(d) Remove glycol coolers</i>	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	<i>(e) Remove lighting system</i>	3E		1.00	Lot	120.00	120.00	\$79.25	\$9,510.40
	<i>(f) Remove associated piping system</i>	6B		1.00	Lot	240.00	240.00	\$101.97	\$24,472.80
	<i>(g) Remove miscellaneous valves</i>	6E		1.00	Lot	45.00	45.00	\$123.13	\$5,541.05
	<i>(h) Removed compressed air system</i>	6D		1.00	Lot	60.00	60.00	\$116.98	\$7,018.94
	2. Remove Plant Boiler and all Hot Water Piping								
	<i>(a) Remove plant boiler</i>	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	<i>(b) Remove all associated hot water piping</i>	6B		1.00	Lot	60.00	60.00	\$101.97	\$6,118.20
	3. Remove Auxiliary Wing associated Equipment								
	<i>(a) Remove auxiliary power unit</i>	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	<i>(b) Remove all associated hot water piping</i>	6B		1.00	Lot	30.00	30.00	\$101.97	\$3,059.10
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,765		\$275,916.09
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	<i>(a) Remove foundation walls and pilasters</i>	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	<i>(b) Remove engine blocks</i>	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	<i>(c) Remove operating floor structural slab</i>	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	<i>(d) Remove yard equipment foundations</i>	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	<i>(e) Remove above grade pipe piers & valve supports</i>	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	<i>(a) Excavate for foundation walls & yard concrete</i>	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	<i>(b) Backfill with excavated native material</i>	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71

	<i>(c) Backfill with imported gravel</i>	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
SUB TOTAL SYSTEM B: REINFORCED CONCRETE							1,437		\$156,576.82
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	<i>(a) Remove built-up roofing system</i>	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	<i>(b) Remove metal roof deck</i>	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	<i>(c) Remove wall cladding, door windows & louvers</i>	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	<i>(d) Remove structural steel frame (roof, walls & columns)</i>	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	<i>(a) Dismantle and remove structural steel</i>	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL							534		\$49,350.42
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	<i>(a) Remove high pressure gas piping</i>								
	<i>- NPS 30 HP above grade suction & discharge</i>	6B	30	459.24	ft	0.74	341.60	\$101.97	\$34,832.95
	<i>- NPS 16 HP above grade suction & discharge feeder lines</i>	6B	16	131.21	ft	0.51	66.80	\$101.97	\$6,811.60
	<i>- NPS 10 HP above grade suction & discharge</i>	6B	10	131.21	ft	0.30	39.20	\$101.97	\$3,997.22
	<i>- NPS 12 HP bypass</i>	6B	12	52.48	ft	0.37	19.20	\$101.97	\$1,957.82
	<i>(b) Flame Cutting</i>								
	<i>- NPS 30</i>	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	<i>- NPS 16</i>	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	<i>- NPS 10</i>	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	<i>- NPS 12</i>	6A	12	12.00	ea	1.09	13.08	\$133.97	\$1,752.27
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	<i>(a) Remove horizontal scrubber</i>	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	<i>(b) Remove NPS 30 suction valve & operator</i>	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	<i>(c) Remove NPS 12 bypass valve and operator</i>	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	<i>(d) Remove NPS 6 bypass valve and operator</i>	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64
	<i>(e) Remove NPS 8 underground vent piping</i>	6B	8	242.74	ft	0.24	58.46	\$101.97	\$5,961.17
	<i>(f) Excavate by machine</i>	2B		150.41	cy	0.10	14.95	\$139.63	\$2,087.48
	<i>(g) Backfill with native excavated material</i>	2C		150.41	cy	0.21	32.20	\$102.25	\$3,292.55
SUB TOTAL SYSTEM D: HIGH PRESSURE GAS							772		\$83,973.80
E	SYSTEM E: FUEL AND STARTING GAS								
	1. Excavate, Remove & Dispose of Emergency Fuel Gas Supply Piping								
	<i>(a) Excavate underground piping by machine</i>	2B		196.19	cy	0.10	19.50	\$139.63	\$2,722.80
	<i>(b) Remove NPS 2 underground piping</i>	6B	2	131.21	ft	0.10	13.20	\$101.97	\$1,346.00
	<i>(c) Backfill with native excavated material</i>	2C		196.19	cy	0.21	42.00	\$102.25	\$4,294.64

	2. Excavate, Remove & Dispose of Domestic Fuel Gas Piping								
	(a) Excavate underground piping by machine	2B		39.24	cy	0.10	3.90	\$139.63	\$544.56
	(b) Remove NPS 4 underground piping	6B	4	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(c) Backfill with native excavated material	2C		39.24	cy	0.21	8.40	\$102.25	\$858.93
	3. Excavate, Remove & Dispose of Fuel & Starting Gas Piping and Valves								
	(a) Excavate underground piping by machine	2B		71.94	cy	0.10	7.15	\$139.63	\$998.36
	(b) Remove NPS 4 underground starting gas piping	6B	6	59.05	ft	0.19	11.16	\$101.97	\$1,137.99
	(c) Remove NPS 4 underground fuel gas piping	6B	4	72.17	ft	0.19	13.64	\$101.97	\$1,390.87
	(d) Backfill with native excavated material	2C		71.94	cy	0.21	15.40	\$102.25	\$1,574.70
	4. Excavate, Remove & Dispose of "normal" Fuel Gas Piping								
	(a) Excavate underground piping by machine	2B		52.32	cy	0.10	5.20	\$139.63	\$726.08
	(b) Remove NPS 1-1/2 underground piping	6B	1.5	49.20	lf	0.09	4.65	\$101.97	\$474.16
	(c) Backfill with native excavated material	2C		52.32	cy	0.21	11.20	\$102.25	\$1,145.24
	SUB TOTAL SYSTEM E: FUEL AND STARTING GAS						162		\$17,846.54
E	SYSTEM F: COOLING WATER								
	1. Remove all Glycol and Jacket Water Cooling Systems Including Air System Cooling, Engine Cooling and APU Cooling Piping.								
	(a) Remove JCW and OCW pumps	6D		2.00	ea	40.00	80.00	\$116.98	\$9,358.58
	(b) Remove glucol pumps	6D		2.00	ea	10.00	20.00	\$116.98	\$2,339.65
	(c) Remove NPS 16 underground glycol cooling piping	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	(d) Remove NPS 6 underground glycol cooling piping	6B	6	590.45	ft	0.19	111.60	\$101.97	\$11,379.85
	(e) Excavate underground piping by machine	2B		431.62	cy	0.10	42.90	\$139.63	\$5,990.17
	(f) Backfill with native excavated material (75%)	2C		104.64	cy	0.21	22.40	\$102.25	\$2,290.47
	(g) Backfill with imported gravel (25%)	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	2. Remove Glycol & Cooling Water Storage & Expansion Tanks								
	(a) Remove OCW expansion tank	6D		1.00	ea	20.00	20.00	\$116.98	\$2,339.65
	(b) Remove glycol storage tank	6D		1.00	ea	40.00	40.00	\$116.98	\$4,679.29
	(c) Remove domestic water tank	6D		1.00	ea	30.00	30.00	\$116.98	\$3,509.47
	(d) Remove service pump	6D		1.00	ea	5.00	5.00	\$116.98	\$584.91
	(e) Remove all associated piping	6B		1.00	Lot	80.00	80.00	\$101.97	\$8,157.60
	SUB TOTAL SYSTEM F: COOLING WATER						572		\$62,896.05
G	SYSTEM G: COMPRESSED AIR								
	1. Remove all Air Compressors located in the Auxiliary Wing, with all Associated Receiver Tanks and Piping, Including the Shop Air System Piping, Crane Supply and Engine Starting Air System Piping								
	(a) Remove air compressors	6D		1.00	ea	20.00	20.00	\$116.98	\$2,339.65
	(b) Remove air receiver tanks	6D		1.00	ea	40.00	40.00	\$116.98	\$4,679.29
	(c) Remove instrument air storage tank	6D		1.00	ea	10.00	10.00	\$116.98	\$1,169.82
	(d) Remove condensate tank	6D		1.00	ea	10.00	10.00	\$116.98	\$1,169.82
	(e) Remove associated piping	6B		1.00	Lot	80.00	80.00	\$101.97	\$8,157.60

