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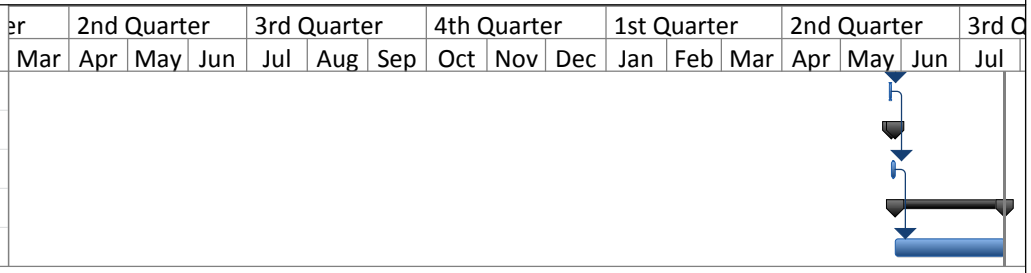
Filed Date: 02/06/2017
State Corporation Commission
of Kansas

Greenwood Retirement

ID	Task Name	Duration
78	Empty and Vent Diesel Generator F.O. Tank	1 day
79	**Potable Water**	**2 days**
80	Disconnect Potable Water at Property Bound	2 days
81	**Post Retirement Closure Activity**	**40 days**
82	Post Retirement Closure Activity	40 days



Redactions Removed Pursuant to Commission Order

Greenwood Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$892,760		
Overhead During Dismantlement			$1,477,766		
Post-Dismantlement Activities			$49,140		
Owner Costs Total*				$2,419,666	
Demolition General Contractor (DGC) Costs					
Site Management			$805,541		
Equipment Rental			$1,371,616		
Consummables			$1,368,432		
Scrap Crew(s)			$360,262		
Dismantlement			$1,117,115		
Contractor Direct Cost*		$5,022,966			
Contractor Allowances					
DGC Insurance	2.00%		$100,459		
Contingency/Profit	15.00%		$768,514		
Performance Bond	2.00%		$117,838.78		
Contractor Costs Total:				$6,009,778	
Total:					$8,429,444
Owner Internal Costs:	5.00%				$421,472
Owner Contingency:	25.00%				$2,212,729
Greenwood Dismantlement Opinion of Probable Cost:					$11,063,645

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $7,442,632

Redactions Removed Pursuant to Commission Order

Greenwood Dismantlement

ID	Task Name	Cost
1	**Greenwood Dismantlement**	**$7,442,635.44**
2	**Pre-Demolition Activities**	**$892,760.32**
3	Detailed Planning & Hire Owner's Engineer	$104,441.28
4	Detailed Site Characterization Study	$610,335.44
5	Hire Demolition general Contractor	$167,184.00
6	KCP&L Prepares Unit for Dismantlement	$10,799.60
7	Demolition Contractor Mobilizes on Site	$0.00
8	**KCP&L Overhead during Dismantlement**	**$1,477,766.48**
9	KCP&L Project Manager	$234,828.40
10	KCP&L Administrative Support	$86,836.48
11	KCP&L Engineer	$385,973.60
12	Owners Engineer Project Manager	$115,216.00
13	Owners Engineer - Engineer	$654,912.00
14	**Demolition Contractor Overhead during Dismantlement**	**$805,541.76**
15	Demolition Contractor Project Manager	$227,915.44
16	Demolition Contractor Safety Manager	$202,931.76
17	Demolition Contractor Superintendent	$374,694.56
18	**Demolition Contractor Equipment Rental Cost**	**$1,371,616.16**
19	Equipment Rental	$1,371,616.16
20	**Demolition Contractor Consumables**	**$1,368,432.56**
21	Consumables	$1,368,432.56
22	**Scrap Crews**	**$360,262.24**
23	Crew to Handle Scrap Material(s)	$360,262.24
24	**Dismantlement**	**$1,117,115.92**
25	**Electrical**	**$197,049.60**
26	Electrical Demolition of Equipment	$197,049.60
27	**Fuel Gas System**	**$17,932.24**
28	Remove all above grade fuel gas piping.	$3,601.36
29	Gas Filter Skid	$14,330.88
30	**Fueil Oil System**	**$17,913.60**
31	Remove above grade fuel oil piping	$12,539.52
32	Remove fuel oil forwarding equipment	$5,374.08
33	Remove fuel oil forwarding building	$0.00
34	**Demineralizer**	**$17,913.60**
35	Remove demineralizer vessels	$3,582.72
36	Remove acid and caustic tanks	$7,165.44
37	Remove hot water tank	$3,582.72
38	Remove misc. demineralizer piping.	$3,582.72
39	**Lube Oil System**	**$53,740.80**
40	Lube Oil Piping	$14,330.88
41	Lube Oil Pumps	$17,913.60
42	Lube Oil Tanks	$21,496.32
43	**Compressed Air System**	**$21,496.32**
44	Compressed Air Piping	$10,748.16

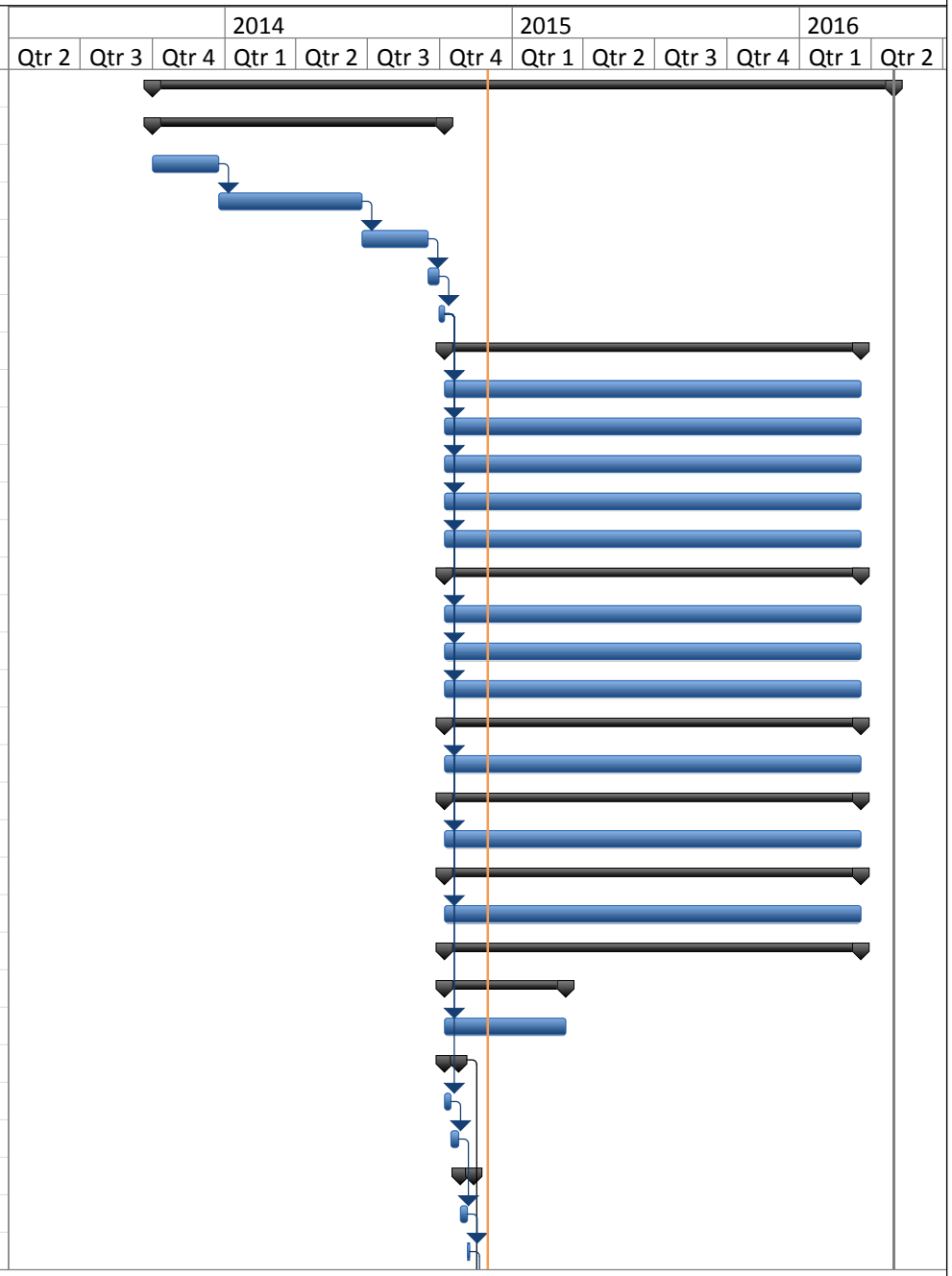
Redactions Removed Pursuant to Commission Order

Greenwood Dismantlement

ID	Task Name	Cost
45	Compressors	$5,374.08
46	Air Receiver	$3,582.72
47	Dryer	$1,791.36
48	**Fire Protection**	**$26,870.40**
49	Fire Protection Piping	$19,704.96
50	CO2 Storage Tank	$7,165.44
51	**Wash Water Skid**	**$10,748.16**
52	Detergent Tank	$10,748.16
53	**Miscellaneous Piping**	**$62,697.60**
54	Exhaust Frame Cooling Piping	$17,913.60
55	CT Air Processing Piping	$21,496.32
56	Inlet Air Heating Piping	$23,287.68
57	**Generator**	**$51,949.44**
58	Generators	$51,949.44
59	**Combustion Turbine**	**$263,329.92**
60	Inlet Heaters	$17,913.60
61	Inlet ducts	$26,870.40
62	Exhaust ducts	$35,827.20
63	Combustion Turbines	$62,697.60
64	Combustion Turbine Foundations	$66,280.32
65	Enclosures	$53,740.80
66	**Diesel Generator**	**$3,582.72**
67	Remove diesel generator	$3,582.72
68	**CEMS**	**$42,992.64**
69	CEMS Building	$21,496.32
70	CEMS Building Foundation	$21,496.32
71	**Stack**	**$80,611.20**
72	Stacks	$80,611.20
73	**Buildings**	**$23,287.68**
74	Remove Administration/Maintenance Building	$17,913.60
75	Remove CT Buildings including gantry crane	$5,374.08
76	**Site Prep**	**$225,000.00**
77	Final Grading and Drainage	$225,000.00
78	**Post Dismantlement Activities**	**$49,140.00**
79	Post Dismantlement Activities	$49,140.00

Greenwood Dismantlement

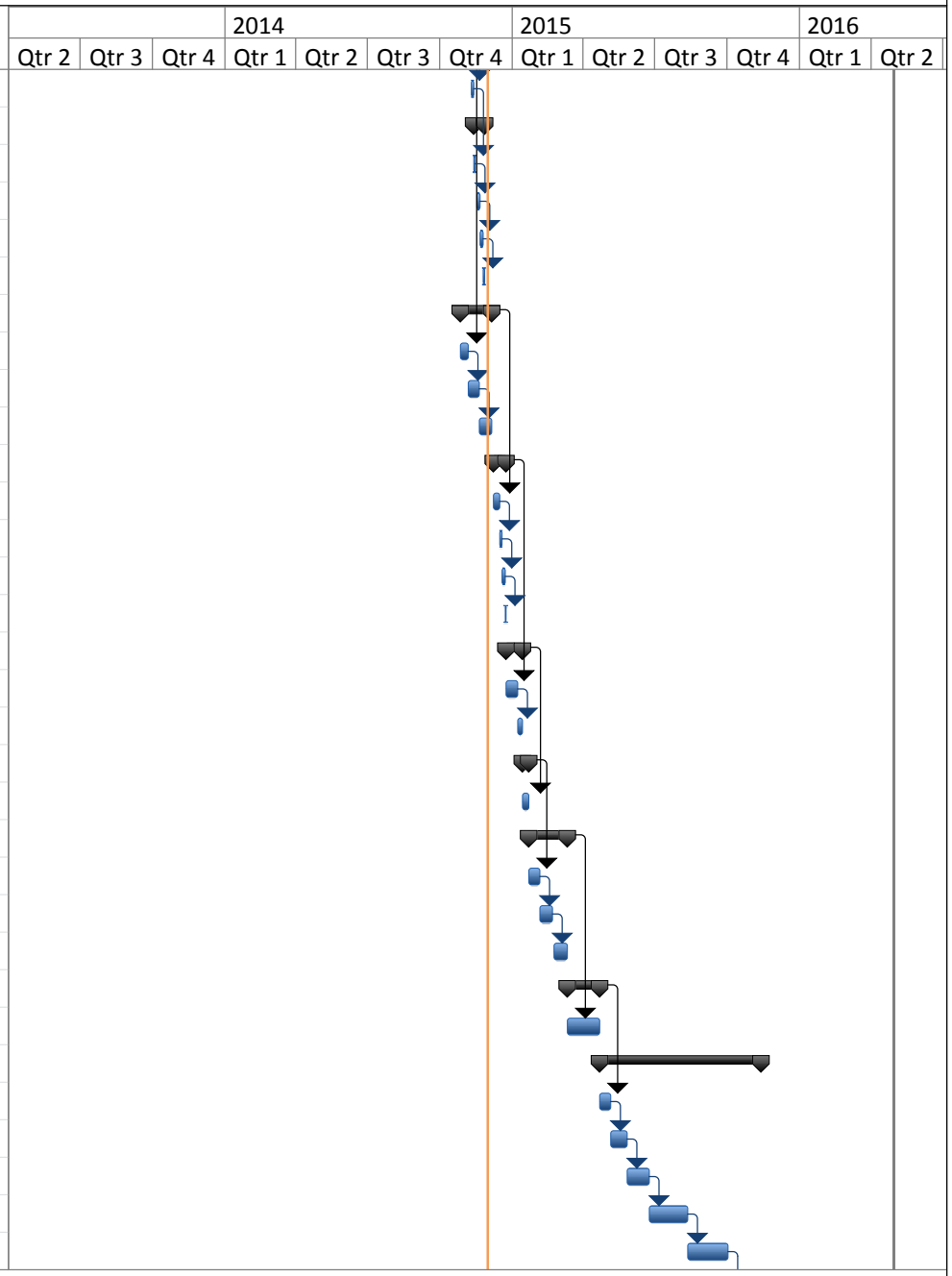
ID	Task Name	Duration
1	**Greenwood Dismantlement**	**674 days**
2	**Pre-Demolition Activities**	**265 days**
3	Detailed Planning & Hire Owner's Engineer	3 mons
4	Detailed Site Characterization Study	130 days
5	Hire Demolition general Contractor	3 mons
6	KCP&L Prepares Unit for Dismantlement	2 wks
7	Demolition Contractor Mobilizes on Site	5 days
8	**KCP&L Overhead during Dismantlement**	**379 days**
9	KCP&L Project Manager	379 days
10	KCP&L Administrative Support	379 days
11	KCP&L Engineer	379 days
12	Owners Engineer Project Manager	379 days
13	Owners Engineer - Engineer	379 days
14	**Demolition Contractor Overhead during Dismantlemen**	**379 days**
15	Demolition Contractor Project Manager	379 days
16	Demolition Contractor Safety Manager	379 days
17	Demolition Contractor Superintendent	379 days
18	**Demolition Contractor Equipment Rental Cost**	**379 days**
19	Equipment Rental	379 days
20	**Demolition Contractor Consumables**	**379 days**
21	Consumables	379 days
22	**Scrap Crews**	**379 days**
23	Crew to Handle Scrap Material(s)	379 days
24	**Dismantlement**	**379 days**
25	**Electrical**	**110 days**
26	Electrical Demolition of Equipment	110 days
27	**Fuel Gas System**	**14 days**
28	Remove all above grade fuel gas piping.	6 days
29	Gas Filter Skid	8 days
30	**Fueil Oil System**	**13 days**
31	Remove above grade fuel oil piping	7 days
32	Remove fuel oil forwarding equipment	3 days



Redactions Removed Pursuant to Commission Order

Greenwood Dismantlement

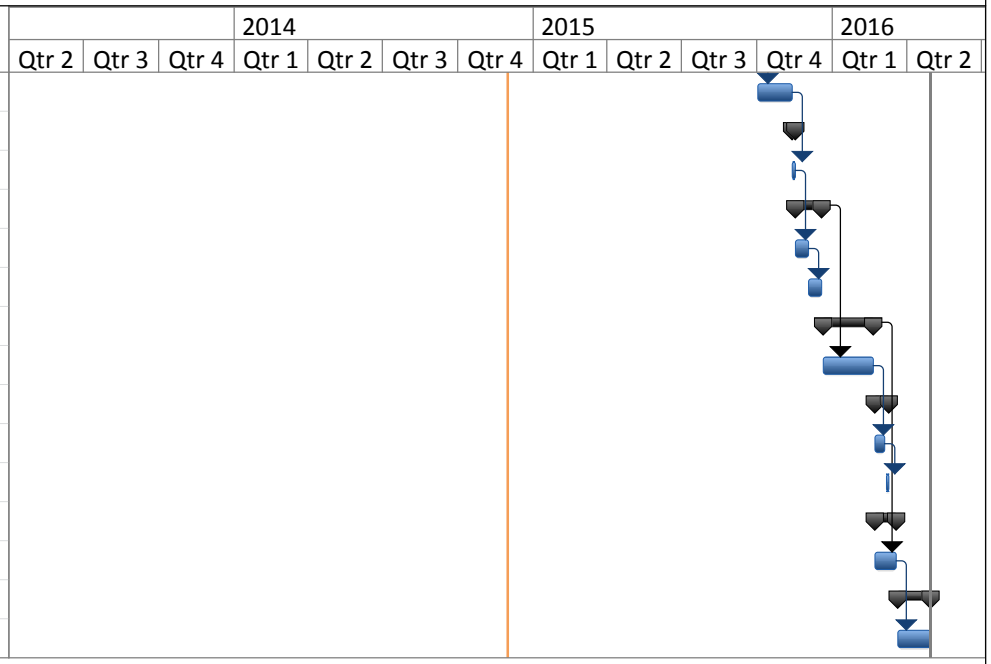
ID	Task Name	Duration
33	Remove fuel oil forwarding building	3 days
34	**Demineralizer**	**10 days**
35	Remove demineralizer vessels	2 days
36	Remove acid and caustic tanks	4 days
37	Remove hot water tank	2 days
38	Remove misc. demineralizer piping.	2 days
39	**Lube Oil System**	**30 days**
40	Lube Oil Piping	8 days
41	Lube Oil Pumps	10 days
42	Lube Oil Tanks	12 days
43	**Compressed Air System**	**12 days**
44	Compressed Air Piping	6 days
45	Compressors	3 days
46	Air Receiver	2 days
47	Dryer	1 day
48	**Fire Protection**	**15 days**
49	Fire Protection Piping	11 days
50	CO2 Storage Tank	4 days
51	**Wash Water Skid**	**6 days**
52	Detergent Tank	6 days
53	**Miscellaneous Piping**	**35 days**
54	Exhaust Frame Cooling Piping	10 days
55	CT Air Processing Piping	12 days
56	Inlet Air Heating Piping	13 days
57	**Generator**	**29 days**
58	Generators	29 days
59	**Combustion Turbine**	**147 days**
60	Inlet Heaters	10 days
61	Inlet ducts	15 days
62	Exhaust ducts	20 days
63	Combustion Turbines	35 days
64	Combustion Turbine Foundations	37 days



Redactions Removed Pursuant to Commission Order

Greenwood Dismantlement

ID	Task Name	Duration
65	Enclosures	30 days
66	**Diesel Generator**	**2 days**
67	Remove diesel generator	2 days
68	**CEMS**	**24 days**
69	CEMS Building	12 days
70	CEMS Building Foundation	12 days
71	**Stack**	**45 days**
72	Stacks	45 days
73	**Buildings**	**13 days**
74	Remove Administration/Maintenance Building	10 days
75	Remove CT Buildings including gantry crane	3 days
76	**Site Prep**	**20 days**
77	Final Grading and Drainage	20 days
78	**Post Dismantlement Activities**	**30 days**
79	Post Dismantlement Activities	30 days



Redactions Removed Pursuant to Commission Order

CROSSROADS

Redactions Removed Pursuant to Commission Order

CROSSROADS STATION

The Crossroads Generating Station consists of four natural gas-fired combustion turbine generator sets.

Combined, these combustion turbines have an SPP-accredited unit rating of 276.8 MW. Crossroads was placed into service in 2002. Each unit is comprised of a GE Model MS7001EA combustion turbine with a generator step-up transformer and auxiliary power transformer.

The following are the major systems and equipment that were included in the retirement and dismantlement of the Crossroads Generating Station.

1. Combustion turbine generator sets and auxiliaries.
2. Generation step-up and auxiliary transformers.
3. Outdoor switchgear.
4. Exhaust stacks.
5. Maintenance building.
6. Natural gas filtering skid.
7. Service/Instrument air compressors.

Crossroads Retirement

Owner Costs				
Pre-Retirement Activities		$43,834		
Retirement Activities		$215,997		
Post-Retirement Activities		$45,162		
Owner Direct Total			$304,993	
Owner Internal Costs	5.00%		$15,250	
Owner Contingency:	25.00%		$80,061	
Crossroads Retirement Opinion of Probable Cost:				$400,303.31

Crossroads Retirement

ID	Task Name	Cost
1	**Crossroads Retirement**	**$304,983.84**
2	**Pre-Retirement Activities**	**$43,834.00**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Retirement**	**$215,997.84**
6	**Project Management During Retirement**	**$99,450.48**
7	Project Management During Retirement	$99,450.48
8	**Retirement Activities**	**$116,547.36**
9	**Electrical**	**$44,664.00**
10	**Medium and Low Voltage Drawout Switchgear**	**$12,505.92**
11	De-energize all buses at the source.	$2,679.84
12	Open all circuit breakers.	$2,679.84
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$2,679.84
14	Verify that the closing/tripping springs are discharged.	$2,679.84
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$1,786.56
16	**Motor Control Centers**	**$6,252.96**
17	De-energize all buses at the source.	$893.28
18	Open all circuit breakers and disconnect switches.	$2,679.84
19	Remove all fuses in control circuits.	$2,679.84
20	**Low-voltage Switchboards and Panelboards**	**$5,359.68**
21	De-energize all buses at the source.	$2,679.84
22	Open all circuit breakers and disconnect switches.	$2,679.84
23	**Oil-Filled Power Transformers**	**$9,826.08**
24	De-energize all buses at the source.	$2,679.84
25	Open all circuit breakers and disconnect switches.	$1,786.56
26	De-energize all buses at the source.	$2,679.84
27	Open all circuit breakers and disconnect switches.	$2,679.84
28	**Dry-type Power Transformers**	**$4,466.40**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$2,679.84
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$1,786.56
31	**Motors**	**$6,252.96**
32	De-energize all primary power at the source.	$1,786.56
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
34	Drain lube oil system (if applicable) and dispose of oil.	$2,679.84
35	**Maintenance Building**	**$9,342.40**

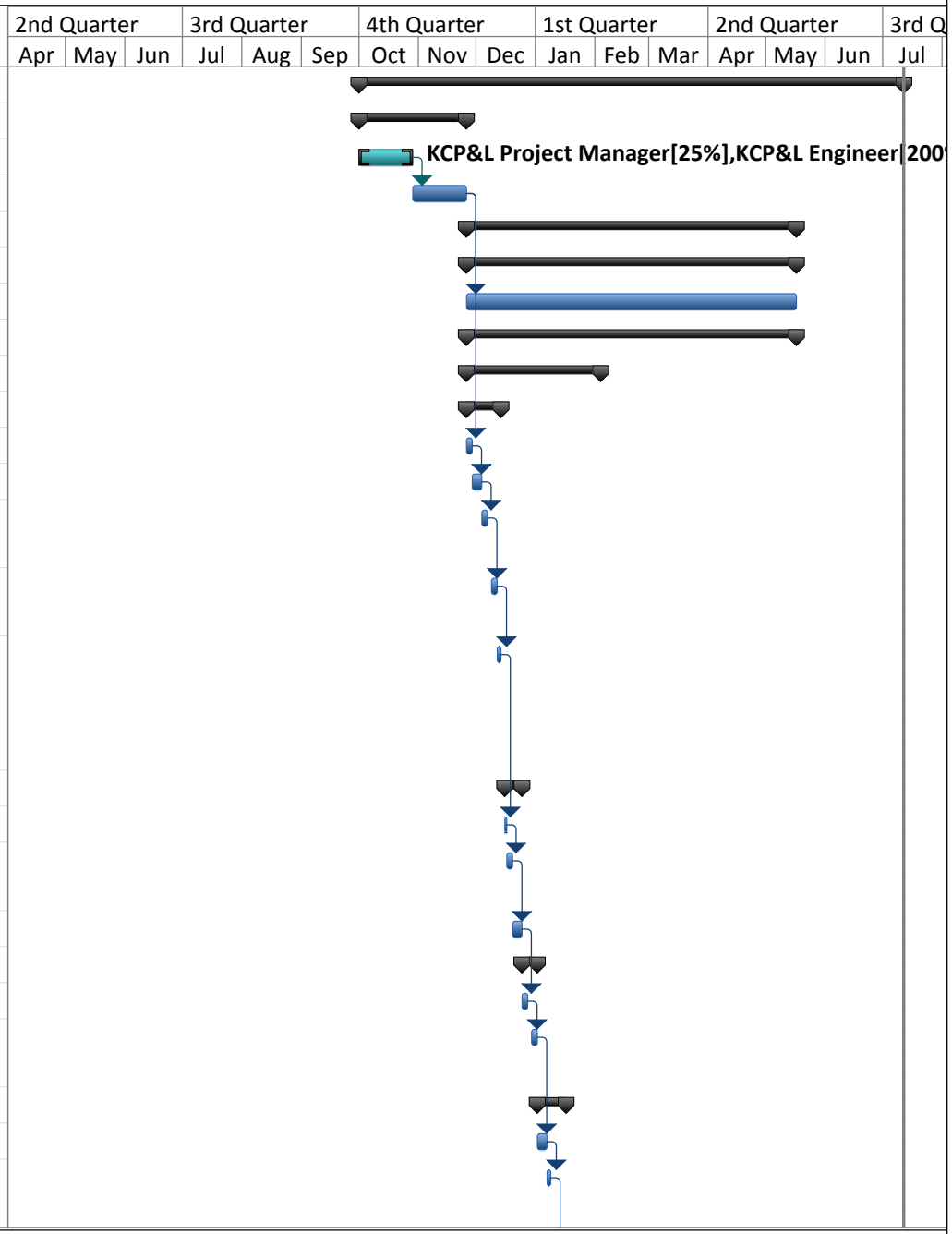
Crossroads Retirement

ID	Task Name	Cost
36	Secure the Maintenance Building	$9,342.40
37	**Fuel Gas System**	**$10,783.04**
38	Isolate Fuel Gas System	$3,907.44
39	Vent Fuel Gas Piping and Equipment	$2,528.16
40	Open and Vent Knock-Out Drum	$861.84
41	Drain, Open and Vent the Drain Tank	$861.84
42	Empty the Coalescing Filter	$1,761.92
43	Open and Vent Equipment on the CT Gas Valve Module	$861.84
44	**Lube Oil Cooling Water System**	**$7,756.56**
45	Open and Drain the Water Side of the Lube Oil Coolers	$5,171.04
46	Open and Vent the Coolers and Expansion Tank	$2,585.52
47	**Oily Drain Tank**	**$3,954.00**
48	Open and Pump Out the Oily Drain Tank	$3,954.00
49	**Wash Water Skid**	**$5,171.04**
50	Open and Drain the Detergent Tank	$1,723.68
51	Open and Drain the Demineralized Water Tank	$1,723.68
52	Empty the Demineralized Water Tank	$1,723.68
53	**Compressed Air**	**$3,447.36**
54	Empty Dessiccant Air Dryers and Vent	$1,723.68
55	Open and Vent the Air Reciever	$1,723.68
56	**Miscelleaneous Piping**	**$10,342.08**
57	Open and Vent the Exhaust Frame Cooling Piping	$3,447.36
58	Open and Vent the CT Air Processing Piping	$0.00
59	Open and Vent the Inlet Air Heating Piping	$3,447.36
60	Open and Vent the CT Air Processing Piping	$3,447.36
61	**Fire Protection Piping**	**$6,856.48**
62	Empty the CO2 Storage Tank	$5,132.80
63	Open and Vent the Fire Protection Piping	$1,723.68
64	**Lube Oil System**	**$11,587.04**
65	Empty and Remove from Site the Lubricating Oil	$6,416.00
66	Drain Lubricating Oil Piping	$3,447.36
67	Open and Vent Lubricating Oil Piping	$1,723.68
68	**Potable Water**	**$2,643.36**
69	Disconnect Potable Water at Property Boundary	$2,643.36
70	**Post Retirement Closure Activity**	**$45,152.00**
71	Post Retirement Closure Activity	$45,152.00

Redactions Removed Pursuant to Commission Order

Crossroads Retirement

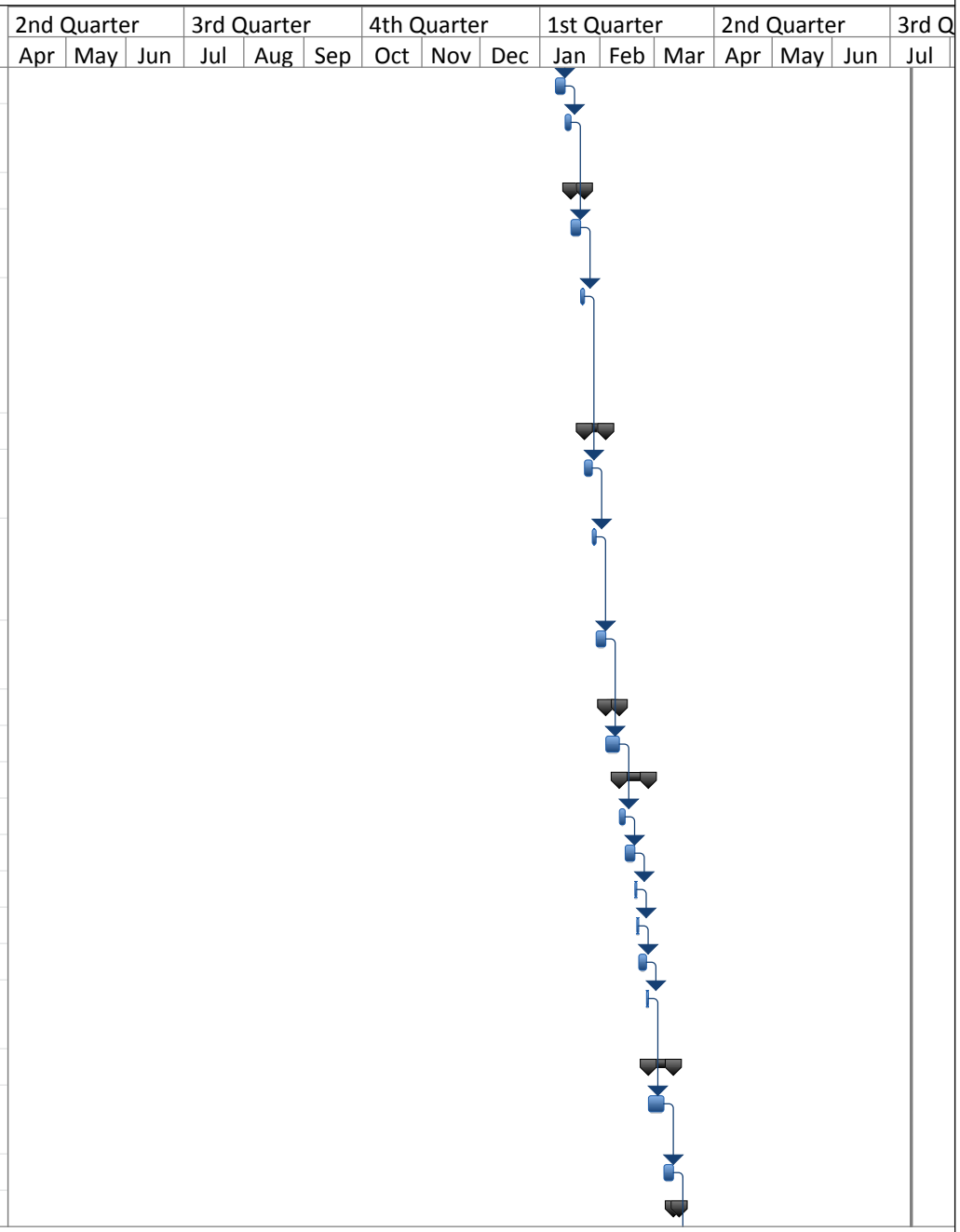
ID	Task Name	Duration
1	**Crossroads Retirement**	**204 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Retirement**	**124 days**
6	**Project Management During Retirement**	**124 days**
7	Project Management During Retirement	124 days
8	**Retirement Activities**	**124 days**
9	**Electrical**	**50 days**
10	**Medium and Low Voltage Drawout Switchge**	**14 days**
11	De-energize all buses at the source.	3 days
12	Open all circuit breakers.	3 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	3 days
14	Verify that the closing/tripping springs are discharged.	3 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each	2 days
16	**Motor Control Centers**	**7 days**
17	De-energize all buses at the source.	1 day
18	Open all circuit breakers and disconnect switches.	3 days
19	Remove all fuses in control circuits.	3 days
20	**Low-voltage Switchboards and Panelboards**	**6 days**
21	De-energize all buses at the source.	3 days
22	Open all circuit breakers and disconnect switches.	3 days
23	**Oil-Filled Power Transformers**	**11 days**
24	De-energize all buses at the source.	3 days
25	Open all circuit breakers and disconnect switches.	2 days



Redactions Removed Pursuant to Commission Order

Crossroads Retirement

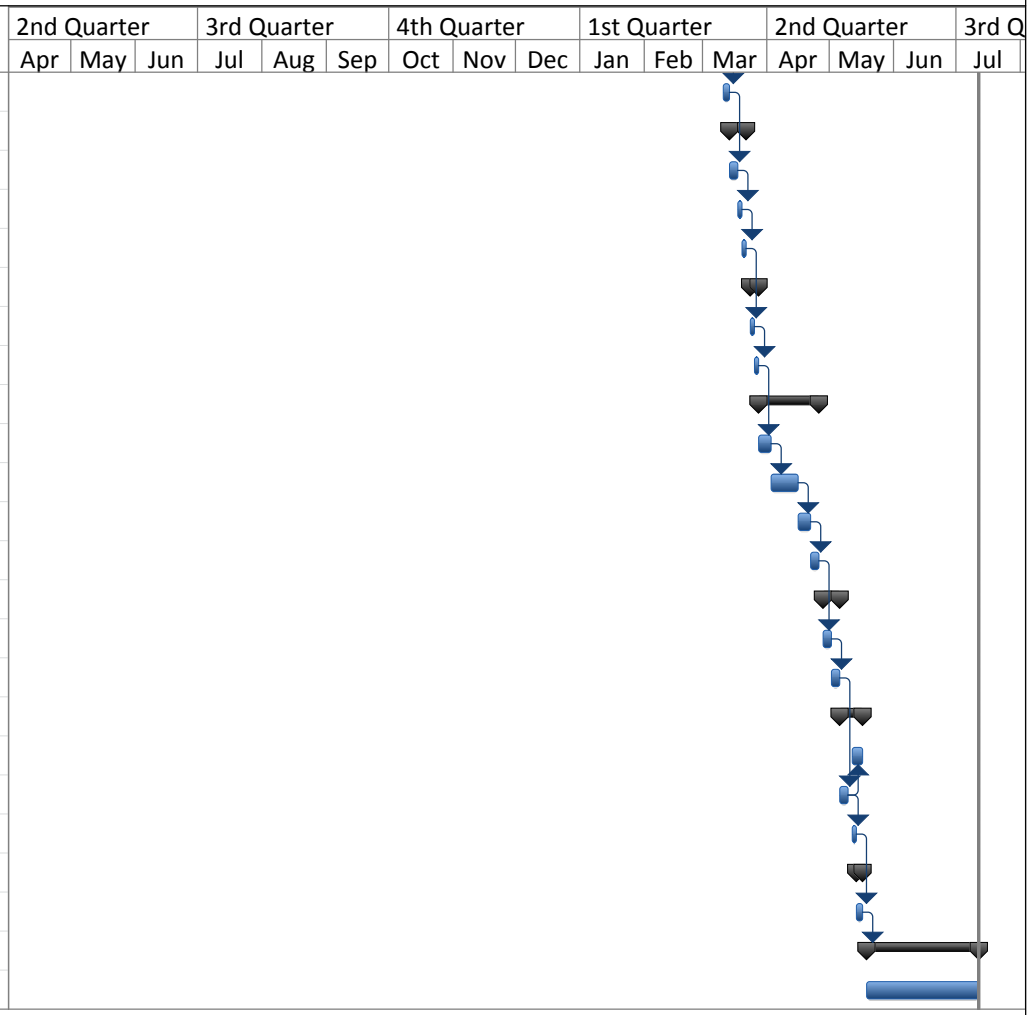
ID	Task Name	Duration
26	De-energize all buses at the source.	3 days
27	Open all circuit breakers and disconnect switches.	3 days
28	**Dry-type Power Transformers**	**5 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	3 days
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses	2 days
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	2 days
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
34	Drain lube oil system (if applicable) and dispose of oil.	3 days
35	**Maintenance Building**	**5 days**
36	Secure the Maintenance Building	5 days
37	**Fuel Gas System**	**11 days**
38	Isolate Fuel Gas System	3 days
39	Vent Fuel Gas Piping and Equipment	3 days
40	Open and Vent Knock-Out Drum	1 day
41	Drain, Open and Vent the Drain Tank	1 day
42	Empty the Coalescing Filter	2 days
43	Open and Vent Equipment on the CT Gas Valve Module	1 day
44	**Lube Oil Cooling Water System**	**9 days**
45	Open and Drain the Water Side of the Lube Oil Coolers	6 days
46	Open and Vent the Coolers and Expansion Ta	3 days
47	**Oily Drain Tank**	**3 days**



Redactions Removed Pursuant to Commission Order

Crossroads Retirement

ID	Task Name	Duration
48	Open and Pump Out the Oily Drain Tank	3 days
49	**Wash Water Skid**	**6 days**
50	Open and Drain the Detergent Tank	2 days
51	Open and Drain the Demineralized Water Tar	2 days
52	Empty the Demineralized Water Tank	2 days
53	**Compressed Air**	**4 days**
54	Empty Dessiccant Air Dryers and Vent	2 days
55	Open and Vent the Air Reciever	2 days
56	**Miscelleaneous Piping**	**21 days**
57	Open and Vent the Exhaust Frame Cooling Pi	4 days
58	Open and Vent the CT Air Processing Piping	9 days
59	Open and Vent the Inlet Air Heating Piping	4 days
60	Open and Vent the CT Air Processing Piping	4 days
61	**Fire Protection Piping**	**6 days**
62	Empty the CO2 Storage Tank	4 days
63	Open and Vent the Fire Protection Piping	2 days
64	**Lube Oil System**	**9 days**
65	Empty and Remove from Site the Lubricating	5 days
66	Drain Lubricating Oil Piping	4 days
67	Open and Vent Lubricating Oil Piping	2 days
68	**Potable Water**	**3 days**
69	Disconnect Potable Water at Property Bound	3 days
70	**Post Retirement Closure Activity**	**40 days**
71	Post Retirement Closure Activity	40 days



Redactions Removed Pursuant to Commission Order

Crossroads Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$887,360		
Overhead During Dismantlement			$1,551,849		
Post-Dismantlement Activities			$49,140		
Owner Costs Total*				$2,488,349	
Demolition General Contractor (DGC) Costs					
Site Management			$845,925		
Equipment Rental			$1,440,377		
Consummables			$1,437,034		
Scrap Crew(s)			$378,322		
Dismantlement			$982,145		
Contractor Direct Cost*		$5,083,803			
Contractor Allowances					
DGC Insurance	2.00%		$101,676		
Contingency/Profit	15.00%		$777,822		
Performance Bond	2.00%		$119,266.02		
Contractor Costs Total:				$6,082,567	
Total:					$8,570,916
Owner Internal Costs:	5.00%				$428,546
Owner Contingency:	25.00%				$2,249,865
Crossroads Dismantlement Opinion of Probable Cost:					$11,249,327

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $7,572,152

Crossroads Dismantlement

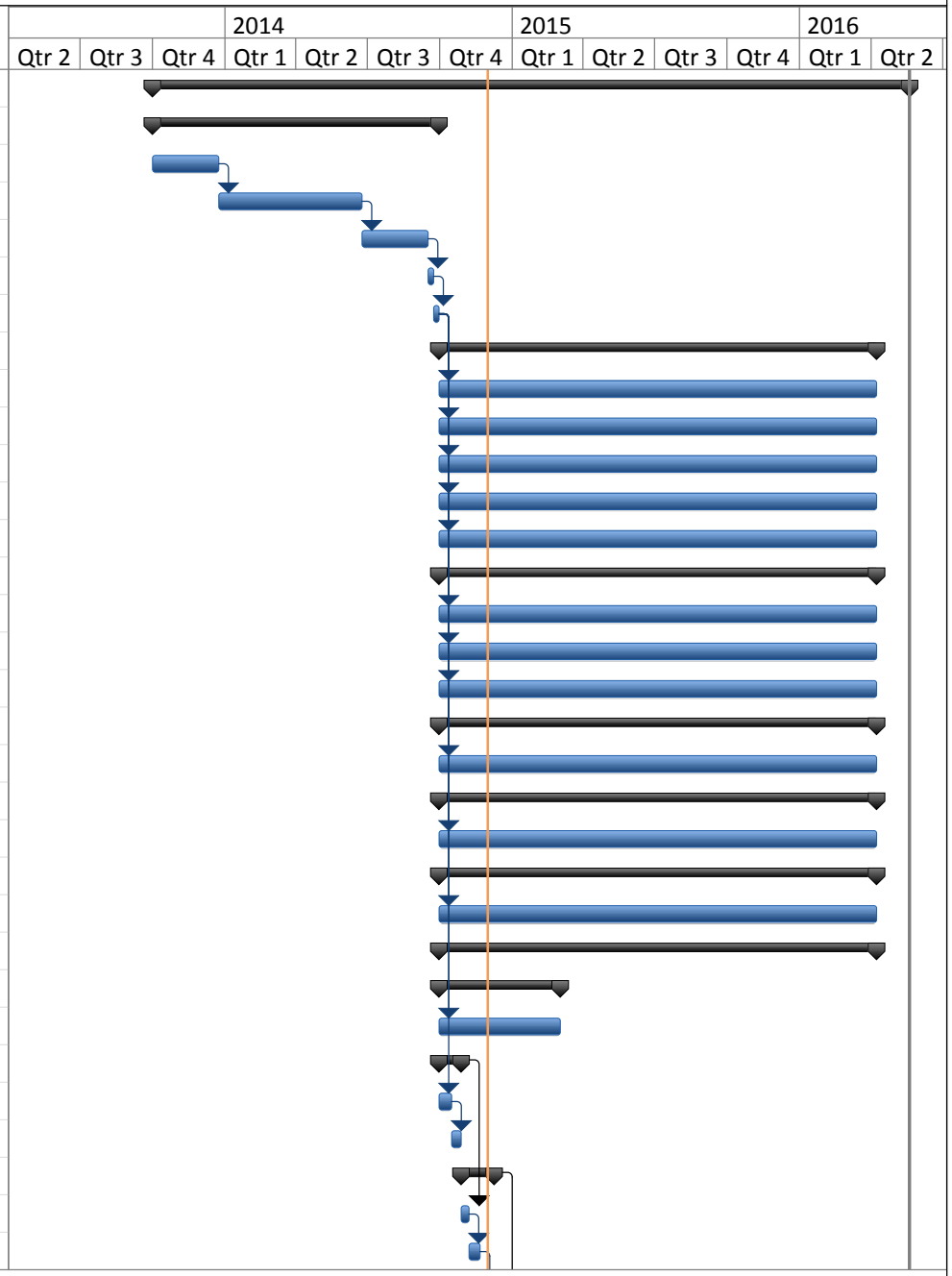
ID	Task Name	Cost
1	**Crossroads Dismantlement**	**$7,572,156.16**
2	**Pre-Demolition Activities**	**$887,360.52**
3	Detailed Planning & Hire Owner's Engineer	$104,441.28
4	Detailed Site Characterization Study	$610,335.44
5	Hire Demolition general Contractor	$167,184.00
6	KCP&L Prepares Unit for Dismantlement	$5,399.80
7	Demolition Contractor Mobilizes on Site	$0.00
8	**KCP&L Overhead during Dismantlement**	**$1,551,849.76**
9	KCP&L Project Manager	$246,600.80
10	KCP&L Administrative Support	$91,189.76
11	KCP&L Engineer	$405,323.20
12	Owners Engineer Project Manager	$120,992.00
13	Owners Engineer - Engineer	$687,744.00
14	**Demolition Contractor Overhead during Dismantlement**	**$845,925.12**
15	Demolition Contractor Project Manager	$239,341.28
16	Demolition Contractor Safety Manager	$213,105.12
17	Demolition Contractor Superintendent	$393,478.72
18	**Demolition Contractor Equipment Rental Cost**	**$1,440,377.92**
19	Equipment Rental	$1,440,377.92
20	**Demolition Contractor Consumables**	**$1,437,034.72**
21	Consumables	$1,437,034.72
22	**Scrap Crews**	**$378,322.88**
23	Crew to Handle Scrap Material(s)	$378,322.88
24	**Dismantlement**	**$982,145.24**
25	**Electrical**	**$197,049.60**
26	Electrical Demolition of Equipment	$197,049.60
27	**Fuel Gas System**	**$21,113.20**
28	Remove all above grade fuel gas piping.	$6,782.32
29	Gas Filter Skid	$14,330.88
30	**Lube Oil System**	**$53,740.80**
31	Lube Oil Piping	$14,330.88
32	Lube Oil Pumps	$17,913.60
33	Lube Oil Tanks	$21,496.32
34	**Compressed Air System**	**$21,496.32**
35	Compressed Air Piping	$10,748.16
36	Compressors	$5,374.08
37	Air Receiver	$3,582.72
38	Dryer	$1,791.36
39	**Fire Protection**	**$26,870.40**
40	Fire Protection Piping	$19,704.96
41	CO2 Storage Tank	$7,165.44
42	**Wash Water Skid**	**$10,748.16**
43	Detergent Tank	$10,748.16
44	**Miscellaneous Piping**	**$62,697.60**

Crossroads Dismantlement

ID	Task Name	Cost
45	Exhaust Frame Cooling Piping	$17,913.60
46	CT Air Processing Piping	$21,496.32
47	Inlet Air Heating Piping	$23,287.68
48	**Generator**	**$0.00**
49	Generators	$0.00
50	**Combustion Turbine**	**$263,329.92**
51	Inlet Heaters	$17,913.60
52	Inlet ducts	$26,870.40
53	Exhaust ducts	$35,827.20
54	Combustion Turbines	$62,697.60
55	Combustion Turbine Foundations	$66,280.32
56	Enclosures	$53,740.80
57	**CEMS**	**$42,992.64**
58	CEMS Building	$21,496.32
59	CEMS Building Foundation	$21,496.32
60	**Stack**	**$80,611.20**
61	Stacks	$80,611.20
62	**Buildings**	**$17,913.60**
63	Remove Maintenance Building	$17,913.60
64	**Waste Water Tank**	**$8,956.80**
65	Remove Waste Water Tank	$8,956.80
66	**Site Prep**	**$174,625.00**
67	Final Grading and Drainage	$174,625.00
68	**Post Dismantlement Activities**	**$49,140.00**
69	Post Dismantlement Activities	$49,140.00

Crossroads Dismantlement

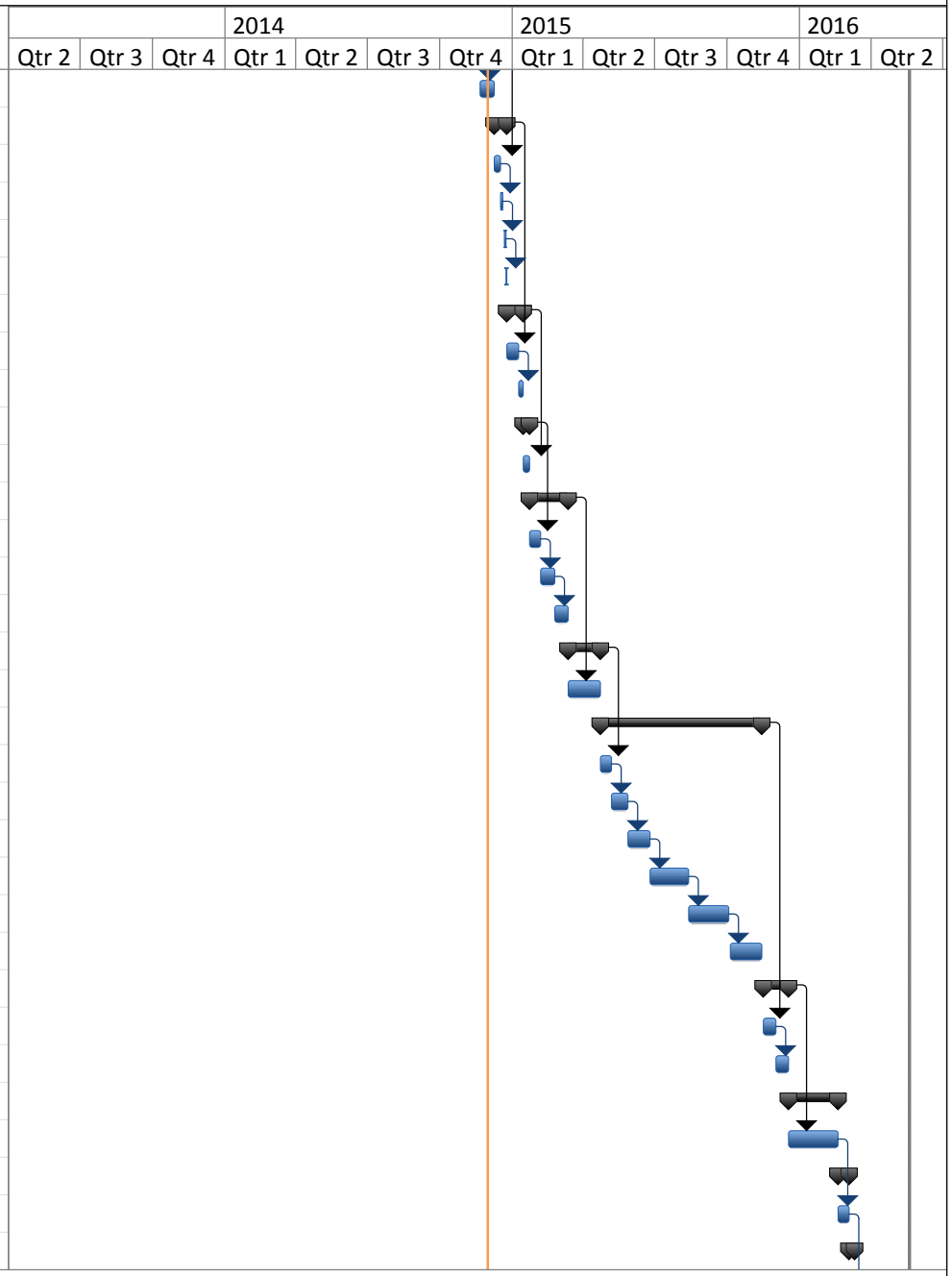
ID	Task Name	Duration
1	**Crossroads Dismantlement**	**688 days**
2	**Pre-Demolition Activities**	**260 days**
3	Detailed Planning & Hire Owner's Engineer	3 mons
4	Detailed Site Characterization Study	130 days
5	Hire Demolition general Contractor	3 mons
6	KCP&L Prepares Unit for Dismantlement	1 wk
7	Demolition Contractor Mobilizes on Site	5 days
8	**KCP&L Overhead during Dismantlement**	**398 days**
9	KCP&L Project Manager	398 days
10	KCP&L Administrative Support	398 days
11	KCP&L Engineer	398 days
12	Owners Engineer Project Manager	398 days
13	Owners Engineer - Engineer	398 days
14	**Demolition Contractor Overhead during Dismantlemen**	**398 days**
15	Demolition Contractor Project Manager	398 days
16	Demolition Contractor Safety Manager	398 days
17	Demolition Contractor Superintendent	398 days
18	**Demolition Contractor Equipment Rental Cost**	**398 days**
19	Equipment Rental	398 days
20	**Demolition Contractor Consumables**	**398 days**
21	Consumables	398 days
22	**Scrap Crews**	**398 days**
23	Crew to Handle Scrap Material(s)	398 days
24	**Dismantlement**	**398 days**
25	**Electrical**	**110 days**
26	Electrical Demolition of Equipment	110 days
27	**Fuel Gas System**	**20 days**
28	Remove all above grade fuel gas piping.	12 days
29	Gas Filter Skid	8 days
30	**Lube Oil System**	**30 days**
31	Lube Oil Piping	8 days
32	Lube Oil Pumps	10 days



Redactions Removed Pursuant to Commission Order

Crossroads Dismantlement

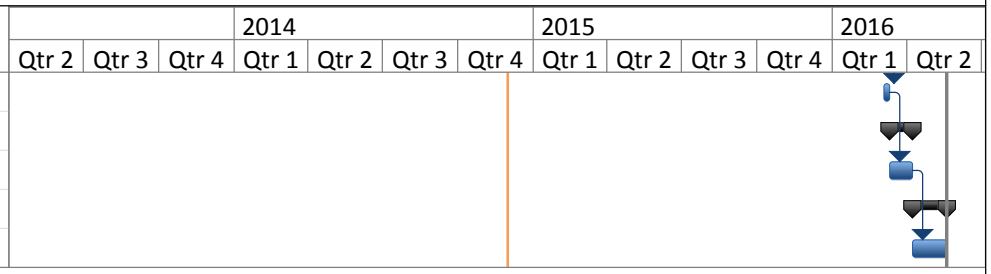
ID	Task Name	Duration
33	Lube Oil Tanks	12 days
34	**Compressed Air System**	**12 days**
35	Compressed Air Piping	6 days
36	Compressors	3 days
37	Air Receiver	2 days
38	Dryer	1 day
39	**Fire Protection**	**15 days**
40	Fire Protection Piping	11 days
41	CO2 Storage Tank	4 days
42	**Wash Water Skid**	**6 days**
43	Detergent Tank	6 days
44	**Miscellaneous Piping**	**35 days**
45	Exhaust Frame Cooling Piping	10 days
46	CT Air Processing Piping	12 days
47	Inlet Air Heating Piping	13 days
48	**Generator**	**29 days**
49	Generators	29 days
50	**Combustion Turbine**	**147 days**
51	Inlet Heaters	10 days
52	Inlet ducts	15 days
53	Exhaust ducts	20 days
54	Combustion Turbines	35 days
55	Combustion Turbine Foundations	37 days
56	Enclosures	30 days
57	**CEMS**	**24 days**
58	CEMS Building	12 days
59	CEMS Building Foundation	12 days
60	**Stack**	**45 days**
61	Stacks	45 days
62	**Buildings**	**10 days**
63	Remove Maintenance Building	10 days
64	**Waste Water Tank**	**5 days**



Redactions Removed Pursuant to Commission Order

Crossroads Dismantlement

ID	Task Name	Duration
65	Remove Waste Water Tank	5 days
66	**Site Prep**	**20 days**
67	Final Grading and Drainage	20 days
68	**Post Dismantlement Activities**	**30 days**
69	Post Dismantlement Activities	30 days



Redactions Removed Pursuant to Commission Order

KCI

Redactions Removed Pursuant to Commission Order

KCI STATION

The KCI Generating Station consists of two natural gas-fired combustion turbine generator sets.

Combined, these combustion turbines have an SPP-accredited unit rating of 0 MW. KCI was placed into service in 1971. Each unit is comprised of a Pratt & Whitney GG4A-7 combustion turbine with a generator step-up transformer and auxiliary power transformer.

The following are the major systems and equipment that were included in the retirement and dismantlement of the KCI Generating Station.

1. Combustion turbine generator sets and auxiliaries.
2. Generation step-up and auxiliary transformers.
3. Outdoor switchgear.
4. Exhaust stacks.
5. Control Room/Maintenance building.
6. Gas compressor building and equipment.
7. Black-start generator.
8. Service/Instrument air compressors.
9. Glycol cooling towers.
10. Fire protection systems.