	SUB TOTAL SYSTEM G: COMPRESSED AIR						160		\$17,516.18
H	SYSTEM H: LUBE OIL								
	1. Remove all New and Used Oil Storage Tanks located in the Auxiliary Wing Basement								
	(a) Remove lub oil storage tank	6D		1.00	ea	40.00	40.00	\$116.98	\$4,679.29
	(b) Remove lub oil drainage tank	6D		1.00	ea	40.00	40.00	\$116.98	\$4,679.29
	(c) Remove lube oil drain pumps	6D		1.00	ea	10.00	10.00	\$116.98	\$1,169.82
	(d) Remove associated piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	SUB TOTAL SYSTEM H: LUBE OIL						130		\$14,607.20
I	SYSTEM I: HEATING, VENTALATION & A/C								
	1. Remove Heating Systems associates with the Compressor Building, Auxilaury Wing, etc. (to be removed with buildings)								
	(a) Remove unit steam / electrical heaters	6D		13.00	ea	10.00	130.00	\$116.98	\$15,207.69
	(b) Remove associated piping / cabling	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	SUB TOTAL SYSTEM I: HEATING, VENTALATION & A/C						170		\$19,286.49
J	SYSTEM J: SANITARY & STORM SEWERS								
	1. Remove Weeping Tiles and Manholes								
	(a) Remove weeking tiles around Compr. Bldg. Basement	6B	6	278.83	ft	0.19	52.70	\$101.97	\$5,373.82
	(b) Remove manholes	2B		1.00	ea	20.00	20.00	\$139.63	\$2,792.62
	2. Excavate and carefully Remove Drain Piping Under Compr. Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			2.00	Mo				

1.	Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	44.00	440.00	\$143.89	\$63,312.04
	(b) Safety Coordinator			1.00	ea	44.00	440.00	\$96.31	\$42,374.20
	(c) Mechanic			1.00	ea	44.00	440.00	\$71.38	\$31,406.76
	(d) Truck Driver			1.00	ea	44.00	440.00	\$78.18	\$34,397.88
2.	Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	44.00	440.00	\$27.19	\$11,964.48
	(b) Truck, Mechanic Rig 4x4			1.00	ea	44.00	440.00	\$38.52	\$16,949.68
3.	Miscellaneous Expenses								
	(a) Trailer Office			2.00	mo			\$230.00	\$460.00
	(b) Telephone			2.00	mo			\$1,150.00	\$2,300.00
	(c) Cellular Phones			2.00	mo			\$1,150.00	\$2,300.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			2.00	mo			\$1,150.00	\$2,300.00
	(e) Utility Bills: Electric, Water, etc.			2.00	mo			\$575.00	\$1,150.00
	(f) Daily Consumables			44.00	day			\$172.50	\$7,590.00
SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION								2,640	\$216,505.04
SUB TOTAL: SYSTEMS A TO L								9,597	\$938,948.67
ADDITIONAL ITEMS									
1.	Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
2.	Allowance for Hydrovac Unit			18.00	days			\$4,500.00	\$81,000.00
3.	Load and Haul Debris (Trucking to Dumpsite)	2F		30.00	days			\$85.00	\$2,550.00
4.	Load and Haul Heavy Equipment (Trucking offsite)	6F		20.00	days			\$73.00	\$1,460.00
5.	Daily Subsistence Allowance (Per Diem)			969.00	Mdays			\$130.00	\$125,970.00
6.	Prime Cost Allowance (Contingency)			0.00	%				\$0.00
7.	Sales Tax			0.00	%				\$0.00
8.	Markup			10.00	%				\$115,992.87
SUB TOTAL ADDITIONAL ITEMS								0	\$336,972.87
GRAND TOTAL								9,597	\$1,275,921.53

Goodwell, B, 5,000-10,500 HP
 Storage

Labor Man Average Rat Total Labor Cost
 6,957 103.83742 \$722,443.63

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Lincoln, A, 5,000-10,500 HP
 State: Michigan
 Capacity: 5,000-10,500 HP

Storage

of Compressors 1

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		1.00	ea	495.00	495.00	\$99.64	\$49,319.83
	(b) Remove air intake systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(c) Remove exhaust systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(d) Remove glycol coolers	6C		1.00	ea	250.00	250.00	\$99.64	\$24,909.01
	(e) Remove lighting system	3E		1.00	Lot	120.00	120.00	\$79.25	\$9,510.40
	(f) Remove associated piping system	6B		1.00	Lot	240.00	240.00	\$101.97	\$24,472.80
	(g) Remove miscellaneous valves	6E		1.00	Lot	45.00	45.00	\$123.13	\$5,541.05
	(h) Removed compressed air system	6D		1.00	Lot	60.00	60.00	\$116.98	\$7,018.94
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	60.00	60.00	\$101.97	\$6,118.20
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	30.00	30.00	\$101.97	\$3,059.10
	SUB TOTAL SYSTEM A: STATION LAYOUT						1,780		\$177,774.61
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(b) Remove engine blocks	2A		124.26	cy	2.45	304.00	\$109.49	\$33,285.91
	(c) Remove operating floor structural slab	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(d) Remove yard equipment foundations	2A		13.08	cy	2.45	32.00	\$109.49	\$3,503.78
	(e) Remove above grade pipe piers & valve supports	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		78.48	cy	0.10	7.80	\$139.63	\$1,089.12
	(b) Backfill with excavated native material	2C		78.48	cy	0.21	16.80	\$102.25	\$1,717.85
	(c) Backfill with imported gravel	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						719		\$78,288.41
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		182.99	sy	0.48	88.74	\$80.64	\$7,155.60
	(b) Remove metal roof deck	3B		182.99	sy	0.14	26.01	\$98.81	\$2,570.02
	(c) Remove wall cladding, door windows & louvers	3C		104.05	sy	0.18	19.14	\$88.17	\$1,687.57
	(d) Remove structural steel frame (roof, walls & columns)	3C		877.96	cy	0.09	80.55	\$88.17	\$7,102.10
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		5.28	ton	10.00	52.80	\$116.67	\$6,159.91
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						267		\$24,675.21
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	229.62	ft	0.74	170.80	\$101.97	\$17,416.48
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	65.61	ft	0.51	33.40	\$101.97	\$3,405.80
	- NPS 10 HP above grade suction & discharge	6B	10	65.61	ft	0.30	19.60	\$101.97	\$1,998.61
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	8.00	ea	7.20	57.60	\$133.97	\$7,716.44
	- NPS 16	6A	16	4.00	ea	1.61	6.44	\$133.97	\$862.74
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	6.00	ea	1.09	6.54	\$133.97	\$876.14
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(b) 1:2-DC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(c) L1-SB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(d) L1-DB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	SUB TOTAL SYSTEM K: ELECTRICAL						94		\$7,449.81
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			2.00	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	44.00	440.00	\$143.89	\$63,312.04
	(b) Safety Coordinator			1.00	ea	44.00	440.00	\$96.31	\$42,374.20
	(c) Mechanic			1.00	ea	44.00	440.00	\$71.38	\$31,406.76
	(d) Truck Driver			1.00	ea	44.00	440.00	\$78.18	\$34,397.88
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	44.00	440.00	\$27.19	\$11,964.48
	(b) Truck, Mechanic Rig 4x4			1.00	ea	44.00	440.00	\$38.52	\$16,949.68
	3. Miscellaneous Expenses								
	(a) Trailer Office			2.00	mo			\$230.00	\$460.00
	(b) Telephone			2.00	mo			\$1,150.00	\$2,300.00
	(c) Cellular Phones			2.00	mo			\$1,150.00	\$2,300.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			2.00	mo			\$1,150.00	\$2,300.00
	(e) Utility Bills: Electric, Water, etc.			2.00	mo			\$575.00	\$1,150.00
	(f) Daily Consumables			44.00	day			\$172.50	\$7,590.00
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						2,640		\$216,505.04
	SUB TOTAL: SYSTEMS A TO L						7,309		\$703,478.91
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			9.00	days			\$4,500.00	\$40,500.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		15.00	days			\$85.00	\$1,275.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			969.00	Mdays			\$130.00	\$125,970.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$88,195.39
	SUB TOTAL ADDITIONAL ITEMS						0		\$266,670.39
	GRAND TOTAL						7,309		\$970,149.30

Lincoln, A, 5,000-10,500 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
4,669	\$104.31	\$486,973.87

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Lincoln, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,500		\$249,371.71
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						1,437		\$156,576.82
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						534		\$49,350.42
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

Lincoln, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
6,577	\$103.96	\$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Muttonville, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,500		\$249,371.71
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						1,437		\$156,576.82
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						534		\$49,350.42
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

Muttonville, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
6,577	\$103.96	\$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Reed City, A, 5,000-10,500 HP
 State: Michigan
 Capacity: 5,000-10,500 HP

Storage

of Compressors 1

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		1.00	ea	495.00	495.00	\$99.64	\$49,319.83
	(b) Remove air intake systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(c) Remove exhaust systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(d) Remove glycol coolers	6C		1.00	ea	250.00	250.00	\$99.64	\$24,909.01
	(e) Remove lighting system	3E		1.00	Lot	120.00	120.00	\$79.25	\$9,510.40
	(f) Remove associated piping system	6B		1.00	Lot	240.00	240.00	\$101.97	\$24,472.80
	(g) Remove miscellaneous valves	6E		1.00	Lot	45.00	45.00	\$123.13	\$5,541.05
	(h) Removed compressed air system	6D		1.00	Lot	60.00	60.00	\$116.98	\$7,018.94
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	60.00	60.00	\$101.97	\$6,118.20
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(b) Remove all associated hot water piping	6B		1.00	Lot	30.00	30.00	\$101.97	\$3,059.10
	SUB TOTAL SYSTEM A: STATION LAYOUT						1,780		\$177,774.61
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(b) Remove engine blocks	2A		124.26	cy	2.45	304.00	\$109.49	\$33,285.91
	(c) Remove operating floor structural slab	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(d) Remove yard equipment foundations	2A		13.08	cy	2.45	32.00	\$109.49	\$3,503.78
	(e) Remove above grade pipe piers & valve supports	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		78.48	cy	0.10	7.80	\$139.63	\$1,089.12
	(b) Backfill with excavated native material	2C		78.48	cy	0.21	16.80	\$102.25	\$1,717.85
	(c) Backfill with imported gravel	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						719		\$78,288.41
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		182.99	sy	0.48	88.74	\$80.64	\$7,155.60
	(b) Remove metal roof deck	3B		182.99	sy	0.14	26.01	\$98.81	\$2,570.02
	(c) Remove wall cladding, door windows & louvers	3C		104.05	sy	0.18	19.14	\$88.17	\$1,687.57
	(d) Remove structural steel frame (roof, walls & columns)	3C		877.96	cy	0.09	80.55	\$88.17	\$7,102.10
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		5.28	ton	10.00	52.80	\$116.67	\$6,159.91
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						267		\$24,675.21
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	229.62	ft	0.74	170.80	\$101.97	\$17,416.48
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	65.61	ft	0.51	33.40	\$101.97	\$3,405.80
	- NPS 10 HP above grade suction & discharge	6B	10	65.61	ft	0.30	19.60	\$101.97	\$1,998.61
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	8.00	ea	7.20	57.60	\$133.97	\$7,716.44
	- NPS 16	6A	16	4.00	ea	1.61	6.44	\$133.97	\$862.74
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	6.00	ea	1.09	6.54	\$133.97	\$876.14
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(b) 1:2-DC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(c) L1-SB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(d) L1-DB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	SUB TOTAL SYSTEM K: ELECTRICAL						94		\$7,449.81
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			2.00	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	44.00	440.00	\$143.89	\$63,312.04
	(b) Safety Coordinator			1.00	ea	44.00	440.00	\$96.31	\$42,374.20
	(c) Mechanic			1.00	ea	44.00	440.00	\$71.38	\$31,406.76
	(d) Truck Driver			1.00	ea	44.00	440.00	\$78.18	\$34,397.88
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	44.00	440.00	\$27.19	\$11,964.48
	(b) Truck, Mechanic Rig 4x4			1.00	ea	44.00	440.00	\$38.52	\$16,949.68
	3. Miscellaneous Expenses								
	(a) Trailer Office			2.00	mo			\$230.00	\$460.00
	(b) Telephone			2.00	mo			\$1,150.00	\$2,300.00
	(c) Cellular Phones			2.00	mo			\$1,150.00	\$2,300.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			2.00	mo			\$1,150.00	\$2,300.00
	(e) Utility Bills: Electric, Water, etc.			2.00	mo			\$575.00	\$1,150.00
	(f) Daily Consumables			44.00	day			\$172.50	\$7,590.00
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						2,640		\$216,505.04
	SUB TOTAL: SYSTEMS A TO L						7,309		\$703,478.91
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			9.00	days			\$4,500.00	\$40,500.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		15.00	days			\$85.00	\$1,275.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			969.00	Mdays			\$130.00	\$125,970.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$88,195.39
	SUB TOTAL ADDITIONAL ITEMS						0		\$266,670.39
	GRAND TOTAL						7,309		\$970,149.30