KCI Retirement

Owner Costs				
Pre-Retirement Activities		$43,834		
Retirement Activities		$112,691		
Post-Retirement Activities		$16,932		
Owner Direct Total			$173,457	
Owner Internal Costs	5.00%		$8,673	
Owner Contingency:	25.00%		$45,532	
KCI Retirement Opinion of Probable Cost:				$227,662.31

KCI Retirement

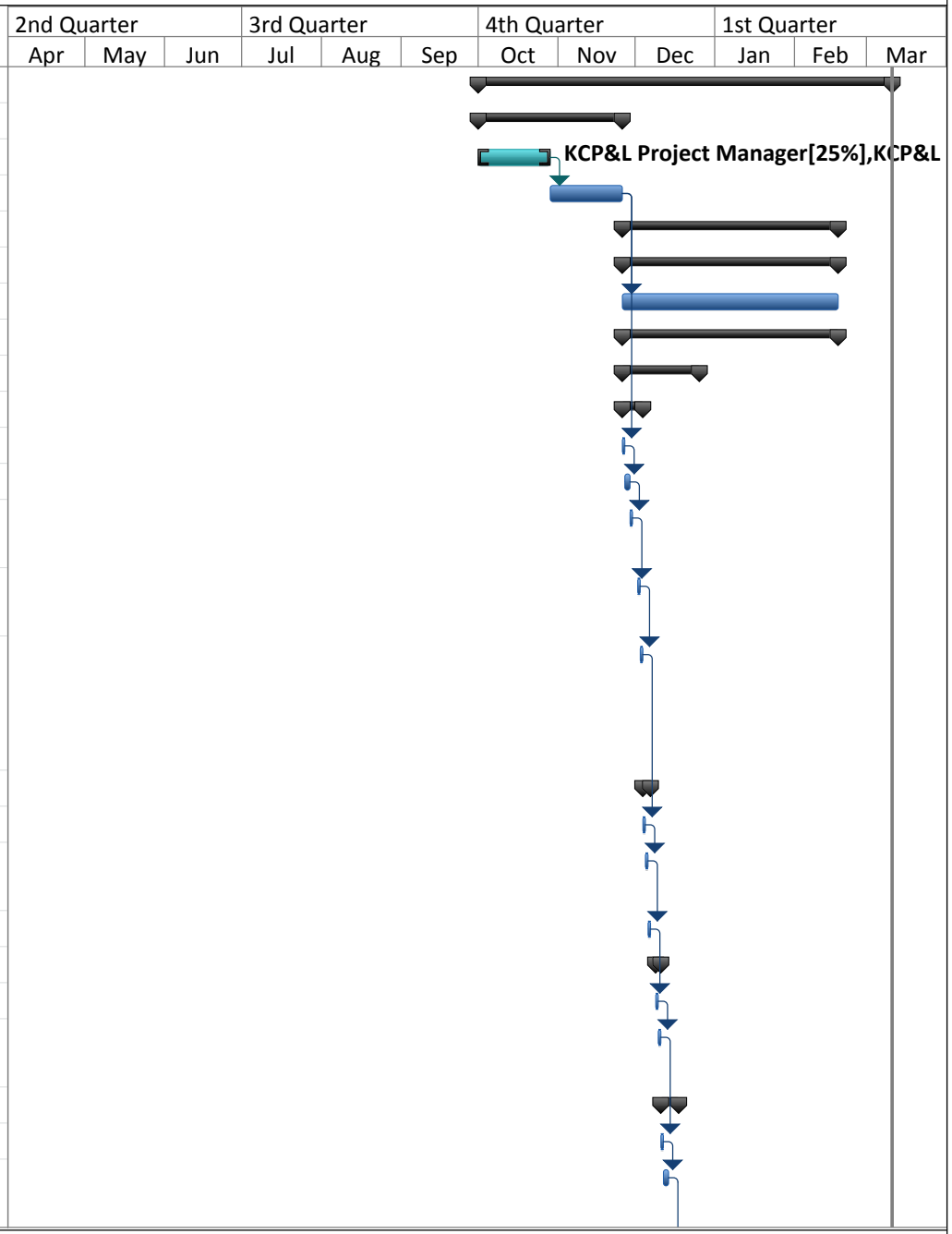
ID	Task Name	Cost
1	**KCI Retirement**	**$173,457.84**
2	**Pre-Retirement Activities**	**$43,834.00**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Retirement**	**$112,691.84**
6	**Project Management During Retirement**	**$48,121.20**
7	Project Management During Retirement	$48,121.20
8	**Retirement Activities**	**$64,570.64**
9	**Electrical**	**$19,652.16**
10	**Medium and Low Voltage Drawout Switchgear**	**$5,359.68**
11	De-energize all buses at the source.	$893.28
12	Open all circuit breakers.	$1,786.56
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$893.28
14	Verify that the closing/tripping springs are discharged.	$893.28
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$2,679.84**
17	De-energize all buses at the source.	$893.28
18	Open all circuit breakers and disconnect switches.	$893.28
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$1,786.56**
21	De-energize all buses at the source.	$893.28
22	Open all circuit breakers and disconnect switches.	$893.28
23	**Oil-Filled Power Transformers**	**$4,466.40**
24	De-energize all buses at the source.	$893.28
25	Open all circuit breakers and disconnect switches.	$1,786.56
26	De-energize all buses at the source.	$893.28
27	Open all circuit breakers and disconnect switches.	$893.28
28	**Dry-type Power Transformers**	**$1,786.56**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
31	**Motors**	**$3,573.12**
32	De-energize all primary power at the source.	$893.28
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$893.28
34	Drain lube oil system (if applicable) and dispose of oil.	$1,786.56
35	**Enclosure Building**	**$3,736.96**

KCI Retirement

ID	Task Name	Cost
36	Secure the Enclosure Building	$3,736.96
37	**Gas Compressor Building**	**$1,868.48**
38	Secure the Gas Compressor Building	$1,868.48
39	**Shop Building**	**$3,736.96**
40	Secure the Shop Building	$3,736.96
41	**Cooling Towers**	**$5,209.92**
42	Drain Cooling Tower	$3,907.44
43	Drain Cooling Tower Chemical Storage Tanks	$1,302.48
44	**Fuel Gas System**	**$5,612.00**
45	Isolate Fuel Gas System	$3,907.44
46	Vent Fuel Gas Piping and Equipment	$842.72
47	Open and Vent Equipment on the CT Gas Valve Module	$861.84
48	**Lube Oil Cooling Water System**	**$2,585.52**
49	Open and Drain the Glycol Side of the Lube Oil Coolers	$1,723.68
50	Open and Vent the Coolers and Expansion Tank	$861.84
51	**Sump**	**$3,954.00**
52	Open and Pump Out the Sump	$3,954.00
53	**Miscelleaneous Piping**	**$2,585.52**
54	Open and Vent Miscellaneous Piping	$2,585.52
55	**Fire Protection Piping**	**$3,428.24**
56	Empty the CO2 Storage Tank	$2,566.40
57	Open and Vent the Fire Protection Piping	$861.84
58	**Lube Oil System**	**$5,151.92**
59	Empty and Remove from Site the Lubricating Oil	$2,566.40
60	Drain Lubricating Oil Piping	$1,723.68
61	Open and Vent Lubricating Oil Piping	$861.84
62	**Service Piping**	**$5,286.72**
63	Disconnect Potable Water at Property Boundary	$2,643.36
64	Disconnect Compressed Air at Property Boundary	$2,643.36
65	**Black Start Engine**	**$1,762.24**
66	Vent Fuel Gas Piping to Black Start Enginer	$881.12
67	**Post Retirement Closure Activity**	**$16,932.00**
68	Post Retirement Closure Activity	$16,932.00

KCI Retirement

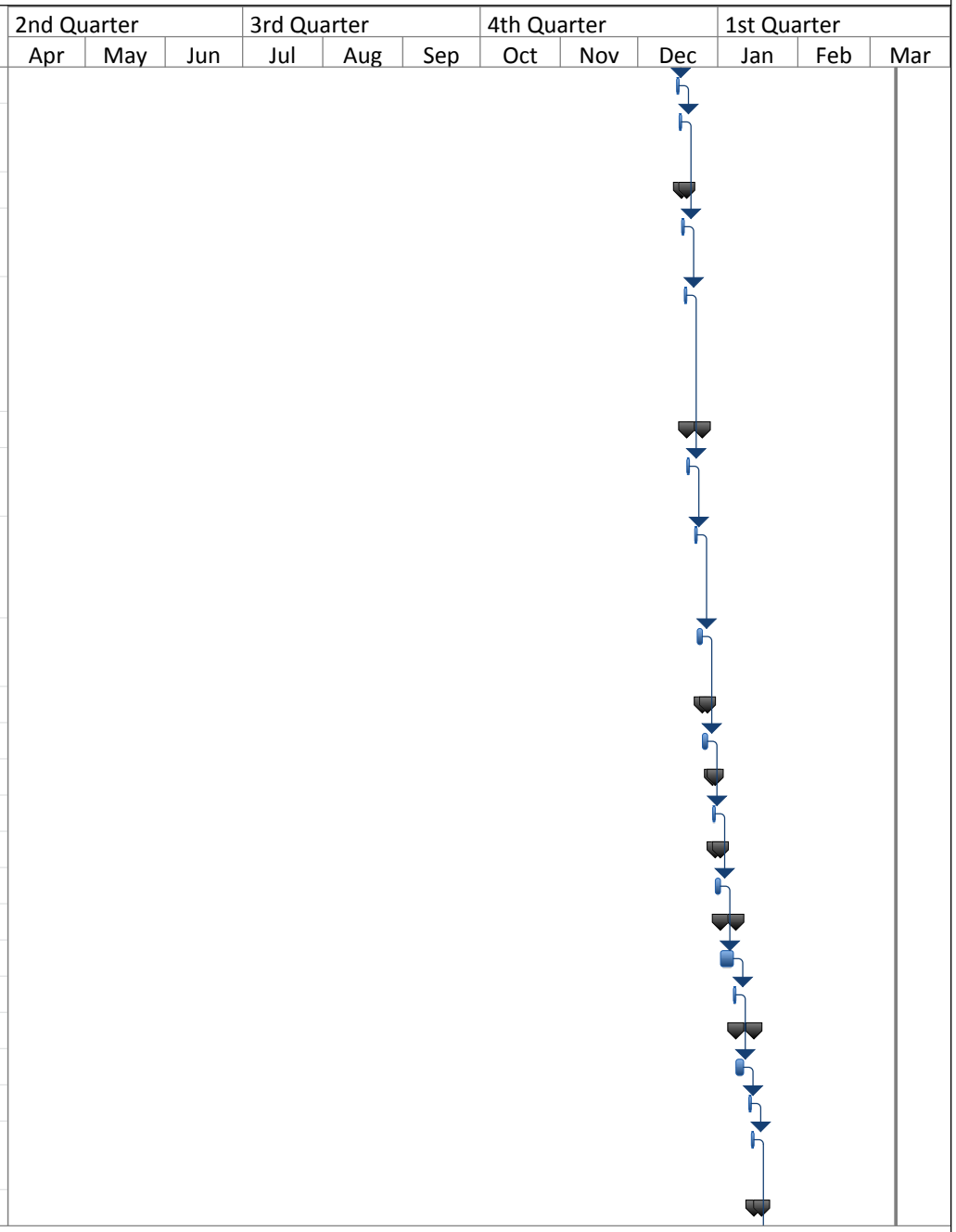
ID	Task Name	Duration
1	**KCI Retirement**	**115 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Retirement**	**60 days**
6	**Project Management During Retirement**	**60 days**
7	Project Management During Retirement	60 days
8	**Retirement Activities**	**60 days**
9	**Electrical**	**22 days**
10	**Medium and Low Voltage Drawout Switchge**	**6 days**
11	De-energize all buses at the source.	1 day
12	Open all circuit breakers.	2 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	1 day
14	Verify that the closing/tripping springs are discharged.	1 day
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each	1 day
16	**Motor Control Centers**	**3 days**
17	De-energize all buses at the source.	1 day
18	Open all circuit breakers and disconnect switches.	1 day
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**2 days**
21	De-energize all buses at the source.	1 day
22	Open all circuit breakers and disconnect switches.	1 day
23	**Oil-Filled Power Transformers**	**5 days**
24	De-energize all buses at the source.	1 day
25	Open all circuit breakers and disconnect switches.	2 days



Redactions Removed Pursuant to Commission Order

KCI Retirement

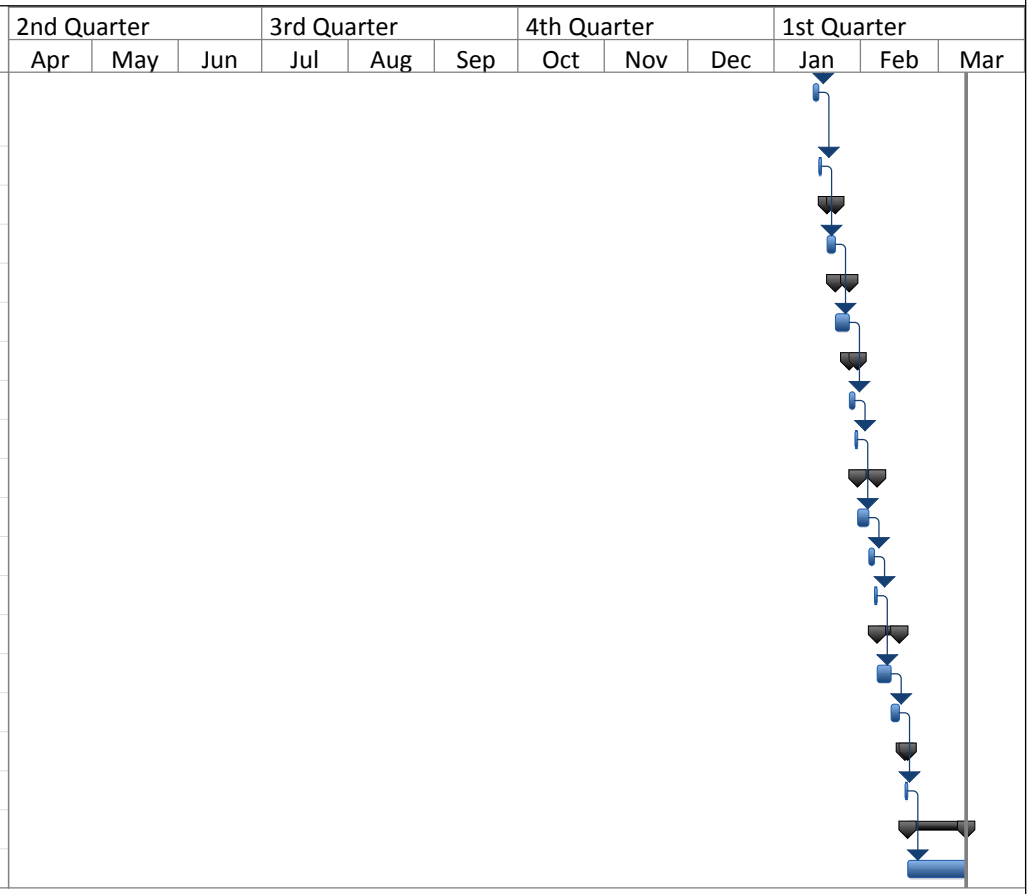
ID	Task Name	Duration
26	De-energize all buses at the source.	1 day
27	Open all circuit breakers and disconnect switches.	1 day
28	**Dry-type Power Transformers**	**2 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses	1 day
31	**Motors**	**4 days**
32	De-energize all primary power at the source.	1 day
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	1 day
34	Drain lube oil system (if applicable) and dispose of oil.	2 days
35	**Enclosure Building**	**2 days**
36	Secure the Enclosure Building	2 days
37	**Gas Compressor Building**	**1 day**
38	Secure the Gas Compressor Building	1 day
39	**Shop Building**	**2 days**
40	Secure the Shop Building	2 days
41	**Cooling Towers**	**4 days**
42	Drain Cooling Tower	3 days
43	Drain Cooling Tower Chemical Storage Tanks	1 day
44	**Fuel Gas System**	**5 days**
45	Isolate Fuel Gas System	3 days
46	Vent Fuel Gas Piping and Equipment	1 day
47	Open and Vent Equipment on the CT Gas Valve Module	1 day
48	**Lube Oil Cooling Water System**	**3 days**



Redactions Removed Pursuant to Commission Order

KCI Retirement

ID	Task Name	Duration
49	Open and Drain the Glycol Side of the Lube Oil Coolers	2 days
50	Open and Vent the Coolers and Expansion Tai	1 day
51	**Sump**	**3 days**
52	Open and Pump Out the Sump	3 days
53	**Miscelleaneous Piping**	**3 days**
54	Open and Vent Miscellaneous Piping	3 days
55	**Fire Protection Piping**	**3 days**
56	Empty the CO2 Storage Tank	2 days
57	Open and Vent the Fire Protection Piping	1 day
58	**Lube Oil System**	**5 days**
59	Empty and Remove from Site the Lubricating	2 days
60	Drain Lubricating Oil Piping	2 days
61	Open and Vent Lubricating Oil Piping	1 day
62	**Service Piping**	**6 days**
63	Disconnect Potable Water at Property Bound	3 days
64	Disconnect Compressed Air at Property Boun	3 days
65	**Black Start Engine**	**1 day**
66	Vent Fuel Gas Piping to Black Start Enginer	1 day
67	**Post Retirement Closure Activity**	**15 days**
68	Post Retirement Closure Activity	15 days



Redactions Removed Pursuant to Commission Order

KCI Dismantlement

Owner Costs					
	Pre-Dismantlement Activities			$473,576	
	Overhead During Dismantlement			$279,378	
	Post-Dismantlement Activities			$32,760	
	Owner Costs Total*				$785,714
Demolition General Contractor (DGC) Costs					
	Site Management			$176,411	
	Equipment Rental			$300,380	
	Consummables			$299,683	
	Scrap Crew(s)			$78,896	
	Dismantlement			$263,996	
	Contractor Direct Cost*		$1,119,366		
	Contractor Allowances				
	DGC Insurance	2.00%		$22,387	
	Contingency/Profit	15.00%		$171,263	
	Performance Bond	2.00%		$26,260.33	
	Contractor Costs Total:				$1,339,277

Total:		$2,124,991
Owner Internal Costs:	5.00%	$106,250
Owner Contingency:	25.00%	$557,810
KCI Dismantlement Opinion of Probable Cost:		$2,789,050

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,905,080

KCI Dismantlement

ID	Task Name	Cost
1	**KCI Dismantlement**	**$1,905,082.52**
2	**Pre-Demolition Activities**	**$473,576.40**
3	Detailed Planning & Hire Owner's Engineer	$69,627.52
4	Detailed Site Characterization Study	$281,693.28
5	Hire Demolition general Contractor	$111,456.00
6	KCP&L Prepares Unit for Dismantlement	$10,799.60
7	Demolition Contractor Mobilizes on Site	$0.00
8	**KCP&L Overhead during Dismantlement**	**$279,378.00**
9	KCP&L Project Manager	$51,426.80
10	KCP&L Engineer	$84,527.20
11	Owners Engineer - Engineer	$143,424.00
12	**Demolition Contractor Overhead during Dismantlement**	**$176,411.52**
13	Demolition Contractor Project Manager	$49,912.88
14	Demolition Contractor Safety Manager	$44,441.52
15	Demolition Contractor Superintendent	$82,057.12
16	**Demolition Contractor Equipment Rental Cost**	**$300,380.32**
17	Equipment Rental	$300,380.32
18	**Demolition Contractor Consumables**	**$299,683.12**
19	Consumables	$299,683.12
20	**Scrap Crews**	**$78,896.48**
21	Crew to Handle Scrap Material(s)	$78,896.48
22	**Dismantlement**	**$263,996.68**
23	**Electrical**	**$53,740.80**
24	Electrical Demolition of Equipment	$53,740.80
25	**Shop Building**	**$7,165.44**
26	Remove the Shop Building	$7,165.44
27	**Fuel Gas System**	**$10,437.52**
28	Remove all above grade fuel gas piping.	$1,480.72
29	Remove Gas Compressor Equipment	$5,374.08
30	Remove Gas Compressor Building	$3,582.72
31	**Lube Oil System**	**$10,748.16**
32	Lube Oil Piping	$1,791.36
33	Lube Oil Pumps	$3,582.72
34	Lube Oil Tanks	$5,374.08
35	**Compressed Air System**	**$1,791.36**
36	Remove Above Ground Compressed Air Piping	$1,791.36
37	**Fire Protection**	**$10,748.16**
38	Fire Protection Piping	$3,582.72
39	CO2 Storage Tank	$7,165.44
40	**Miscellaneous Piping**	**$10,748.16**
41	Remove Miscellaneous Piping	$8,956.80
42	Remove Above Ground Service Water Piping	$1,791.36
43	**Generator**	**$17,913.60**
44	Generators	$17,913.60

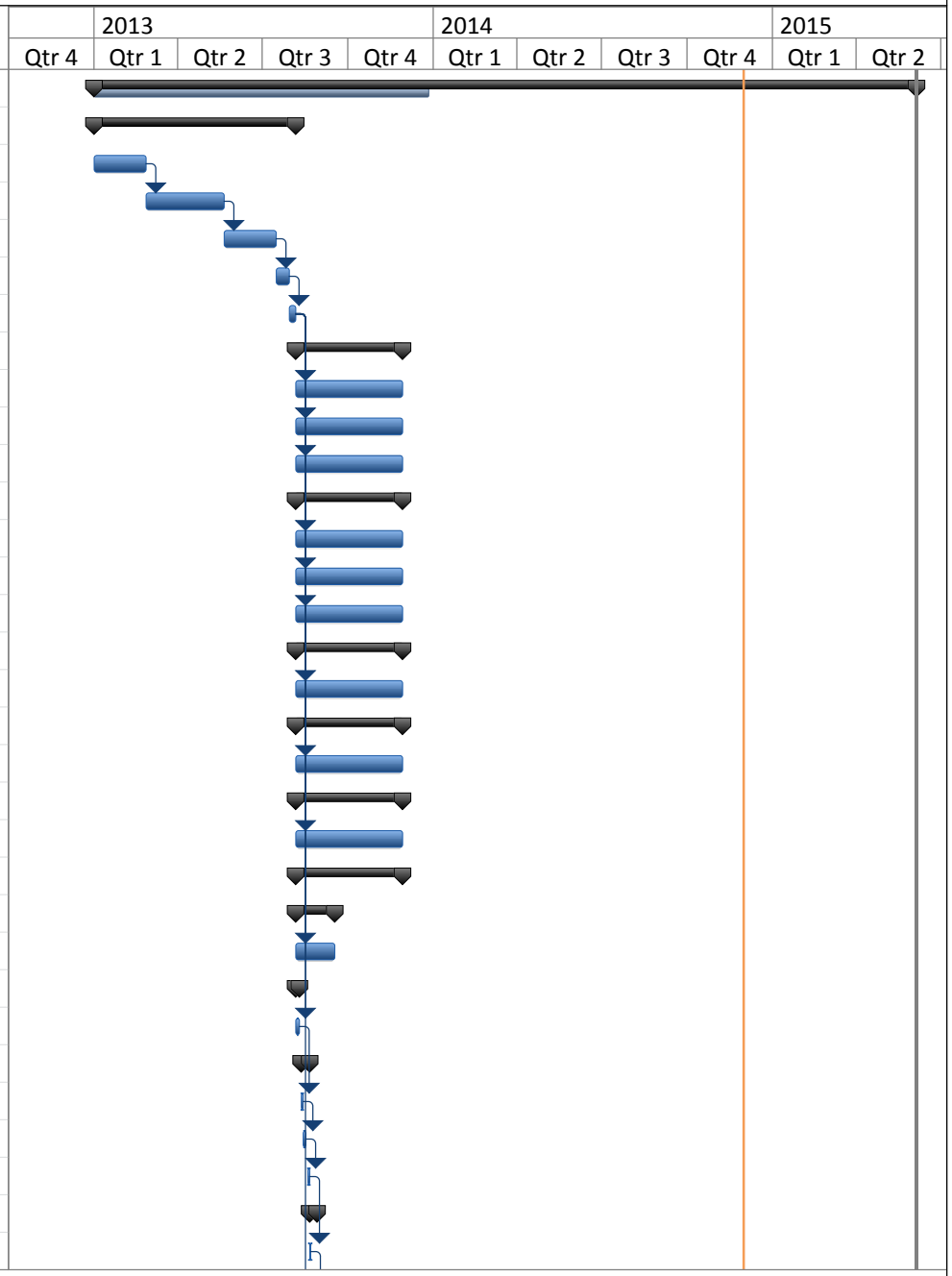
Redactions Removed Pursuant to Commission Order

KCI Dismantlement

ID	Task Name	Cost
45	**Combustion Turbine**	**$62,697.60**
46	Inlet ducts	$7,165.44
47	Exhaust ducts	$7,165.44
48	Combustion Turbines	$17,913.60
49	Combustion Turbine Foundation	$21,496.32
50	Combustion Turbine Enclosure Building	$8,956.80
51	**Cooling Towers**	**$10,748.16**
52	Remove Cooling Towers	$10,748.16
53	**Stack**	**$3,582.72**
54	Stacks	$3,582.72
55	**Site Prep**	**$63,675.00**
56	Final Grading and Drainage	$63,675.00
57	**Post Dismantlement Activities**	**$32,760.00**
58	Post Dismantlement Activities	$32,760.00

KCI Dismantlement

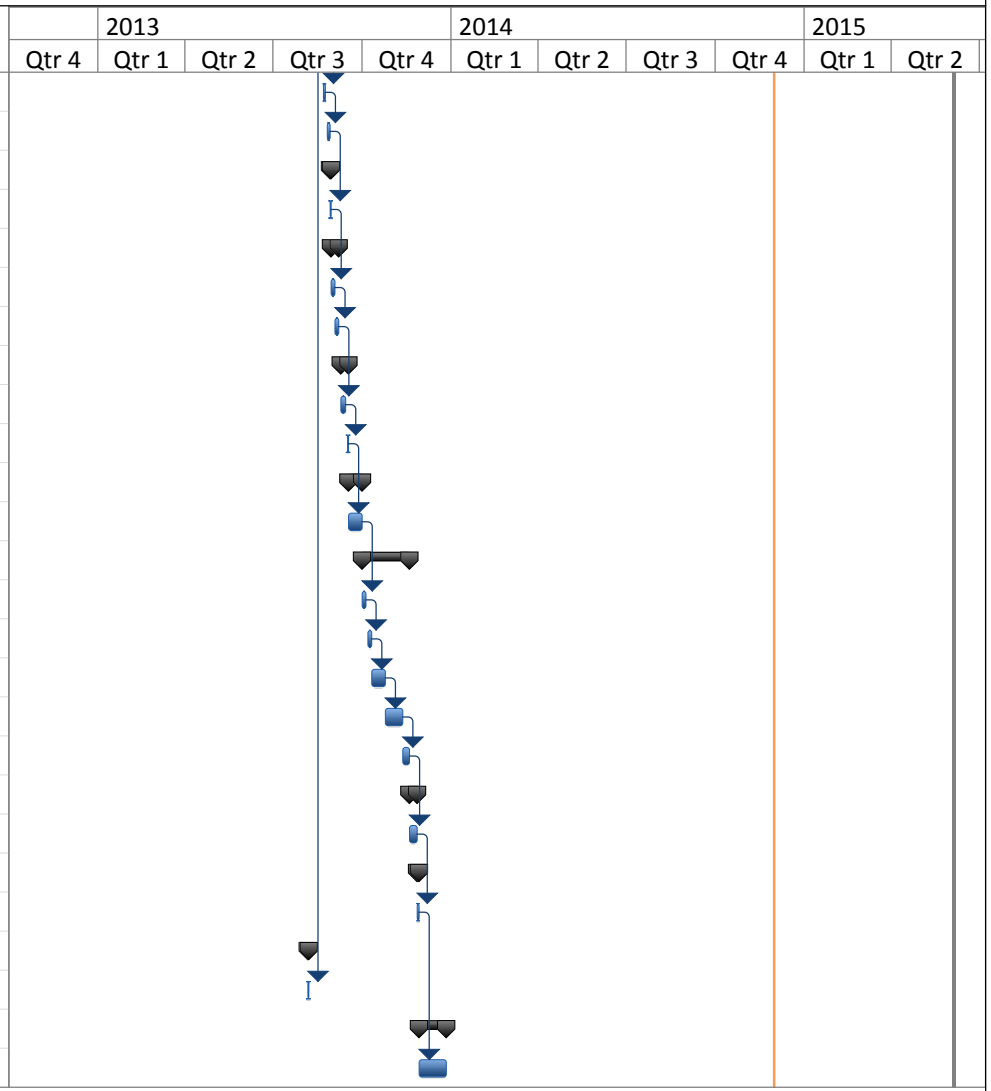
ID	Task Name	Duration
1	**KCI Dismantlement**	**633 days**
2	**Pre-Demolition Activities**	**155 days**
3	Detailed Planning & Hire Owner's Engineer	2 mons
4	Detailed Site Characterization Study	60 days
5	Hire Demolition general Contractor	2 mons
6	KCP&L Prepares Unit for Dismantlement	2 wks
7	Demolition Contractor Mobilizes on Site	5 days
8	**KCP&L Overhead during Dismantlement**	**83 days**
9	KCP&L Project Manager	83 days
10	KCP&L Engineer	83 days
11	Owners Engineer - Engineer	83 days
12	**Demolition Contractor Overhead during Dismantlemen**	**83 days**
13	Demolition Contractor Project Manager	83 days
14	Demolition Contractor Safety Manager	83 days
15	Demolition Contractor Superintendent	83 days
16	**Demolition Contractor Equipment Rental Cost**	**83 days**
17	Equipment Rental	83 days
18	**Demolition Contractor Consumables**	**83 days**
19	Consumables	83 days
20	**Scrap Crews**	**83 days**
21	Crew to Handle Scrap Material(s)	83 days
22	**Dismantlement**	**83 days**
23	**Electrical**	**30 days**
24	Electrical Demolition of Equipment	30 days
25	**Shop Building**	**4 days**
26	Remove the Shop Building	4 days
27	**Fuel Gas System**	**7 days**
28	Remove all above grade fuel gas piping.	2 days
29	Remove Gas Compressor Equipment	3 days
30	Remove Gas Compressor Building	2 days
31	**Lube Oil System**	**6 days**
32	Lube Oil Piping	1 day



Redactions Removed Pursuant to Commission Order

KCI Dismantlement

ID	Task Name	Duration
33	Lube Oil Pumps	2 days
34	Lube Oil Tanks	3 days
35	**Compressed Air System**	**1 day**
36	Remove Above Ground Compressed Air Piping	1 day
37	**Fire Protection**	**6 days**
38	Fire Protection Piping	2 days
39	CO2 Storage Tank	4 days
40	**Miscellaneous Piping**	**6 days**
41	Remove Miscellaneous Piping	5 days
42	Remove Above Ground Service Water Piping	1 day
43	**Generator**	**10 days**
44	Generators	10 days
45	**Combustion Turbine**	**35 days**
46	Inlet ducts	4 days
47	Exhaust ducts	4 days
48	Combustion Turbines	10 days
49	Combustion Turbine Foundation	12 days
50	Combustion Turbine Enclosure Building	5 days
51	**Cooling Towers**	**6 days**
52	Remove Cooling Towers	6 days
53	**Stack**	**2 days**
54	Stacks	2 days
55	**Site Prep**	**1 day**
56	Final Grading and Drainage	1 day
57	**Post Dismantlement Activities**	**20 days**
58	Post Dismantlement Activities	20 days



Redactions Removed Pursuant to Commission Order

NEVADA UNIT 1

Redactions Removed Pursuant to Commission Order

NEVADA STATION

The Nevada Generating Station consists of a single distillate-fired combustion turbine generator set.

Nevada has an SPP-accredited unit rating of 20.8 MW. Nevada was placed into service in 1974. The unit is comprised of a GE Model MS5001P combustion turbine with a generator step-up transformer and auxiliary power transformer.

The following are the major systems and equipment that were included in the retirement and dismantlement of the Nevada Generating Station.

1. Combustion turbine generator sets and auxiliaries.
2. Generation step-up and auxiliary transformers.
3. Outdoor switchgear.
4. Exhaust stacks.
5. Maintenance building.
6. Fuel oil transfer equipment.
7. Service/Instrument air compressors.
8. Fuel oil storage.

Nevada Retirement

Owner Costs				
Pre-Retirement Activities		$43,834		
Retirement Activities		$125,254		
Post-Retirement Activities		$45,152		
Owner Direct Total			$214,240	
Owner Internal Costs	5.00%		$10,712	
Owner Contingency:	25.00%		$56,238	
Nevada Retirement Opinion of Probable Cost:				$281,190.00
Activities Required by Permit or Regulation				
Nevada Storage Tank		$56,530		
Activities Required by Permit or Regulation:				$56,530

Nevada Retirement

ID	Task Name	Cost
1	**Nevada Retirement**	**$214,240.42**
2	**Pre-Retirement Activities**	**$43,834.00**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Retirement**	**$125,254.42**
6	**Project Management During Retirement**	**$55,339.38**
7	Project Management During Retirement	$55,339.38
8	**Retirement Activities**	**$69,915.04**
9	**Electrical**	**$27,691.68**
10	**Medium and Low Voltage Drawout Switchgear**	**$5,359.68**
11	De-energize all buses at the source.	$893.28
12	Open all circuit breakers.	$893.28
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$893.28
14	Verify that the closing/tripping springs are discharged.	$1,786.56
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$2,679.84**
17	De-energize all buses at the source.	$893.28
18	Open all circuit breakers and disconnect switches.	$893.28
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$1,786.56**
21	De-energize all buses at the source.	$893.28
22	Open all circuit breakers and disconnect switches.	$893.28
23	**Oil-Filled Power Transformers**	**$7,146.24**
24	De-energize all buses at the source.	$893.28
25	Open all circuit breakers and disconnect switches.	$893.28
26	De-energize all buses at the source.	$893.28
27	Open all circuit breakers and disconnect switches.	$4,466.40
28	**Dry-type Power Transformers**	**$4,466.40**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$3,573.12
31	**Motors**	**$6,252.96**
32	De-energize all primary power at the source.	$893.28
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$893.28
34	Drain lube oil system (if applicable) and dispose of oil.	$4,466.40
35	**Maintenance Building**	**$3,736.96**
36	Secure the Maintenance Building	$3,736.96
37	**Fuel Oil System**	**$5,631.12**

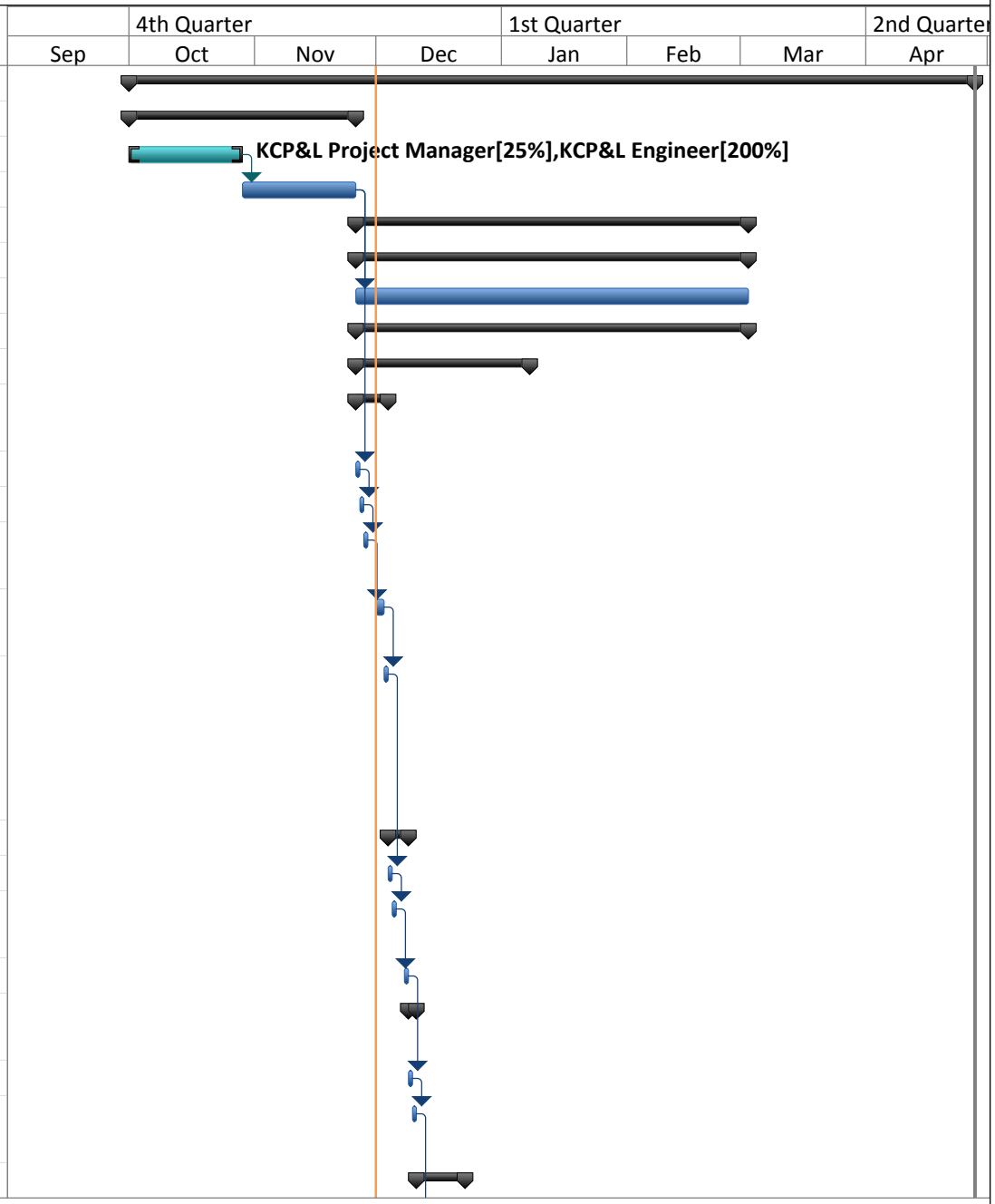
Redactions Removed Pursuant to Commission Order

Nevada Retirement

ID	Task Name	Cost
38	Isolate Fuel Oil System	$3,907.44
39	Drain and Vent Fuel Oil Piping	$1,723.68
40	**Lube Oil Cooling Water System**	**$2,585.52**
41	Open and Drain the Water Side of the Lube Oil Coolers	$1,723.68
42	Open and Vent the Coolers and Expansion Tank	$861.84
43	**Oily Drain Tank**	**$3,954.00**
44	Open and Pump Out the Oily Drain Tank	$3,954.00
45	**Compressed Air**	**$2,585.52**
46	Empty Dessiccant Air Dryers and Vent	$861.84
47	Open and Vent the Air Reciever	$1,723.68
48	**Miscelleaneous Piping**	**$5,171.04**
49	Open and Vent the Exhaust Frame Cooling Piping	$861.84
50	Open and Vent the Inlet Air Heating Piping	$861.84
51	Open & Vent the CT Air Process Piping	$861.84
52	Open and Vent the CT Air Processing Piping	$2,585.52
53	**Fire Protection Piping**	**$3,428.24**
54	Empty the CO2 Storage Tank	$2,566.40
55	Open and Vent the Fire Protection Piping	$861.84
56	**Lube Oil System**	**$8,580.16**
57	Empty and Remove from Site the Lubricating Oil	$5,132.80
58	Drain Lubricating Oil Piping	$1,723.68
59	Open and Vent Lubricating Oil Piping	$1,723.68
60	**Potable Water**	**$2,643.36**
61	Disconnect Potable Water at Property Boundary	$2,643.36
62	**Waste Water**	**$3,907.44**
63	Disconnect Waste Water at Property Boundary	$3,907.44
64	**Post Retirement Closure Activity**	**$45,152.00**
65	Post Retirement Closure Activity	$45,152.00

Nevada Retirement

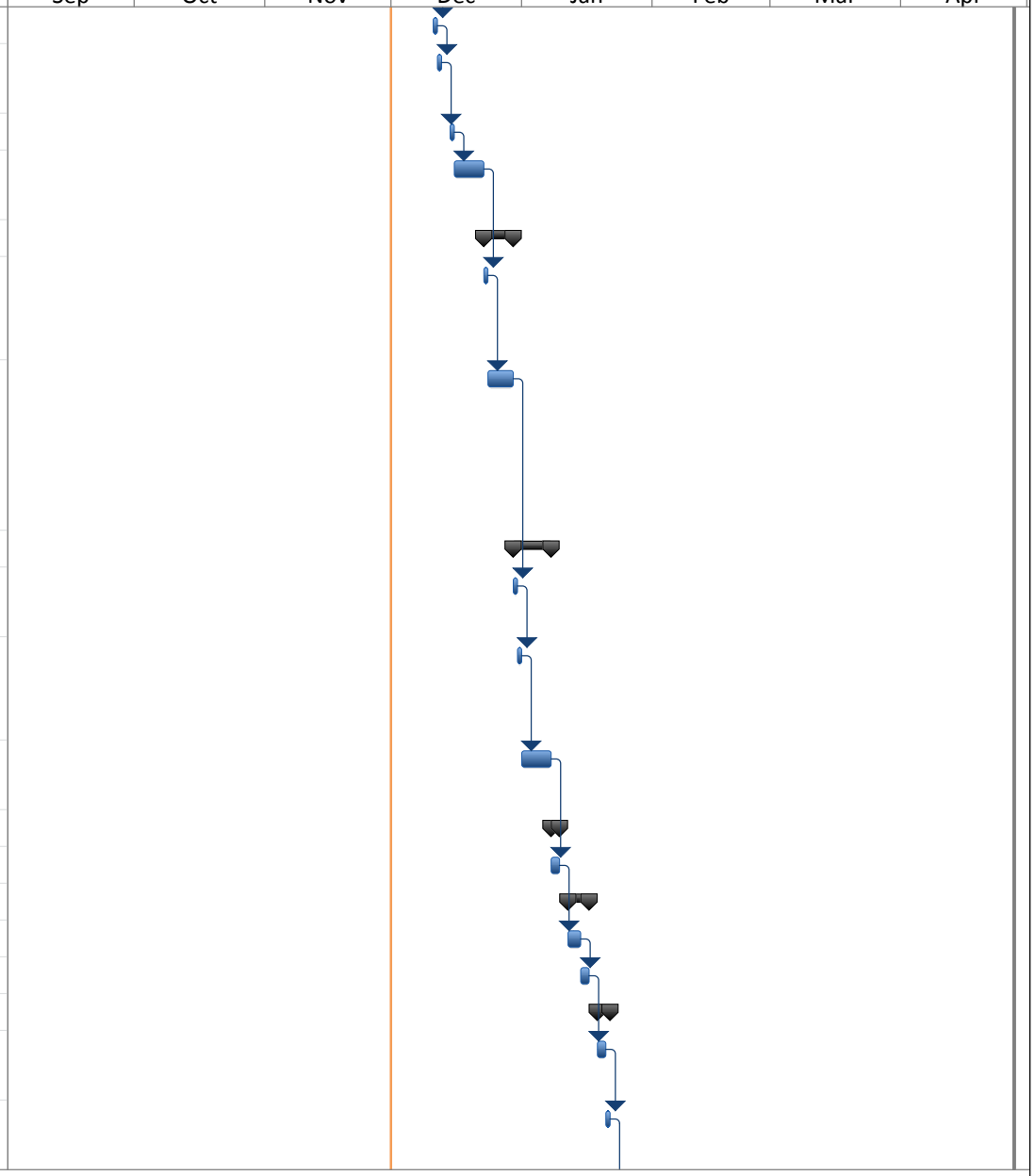
ID	Task Name	Duration
1	**Nevada Retirement**	**149 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Retirement**	**69 days**
6	**Project Management During Retirement**	**69 days**
7	Project Management During Retirement	69 days
8	**Retirement Activities**	**69 days**
9	**Electrical**	**31 days**
10	**Medium and Low Voltage Drawout Switchgear**	**6 days**
11	De-energize all buses at the source.	1 day
12	Open all circuit breakers.	1 day
13	Rack all circuit breakers into the fully withdrawn, disconnected	1 day
14	Verify that the closing/tripping springs are discharged.	2 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each	1 day
16	**Motor Control Centers**	**3 days**
17	De-energize all buses at the source.	1 day
18	Open all circuit breakers and disconnect switches.	1 day
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**2 days**
21	De-energize all buses at the source.	1 day
22	Open all circuit breakers and disconnect switches.	1 day
23	**Oil-Filled Power Transformers**	**8 days**



Redactions Removed Pursuant to Commission Order

Nevada Retirement

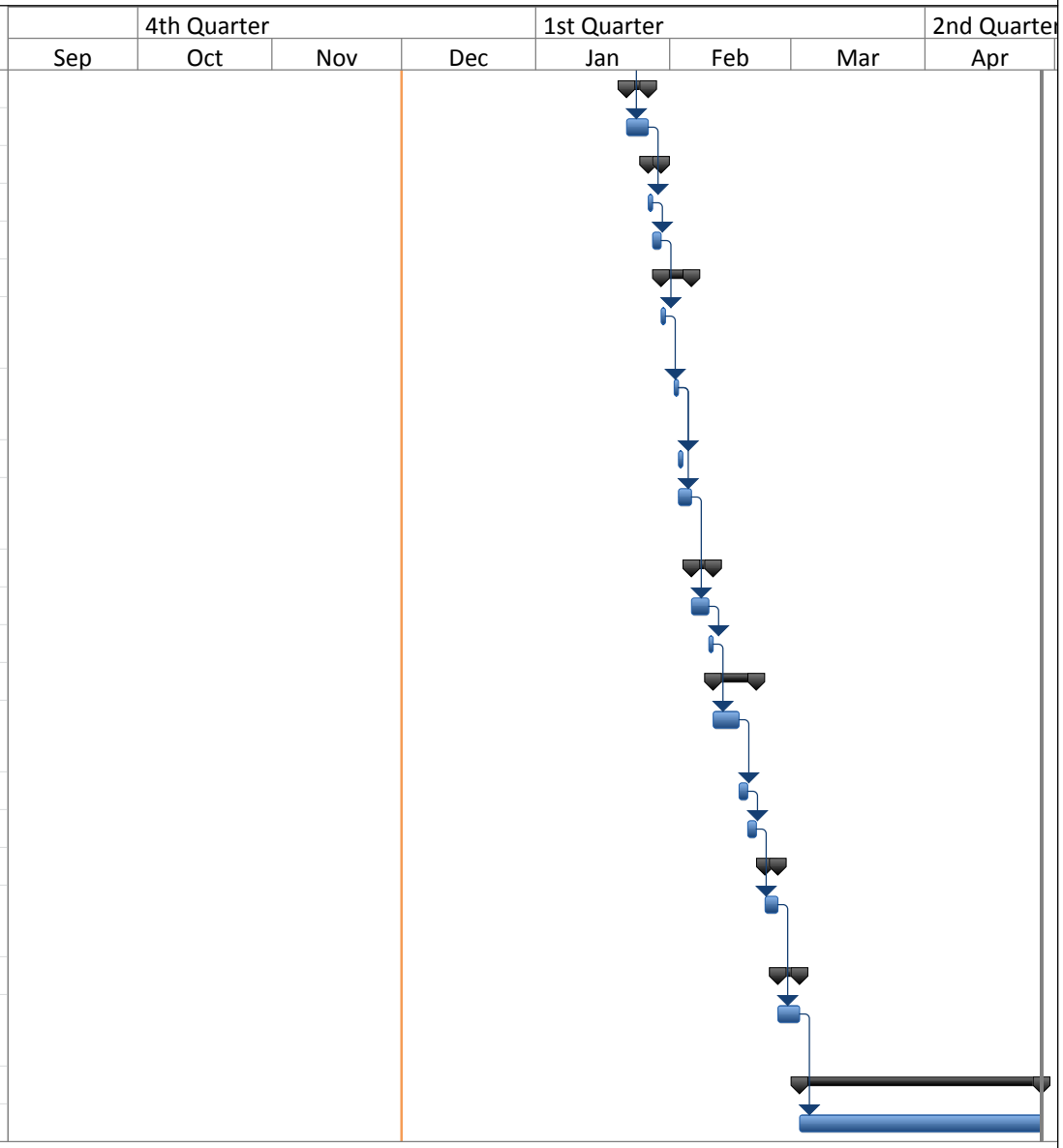
ID	Task Name	Duration
24	De-energize all buses at the source.	1 day
25	Open all circuit breakers and disconnect switches.	1 day
26	De-energize all buses at the source.	1 day
27	Open all circuit breakers and disconnect switches.	5 days
28	**Dry-type Power Transformers**	**5 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	4 days
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	1 day
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	1 day
34	Drain lube oil system (if applicable) and dispose of oil.	5 days
35	**Maintenance Building**	**2 days**
36	Secure the Maintenance Building	2 days
37	**Fuel Oil System**	**5 days**
38	Isolate Fuel Oil System	3 days
39	Drain and Vent Fuel Oil Piping	2 days
40	**Lube Oil Cooling Water System**	**3 days**
41	Open and Drain the Water Side of the Lube Oil Coolers	2 days
42	Open and Vent the Coolers and Expansion Tank	1 day



Redactions Removed Pursuant to Commission Order

Nevada Retirement

ID	Task Name	Duration
43	**Oily Drain Tank**	**3 days**
44	Open and Pump Out the Oily Drain Tank	3 days
45	**Compressed Air**	**3 days**
46	Empty Dessiccant Air Dryers and Vent	1 day
47	Open and Vent the Air Reciever	2 days
48	**Miscelleaneous Piping**	**5 days**
49	Open and Vent the Exhaust Frame Cooling Piping	1 day
50	Open and Vent the Inlet Air Heating Piping	1 day
51	Open & Vent the CT Air Process Piping	1 day
52	Open and Vent the CT Air Processing Piping	3 days
53	**Fire Protection Piping**	**3 days**
54	Empty the CO2 Storage Tank	2 days
55	Open and Vent the Fire Protection Pipin	1 day
56	**Lube Oil System**	**8 days**
57	Empty and Remove from Site the Lubricating Oil	4 days
58	Drain Lubricating Oil Piping	2 days
59	Open and Vent Lubricating Oil Piping	2 days
60	**Potable Water**	**3 days**
61	Disconnect Potable Water at Property Boundary	3 days
62	**Waste Water**	**3 days**
63	Disconnect Waste Water at Property Boundary	3 days
64	**Post Retirement Closure Activity**	**40 days**
65	Post Retirement Closure Activity	40 days



Redactions Removed Pursuant to Commission Order

Nevada Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$892,760		
Overhead During Dismantlement			$799,319		
Post-Dismantlement Activities			$65,520		
Owner Costs Total*				$1,757,599	
Demolition General Contractor (DGC) Costs					
Site Management			$435,715		
Equipment Rental			$741,903		
Consummables			$740,181		
Scrap Crew(s)			$194,864		
Dismantlement			$515,571		
Contractor Direct Cost*		$2,628,234			
Contractor Allowances					
DGC Insurance	2.00%		$52,565		
Contingency/Profit	15.00%		$402,120		
Performance Bond	2.00%		$61,658.37		
Contractor Costs Total:				$3,144,577	
Total:					$4,902,176
Owner Internal Costs:	5.00%				$245,109
Owner Contingency:	25.00%				$1,286,821
Nevada Dismantlement Opinion of Probable Cost:					$6,434,106

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $4,385,833

Nevada Dismantlement

ID	Task Name	Cost
1	**Nevada CT Dismantlement**	**$4,385,836.20**
2	**Pre-Demolition Activities**	**$892,760.32**
3	Detailed Planning & Hire Owner's Engineer	$104,441.28
4	Detailed Site Characterization Study	$610,335.44
5	Hire Demolition general Contractor	$167,184.00
6	KCP&L Prepares Unit for Dismantlement	$10,799.60
7	Demolition Contractor Mobilizes on Sit	$0.00
8	**KCP&L Overhead during Dismantlement**	**$799,319.60**
9	KCP&L Project Manager	$127,018.00
10	KCP&L Administrative Support	$46,969.60
11	KCP&L Engineer	$208,772.00
12	Owners Engineer Project Manager	$62,320.00
13	Owners Engineer - Engineer	$354,240.00
14	**Demolition Contractor Overhead during Dismantlement**	**$435,715.20**
15	Demolition Contractor Project Manager	$123,278.80
16	Demolition Contractor Safety Manager	$109,765.20
17	Demolition Contractor Superintendent	$202,671.20
18	**Demolition Contractor Equipment Rental Cost**	**$741,903.20**
19	Equipment Rental	$741,903.20
20	**Demolition Contractor Consumables**	**$740,181.20**
21	Consumables	$740,181.20
22	**Scrap Crews**	**$194,864.80**
23	Crew to Handle Scrap Material(s)	$194,864.80
24	**Dismantlement**	**$515,571.88**
25	**Electrical**	**$107,481.60**
26	Electrical Demolition of Equipment	$107,481.60
27	**Fuel Oil System**	**$8,445.28**
28	Remove Above Ground Fuel Oil Piping	$3,071.20
29	Fuel Skids	$5,374.08
30	**Lube Oil System**	**$17,913.60**
31	Lube Oil Piping	$5,374.08
32	Lube Oil Pumps	$5,374.08
33	Lube Oil Tanks	$7,165.44
34	**Fire Protection**	**$26,870.40**
35	Fire Protection Piping	$10,748.16
36	Firewater Tank	$8,956.80
37	CO2 Storage Tank	$7,165.44
38	**Miscellaneous Piping**	**$25,079.04**
39	Exhaust Frame Cooling Piping	$7,165.44
40	CT Air Processing Piping	$8,956.80
41	Inlet Air Heating Piping	$8,956.80
42	**Generator**	**$10,748.16**
43	Generator	$10,748.16
44	**Combustion Turbine**	**$93,150.72**

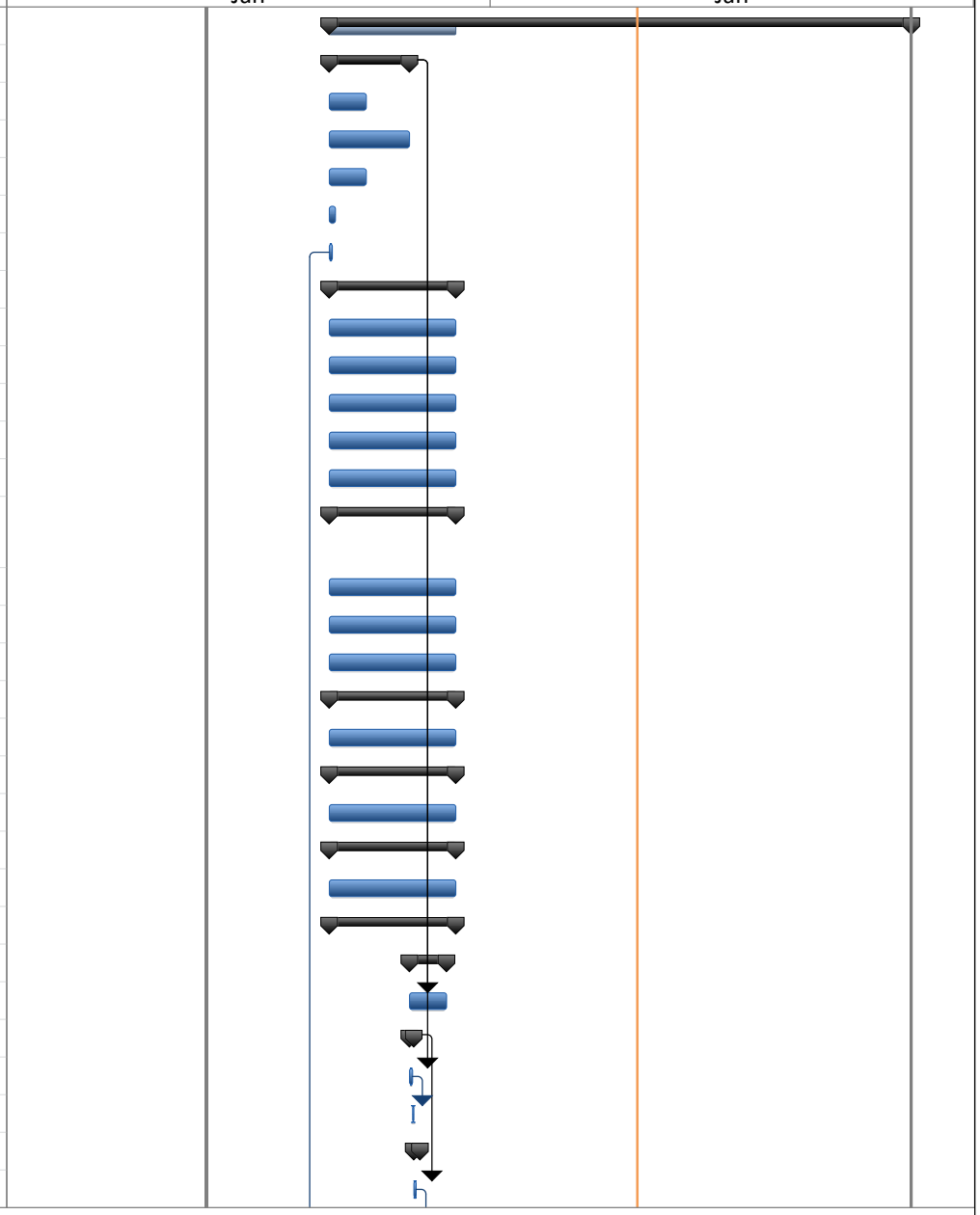
Redactions Removed Pursuant to Commission Order

Nevada Dismantlement

ID	Task Name	Cost
45	Inlet Heater	$5,374.08
46	Inlet duct	$10,748.16
47	Exhaust duct	$14,330.88
48	Combustion Turbine	$28,661.76
49	Combustion Turbine Foundation	$16,122.24
50	Enclosure	$17,913.60
51	**CEMS**	**$14,330.88**
52	CEMS Building	$7,165.44
53	CEMS Building Foundation	$7,165.44
54	**Stack**	**$26,870.40**
55	Stacks	$26,870.40
56	**Site Buildings**	**$8,956.80**
57	Remove Site Buildings	$8,956.80
58	**Site Prep**	**$175,725.00**
59	Final Grading and Drainage	$175,725.00
60	**Post Dismantlement Activities**	**$65,520.00**
61	Post Dismantlement Activities	$65,520.00

Nevada Dismantlement

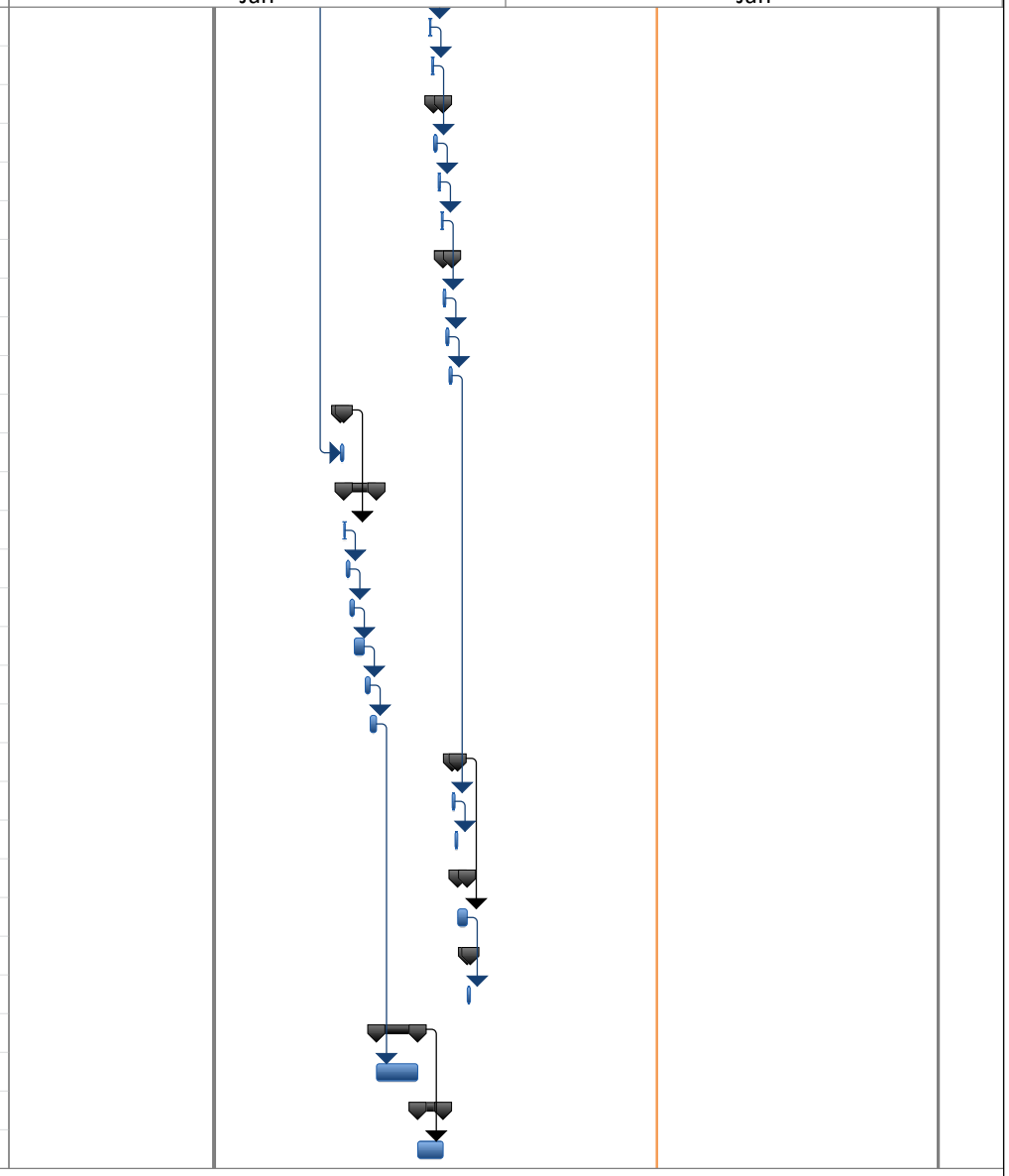
ID	Task Name	Duration
1	**Nevada CT Dismantlement**	**944 days**
2	**Pre-Demolition Activities**	**130 days**
3	Detailed Planning & Hire Owner's Engineer	3 mons
4	Detailed Site Characterization Study	130 days
5	Hire Demolition general Contractor	3 mons
6	KCP&L Prepares Unit for Dismantlement	2 wks
7	Demolition Contractor Mobilizes on Sit	5 days
8	**KCP&L Overhead during Dismantlement**	**205 days**
9	KCP&L Project Manager	205 days
10	KCP&L Administrative Support	205 days
11	KCP&L Engineer	205 days
12	Owners Engineer Project Manager	205 days
13	Owners Engineer - Engineer	205 days
14	**Demolition Contractor Overhead during Dismantlement**	**205 days**
15	Demolition Contractor Project Manager	205 days
16	Demolition Contractor Safety Manager	205 days
17	Demolition Contractor Superintendent	205 days
18	**Demolition Contractor Equipment Rental Cost**	**205 days**
19	Equipment Rental	205 days
20	**Demolition Contractor Consumables**	**205 days**
21	Consumables	205 days
22	**Scrap Crews**	**205 days**
23	Crew to Handle Scrap Material(s)	205 days
24	**Dismantlement**	**205 days**
25	**Electrical**	**60 days**
26	Electrical Demolition of Equipment	60 days
27	**Fuel Oil System**	**8 days**
28	Remove Above Ground Fuel Oil Piping	5 days
29	Fuel Skids	3 days
30	**Lube Oil System**	**10 days**
31	Lube Oil Piping	3 days



Redactions Removed Pursuant to Commission Order

Nevada Dismantlement

ID	Task Name	Duration
32	Lube Oil Pumps	3 days
33	Lube Oil Tanks	4 days
34	**Fire Protection**	**15 days**
35	Fire Protection Piping	6 days
36	Firewater Tank	5 days
37	CO2 Storage Tank	4 days
38	**Miscellaneous Piping**	**14 days**
39	Exhaust Frame Cooling Piping	4 days
40	CT Air Processing Piping	5 days
41	Inlet Air Heating Piping	5 days
42	**Generator**	**6 days**
43	Generator	6 days
44	**Combustion Turbine**	**52 days**
45	Inlet Heater	3 days
46	Inlet duct	6 days
47	Exhaust duct	8 days
48	Combustion Turbine	16 days
49	Combustion Turbine Foundation	9 days
50	Enclosure	10 days
51	**CEMS**	**8 days**
52	CEMS Building	4 days
53	CEMS Building Foundation	4 days
54	**Stack**	**15 days**
55	Stacks	15 days
56	**Site Buildings**	**5 days**
57	Remove Site Buildings	5 days
58	**Site Prep**	**65 days**
59	Final Grading and Drainage	65 days
60	**Post Dismantlement Activities**	**40 days**
61	Post Dismantlement Activities	40 days



Redactions Removed Pursuant to Commission Order

RALPH GREEN UNIT 3

Redactions Removed Pursuant to Commission Order

RALPH GREEN STATION

The Ralph Green Generating Station consists of a single gas-fired combustion turbine generator set.

Ralph Green has an SPP-accredited unit rating of 71.5 MW and was placed into service in 1981. The unit is comprised of a GE Model MS7001E combustion turbine with a generator step-up transformer and auxiliary power transformer.

The following are the major systems and equipment that were included in the retirement and dismantlement of the Ralph Green Generating Station.

1. Combustion turbine generator sets and auxiliaries.
2. Generation step-up and auxiliary transformers.
3. Outdoor switchgear.
4. Exhaust stack.
5. Administrative/Maintenance building.
6. Water treatment equipment.
7. Service/Instrument air compressors.
8. Demineralized water tank.

Ralph Green Retirement

Owner Costs				
Pre-Retirement Activities		$43,834		
Retirement Activities		$128,593		
Post-Retirement Activities		$45,152		
Owner Direct Total			$217,579	
Owner Internal Costs	5.00%		$10,879	
Owner Contingency:	25.00%		$57,114	
Ralph Green Retirement Opinion of Probable Cost:				$285,572.44

<u>Activities Required by Permit or Regulation</u>

Ash Pond Landfill Closure	$81,385	
Activities Required by Permit or Regulation:		$81,385

Ralph Green Retirement

ID	Task Name	Cost
1	**Ralph Green Retirement**	**$217,579.72**
2	**Pre-Retirement Activities**	**$43,834.00**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Retirement**	**$128,593.72**
6	**Project Management During Retirement**	**$56,141.40**
7	Project Management During Retirement	$56,141.40
8	**Retirement Activities**	**$72,452.32**
9	**Electrical**	**$19,652.16**
10	**Medium and Low Voltage Drawout Switchgear**	**$5,359.68**
11	De-energize all buses at the source.	$893.28
12	Open all circuit breakers.	$893.28
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$893.28
14	Verify that the closing/tripping springs are discharged.	$1,786.56
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$2,679.84**
17	De-energize all buses at the source.	$893.28
18	Open all circuit breakers and disconnect switches.	$893.28
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$1,786.56**
21	De-energize all buses at the source.	$893.28
22	Open all circuit breakers and disconnect switches.	$893.28
23	**Oil-Filled Power Transformers**	**$3,573.12**
24	De-energize all buses at the source.	$893.28
25	Open all circuit breakers and disconnect switches.	$893.28
26	De-energize all buses at the source.	$893.28
27	Open all circuit breakers and disconnect switches.	$893.28
28	**Dry-type Power Transformers**	**$1,786.56**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
31	**Motors**	**$4,466.40**
32	De-energize all primary power at the source.	$893.28
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$893.28
34	Drain lube oil system (if applicable) and dispose of oil.	$2,679.84
35	**Administration/Maintenance Building**	**$7,235.60**
36	Secure Administration/Maintenance Building	$7,235.60
37	**Fuel Gas System**	**$10,783.04**

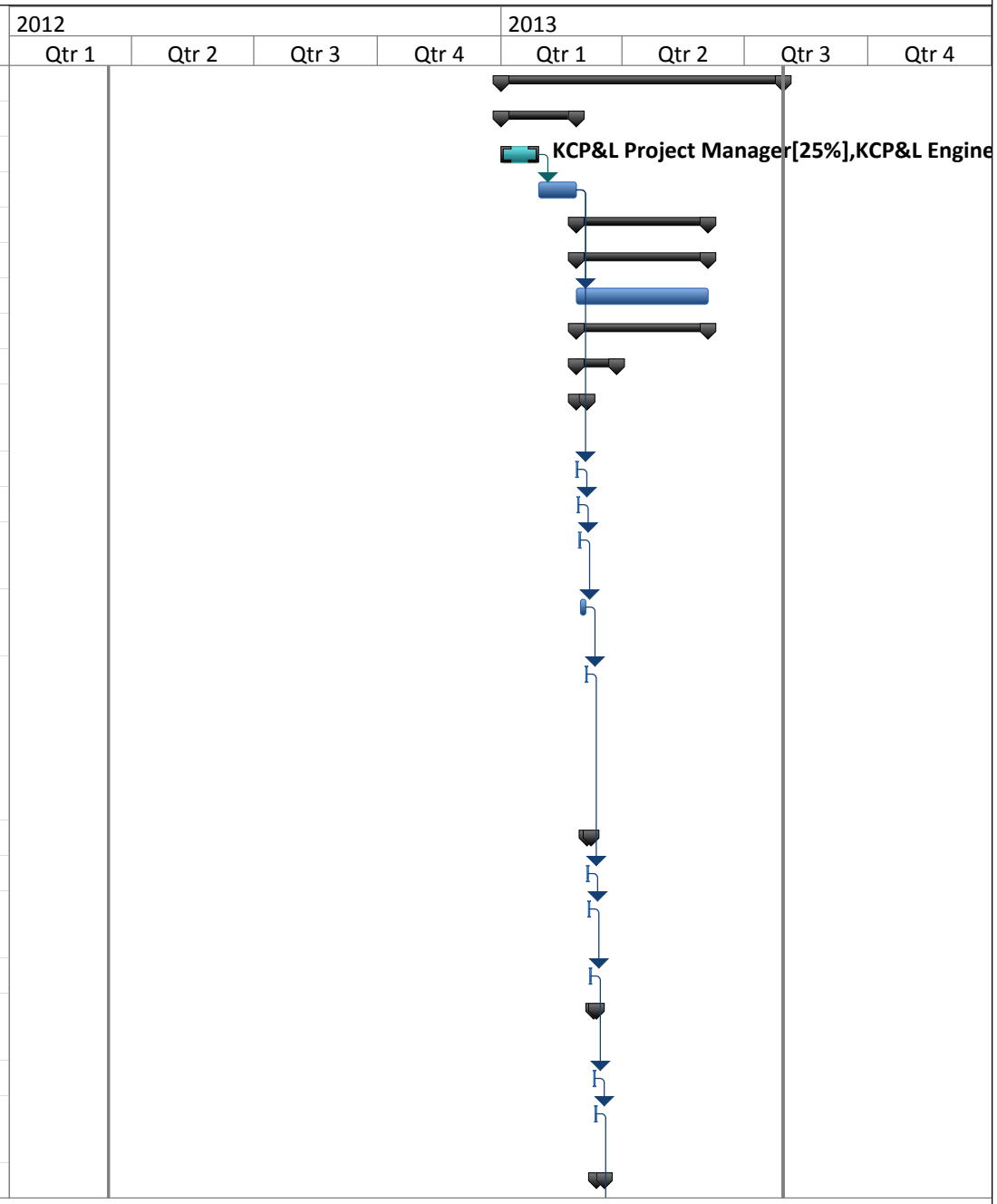
Ralph Green Retirement

ID	Task Name	Cost
38	Isolate Fuel Gas System	$3,907.44
39	Vent Fuel Gas Piping and Equipment	$2,528.16
40	Open and Vent Knock-Out Drum	$861.84
41	Drain, Open and Vent the Drain Tank	$861.84
42	Empty the Coalescing Filter	$1,761.92
43	Open and Vent Equipment on the CT Gas Valve Module	$861.84
44	**Lube Oil Cooling Water System**	**$2,585.52**
45	Open and Drain the Water Side of the Lube Oil Coolers	$1,723.68
46	Open and Vent the Coolers and Expansion Tank	$861.84
47	**Oily Drain Tank**	**$3,954.00**
48	Open and Pump Out the Oily Drain Tank	$3,954.00
49	**Wash Water Skid**	**$2,585.52**
50	Open and Drain the Detergent Tank	$861.84
51	Open and Drain the Demineralized Water Tank	$861.84
52	Empty the Demineralized Water Tank	$861.84
53	**Compressed Air**	**$1,723.68**
54	Empty Dessiccant Air Dryers and Vent	$861.84
55	Open and Vent the Air Reciever	$861.84
56	**Miscelleaneous Piping**	**$3,447.36**
57	Open and Vent the Exhaust Frame Cooling Piping	$861.84
58	Open and Vent the CT Air Processing Piping	$861.84
59	Open and Vent the Inlet Air Heating Piping	$861.84
60	Open and Vent the CT Air Processing Piping	$861.84
61	**Fire Protection Piping**	**$3,428.24**
62	Empty the CO2 Storage Tank	$2,566.40
63	Open and Vent the Fire Protection Piping	$861.84
64	**Lube Oil System**	**$7,718.32**
65	Empty and Remove from Site the Lubricating Oil	$5,132.80
66	Drain Lubricating Oil Piping	$1,723.68
67	Open and Vent Lubricating Oil Piping	$861.84
68	**Water Treatment**	**$9,338.88**
69	Drain All Tanks and Vessels	$1,723.68
70	Remove Resin from Vessels	$2,585.52
71	Remove Chemicals	$2,585.52
72	Open and Vent Vessels	$861.84
73	Open and Vent the 2 Water Storage Tanks	$861.84
74	Clean Neutralization Basin	$720.48
75	**Post Retirement Closure Activity**	**$45,152.00**
76	Post Retirement Closure Activity	$45,152.00

Redactions Removed Pursuant to Commission Order

Ralph Green Retirement

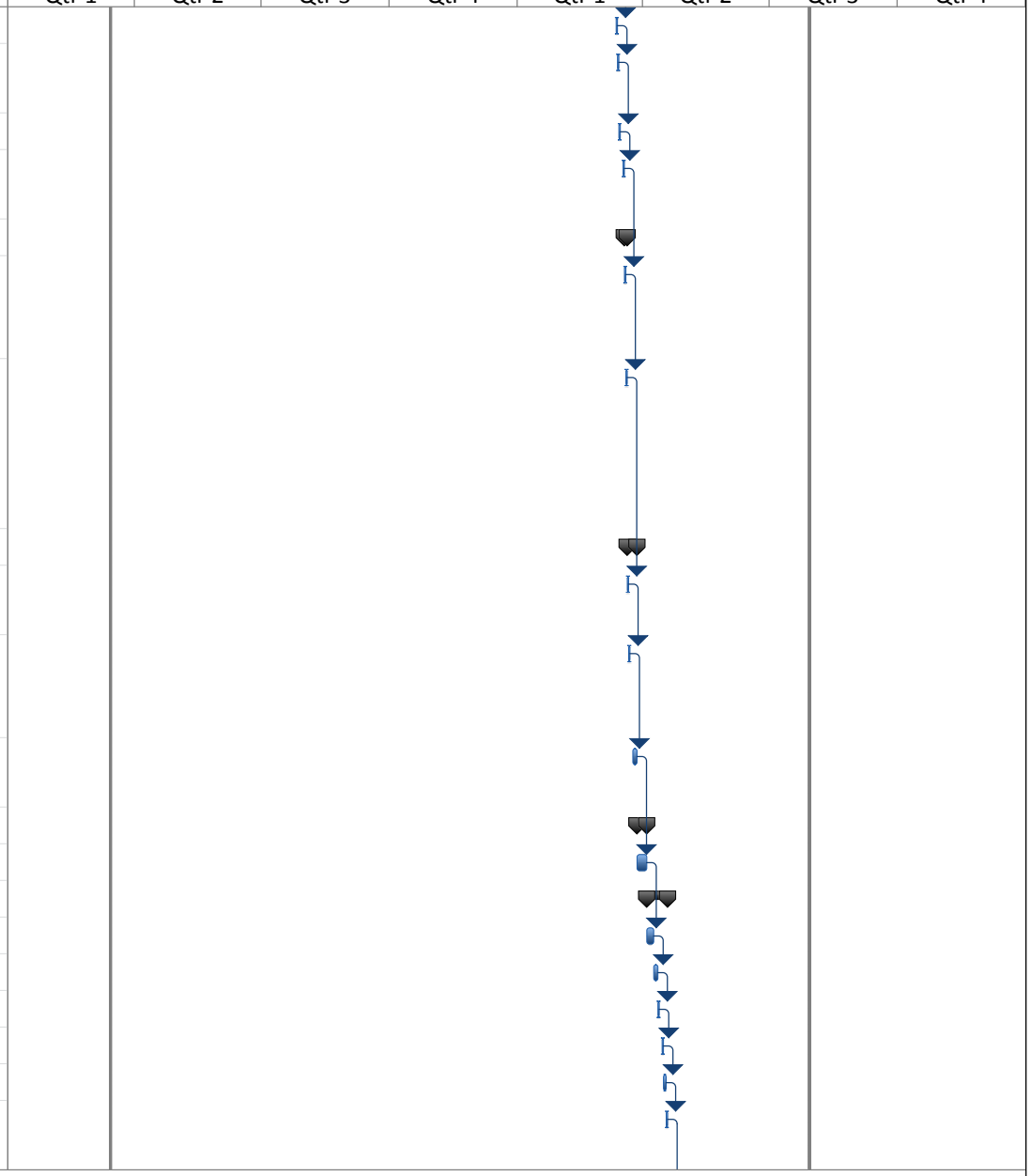
ID	Task Name	Duration
1	**Ralph Green Retirement**	**150 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Retirement**	**70 days**
6	**Project Management During Retirement**	**70 days**
7	Project Management During Retirement	70 days
8	**Retirement Activities**	**70 days**
9	**Electrical**	**22 days**
10	**Medium and Low Voltage Drawout Switchgear**	**6 days**
11	De-energize all buses at the source.	1 day
12	Open all circuit breakers.	1 day
13	Rack all circuit breakers into the fully withdrawn, disconnected	1 day
14	Verify that the closing/tripping springs are discharged.	2 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each	1 day
16	**Motor Control Centers**	**3 days**
17	De-energize all buses at the source.	1 day
18	Open all circuit breakers and disconnect switches.	1 day
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**2 days**
21	De-energize all buses at the source.	1 day
22	Open all circuit breakers and disconnect switches.	1 day
23	**Oil-Filled Power Transformers**	**4 days**



Redactions Removed Pursuant to Commission Order

Ralph Green Retirement

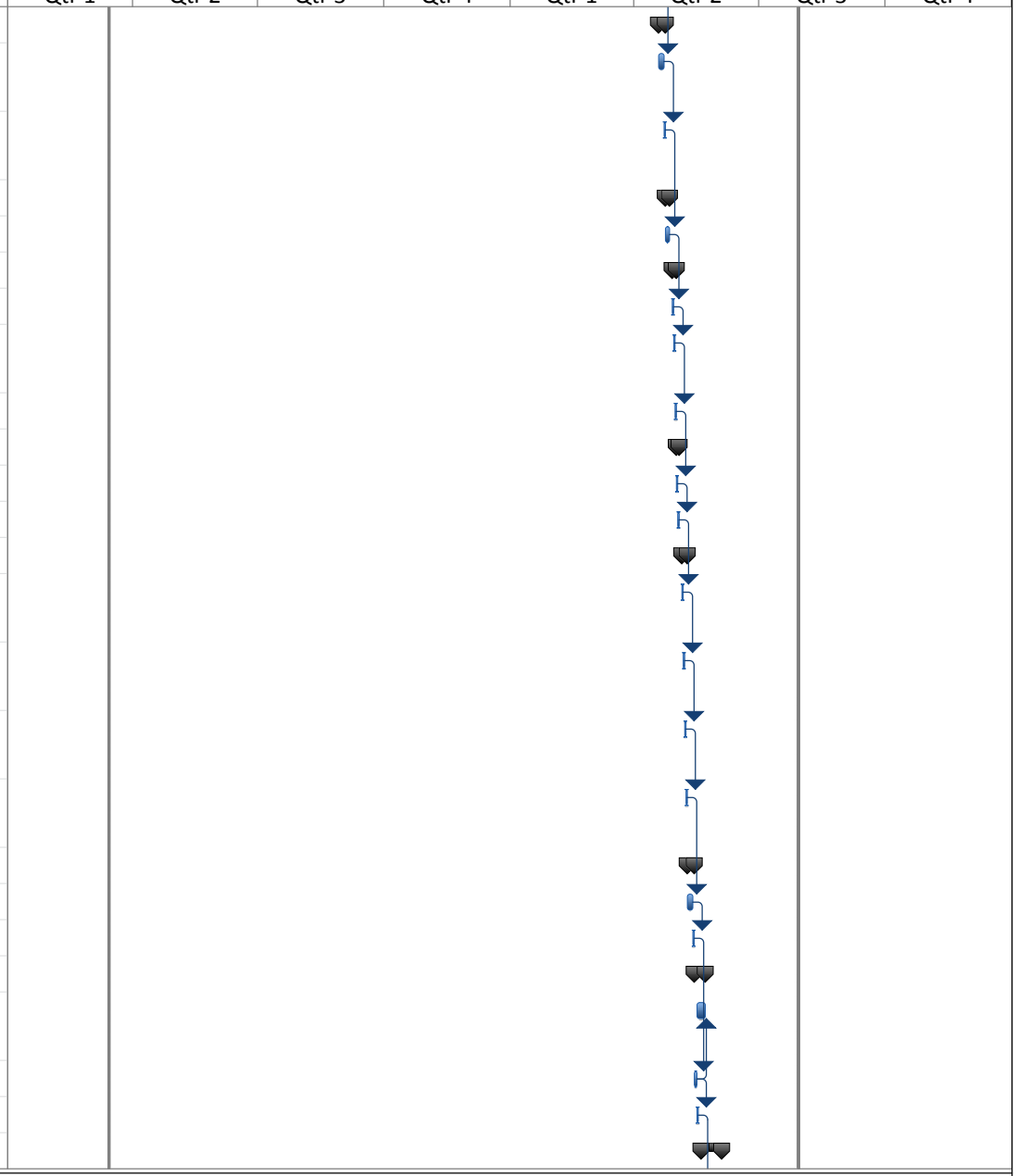
ID	Task Name	Duration
24	De-energize all buses at the source.	1 day
25	Open all circuit breakers and disconnect switches.	1 day
26	De-energize all buses at the source.	1 day
27	Open all circuit breakers and disconnect switches.	1 day
28	**Dry-type Power Transformers**	**2 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
31	**Motors**	**5 days**
32	De-energize all primary power at the source.	1 day
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	1 day
34	Drain lube oil system (if applicable) and dispose of oil.	3 days
35	**Administration/Maintenance Building**	**5 days**
36	Secure Administration/Maintenance Bu	5 days
37	**Fuel Gas System**	**11 days**
38	Isolate Fuel Gas System	3 days
39	Vent Fuel Gas Piping and Equipment	3 days
40	Open and Vent Knock-Out Drum	1 day
41	Drain, Open and Vent the Drain Tank	1 day
42	Empty the Coalescing Filter	2 days
43	Open and Vent Equipment on the CT Gas Valve Module	1 day



Redactions Removed Pursuant to Commission Order

Ralph Green Retirement

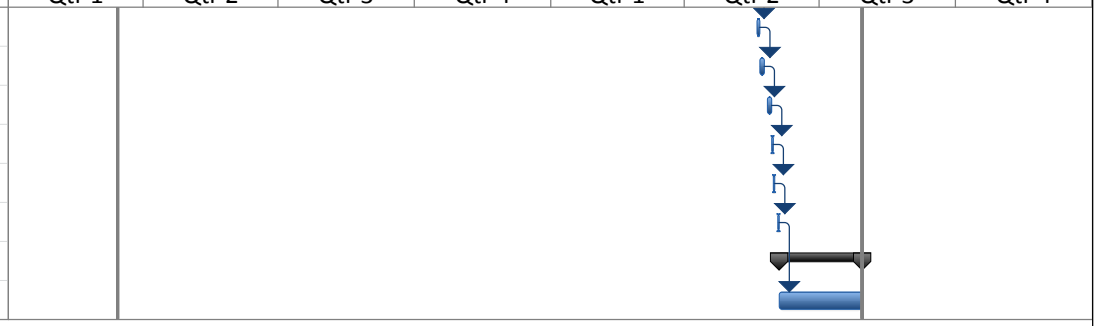
ID	Task Name	Duration
44	**Lube Oil Cooling Water System**	**3 days**
45	Open and Drain the Water Side of the Lube Oil Coolers	2 days
46	Open and Vent the Coolers and Expansion Tank	1 day
47	**Oily Drain Tank**	**3 days**
48	Open and Pump Out the Oily Drain Tank	3 days
49	**Wash Water Skid**	**3 days**
50	Open and Drain the Detergent Tank	1 day
51	Open and Drain the Demineralized Water Tank	1 day
52	Empty the Demineralized Water Tank	1 day
53	**Compressed Air**	**2 days**
54	Empty Dessiccant Air Dryers and Vent	1 day
55	Open and Vent the Air Reciever	1 day
56	**Miscelleaneous Piping**	**4 days**
57	Open and Vent the Exhaust Frame Cooling Piping	1 day
58	Open and Vent the CT Air Processing Piping	1 day
59	Open and Vent the Inlet Air Heating Piping	1 day
60	Open and Vent the CT Air Processing Piping	1 day
61	**Fire Protection Piping**	**3 days**
62	Empty the CO2 Storage Tank	2 days
63	Open and Vent the Fire Protection Pipin	1 day
64	**Lube Oil System**	**6 days**
65	Empty and Remove from Site the Lubricating Oil	4 days
66	Drain Lubricating Oil Piping	2 days
67	Open and Vent Lubricating Oil Piping	1 day
68	**Water Treatment**	**11 days**



Redactions Removed Pursuant to Commission Order

Ralph Green Retirement

ID	Task Name	Duration
69	Drain All Tanks and Vessels	2 days
70	Remove Resin from Vessels	3 days
71	Remove Chemicals	3 days
72	Open and Vent Vessels	1 day
73	Open and Vent the 2 Water Storage Tar	1 day
74	Clean Neutralization Basin	1 day
75	**Post Retirement Closure Activity**	**40 days**
76	Post Retirement Closure Activity	40 days



Redactions Removed Pursuant to Commission Order

Ralph Green Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$892,760		
Overhead During Dismantlement			$748,631		
Post-Dismantlement Activities			$32,760		
Owner Costs Total*				$1,674,151	
Demolition General Contractor (DGC) Costs					
Site Management			$408,084		
Equipment Rental			$694,855		
Consummables			$693,242		
Scrap Crew(s)			$182,507		
Dismantlement			$542,291		
Contractor Direct Cost*		$2,520,979			
Contractor Allowances					
DGC Insurance	2.00%		$50,420		
Contingency/Profit	15.00%		$385,710		
Performance Bond	2.00%		$59,142.17		
Contractor Costs Total:				$3,016,251	
Total:					$4,690,402
Owner Internal Costs:	5.00%				$234,520
Owner Contingency:	25.00%				$1,231,230
Ralph Green Dismantlement Opinion of Probable Cost:					$6,156,152

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $4,195,130

Redactions Removed Pursuant to Commission Order

Ralph Green Dismantlement

ID	Task Name	Cost
1	**Ralph Green Dismantlement**	**$4,195,133.68**
2	**Pre-Demolition Activities**	**$892,760.32**
3	Detailed Planning & Hire Owner's Engineer	$104,441.28
4	Detailed Site Characterization Study	$610,335.44
5	Hire Demolition general Contractor	$167,184.00
6	KCP&L Prepares Unit for Dismantlement	$10,799.60
7	Demolition Contractor Mobilizes on Sit	$0.00
8	**KCP&L Overhead during Dismantlement**	**$748,631.04**
9	KCP&L Project Manager	$118,963.20
10	KCP&L Administrative Support	$43,991.04
11	KCP&L Engineer	$195,532.80
12	Owners Engineer Project Manager	$58,368.00
13	Owners Engineer - Engineer	$331,776.00
14	**Demolition Contractor Overhead during Dismantlement**	**$408,084.48**
15	Demolition Contractor Project Manager	$115,461.12
16	Demolition Contractor Safety Manager	$102,804.48
17	Demolition Contractor Superintendent	$189,818.88
18	**Demolition Contractor Equipment Rental Cost**	**$694,855.68**
19	Equipment Rental	$694,855.68
20	**Demolition Contractor Consumables**	**$693,242.88**
21	Consumables	$693,242.88
22	**Scrap Crews**	**$182,507.52**
23	Crew to Handle Scrap Material(s)	$182,507.52
24	**Dismantlement**	**$542,291.76**
25	**Electrical**	**$107,481.60**
26	Electrical Demolition of Equipment	$107,481.60
27	**Buildings**	**$17,913.60**
28	Remove Administration/Maintenance Building	$17,913.60
29	**Fuel Gas System**	**$8,445.28**
30	Remove all above grade fuel gas piping.	$3,071.20
31	Gas Filter Skid	$5,374.08
32	**Lube Oil System**	**$17,913.60**
33	Lube Oil Piping	$5,374.08
34	Lube Oil Pumps	$5,374.08
35	Lube Oil Tanks	$7,165.44
36	**Compressed Air System**	**$23,287.68**
37	Compressed Air Piping	$5,374.08
38	Compressors	$8,956.80
39	Air Receiver	$3,582.72
40	Dryer	$5,374.08
41	**Fire Protection**	**$26,870.40**
42	Fire Protection Piping	$10,748.16
43	Firewater Tank	$8,956.80
44	CO2 Storage Tank	$7,165.44

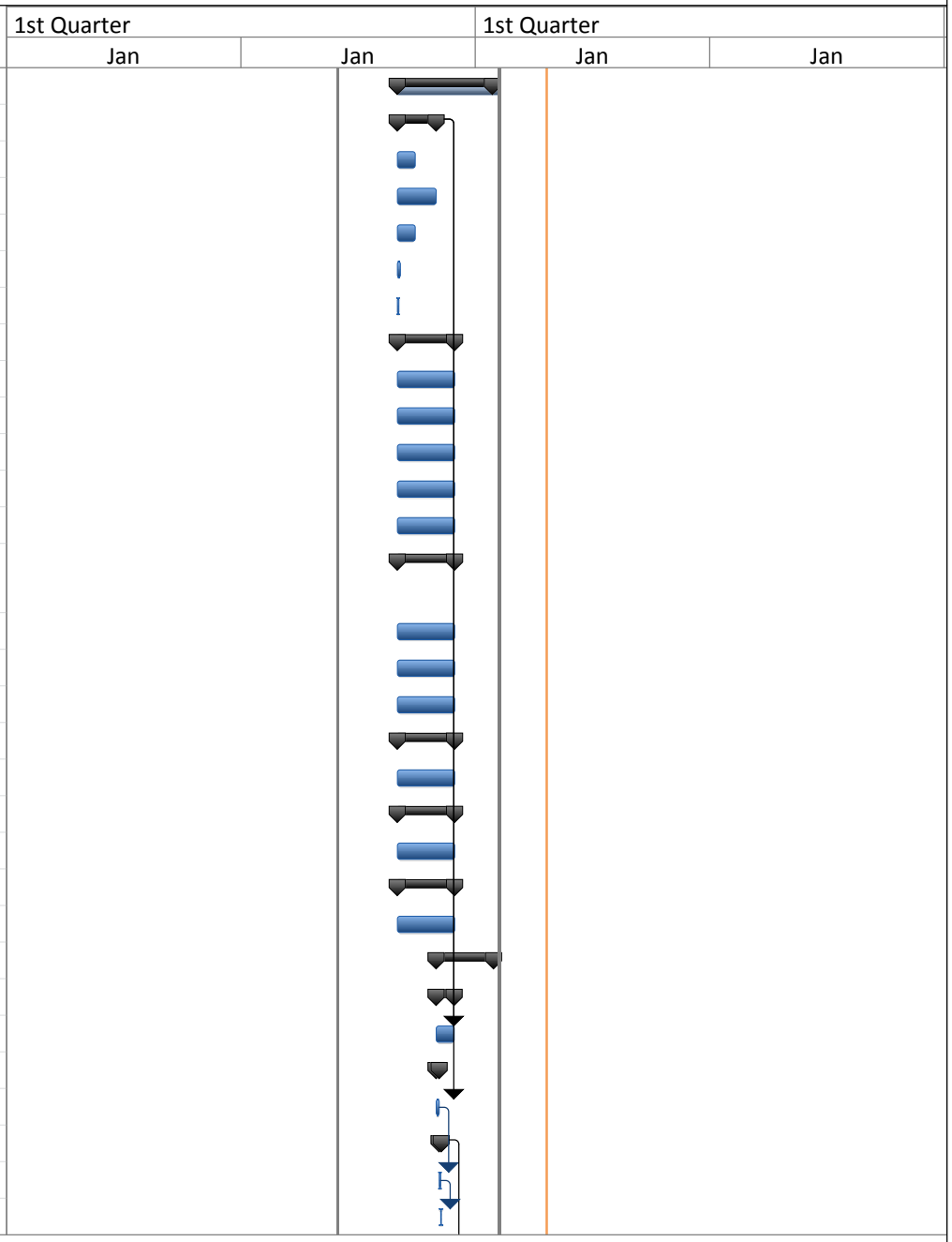
Ralph Green Dismantlement

ID	Task Name	Cost
45	**Wash Water Skid**	**$14,330.88**
46	Detergent Tank	$7,165.44
47	Demineralized Water Tank	$7,165.44
48	**Miscellaneous Piping**	**$25,079.04**
49	Exhaust Frame Cooling Piping	$7,165.44
50	CT Air Processing Piping	$8,956.80
51	Inlet Air Heating Piping	$8,956.80
52	**Generator**	**$0.00**
53	Generator	$0.00
54	**Combustion Turbine**	**$93,150.72**
55	Inlet Heater	$5,374.08
56	Inlet duct	$10,748.16
57	Exhaust duct	$14,330.88
58	Combustion Turbine	$28,661.76
59	Combustion Turbine Foundation	$16,122.24
60	Enclosure	$17,913.60
61	**CEMS**	**$14,330.88**
62	CEMS Building	$7,165.44
63	CEMS Building Foundation	$7,165.44
64	**Stack**	**$26,870.40**
65	Stack	$26,870.40
66	**Demineralizer**	**$23,287.68**
67	Remove demineralizer vessels	$3,582.72
68	Remove acid and caustic tanks	$7,165.44
69	Remove hot water tank	$3,582.72
70	Remove misc. demineralizer piping.	$3,582.72
71	Remove 2 Demin. Water Storage Tanks	$5,374.08
72	**Site Prep**	**$143,330.00**
73	Final Grading and Drainage	$143,330.00
74	**Post Dismantlement Activities**	**$32,760.00**
75	Post Dismantlement Activities	$32,760.00

Redactions Removed Pursuant to Commission Order

Ralph Green Dismantlement

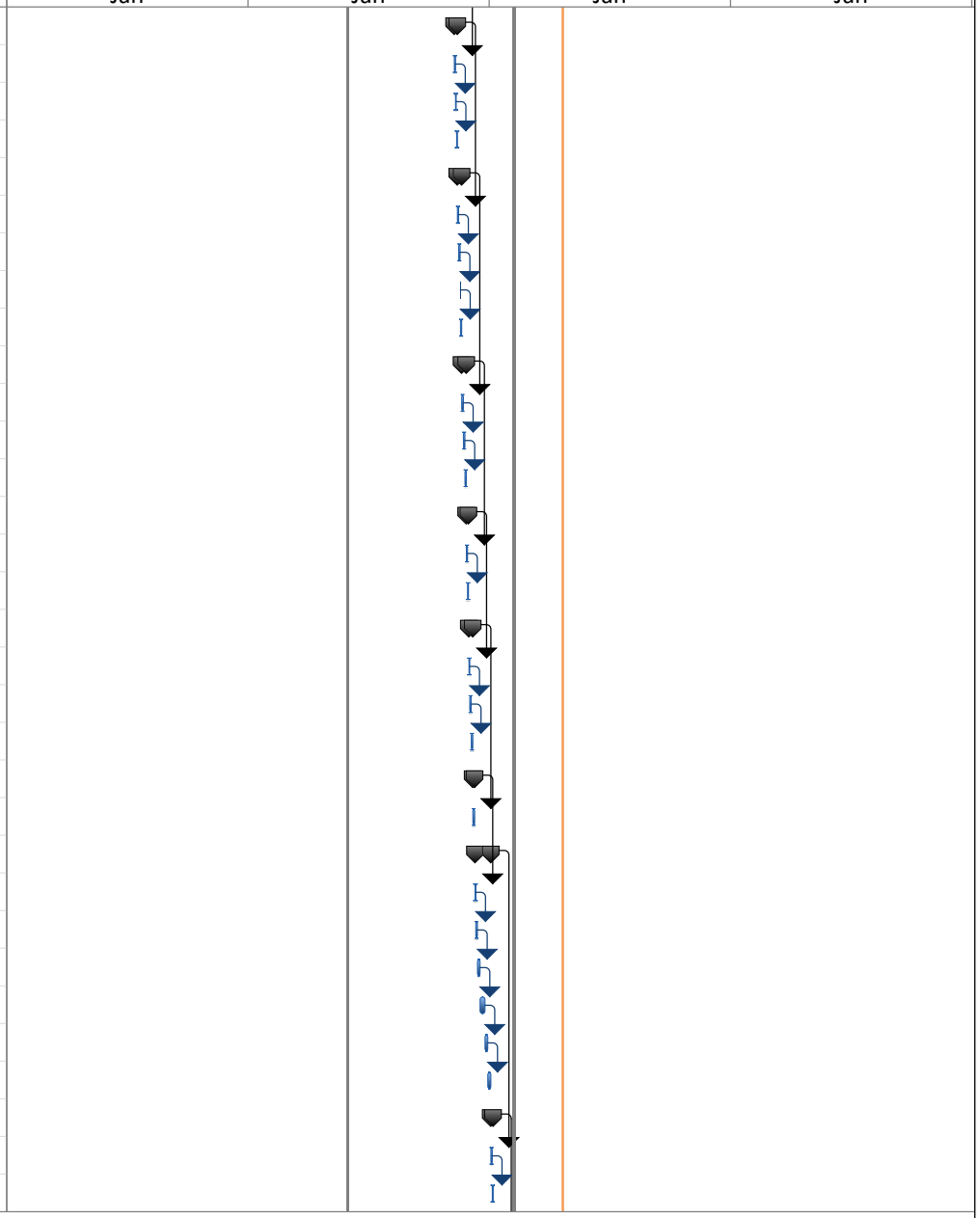
ID	Task Name	Duration
1	**Ralph Green Dismantlement**	**319 days**
2	**Pre-Demolition Activities**	**130 days**
3	Detailed Planning & Hire Owner's Engineer	3 mons
4	Detailed Site Characterization Study	130 days
5	Hire Demolition general Contractor	3 mons
6	KCP&L Prepares Unit for Dismantlement	2 wks
7	Demolition Contractor Mobilizes on Sit	5 days
8	**KCP&L Overhead during Dismantlement**	**192 days**
9	KCP&L Project Manager	192 days
10	KCP&L Administrative Support	192 days
11	KCP&L Engineer	192 days
12	Owners Engineer Project Manager	192 days
13	Owners Engineer - Engineer	192 days
14	**Demolition Contractor Overhead during Dismantlement**	**192 days**
15	Demolition Contractor Project Manager	192 days
16	Demolition Contractor Safety Manager	192 days
17	Demolition Contractor Superintendent	192 days
18	**Demolition Contractor Equipment Rental Cost**	**192 days**
19	Equipment Rental	192 days
20	**Demolition Contractor Consumables**	**192 days**
21	Consumables	192 days
22	**Scrap Crews**	**192 days**
23	Crew to Handle Scrap Material(s)	192 days
24	**Dismantlement**	**192 days**
25	**Electrical**	**60 days**
26	Electrical Demolition of Equipment	60 days
27	**Buildings**	**10 days**
28	Remove Administration/Maintenance Building	10 days
29	**Fuel Gas System**	**8 days**
30	Remove all above grade fuel gas piping.	5 days
31	Gas Filter Skid	3 days



Redactions Removed Pursuant to Commission Order

Ralph Green Dismantlement

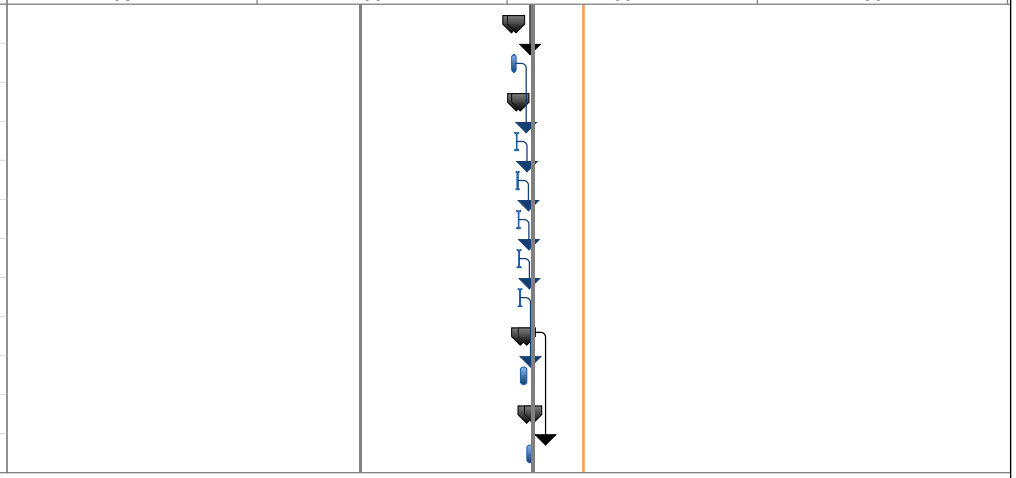
ID	Task Name	Duration
32	**Lube Oil System**	**10 days**
33	Lube Oil Piping	3 days
34	Lube Oil Pumps	3 days
35	Lube Oil Tanks	4 days
36	**Compressed Air System**	**13 days**
37	Compressed Air Piping	3 days
38	Compressors	5 days
39	Air Receiver	2 days
40	Dryer	3 days
41	**Fire Protection**	**15 days**
42	Fire Protection Piping	6 days
43	Firewater Tank	5 days
44	CO2 Storage Tank	4 days
45	**Wash Water Skid**	**8 days**
46	Detergent Tank	4 days
47	Demineralized Water Tank	4 days
48	**Miscellaneous Piping**	**14 days**
49	Exhaust Frame Cooling Piping	4 days
50	CT Air Processing Piping	5 days
51	Inlet Air Heating Piping	5 days
52	**Generator**	**6 days**
53	Generator	6 days
54	**Combustion Turbine**	**52 days**
55	Inlet Heater	3 days
56	Inlet duct	6 days
57	Exhaust duct	8 days
58	Combustion Turbine	16 days
59	Combustion Turbine Foundation	9 days
60	Enclosure	10 days
61	**CEMS**	**8 days**
62	CEMS Building	4 days
63	CEMS Building Foundation	4 days



Redactions Removed Pursuant to Commission Order

Ralph Green Dismantlement

ID	Task Name	Duration
64	**Stack**	**15 days**
65	Stack	15 days
66	**Demineralizer**	**13 days**
67	Remove demineralizer vessels	2 days
68	Remove acid and caustic tanks	4 days
69	Remove hot water tank	2 days
70	Remove misc. demineralizer piping.	2 days
71	Remove 2 Demin. Water Storage Tanks	3 days
72	**Site Prep**	**20 days**
73	Final Grading and Drainage	20 days
74	**Post Dismantlement Activities**	**20 days**
75	Post Dismantlement Activities	20 days



Redactions Removed Pursuant to Commission Order

LAKE ROAD

Redactions Removed Pursuant to Commission Order

LAKE ROAD STATION

The Lake Road Generating Station is a multi-unit facility that generates electricity from four steam turbine generators that receive steam from seven different boilers. These boilers burn either gas, distillate, or coal. These same boilers also produce steam that is sold to local steam customers. Lake Road also includes three combustion turbines that fire distillate (CTGs 5, 6, and 7) or natural gas (CTG 5).

Lake Road Boilers 1 and 2 are both package boilers rated at 85,000 lb/hr each. These boilers fire either natural gas or distillate and were placed into service in 1962.

Lake Road Boiler 3 is rated at 130,000 lb/hr, fires natural gas, and was placed into service in 1936.

Lake Road Boiler 4 is rated at 200,000 lb/hr, fires either natural gas or distillate, and was placed into service in 1951.

Lake Road Boiler 5 is rated at 250,000 lb/hr, fires either natural gas or coal, and was placed into service in 1959. This boiler has a precipitator for particulate control.

Lake Road Boiler 8 is rated at 250,000 lb/hr, fires either natural gas or distillate, and was placed into service in 2006.

Lake Road 4/6 has an SPP-accredited unit rating of 99 MW and was placed into service in 1967. This unit can fire either coal (using cyclone burners) or natural gas and has an electrostatic precipitator for particulate removal. River water is used for condenser cooling.

Lake Road Turbine Generator 1 has an SPP-accredited rating of 21.7 MW and was placed into service in 1951. This unit has a condensing turbine that uses a three-cell cooling tower for heat rejection.

Lake Road Turbine Generator 2 has an SPP-accredited rating of 27.3 MW and was placed into service in 1957. This unit has a condensing turbine that uses a four-cell cooling tower for heat rejection.

Lake Road Turbine Generator 3 has an SPP-accredited rating of 11.2 MW and was placed into service in 1962.

Lake Road Combustion Turbine (CT) 5 has an SPP-accredited rating of 63 MW and was placed into service in 1973. Lake Road CT 5 is comprised of a Westinghouse Model 501B combustion turbine set with a generator step-up transformer and auxiliary power transformer.

Lake Road Combustion Turbines 6 and 7 have an SPP-accredited rating of 42.7 MW and was placed into service in 1989 and 1990, respectively. Lake Road CTs 6 and 7 are comprised of P&W Model GG4A-7 combustion turbine set with a generator step-up transformer and auxiliary power transformer.

The Lake Road fuel yard has a main car unloading facility, a fuel storage and reclaim system, and a coal crusher facility that supplies coal to the units that can fire coal.

A detailed listing of the different equipment and systems included in each unit described above can be found in the attached retirement and dismantlement schedules included in this Appendix. The following is a detailed listing of the systems and equipment that are considered common to the Lake Road facilities.

COMMON

1. Administration building.
2. Fuel yard office building.
3. Butler building.
4. Dozer building.

5. Laboratory.

6. Guard shack.

4. Warehouses.

5. Non-Potable/Fire protection water tank.

6. Wells and low side water treatment.

8. Common fuel handling equipment.

9. 900 lb and 200 lb steam header system.