Reed City, A, 5,000-10,500 HP Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
4,669	\$104.31	\$486,973.87

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Reed City, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 6

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		6.00	ea	495.00	2970.00	\$99.64	\$295,918.98
	(b) Remove air intake systems	6C		6.00	ea	120.00	720.00	\$99.64	\$71,737.93
	(c) Remove exhaust systems	6C		6.00	ea	120.00	720.00	\$99.64	\$71,737.93
	(d) Remove glycol coolers	6C		6.00	ea	250.00	1500.00	\$99.64	\$149,454.03
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						6,440		\$641,937.63
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		313.91	cy	2.45	768.00	\$109.49	\$84,090.72
	(b) Remove engine blocks	2A		745.53	cy	2.45	1824.00	\$109.49	\$199,715.45
	(c) Remove operating floor structural slab	2A		156.95	cy	2.45	384.00	\$109.49	\$42,045.36
	(d) Remove yard equipment foundations	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	(e) Remove above grade pipe piers & valve supports	2A		235.43	cy	2.45	576.00	\$109.49	\$63,068.04
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		470.86	cy	0.10	46.80	\$139.63	\$6,534.73
	(b) Backfill with excavated native material	2C		470.86	cy	0.21	100.80	\$102.25	\$10,307.13
	(c) Backfill with imported gravel	2C		1961.93	cy	0.21	420.00	\$102.25	\$42,946.37
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						4,312		\$469,730.46
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		1097.92	sy	0.48	532.44	\$80.64	\$42,933.62
	(b) Remove metal roof deck	3B		1097.92	sy	0.14	156.06	\$98.81	\$15,420.12
	(c) Remove wall cladding, door windows & louvers	3C		624.31	sy	0.18	114.84	\$88.17	\$10,125.45
	(d) Remove structural steel frame (roof, walls & columns)	3C		5267.77	cy	0.09	483.30	\$88.17	\$42,612.59
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		31.68	ton	10.00	316.80	\$116.67	\$36,959.48
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						1,603		\$148,051.26
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	1180.91	ft	0.74	878.40	\$101.97	\$89,570.45
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	295.23	ft	0.51	150.30	\$101.97	\$15,326.09
	- NPS 10 HP above grade suction & discharge	6B	10	275.55	ft	0.30	82.32	\$101.97	\$8,394.17
	- NPS 12 HP bypass	6B	12	78.73	ft	0.37	28.80	\$101.97	\$2,936.74
	(b) Flame Cutting								
	- NPS 30	6A	30	48.00	ea	7.20	345.60	\$133.97	\$46,298.62
	- NPS 16	6A	16	24.00	ea	1.61	38.64	\$133.97	\$5,176.44
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	24.00	ea	1.09	26.16	\$133.97	\$3,504.55
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		688.86	ft	0.03	21.00	\$79.25	\$1,664.32
	(b) 1:2-DC	3E		688.86	ft	0.03	21.00	\$79.25	\$1,664.32
	(c) L1-SB	3E		688.86	ft	0.03	21.00	\$79.25	\$1,664.32
	(d) L1-DB	3E		688.86	ft	0.03	21.00	\$79.25	\$1,664.32
	SUB TOTAL SYSTEM K: ELECTRICAL						164		\$12,997.55
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						17,530		\$1,769,157.80
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			36.00	days			\$4,500.00	\$162,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		60.00	days			\$85.00	\$5,100.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		30.00	days			\$73.00	\$2,190.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$204,438.78
	SUB TOTAL ADDITIONAL ITEMS						0		\$479,668.78
	GRAND TOTAL						17,530		\$2,248,826.58

Reed City, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
15,550	\$103.33	\$1,606,779.02

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Reed City, A1, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,500		\$249,371.71
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						1,437		\$156,576.82
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						534		\$49,350.42
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

Reed City, A1, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
6,577	\$103.96	\$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: South Chester, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,500		\$249,371.71
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						1,437		\$156,576.82
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						534		\$49,350.42
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

South Chester, A, 0-5,000 HP
 Storage

Total Labor MH 6,577
 Average Labor Rate \$103.96
 Total Labor Cost \$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Winfield, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 3

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		3.00	ea	495.00	1485.00	\$99.64	\$147,959.49
	(b) Remove air intake systems	6C		3.00	ea	120.00	360.00	\$99.64	\$35,868.97
	(c) Remove exhaust systems	6C		3.00	ea	120.00	360.00	\$99.64	\$35,868.97
	(d) Remove glycol coolers	6C		3.00	ea	250.00	750.00	\$99.64	\$74,727.02
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						3,485		\$347,513.19
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		156.95	cy	2.45	384.00	\$109.49	\$42,045.36
	(b) Remove engine blocks	2A		372.77	cy	2.45	912.00	\$109.49	\$99,857.73
	(c) Remove operating floor structural slab	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	(d) Remove yard equipment foundations	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	(e) Remove above grade pipe piers & valve supports	2A		117.72	cy	2.45	288.00	\$109.49	\$31,534.02
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		235.43	cy	0.10	23.40	\$139.63	\$3,267.36
	(b) Backfill with excavated native material	2C		235.43	cy	0.21	50.40	\$102.25	\$5,153.56
	(c) Backfill with imported gravel	2C		980.96	cy	0.21	210.00	\$102.25	\$21,473.18
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						2,156		\$234,865.23
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		548.96	sy	0.48	266.22	\$80.64	\$21,466.81
	(b) Remove metal roof deck	3B		548.96	sy	0.14	78.03	\$98.81	\$7,710.06
	(c) Remove wall cladding, door windows & louvers	3C		312.15	sy	0.18	57.42	\$88.17	\$5,062.72
	(d) Remove structural steel frame (roof, walls & columns)	3C		2633.89	cy	0.09	241.65	\$88.17	\$21,306.29
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		15.84	ton	10.00	158.40	\$116.67	\$18,479.74
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						802		\$74,025.63
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	590.45	ft	0.74	439.20	\$101.97	\$44,785.22
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	147.61	ft	0.51	75.15	\$101.97	\$7,663.05
	- NPS 10 HP above grade suction & discharge	6B	10	137.77	ft	0.30	41.16	\$101.97	\$4,197.09
	- NPS 12 HP bypass	6B	12	39.36	ft	0.37	14.40	\$101.97	\$1,468.37
	(b) Flame Cutting								
	- NPS 30	6A	30	24.00	ea	7.20	172.80	\$133.97	\$23,149.31
	- NPS 16	6A	16	12.00	ea	1.61	19.32	\$133.97	\$2,588.22
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	12.00	ea	1.09	13.08	\$133.97	\$1,752.27
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		344.43	ft	0.03	10.50	\$79.25	\$832.16
	(b) 1:2-DC	3E		344.43	ft	0.03	10.50	\$79.25	\$832.16
	(c) L1-SB	3E		344.43	ft	0.03	10.50	\$79.25	\$832.16
	(d) L1-DB	3E		344.43	ft	0.03	10.50	\$79.25	\$832.16
	SUB TOTAL SYSTEM K: ELECTRICAL						122		\$9,668.91
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						10,801		\$1,076,910.33
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			18.00	days			\$4,500.00	\$81,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		30.00	days			\$85.00	\$2,550.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		15.00	days			\$73.00	\$1,095.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$126,749.53
	SUB TOTAL ADDITIONAL ITEMS						0		\$317,334.53
	GRAND TOTAL						10,801		\$1,394,244.87