10. Fire water systems.

11. Stacks.

13. Low side feedwater system.

BOILER 1

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 1 Retirement

Owner Costs				
Pre-Retirement Activities		$25,969		
Retirement Activities		$52,440		
Post-Retirement Activities		$13,282		
Owner Direct Total			$91,691	
Owner Internal Costs	5.00%		$4,585	
Owner Contingency:	25.00%		$24,069	
Lake Road Boiler 1 Retirement Opinion of Probable Cost:				$120,344

Lake Road Boiler 1 Retirement

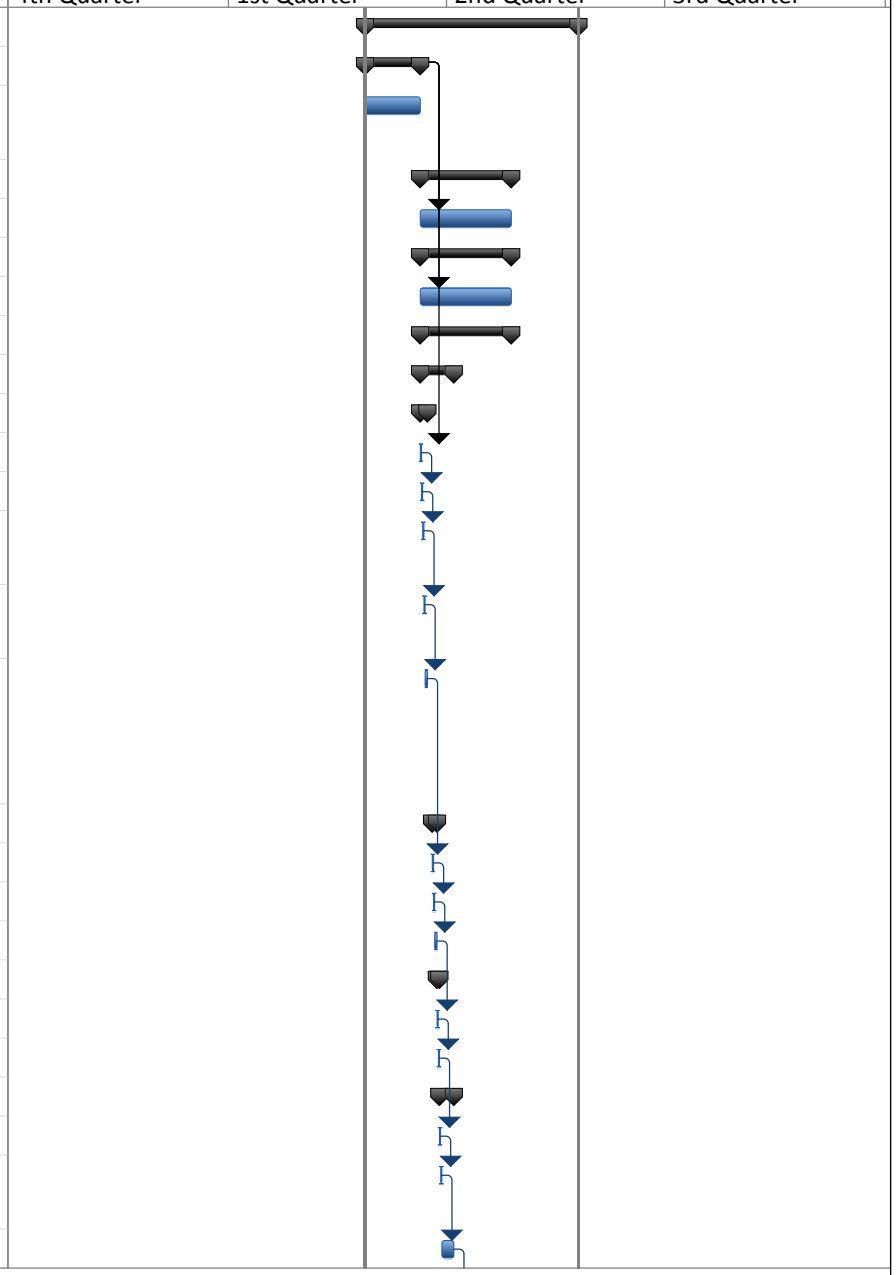
ID	Task Name	Cost
1	**Lake Road Boiler 1 Retirement**	**$91,691.28**
2	**Pre-Engineering**	**$25,969.20**
3	Permit review and engineering analysis and establish isolation points.	$25,969.20
4	**KCL&L Overhead Costs**	**$17,348.80**
5	KCP&L Retirement Manager	$17,348.80
6	**Equipment Rentals**	**$5,877.76**
7	Vacuum truck	$5,877.76
8	**Retirement**	**$29,213.52**
9	**Electrical**	**$10,037.04**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Motors**	**$4,677.36**
24	De-energize all primary power at the source.	$446.64
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$446.64
26	Drain lube oil system (if applicable) and dispose of oil.	$3,784.08
27	**Fuel Systems**	**$3,784.08**
28	Isolate gas lines from source, open and vent.	$1,261.36
29	Isolate fuel oil lines from source, drain, open and vent.	$2,522.72
30	**Boiler Chemical Feed**	**$1,261.36**
31	Drain all chemical feed tanks.	$1,261.36
32	**Boiler**	**$7,084.64**
33	Open boiler doors.	$880.96
34	Gas side - perform cleaning of the boiler and bottom ash system.	$4,480.00
35	Drain boiler, drum, downcomers and headers.	$842.72
36	Open drum doors.	$880.96
37	**Ductwork**	**$5,360.96**
38	Open ductwork doors.	$880.96
39	Perform extensive cleaning of the ductwork.	$4,480.00
40	**Feedwater Piping**	**$842.72**

Lake Road Boiler 1 Retirement

ID	Task Name	Cost
41	Drain water from the system.	$421.36
42	Leave open vents and drains.	$421.36
43	**Compressed Air System**	**$842.72**
44	Open vents and drains.	$842.72
45	**Post Retirement Activities**	**$13,282.00**
46	Post Retirement Activities	$13,282.00

Lake Road Boiler 1 Retirement

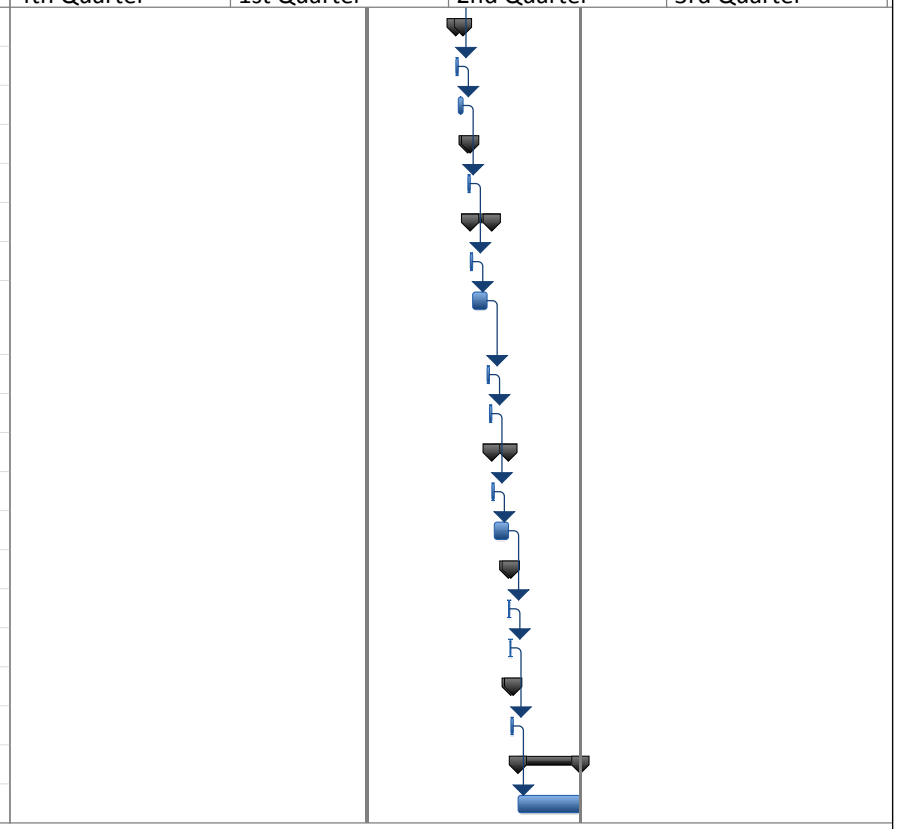
ID	Task Name	Duration
1	**Lake Road Boiler 1 Retirement**	**65 days**
2	**Pre-Engineering**	**17 days**
3	Permit review and engineering analysis and establish isolation points.	17 days
4	**KCL&L Overhead Costs**	**28 days**
5	KCP&L Retirement Manager	28 days
6	**Equipment Rentals**	**28 days**
7	Vacuum truck	28 days
8	**Retirement**	**28 days**
9	**Electrical**	**10 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Motors**	**4 days**
24	De-energize all primary power at the source.	0.5 days
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	0.5 days
26	Drain lube oil system (if applicable) and dispose of oil.	3 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 1 Retirement

ID	Task Name	Duration
27	**Fuel Systems**	**3 days**
28	Isolate gas lines from source, open and vent.	1 day
29	Isolate fuel oil lines from source, drain, open and vent.	2 days
30	**Boiler Chemical Feed**	**1 day**
31	Drain all chemical feed tanks.	1 day
32	**Boiler**	**7 days**
33	Open boiler doors.	1 day
34	Gas side - perform cleaning of the boiler and bottom ash system.	4 days
35	Drain boiler, drum, downcomers and headers.	1 day
36	Open drum doors.	1 day
37	**Ductwork**	**5 days**
38	Open ductwork doors.	1 day
39	Perform extensive cleaning of the ductwork.	4 days
40	**Feedwater Piping**	**1 day**
41	Drain water from the system.	0.5 days
42	Leave open vents and drains.	0.5 days
43	**Compressed Air System**	**1 day**
44	Open vents and drains.	1 day
45	**Post Retirement Activities**	**20 days**
46	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 1 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$412,728		
Overhead During Dismantlement			$86,564		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$515,672	
Demolition General Contractor (DGC) Costs					
Site Management			$129,546		
Equipment Rental			$307,618		
Consummables			$306,904		
Scrap Crew(s)			$304,531		
Dismantlement			$493,684		
Contractor Direct Cost*		$1,542,283			
Contractor Allowances					
DGC Insurance	2.00%		$30,846		
Contingency/Profit	15.00%		$235,969		
Performance Bond	2.00%		$36,181.96		
Contractor Costs Total:				$1,845,280	
Total:					$2,360,952
Owner Internal Costs:	5.00%				$118,048
Owner Contingency:	25.00%				$619,750
Lake Road Boiler 1 Dismantlement Opinion of Probable Cost:					$3,098,749

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $2,057,955

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 1 Dismantlement

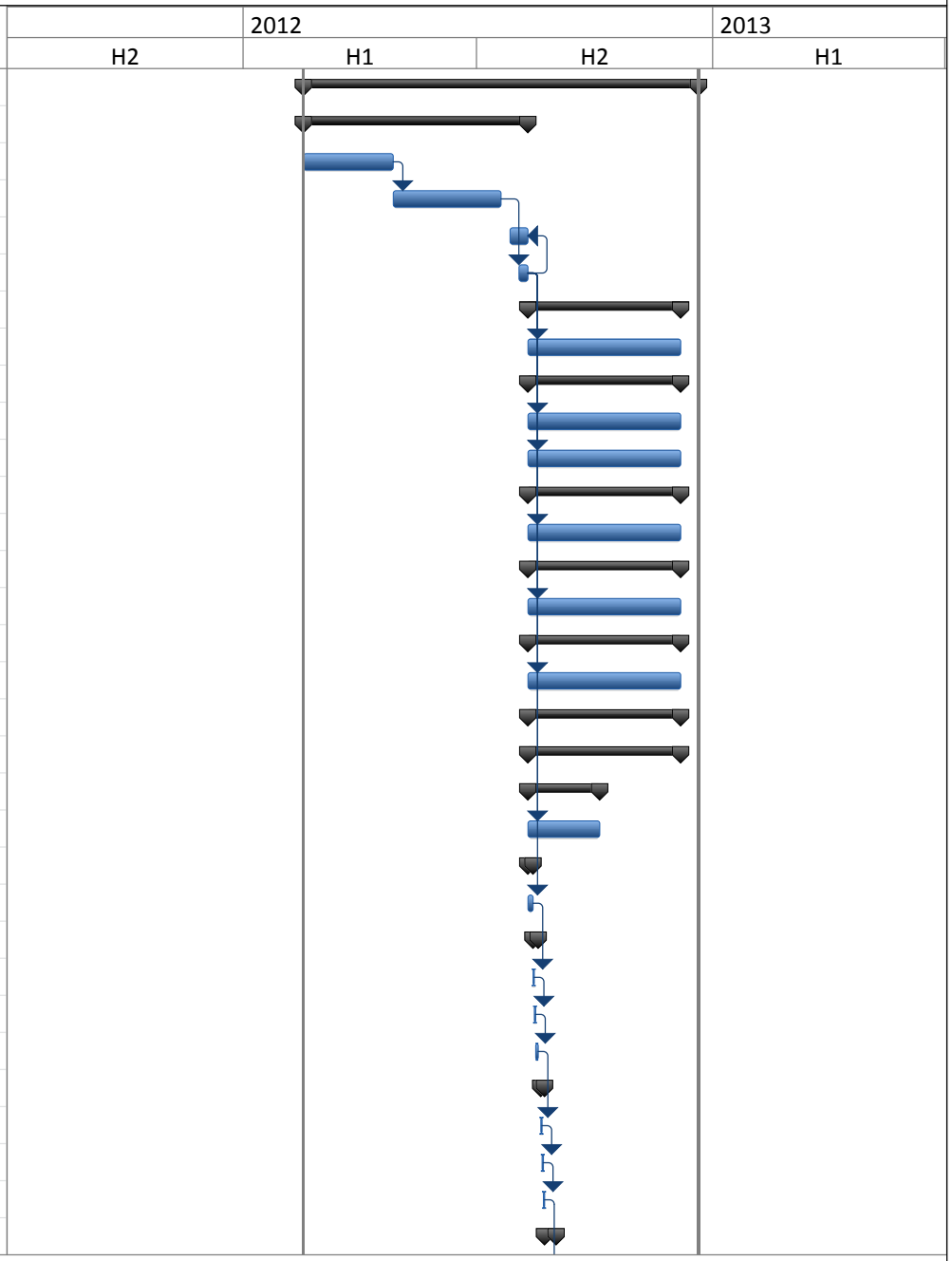
ID	Task Name	Cost
1	**Lake Road Boiler 1 Dismantlement**	**$2,057,957.12**
2	**Pre-Dismantlement Activities**	**$412,728.00**
3	Detailed Characterization Study	$234,744.40
4	Hire Demolition General Contractor	$167,184.00
5	KCP&L Prepares Unit for Dismantlement	$10,799.60
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$86,564.00**
8	KCP&L Engineer	$86,564.00
9	**Demoliton Contractor Overhead during Dismantlement**	**$129,546.80**
10	Demolition Contractor Safety Manager	$45,512.40
11	Demolition Contractor Superintendent	$84,034.40
12	**Demolition Contractor Equipment Rental Costs**	**$307,618.40**
13	Equipment Rental	$307,618.40
14	**Demolition Contractor Consummables**	**$306,904.40**
15	Consummables	$306,904.40
16	**Scrap Crew(s)**	**$304,531.20**
17	Crew to Handle Scrap Material(s)	$304,531.20
18	**Dismantlement Directs**	**$493,684.32**
19	**Phase 1 Demolition**	**$493,684.32**
20	**Electrical Demolition**	**$71,654.40**
21	Electrical Demolition Equipment	$71,654.40
22	**Critical Piping**	**$3,582.72**
23	Main Steam Piping	$3,582.72
24	**Fuel Systems (plant side)**	**$7,165.44**
25	Gas Piping and Valves	$1,791.36
26	Fuel Oil Piping and Valves	$1,791.36
27	Igniters	$3,582.72
28	**Chemical Feed Systems**	**$5,374.08**
29	Tanks	$1,791.36
30	Pumps	$1,791.36
31	Piping	$1,791.36
32	**Sampling Systems**	**$10,017.12**
33	Field Mounted Heat Exchangers	$3,582.72
34	Piping	$2,851.68
35	Sample Panel	$3,582.72
36	**Miscellaneous Equipment**	**$8,956.80**
37	Miscellaneous Equipment (including Fire Protection)	$8,956.80
38	**Boiler Equipment**	**$71,654.40**
39	Fans	$17,913.60
40	Drums	$17,913.60
41	Ductwork	$35,827.20
42	**Boiler Removal**	**$143,308.80**
43	Furnace	$143,308.80
44	**Boiler Steel Framing**	**$100,316.16**

Lake Road Boiler 1 Dismantlement

ID	Task Name	Cost
45	Framing	$35,827.20
46	Bracing and Girts	$35,827.20
47	Columns	$28,661.76
48	**Boiler Foundations**	**$71,654.40**
49	Equipment Foundation Demolition to Grade	$71,654.40
50	**Project Close-Out**	**$16,380.00**
51	Project Close-Out Activities	$16,380.00

Lake Road Boiler 1 Dismantlement

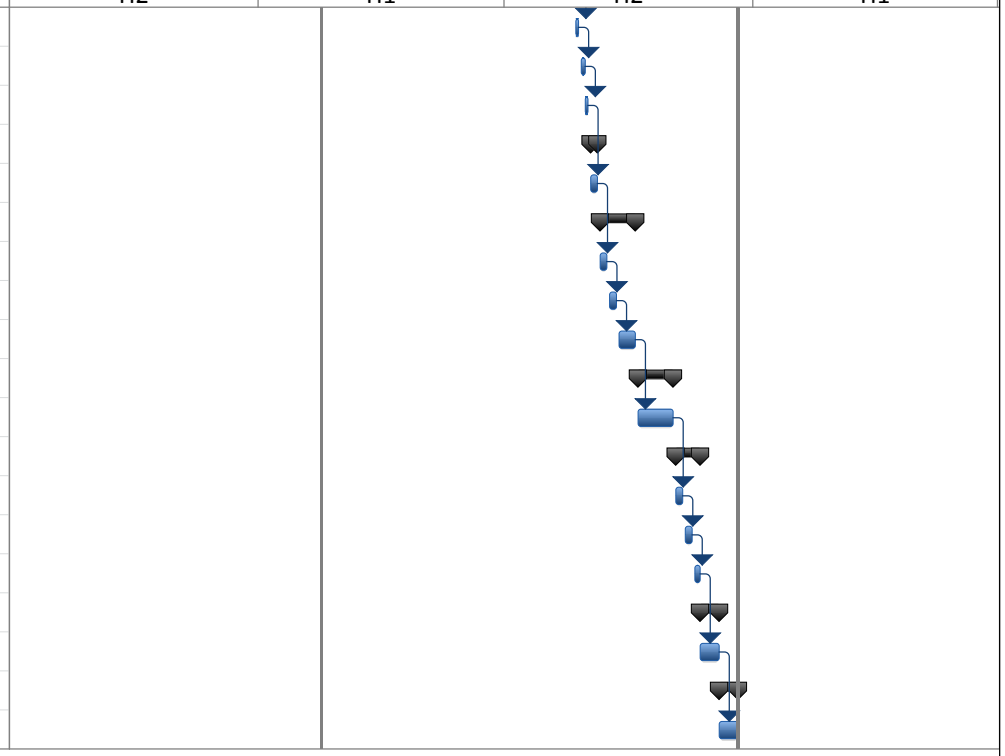
ID	Task Name	Duration
1	**Lake Road Boiler 1 Dismantlement**	**220 days**
2	**Pre-Dismantlement Activities**	**125 days**
3	Detailed Characterization Study	50 days
4	Hire Demolition General Contractor	3 mons
5	KCP&L Prepares Unit for Dismantlement	2 wks
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**85 days**
8	KCP&L Engineer	85 days
9	**Demoliton Contractor Overhead during Dismantlemen**	**85 days**
10	Demolition Contractor Safety Manager	85 days
11	Demolition Contractor Superintendent	85 days
12	**Demolition Contractor Equipment Rental Costs**	**85 days**
13	Equipment Rental	85 days
14	**Demolition Contractor Consummables**	**85 days**
15	Consummables	85 days
16	**Scrap Crew(s)**	**85 days**
17	Crew to Handle Scrap Material(s)	85 days
18	**Dismantlement Directs**	**85 days**
19	**Phase 1 Demolition**	**85 days**
20	**Electrical Demolition**	**40 days**
21	Electrical Demolition Equipment	40 days
22	**Critical Piping**	**2 days**
23	Main Steam Piping	2 days
24	**Fuel Systems (plant side)**	**4 days**
25	Gas Piping and Valves	1 day
26	Fuel Oil Piping and Valves	1 day
27	Igniters	2 days
28	**Chemical Feed Systems**	**3 days**
29	Tanks	1 day
30	Pumps	1 day
31	Piping	1 day
32	**Sampling Systems**	**7 days**



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 1 Dismantlement

ID	Task Name	Duration
33	Field Mounted Heat Exchangers	2 days
34	Piping	3 days
35	Sample Panel	2 days
36	**Miscellaneous Equipment**	**5 days**
37	Miscellaneous Equipment (including Fire Protec	5 days
38	**Boiler Equipment**	**20 days**
39	Fans	5 days
40	Drums	5 days
41	Ductwork	10 days
42	**Boiler Removal**	**20 days**
43	Furnace	20 days
44	**Boiler Steel Framing**	**14 days**
45	Framing	5 days
46	Bracing and Girts	5 days
47	Columns	4 days
48	**Boiler Foundations**	**10 days**
49	Equipment Foundation Demolition to Grade	10 days
50	**Project Close-Out**	**10 days**
51	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

BOILER 2

Lake Road Boiler 2 Retirement

Owner Costs				
Pre-Retirement Activities		$25,969		
Retirement Activities		$52,440		
Post-Retirement Activities		$13,282		
Owner Direct Total			$91,691	
Owner Internal Costs	5.00%		$4,585	
Owner Contingency:	25.00%		$24,069	
Lake Road Boiler 2 Retirement Opinion of Probable Cost:				$120,344

Lake Road Boiler 2 Retirement

ID	Task Name	Cost
1	**Lake Road Boiler 2 Retirement**	**$91,691.28**
2	**Pre-Engineering**	**$25,969.20**
3	Permit review and engineering analysis and establish isolation points.	$25,969.20
4	**KCL&L Overhead Costs**	**$17,348.80**
5	KCP&L Retirement Manager	$17,348.80
6	**Equipment Rentals**	**$5,877.76**
7	Vacuum truck	$5,877.76
8	**Retirement**	**$29,213.52**
9	**Electrical**	**$10,037.04**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Motors**	**$4,677.36**
24	De-energize all primary power at the source.	$446.64
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$446.64
26	Drain lube oil system (if applicable) and dispose of oil.	$3,784.08
27	**Fuel Systems**	**$3,784.08**
28	Isolate gas lines from source, open and vent.	$1,261.36
29	Isolate fuel oil lines from source, drain, open and vent.	$2,522.72
30	**Boiler Chemical Feed**	**$1,261.36**
31	Drain all chemical feed tanks.	$1,261.36
32	**Boiler**	**$7,084.64**
33	Open boiler doors.	$880.96
34	Gas side - perform cleaning of the boiler and bottom ash system.	$4,480.00
35	Drain boiler, drum, downcomers and headers.	$842.72
36	Open drum doors.	$880.96
37	**Ductwork**	**$5,360.96**
38	Open ductwork doors.	$880.96
39	Perform extensive cleaning of the ductwork.	$4,480.00
40	**Feedwater Piping**	**$842.72**

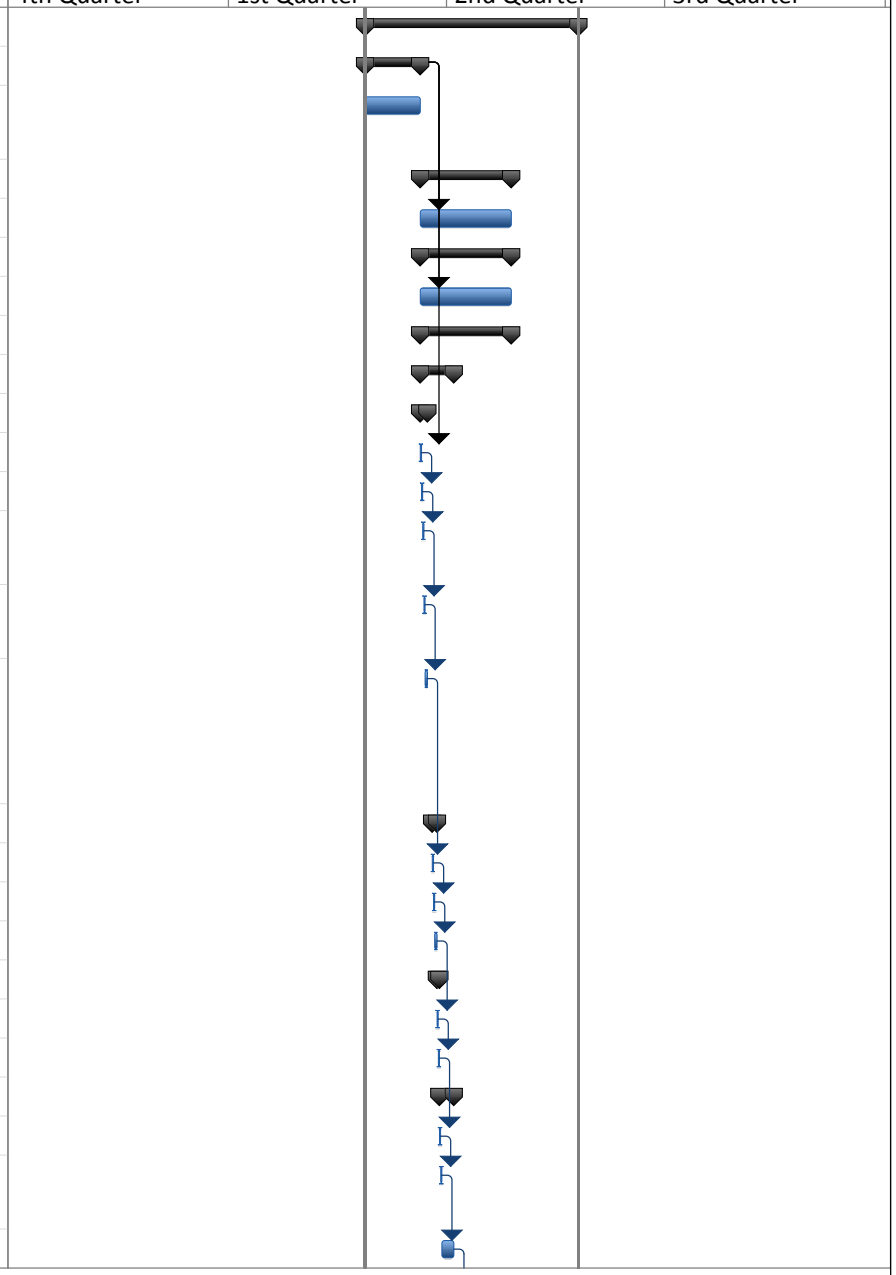
Redactions Removed Pursuant to Commission Order

Lake Road Boiler 2 Retirement

ID	Task Name	Cost
41	Drain water from the system.	$421.36
42	Leave open vents and drains.	$421.36
43	**Compressed Air System**	**$842.72**
44	Open vents and drains.	$842.72
45	**Post Retirement Activities**	**$13,282.00**
46	Post Retirement Activities	$13,282.00

Lake Road Boiler 2 Retirement

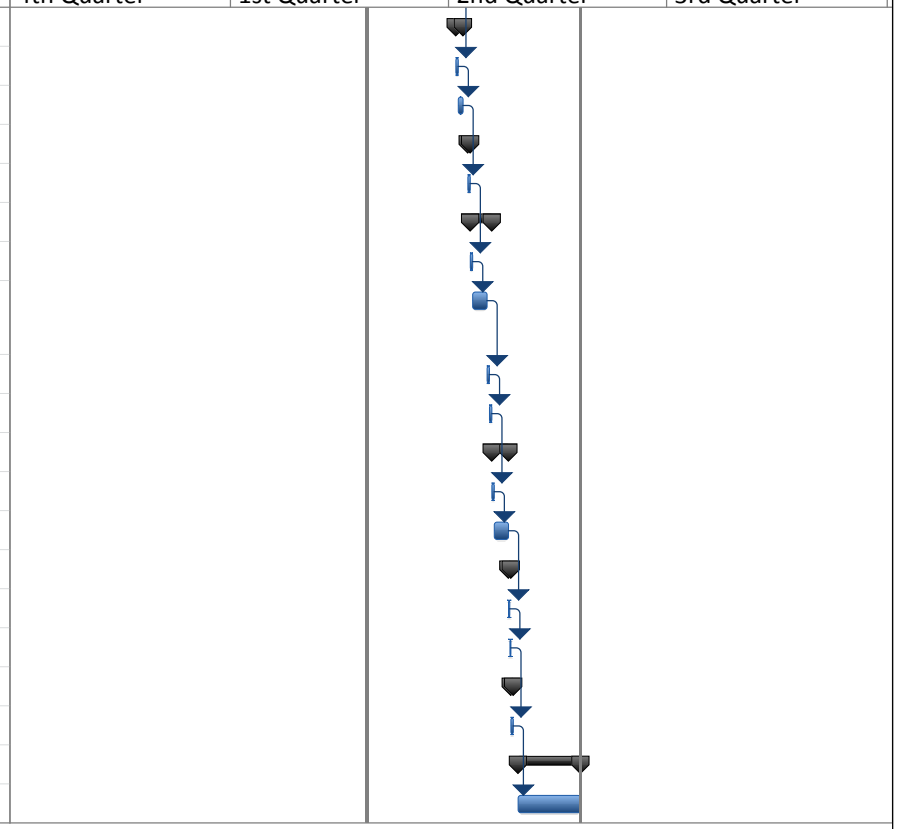
ID	Task Name	Duration
1	**Lake Road Boiler 2 Retirement**	**65 days**
2	**Pre-Engineering**	**17 days**
3	Permit review and engineering analysis and establish isolation points.	17 days
4	**KCL&L Overhead Costs**	**28 days**
5	KCP&L Retirement Manager	28 days
6	**Equipment Rentals**	**28 days**
7	Vacuum truck	28 days
8	**Retirement**	**28 days**
9	**Electrical**	**10 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Motors**	**4 days**
24	De-energize all primary power at the source.	0.5 days
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	0.5 days
26	Drain lube oil system (if applicable) and dispose of oil.	3 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 2 Retirement

ID	Task Name	Duration
27	**Fuel Systems**	**3 days**
28	Isolate gas lines from source, open and vent.	1 day
29	Isolate fuel oil lines from source, drain, open and vent.	2 days
30	**Boiler Chemical Feed**	**1 day**
31	Drain all chemical feed tanks.	1 day
32	**Boiler**	**7 days**
33	Open boiler doors.	1 day
34	Gas side - perform cleaning of the boiler and bottom ash system.	4 days
35	Drain boiler, drum, downcomers and headers.	1 day
36	Open drum doors.	1 day
37	**Ductwork**	**5 days**
38	Open ductwork doors.	1 day
39	Perform extensive cleaning of the ductwork.	4 days
40	**Feedwater Piping**	**1 day**
41	Drain water from the system.	0.5 days
42	Leave open vents and drains.	0.5 days
43	**Compressed Air System**	**1 day**
44	Open vents and drains.	1 day
45	**Post Retirement Activities**	**20 days**
46	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 2 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$412,728		
Overhead During Dismantlement			$86,564		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$515,672	
Demolition General Contractor (DGC) Costs					
Site Management			$129,546		
Equipment Rental			$307,618		
Consummables			$306,904		
Scrap Crew(s)			$304,531		
Dismantlement			$493,684		
Contractor Direct Cost*		$1,542,283			
Contractor Allowances					
DGC Insurance	2.00%		$30,846		
Contingency/Profit	15.00%		$235,969		
Performance Bond	2.00%		$36,181.96		
Contractor Costs Total:				$1,845,280	
Total:					$2,360,952
Owner Internal Costs:	5.00%				$118,048
Owner Contingency:	25.00%				$619,750
Lake Road Boiler 2 Dismantlement Opinion of Probable Cost:					$3,098,749

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $2,057,955

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 2 Dismantlement

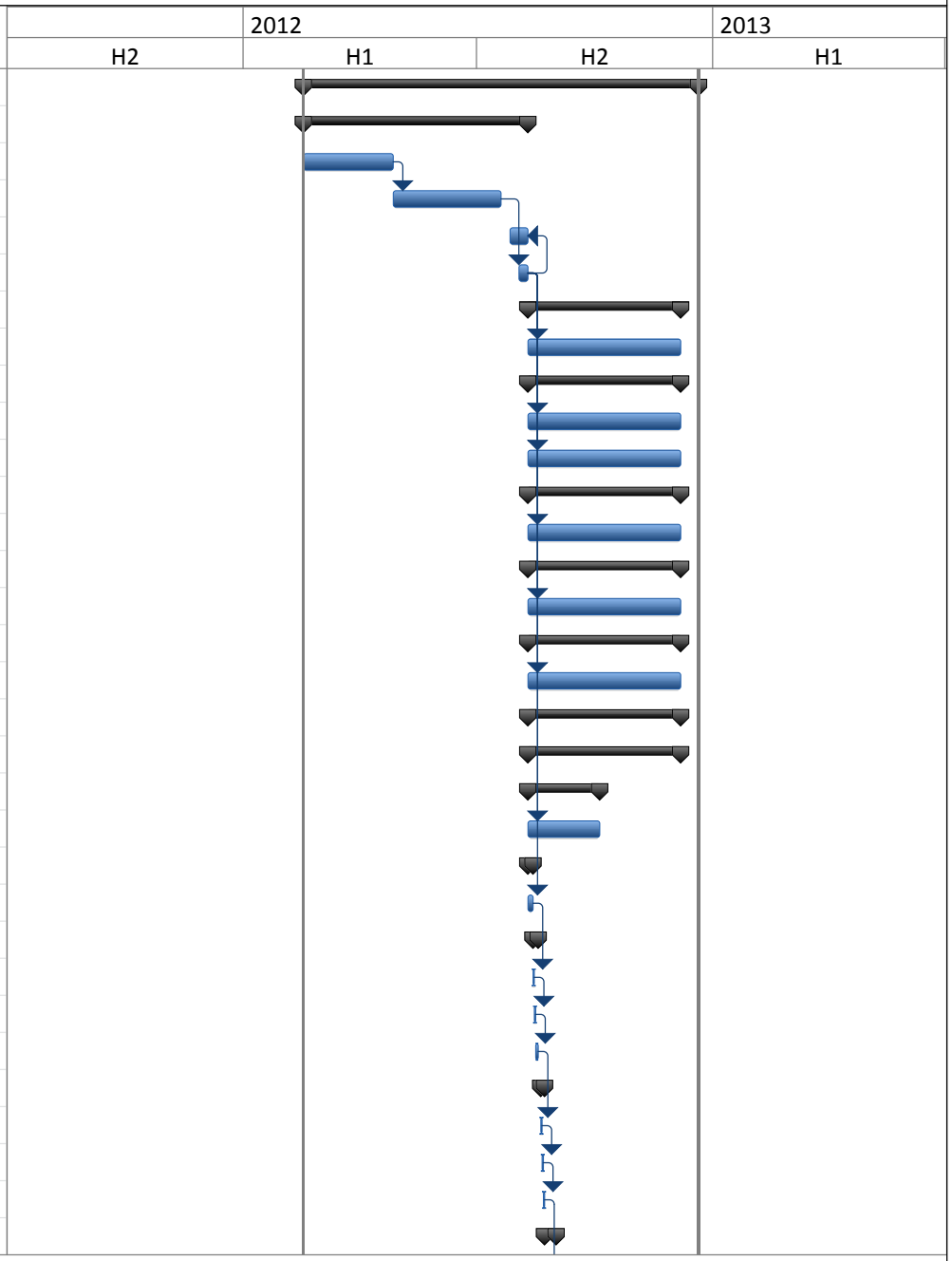
ID	Task Name	Cost
1	**Lake Road Boiler 2 Dismantlement**	**$2,057,957.12**
2	**Pre-Dismantlement Activities**	**$412,728.00**
3	Detailed Characterization Study	$234,744.40
4	Hire Demolition General Contractor	$167,184.00
5	KCP&L Prepares Unit for Dismantlement	$10,799.60
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$86,564.00**
8	KCP&L Engineer	$86,564.00
9	**Demoliton Contractor Overhead during Dismantlement**	**$129,546.80**
10	Demolition Contractor Safety Manager	$45,512.40
11	Demolition Contractor Superintendent	$84,034.40
12	**Demolition Contractor Equipment Rental Costs**	**$307,618.40**
13	Equipment Rental	$307,618.40
14	**Demolition Contractor Consummables**	**$306,904.40**
15	Consummables	$306,904.40
16	**Scrap Crew(s)**	**$304,531.20**
17	Crew to Handle Scrap Material(s)	$304,531.20
18	**Dismantlement Directs**	**$493,684.32**
19	**Phase 1 Demolition**	**$493,684.32**
20	**Electrical Demolition**	**$71,654.40**
21	Electrical Demolition Equipment	$71,654.40
22	**Critical Piping**	**$3,582.72**
23	Main Steam Piping	$3,582.72
24	**Fuel Systems (plant side)**	**$7,165.44**
25	Gas Piping and Valves	$1,791.36
26	Fuel Oil Piping and Valves	$1,791.36
27	Igniters	$3,582.72
28	**Chemical Feed Systems**	**$5,374.08**
29	Tanks	$1,791.36
30	Pumps	$1,791.36
31	Piping	$1,791.36
32	**Sampling Systems**	**$10,017.12**
33	Field Mounted Heat Exchangers	$3,582.72
34	Piping	$2,851.68
35	Sample Panel	$3,582.72
36	**Miscellaneous Equipment**	**$8,956.80**
37	Miscellaneous Equipment (including Fire Protection)	$8,956.80
38	**Boiler Equipment**	**$71,654.40**
39	Fans	$17,913.60
40	Drums	$17,913.60
41	Ductwork	$35,827.20
42	**Boiler Removal**	**$143,308.80**
43	Furnace	$143,308.80
44	**Boiler Steel Framing**	**$100,316.16**

Lake Road Boiler 2 Dismantlement

ID	Task Name	Cost
45	Framing	$35,827.20
46	Bracing and Girts	$35,827.20
47	Columns	$28,661.76
48	**Boiler Foundations**	**$71,654.40**
49	Equipment Foundation Demolition to Grade	$71,654.40
50	**Project Close-Out**	**$16,380.00**
51	Project Close-Out Activities	$16,380.00

Lake Road Boiler 2 Dismantlement

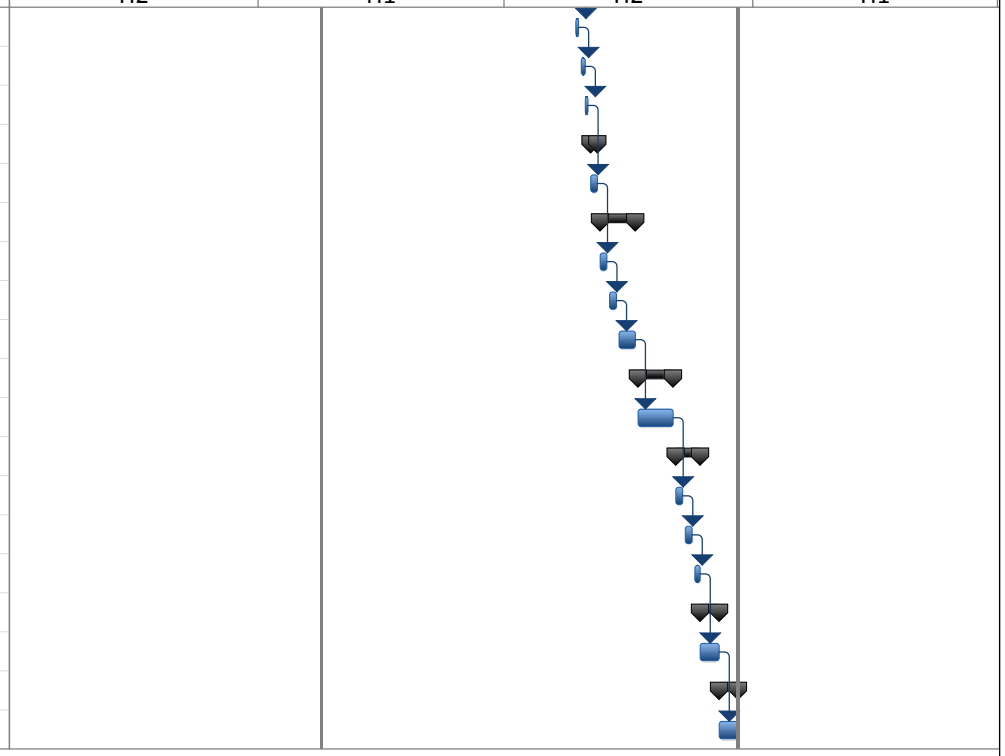
ID	Task Name	Duration
1	**Lake Road Boiler 2 Dismantlement**	**220 days**
2	**Pre-Dismantlement Activities**	**125 days**
3	Detailed Characterization Study	50 days
4	Hire Demolition General Contractor	3 mons
5	KCP&L Prepares Unit for Dismantlement	2 wks
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**85 days**
8	KCP&L Engineer	85 days
9	**Demoliton Contractor Overhead during Dismantlemen**	**85 days**
10	Demolition Contractor Safety Manager	85 days
11	Demolition Contractor Superintendent	85 days
12	**Demolition Contractor Equipment Rental Costs**	**85 days**
13	Equipment Rental	85 days
14	**Demolition Contractor Consummables**	**85 days**
15	Consummables	85 days
16	**Scrap Crew(s)**	**85 days**
17	Crew to Handle Scrap Material(s)	85 days
18	**Dismantlement Directs**	**85 days**
19	**Phase 1 Demolition**	**85 days**
20	**Electrical Demolition**	**40 days**
21	Electrical Demolition Equipment	40 days
22	**Critical Piping**	**2 days**
23	Main Steam Piping	2 days
24	**Fuel Systems (plant side)**	**4 days**
25	Gas Piping and Valves	1 day
26	Fuel Oil Piping and Valves	1 day
27	Igniters	2 days
28	**Chemical Feed Systems**	**3 days**
29	Tanks	1 day
30	Pumps	1 day
31	Piping	1 day
32	**Sampling Systems**	**7 days**



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 2 Dismantlement

ID	Task Name	Duration
33	Field Mounted Heat Exchangers	2 days
34	Piping	3 days
35	Sample Panel	2 days
36	**Miscellaneous Equipment**	**5 days**
37	Miscellaneous Equipment (including Fire Protec	5 days
38	**Boiler Equipment**	**20 days**
39	Fans	5 days
40	Drums	5 days
41	Ductwork	10 days
42	**Boiler Removal**	**20 days**
43	Furnace	20 days
44	**Boiler Steel Framing**	**14 days**
45	Framing	5 days
46	Bracing and Girts	5 days
47	Columns	4 days
48	**Boiler Foundations**	**10 days**
49	Equipment Foundation Demolition to Grade	10 days
50	**Project Close-Out**	**10 days**
51	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

BOILER 3

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Retirement

Owner Costs				
Pre-Retirement Activities		$25,969		
Retirement Activities		$84,001		
Post-Retirement Activities		$13,282		
Owner Direct Total			$123,252	
Owner Internal Costs	5.00%		$6,163	
Owner Contingency:	25.00%		$32,354	
Lake Road Boiler 3 Retirement Opinion of Probable Cost:				$161,768

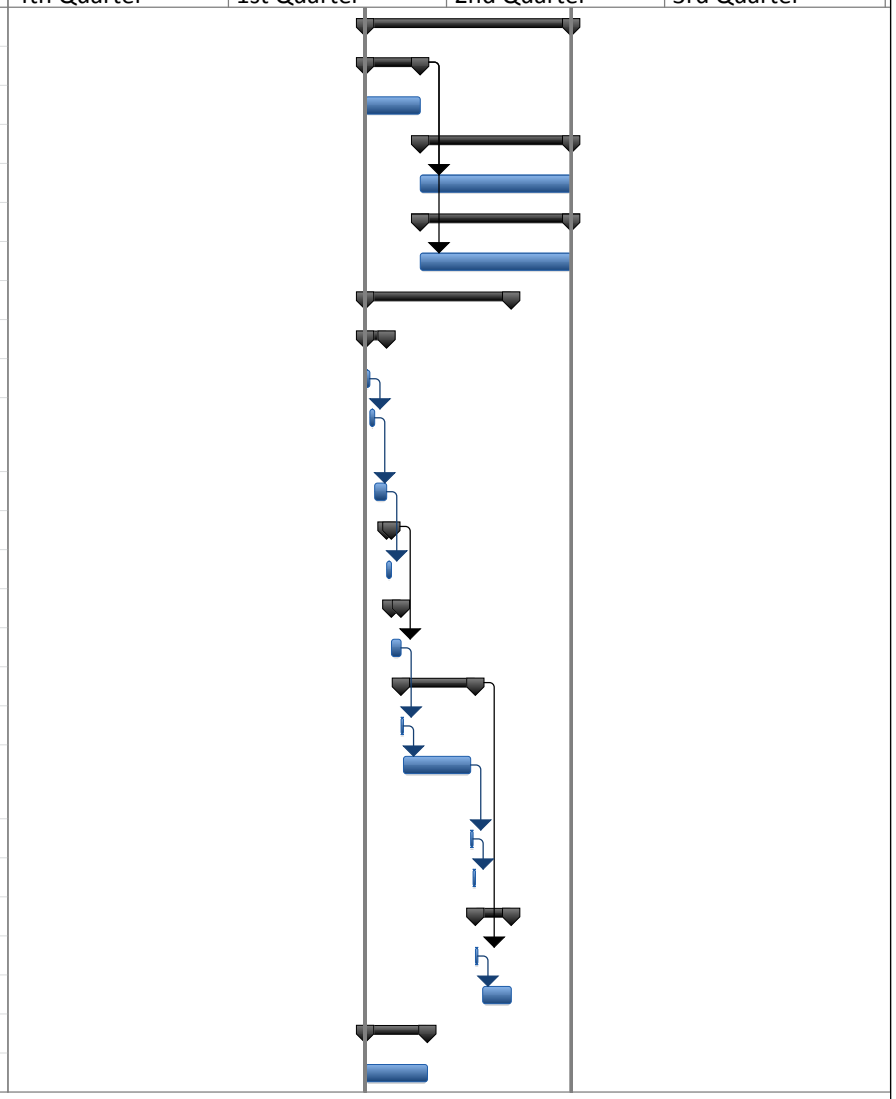
Lake Road Boiler 3 Retirement

ID	Task Name	Cost
1	**Lake Road Boiler 3 Retirement**	**$123,252.08**
2	**Pre-Engineering**	**$25,969.20**
3	Engineering analysis and establish isolation points.	$0.00
4	**KCL&L Overhead Costs**	**$27,882.00**
5	KCP&L Retirement Manager	$27,882.00
6	**Equipment Rentals**	**$9,446.40**
7	Vacuum truck	$9,446.40
8	**Retirement**	**$59,954.48**
9	**Motors**	**$6,216.00**
10	De-energize all primary power at the source.	$1,786.56
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
12	Drain lube oil system (if applicable) and dispose of oil.	$2,642.88
13	**Fuel Gas Systems**	**$1,685.44**
14	Vent the Fuel Gas Systems	$1,685.44
15	**Boiler Chemical Feed**	**$1,685.44**
16	Drain all chemical feed tanks and piping	$1,685.44
17	**Boiler**	**$25,004.64**
18	Open boiler doors.	$880.96
19	Gas side - perform cleaning of the boiler.	$22,400.00
20	Drain boiler, drum, downcomers and headers.	$842.72
21	Open drum doors.	$880.96
22	**Ductwork**	**$12,080.96**
23	Open ductwork doors.	$880.96
24	Perform extensive cleaning of the ductwork.	$11,200.00
25	**Post Retirement Activities**	**$13,282.00**
26	Post Retirement Activities	$13,282.00

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Retirement

ID	Task Name	Duration
1	**Lake Road Boiler 3 Retirement**	**62 days**
2	**Pre-Engineering**	**17 days**
3	Engineering analysis and establish isolation points.	17 days
4	**KCL&L Overhead Costs**	**45 days**
5	KCP&L Retirement Manager	45 days
6	**Equipment Rentals**	**45 days**
7	Vacuum truck	45 days
8	**Retirement**	**45 days**
9	**Motors**	**7 days**
10	De-energize all primary power at the source.	2 days
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
12	Drain lube oil system (if applicable) and dispose of oil.	3 days
13	**Fuel Gas Systems**	**2 days**
14	Vent the Fuel Gas Systems	2 days
15	**Boiler Chemical Feed**	**2 days**
16	Drain all chemical feed tanks and piping	2 days
17	**Boiler**	**23 days**
18	Open boiler doors.	1 day
19	Gas side - perform cleaning of the boiler.	20 days
20	Drain boiler, drum, downcomers and headers.	1 day
21	Open drum doors.	1 day
22	**Ductwork**	**11 days**
23	Open ductwork doors.	1 day
24	Perform extensive cleaning of the ductwork.	10 days
25	**Post Retirement Activities**	**20 days**
26	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$186,483		
Overhead During Dismantlement			$298,939		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$501,802	
Demolition General Contractor (DGC) Costs					
Site Management			$149,359		
Equipment Rental			$354,665		
Consummables			$353,842		
Scrap Crew(s)			$351,016		
Dismantlement			$671,358		
Contractor Direct Cost*		$1,880,240			
Contractor Allowances					
DGC Insurance	2.00%		$37,605		
Contingency/Profit	15.00%		$287,677		
Performance Bond	2.00%		$44,110.43		
Contractor Costs Total:				$2,249,632	
Total:					$2,751,434
Owner Internal Costs:	5.00%				$137,572
Owner Contingency:	25.00%				$722,251
Lake Road Boiler 3 Dismantlement Opinion of Probable Cost:					$3,611,257

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $2,382,042

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Dismantlement

ID	Task Name	Cost
1	**Lake Road Boiler 3 Dismantlement**	**$2,382,135.80**
2	**Pre-Dismantlement Activities**	**$186,483.32**
3	Detailed Planning & Hire Owner's Engineer	$69,627.52
4	Hire Demolition General Contractor	$111,456.00
5	KCP&L Prepares Unit for Dismantlement	$5,399.80
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$298,939.20**
8	KCP&L Engineer	$99,803.20
9	Owners Engineer Project Manager	$29,792.00
10	Owners Engineer - Engineer	$169,344.00
11	**Demoliton Contractor Overhead during Dismantlement**	**$149,359.84**
12	Demolition Contractor Safety Manager	$52,473.12
13	Demolition Contractor Superintendent	$96,886.72
14	**Demolition Contractor Equipment Rental Costs**	**$354,665.92**
15	Equipment Rental	$354,665.92
16	**Demolition Contractor Consummables**	**$353,842.72**
17	Consummables	$353,842.72
18	**Scrap Crew(s)**	**$351,106.56**
19	Crew to Handle Scrap Material(s)	$351,106.56
20	**Dismantlement Directs**	**$671,358.24**
21	**Phase 1 Demolition**	**$671,358.24**
22	**Electrical Demolition**	**$107,481.60**
23	Electrical Demolition Equipment	$107,481.60
24	**Boiler Feed System**	**$3,582.72**
25	Feedwater piping	$3,582.72
26	**Critical Piping**	**$3,582.72**
27	Main Steam Piping	$3,582.72
28	**Fuel Systems (Plant Side)**	**$5,374.08**
29	Gas Piping and Equipment	$3,582.72
30	Igniters	$1,791.36
31	**Air Preheat System**	**$1,791.36**
32	Steam Coil Air Heater Piping	$1,791.36
33	**Miscellaneous Equipment**	**$8,956.80**
34	Miscellaneous Equipment (including Fire Protection)	$8,956.80
35	**Boiler Equipment**	**$67,669.92**
36	Fans	$17,913.60
37	Steam Drum	$28,661.76
38	Soot Blowers	$3,180.96
39	Ductwork	$17,913.60
40	**Boiler Removal**	**$114,647.04**
41	Furnace	$57,323.52
42	Back Pass	$57,323.52
43	**Boiler Steel Framing**	**$250,790.40**
44	Hanger Girders at Top	$35,827.20

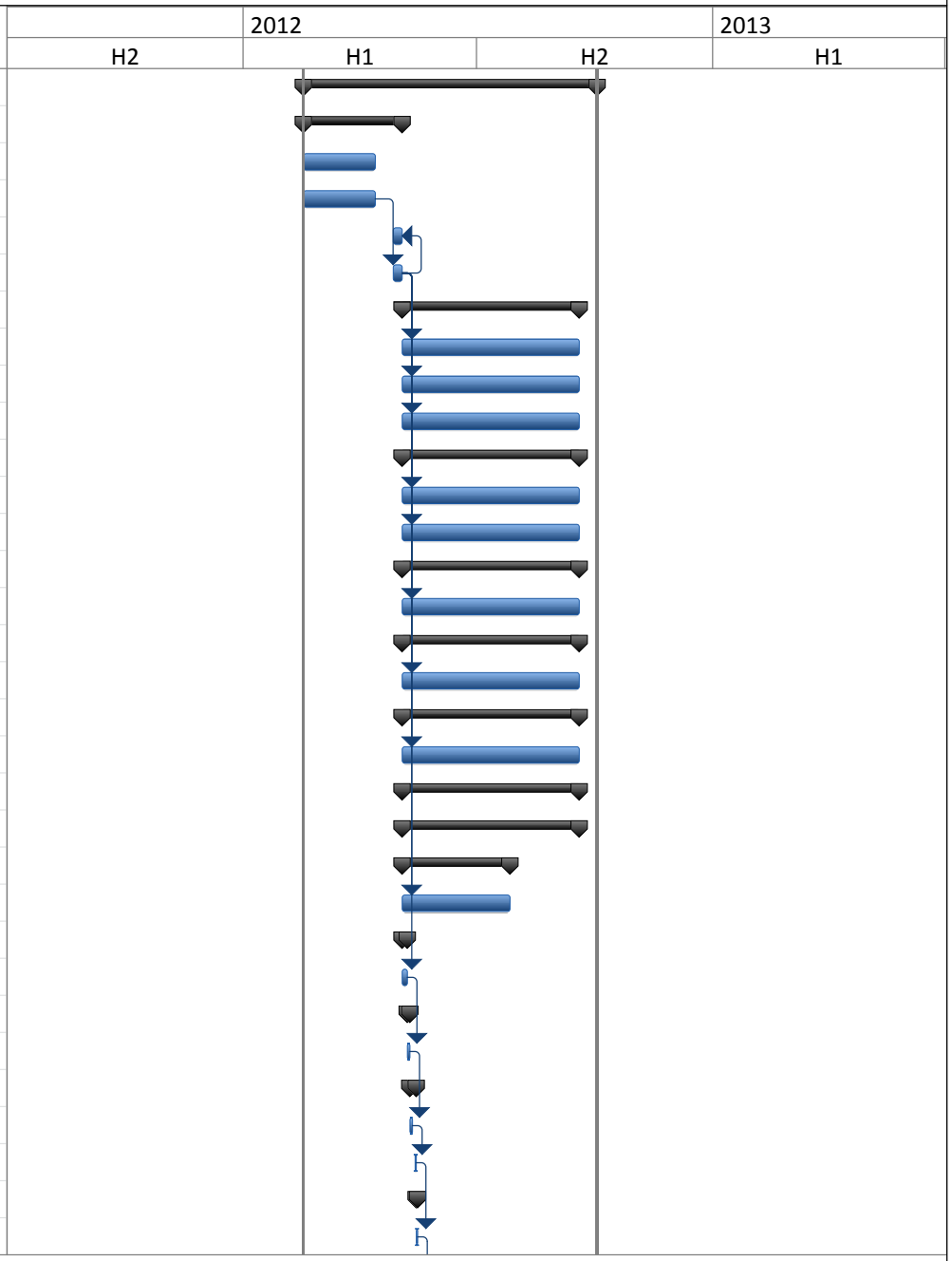
Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Dismantlement

ID	Task Name	Cost
45	All Other Framing	$71,654.40
46	Bracing and Girts	$71,654.40
47	Columns	$71,654.40
48	**Boiler Foundations**	**$107,481.60**
49	Equipment Foundation Demolition to Grade	$107,481.60
50	**Project Close-Out**	**$16,380.00**
51	Project Close-Out Activities	$16,380.00

Lake Road Boiler 3 Dismantlement

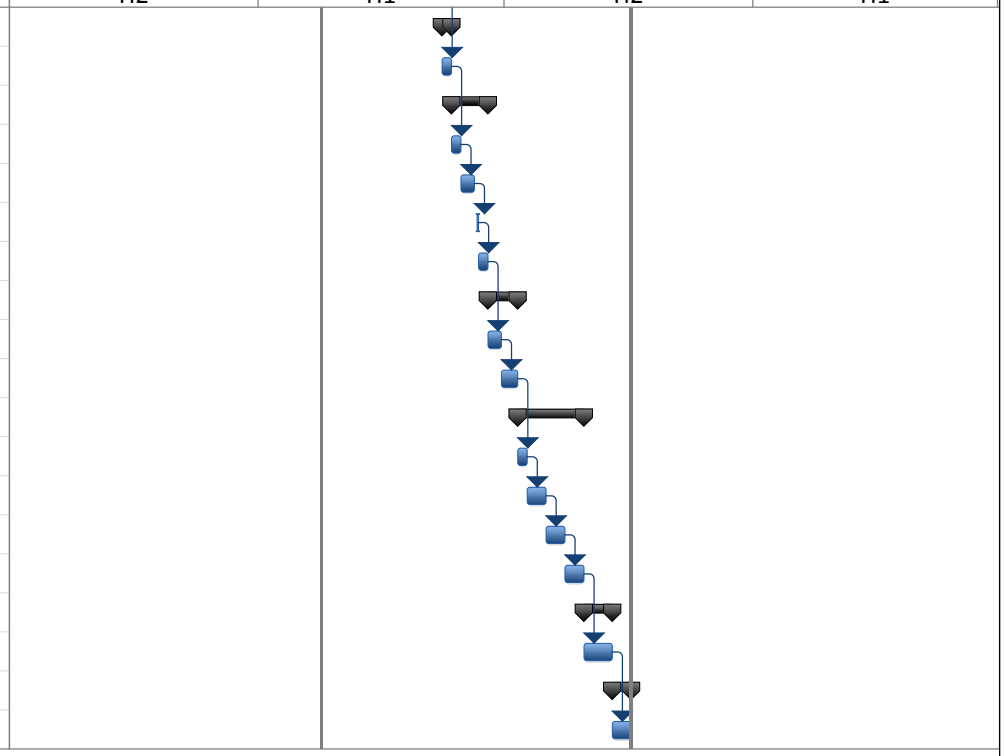
ID	Task Name	Duration
1	**Lake Road Boiler 3 Dismantlement**	**163 days**
2	**Pre-Dismantlement Activities**	**55 days**
3	Detailed Planning & Hire Owner's Engineer	2 mons
4	Hire Demolition General Contractor	2 mons
5	KCP&L Prepares Unit for Dismantlement	1 wk
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**98 days**
8	KCP&L Engineer	98 days
9	Owners Engineer Project Manager	98 days
10	Owners Engineer - Engineer	98 days
11	**Demoliton Contractor Overhead during Dismantlemen**	**98 days**
12	Demolition Contractor Safety Manager	98 days
13	Demolition Contractor Superintendent	98 days
14	**Demolition Contractor Equipment Rental Costs**	**98 days**
15	Equipment Rental	98 days
16	**Demolition Contractor Consummables**	**98 days**
17	Consummables	98 days
18	**Scrap Crew(s)**	**98 days**
19	Crew to Handle Scrap Material(s)	98 days
20	**Dismantlement Directs**	**98 days**
21	**Phase 1 Demolition**	**98 days**
22	**Electrical Demolition**	**60 days**
23	Electrical Demolition Equipment	60 days
24	**Boiler Feed System**	**2 days**
25	Feedwater piping	2 days
26	**Critical Piping**	**2 days**
27	Main Steam Piping	2 days
28	**Fuel Systems (Plant Side)**	**3 days**
29	Gas Piping and Equipment	2 days
30	Igniters	1 day
31	**Air Preheat System**	**1 day**
32	Steam Coil Air Heater Piping	1 day



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 3 Dismantlement

ID	Task Name	Duration
33	**Miscellaneous Equipment**	**5 days**
34	Miscellaneous Equipment (including Fire Protec	5 days
35	**Boiler Equipment**	**19 days**
36	Fans	5 days
37	Steam Drum	8 days
38	Soot Blowers	1 day
39	Ductwork	5 days
40	**Boiler Removal**	**16 days**
41	Furnace	8 days
42	Back Pass	8 days
43	**Boiler Steel Framing**	**35 days**
44	Hanger Girders at Top	5 days
45	All Other Framing	10 days
46	Bracing and Girts	10 days
47	Columns	10 days
48	**Boiler Foundations**	**15 days**
49	Equipment Foundation Demolition to Grade	15 days
50	**Project Close-Out**	**10 days**
51	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

BOILER 4

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 4 Retirement

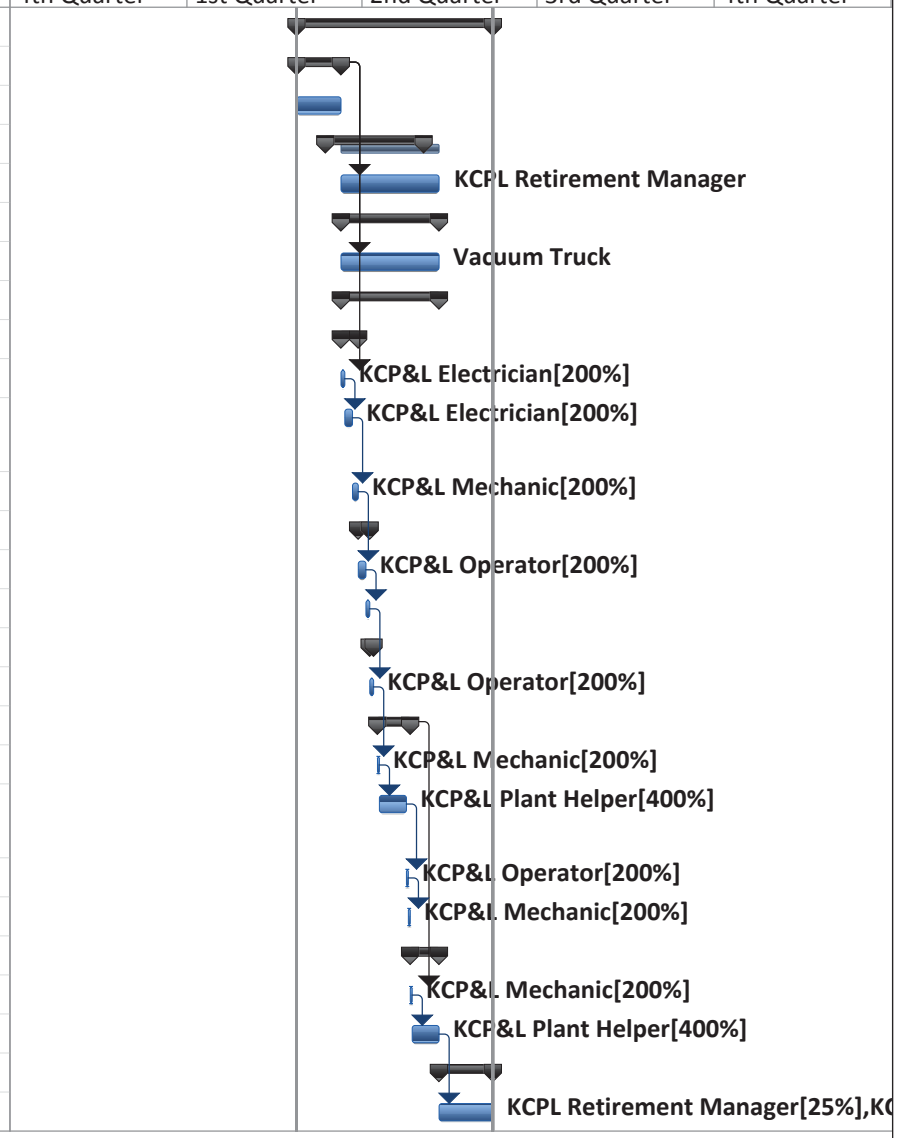
Owner Costs				
Pre-Retirement Activities		$25,969		
Retirement Activities		$66,164		
Post-Retirement Activities		$13,282		
Owner Direct Total			$105,415	
Owner Internal Costs	5.00%		$5,271	
Owner Contingency:	25.00%		$27,671	
Lake Road Boiler 4 Retirement Opinion of Probable Cost:				$138,357

Lake Road Boiler 4 Retirement

ID	Task Name	Cost
1	**Lake Road Boiler 4 Retirement**	**$105,415.92**
2	**Pre-Engineering**	**$25,969.20**
3	Engineering analysis and establish isolation points.	$0.00
4	**KCL&L Overhead Costs**	**$22,925.20**
5	KCP&L Retirement Manager	$22,925.20
6	**Equipment Rentals**	**$7,767.04**
7	Vacuum truck	$7,767.04
8	**Retirement**	**$35,472.48**
9	**Motors**	**$6,216.00**
10	De-energize all primary power at the source.	$1,786.56
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
12	Drain lube oil system (if applicable) and dispose of oil.	$2,642.88
13	**Fuel Systems**	**$1,685.44**
14	Isolate and Vent the Fuel Gas Systems	$1,685.44
15	Isolate and Vent the Fuel Oil Systems	$0.00
16	**Boiler Chemical Feed**	**$1,685.44**
17	Drain all chemical feed tanks and piping	$1,685.44
18	**Boiler**	**$13,804.64**
19	Open boiler doors.	$880.96
20	Gas side - perform cleaning of the boiler.	$11,200.00
21	Drain boiler, drum, downcomers and headers.	$842.72
22	Open drum doors.	$880.96
23	**Ductwork**	**$12,080.96**
24	Open ductwork doors.	$880.96
25	Perform extensive cleaning of the ductwork.	$11,200.00
26	**Post Retirement Activities**	**$13,282.00**
27	Post Retirement Activities	$13,282.00

Lake Road Boiler 4 Retirement

ID	Task Name	Duration
1	**Lake Road Boiler 4 Retirement**	**74 days**
2	**Pre-Engineering**	**17 days**
3	Engineering analysis and establish isolation points.	17 days
4	**KCL&L Overhead Costs**	**37 days**
5	KCP&L Retirement Manager	37 days
6	**Equipment Rentals**	**37 days**
7	Vacuum truck	37 days
8	**Retirement**	**37 days**
9	**Motors**	**7 days**
10	De-energize all primary power at the source.	2 days
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
12	Drain lube oil system (if applicable) and dispose of oil.	3 days
13	**Fuel Systems**	**4 days**
14	Isolate and Vent the Fuel Gas Systems	2 days
15	Isolate and Vent the Fuel Oil Systems	2 days
16	**Boiler Chemical Feed**	**2 days**
17	Drain all chemical feed tanks and piping	2 days
18	**Boiler**	**13 days**
19	Open boiler doors.	1 day
20	Gas side - perform cleaning of the boiler.	10 days
21	Drain boiler, drum, downcomers and headers.	1 day
22	Open drum doors.	1 day
23	**Ductwork**	**11 days**
24	Open ductwork doors.	1 day
25	Perform extensive cleaning of the ductwork.	10 days
26	**Post Retirement Activities**	**20 days**
27	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 4 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$186,483		
Overhead During Dismantlement			$298,939		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$501,802	
Demolition General Contractor (DGC) Costs					
Site Management			$172,221		
Equipment Rental			$408,951		
Consummables			$408,002		
Scrap Crew(s)			$404,847		
Dismantlement			$762,717		
Contractor Direct Cost*		$2,156,738			
Contractor Allowances					
DGC Insurance	2.00%		$43,135		
Contingency/Profit	15.00%		$329,981		
Performance Bond	2.00%		$50,597.07		
Contractor Costs Total:				$2,580,451	
Total:					$3,082,253
Owner Internal Costs:	5.00%				$154,113
Owner Contingency:	25.00%				$809,091
Lake Road Boiler 4 Dismantlement Opinion of Probable Cost:					$4,045,457

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $2,658,540

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 4 Dismantlement

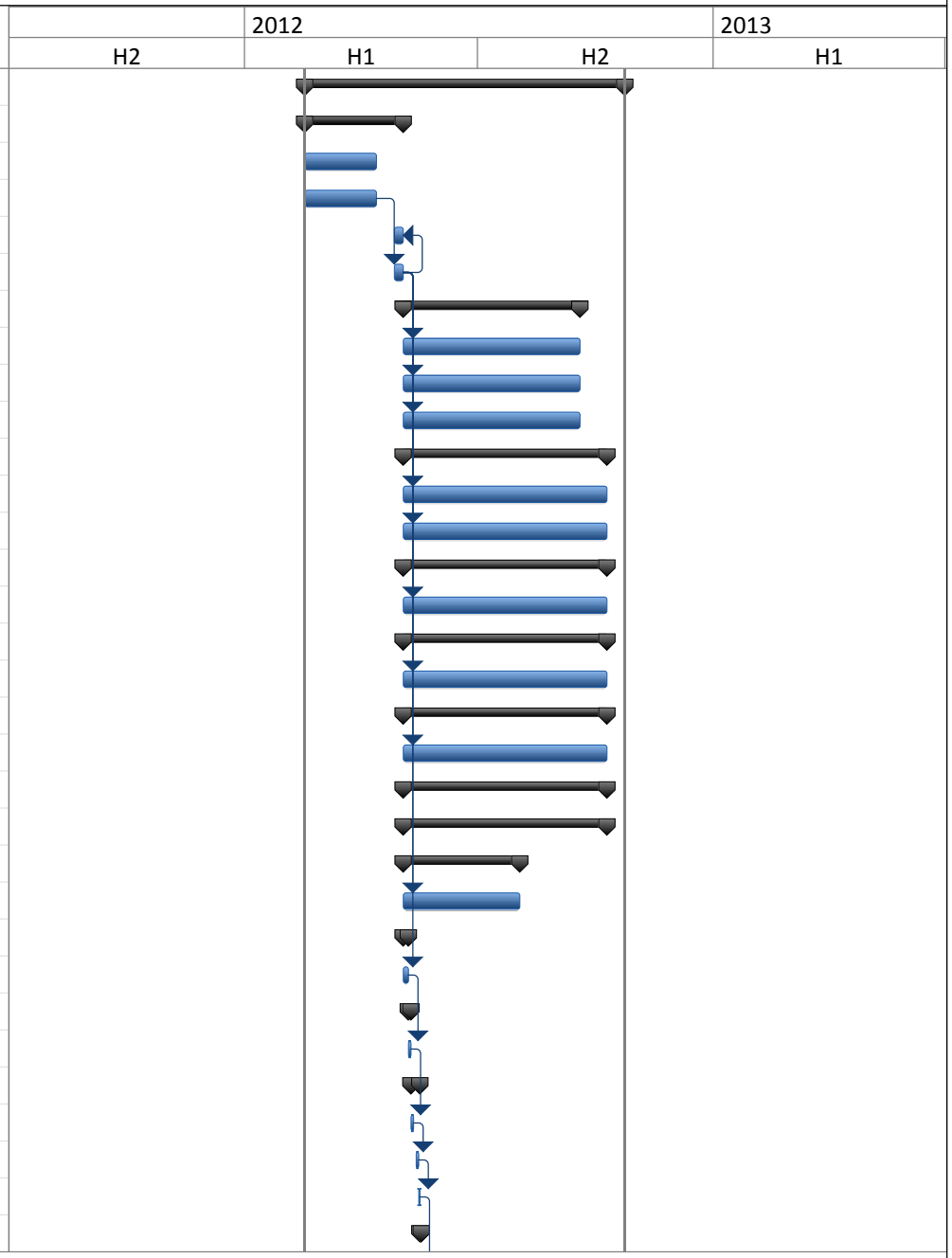
ID	Task Name	Cost
1	**Lake Road Boiler 4 Dismantlement**	**$2,658,542.36**
2	**Pre-Dismantlement Activities**	**$186,483.32**
3	Detailed Planning & Hire Owner's Engineer	$69,627.52
4	Hire Demolition General Contractor	$111,456.00
5	KCP&L Prepares Unit for Dismantlement	$5,399.80
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$298,939.20**
8	KCP&L Engineer	$99,803.20
9	Owners Engineer Project Manager	$29,792.00
10	Owners Engineer - Engineer	$169,344.00
11	**Demoliton Contractor Overhead during Dismantlement**	**$172,221.04**
12	Demolition Contractor Safety Manager	$60,504.72
13	Demolition Contractor Superintendent	$111,716.32
14	**Demolition Contractor Equipment Rental Costs**	**$408,951.52**
15	Equipment Rental	$408,951.52
16	**Demolition Contractor Consummables**	**$408,002.32**
17	Consummables	$408,002.32
18	**Scrap Crew(s)**	**$404,847.36**
19	Crew to Handle Scrap Material(s)	$404,847.36
20	**Dismantlement Directs**	**$762,717.60**
21	**Phase 1 Demolition**	**$762,717.60**
22	**Electrical Demolition**	**$116,438.40**
23	Electrical Demolition Equipment	$116,438.40
24	**Boiler Feed System**	**$3,582.72**
25	Feedwater piping	$3,582.72
26	**Critical Piping**	**$3,582.72**
27	Main Steam Piping	$3,582.72
28	**Fuel Systems (Plant Side)**	**$5,374.08**
29	Gas Piping and Equipment	$3,582.72
30	Fuel Oil Piping and Equipment	$0.00
31	Igniters	$1,791.36
32	**Air Preheat System**	**$1,791.36**
33	Steam Coil Air Heater Piping	$1,791.36
34	**Miscellaneous Equipment**	**$8,956.80**
35	Miscellaneous Equipment (including Fire Protection)	$8,956.80
36	**Boiler Equipment**	**$78,418.08**
37	Fans	$17,913.60
38	Steam Drum	$32,244.48
39	Soot Blowers	$3,180.96
40	Ductwork	$17,913.60
41	Old Coal Bunkers	$7,165.44
42	**Boiler Removal**	**$143,308.80**
43	Furnace	$71,654.40
44	Back Pass	$71,654.40

Lake Road Boiler 4 Dismantlement

ID	Task Name	Cost
45	**Boiler Steel Framing**	**$279,452.16**
46	Hanger Girders at Top	$42,992.64
47	All Other Framing	$78,819.84
48	Bracing and Girts	$78,819.84
49	Columns	$78,819.84
50	**Boiler Foundations**	**$121,812.48**
51	Equipment Foundation Demolition to Grade	$121,812.48
52	**Project Close-Out**	**$16,380.00**
53	Project Close-Out Activities	$16,380.00

Lake Road Boiler 4 Dismantlement

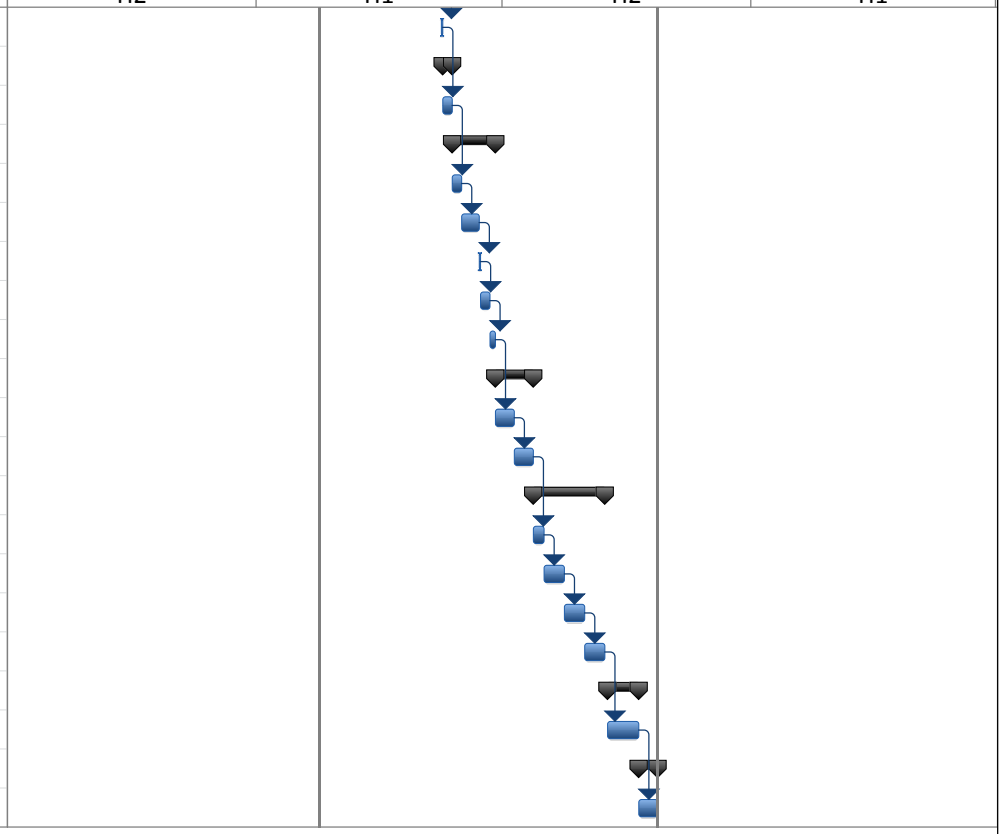
ID	Task Name	Duration
1	**Lake Road Boiler 4 Dismantlement**	**178 days**
2	**Pre-Dismantlement Activities**	**55 days**
3	Detailed Planning & Hire Owner's Engineer	2 mons
4	Hire Demolition General Contractor	2 mons
5	KCP&L Prepares Unit for Dismantlement	1 wk
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**98 days**
8	KCP&L Engineer	98 days
9	Owners Engineer Project Manager	98 days
10	Owners Engineer - Engineer	98 days
11	**Demoliton Contractor Overhead during Dismantlemen**	**113 days**
12	Demolition Contractor Safety Manager	113 days
13	Demolition Contractor Superintendent	113 days
14	**Demolition Contractor Equipment Rental Costs**	**113 days**
15	Equipment Rental	113 days
16	**Demolition Contractor Consummables**	**113 days**
17	Consummables	113 days
18	**Scrap Crew(s)**	**113 days**
19	Crew to Handle Scrap Material(s)	113 days
20	**Dismantlement Directs**	**113 days**
21	**Phase 1 Demolition**	**113 days**
22	**Electrical Demolition**	**65 days**
23	Electrical Demolition Equipment	65 days
24	**Boiler Feed System**	**2 days**
25	Feedwater piping	2 days
26	**Critical Piping**	**2 days**
27	Main Steam Piping	2 days
28	**Fuel Systems (Plant Side)**	**5 days**
29	Gas Piping and Equipment	2 days
30	Fuel Oil Piping and Equipment	2 days
31	Igniters	1 day
32	**Air Preheat System**	**1 day**



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 4 Dismantlement

ID	Task Name	Duration
33	Steam Coil Air Heater Piping	1 day
34	**Miscellaneous Equipment**	**5 days**
35	Miscellaneous Equipment (including Fire Protec	5 days
36	**Boiler Equipment**	**22 days**
37	Fans	5 days
38	Steam Drum	9 days
39	Soot Blowers	1 day
40	Ductwork	5 days
41	Old Coal Bunkers	2 days
42	**Boiler Removal**	**20 days**
43	Furnace	10 days
44	Back Pass	10 days
45	**Boiler Steel Framing**	**39 days**
46	Hanger Girders at Top	6 days
47	All Other Framing	11 days
48	Bracing and Girts	11 days
49	Columns	11 days
50	**Boiler Foundations**	**17 days**
51	Equipment Foundation Demolition to Grade	17 days
52	**Project Close-Out**	**10 days**
53	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

BOILER 5

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 5 Retirement

Owner Costs				
Pre-Retirement Activities		$25,969		
Retirement Activities		$100,380		
Post-Retirement Activities		$13,282		
Owner Direct Total			$139,631	
Owner Internal Costs	5.00%		$6,982	
Owner Contingency:	25.00%		$36,653	
Lake Road Boiler 5 Retirement Opinion of Probable Cost:				$183,266
Activities Required by Permit or Regulation				
Lake Road 5 Pond		$58,349		
Lake Road Ash Pond Closure		$1,117,000		
Activities Required by Permit or Regulation:				$1,175,349

Lake Road Boiler 5 Retirement

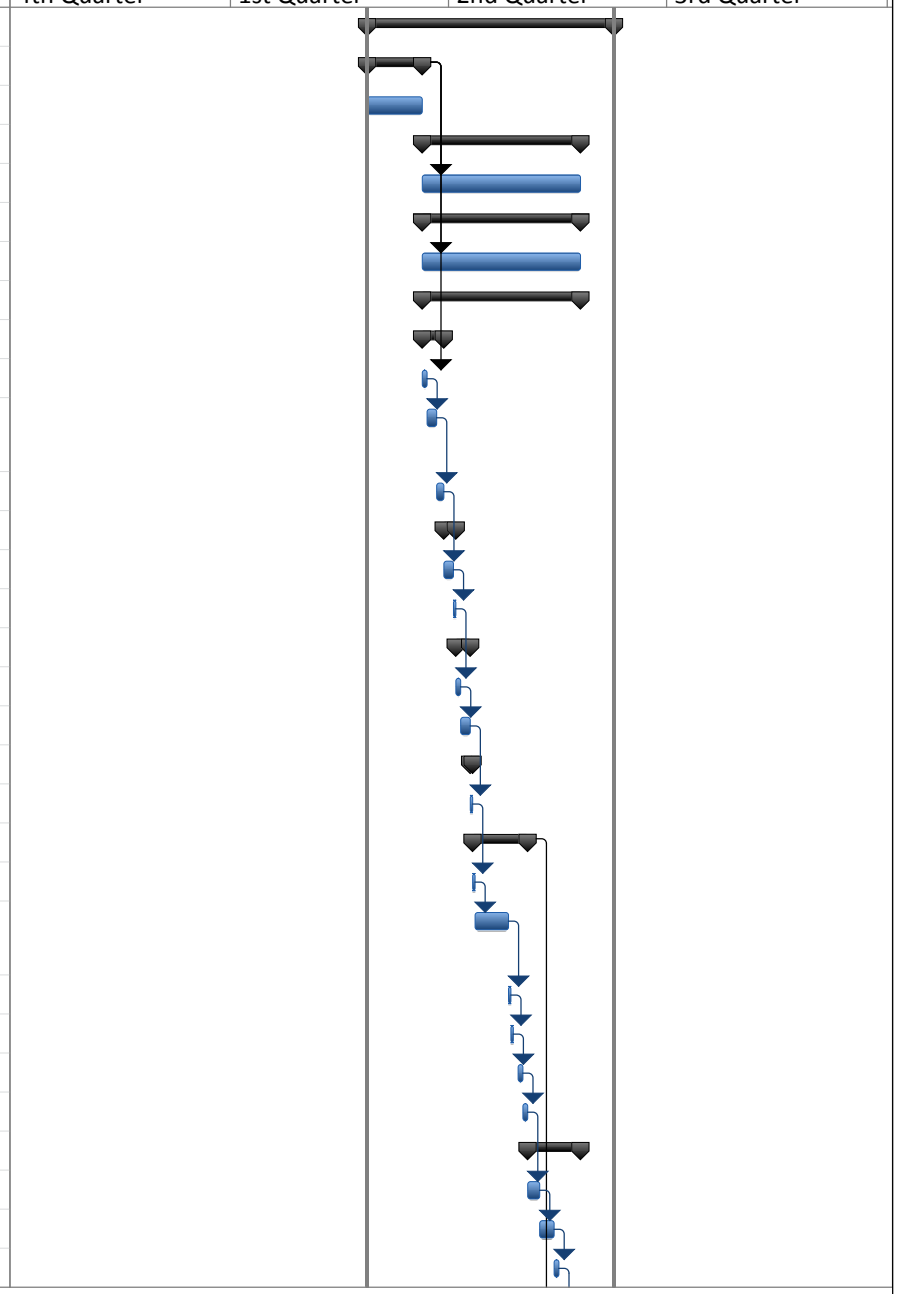
ID	Task Name	Cost
1	**Lake Road Boiler 5 Retirement**	**$139,631.92**
2	**Pre-Engineering**	**$25,969.20**
3	Engineering analysis and establish isolation points.	$0.00
4	**KCL&L Overhead Costs**	**$29,740.80**
5	KCP&L Retirement Manager	$29,740.80
6	**Equipment Rentals**	**$10,076.16**
7	Vacuum truck	$10,076.16
8	**Retirement**	**$60,563.76**
9	**Motors**	**$6,216.00**
10	De-energize all primary power at the source.	$1,786.56
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
12	Drain lube oil system (if applicable) and dispose of oil.	$2,642.88
13	**Sulfur Injection System**	**$2,522.72**
14	Empty, Clean and Vent the Storage Tank	$2,522.72
15	Drain and Flush the Sulfur Injection System Piping and Vent	$0.00
16	**Fuel Systems**	**$4,208.16**
17	Open and Clean the Boiler 5 Bunker	$1,685.44
18	Isolate and Vent the Gas Systems	$2,522.72
19	**Boiler Chemical Feed**	**$842.72**
20	Drain all chemical feed tanks and piping	$842.72
21	**Boiler**	**$13,804.64**
22	Open boiler doors.	$880.96
23	Gas side - perform cleaning of the boiler.	$11,200.00
24	Drain boiler, drum, downcomers and headers.	$842.72
25	Open drum doors.	$880.96
26	Open and Clean the Pulverizers	$0.00
27	Open and Vent the Coal Piping	$0.00
28	**Precipitator**	**$20,181.76**
29	Multiple cleaning cycles for collection plates.	$3,784.08
30	Clear hoppers of all ash	$5,045.44
31	Disconnect tranformers.	$2,522.72
32	Mechanically secure all compartment dampers and hopper outlet valves in open position.	$1,261.36
33	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	$1,261.36
34	Install bird screens across hopper ash outlet and ash line flanges.	$1,261.36
35	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	$1,261.36
36	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$3,784.08
37	**Ductwork**	**$6,480.96**
38	Open ductwork doors.	$880.96

Lake Road Boiler 5 Retirement

ID	Task Name	Cost
39	Perform extensive cleaning of the ductwork.	$5,600.00
40	**Ash Handling**	**$6,306.80**
41	Open and Vacuum the Ash Silo	$5,045.44
42	Open and Clean Ash Handling Equipment	$1,261.36
43	**Post Retirement Activities**	**$13,282.00**
44	Post Retirement Activities	$13,282.00

Lake Road Boiler 5 Retirement

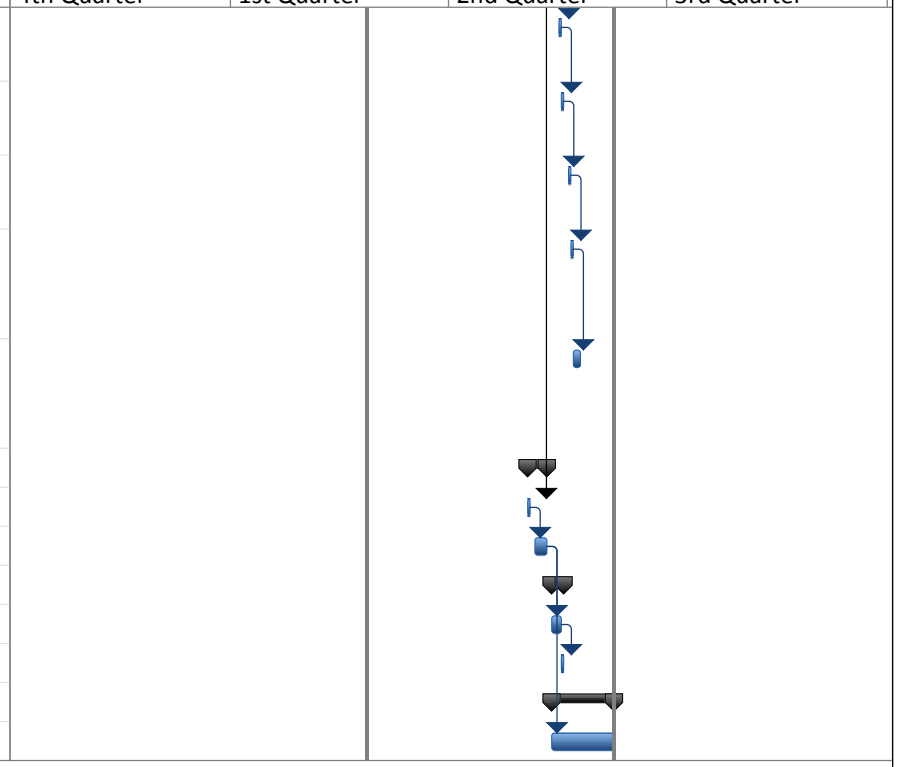
ID	Task Name	Duration
1	**Lake Road Boiler 5 Retirement**	**75 days**
2	**Pre-Engineering**	**17 days**
3	Engineering analysis and establish isolation points.	17 days
4	**KCL&L Overhead Costs**	**48 days**
5	KCP&L Retirement Manager	48 days
6	**Equipment Rentals**	**48 days**
7	Vacuum truck	48 days
8	**Retirement**	**48 days**
9	**Motors**	**7 days**
10	De-energize all primary power at the source.	2 days
11	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
12	Drain lube oil system (if applicable) and dispose of oil.	3 days
13	**Sulfur Injection System**	**3 days**
14	Empty, Clean and Vent the Storage Tank	2 days
15	Drain and Flush the Sulfur Injection System Piping and Vent	1 day
16	**Fuel Systems**	**4 days**
17	Open and Clean the Boiler 5 Bunker	2 days
18	Isolate and Vent the Gas Systems	2 days
19	**Boiler Chemical Feed**	**1 day**
20	Drain all chemical feed tanks and piping	1 day
21	**Boiler**	**17 days**
22	Open boiler doors.	1 day
23	Gas side - perform cleaning of the boiler.	10 days
24	Drain boiler, drum, downcomers and headers.	1 day
25	Open drum doors.	1 day
26	Open and Clean the Pulverizers	2 days
27	Open and Vent the Coal Piping	2 days
28	**Precipitator**	**16 days**
29	Multiple cleaning cycles for collection plates.	3 days
30	Clear hoppers of all ash	4 days
31	Disconnect tranformers.	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 5 Retirement

ID	Task Name	Duration
32	Mechanically secure all compartment dampers and hopper outlet valves in open position.	1 day
33	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	1 day
34	Install bird screens across hopper ash outlet and ash line flanges.	1 day
35	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	1 day
36	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
37	**Ductwork**	**6 days**
38	Open ductwork doors.	1 day
39	Perform extensive cleaning of the ductwork.	5 days
40	**Ash Handling**	**5 days**
41	Open and Vacuum the Ash Silo	4 days
42	Open and Clean Ash Handling Equipment	1 day
43	**Post Retirement Activities**	**20 days**
44	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 5 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$186,483		
Overhead During Dismantlement			$558,223		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$761,086	
Demolition General Contractor (DGC) Costs					
Site Management			$278,906		
Equipment Rental			$662,284		
Consummables			$660,747		
Scrap Crew(s)			$655,637		
Dismantlement			$1,174,730		
Contractor Direct Cost*		$3,432,304			
Contractor Allowances					
DGC Insurance	2.00%		$68,646		
Contingency/Profit	15.00%		$525,143		
Performance Bond	2.00%		$80,521.85		
Contractor Costs Total:				$4,106,614	
Total:					$4,867,700
Owner Internal Costs:	5.00%				$243,385
Owner Contingency:	25.00%				$1,277,771
Lake Road Boiler 5 Dismantlement Opinion of Probable Cost:					$6,388,857

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $4,193,390

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 5 Dismantlement

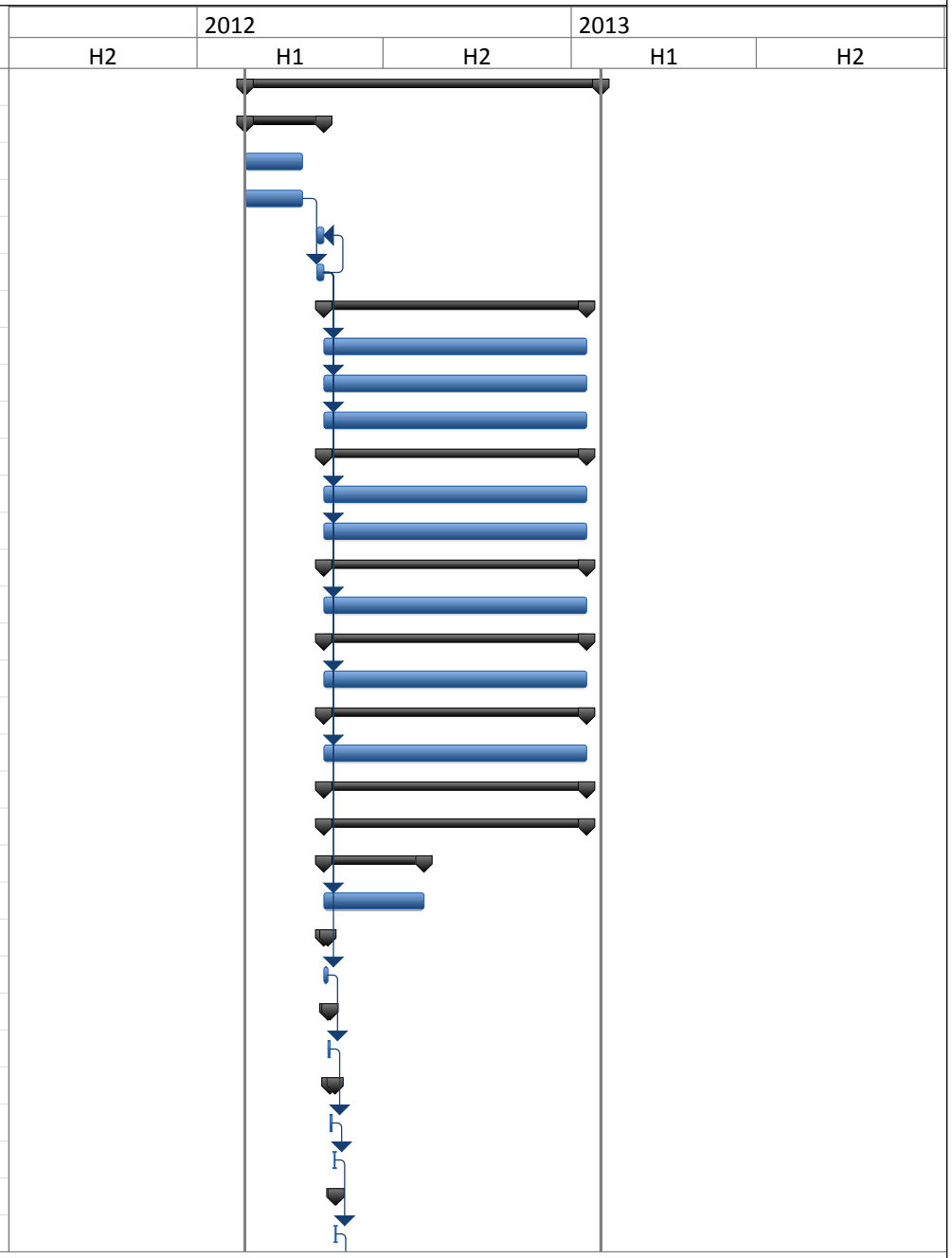
ID	Task Name	Cost
1	**Lake Road Boiler 5 Dismantlement**	**$4,193,392.76**
2	**Pre-Dismantlement Activities**	**$186,483.32**
3	Detailed Planning & Hire Owner's Engineer	$69,627.52
4	Hire Demolition General Contractor	$111,456.00
5	KCP&L Prepares Unit for Dismantlement	$5,399.80
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$558,223.20**
8	KCP&L Engineer	$186,367.20
9	Owners Engineer Project Manager	$55,632.00
10	Owners Engineer - Engineer	$316,224.00
11	**Demoliton Contractor Overhead during Dismantlement**	**$278,906.64**
12	Demolition Contractor Safety Manager	$97,985.52
13	Demolition Contractor Superintendent	$180,921.12
14	**Demolition Contractor Equipment Rental Costs**	**$662,284.32**
15	Equipment Rental	$662,284.32
16	**Demolition Contractor Consummables**	**$660,747.12**
17	Consummables	$660,747.12
18	**Scrap Crew(s)**	**$655,637.76**
19	Crew to Handle Scrap Material(s)	$655,637.76
20	**Dismantlement Directs**	**$1,174,730.40**
21	**Phase 1 Demolition**	**$1,174,730.40**
22	**Electrical Demolition**	**$125,395.20**
23	Electrical Demolition Equipment	$125,395.20
24	**Boiler Feed System**	**$3,582.72**
25	Feedwater piping	$3,582.72
26	**Critical Piping**	**$3,582.72**
27	Main Steam Piping	$3,582.72
28	**Gas Systems (Plant Side)**	**$5,374.08**
29	Gas Piping and Equipment	$3,582.72
30	Igniters	$1,791.36
31	**Air Preheat System**	**$1,791.36**
32	Steam Coil Air Heater Piping	$1,791.36
33	**Miscellaneous Equipment**	**$14,330.88**
34	Miscellaneous Equipment (including Fire Protection)	$14,330.88
35	**Boiler Equipment**	**$175,151.52**
36	Fans	$21,496.32
37	Steam Drum	$35,827.20
38	Soot Blowers	$3,180.96
39	Ductwork	$21,496.32
40	Pulverizers	$35,827.20
41	Coal Bunkers	$14,330.88
42	Feeders	$7,165.44
43	Ash Silo	$17,913.60
44	Ash Handling Equipment	$17,913.60

Lake Road Boiler 5 Dismantlement

ID	Task Name	Cost
45	**Boiler Removal**	**$207,797.76**
46	Furnace	$107,481.60
47	Back Pass	$100,316.16
48	**Boiler Steel Framing**	**$351,106.56**
49	Hanger Girders at Top	$71,654.40
50	All Other Framing	$100,316.16
51	Bracing and Girts	$100,316.16
52	Columns	$78,819.84
53	**Precipitator**	**$143,308.80**
54	Remove Precipitator	$143,308.80
55	**Boiler Foundations**	**$143,308.80**
56	Equipment Foundation Demolition to Grade	$143,308.80
57	**Project Close-Out**	**$16,380.00**
58	Project Close-Out Activities	$16,380.00

Lake Road Boiler 5 Dismantlement

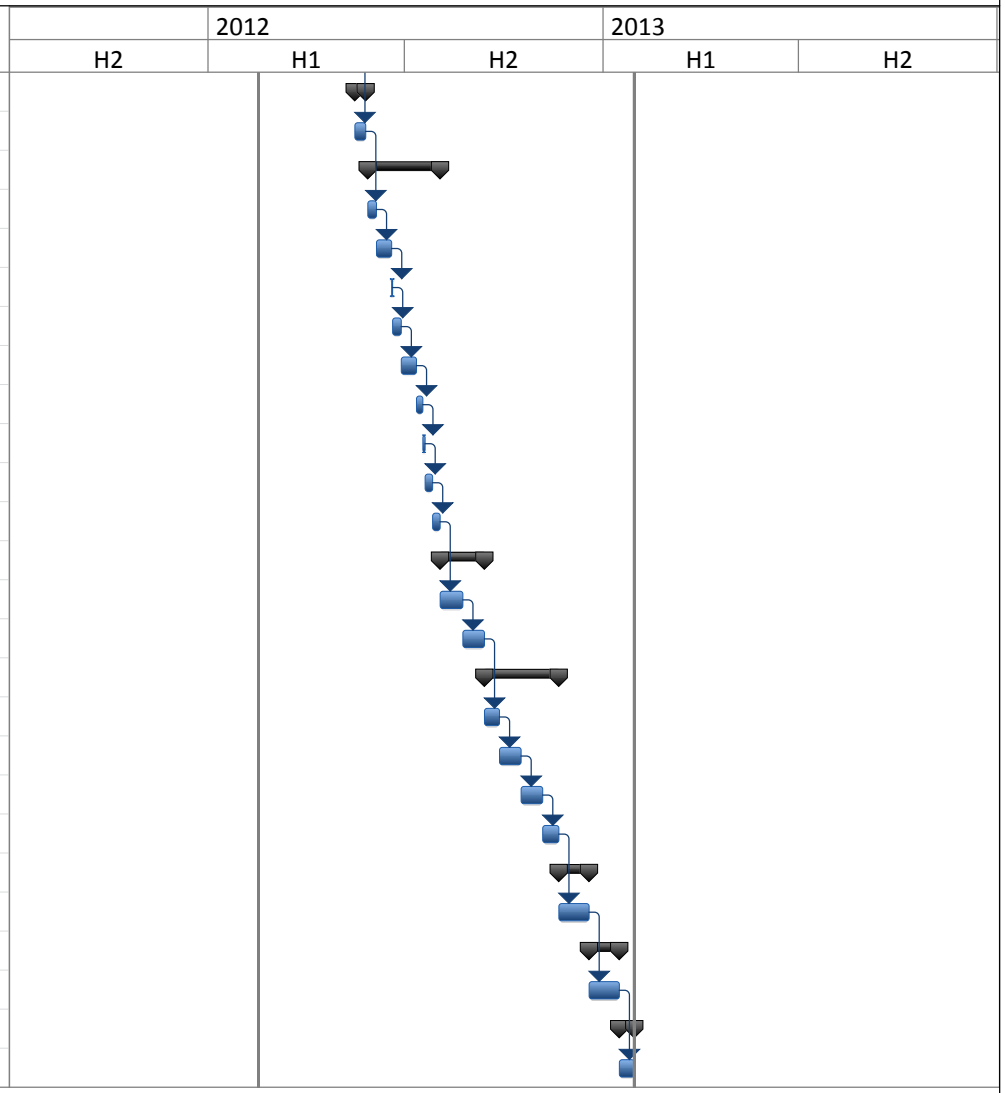
ID	Task Name	Duration
1	**Lake Road Boiler 5 Dismantlement**	**248 days**
2	**Pre-Dismantlement Activities**	**55 days**
3	Detailed Planning & Hire Owner's Engineer	2 mons
4	Hire Demolition General Contractor	2 mons
5	KCP&L Prepares Unit for Dismantlement	1 wk
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**183 days**
8	KCP&L Engineer	183 days
9	Owners Engineer Project Manager	183 days
10	Owners Engineer - Engineer	183 days
11	**Demoliton Contractor Overhead during Dismantlemen**	**183 days**
12	Demolition Contractor Safety Manager	183 days
13	Demolition Contractor Superintendent	183 days
14	**Demolition Contractor Equipment Rental Costs**	**183 days**
15	Equipment Rental	183 days
16	**Demolition Contractor Consummables**	**183 days**
17	Consummables	183 days
18	**Scrap Crew(s)**	**183 days**
19	Crew to Handle Scrap Material(s)	183 days
20	**Dismantlement Directs**	**183 days**
21	**Phase 1 Demolition**	**183 days**
22	**Electrical Demolition**	**70 days**
23	Electrical Demolition Equipment	70 days
24	**Boiler Feed System**	**2 days**
25	Feedwater piping	2 days
26	**Critical Piping**	**2 days**
27	Main Steam Piping	2 days
28	**Gas Systems (Plant Side)**	**3 days**
29	Gas Piping and Equipment	2 days
30	Igniters	1 day
31	**Air Preheat System**	**1 day**
32	Steam Coil Air Heater Piping	1 day



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 5 Dismantlement

ID	Task Name	Duration
33	**Miscellaneous Equipment**	**8 days**
34	Miscellaneous Equipment (including Fire Protec	8 days
35	**Boiler Equipment**	**49 days**
36	Fans	6 days
37	Steam Drum	10 days
38	Soot Blowers	1 day
39	Ductwork	6 days
40	Pulverizers	10 days
41	Coal Bunkers	4 days
42	Feeders	2 days
43	Ash Silo	5 days
44	Ash Handling Equipment	5 days
45	**Boiler Removal**	**29 days**
46	Furnace	15 days
47	Back Pass	14 days
48	**Boiler Steel Framing**	**49 days**
49	Hanger Girders at Top	10 days
50	All Other Framing	14 days
51	Bracing and Girts	14 days
52	Columns	11 days
53	**Precipitator**	**20 days**
54	Remove Precipitator	20 days
55	**Boiler Foundations**	**20 days**
56	Equipment Foundation Demolition to Grade	20 days
57	**Project Close-Out**	**10 days**
58	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

BOILER 8

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Retirement

Owner Costs				
Pre-Retirement Activities		$22,914		
Retirement Activities		$44,223		
Post-Retirement Activities		$13,282		
Owner Direct Total			$80,419	
Owner Internal Costs	5.00%		$4,021	
Owner Contingency:	25.00%		$21,110	
Lake Road Boiler 8 Retirement Opinion of Probable Cost:				$105,550

Lake Road Boiler 8 Retirement

ID	Task Name	Cost
1	**Lake Road Boiler 8 Retirement**	**$80,419.36**
2	**Pre-Engineering**	**$22,914.00**
3	Permit review and engineering analysis and establish isolation points.	$22,914.00
4	**KCL&L Overhead Costs**	**$14,870.40**
5	KCP&L Retirement Manager	$14,870.40
6	**Equipment Rentals**	**$5,038.08**
7	Vacuum truck	$5,038.08
8	**Retirement**	**$24,314.88**
9	**Electrical**	**$10,037.04**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Motors**	**$4,677.36**
24	De-energize all primary power at the source.	$446.64
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$446.64
26	Drain lube oil system (if applicable) and dispose of oil.	$3,784.08
27	**Fuel Systems**	**$2,522.72**
28	Isolate gas lines from source, open and vent.	$1,261.36
29	Isolate fuel oil lines from source, drain, open and vent.	$1,261.36
30	**Boiler Chemical Feed**	**$1,261.36**
31	Drain all chemical feed tanks.	$1,261.36
32	**Boiler**	**$4,844.64**
33	Open boiler doors.	$880.96
34	Gas side - perform cleaning of the boiler and bottom ash system.	$2,240.00
35	Drain boiler, drum, downcomers and headers.	$842.72
36	Open drum doors.	$880.96
37	**Ductwork**	**$3,120.96**
38	Open ductwork doors.	$880.96
39	Perform extensive cleaning of the ductwork.	$2,240.00
40	**Feedwater Piping**	**$842.72**

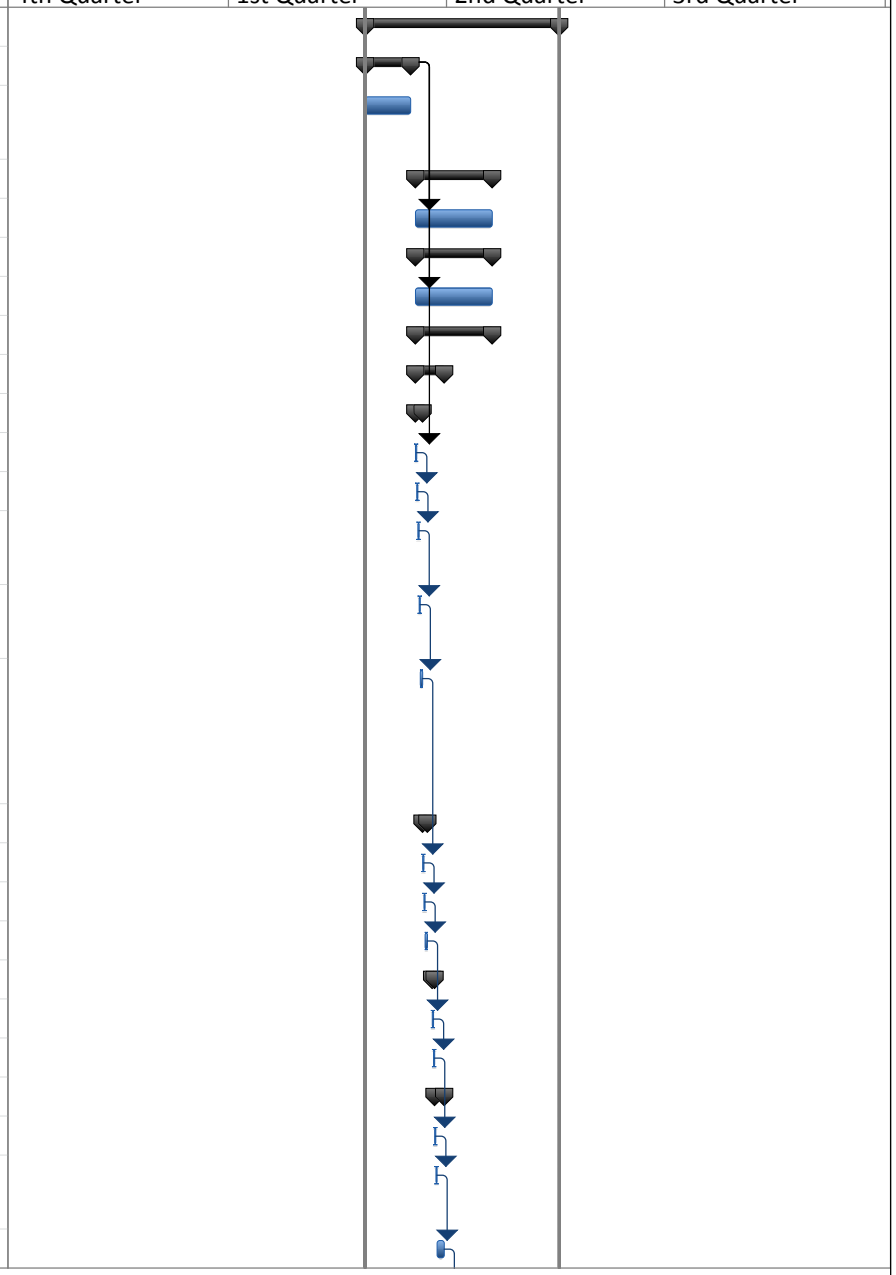
Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Retirement

ID	Task Name	Cost
41	Drain water from the system.	$421.36
42	Leave open vents and drains.	$421.36
43	**Deaerator and Deaerator Storage Tank**	**$842.72**
44	Drain Deaerator and Storage	$421.36
45	Leave open vents and drains.	$421.36
46	**Compressed Air System**	**$842.72**
47	Open vents and drains.	$842.72
48	**Post Retirement Activities**	**$13,282.00**
49	Post Retirement Activities	$13,282.00

Lake Road Boiler 8 Retirement

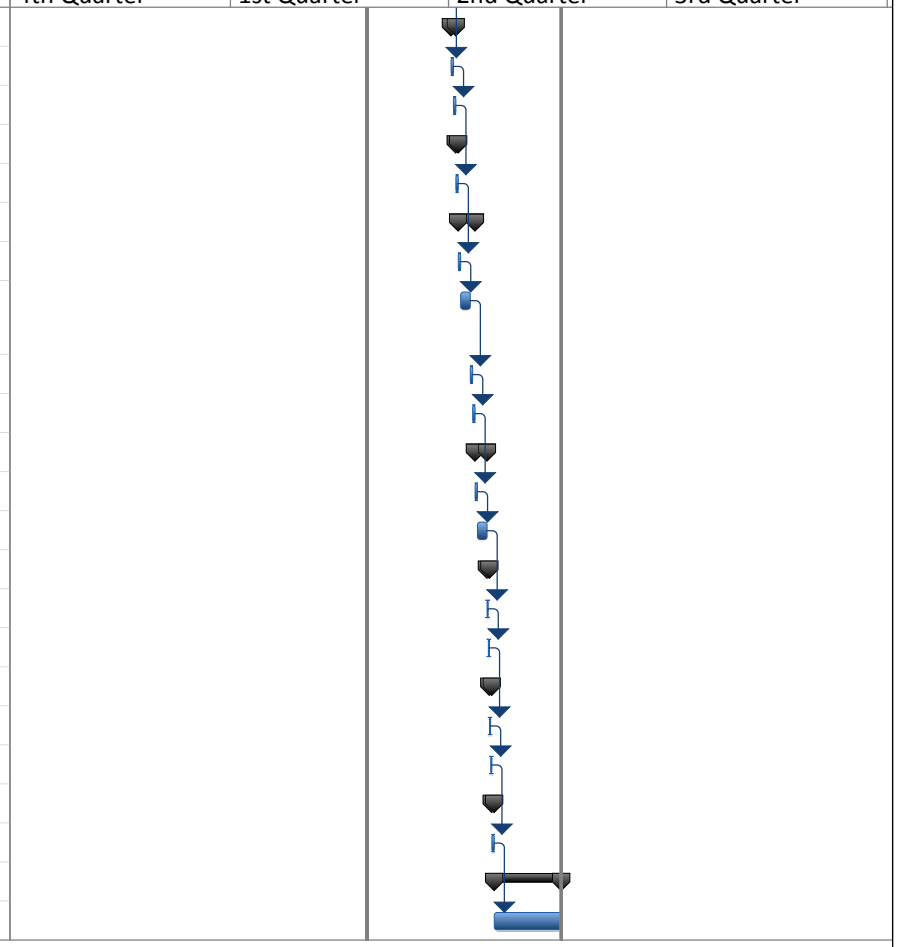
ID	Task Name	Duration
1	**Lake Road Boiler 8 Retirement**	**59 days**
2	**Pre-Engineering**	**15 days**
3	Permit review and engineering analysis and establish isolation points.	15 days
4	**KCL&L Overhead Costs**	**24 days**
5	KCP&L Retirement Manager	24 days
6	**Equipment Rentals**	**24 days**
7	Vacuum truck	24 days
8	**Retirement**	**24 days**
9	**Electrical**	**10 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Motors**	**4 days**
24	De-energize all primary power at the source.	0.5 days
25	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	0.5 days
26	Drain lube oil system (if applicable) and dispose of oil.	3 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Retirement

ID	Task Name	Duration
27	**Fuel Systems**	**2 days**
28	Isolate gas lines from source, open and vent.	1 day
29	Isolate fuel oil lines from source, drain, open and vent.	1 day
30	**Boiler Chemical Feed**	**1 day**
31	Drain all chemical feed tanks.	1 day
32	**Boiler**	**5 days**
33	Open boiler doors.	1 day
34	Gas side - perform cleaning of the boiler and bottom ash system.	2 days
35	Drain boiler, drum, downcomers and headers.	1 day
36	Open drum doors.	1 day
37	**Ductwork**	**3 days**
38	Open ductwork doors.	1 day
39	Perform extensive cleaning of the ductwork.	2 days
40	**Feedwater Piping**	**1 day**
41	Drain water from the system.	0.5 days
42	Leave open vents and drains.	0.5 days
43	**Deaerator and Deaerator Storage Tank**	**1 day**
44	Drain Deaerator and Storage	0.5 days
45	Leave open vents and drains.	0.5 days
46	**Compressed Air System**	**1 day**
47	Open vents and drains.	1 day
48	**Post Retirement Activities**	**20 days**
49	Post Retirement Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$177,983		
Overhead During Dismantlement			$67,214		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$261,577	
Demolition General Contractor (DGC) Costs					
Site Management			$140,279		
Equipment Rental			$238,856		
Consummables			$238,302		
Scrap Crew(s)			$236,459		
Dismantlement			$360,502		
Contractor Direct Cost*		$1,214,398			
Contractor Allowances					
DGC Insurance	2.00%		$24,288		
Contingency/Profit	15.00%		$185,803		
Performance Bond	2.00%		$28,489.78		
Contractor Costs Total:				$1,452,979	
Total:					$1,714,556
Owner Internal Costs:	5.00%				$85,728
Owner Contingency:	25.00%				$450,071
Lake Road Boiler 8 Dismantlement Opinion of Probable Cost:					$2,250,354

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,475,975

Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Dismantlement

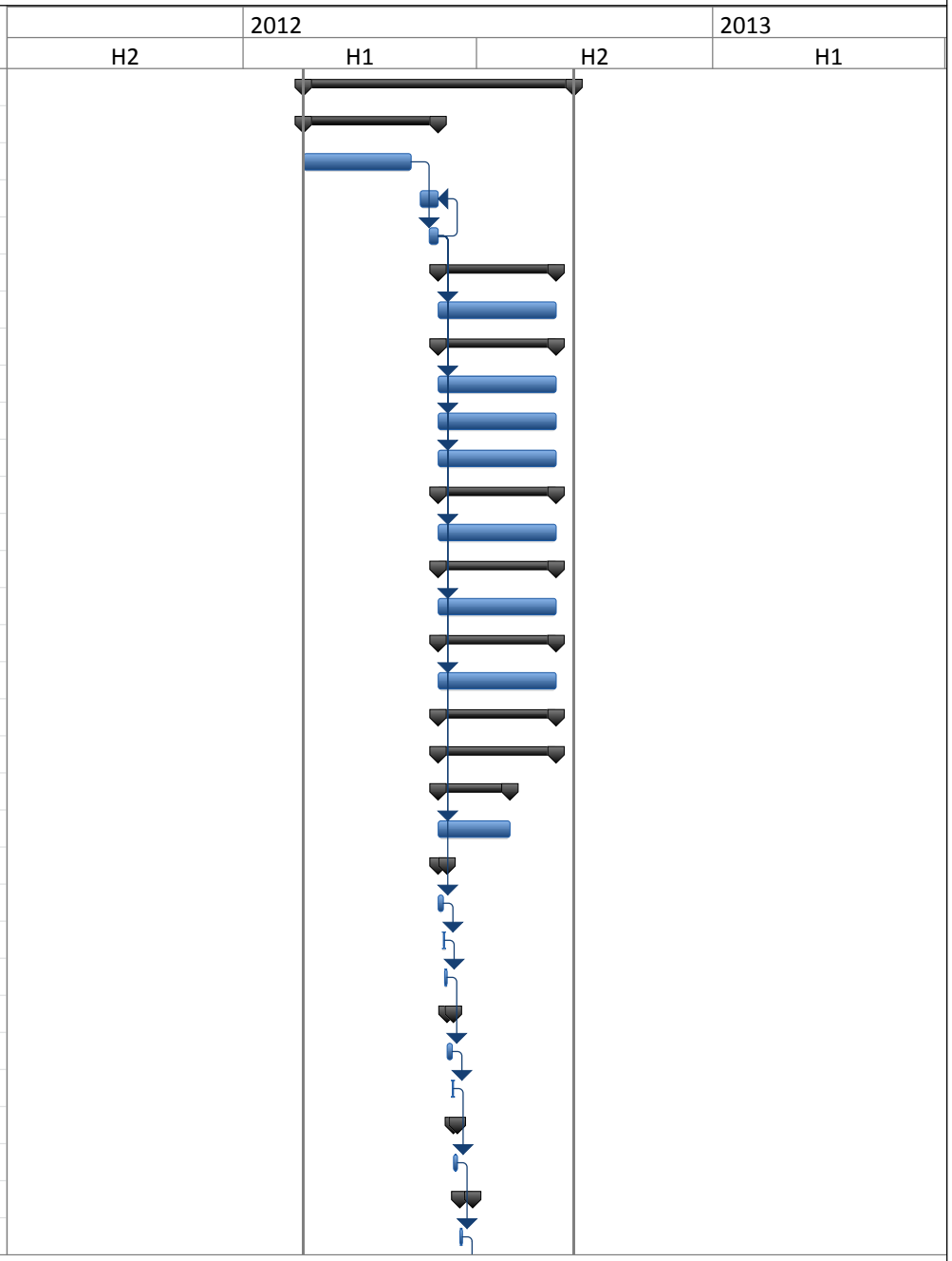
ID	Task Name	Cost
1	**Lake Road Boiler 8 Dismantlement**	**$1,475,977.84**
2	**Pre-Dismantlement Activities**	**$177,983.60**
3	Hire Demolition General Contractor	$167,184.00
4	KCP&L Prepares Unit for Dismantlement	$10,799.60
5	Demolition Contractor Mobilizes on Site	$0.00
6	**KCP&L Overhead during Dismantlement**	**$67,214.40**
7	KCP&L Engineer	$67,214.40
8	**Demoliton Contractor Overhead during Dismantlement**	**$140,279.04**
9	Demolition Contractor Project Manager	$39,689.76
10	Demolition Contractor Safety Manager	$35,339.04
11	Demolition Contractor Superintendent	$65,250.24
12	**Demolition Contractor Equipment Rental Costs**	**$238,856.64**
13	Equipment Rental	$238,856.64
14	**Demolition Contractor Consummables**	**$238,302.24**
15	Consummables	$238,302.24
16	**Scrap Crew(s)**	**$236,459.52**
17	Crew to Handle Scrap Material(s)	$236,459.52
18	**Dismantlement Directs**	**$360,502.40**
19	**Phase 1 Demolition**	**$360,502.40**
20	**Electrical Demolition**	**$71,654.40**
21	Electrical Demolition Equipment	$71,654.40
22	**Condensate System**	**$8,956.80**
23	Deaerator	$3,582.72
24	Deaerator Storage Tank	$1,791.36
25	Condensate Piping	$3,582.72
26	**Boiler Feed System**	**$11,187.20**
27	Boiler Feed Pumps	$4,021.76
28	Feedwater piping	$7,165.44
29	**Critical Piping**	**$5,374.08**
30	Main Steam Piping	$5,374.08
31	**Fuel Systems**	**$14,330.88**
32	Fuel Oil Piping	$3,582.72
33	Gas Piping	$1,791.36
34	Igniters	$8,956.80
35	**Chemical Feed Systems**	**$7,165.44**
36	Tanks	$1,791.36
37	Pumps	$1,791.36
38	Piping	$3,582.72
39	**Sampling Systems**	**$5,374.08**
40	Field Mounted Heat Exchangers	$1,791.36
41	Piping	$1,791.36
42	Sample Panel	$1,791.36
43	**Miscellaneous Equipment**	**$7,165.44**
44	Miscellaneous Equipment (including Fire Protection)	$7,165.44

Lake Road Boiler 8 Dismantlement

ID	Task Name	Cost
45	**Boiler Equipment**	**$28,661.76**
46	Fans	$3,582.72
47	Steam Drum	$14,330.88
48	Ductwork	$10,748.16
49	**Boiler Removal**	**$71,654.40**
50	Furnace	$71,654.40
51	**Boiler Steel Framing**	**$71,654.40**
52	Framing and Supports	$71,654.40
53	**Boiler Building**	**$21,496.32**
54	Remove Boiler Building	$21,496.32
55	**Boiler Foundations**	**$35,827.20**
56	Equipment Foundation Demolition to Grade	$35,827.20
57	**Project Close-Out**	**$16,380.00**
58	Project Close-Out Activities	$16,380.00