Winfield, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
8,821	\$103.68	\$914,531.55

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Woolfolk, A, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage
 # of Compressors 13

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		13.00	ea	495.00	6435.00	\$99.64	\$641,157.79
	(b) Remove air intake systems	6C		13.00	ea	120.00	1560.00	\$99.64	\$155,432.19
	(c) Remove exhaust systems	6C		13.00	ea	120.00	1560.00	\$99.64	\$155,432.19
	(d) Remove glycol coolers	6C		13.00	ea	250.00	3250.00	\$99.64	\$323,817.07
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						13,335		\$1,328,927.99
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		680.13	cy	2.45	1664.00	\$109.49	\$182,196.55
	(b) Remove engine blocks	2A		1615.32	cy	2.45	3952.00	\$109.49	\$432,716.81
	(c) Remove operating floor structural slab	2A		340.07	cy	2.45	832.00	\$109.49	\$91,098.28
	(d) Remove yard equipment foundations	2A		170.03	cy	2.45	416.00	\$109.49	\$45,549.14
	(e) Remove above grade pipe piers & valve supports	2A		510.10	cy	2.45	1248.00	\$109.49	\$136,647.41
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		1020.20	cy	0.10	101.40	\$139.63	\$14,158.58
	(b) Backfill with excavated native material	2C		1020.20	cy	0.21	218.40	\$102.25	\$22,332.11
	(c) Backfill with imported gravel	2C		4250.84	cy	0.21	910.00	\$102.25	\$93,050.46
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						9,342		\$1,017,749.33
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		2378.82	sy	0.48	1153.62	\$80.64	\$93,022.85
	(b) Remove metal roof deck	3B		2378.82	sy	0.14	338.13	\$98.81	\$33,410.26
	(c) Remove wall cladding, door windows & louvers	3C		1352.66	sy	0.18	248.82	\$88.17	\$21,938.47
	(d) Remove structural steel frame (roof, walls & columns)	3C		11413.51	cy	0.09	1047.15	\$88.17	\$92,327.28
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		68.64	ton	10.00	686.40	\$116.67	\$80,078.86
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						3,474		\$320,777.73
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	2558.63	ft	0.74	1903.20	\$101.97	\$194,069.30
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	639.66	ft	0.51	325.65	\$101.97	\$33,206.53
	- NPS 10 HP above grade suction & discharge	6B	10	597.01	ft	0.30	178.36	\$101.97	\$18,187.37
	- NPS 12 HP bypass	6B	12	170.58	ft	0.37	62.40	\$101.97	\$6,362.93
	(b) Flame Cutting								
	- NPS 30	6A	30	104.00	ea	7.20	748.80	\$133.97	\$100,313.68
	- NPS 16	6A	16	52.00	ea	1.61	83.72	\$133.97	\$11,215.63
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	52.00	ea	1.09	56.68	\$133.97	\$7,593.19
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		1492.54	ft	0.03	45.50	\$79.25	\$3,606.03
	(b) 1:2-DC	3E		1492.54	ft	0.03	45.50	\$79.25	\$3,606.03
	(c) L1-SB	3E		1492.54	ft	0.03	45.50	\$79.25	\$3,606.03
	(d) L1-DB	3E		1492.54	ft	0.03	45.50	\$79.25	\$3,606.03
	SUB TOTAL SYSTEM K: ELECTRICAL						262		\$20,764.38
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						33,233		\$3,384,401.90
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			78.00	days			\$4,500.00	\$351,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		130.00	days			\$85.00	\$11,050.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		65.00	days			\$73.00	\$4,745.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$385,713.69
	SUB TOTAL ADDITIONAL ITEMS						0		\$858,448.69
	GRAND TOTAL						33,233		\$4,242,850.59

Woolfolk, A, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
31,253	\$103.10	\$3,222,023.12

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Woolfolk, B, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 2

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
SYSTEM A: STATION LAYOUT									
A	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		2.00	ea	495.00	990.00	\$99.64	\$98,639.66
	(b) Remove air intake systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(c) Remove exhaust systems	6C		2.00	ea	120.00	240.00	\$99.64	\$23,912.64
	(d) Remove glycol coolers	6C		2.00	ea	250.00	500.00	\$99.64	\$49,818.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
SUB TOTAL SYSTEM A: STATION LAYOUT							2,500		\$249,371.71
SYSTEM B: REINFORCED CONCRETE									
B	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		104.64	cy	2.45	256.00	\$109.49	\$28,030.24
	(b) Remove engine blocks	2A		248.51	cy	2.45	608.00	\$109.49	\$66,571.82
	(c) Remove operating floor structural slab	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(d) Remove yard equipment foundations	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(e) Remove above grade pipe piers & valve supports	2A		78.48	cy	2.45	192.00	\$109.49	\$21,022.68
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		156.95	cy	0.10	15.60	\$139.63	\$2,178.24
	(b) Backfill with excavated native material	2C		156.95	cy	0.21	33.60	\$102.25	\$3,435.71
	(c) Backfill with imported gravel	2C		653.98	cy	0.21	140.00	\$102.25	\$14,315.46
SUB TOTAL SYSTEM B: REINFORCED CONCRETE							1,437		\$156,576.82
SYSTEM C: BUILDINGS & STRUCTURAL STEEL									
C	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		365.97	sy	0.48	177.48	\$80.64	\$14,311.21
	(b) Remove metal roof deck	3B		365.97	sy	0.14	52.02	\$98.81	\$5,140.04
	(c) Remove wall cladding, door windows & louvers	3C		208.10	sy	0.18	38.28	\$88.17	\$3,375.15
	(d) Remove structural steel frame (roof, walls & columns)	3C		1755.92	cy	0.09	161.10	\$88.17	\$14,204.20
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		10.56	ton	10.00	105.60	\$116.67	\$12,319.83
SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL							534		\$49,350.42
SYSTEM D: HIGH PRESSURE GAS									
D	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	393.64	ft	0.74	292.80	\$101.97	\$29,856.82
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	98.41	ft	0.51	50.10	\$101.97	\$5,108.70
	- NPS 10 HP above grade suction & discharge	6B	10	91.85	ft	0.30	27.44	\$101.97	\$2,798.06
	- NPS 12 HP bypass	6B	12	26.24	ft	0.37	9.60	\$101.97	\$978.91
	(b) Flame Cutting								
	- NPS 30	6A	30	16.00	ea	7.20	115.20	\$133.97	\$15,432.87
	- NPS 16	6A	16	8.00	ea	1.61	12.88	\$133.97	\$1,725.48
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(b) 1:2-DC	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(c) L1-SB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	(d) L1-DB	3E		229.62	ft	0.03	7.00	\$79.25	\$554.77
	SUB TOTAL SYSTEM K: ELECTRICAL						108		\$8,559.36
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						8,557		\$846,161.18
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			12.00	days			\$4,500.00	\$54,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		10.00	days			\$73.00	\$730.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$100,853.12
	SUB TOTAL ADDITIONAL ITEMS						0		\$263,223.12
	GRAND TOTAL						8,557		\$1,109,384.29