Lake Road Boiler 8 Dismantlement

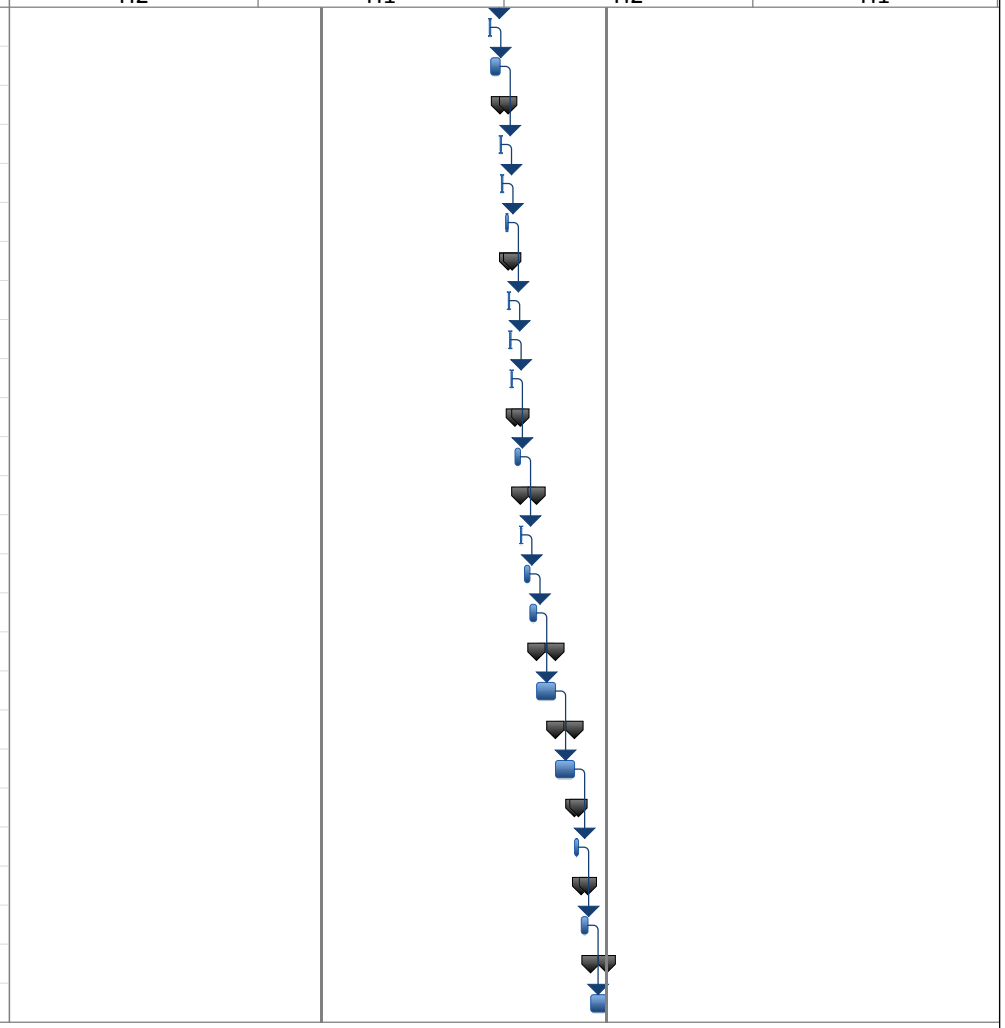
ID	Task Name	Duration
1	**Lake Road Boiler 8 Dismantlement**	**151 days**
2	**Pre-Dismantlement Activities**	**75 days**
3	Hire Demolition General Contractor	3 mons
4	KCP&L Prepares Unit for Dismantlement	2 wks
5	Demolition Contractor Mobilizes on Site	5 days
6	**KCP&L Overhead during Dismantlement**	**66 days**
7	KCP&L Engineer	66 days
8	**Demoliton Contractor Overhead during Dismantlemen**	**66 days**
9	Demolition Contractor Project Manager	66 days
10	Demolition Contractor Safety Manager	66 days
11	Demolition Contractor Superintendent	66 days
12	**Demolition Contractor Equipment Rental Costs**	**66 days**
13	Equipment Rental	66 days
14	**Demolition Contractor Consummables**	**66 days**
15	Consummables	66 days
16	**Scrap Crew(s)**	**66 days**
17	Crew to Handle Scrap Material(s)	66 days
18	**Dismantlement Directs**	**66 days**
19	**Phase 1 Demolition**	**66 days**
20	**Electrical Demolition**	**40 days**
21	Electrical Demolition Equipment	40 days
22	**Condensate System**	**5 days**
23	Deaerator	2 days
24	Deaerator Storage Tank	1 day
25	Condensate Piping	2 days
26	**Boiler Feed System**	**3 days**
27	Boiler Feed Pumps	2 days
28	Feedwater piping	1 day
29	**Critical Piping**	**3 days**
30	Main Steam Piping	3 days
31	**Fuel Systems**	**8 days**
32	Fuel Oil Piping	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Boiler 8 Dismantlement

ID	Task Name	Duration
33	Gas Piping	1 day
34	Igniters	5 days
35	**Chemical Feed Systems**	**4 days**
36	Tanks	1 day
37	Pumps	1 day
38	Piping	2 days
39	**Sampling Systems**	**3 days**
40	Field Mounted Heat Exchangers	1 day
41	Piping	1 day
42	Sample Panel	1 day
43	**Miscellaneous Equipment**	**4 days**
44	Miscellaneous Equipment (including Fire Protec	4 days
45	**Boiler Equipment**	**8 days**
46	Fans	1 day
47	Steam Drum	4 days
48	Ductwork	3 days
49	**Boiler Removal**	**10 days**
50	Furnace	10 days
51	**Boiler Steel Framing**	**10 days**
52	Framing and Supports	10 days
53	**Boiler Building**	**3 days**
54	Remove Boiler Building	3 days
55	**Boiler Foundations**	**5 days**
56	Equipment Foundation Demolition to Grade	5 days
57	**Project Close-Out**	**10 days**
58	Project Close-Out Activities	10 days



Redactions Removed Pursuant to Commission Order

Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

Owner Costs				
Pre-Retirement Activities		$61,104		
Retirement Activities		$206,732		
Post-Retirement Activities		$26,564		
Owner Direct Total			$294,400	
Owner Internal Costs	5.00%		$14,720	
Owner Contingency:	25.00%		$77,280	
Lake Road 4/6 Retirement Opinion of Probable Cost:				$386,400
<u>Activities Required by Permit or Regulation</u>				
Lake Road 4 River Intake		$637,591		
Activities Required by Permit or Regulation:				$637,591

Lake Road 4/6 Retirement

ID	Task Name	Cost
1	**Lake Road 4/6 Retirement**	**$294,400.77**
2	**Pre-Engineering**	**$61,104.00**
3	Permit review and engineering analysis and establish isolation points.	$61,104.00
4	**KCL&L Overhead Costs**	**$73,732.40**
5	KCP&L Retirement Manager	$73,732.40
6	**Equipment Rentals**	**$24,980.48**
7	Vacuum truck	$24,980.48
8	**Retirement**	**$108,019.89**
9	**Electrical**	**$20,052.88**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Oil-Filled Power Transformers**	**$5,549.44**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
26	Drain and dispose of oil.	$2,642.88
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	$1,120.00
28	**Dry-type Power Transformers**	**$1,786.56**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
31	**Motors**	**$7,357.20**
32	De-energize all primary power at the source.	$1,786.56
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56

Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

ID	Task Name	Cost
34	Drain lube oil system (if applicable) and dispose of oil.	$3,784.08
35	**Coal Handling**	**$5,466.80**
36	Empty both coal silos.	$1,682.72
37	Confirm conveyors are run out of fuel.	$1,261.36
38	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from area.	$2,522.72
39	**Gas System**	**$2,522.72**
40	Isolate lines from source, open and vent.	$2,522.72
41	**Boiler Chemical Feed**	**$2,522.72**
42	Drain all chemical feed tanks.	$2,522.72
43	**Demineralizer**	**$5,371.84**
44	Drain water from system.	$842.72
45	Drain acid and caustic tanks.	$1,685.44
46	Open tanks and vessels.	$880.96
47	Remove resin.	$1,120.00
48	Drain and Vent the Demineralized Water Storage Tank	$842.72
49	**Boiler**	**$26,508.85**
50	Open boiler doors.	$880.96
51	Gas side - perform cleaning of the boiler and bottom ash system.	$16,800.00
52	Drain boiler, drum, downcomers and headers.	$842.72
53	Open drum doors.	$880.96
54	Drain, vent and clean the fly ash, slag and transport systems	$2,480.13
55	Drain and vent the steam coil air heaters and piping	$1,541.36
56	Drain and vent the steam coil air heater drain tanks	$1,541.36
57	Drain and vent boiler sampling system panel and piping	$1,541.36
58	**Precipitator**	**$8,357.60**
59	Multiple cleaning cycles for collection plates.	$1,685.44
60	Clear hoppers of all ash	$1,402.72
61	Disconnect transformers.	$1,786.56
62	Mechanically secure all compartment dampers and hopper outlet valves in open position.	$720.48
63	Disconnect ash transport piping and washdown hoppers and interior of casing.	$1,000.48
64	Install bird screens across hopper ash outlet and ash line flanges.	$880.96
65	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	$880.96
66	**Ductwork**	**$9,840.96**
67	Open ductwork doors.	$880.96
68	Perform extensive cleaning of the ductwork.	$8,960.00
69	Isolate ductwork at tie to common ductwork.	$0.00
70	**Condensate and Feedwater Piping**	**$1,685.44**
71	Drain water from the system.	$842.72
72	Leave open vents and drains.	$842.72

Lake Road 4/6 Retirement

ID	Task Name	Cost
73	**Feedwater heaters**	**$3,370.88**
74	Drain feedwater heaters	$842.72
75	Leave open vents and drains.	$1,685.44
76	Drain and vent the heater drain piping.	$842.72
77	**Deaerator and Deaerator Storage Tank**	**$1,685.44**
78	Drain Deaerator and Storage	$842.72
79	Leave open vents and drains.	$842.72
80	**Turbine(s) and Condenser**	**$3,504.72**
81	Drain hotwell and leave doors open.	$861.84
82	Open main turbine doors.	$880.96
83	Remove lube oil.	$1,761.92
84	**Generator**	**$6,095.76**
85	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
86	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
87	De-energize power supplies to generator excitation system at the source.	$446.64
88	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
89	Drain generator and exciter cooling water systems (if applicable).	$861.84
90	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
91	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
92	**Circulation Water and Turbine Cooling Water System**	**$2,566.40**
93	Drain.	$842.72
94	Open water box doors.	$880.96
95	Drain any circulating water chemical feed tanks.	$842.72
96	**Compressed Air System**	**$842.72**
97	Open vents and drains.	$842.72
98	**Auxiliary Steam System**	**$842.72**
99	Drain water from system.	$842.72
100	**Closed Cooling Water System**	**$1,685.44**
101	Drain water from system.	$842.72
102	Vent piping.	$842.72
103	**Condenser Air Extraction**	**$842.72**
104	Drain water from system.	$842.72
105	**Battery System**	**$4,253.28**
106	De-energize all battery chargers from the source.	$446.64
107	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	$446.64
108	Remove and dispose of battery electrolyte.	$1,680.00

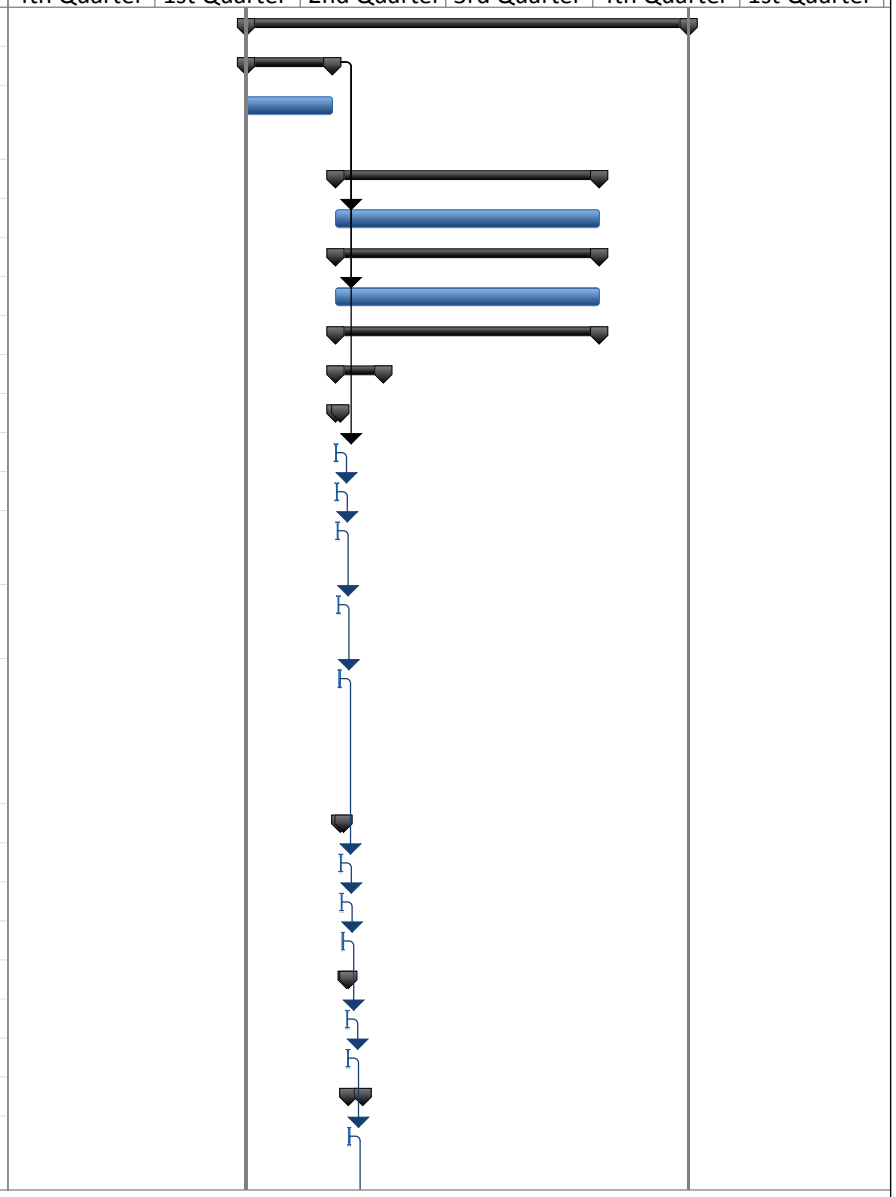
Lake Road 4/6 Retirement

ID	Task Name	Cost
109	Remove and dispose of battery cells.	$1,120.00
110	Clean up and dispose of electrolyte on surface areas around batteries.	$560.00
111	**Post Retirement Activities**	**$26,564.00**
112	Post Retirement Activities	$26,564.00

Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

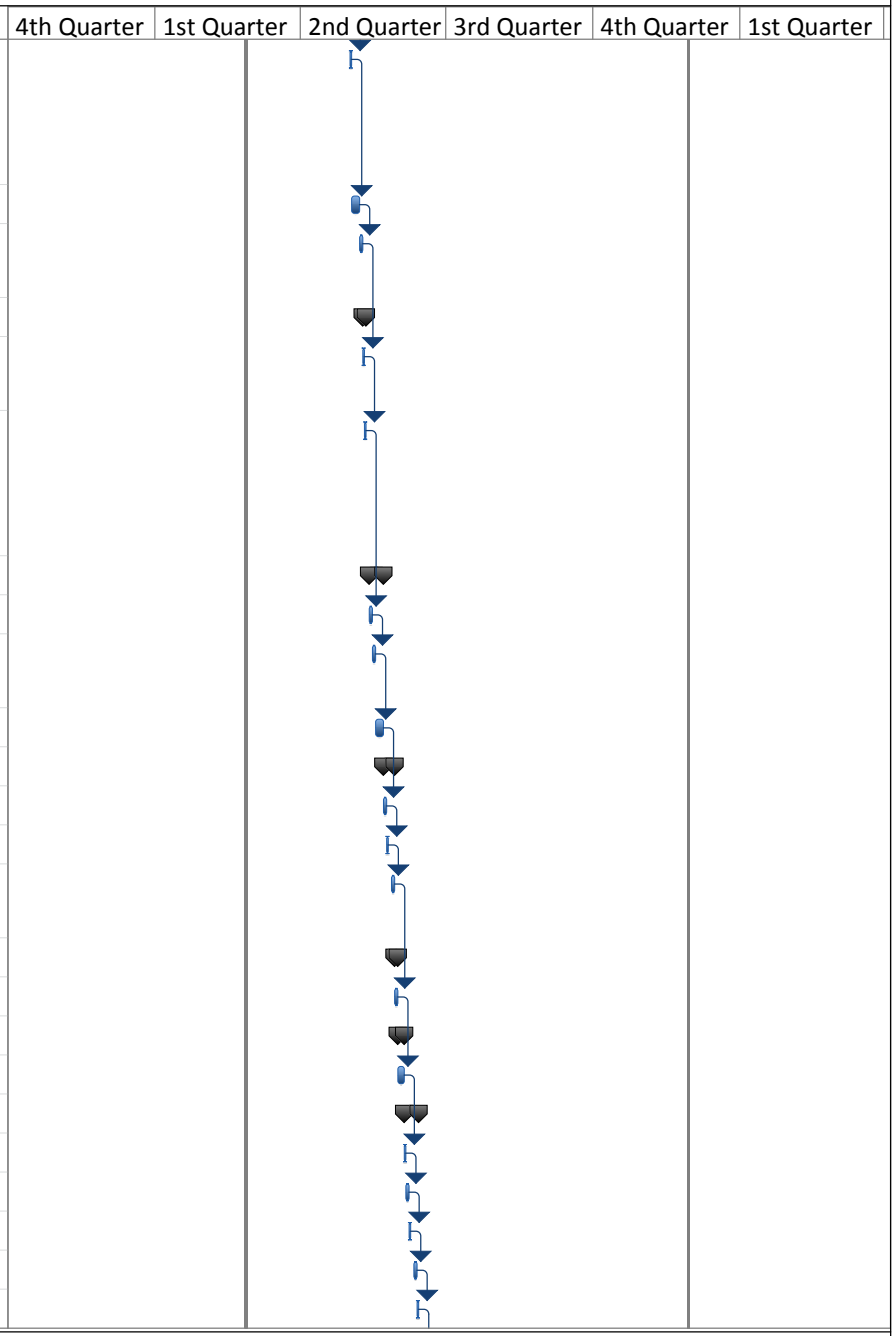
ID	Task Name	Duration
1	**Lake Road 4/6 Retirement**	**199 days**
2	**Pre-Engineering**	**40 days**
3	Permit review and engineering analysis and establish isolation points.	40 days
4	**KCL&L Overhead Costs**	**119 days**
5	KCP&L Retirement Manager	119 days
6	**Equipment Rentals**	**119 days**
7	Vacuum truck	119 days
8	**Retirement**	**119 days**
9	**Electrical**	**22 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Oil-Filled Power Transformers**	**7 days**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day



Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

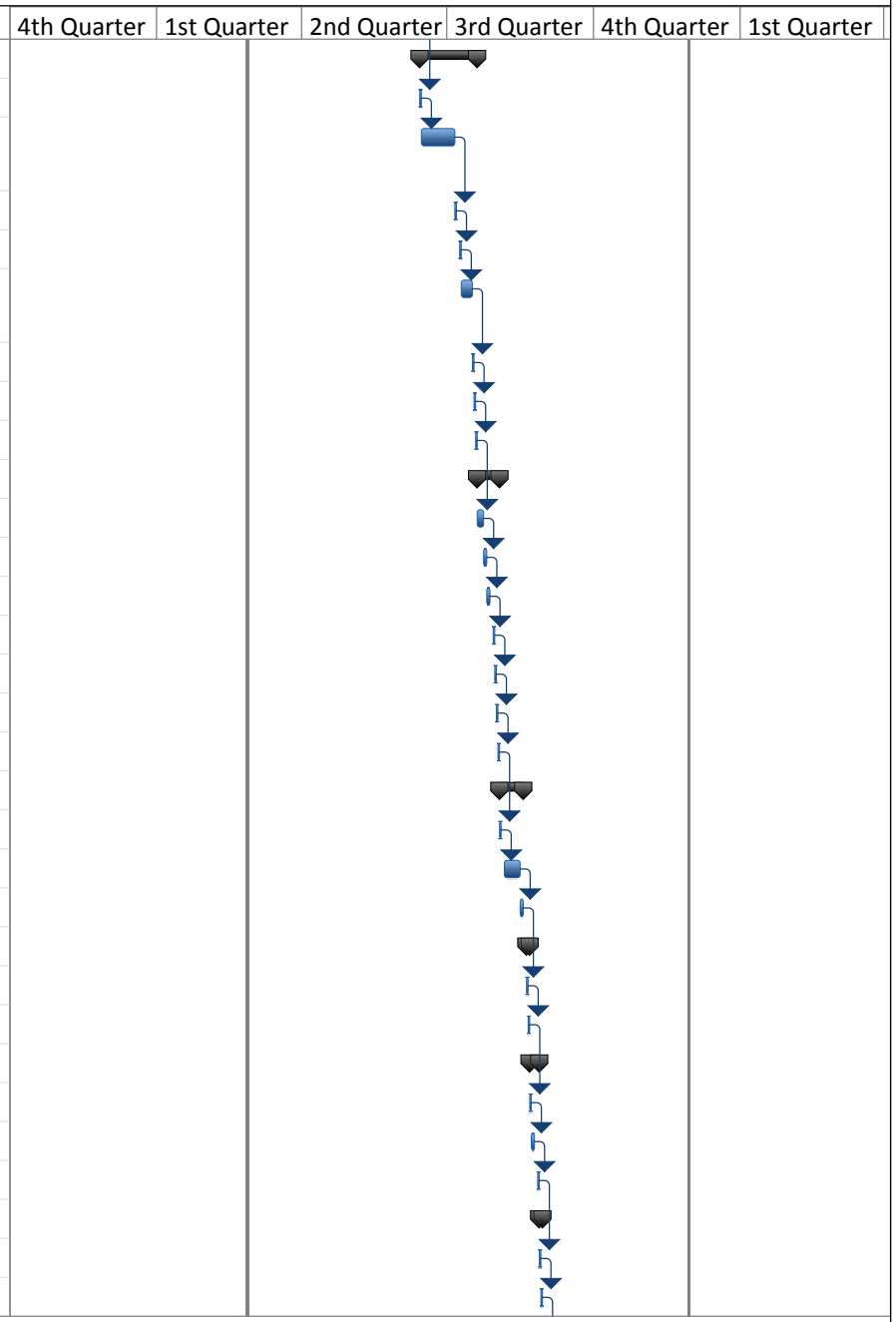
ID	Task Name	Duration
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
26	Drain and dispose of oil.	3 days
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	2 days
28	**Dry-type Power Transformers**	**2 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	2 days
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
34	Drain lube oil system (if applicable) and dispose of oil.	3 days
35	**Coal Handling**	**5 days**
36	Empty both coal silos.	2 days
37	Confirm conveyors are run out of fuel.	1 day
38	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from area.	2 days
39	**Gas System**	**2 days**
40	Isolate lines from source, open and vent.	2 days
41	**Boiler Chemical Feed**	**2 days**
42	Drain all chemical feed tanks.	2 days
43	**Demineralizer**	**7 days**
44	Drain water from system.	1 day
45	Drain acid and caustic tanks.	2 days
46	Open tanks and vessels.	1 day
47	Remove resin.	2 days
48	Drain and Vent the Demineralized Water Storage Tank	1 day



Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

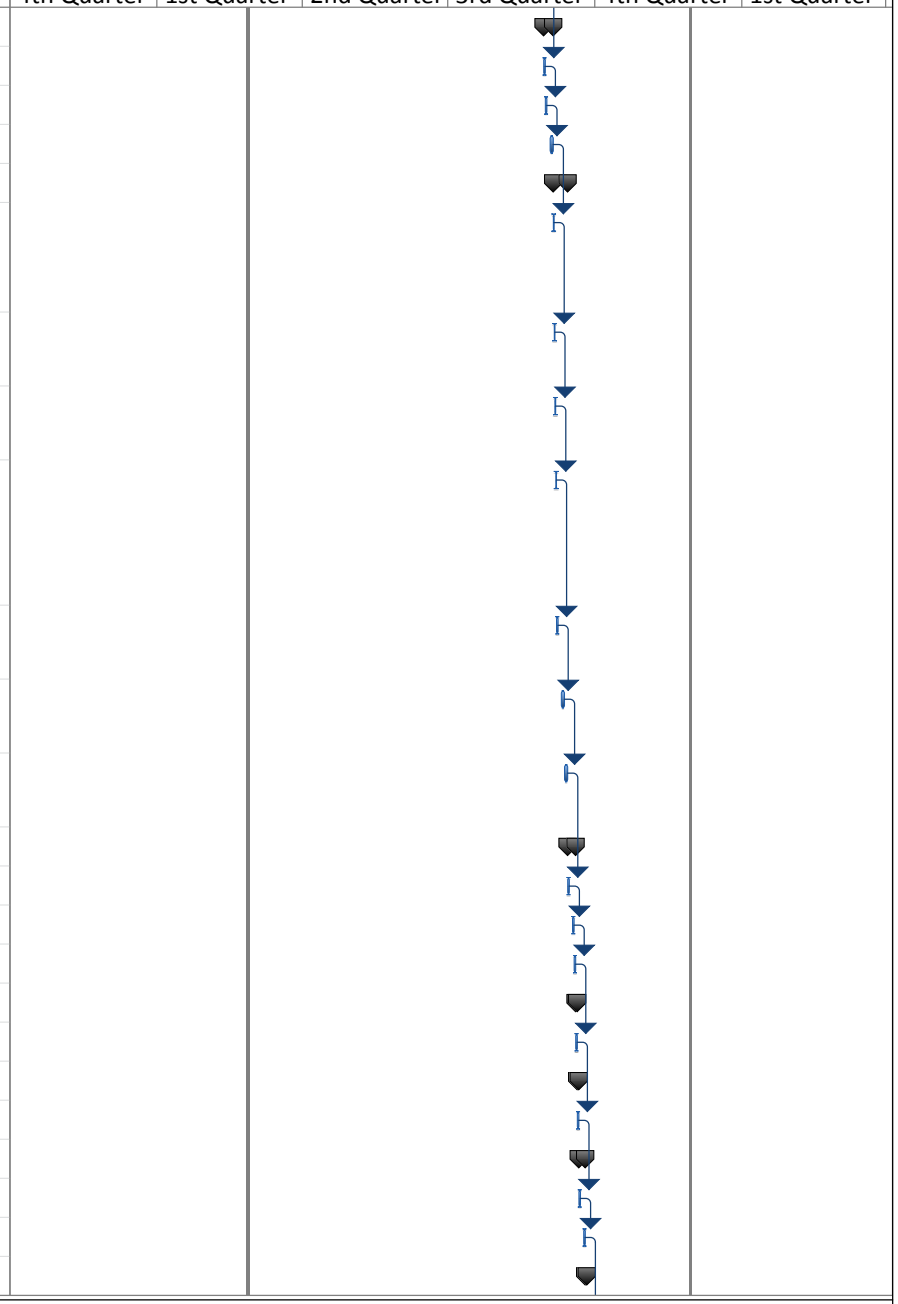
ID	Task Name	Duration
49	**Boiler**	**26 days**
50	Open boiler doors.	1 day
51	Gas side - perform cleaning of the boiler and bottom ash system.	15 days
52	Drain boiler, drum, downcomers and headers.	1 day
53	Open drum doors.	1 day
54	Drain, vent and clean the fly ash, slag and transport systems	5 days
55	Drain and vent the steam coil air heaters and piping	1 day
56	Drain and vent the steam coil air heater drain tanks	1 day
57	Drain and vent boiler sampling system panel and piping	1 day
58	**Precipitator**	**10 days**
59	Multiple cleaning cycles for collection plates.	2 days
60	Clear hoppers of all ash	2 days
61	Disconnect transformers.	2 days
62	Mechanically secure all compartment dampers and hopper	1 day
63	Disconnect ash transport piping and washdown hoppers ar	1 day
64	Install bird screens across hopper ash outlet and ash line fl	1 day
65	Padlock or tack weld all hopper doors shut. (note: if ash ho	1 day
66	**Ductwork**	**11 days**
67	Open ductwork doors.	1 day
68	Perform extensive cleaning of the ductwork.	8 days
69	Isolate ductwork at tie to common ductwork.	2 days
70	**Condensate and Feedwater Piping**	**2 days**
71	Drain water from the system.	1 day
72	Leave open vents and drains.	1 day
73	**Feedwater heaters**	**4 days**
74	Drain feedwater heaters	1 day
75	Leave open vents and drains.	2 days
76	Drain and vent the heater drain piping.	1 day
77	**Deaerator and Deaerator Storage Tank**	**2 days**
78	Drain Deaerator and Storage	1 day
79	Leave open vents and drains.	1 day



Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

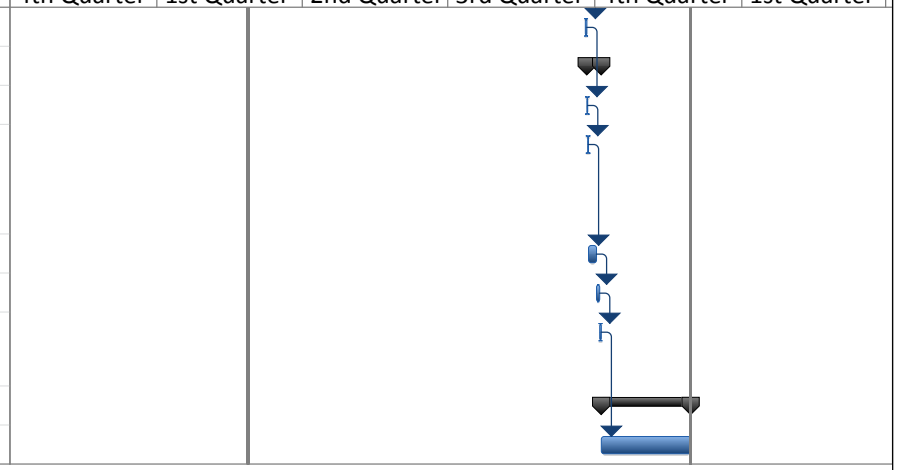
ID	Task Name	Duration
80	**Turbine(s) and Condenser**	**4 days**
81	Drain hotwell and leave doors open.	1 day
82	Open main turbine doors.	1 day
83	Remove lube oil.	2 days
84	**Generator**	**7 days**
85	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
86	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
87	De-energize power supplies to generator excitation system at the source.	0.5 days
88	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
89	Drain generator and exciter cooling water systems (if applicable).	1 day
90	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days
91	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
92	**Circulation Water and Turbine Cooling Water System**	**3 days**
93	Drain.	1 day
94	Open water box doors.	1 day
95	Drain any circulating water chemical feed tanks.	1 day
96	**Compressed Air System**	**1 day**
97	Open vents and drains.	1 day
98	**Auxiliary Steam System**	**1 day**
99	Drain water from system.	1 day
100	**Closed Cooling Water System**	**2 days**
101	Drain water from system.	1 day
102	Vent piping.	1 day
103	**Condenser Air Extraction**	**1 day**



Redactions Removed Pursuant to Commission Order

Lake Road 4/6 Retirement

ID	Task Name	Duration
104	Drain water from system.	1 day
105	**Battery System**	**7 days**
106	De-energize all battery chargers from the source.	0.5 days
107	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	0.5 days
108	Remove and dispose of battery electrolyte.	3 days
109	Remove and dispose of battery cells.	2 days
110	Clean up and dispose of electrolyte on surface areas around batteries.	1 day
111	**Post Retirement Activities**	**40 days**
112	Post Retirement Activities	40 days



Redactions Removed Pursuant to Commission Order

Lake Road 4-6 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$892,760		
Overhead During Dismantlement			$733,959		
Post-Dismantlement Activities			$49,140		
Owner Costs Total*				$1,675,859	
Demolition General Contractor (DGC) Costs					
Site Management			$400,086		
Equipment Rental			$681,238		
Consummables			$679,657		
Scrap Crew(s)			$674,401		
Dismantlement			$1,500,720		
Contractor Direct Cost*		$3,936,101			
Contractor Allowances					
DGC Insurance	2.00%		$78,722		
Contingency/Profit	15.00%		$602,224		
Performance Bond	2.00%		$92,340.94		
Contractor Costs Total:				$4,709,388	
Total:					$6,385,247
Owner Internal Costs:	5.00%				$319,262
Owner Contingency:	25.00%				$1,676,127
Lake Road 4-6 Dismantlement Opinion of Probable Cost:					$8,380,637

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $5,611,960

Redactions Removed Pursuant to Commission Order

TURBINE GENERATOR 1

Redactions Removed Pursuant to Commission Order

Lake Road T/G 1 Retirement

Owner Costs				
Pre-Retirement Activities		$7,638		
Retirement Activities		$26,641		
Post-Retirement Activities		$3,320		
Owner Direct Total			$37,599	
Owner Internal Costs	5.00%		$1,880	
Owner Contingency:	25.00%		$9,870	
Lake Road T/G 1 Retirement Opinion of Probable Cost:				$49,349

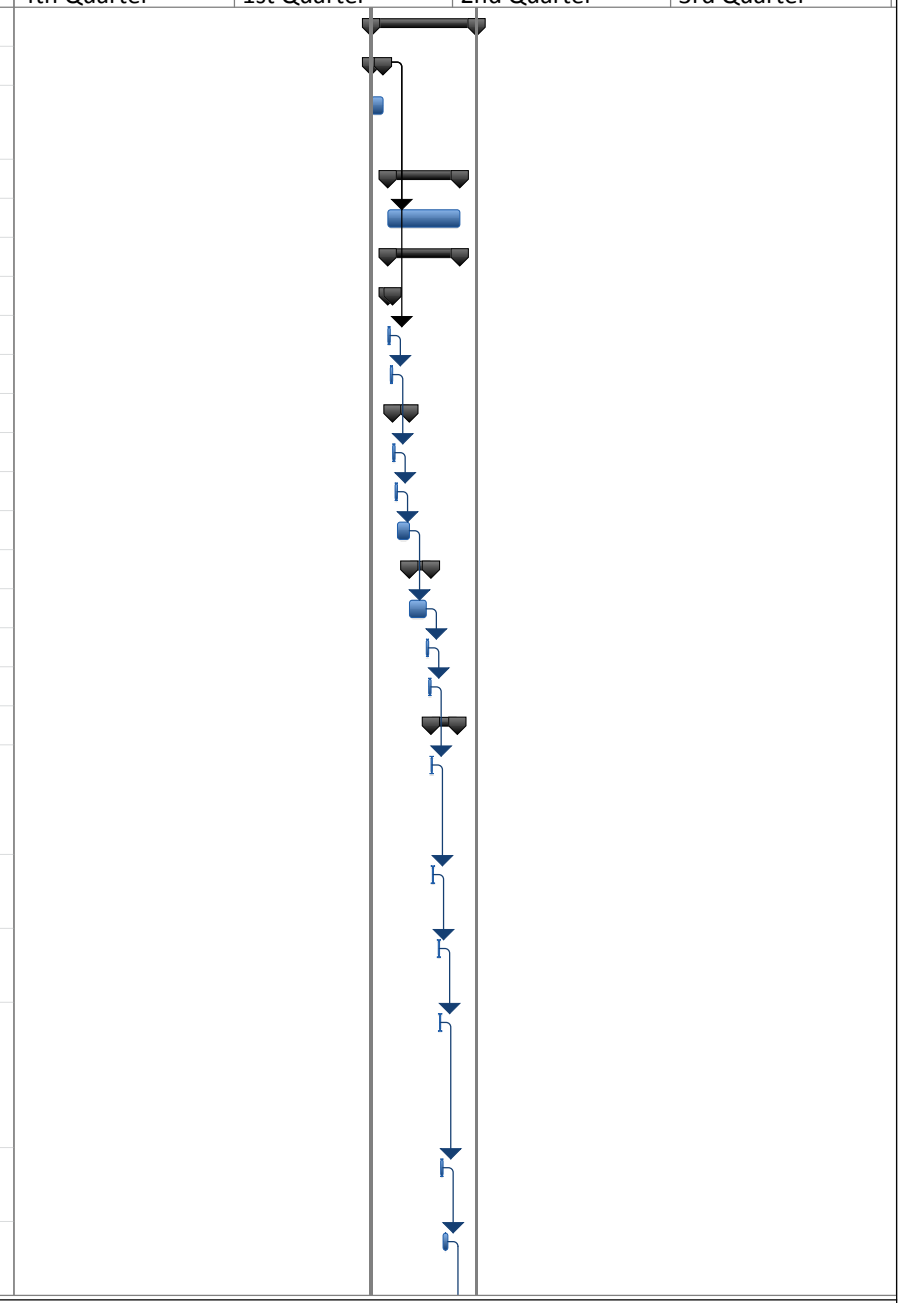
Lake Road Turbine Generator 1 Retirement

ID	Task Name	Cost
1	**Lake Road Turbine Generator 1 Retirement**	**$37,599.30**
2	**Pre-Engineering**	**$7,638.00**
3	Engineering analysis and establish isolation points.	$7,638.00
4	**KCL&L Overhead Costs**	**$13,631.20**
5	KCP&L Retirement Manager	$13,631.20
6	**Retirement**	**$13,009.60**
7	**Feedwater Piping**	**$1,685.44**
8	Drain water from the system and isolate from system.	$842.72
9	Leave open vents and drains.	$842.72
10	**Turbine(s) and Condenser**	**$4,385.68**
11	Drain hotwell and leave doors open.	$861.84
12	Open main turbine doors.	$880.96
13	Remove lube oil.	$2,642.88
14	**Circulating Water System**	**$0.00**
15	Drain and Clean the Cooling Tower	$0.00
16	Drain and Vent the Circulating Water Pipe	$0.00
17	Drain, Clean and Vent the Cooling Tower Chemical Systems	$0.00
18	**Generator**	**$6,095.76**
19	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
20	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
21	De-energize power supplies to generator excitation system at the source.	$446.64
22	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
23	Drain generator and exciter cooling water systems (if applicable).	$861.84
24	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
26	**Condenser Air Extraction**	**$842.72**
27	Drain water from system.	$842.72
28	**Post Retirement Activities**	**$3,320.50**
29	Post Retirement Activities	$3,320.50

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 1 Retirement

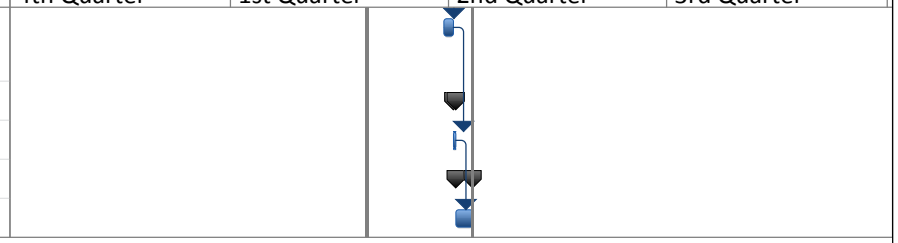
ID	Task Name	Duration
1	**Lake Road Turbine Generator 1 Retirement**	**32 days**
2	**Pre-Engineering**	**5 days**
3	Engineering analysis and establish isolation points.	5 days
4	**KCL&L Overhead Costs**	**22 days**
5	KCP&L Retirement Manager	22 days
6	**Retirement**	**22 days**
7	**Feedwater Piping**	**2 days**
8	Drain water from the system and isolate from system.	1 day
9	Leave open vents and drains.	1 day
10	**Turbine(s) and Condenser**	**5 days**
11	Drain hotwell and leave doors open.	1 day
12	Open main turbine doors.	1 day
13	Remove lube oil.	3 days
14	**Circulating Water System**	**7 days**
15	Drain and Clean the Cooling Tower	5 days
16	Drain and Vent the Circulating Water Pipe	1 day
17	Drain, Clean and Vent the Cooling Tower Chemical Systems	1 day
18	**Generator**	**7 days**
19	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
20	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
21	De-energize power supplies to generator excitation system at the source.	0.5 days
22	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
23	Drain generator and exciter cooling water systems (if applicable).	1 day
24	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 1 Retirement

ID	Task Name	Duration
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
26	**Condenser Air Extraction**	**1 day**
27	Drain water from system.	1 day
28	**Post Retirement Activities**	**5 days**
29	Post Retirement Activities	5 days



Redactions Removed Pursuant to Commission Order

Lake Road T/G 1 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$172,583		
Overhead During Dismantlement			$92,674		
Post-Dismantlement Activities			$8,190		
Owner Costs Total*				$273,447	
Demolition General Contractor (DGC) Costs					
Site Management			$89,966		
Equipment Rental			$329,332		
Consummables			$328,568		
Scrap Crew(s)			$326,027		
Dismantlement			$210,518		
Contractor Direct Cost*		$1,284,411			
Contractor Allowances					
DGC Insurance	2.00%		$25,688		
Contingency/Profit	15.00%		$196,515		
Performance Bond	2.00%		$30,132.28		
Contractor Costs Total:				$1,536,746	
Total:					$1,810,193
Owner Internal Costs:	5.00%				$90,510
Owner Contingency:	25.00%				$475,176
Lake Road T/G 1 Dismantlement Opinion of Probable Cost:					$2,375,879

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,557,858

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 1 Dismantlement

ID	Task Name	Cost
1	**Lake Road T/G 1 Removal**	**$1,557,861.80**
2	**Pre-Dismantlement Activities**	**$172,583.80**
3	Hire Demolition General Contractor	$167,184.00
4	KCP&L Prepares Unit for Dismantlement	$5,399.80
5	Demolition Contractor Mobilizes on Site	$0.00
6	**KCP&L Overhead during Dismantlement**	**$92,674.40**
7	KCP&L Engineer	$92,674.40
8	**Demoliton Contractor Overhead during Dismantlement**	**$89,966.24**
9	Demolition Contractor Superintendent	$89,966.24
10	**Demolition Contractor Equipment Rental Costs**	**$329,332.64**
11	Equipment Rental	$329,332.64
12	**Demolition Contractor Consummables**	**$328,568.24**
13	Consummables	$328,568.24
14	**Scrap Crew(s)**	**$326,027.52**
15	Crew to Handle Scrap Material(s)	$326,027.52
16	**Dismantlement Directs**	**$210,518.96**
17	**Phase 1 Demolition**	**$210,518.96**
18	**Critical Piping**	**$3,582.72**
19	Remove Main Steam Piping to the Turbine	$3,582.72
20	**Circulating Water (plant side)**	**$3,582.72**
21	Waterboxes	$3,582.72
22	**Condenser Air Extraction System**	**$3,582.72**
23	Vacuum Pumps	$3,582.72
24	**Turbine Seals and Drains**	**$7,165.44**
25	Piping	$7,165.44
26	**Turbine Lube Oil System**	**$18,443.76**
27	Turbine Lube Oil Tank	$7,695.60
28	Turbine Lube Oil Pumps	$7,165.44
29	Turbine Oil Mist Eliminator	$3,582.72
30	**Generator Auxiliary Systems**	**$21,496.32**
31	Hydrogen Cooler Skid and Piping	$3,582.72
32	Stator Cooling Water Skid and Piping	$3,582.72
33	Isophase Bus Duct	$7,165.44
34	Exciter Heat Exchanger	$3,582.72
35	EHC Coolers	$3,582.72
36	**Remove Turbine**	**$126,343.68**
37	Remove Turbine	$26,321.60
38	Remove Generator	$39,482.40
39	Remove Condenser Neck Heat Exchanger	$7,896.48
40	Remove Condenser	$13,160.80
41	Remove Misc. Auxiliary Turbine Equipment	$39,482.40
42	**Cooling Tower 1**	**$26,321.60**
43	Remove Cooling Tower 1	$26,321.60
44	**Project Close-Out**	**$8,190.00**

Redactions Removed Pursuant to Commission Order

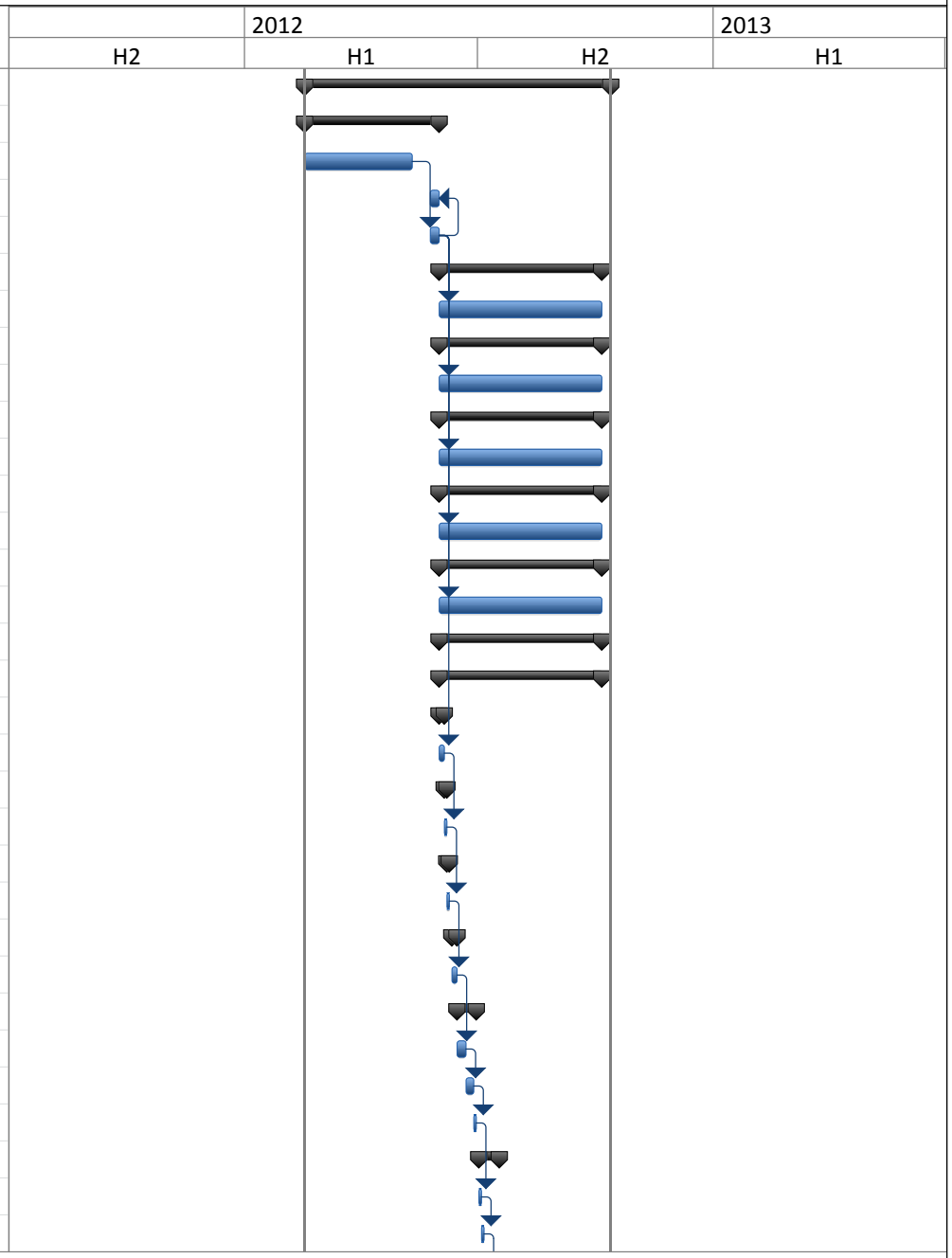
Lake Road Turbine Generator 1 Dismantlement

ID	Task Name	Cost
45	Project Close-Out Activities	$8,190.00

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 1 Dismantlement

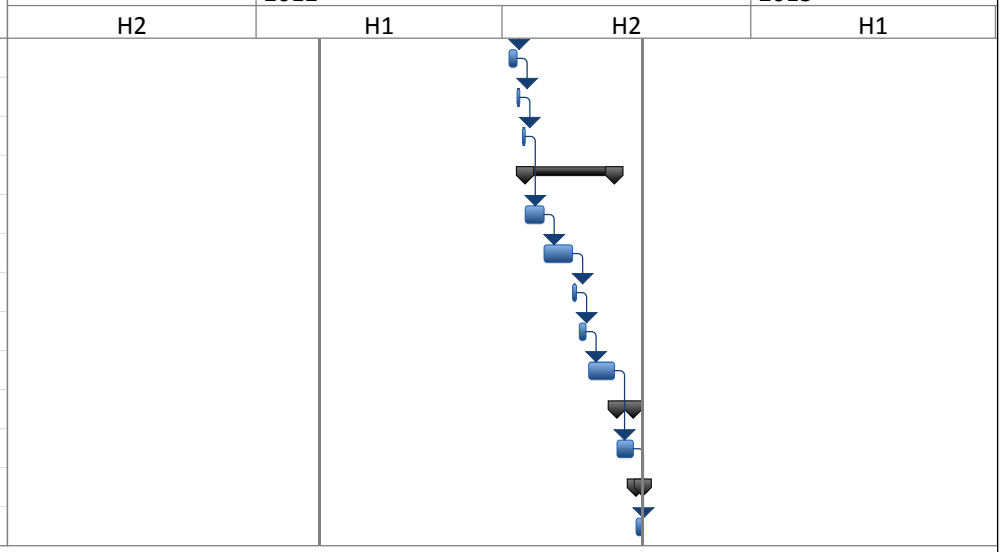
ID	Task Name	Duration
1	**Lake Road T/G 1 Removal**	**171 days**
2	**Pre-Dismantlement Activities**	**75 days**
3	Hire Demolition General Contractor	3 mons
4	KCP&L Prepares Unit for Dismantlement	1 wk
5	Demolition Contractor Mobilizes on Site	5 days
6	**KCP&L Overhead during Dismantlement**	**91 days**
7	KCP&L Engineer	91 days
8	**Demoliton Contractor Overhead during Dismantlemen**	**91 days**
9	Demolition Contractor Superintendent	91 days
10	**Demolition Contractor Equipment Rental Costs**	**91 days**
11	Equipment Rental	91 days
12	**Demolition Contractor Consummables**	**91 days**
13	Consummables	91 days
14	**Scrap Crew(s)**	**91 days**
15	Crew to Handle Scrap Material(s)	91 days
16	**Dismantlement Directs**	**91 days**
17	**Phase 1 Demolition**	**91 days**
18	**Critical Piping**	**2 days**
19	Remove Main Steam Piping to the Turbine	2 days
20	**Circulating Water (plant side)**	**2 days**
21	Waterboxes	2 days
22	**Condenser Air Extraction System**	**2 days**
23	Vacuum Pumps	2 days
24	**Turbine Seals and Drains**	**4 days**
25	Piping	4 days
26	**Turbine Lube Oil System**	**11 days**
27	Turbine Lube Oil Tank	5 days
28	Turbine Lube Oil Pumps	4 days
29	Turbine Oil Mist Eliminator	2 days
30	**Generator Auxiliary Systems**	**12 days**
31	Hydrogen Cooler Skid and Piping	2 days
32	Stator Cooling Water Skid and Piping	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 1 Dismantlement

ID	Task Name	Duration
33	Isophase Bus Duct	4 days
34	Exciter Heat Exchanger	2 days
35	EHC Coolers	2 days
36	**Remove Turbine**	**48 days**
37	Remove Turbine	10 days
38	Remove Generator	15 days
39	Remove Condenser Neck Heat Exchanger	3 days
40	Remove Condenser	5 days
41	Remove Misc. Auxiliary Turbine Equipment	15 days
42	**Cooling Tower 1**	**10 days**
43	Remove Cooling Tower 1	10 days
44	**Project Close-Out**	**5 days**
45	Project Close-Out Activities	5 days



Redactions Removed Pursuant to Commission Order

TURBINE GENERATOR 2

Lake Road T/G 2 Retirement

Owner Costs				
Pre-Retirement Activities		$7,638		
Retirement Activities		$26,641		
Post-Retirement Activities		$3,320		
Owner Direct Total			$37,599	
Owner Internal Costs	5.00%		$1,880	
Owner Contingency:	25.00%		$9,870	
Lake Road T/G 2 Retirement Opinion of Probable Cost:				$49,349

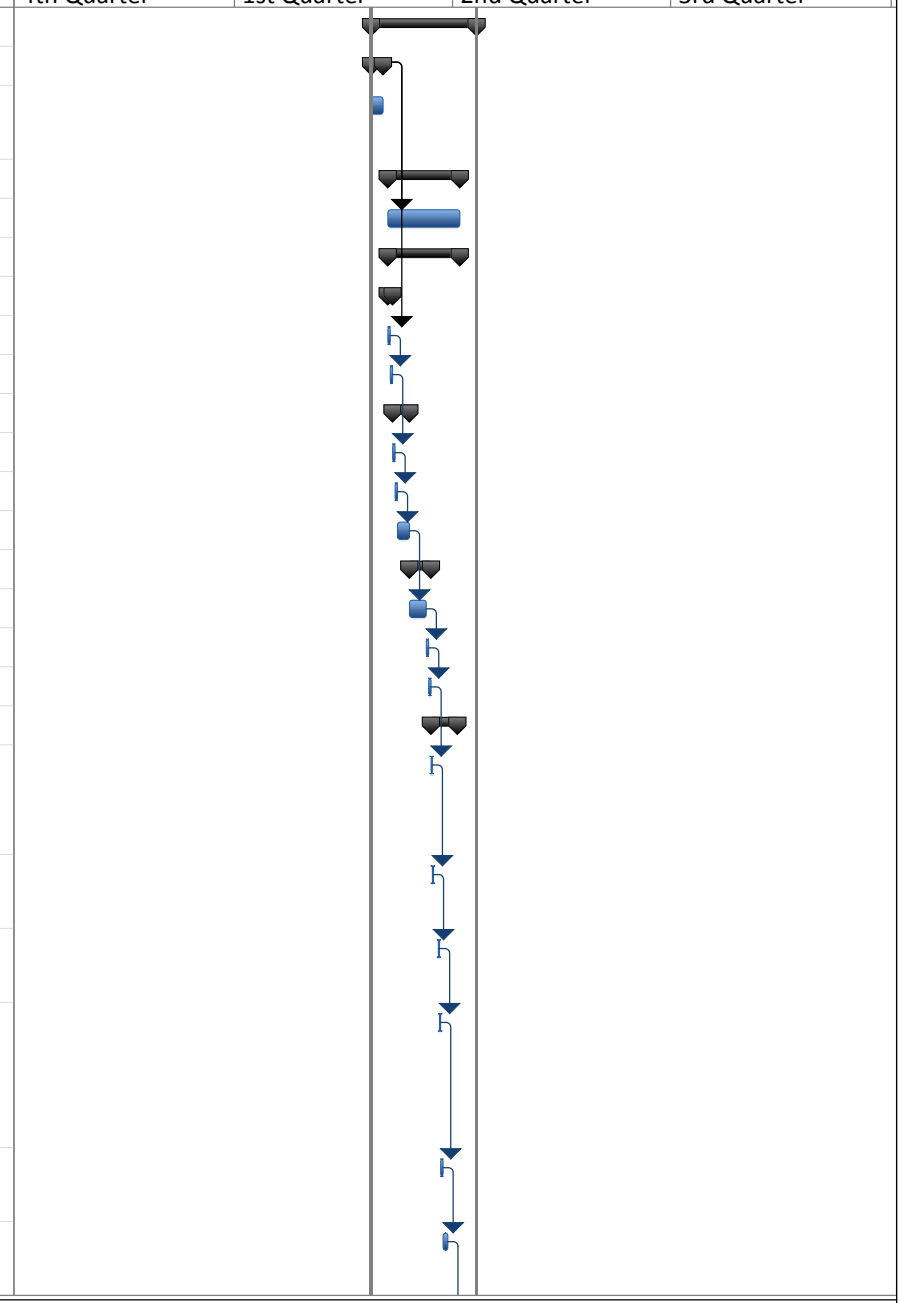
Lake Road Turbine Generator 2 Retirement

ID	Task Name	Cost
1	**Lake Road Turbine Generator 2 Retirement**	**$37,599.30**
2	**Pre-Engineering**	**$7,638.00**
3	Engineering analysis and establish isolation points.	$7,638.00
4	**KCL&L Overhead Costs**	**$13,631.20**
5	KCP&L Retirement Manager	$13,631.20
6	**Retirement**	**$13,009.60**
7	**Feedwater Piping**	**$1,685.44**
8	Drain water from the system and isolate from system.	$842.72
9	Leave open vents and drains.	$842.72
10	**Turbine(s) and Condenser**	**$4,385.68**
11	Drain hotwell and leave doors open.	$861.84
12	Open main turbine doors.	$880.96
13	Remove lube oil.	$2,642.88
14	**Circulating Water System**	**$0.00**
15	Drain and Clean the Cooling Tower	$0.00
16	Drain and Vent the Circulating Water Pipe	$0.00
17	Drain, Clean and Vent the Cooling Tower Chemical Systems	$0.00
18	**Generator**	**$6,095.76**
19	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
20	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
21	De-energize power supplies to generator excitation system at the source.	$446.64
22	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
23	Drain generator and exciter cooling water systems (if applicable).	$861.84
24	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
26	**Condenser Air Extraction**	**$842.72**
27	Drain water from system.	$842.72
28	**Post Retirement Activities**	**$3,320.50**
29	Post Retirement Activities	$3,320.50