Woolfolk, B, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
6,577	\$103.96	\$683,782.40

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Woolfolk, C, 10,500-21,000 HP
 State: Michigan
 Capacity: 10,500-21,000 HP

Storage

of Compressors 1

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		1.00	ea	495.00	495.00	\$99.64	\$49,319.83
	(b) Remove air intake systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(c) Remove exhaust systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(d) Remove glycol coolers	6C		1.00	ea	250.00	250.00	\$99.64	\$24,909.01
	(e) Remove lighting system	3E		1.00	Lot	160.00	160.00	\$79.25	\$12,680.54
	(f) Remove associated piping system	6B		1.00	Lot	320.00	320.00	\$101.97	\$32,630.40
	(g) Remove miscellaneous valves	6E		1.00	Lot	60.00	60.00	\$123.13	\$7,388.07
	(h) Removed compressed air system	6D		1.00	Lot	60.00	60.00	\$116.98	\$7,018.94
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	160.00	160.00	\$99.64	\$15,941.76
	(b) Remove all associated hot water piping	6B		1.00	Lot	80.00	80.00	\$101.97	\$8,157.60
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	160.00	160.00	\$99.64	\$15,941.76
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	SUB TOTAL SYSTEM A: STATION LAYOUT						2,025		\$201,979.34
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(b) Remove engine blocks	2A		124.26	cy	2.45	304.00	\$109.49	\$33,285.91
	(c) Remove operating floor structural slab	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(d) Remove yard equipment foundations	2A		13.08	cy	2.45	32.00	\$109.49	\$3,503.78
	(e) Remove above grade pipe piers & valve supports	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		78.48	cy	0.10	7.80	\$139.63	\$1,089.12
	(b) Backfill with excavated native material	2C		78.48	cy	0.21	16.80	\$102.25	\$1,717.85
	(c) Backfill with imported gravel	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						719		\$78,288.41
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		182.99	sy	0.48	88.74	\$80.64	\$7,155.60
	(b) Remove metal roof deck	3B		182.99	sy	0.14	26.01	\$98.81	\$2,570.02
	(c) Remove wall cladding, door windows & louvers	3C		104.05	sy	0.18	19.14	\$88.17	\$1,687.57
	(d) Remove structural steel frame (roof, walls & columns)	3C		877.96	cy	0.09	80.55	\$88.17	\$7,102.10
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		5.28	ton	10.00	52.80	\$116.67	\$6,159.91
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						267		\$24,675.21
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	328.03	ft	0.74	244.00	\$101.97	\$24,880.68
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	131.21	ft	0.51	66.80	\$101.97	\$6,811.60
	- NPS 10 HP above grade suction & discharge	6B	10	131.21	ft	0.30	39.20	\$101.97	\$3,997.22
	- NPS 12 HP bypass	6B	12	39.36	ft	0.37	14.40	\$101.97	\$1,468.37
	(b) Flame Cutting								
	- NPS 30	6A	30	8.00	ea	7.20	57.60	\$133.97	\$7,716.44
	- NPS 16	6A	16	4.00	ea	1.61	6.44	\$133.97	\$862.74
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	8.00	ea	1.09	8.72	\$133.97	\$1,168.18
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(b) 1:2-DC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(c) L1-SB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(d) L1-DB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	SUB TOTAL SYSTEM K: ELECTRICAL						94		\$7,449.81
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			2.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	55.00	550.00	\$143.89	\$79,140.05
	(b) Safety Coordinator			1.00	ea	55.00	550.00	\$96.31	\$52,967.75
	(c) Mechanic			1.00	ea	55.00	550.00	\$71.38	\$39,258.45
	(d) Truck Driver			1.00	ea	55.00	550.00	\$78.18	\$42,997.35
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	55.00	550.00	\$27.19	\$14,955.60
	(b) Truck, Mechanic Rig 4x4			1.00	ea	55.00	550.00	\$38.52	\$21,187.10
	3. Miscellaneous Expenses								
	(a) Trailer Office			2.50	mo			\$230.00	\$575.00
	(b) Telephone			2.50	mo			\$1,150.00	\$2,875.00
	(c) Cellular Phones			2.50	mo			\$1,150.00	\$2,875.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			2.50	mo			\$1,150.00	\$2,875.00
	(e) Utility Bills: Electric, Water, etc.			2.50	mo			\$575.00	\$1,437.50
	(f) Daily Consumables			55.00	day			\$172.50	\$9,487.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						3,300		\$270,631.30
	SUB TOTAL: SYSTEMS A TO L						8,447		\$806,406.76
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			15.00	days			\$4,500.00	\$67,500.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		20.00	days			\$85.00	\$1,700.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		15.00	days			\$73.00	\$1,095.00
	5. Daily Subsistence Allowance (Per Diem)			1219.00	Mdays			\$130.00	\$158,470.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$104,517.18
	SUB TOTAL ADDITIONAL ITEMS						0		\$343,282.18
	GRAND TOTAL						8,447		\$1,149,688.94

Woolfolk, C, 10,500-21,000 HP Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
5,147	\$104.10	\$535,775.46

ANR Pipeline Company
Compressor Station TNS Estimate

Project: 2015 Terminal Negative Salvage - ARO - IFRS
 Location: Woolfolk, D, 0-5,000 HP
 State: Michigan
 Capacity: 0-5,000 HP