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 2 Retirement

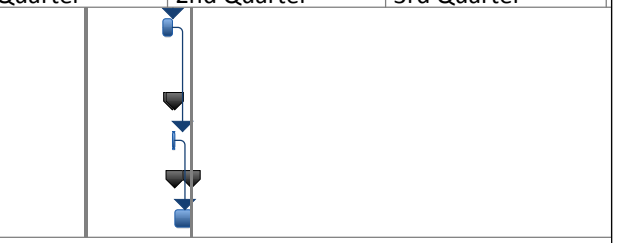
ID	Task Name	Duration
1	**Lake Road Turbine Generator 2 Retirement**	**32 days**
2	**Pre-Engineering**	**5 days**
3	Engineering analysis and establish isolation points.	5 days
4	**KCL&L Overhead Costs**	**22 days**
5	KCP&L Retirement Manager	22 days
6	**Retirement**	**22 days**
7	**Feedwater Piping**	**2 days**
8	Drain water from the system and isolate from system.	1 day
9	Leave open vents and drains.	1 day
10	**Turbine(s) and Condenser**	**5 days**
11	Drain hotwell and leave doors open.	1 day
12	Open main turbine doors.	1 day
13	Remove lube oil.	3 days
14	**Circulating Water System**	**7 days**
15	Drain and Clean the Cooling Tower	5 days
16	Drain and Vent the Circulating Water Pipe	1 day
17	Drain, Clean and Vent the Cooling Tower Chemical Systems	1 day
18	**Generator**	**7 days**
19	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
20	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
21	De-energize power supplies to generator excitation system at the source.	0.5 days
22	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
23	Drain generator and exciter cooling water systems (if applicable).	1 day
24	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 2 Retirement

ID	Task Name	Duration
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
26	**Condenser Air Extraction**	**1 day**
27	Drain water from system.	1 day
28	**Post Retirement Activities**	**5 days**
29	Post Retirement Activities	5 days



Redactions Removed Pursuant to Commission Order

Lake Road T/G 2 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$172,583		
Overhead During Dismantlement			$102,858		
Post-Dismantlement Activities			$8,190		
Owner Costs Total*				$283,631	
Demolition General Contractor (DGC) Costs					
Site Management			$99,852		
Equipment Rental			$365,523		
Consummables			$364,674		
Scrap Crew(s)			$361,854		
Dismantlement			$236,840		
Contractor Direct Cost*		$1,428,743			
Contractor Allowances					
DGC Insurance	2.00%		$28,575		
Contingency/Profit	15.00%		$218,598		
Performance Bond	2.00%		$33,518.31		
Contractor Costs Total:				$1,709,434	
Total:					$1,993,065
Owner Internal Costs:	5.00%				$99,653
Owner Contingency:	25.00%				$523,180
Lake Road T/G 2 Dismantlement Opinion of Probable Cost:					$2,615,898

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,712,374

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Cost
1	**Lake Road T/G 2 Removal**	**$1,712,377.80**
2	**Pre-Dismantlement Activities**	**$172,583.80**
3	Hire Demolition General Contractor	$167,184.00
4	KCP&L Prepares Unit for Dismantlement	$5,399.80
5	Demolition Contractor Mobilizes on Site	$0.00
6	**KCP&L Overhead during Dismantlement**	**$102,858.40**
7	KCP&L Engineer	$102,858.40
8	**Demoliton Contractor Overhead during Dismantlement**	**$99,852.64**
9	Demolition Contractor Superintendent	$99,852.64
10	**Demolition Contractor Equipment Rental Costs**	**$365,523.04**
11	Equipment Rental	$365,523.04
12	**Scrap Crew(s)**	**$361,854.72**
13	Crew to Handle Scrap Material(s)	$361,854.72
14	**Demolition Contractor Consummables**	**$364,674.64**
15	Consummables	$364,674.64
16	**Dismantlement Directs**	**$236,840.56**
17	**Phase 1 Demolition**	**$236,840.56**
18	**Critical Piping**	**$3,582.72**
19	Remove Main Steam Piping to the Turbine	$3,582.72
20	**Circulating Water (plant side)**	**$3,582.72**
21	Waterboxes	$3,582.72
22	**Condenser Air Extraction System**	**$3,582.72**
23	Vacuum Pumps	$3,582.72
24	**Turbine Seals and Drains**	**$7,165.44**
25	Piping	$7,165.44
26	**Turbine Lube Oil System**	**$18,443.76**
27	Turbine Lube Oil Tank	$7,695.60
28	Turbine Lube Oil Pumps	$7,165.44
29	Turbine Oil Mist Eliminator	$3,582.72
30	**Generator Auxiliary Systems**	**$21,496.32**
31	Hydrogen Cooler Skid and Piping	$3,582.72
32	Stator Cooling Water Skid and Piping	$3,582.72
33	Isophase Bus Duct	$7,165.44
34	Exciter Heat Exchanger	$3,582.72
35	EHC Coolers	$3,582.72
36	**Remove Turbine**	**$147,400.96**
37	Remove Turbine	$34,218.08
38	Remove Generator	$44,746.72
39	Remove Condenser Neck Heat Exchanger	$7,896.48
40	Remove Condenser	$15,792.96
41	Remove Misc. Auxiliary Turbine Equipment	$44,746.72
42	**Cooling Tower 2**	**$31,585.92**
43	Remove Cooling Tower 2	$31,585.92
44	**Project Close-Out**	**$8,190.00**

Redactions Removed Pursuant to Commission Order

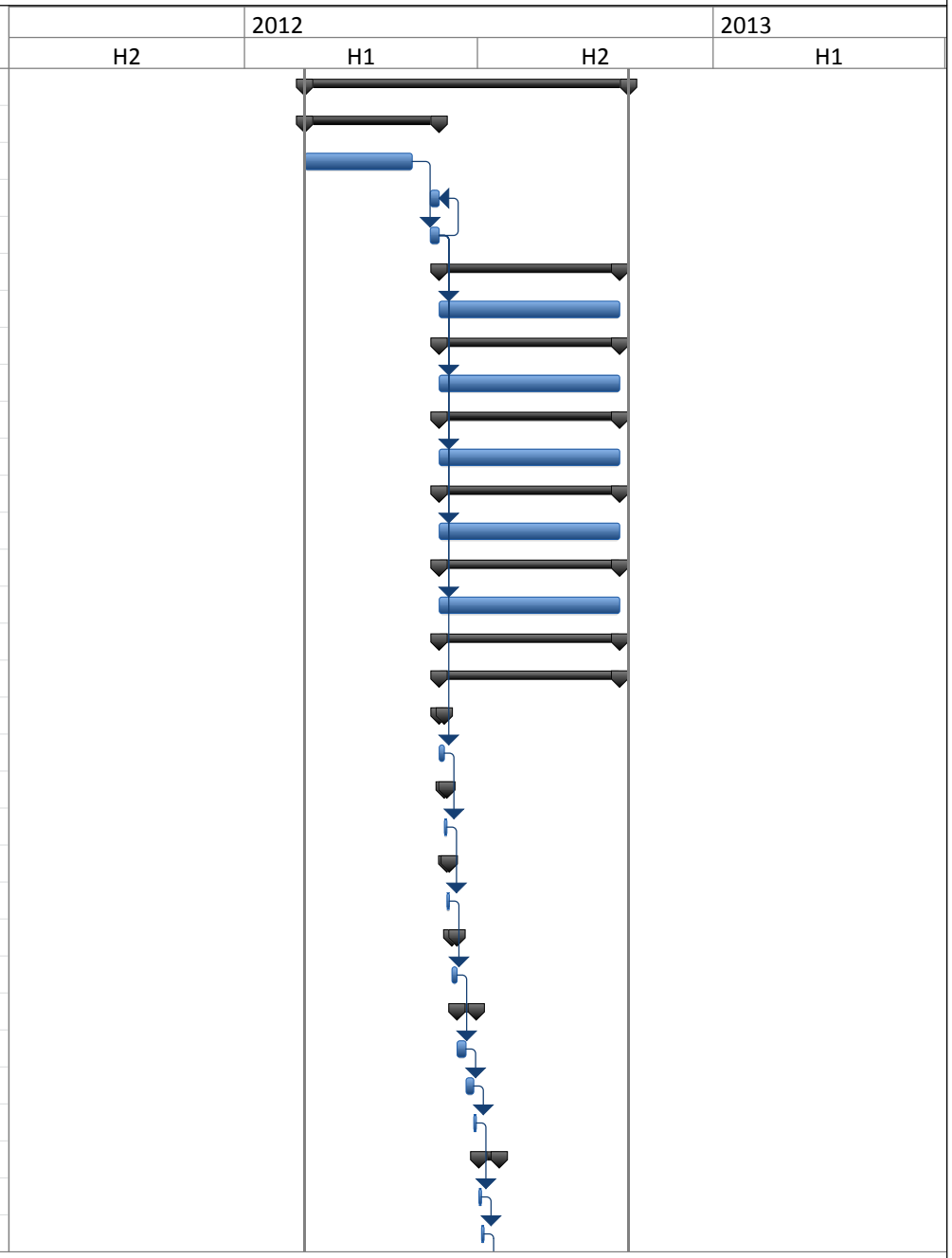
Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Cost
45	Project Close-Out Activities	$8,190.00

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 2 Dismantlement

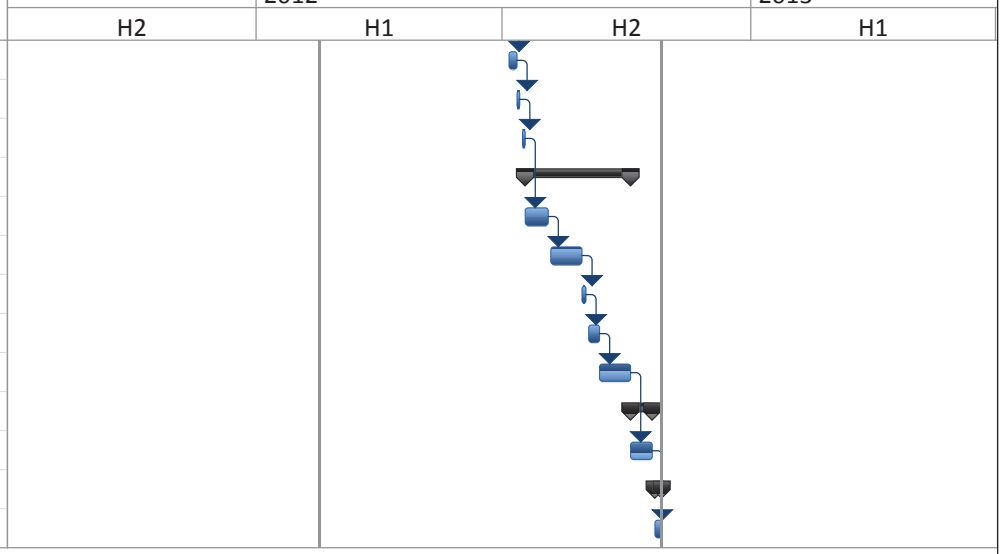
ID	Task Name	Duration
1	**Lake Road T/G 2 Removal**	**181 days**
2	**Pre-Dismantlement Activities**	**75 days**
3	Hire Demolition General Contractor	3 mons
4	KCP&L Prepares Unit for Dismantlement	1 wk
5	Demolition Contractor Mobilizes on Site	5 days
6	**KCP&L Overhead during Dismantlement**	**101 days**
7	KCP&L Engineer	101 days
8	**Demoliton Contractor Overhead during Dismantlemen**	**101 days**
9	Demolition Contractor Superintendent	101 days
10	**Demolition Contractor Equipment Rental Costs**	**101 days**
11	Equipment Rental	101 days
12	**Scrap Crew(s)**	**101 days**
13	Crew to Handle Scrap Material(s)	101 days
14	**Demolition Contractor Consummables**	**101 days**
15	Consummables	101 days
16	**Dismantlement Directs**	**101 days**
17	**Phase 1 Demolition**	**101 days**
18	**Critical Piping**	**2 days**
19	Remove Main Steam Piping to the Turbine	2 days
20	**Circulating Water (plant side)**	**2 days**
21	Waterboxes	2 days
22	**Condenser Air Extraction System**	**2 days**
23	Vacuum Pumps	2 days
24	**Turbine Seals and Drains**	**4 days**
25	Piping	4 days
26	**Turbine Lube Oil System**	**11 days**
27	Turbine Lube Oil Tank	5 days
28	Turbine Lube Oil Pumps	4 days
29	Turbine Oil Mist Eliminator	2 days
30	**Generator Auxiliary Systems**	**12 days**
31	Hydrogen Cooler Skid and Piping	2 days
32	Stator Cooling Water Skid and Piping	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Duration
33	Isophase Bus Duct	4 days
34	Exciter Heat Exchanger	2 days
35	EHC Coolers	2 days
36	**Remove Turbine**	**56 days**
37	Remove Turbine	13 days
38	Remove Generator	17 days
39	Remove Condenser Neck Heat Exchanger	3 days
40	Remove Condenser	6 days
41	Remove Misc. Auxiliary Turbine Equipment	17 days
42	**Cooling Tower 2**	**12 days**
43	Remove Cooling Tower 2	12 days
44	**Project Close-Out**	**5 days**
45	Project Close-Out Activities	5 days



Redactions Removed Pursuant to Commission Order

TURBINE GENERATOR 3

Lake Road T/G 3 Retirement

Owner Costs				
Pre-Retirement Activities		$7,638		
Retirement Activities		$22,304		
Post-Retirement Activities		$3,320		
Owner Direct Total			$33,262	
Owner Internal Costs	5.00%		$1,663	
Owner Contingency:	25.00%		$8,731	
Lake Road T/G 3 Retirement Opinion of Probable Cost:				$43,656

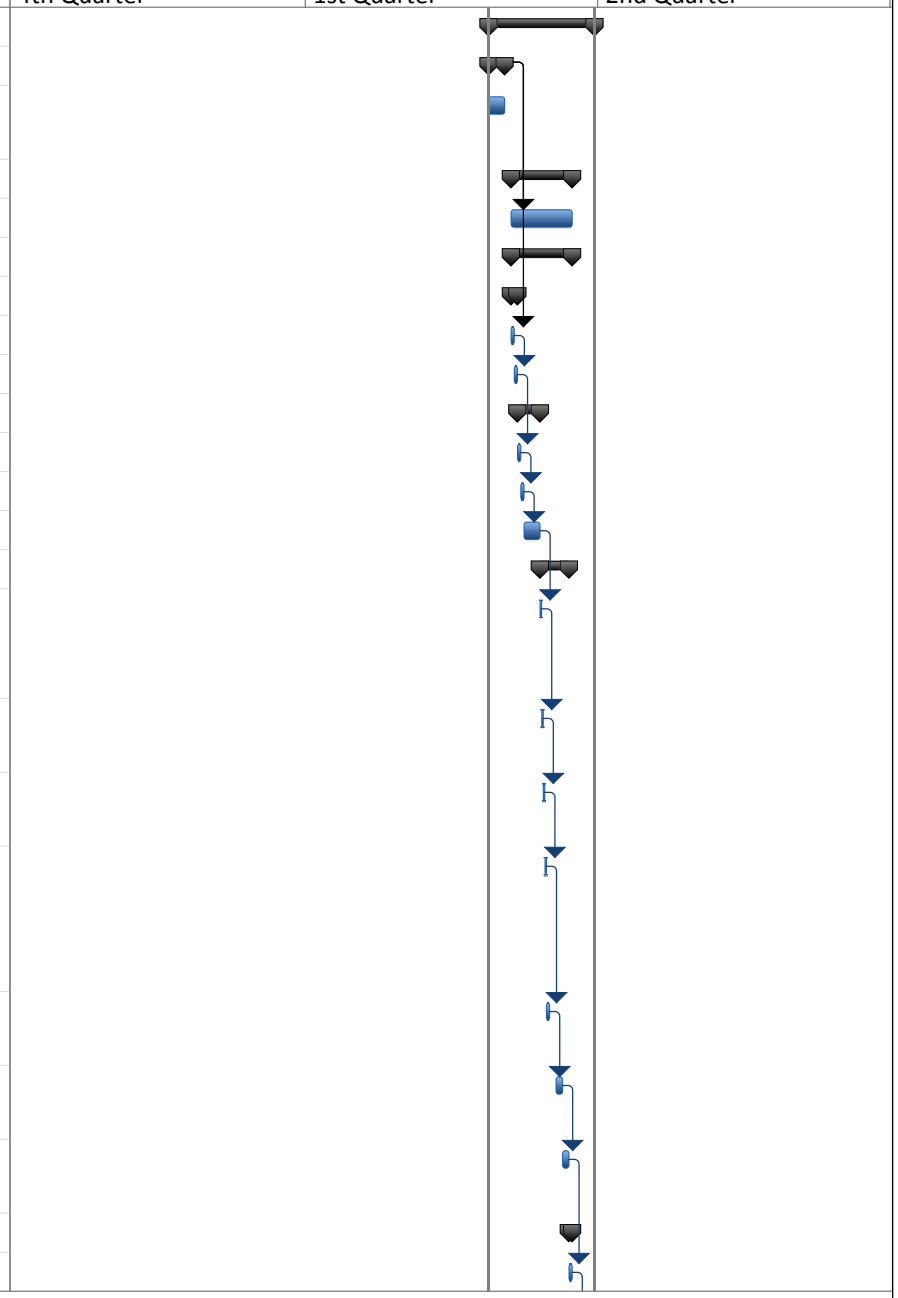
Lake Road Turbine Generator 3 Retirement

ID	Task Name	Cost
1	**Lake RoadTurbine Generator 3 Retirement**	**$33,262.10**
2	**Pre-Engineering**	**$7,638.00**
3	Engineering analysis and establish isolation points.	$7,638.00
4	**KCL&L Overhead Costs**	**$9,294.00**
5	KCP&L Retirement Manager	$9,294.00
6	**Retirement**	**$13,009.60**
7	**Feedwater Piping**	**$1,685.44**
8	Drain water from the system and isolate from system.	$842.72
9	Leave open vents and drains.	$842.72
10	**Turbine(s) and Condenser**	**$4,385.68**
11	Drain hotwell and leave doors open.	$861.84
12	Open main turbine doors.	$880.96
13	Remove lube oil.	$2,642.88
14	**Generator**	**$6,095.76**
15	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
16	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
17	De-energize power supplies to generator excitation system at the source.	$446.64
18	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
19	Drain generator and exciter cooling water systems (if applicable).	$861.84
20	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
21	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
22	**Condenser Air Extraction**	**$842.72**
23	Drain water from system.	$842.72
24	**Post Retirement Activities**	**$3,320.50**
25	Post Retirement Activities	$3,320.50

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 3 Retirement

ID	Task Name	Duration
1	**Lake RoadTurbine Generator 3 Retirement**	**25 days**
2	**Pre-Engineering**	**5 days**
3	Engineering analysis and establish isolation points.	5 days
4	**KCL&L Overhead Costs**	**15 days**
5	KCP&L Retirement Manager	15 days
6	**Retirement**	**15 days**
7	**Feedwater Piping**	**2 days**
8	Drain water from the system and isolate from system.	1 day
9	Leave open vents and drains.	1 day
10	**Turbine(s) and Condenser**	**5 days**
11	Drain hotwell and leave doors open.	1 day
12	Open main turbine doors.	1 day
13	Remove lube oil.	3 days
14	**Generator**	**7 days**
15	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
16	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
17	De-energize power supplies to generator excitation system at the source.	0.5 days
18	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
19	Drain generator and exciter cooling water systems (if applicable).	1 day
20	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days
21	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
22	**Condenser Air Extraction**	**1 day**
23	Drain water from system.	1 day



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 3 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter
24	**Post Retirement Activities**	**5 days**			
25	Post Retirement Activities	5 days			

Redactions Removed Pursuant to Commission Order

Lake Road T/G 3 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$172,583		
Overhead During Dismantlement			$71,288		
Post-Dismantlement Activities			$8,190		
Owner Costs Total*				$252,061	
Demolition General Contractor (DGC) Costs					
Site Management			$69,204		
Equipment Rental			$253,332		
Consummables			$252,744		
Scrap Crew(s)			$250,790		
Dismantlement			$156,925		
Contractor Direct Cost*		$982,995			
Contractor Allowances					
DGC Insurance	2.00%		$19,660		
Contingency/Profit	15.00%		$150,398		
Performance Bond	2.00%		$23,061		
Contractor Costs Total:				$1,176,114	
Total:					$1,428,175
Owner Internal Costs:	5.00%				$71,409
Owner Contingency:	25.00%				$374,896
Lake Road T/G 3 Dismantlement Opinion of Probable Cost:					$1,874,480

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,235,056

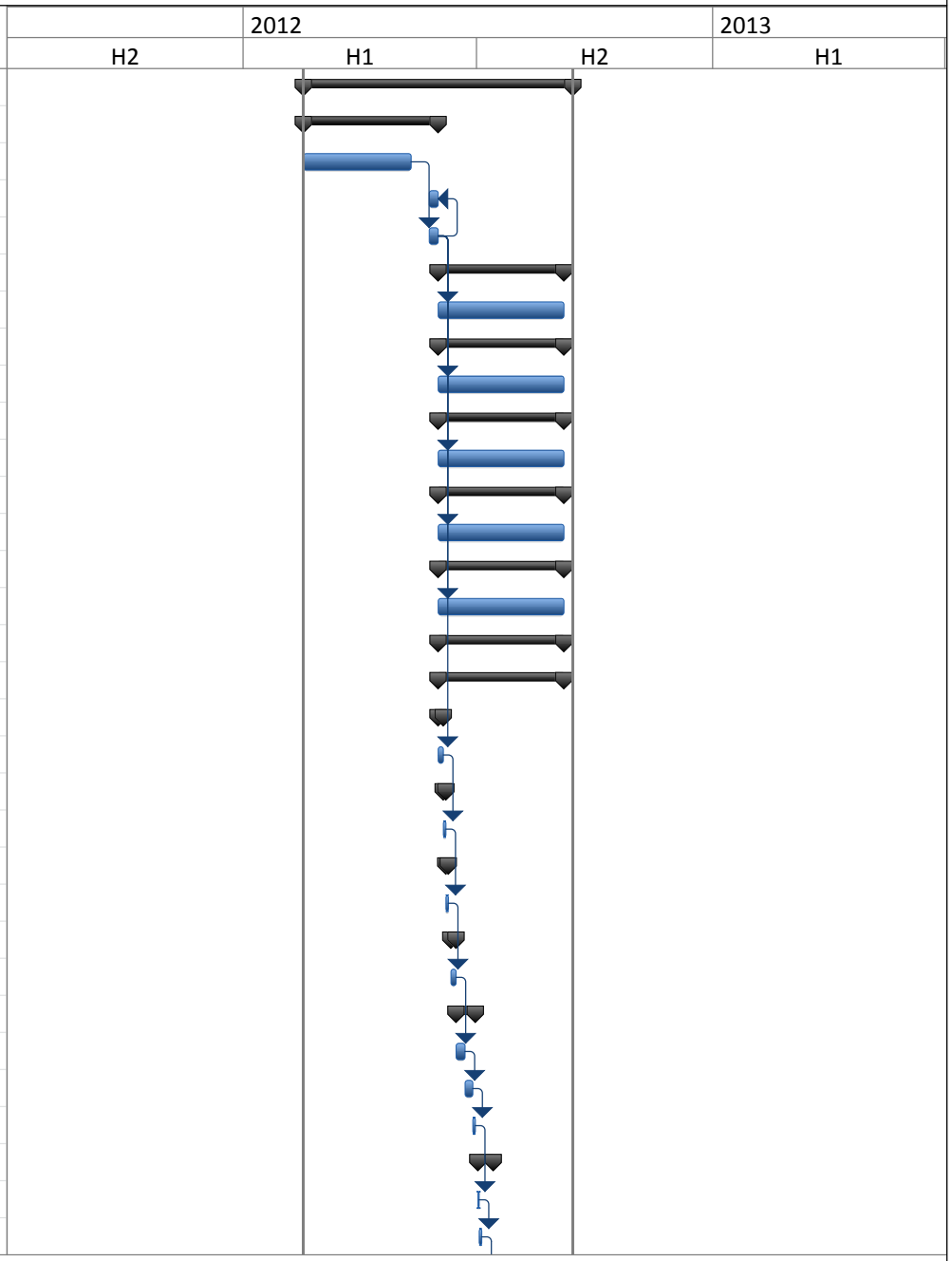
Lake Road Turbine Generator 3 Dismantlement

ID	Task Name	Cost
1	**Lake Road T/G 3 Removal**	**$1,235,059.80**
2	**Pre-Dismantlement Activities**	**$172,583.80**
3	Hire Demolition General Contractor	$167,184.00
4	KCP&L Prepares Unit for Dismantlement	$5,399.80
5	Demolition Contractor Mobilizes on Site	$0.00
6	**KCP&L Overhead during Dismantlement**	**$71,288.00**
7	KCP&L Engineer	$71,288.00
8	**Demoliton Contractor Overhead during Dismantlement**	**$69,204.80**
9	Demolition Contractor Superintendent	$69,204.80
10	**Demolition Contractor Equipment Rental Costs**	**$253,332.80**
11	Equipment Rental	$253,332.80
12	**Demolition Contractor Consummables**	**$252,744.80**
13	Consummables	$252,744.80
14	**Scrap Crew(s)**	**$250,790.40**
15	Crew to Handle Scrap Material(s)	$250,790.40
16	**Dismantlement Directs**	**$156,925.20**
17	**Phase 1 Demolition**	**$156,925.20**
18	**Critical Piping**	**$3,582.72**
19	Remove Main Steam Piping to the Turbine	$3,582.72
20	**Circulating Water (plant side)**	**$3,582.72**
21	Waterboxes	$3,582.72
22	**Condenser Air Extraction System**	**$3,582.72**
23	Vacuum Pumps	$3,582.72
24	**Turbine Seals and Drains**	**$7,165.44**
25	Piping	$7,165.44
26	**Turbine Lube Oil System**	**$18,443.76**
27	Turbine Lube Oil Tank	$7,695.60
28	Turbine Lube Oil Pumps	$7,165.44
29	Turbine Oil Mist Eliminator	$3,582.72
30	**Generator Auxiliary Systems**	**$17,913.60**
31	Hydrogen Cooler Skid and Piping	$1,791.36
32	Stator Cooling Water Skid and Piping	$3,582.72
33	Isophase Bus Duct	$5,374.08
34	Exciter Heat Exchanger	$3,582.72
35	EHC Coolers	$3,582.72
36	**Remove Turbine**	**$102,654.24**
37	Remove Turbine	$21,057.28
38	Remove Generator	$34,218.08
39	Remove Condenser Neck Heat Exchanger	$7,896.48
40	Remove Condenser	$13,160.80
41	Remove Misc. Auxiliary Turbine Equipment	$26,321.60
42	**Project Close-Out**	**$8,190.00**
43	Project Close-Out Activities	$8,190.00

Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 3 Dismantlement

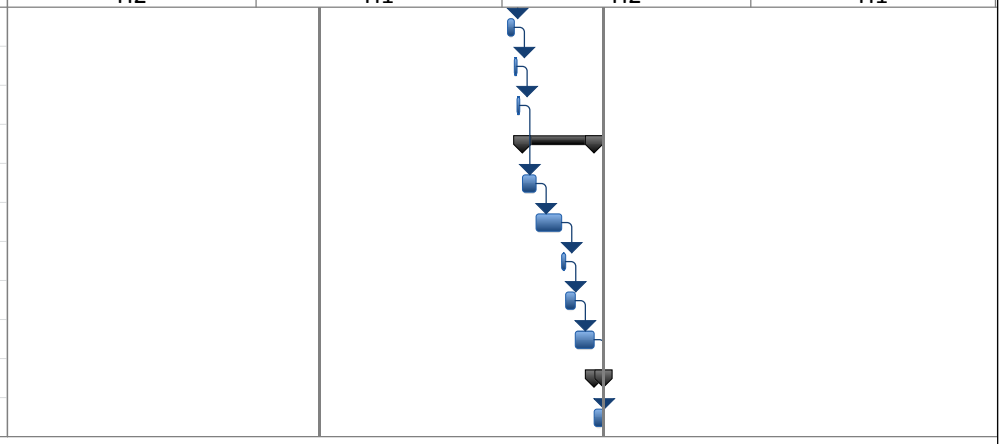
ID	Task Name	Duration
1	**Lake Road T/G 3 Removal**	**150 days**
2	**Pre-Dismantlement Activities**	**75 days**
3	Hire Demolition General Contractor	3 mons
4	KCP&L Prepares Unit for Dismantlement	1 wk
5	Demolition Contractor Mobilizes on Site	5 days
6	**KCP&L Overhead during Dismantlement**	**70 days**
7	KCP&L Engineer	70 days
8	**Demoliton Contractor Overhead during Dismantlemen**	**70 days**
9	Demolition Contractor Superintendent	70 days
10	**Demolition Contractor Equipment Rental Costs**	**70 days**
11	Equipment Rental	70 days
12	**Demolition Contractor Consummables**	**70 days**
13	Consummables	70 days
14	**Scrap Crew(s)**	**70 days**
15	Crew to Handle Scrap Material(s)	70 days
16	**Dismantlement Directs**	**70 days**
17	**Phase 1 Demolition**	**70 days**
18	**Critical Piping**	**2 days**
19	Remove Main Steam Piping to the Turbine	2 days
20	**Circulating Water (plant side)**	**2 days**
21	Waterboxes	2 days
22	**Condenser Air Extraction System**	**2 days**
23	Vacuum Pumps	2 days
24	**Turbine Seals and Drains**	**4 days**
25	Piping	4 days
26	**Turbine Lube Oil System**	**11 days**
27	Turbine Lube Oil Tank	5 days
28	Turbine Lube Oil Pumps	4 days
29	Turbine Oil Mist Eliminator	2 days
30	**Generator Auxiliary Systems**	**10 days**
31	Hydrogen Cooler Skid and Piping	1 day
32	Stator Cooling Water Skid and Piping	2 days



Redactions Removed Pursuant to Commission Order

Lake Road Turbine Generator 3 Dismantlement

ID	Task Name	Duration
33	Isophase Bus Duct	3 days
34	Exciter Heat Exchanger	2 days
35	EHC Coolers	2 days
36	**Remove Turbine**	**39 days**
37	Remove Turbine	8 days
38	Remove Generator	13 days
39	Remove Condenser Neck Heat Exchanger	3 days
40	Remove Condenser	5 days
41	Remove Misc. Auxiliary Turbine Equipment	10 days
42	**Project Close-Out**	**5 days**
43	Project Close-Out Activities	5 days



Redactions Removed Pursuant to Commission Order

COMBUSTION TURBINE 5

Lake Road CT 5 Retirement

Owner Costs			
Pre-Retirement Activities		$43,834	
Retirement Activities		$93,370	
Post-Retirement Activities		$22,576	
Owner Direct Total		$159,780	
Owner Internal Costs	5.00%	$7,989	
Owner Contingency:	25.00%	$41,942	
Lake Road CT 5 Retirement Opinion of Probable Cost:			$209,711

Lake Road CT 5 Retirement

ID	Task Name	Cost
1	**Lake Road CT 5 Retirement**	**$159,780.68**
2	**Pre-Retirement Activities**	**$43,834.00**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Retirement**	**$93,370.68**
6	**Project Management During Retirement**	**$43,309.08**
7	Project Management During Retirement	$43,309.08
8	**Retirement Activities**	**$50,061.60**
9	**Electrical**	**$27,691.68**
10	**Medium and Low Voltage Drawout Switchgear**	**$5,359.68**
11	De-energize all buses at the source.	$893.28
12	Open all circuit breakers.	$893.28
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$893.28
14	Verify that the closing/tripping springs are discharged.	$1,786.56
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$2,679.84**
17	De-energize all buses at the source.	$893.28
18	Open all circuit breakers and disconnect switches.	$893.28
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$1,786.56**
21	De-energize all buses at the source.	$893.28
22	Open all circuit breakers and disconnect switches.	$893.28
23	**Oil-Filled Power Transformers**	**$7,146.24**
24	De-energize all buses at the source.	$893.28
25	Open all circuit breakers and disconnect switches.	$893.28
26	De-energize all buses at the source.	$893.28
27	Open all circuit breakers and disconnect switches.	$4,466.40
28	**Dry-type Power Transformers**	**$4,466.40**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$3,573.12
31	**Motors**	**$6,252.96**
32	De-energize all primary power at the source.	$893.28
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$893.28
34	Drain lube oil system (if applicable) and dispose of oil.	$4,466.40
35	**Fuel System**	**$3,466.80**

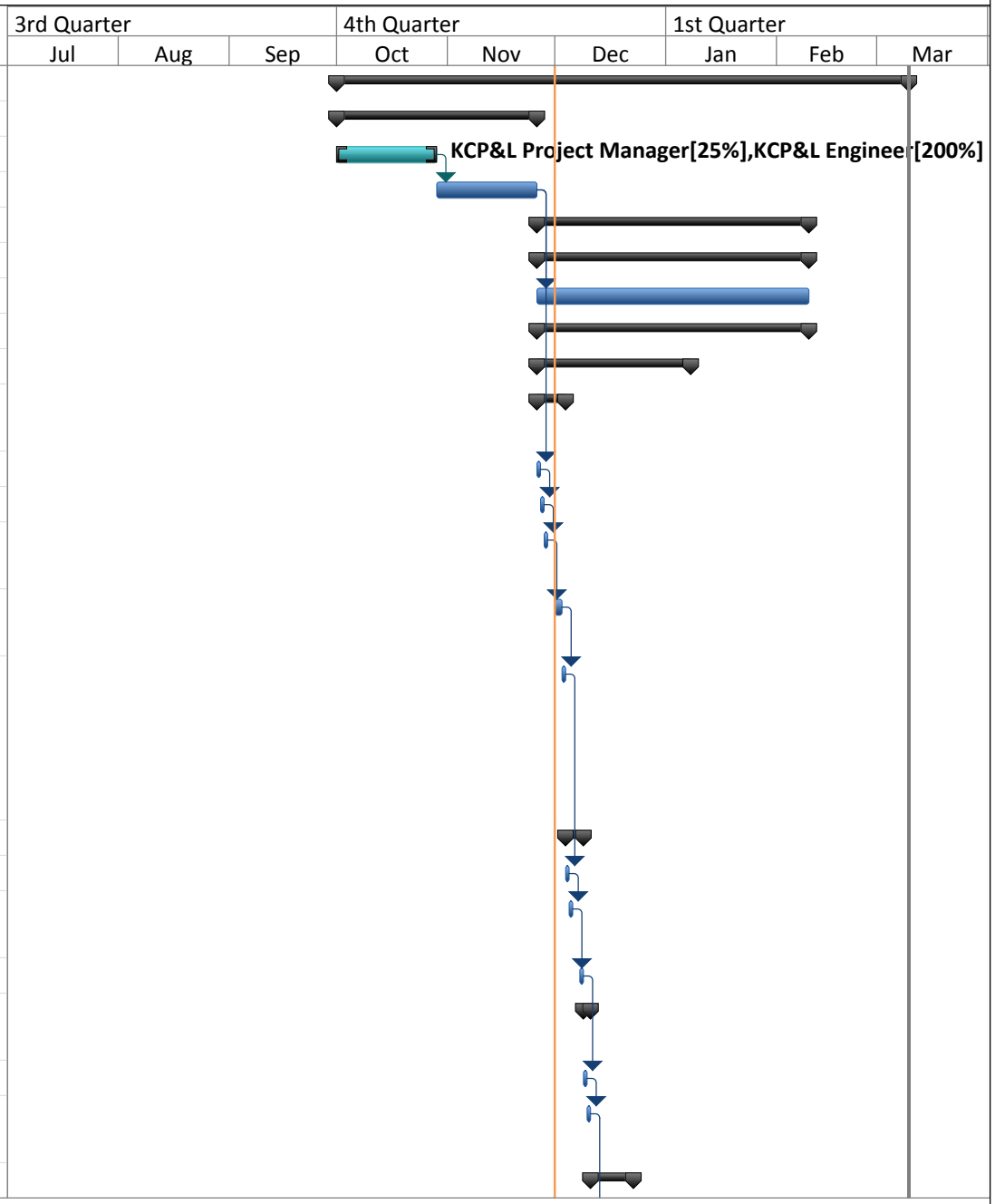
Lake Road CT 5 Retirement

ID	Task Name	Cost
36	Isolate Fuel Oil System	$2,604.96
37	Drain and Vent Fuel Oil Piping	$861.84
38	Open and vent gas piping.	$0.00
39	**Lube Oil Cooling Water System**	**$2,585.52**
40	Open and Drain the Water Side of the Lube Oil Coolers	$1,723.68
41	Open and Vent the Coolers and Expansion Tank	$861.84
42	**Miscelleaneous Piping**	**$4,309.20**
43	Open and Vent the Exhaust Frame Cooling Piping	$861.84
44	Open & Vent the CT Air Process Piping	$861.84
45	Open and Vent the CT Air Processing Piping	$2,585.52
46	**Fire Protection Piping**	**$3,428.24**
47	Empty the CO2 Storage Tank	$2,566.40
48	Open and Vent the Fire Protection Piping	$861.84
49	**Lube Oil System**	**$8,580.16**
50	Empty and Remove from Site the Lubricating Oil	$5,132.80
51	Drain Lubricating Oil Piping	$1,723.68
52	Open and Vent Lubricating Oil Piping	$1,723.68
53	**Post Retirement Closure Activity**	**$22,576.00**
54	Post Retirement Closure Activity	$22,576.00

Redactions Removed Pursuant to Commission Order

Lake Road CT 5 Retirement

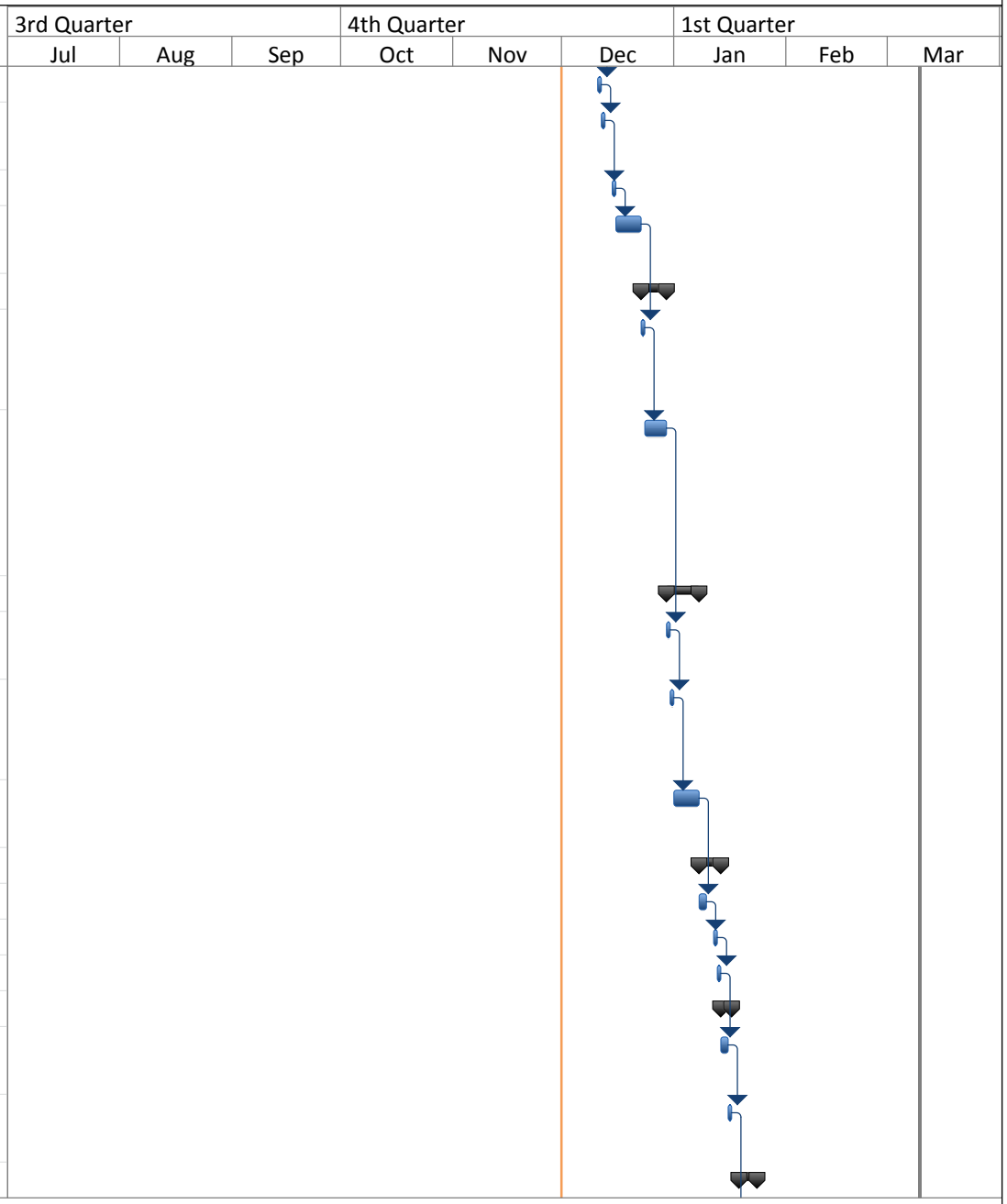
ID	Task Name	Duration
1	**Lake Road CT 5 Retirement**	**114 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Retirement**	**54 days**
6	**Project Management During Retirement**	**54 days**
7	Project Management During Retirement	54 days
8	**Retirement Activities**	**54 days**
9	**Electrical**	**31 days**
10	**Medium and Low Voltage Drawout Switchgear**	**6 days**
11	De-energize all buses at the source.	1 day
12	Open all circuit breakers.	1 day
13	Rack all circuit breakers into the fully withdrawn, disconnected	1 day
14	Verify that the closing/tripping springs are discharged.	2 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each	1 day
16	**Motor Control Centers**	**3 days**
17	De-energize all buses at the source.	1 day
18	Open all circuit breakers and disconnect switches.	1 day
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**2 days**
21	De-energize all buses at the source.	1 day
22	Open all circuit breakers and disconnect switches.	1 day
23	**Oil-Filled Power Transformers**	**8 days**



Redactions Removed Pursuant to Commission Order

Lake Road CT 5 Retirement

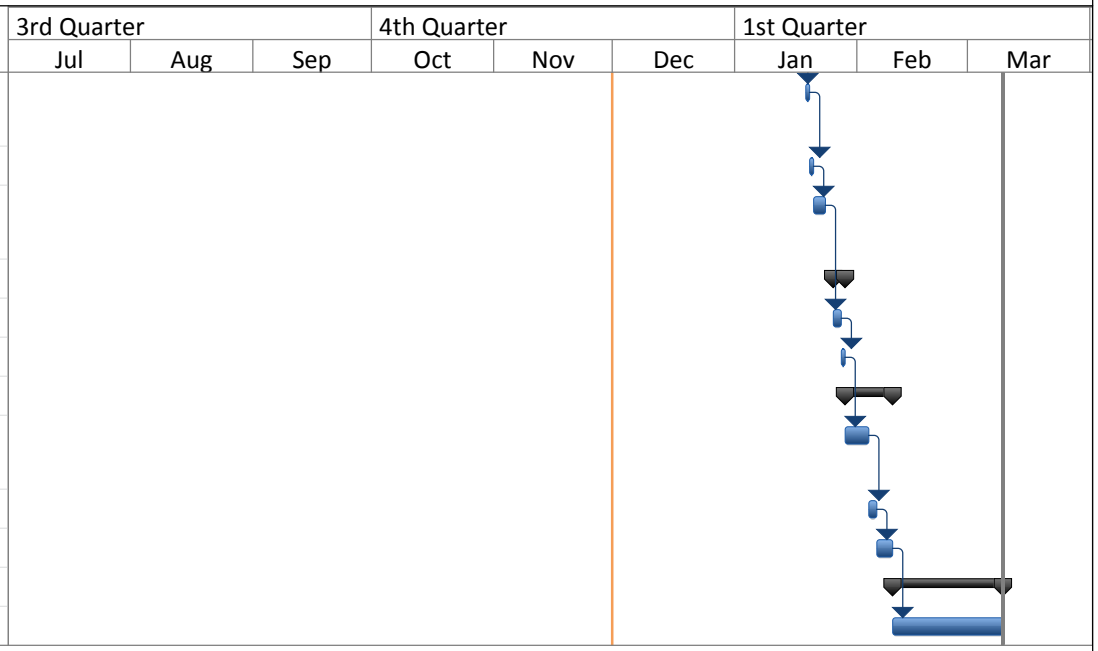
ID	Task Name	Duration
24	De-energize all buses at the source.	1 day
25	Open all circuit breakers and disconnect switches.	1 day
26	De-energize all buses at the source.	1 day
27	Open all circuit breakers and disconnect switches.	5 days
28	**Dry-type Power Transformers**	**5 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	4 days
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	1 day
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	1 day
34	Drain lube oil system (if applicable) and dispose of oil.	5 days
35	**Fuel System**	**4 days**
36	Isolate Fuel Oil System	2 days
37	Drain and Vent Fuel Oil Piping	1 day
38	Open and vent gas piping.	1 day
39	**Lube Oil Cooling Water System**	**3 days**
40	Open and Drain the Water Side of the Lube Oil Coolers	2 days
41	Open and Vent the Coolers and Expansion Tank	1 day
42	**Miscelleaneous Piping**	**5 days**



Redactions Removed Pursuant to Commission Order

Lake Road CT 5 Retirement

ID	Task Name	Duration
43	Open and Vent the Exhaust Frame Cooling Piping	1 day
44	Open & Vent the CT Air Process Piping	1 day
45	Open and Vent the CT Air Processing Piping	3 days
46	**Fire Protection Piping**	**3 days**
47	Empty the CO2 Storage Tank	2 days
48	Open and Vent the Fire Protection Pipin	1 day
49	**Lube Oil System**	**8 days**
50	Empty and Remove from Site the Lubricating Oil	4 days
51	Drain Lubricating Oil Piping	2 days
52	Open and Vent Lubricating Oil Piping	2 days
53	**Post Retirement Closure Activity**	**20 days**
54	Post Retirement Closure Activity	20 days



Redactions Removed Pursuant to Commission Order

Lake Road CT 5 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$242,211		
Overhead During Dismantlement			$95,729		
Post-Dismantlement Activities			$16,380		
Owner Costs Total*				$354,320	
Demolition General Contractor (DGC) Costs					
Site Management			$199,791		
Equipment Rental			$340,189		
Consummables			$339,400		
Scrap Crew(s)			$89,352		
Dismantlement			$272,506		
Contractor Direct Cost*		$1,241,238			
Contractor Allowances					
DGC Insurance	2.00%		$24,825		
Contingency/Profit	15.00%		$189,909		
Performance Bond	2.00%		$29,119		
Contractor Costs Total:				$1,485,092	
Total:					$1,839,412
Owner Internal Costs:	5.00%				$91,971
Owner Contingency:	25.00%				$482,846
Lake Road CT 5 Dismantlement Opinion of Probable Cost:					$2,414,228

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,595,558

Redactions Removed Pursuant to Commission Order

Lake Road CTG 5 Dismantlement

ID	Task Name	Cost
1	**Lake Road CTG 5 Dismantlement**	**$1,595,561.08**
2	**Pre-Demolition Activities**	**$242,211.32**
3	Detailed Planning & Hire Owner's Engineer	$69,627.52
4	Hire Demolition general Contractor	$167,184.00
5	KCP&L Prepares Unit for Dismantlement	$5,399.80
6	Demolition Contractor Mobilizes on Sit	$0.00
7	**KCP&L Overhead during Dismantlement**	**$95,729.60**
8	KCP&L Engineer	$95,729.60
9	**Demolition Contractor Overhead during Dismantlement**	**$199,791.36**
10	Demolition Contractor Project Manager	$56,527.84
11	Demolition Contractor Safety Manager	$50,331.36
12	Demolition Contractor Superintendent	$92,932.16
13	**Demolition Contractor Equipment Rental Cost**	**$340,189.76**
14	Equipment Rental	$340,189.76
15	**Demolition Contractor Consumables**	**$339,400.16**
16	Consumables	$339,400.16
17	**Scrap Crews**	**$89,352.64**
18	Crew to Handle Scrap Material(s)	$89,352.64
19	**Dismantlement**	**$272,506.24**
20	**Electrical**	**$107,481.60**
21	Electrical Demolition of Equipment	$107,481.60
22	**Fuel Gas System**	**$10,967.68**
23	Remove all above grade fuel gas piping.	$2,010.88
24	Gas Filter Skid	$5,374.08
25	Remove all above grade fuel oil piping	$3,582.72
26	**Lube Oil System**	**$17,913.60**
27	Lube Oil Piping	$5,374.08
28	Lube Oil Pumps	$5,374.08
29	Lube Oil Tanks	$7,165.44
30	**Fire Protection**	**$26,870.40**
31	Fire Protection Piping	$10,748.16
32	Firewater Tank	$8,956.80
33	CO2 Storage Tank	$7,165.44
34	**Generator**	**$7,165.44**
35	Generator	$7,165.44
36	**Combustion Turbine**	**$75,237.12**
37	Inlet duct	$8,956.80
38	Exhaust duct	$12,539.52
39	Combustion Turbine	$28,661.76
40	Combustion Turbine Foundation	$16,122.24
41	Enclosure	$8,956.80
42	**Stack**	**$26,870.40**
43	Stack	$26,870.40
44	**Post Dismantlement Activities**	**$16,380.00**

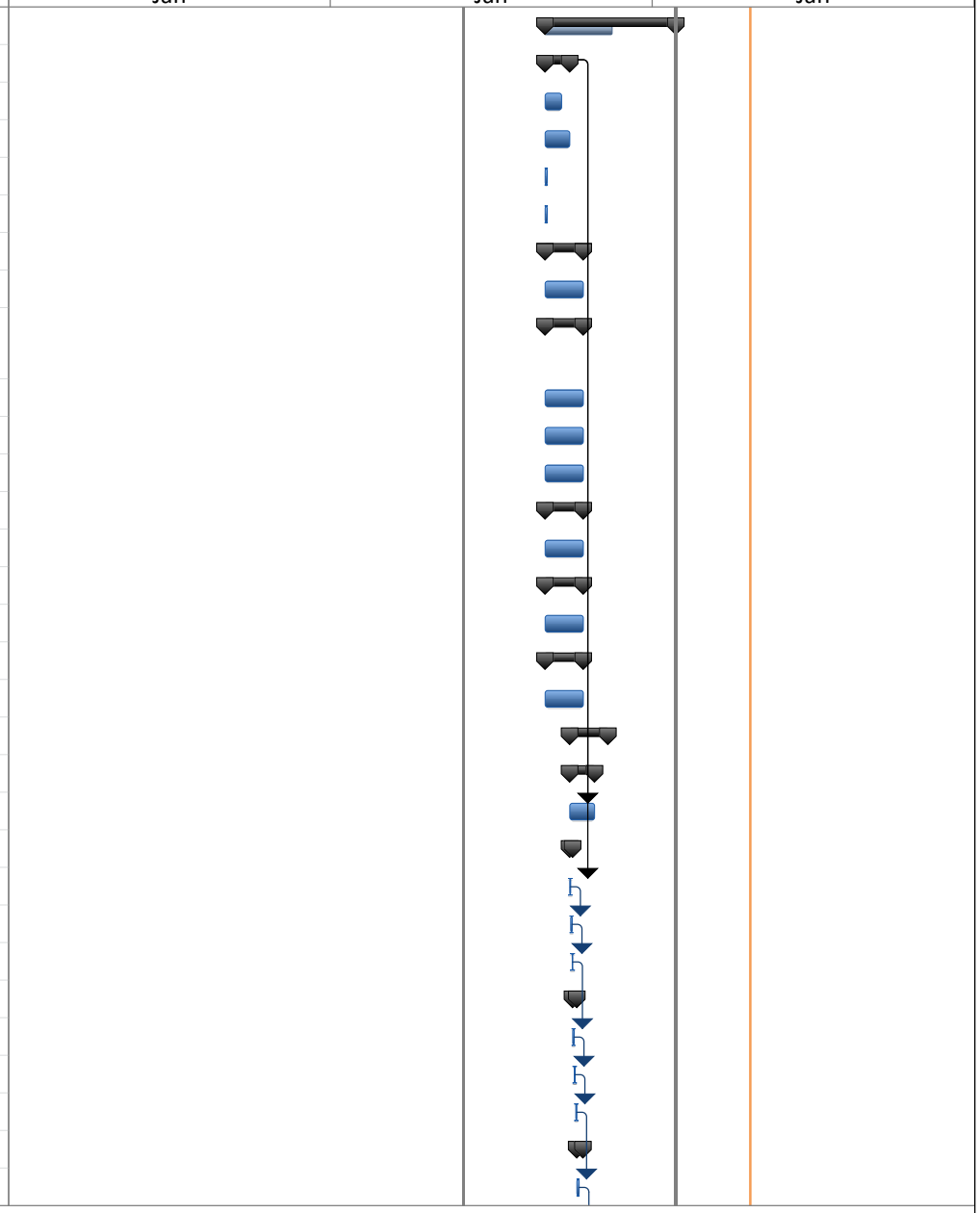
Redactions Removed Pursuant to Commission Order

Lake Road CTG 5 Dismantlement

ID	Task Name	Cost
45	Post Dismantlement Activities	$16,380.00

Lake Road CTG 5 Dismantlement

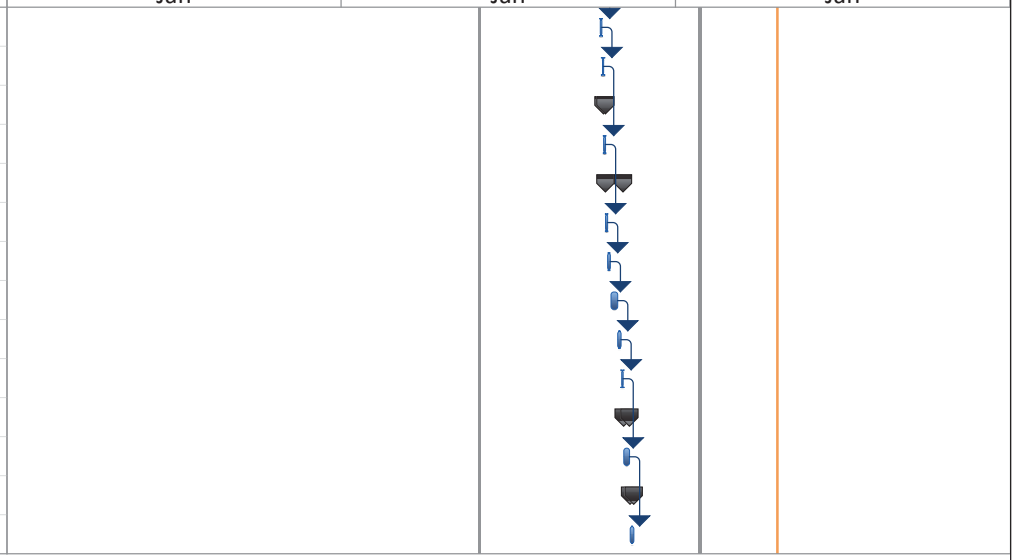
ID	Task Name	Duration
1	**Lake Road CTG 5 Dismantlement**	**319 days**
2	**Pre-Demolition Activities**	**60 days**
3	Detailed Planning & Hire Owner's Engineer	2 mons
4	Hire Demolition general Contractor	3 mons
5	KCP&L Prepares Unit for Dismantlement	1 wk
6	Demolition Contractor Mobilizes on Sit	5 days
7	**KCP&L Overhead during Dismantlement**	**94 days**
8	KCP&L Engineer	94 days
9	**Demolition Contractor Overhead during Dismantlement**	**94 days**
10	Demolition Contractor Project Manager	94 days
11	Demolition Contractor Safety Manager	94 days
12	Demolition Contractor Superintendent	94 days
13	**Demolition Contractor Equipment Rental Cost**	**94 days**
14	Equipment Rental	94 days
15	**Demolition Contractor Consumables**	**94 days**
16	Consumables	94 days
17	**Scrap Crews**	**94 days**
18	Crew to Handle Scrap Material(s)	94 days
19	**Dismantlement**	**94 days**
20	**Electrical**	**60 days**
21	Electrical Demolition of Equipment	60 days
22	**Fuel Gas System**	**8 days**
23	Remove all above grade fuel gas piping.	3 days
24	Gas Filter Skid	3 days
25	Remove all above grade fuel oil piping	2 days
26	**Lube Oil System**	**10 days**
27	Lube Oil Piping	3 days
28	Lube Oil Pumps	3 days
29	Lube Oil Tanks	4 days
30	**Fire Protection**	**15 days**
31	Fire Protection Piping	6 days



Redactions Removed Pursuant to Commission Order

Lake Road CTG 5 Dismantlement

ID	Task Name	Duration
32	Firewater Tank	5 days
33	CO2 Storage Tank	4 days
34	**Generator**	**4 days**
35	Generator	4 days
36	**Combustion Turbine**	**42 days**
37	Inlet duct	5 days
38	Exhaust duct	7 days
39	Combustion Turbine	16 days
40	Combustion Turbine Foundation	9 days
41	Enclosure	5 days
42	**Stack**	**15 days**
43	Stack	15 days
44	**Post Dismantlement Activities**	**10 days**
45	Post Dismantlement Activities	10 days