Storage

of Compressors 1

ITEM	DESCRIPTION	Crew ID	Pipe Dia.	Quantity	Unit	MH/Unit	Total MH	Crew Rate	Total Cost
A	SYSTEM A: STATION LAYOUT								
	1. Remove Plant Engines and Compressor, Air Intake Systems, Exhaust Systems, Glycol Coolers, all Associated Accessories, including Lights, Piping, Valves & Heaters, etc.								
	(a) Remove engines and compressors	6C		1.00	ea	495.00	495.00	\$99.64	\$49,319.83
	(b) Remove air intake systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(c) Remove exhaust systems	6C		1.00	ea	120.00	120.00	\$99.64	\$11,956.32
	(d) Remove glycol coolers	6C		1.00	ea	250.00	250.00	\$99.64	\$24,909.01
	(e) Remove lighting system	3E		1.00	Lot	80.00	80.00	\$79.25	\$6,340.27
	(f) Remove associated piping system	6B		1.00	Lot	160.00	160.00	\$101.97	\$16,315.20
	(g) Remove miscellaneous valves	6E		1.00	Lot	30.00	30.00	\$123.13	\$3,694.03
	(h) Removed compressed air system	6D		1.00	Lot	40.00	40.00	\$116.98	\$4,679.29
	2. Remove Plant Boiler and all Hot Water Piping								
	(a) Remove plant boiler	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	40.00	40.00	\$101.97	\$4,078.80
	3. Remove Auxiliary Wing associated Equipment								
	(a) Remove auxiliary power unit	6C		1.00	ea	80.00	80.00	\$99.64	\$7,970.88
	(b) Remove all associated hot water piping	6B		1.00	Lot	20.00	20.00	\$101.97	\$2,039.40
	SUB TOTAL SYSTEM A: STATION LAYOUT						1,515		\$151,230.23
B	SYSTEM B: REINFORCED CONCRETE								
	1. Compressor Building Basement Walls and Unit Blocks are to be Cut Off 3 feet below grade and backfilled.								
	(a) Remove foundation walls and pilasters	2A		52.32	cy	2.45	128.00	\$109.49	\$14,015.12
	(b) Remove engine blocks	2A		124.26	cy	2.45	304.00	\$109.49	\$33,285.91
	(c) Remove operating floor structural slab	2A		26.16	cy	2.45	64.00	\$109.49	\$7,007.56
	(d) Remove yard equipment foundations	2A		13.08	cy	2.45	32.00	\$109.49	\$3,503.78
	(e) Remove above grade pipe piers & valve supports	2A		39.24	cy	2.45	96.00	\$109.49	\$10,511.34
	2. Excavation & Backfilling.								
	(a) Excavate for foundation walls & yard concrete	2B		78.48	cy	0.10	7.80	\$139.63	\$1,089.12
	(b) Backfill with excavated native material	2C		78.48	cy	0.21	16.80	\$102.25	\$1,717.85
	(c) Backfill with imported gravel	2C		326.99	cy	0.21	70.00	\$102.25	\$7,157.73
	SUB TOTAL SYSTEM B: REINFORCED CONCRETE						719		\$78,288.41
C	SYSTEM C: BUILDINGS & STRUCTURAL STEEL								
	1. Remove Compressor Building and all Associated Structural Steel, Including Cranes								
	(a) Remove built-up roofing system	3A		182.99	sy	0.48	88.74	\$80.64	\$7,155.60
	(b) Remove metal roof deck	3B		182.99	sy	0.14	26.01	\$98.81	\$2,570.02
	(c) Remove wall cladding, door windows & louvers	3C		104.05	sy	0.18	19.14	\$88.17	\$1,687.57
	(d) Remove structural steel frame (roof, walls & columns)	3C		877.96	cy	0.09	80.55	\$88.17	\$7,102.10
	2. Remove Air Intake Systems, Exhaust Mufflers, Glycol Coolers and Associated Structural Steel								
	(a) Dismantle and remove structural steel	3D		5.28	ton	10.00	52.80	\$116.67	\$6,159.91
	SUB TOTAL SYSTEM C: BUILDINGS & STRUCTURAL STEEL						267		\$24,675.21
D	SYSTEM D: HIGH PRESSURE GAS								
	1. Dismantle and Remove all Above and Below Grade High Pressure Gas Piping								
	(a) Remove high pressure gas piping								
	- NPS 30 HP above grade suction & discharge	6B	30	196.82	ft	0.74	146.40	\$101.97	\$14,928.41
	- NPS 16 HP above grade suction & discharge feeder lines	6B	16	49.20	ft	0.51	25.05	\$101.97	\$2,554.35
	- NPS 10 HP above grade suction & discharge	6B	10	45.92	ft	0.30	13.72	\$101.97	\$1,399.03
	- NPS 12 HP bypass	6B	12	13.12	ft	0.37	4.80	\$101.97	\$489.46
	(b) Flame Cutting								
	- NPS 30	6A	30	8.00	ea	7.20	57.60	\$133.97	\$7,716.44
	- NPS 16	6A	16	4.00	ea	1.61	6.44	\$133.97	\$862.74
	- NPS 10	6A	10	2.00	ea	0.92	1.84	\$133.97	\$246.50
	- NPS 12	6A	12	4.00	ea	1.09	4.36	\$133.97	\$584.09
	2. Dismantle and Remove all Unit Valves and Operators, Plant Suction Scrubbers, Valves & Vent Pipes								
	(a) Remove horizontal scrubber	6C		1.00	ea	40.00	40.00	\$99.64	\$3,985.44
	(b) Remove NPS 30 suction valve & operator	6D	30	1.00	ea	9.96	9.96	\$116.98	\$1,165.14
	(c) Remove NPS 12 bypass valve and operator	6D	12	1.00	ea	4.16	4.16	\$116.98	\$486.65
	(d) Remove NPS 6 bypass valve and operator	6D	6	1.00	ea	2.04	2.04	\$116.98	\$238.64

	Bldg. Floor for Environmental Assessment								
	(a) Sawcuts to basement slab	2E		65.61	ft	0.12	8.00	\$105.30	\$842.41
	(b) Breakup and remove concrete	2A		18.31	cy	2.45	44.80	\$109.49	\$4,905.29
	(c) Hand Excavate to expose drain pipes	2D		13.08	cy	1.00	13.10	\$82.60	\$1,082.00
	(d) Carefully remove drain piping	6B	6	32.80	ft	0.19	6.20	\$101.97	\$632.21
	(e) Backfill with imported gravel	2C		13.08	cy	0.21	2.80	\$102.25	\$286.31
	SUB TOTAL SYSTEM J: SANITARY & STORM SEWERS						148		\$15,914.66
K	SYSTEM K: ELECTRICAL								
	1. Remove and Dispose of Unit Control Panels and MCC's for Compressor Units								
	(a) Remove station and generator control panels	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	(b) Remove motor control centers (MCC)	3E		1.00	ea	40.00	40.00	\$79.25	\$3,170.13
	2. Remove all Cables in trenwa trench								
	(a) 1:2-SC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(b) 1:2-DC	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(c) L1-SB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	(d) L1-DB	3E		114.81	ft	0.03	3.50	\$79.25	\$277.39
	SUB TOTAL SYSTEM K: ELECTRICAL						94		\$7,449.81
L	SYSTEM L: SITE OVERHEAD & SUPERVISION			1.50	Mo				
	1. Supervisory Personnel								
	(a) Project Superintendent			1.00	ea	33.00	330.00	\$143.89	\$47,484.03
	(b) Safety Coordinator			1.00	ea	33.00	330.00	\$96.31	\$31,780.65
	(c) Mechanic			1.00	ea	33.00	330.00	\$71.38	\$23,555.07
	(d) Truck Driver			1.00	ea	33.00	330.00	\$78.18	\$25,798.41
	2. Equipment								
	(a) Pickup Truck, 4x4			1.00	ea	33.00	330.00	\$27.19	\$8,973.36
	(b) Truck, Mechanic Rig 4x4			1.00	ea	33.00	330.00	\$38.52	\$12,712.26
	3. Miscellaneous Expenses								
	(a) Trailer Office			1.50	mo			\$230.00	\$345.00
	(b) Telephone			1.50	mo			\$1,150.00	\$1,725.00
	(c) Cellular Phones			1.50	mo			\$1,150.00	\$1,725.00
	(d) Office Equipment: Fax, Copier, Computers, etc.			1.50	mo			\$1,150.00	\$1,725.00
	(e) Utility Bills: Electric, Water, etc.			1.50	mo			\$575.00	\$862.50
	(f) Daily Consumables			33.00	day			\$172.50	\$5,692.50
	SUB TOTAL SYSTEM L: SITE OVERHEAD & SUPERVISION						1,980		\$162,378.78
	SUB TOTAL: SYSTEMS A TO L						6,314		\$615,412.02
	ADDITIONAL ITEMS								
	1. Mobilization and Demobilization			1.00	LS			\$10,000.00	\$10,000.00
	2. Allowance for Hydrovac Unit			6.00	days			\$4,500.00	\$27,000.00
	3. Load and Haul Debris (Trucking to Dumpsite)	2F		10.00	days			\$85.00	\$850.00
	4. Load and Haul Heavy Equipment (Trucking offsite)	6F		5.00	days			\$73.00	\$365.00
	5. Daily Subsistence Allowance (Per Diem)			738.00	Mdays			\$130.00	\$95,940.00
	6. Prime Cost Allowance (Contingency)			0.00	%				\$0.00
	7. Sales Tax			0.00	%				\$0.00
	8. Markup			10.00	%				\$74,956.70
	SUB TOTAL ADDITIONAL ITEMS						0		\$209,111.70
	GRAND TOTAL						6,314		\$824,523.72

Woolfolk, D, 0-5,000 HP
 Storage

Total Labor MH	Average Labor Rate	Total Labor Cost
4,334	\$104.52	\$453,033.24

**ANR Pipeline Company
 Storage TNS Estimate**

Storage Meter Station TNS Estimate 1/

State	Removal Cost	Scrap Value	Combined Total	Adj. Factor	Storage Total
Illinois	\$ 17,243,000	\$ (298,000)	\$ 16,945,000	0.0000	\$ -
Indiana	\$ 18,486,000	\$ (307,000)	\$ 18,179,000	0.0000	\$ -
Iowa	\$ 14,007,000	\$ (233,000)	\$ 13,774,000	0.0000	\$ -
Kansas	\$ 3,966,000	\$ (105,000)	\$ 3,861,000	0.0000	\$ -
Kentucky	\$ 2,754,000	\$ (46,000)	\$ 2,708,000	0.0000	\$ -
Louisiana	\$ 24,800,000	\$ (710,000)	\$ 24,090,000	0.0000	\$ -
Michigan	\$ 33,430,000	\$ (695,000)	\$ 32,735,000	0.0928	\$ 3,037,268
Mississippi	\$ 2,281,000	\$ (87,000)	\$ 2,194,000	0.0000	\$ -
Missouri	\$ 8,170,000	\$ (141,000)	\$ 8,029,000	0.0000	\$ -
Ohio	\$ 15,231,000	\$ (259,000)	\$ 14,972,000	0.0000	\$ -
Oklahoma	\$ 7,678,000	\$ (232,000)	\$ 7,446,000	0.0000	\$ -
Tennessee	\$ 2,018,000	\$ (52,000)	\$ 1,966,000	0.0000	\$ -
Texas	\$ 3,376,000	\$ (86,000)	\$ 3,290,000	0.0000	\$ -
Wisconsin	\$ 57,967,000	\$ (1,032,000)	\$ 56,935,000	0.0000	\$ -
Grand Total	\$ 211,407,000	\$ (4,283,000)	\$ 207,124,000		\$ 3,037,268

1/ Storage TNS estimate includes TNS costs for 9 storage meter stations in the State of Michigan.

Meter Station TNS Estimate - Transmission and Storage

State	Removal Cost	Scrap Value	Combined Total	Adj. Factor	Combined Total
Illinois	\$ 17,243,000	\$ (298,000)	\$ 16,945,000	1.0000	\$ 16,945,000
Indiana	\$ 18,486,000	\$ (307,000)	\$ 18,179,000	1.0000	\$ 18,179,000
Iowa	\$ 14,007,000	\$ (233,000)	\$ 13,774,000	1.0000	\$ 13,774,000
Kansas	\$ 3,966,000	\$ (105,000)	\$ 3,861,000	1.0000	\$ 3,861,000
Kentucky	\$ 2,754,000	\$ (46,000)	\$ 2,708,000	1.0000	\$ 2,708,000
Louisiana	\$ 24,800,000	\$ (710,000)	\$ 24,090,000	1.0000	\$ 24,090,000
Michigan	\$ 33,430,000	\$ (695,000)	\$ 32,735,000	1.0000	\$ 32,735,000
Mississippi	\$ 2,281,000	\$ (87,000)	\$ 2,194,000	1.0000	\$ 2,194,000
Missouri	\$ 8,170,000	\$ (141,000)	\$ 8,029,000	1.0000	\$ 8,029,000
Ohio	\$ 15,231,000	\$ (259,000)	\$ 14,972,000	1.0000	\$ 14,972,000
Oklahoma	\$ 7,678,000	\$ (232,000)	\$ 7,446,000	1.0000	\$ 7,446,000
Tennessee	\$ 2,018,000	\$ (52,000)	\$ 1,966,000	1.0000	\$ 1,966,000
Texas	\$ 3,376,000	\$ (86,000)	\$ 3,290,000	1.0000	\$ 3,290,000
Wisconsin	\$ 57,967,000	\$ (1,032,000)	\$ 56,935,000	1.0000	\$ 56,935,000
Grand Total	\$ 211,407,000	\$ (4,283,000)	\$ 207,124,000		\$ 207,124,000

Transmission and Storage Meter Station Adjustment Factors

State	Combined No. of Meter Sta.	No. of Transmission Meter Sta.	No. of Storage Meter Sta.	Transmission Adjustment Factor	Storage Adjustment Factor
Illinois	44	44		1.0000	0.0000
Indiana	47	47		1.0000	0.0000
Iowa	43	43		1.0000	0.0000
Kansas	21	21		1.0000	0.0000
Kentucky	8	8		1.0000	0.0000
Louisiana	124	124		1.0000	0.0000
Michigan	97	88	9	0.9072	0.0928
Mississippi	15	15		1.0000	0.0000
Missouri	27	27		1.0000	0.0000
Ohio	35	35		1.0000	0.0000
Oklahoma	38	38		1.0000	0.0000
Tennessee	8	8		1.0000	0.0000
Texas	16	16		1.0000	0.0000
Wisconsin	156	156		1.0000	0.0000
Grand Total	679	670	9		