Redactions Removed Pursuant to Commission Order

COMBUSTION TURBINES 6 AND 7

Redactions Removed Pursuant to Commission Order

Lake Road CT 6 & 7 Retirement

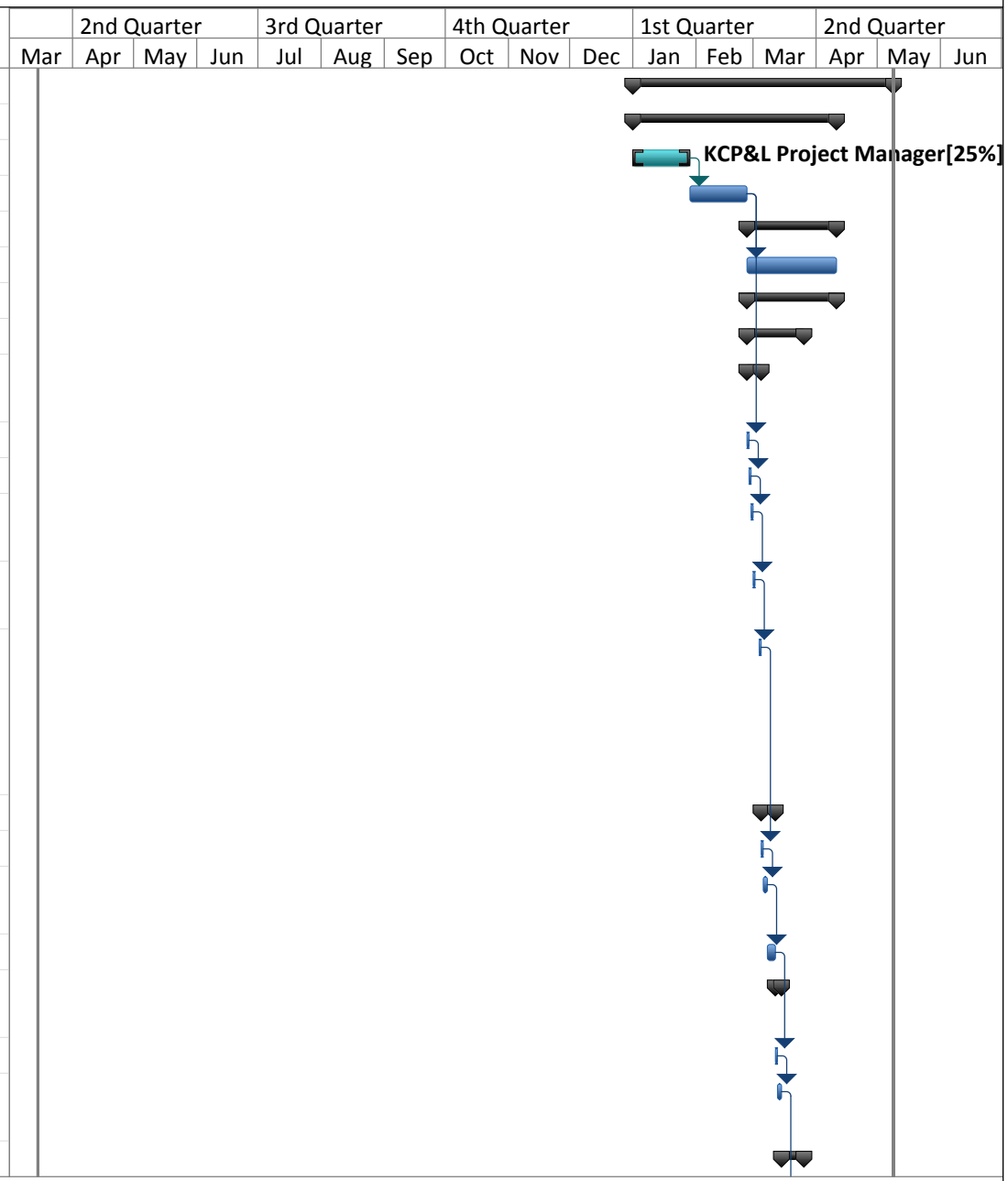
Owner Costs			
Pre-Retirement Activities		$69,498	
Retirement Activities		$29,491	
Post-Retirement Activities		$22,576	
Owner Direct Total		$121,565	
Owner Internal Costs	5.00%	$6,078	
Owner Contingency:	25.00%	$31,911	
Lake Road CT 6 & 7 Retirement Opinion of Probable Cost:			$159,554

Lake Road CTG 6 and 7 Retirement

ID	Task Name	Cost
1	**Lake Road CTG 6 and 7 Retirement**	**$121,565.68**
2	**Pre-Retirement Activities**	**$69,498.64**
3	Permitting Review	$23,466.00
4	Develop Detailed Retirement Plan	$20,368.00
5	**Project Management During Retirement**	**$25,664.64**
6	Project Management During Retirement	$25,664.64
7	**Retirement Activities**	**$29,491.04**
8	**Electrical**	**$17,865.60**
9	**Medium and Low Voltage Drawout Switchgear**	**$4,466.40**
10	De-energize all buses at the source.	$893.28
11	Open all circuit breakers.	$893.28
12	Rack all circuit breakers into the fully withdrawn, disconnected position.	$893.28
13	Verify that the closing/tripping springs are discharged.	$893.28
14	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
15	**Motor Control Centers**	**$4,466.40**
16	De-energize all buses at the source.	$893.28
17	Open all circuit breakers and disconnect switches.	$1,786.56
18	Remove all fuses in control circuits.	$1,786.56
19	**Low-voltage Switchboards and Panelboards**	**$2,679.84**
20	De-energize all buses at the source.	$893.28
21	Open all circuit breakers and disconnect switches.	$1,786.56
22	**Motors**	**$6,252.96**
23	De-energize all primary power at the source.	$893.28
24	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$893.28
25	Drain lube oil system (if applicable) and dispose of oil.	$4,466.40
26	**Fuel Oil System**	**$3,026.16**
27	Isolate Fuel Oil System	$1,302.48
28	Drain and Vent Fuel Oil Piping	$1,723.68
29	**Lube Oil Cooling Water System**	**$2,585.52**
30	Open and Drain the Water Side of the Lube Oil Coolers	$1,723.68
31	Open and Vent the Coolers and Expansion Tank	$861.84
32	**Lube Oil System**	**$6,013.76**
33	Empty and Remove from Site the Lubricating Oil	$2,566.40
34	Drain Lubricating Oil Piping	$2,585.52
35	Open and Vent Lubricating Oil Piping	$861.84
36	**Post Retirement Closure Activity**	**$22,576.00**
37	Post Retirement Closure Activity	$22,576.00

Lake Road CTG 6 and 7 Retirement

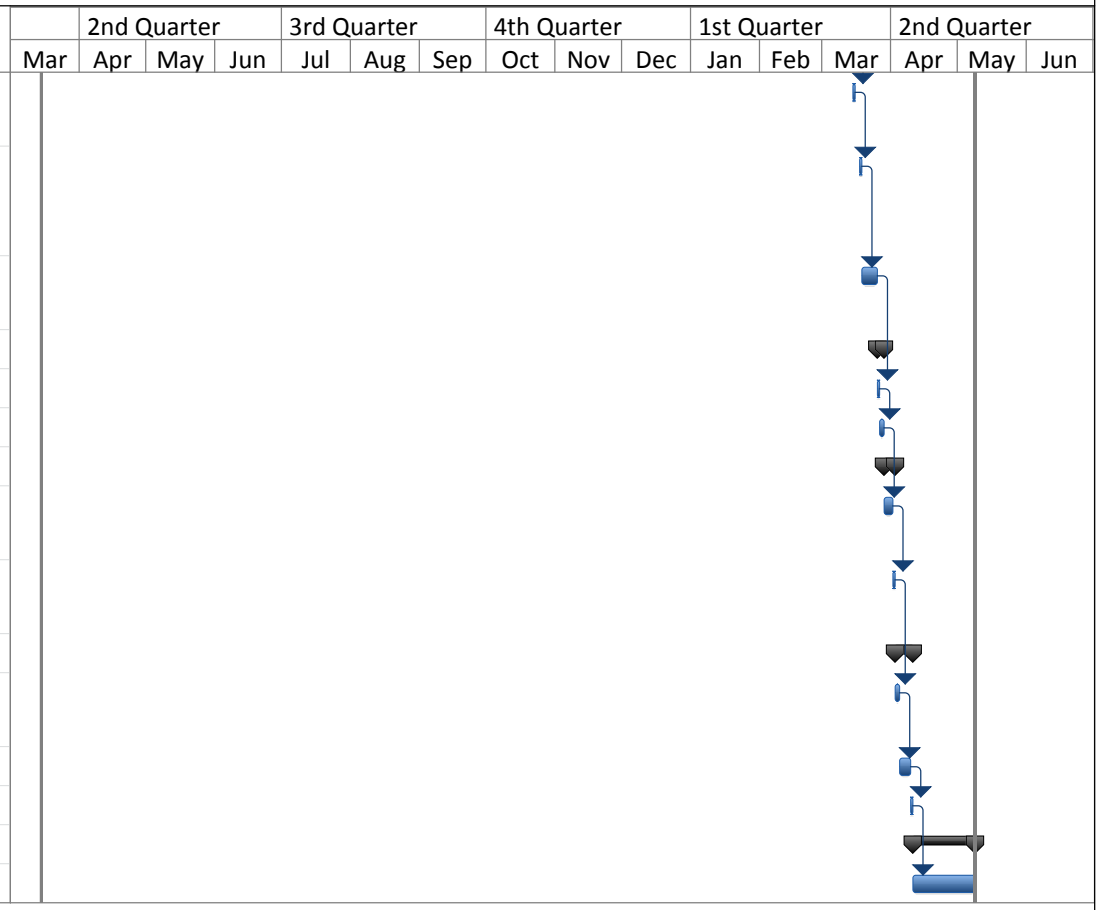
ID	Task Name	Duration
1	**Lake Road CTG 6 and 7 Retirement**	**92 days**
2	**Pre-Retirement Activities**	**72 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Project Management During Retirement**	**32 days**
6	Project Management During Retirement	32 days
7	**Retirement Activities**	**32 days**
8	**Electrical**	**20 days**
9	**Medium and Low Voltage Drawout Switchgear**	**5 days**
10	De-energize all buses at the source.	1 day
11	Open all circuit breakers.	1 day
12	Rack all circuit breakers into the fully withdrawn, disconnected position.	1 day
13	Verify that the closing/tripping springs are discharged.	1 day
14	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
15	**Motor Control Centers**	**5 days**
16	De-energize all buses at the source.	1 day
17	Open all circuit breakers and disconnect switches.	2 days
18	Remove all fuses in control circuits.	2 days
19	**Low-voltage Switchboards and Panelboards**	**3 days**
20	De-energize all buses at the source.	1 day
21	Open all circuit breakers and disconnect switches.	2 days
22	**Motors**	**7 days**



Redactions Removed Pursuant to Commission Order

Lake Road CTG 6 and 7 Retirement

ID	Task Name	Duration
23	De-energize all primary power at the source.	1 day
24	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	1 day
25	Drain lube oil system (if applicable) and dispose of oil.	5 days
26	**Fuel Oil System**	**3 days**
27	Isolate Fuel Oil System	1 day
28	Drain and Vent Fuel Oil Piping	2 days
29	**Lube Oil Cooling Water System**	**3 days**
30	Open and Drain the Water Side of the Lube Oil Coolers	2 days
31	Open and Vent the Coolers and Expansion Tank	1 day
32	**Lube Oil System**	**6 days**
33	Empty and Remove from Site the Lubricating Oil	2 days
34	Drain Lubricating Oil Piping	3 days
35	Open and Vent Lubricating Oil Piping	1 day
36	**Post Retirement Closure Activity**	**20 days**
37	Post Retirement Closure Activity	20 days



Redactions Removed Pursuant to Commission Order

Lake Road CT 6 & 7 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$191,883		
Overhead During Dismantlement			$99,918		
Post-Dismantlement Activities			$32,760		
Owner Costs Total*				$324,561	
Demolition General Contractor (DGC) Costs					
Site Management			$129,651		
Equipment Rental			$220,761		
Consummables			$220,249		
Scrap Crew(s)			$57,984		
Dismantlement			$160,911		
Contractor Direct Cost*		$789,556			
Contractor Allowances					
DGC Insurance	2.00%		$15,791		
Contingency/Profit	15.00%		$120,802		
Performance Bond	2.00%		$18,523		
Contractor Costs Total:				$944,672	
Total:					$1,269,233
Owner Internal Costs:	5.00%				$63,462
Owner Contingency:	25.00%				$333,174
Lake Road CT 6 & 7 Dismantlement Opinion of Probable Cost:					$1,665,869

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $1,114,117

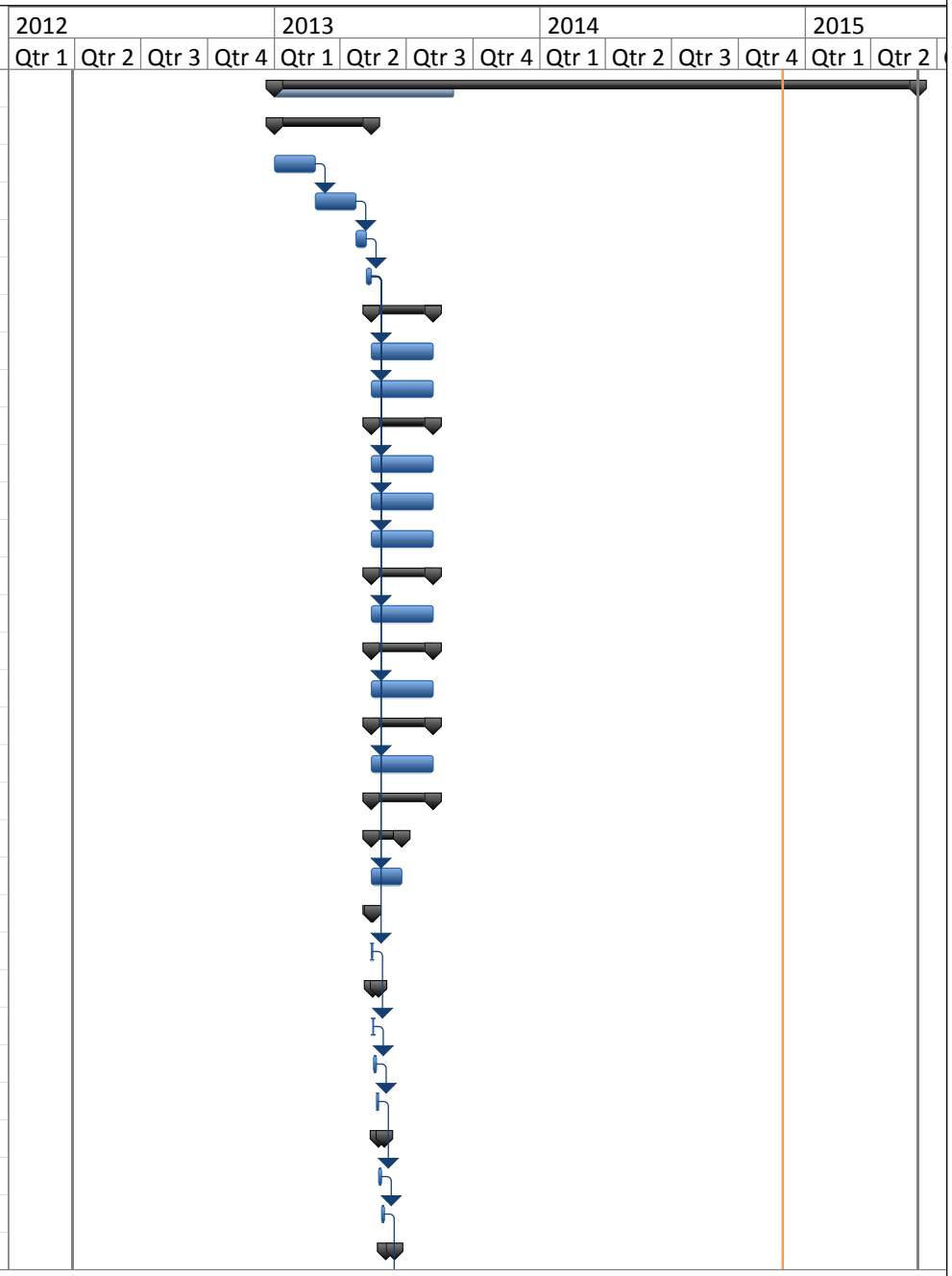
Lake Road CT 6 and 7 Dismantlement

ID	Task Name	Cost
1	**Lake Road CT 6 and 7 Dismantlement**	**$1,114,119.36**
2	**Pre-Demolition Activities**	**$191,883.12**
3	Detailed Planning	$69,627.52
4	Hire Demolition general Contractor	$111,456.00
5	KCP&L Prepares Unit for Dismantlement	$10,799.60
6	Demolition Contractor Mobilizes on Site	$0.00
7	**KCP&L Overhead during Dismantlement**	**$99,918.00**
8	KCP&L Project Manager	$37,795.60
9	KCP&L Engineer	$62,122.40
10	**Demolition Contractor Overhead during Dismantlement**	**$129,651.84**
11	Demolition Contractor Project Manager	$36,682.96
12	Demolition Contractor Safety Manager	$32,661.84
13	Demolition Contractor Superintendent	$60,307.04
14	**Demolition Contractor Equipment Rental Cost**	**$220,761.44**
15	Equipment Rental	$220,761.44
16	**Demolition Contractor Consumables**	**$220,249.04**
17	Consumables	$220,249.04
18	**Scrap Crews**	**$57,984.16**
19	Crew to Handle Scrap Material(s)	$57,984.16
20	**Dismantlement**	**$160,911.76**
21	**Electrical**	**$53,740.80**
22	Electrical Demolition of Equipment	$53,740.80
23	**Fuel Oil System**	**$1,480.72**
24	Remove all above grade fuel oil piping.	$1,480.72
25	**Lube Oil System**	**$10,748.16**
26	Lube Oil Piping	$1,791.36
27	Lube Oil Pumps	$3,582.72
28	Lube Oil Tanks	$5,374.08
29	**Fire Protection**	**$10,748.16**
30	Fire Protection Piping	$3,582.72
31	CO2 Storage Tank	$7,165.44
32	**Generator**	**$17,913.60**
33	Generators	$17,913.60
34	**Combustion Turbine**	**$62,697.60**
35	Inlet ducts	$7,165.44
36	Exhaust ducts	$7,165.44
37	Combustion Turbines	$17,913.60
38	Combustion Turbine Foundation	$21,496.32
39	Combustion Turbine Enclosure Building	$8,956.80
40	**Stack**	**$3,582.72**
41	Stacks	$3,582.72
42	**Post Dismantlement Activities**	**$32,760.00**
43	Post Dismantlement Activities	$32,760.00

Redactions Removed Pursuant to Commission Order

Lake Road CT 6 & 7 Dismantlement

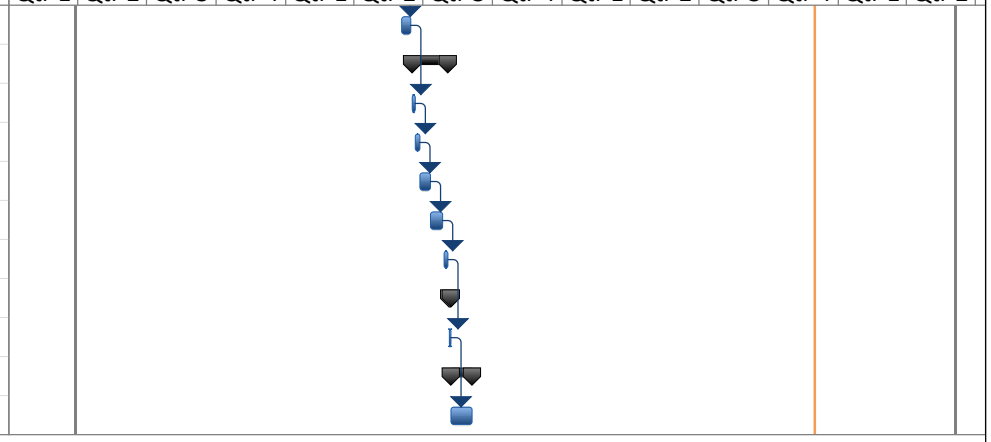
ID	Task Name	Duration
1	**Lake Road CT 6 and 7 Dismantlement**	**633 days**
2	**Pre-Demolition Activities**	**95 days**
3	Detailed Planning	2 mons
4	Hire Demolition general Contractor	2 mons
5	KCP&L Prepares Unit for Dismantlement	2 wks
6	Demolition Contractor Mobilizes on Site	5 days
7	**KCP&L Overhead during Dismantlement**	**61 days**
8	KCP&L Project Manager	61 days
9	KCP&L Engineer	61 days
10	**Demolition Contractor Overhead during Dismantlemen**	**61 days**
11	Demolition Contractor Project Manager	61 days
12	Demolition Contractor Safety Manager	61 days
13	Demolition Contractor Superintendent	61 days
14	**Demolition Contractor Equipment Rental Cost**	**61 days**
15	Equipment Rental	61 days
16	**Demolition Contractor Consumables**	**61 days**
17	Consumables	61 days
18	**Scrap Crews**	**61 days**
19	Crew to Handle Scrap Material(s)	61 days
20	**Dismantlement**	**61 days**
21	**Electrical**	**30 days**
22	Electrical Demolition of Equipment	30 days
23	**Fuel Oil System**	**2 days**
24	Remove all above grade fuel oil piping.	2 days
25	**Lube Oil System**	**6 days**
26	Lube Oil Piping	1 day
27	Lube Oil Pumps	2 days
28	Lube Oil Tanks	3 days
29	**Fire Protection**	**6 days**
30	Fire Protection Piping	2 days
31	CO2 Storage Tank	4 days
32	**Generator**	**10 days**



Redactions Removed Pursuant to Commission Order

Lake Road CT 6 & 7 Dismantlement

ID	Task Name	Duration
33	Generators	10 days
34	**Combustion Turbine**	**35 days**
35	Inlet ducts	4 days
36	Exhaust ducts	4 days
37	Combustion Turbines	10 days
38	Combustion Turbine Foundation	12 days
39	Combustion Turbine Enclosure Building	5 days
40	**Stack**	**2 days**
41	Stacks	2 days
42	**Post Dismantlement Activities**	**20 days**
43	Post Dismantlement Activities	20 days



Redactions Removed Pursuant to Commission Order

COMMON

Redactions Removed Pursuant to Commission Order

Lake Road Common Retirement

Owner Costs				
Pre-Retirement Activities		$52,448		
Retirement Activities		$588,014		
Post-Retirement Activities		$26,224		
Owner Direct Total			$666,686	
Owner Internal Costs	5.00%		$33,334	
Owner Contingency:	25.00%		$175,005	
Lake Road Common Retirement Opinion of Probable Cost:				$875,025

<u>Activities Required by Permit or Regulation</u>

Lake Road 5 Tank	$31,069	
Lake Road 6 Tank	$71,610	
Lake Road 7 Tank	$71,610	
Activities Required by Permit or Regulation:		$174,289

Lake Road Common Retirement

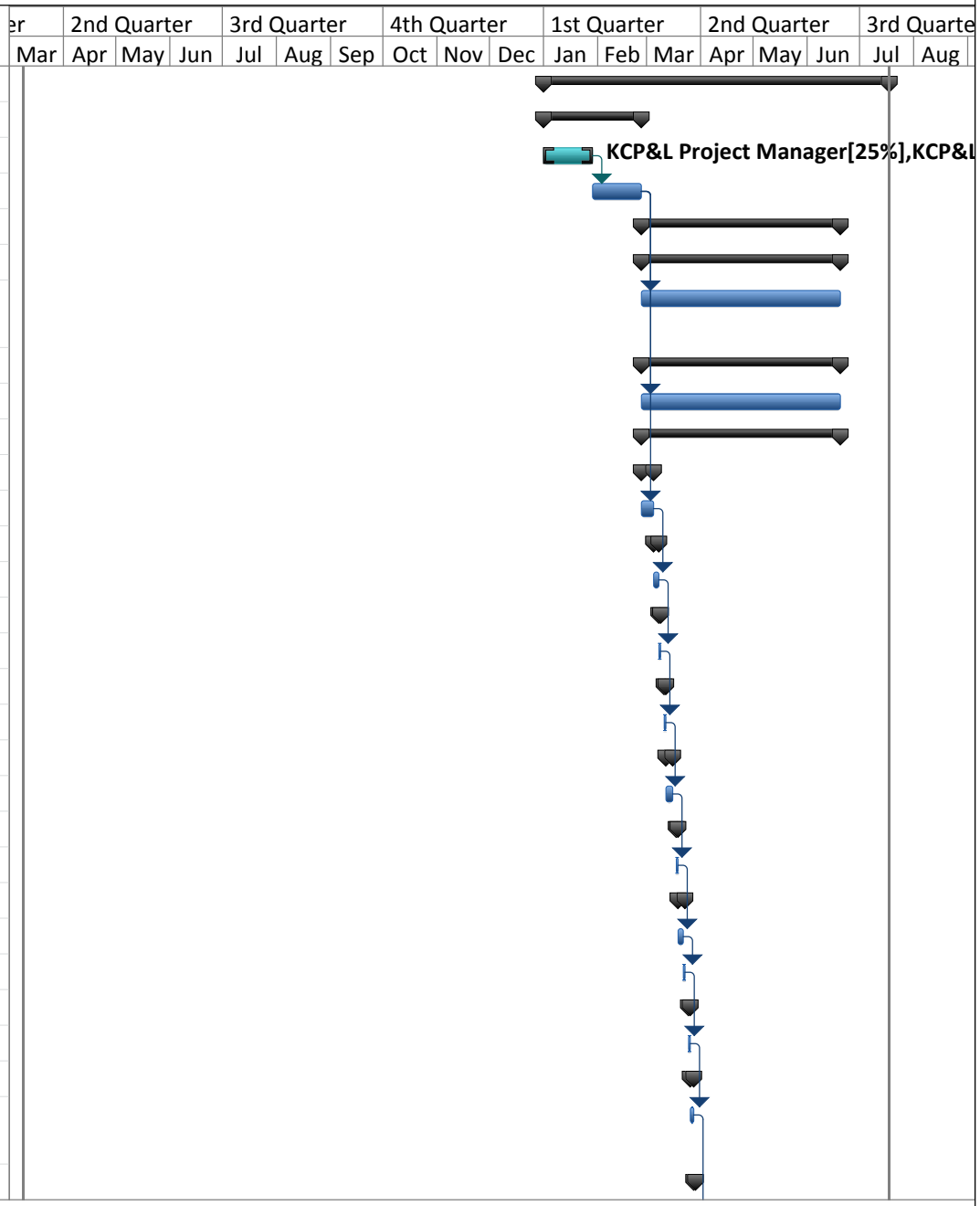
ID	Task Name	Cost
1	**Lake Road Common Retirement**	**$666,686.48**
2	**Pre-Retirement Activities**	**$52,448.80**
3	Permitting Review	$26,224.40
4	Develop Detailed Retirement Plan	$26,224.40
5	**Overheads**	**$137,346.72**
6	**Retirement Overheads**	**$120,133.28**
7	Added Overhead Staff for Common Retirement	$120,133.28
8	**Common Removal Equipment Rental**	**$17,213.44**
9	Common Removal Equipment Rental	$17,213.44
10	**Retirement Activities**	**$450,666.56**
11	**Administration Building**	**$9,342.40**
12	Secure Administration Building	$9,342.40
13	**Fuel Yard Office Building**	**$5,605.44**
14	Secure Fuel Yard Office Building	$5,605.44
15	**Butler Building**	**$1,868.48**
16	Secure Butler Building	$1,868.48
17	**Dozer Building**	**$1,868.48**
18	Secure Dozer Building	$1,868.48
19	**Laboratory**	**$9,260.48**
20	Secure Laboratory	$9,260.48
21	**Guard Shack**	**$1,868.48**
22	Secure Guard Shack	$1,868.48
23	**Gas Metering Station**	**$6,866.80**
24	Isolate Gas Metering Station at the Source	$5,605.44
25	Vent Piping	$1,261.36
26	**Propane Tanks**	**$1,261.36**
27	Open and Vent Propane Tanks	$1,261.36
28	**Non-Potable/Fire Protection Water Tank**	**$2,522.72**
29	Drain and Vent the Non-Potable/Fire Protection Water Tank	$2,522.72
30	**Condensate Storage Tank**	**$1,261.36**
31	Drain and Vent the Condensate Storage Tank	$1,261.36
32	**Fuel Yard**	**$26,690.80**
33	**Car Dumper**	**$8,829.52**
34	Empty Car Track Hoppers	$1,261.36
35	Clean Car Dumper	$3,784.08
36	Empty and Clean Belt Feeders 3A, 3B and 3C	$3,784.08
37	**West Yard Reclaim**	**$15,338.56**
38	Clean West Yard Reclaim Hoppers	$2,522.72
39	Clean the West Yard Reclaim Hopper Vibrating Feeders	$1,261.36
40	Clean the Frozen Coal Cracker	$1,261.36
41	**Boiler 4 and Boiler 5 Tripper**	**$2,522.72**
42	Clean the Boiler 4 and Boiler 5 Tripper	$2,522.72
43	**Coal Conveyors**	**$50,454.40**
44	Clean Conveyors - 5A, 5B, 6, 7, 8, 1, 2, and 3	$25,227.20

Lake Road Common Retirement

ID	Task Name	Cost
45	**Wells**	**$299,000.00**
46	Close 13 Wells	$299,000.00
47	**900 Lb. Steam Header System**	**$5,045.44**
48	Open and Vent the 900 Lb. Steam Header System	$2,522.72
49	Open and Vent the 200 Lb. and 3 Lb. Flash Tanks	$2,522.72
50	**200 Lb. Steam Header System**	**$2,522.72**
51	Open and Vent the 200 Lb. Steam Header System	$2,522.72
52	**Low Side Water Treatment**	**$22,704.48**
53	Open and Clean the Mixing Tanks	$1,261.36
54	Open and Clean the 4 Lime Softeners	$6,306.80
55	Open, Empty and Clean the Carbon Filters (11)	$3,784.08
56	Open, Empty and Clean the Zeolite Filters (4)	$3,784.08
57	Open and Vent the Low Side Deaerator	$1,261.36
58	Open and Vent the Feedwater Storage Tanks (4)	$1,261.36
59	Open and Vent the Desuperheater Storage Tank (1)	$1,261.36
60	Flush the Piping	$3,784.08
61	**Low Side Feedwater System**	**$2,522.72**
62	Open and Vent BFP Suction and Discharge Piping	$1,261.36
63	Open and Vent the Feedwater Heaters	$1,261.36
64	**Post Retirement Closure Activities**	**$26,224.40**
65	Post Retirement Closure Activities	$26,224.40

Lake Road Common Retirement

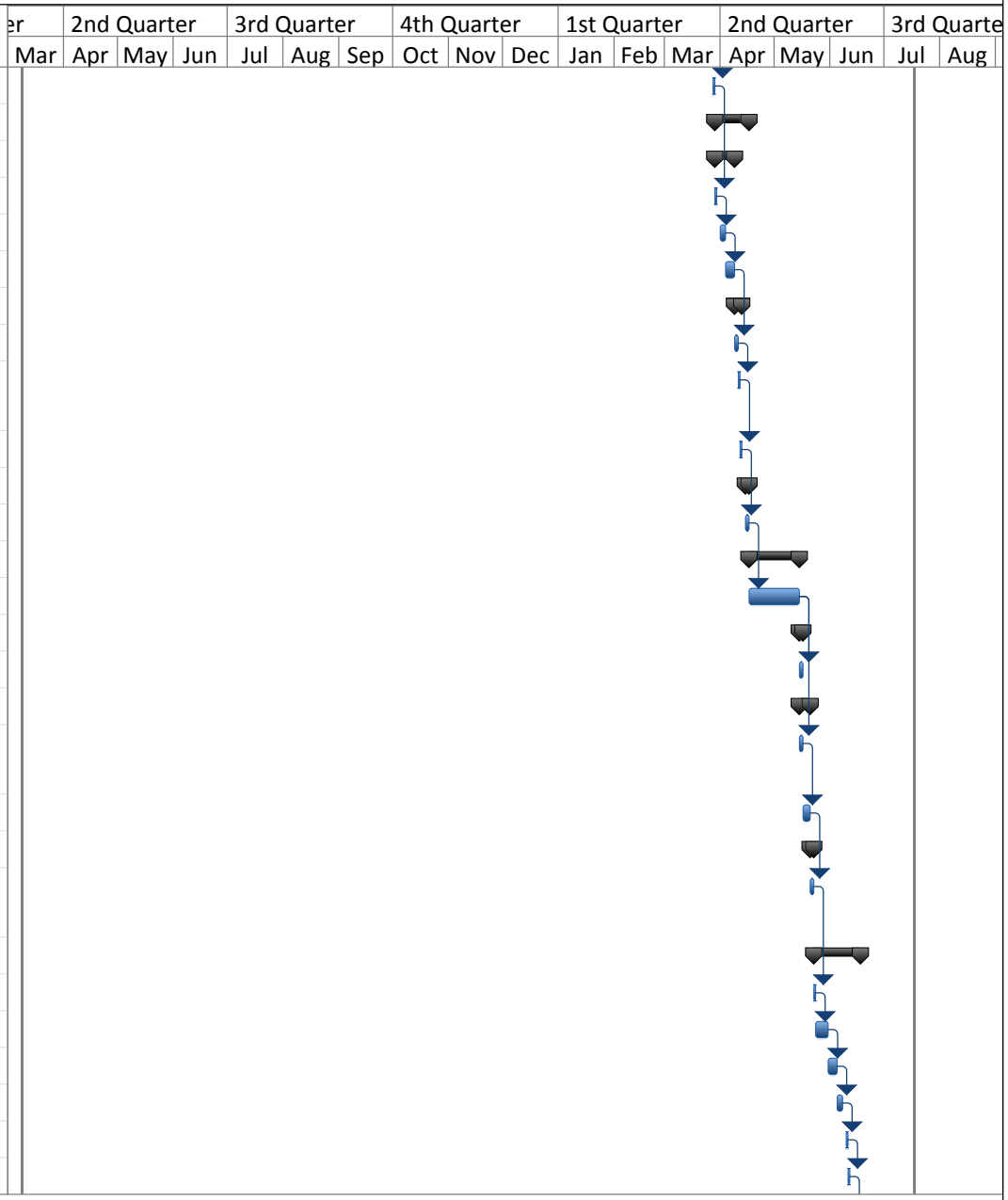
ID	Task Name	Duration
1	**Lake Road Common Retirement**	**142 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Overheads**	**82 days**
6	**Retirement Overheads**	**82 days**
7	Added Overhead Staff for Common Retirement	82 days
8	**Common Removal Equipment Rental**	**82 days**
9	Common Removal Equipment Rental	82 days
10	**Retirement Activities**	**82 days**
11	**Administration Building**	**5 days**
12	Secure Administration Building	5 days
13	**Fuel Yard Office Building**	**3 days**
14	Secure Fuel Yard Office Building	3 days
15	**Butler Building**	**1 day**
16	Secure Butler Building	1 day
17	**Dozer Building**	**1 day**
18	Secure Dozer Building	1 day
19	**Laboratory**	**4 days**
20	Secure Laboratory	4 days
21	**Guard Shack**	**1 day**
22	Secure Guard Shack	1 day
23	**Gas Metering Station**	**4 days**
24	Isolate Gas Metering Station at the Source	3 days
25	Vent Piping	1 day
26	**Propane Tanks**	**1 day**
27	Open and Vent Propane Tanks	1 day
28	**Non-Potable/Fire Protection Water Tank**	**2 days**
29	Drain and Vent the Non-Potable/Fire Protection Water Tank	2 days
30	**Condensate Storage Tank**	**1 day**



Redactions Removed Pursuant to Commission Order

Lake Road Common Retirement

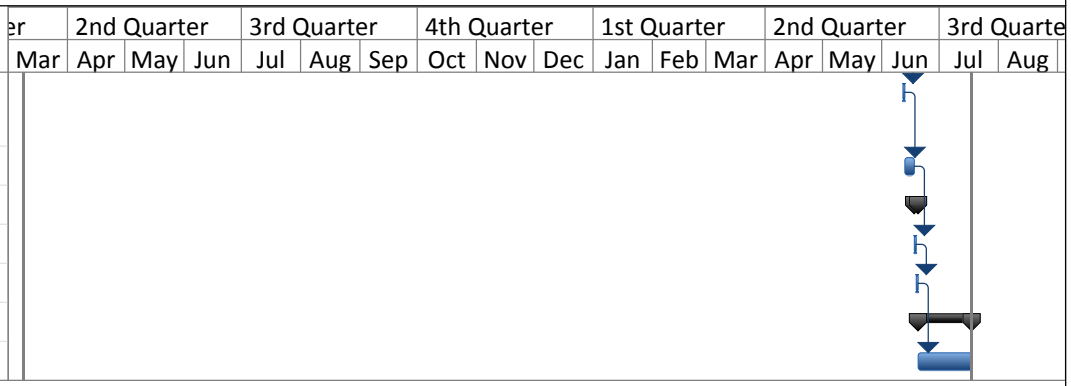
ID	Task Name	Duration
31	Drain and Vent the Condensate Storage Tank	1 day
32	**Fuel Yard**	**13 days**
33	**Car Dumper**	**7 days**
34	Empty Car Track Hoppers	1 day
35	Clean Car Dumper	3 days
36	Empty and Clean Belt Feeders 3A, 3B and	3 days
37	**West Yard Reclaim**	**4 days**
38	Clean West Yard Reclaim Hoppers	2 days
39	Clean the West Yard Reclaim Hopper Vibrating Feeders	1 day
40	Clean the Frozen Coal Cracker	1 day
41	**Boiler 4 and Boiler 5 Tripper**	**2 days**
42	Clean the Boiler 4 and Boiler 5 Tripper	2 days
43	**Coal Conveyors**	**20 days**
44	Clean Conveyors - 5A, 5B, 6, 7, 8, 1, 2, and 3	20 days
45	**Wells**	**2 days**
46	Close 13 Wells	2 days
47	**900 Lb. Steam Header System**	**4 days**
48	Open and Vent the 900 Lb. Steam Header System	2 days
49	Open and Vent the 200 Lb. and 3 Lb. Flash Ta	2 days
50	**200 Lb. Steam Header System**	**2 days**
51	Open and Vent the 200 Lb. Steam Header System	2 days
52	**Low Side Water Treatment**	**18 days**
53	Open and Clean the Mixing Tanks	1 day
54	Open and Clean the 4 Lime Softeners	5 days
55	Open, Empty and Clean the Carbon Filters (1	3 days
56	Open, Empty and Clean the Zeolite Filters (4)	3 days
57	Open and Vent the Low Side Deaerator	1 day
58	Open and Vent the Feedwater Storage Tanks	1 day



Redactions Removed Pursuant to Commission Order

Lake Road Common Retirement

ID	Task Name	Duration
59	Open and Vent the Desuperheater Storage Tank (1)	1 day
60	Flush the Piping	3 days
61	**Low Side Feedwater System**	**2 days**
62	Open and Vent BFP Suction and Discharge Pi	1 day
63	Open and Vent the Feedwater Heaters	1 day
64	**Post Retirement Closure Activities**	**20 days**
65	Post Retirement Closure Activities	20 days



Redactions Removed Pursuant to Commission Order

Lake Road Common Dismantlement

Owner Additional Costs					
Pre-Dismantlement Activities			$0		
Overhead During Dismantlement			$0		
Owner Costs Total*				$0	
Demolition General Contractor (DGC) Costs					
Additional Site Management			$100,346		
Equipment Rental			$489,213		
Consummables			$732,959		
Scrap Crew(s)			$727,292		
Dismantlement			$532,207		
Contractor Direct Cost*		$2,582,017			
Contractor Allowances					
DGC Insurance	2.00%		$51,640		
Contingency/Profit	15.00%		$395,049		
Performance Bond	2.00%		$60,574		
Contractor Costs Total:				$3,089,280	
Total:					$3,089,280
Owner Internal Costs:	5.00%				$154,464
Owner Contingency:	25.00%				$810,936
Lake Road Common Dismantlement Opinion of Probable Cost:					$4,054,680

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $2,582,017

Lake Road Common Dismantlement

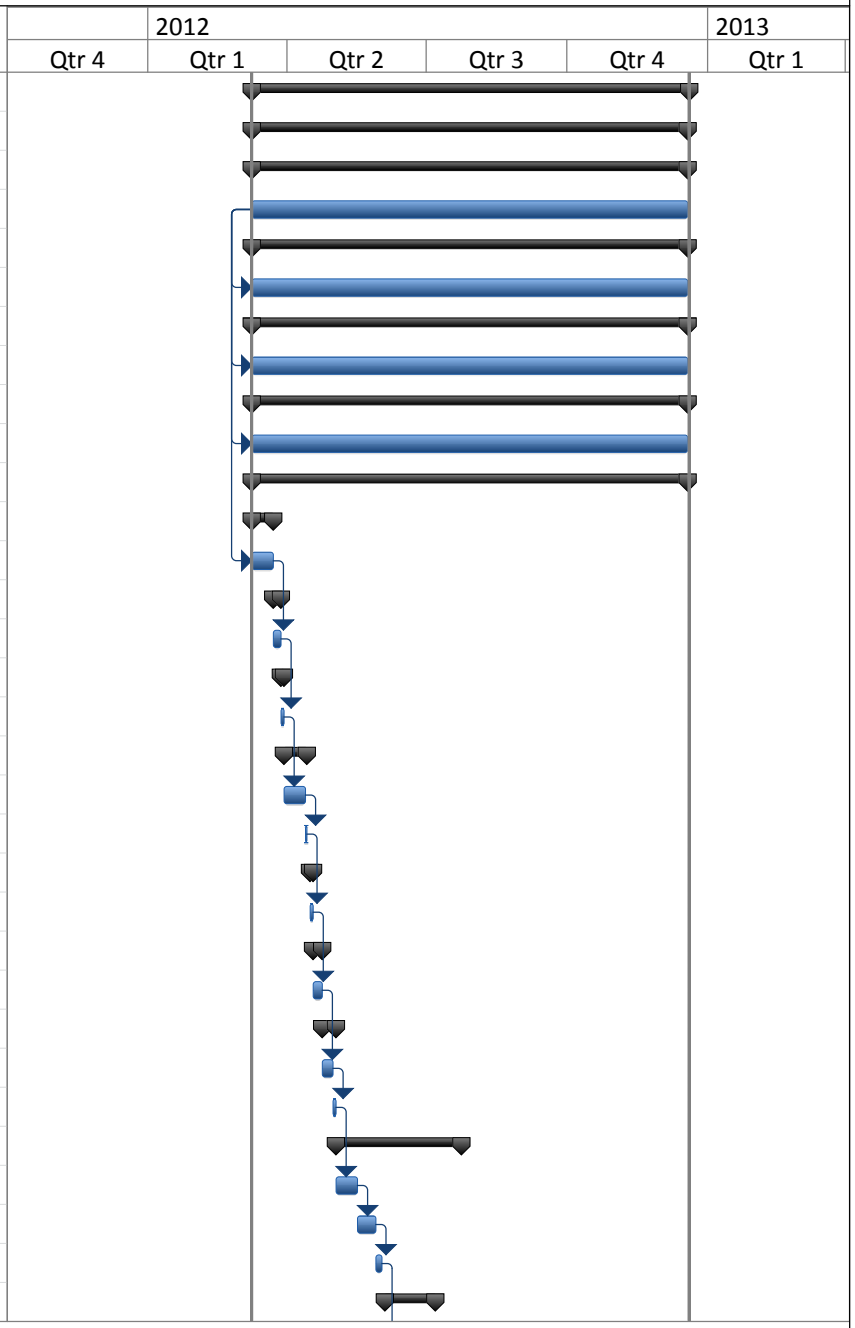
ID	Task Name	Cost
1	**Lake Road Common Dismantlement**	**$2,582,020.72**
2	**Overheads**	**$2,049,812.80**
3	**Common Removal Overheads**	**$100,346.96**
4	Added Overhead Staff for Common Removals	$100,346.96
5	**Common Removal Equipment Rental**	**$489,213.76**
6	Common Removal Equipment Rental	$489,213.76
7	**Demolition Contractor Consummables**	**$732,959.92**
8	Consummables	$732,959.92
9	**Scrap Crew**	**$727,292.16**
10	Crew(s) to Handle Scrap Material	$727,292.16
11	**Dismantlement Activities**	**$532,207.92**
12	**Administration Building**	**$35,827.20**
13	Administration Building	$35,827.20
14	**Fuel Yard Office Building**	**$10,748.16**
15	Remove Fuel Yard Office Building	$10,748.16
16	**Butler Building**	**$7,165.44**
17	Butler Building	$7,165.44
18	**Parking Lots and Plant Roads**	**$39,409.92**
19	Plant Roads and Parking Areas	$35,827.20
20	Guard Shack	$3,582.72
21	**Dozer Building**	**$7,165.44**
22	Dozer Building	$7,165.44
23	**Laboratory**	**$9,286.08**
24	Laboratory	$9,286.08
25	**Fuel Equipment**	**$11,607.60**
26	Remove Propane Tanks and above ground piping	$11,607.60
27	Remove Gas Metering Station and above ground piping	$0.00
28	**Fuel Yard**	**$147,260.16**
29	Remove Car Dumper	$23,215.20
30	Remove West Yard Reclaim	$18,572.16
31	Remove Boiler 4 and Boiler 5 Tripper	$9,286.08
32	**Conveyors**	**$58,038.00**
33	Remove Conveyors - 5A, 5B, 6, 7, 8, 1, 2, and 3	$58,038.00
34	Remove Dust Collectors	$2,321.52
35	Remove Miscellaneous Fuel Yard Equipment	$35,827.20
36	**Underground Circulating Water Piping between Condensers and Intake**	**$39,409.92**
37	Excavate Underground Circulating Water Piping	$10,748.16
38	Collapse Underground Circulating Water Piping	$7,165.44
39	Backfill and Compact Over Circulating Water Piping	$21,496.32
40	**Yard Fire Water Systems**	**$10,748.16**
41	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	$10,748.16
42	**Low Side Water Treatment**	**$60,359.52**
43	Remove Mixing Tanks	$4,643.04

Lake Road Common Dismantlement

ID	Task Name	Cost
44	Remove 4 Lime Softeners	$4,643.04
45	Remove 11 Carbon Filters	$16,250.64
46	Remove 4 Zeolite Filters	$6,964.56
47	Remove Deaerator	$4,643.04
48	Remove 4 Feedwater Storage Tanks	$9,286.08
49	Remove Desuperheater Storage Tanks	$2,321.52
50	Remove interconnecting piping and equipment	$11,607.60
51	**Low Side Feedwater System**	**$16,250.64**
52	Remove BFP Suction and Discharge Pipe	$2,321.52
53	Remove 3 Boiler Feed Pump/Motor Sets	$9,286.08
54	Remove the Active and Retired Feedwater Heaters	$2,321.52
55	Remove Low Side Sampling System	$2,321.52
56	**Boiler/Turbine Building**	**$23,215.20**
57	Remove the Common Boiler and Turbine Building	$23,215.20
58	**Water Storage Tanks**	**$16,250.64**
59	Remove the Non-Potable/Fire Protection Water Tank	$11,607.60
60	Remove the Condensate Storage Tank	$4,643.04
61	**Steam Header Systems**	**$13,929.12**
62	Remove 900 Lb. Steam Header Piping and Equipment	$11,607.60
63	Remove 200 Lb. Steam Header Piping and Equipment	$2,321.52
64	**Stacks**	**$83,574.72**
65	Remove #6 Stack to Grade	$32,501.28
66	Remove #5 Stack to Grade	$27,858.24
67	Remove #4 Stack to Grade	$23,215.20
68	**Final Site Grading and Drainage**	**$0.00**
69	Final Site Grading and Drainage	$0.00

Lake Road Common Dismantlement

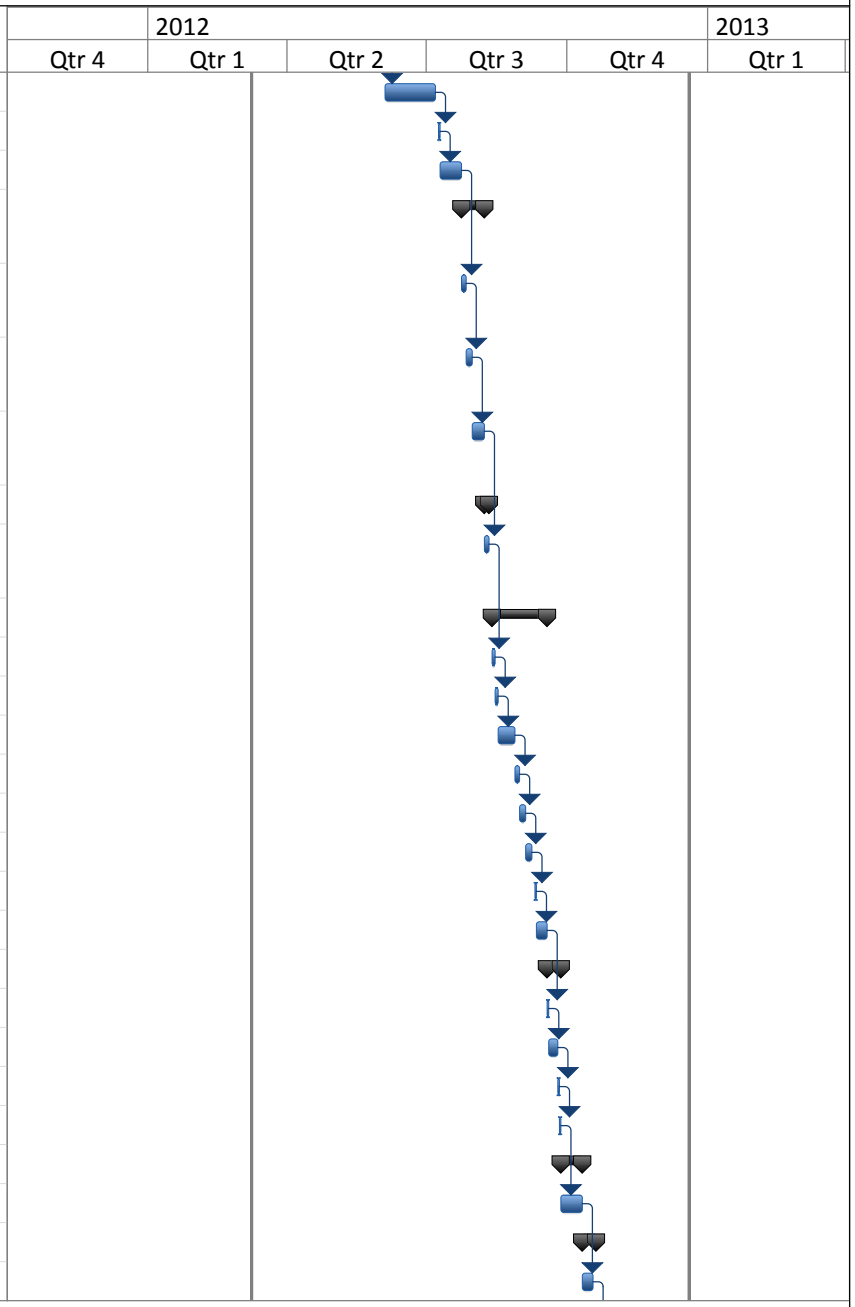
ID	Task Name	Duration
1	**Lake Road Common Dismantlement**	**204 days**
2	**Overheads**	**203 days**
3	**Common Removal Overheads**	**203 days**
4	Added Overhead Staff for Common Removals	203 days
5	**Common Removal Equipment Rental**	**203 days**
6	Common Removal Equipment Rental	203 days
7	**Demolition Contractor Consummables**	**203 days**
8	Consummables	203 days
9	**Scrap Crew**	**203 days**
10	Crew(s) to Handle Scrap Material	203 days
11	**Dismantlement Activities**	**203 days**
12	**Administration Building**	**10 days**
13	Administration Building	10 days
14	**Fuel Yard Office Building**	**3 days**
15	Remove Fuel Yard Office Building	3 days
16	**Butler Building**	**2 days**
17	Butler Building	2 days
18	**Parking Lots and Plant Roads**	**11 days**
19	Plant Roads and Parking Areas	10 days
20	Guard Shack	1 day
21	**Dozer Building**	**2 days**
22	Dozer Building	2 days
23	**Laboratory**	**4 days**
24	Laboratory	4 days
25	**Fuel Equipment**	**7 days**
26	Remove Propane Tanks and above ground piping	5 days
27	Remove Gas Metering Station and above ground piping	2 days
28	**Fuel Yard**	**58 days**
29	Remove Car Dumper	10 days
30	Remove West Yard Reclaim	8 days
31	Remove Boiler 4 and Boiler 5 Tripper	4 days
32	**Conveyors**	**25 days**



Redactions Removed Pursuant to Commission Order

Lake Road Common Dismantlement

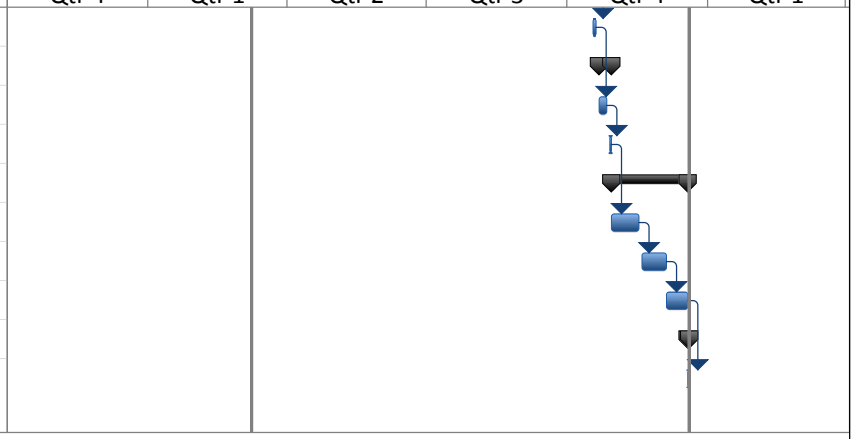
ID	Task Name	Duration
33	Remove Conveyors - 5A, 5B, 6, 7, 8, 1, 2, and 3	25 days
34	Remove Dust Collectors	1 day
35	Remove Miscellaneous Fuel Yard Equipment	10 days
36	**Underground Circulating Water Piping between Condensers and Intake and Cooling Towers**	**11 days**
37	Excavate Underground Circulating Water Piping	3 days
38	Collapse Underground Circulating Water Piping	2 days
39	Backfill and Compact Over Circulating Water Piping	6 days
40	**Yard Fire Water Systems**	**3 days**
41	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	3 days
42	**Low Side Water Treatment**	**26 days**
43	Remove Mixing Tanks	2 days
44	Remove 4 Lime Softeners	2 days
45	Remove 11 Carbon Filters	7 days
46	Remove 4 Zeolite Filters	3 days
47	Remove Deaerator	2 days
48	Remove 4 Feedwater Storage Tanks	4 days
49	Remove Desuperheater Storage Tanks	1 day
50	Remove interconnecting piping and equipment	5 days
51	**Low Side Feedwater System**	**7 days**
52	Remove BFP Suction and Discharge Pipe	1 day
53	Remove 3 Boiler Feed Pump/Motor Sets	4 days
54	Remove the Active and Retired Feedwater Heaters	1 day
55	Remove Low Side Sampling System	1 day
56	**Boiler/Turbine Building**	**10 days**
57	Remove the Common Boiler and Turbine Building	10 days
58	**Water Storage Tanks**	**7 days**
59	Remove the Non-Potable/Fire Protection Water Tank	5 days



Redactions Removed Pursuant to Commission Order

Lake Road Common Dismantlement

ID	Task Name	Duration
60	Remove the Condensate Storage Tank	2 days
61	**Steam Header Systems**	**6 days**
62	Remove 900 Lb. Steam Header Piping and Equipment	5 days
63	Remove 200 Lb. Steam Header Piping and Equipment	1 day
64	**Stacks**	**36 days**
65	Remove #6 Stack to Grade	14 days
66	Remove #5 Stack to Grade	12 days
67	Remove #4 Stack to Grade	10 days
68	**Final Site Grading and Drainage**	**1 day**
69	Final Site Grading and Drainage	1 day



Redactions Removed Pursuant to Commission Order

IATAN

Redactions Removed Pursuant to Commission Order

IATAN STATION

The Iatan Generating Station consists of two coal-fired power plants.

Iatan Unit 1 has an SPP-accredited unit rating of 705 MW and was placed in service in 1980. Unit 1 has a sub-critical Babcock & Wilcox boiler and a General Electric turbine. Missouri River water is used for condenser cooling. Iatan Unit 1 was originally commissioned with a dedicated chimney and an electrostatic precipitator for flue gas particulate removal. In 2009, Iatan Unit 1 was retrofitted with an SCR, baghouse, and wet scrubber. The original electrostatic precipitator and stack were abandoned in place and the flue gas was redirected to a common Iatan Units 1 and 2 chimney with a dedicated Unit 1 flue.

Iatan Unit 2 has an SPP-accredited unit rated of 881 MW and was placed in service in 2010. Unit 2 has a super-critical Alstom boiler and a Toshiba turbine. A cooling tower is used for condenser cooling with well water for cooling tower makeup. Iatan Unit 2 has an SCR, baghouse, and wet scrubber. The flue gas is discharged through a common Iatan Units 1 and 2 chimney with a dedicated Unit 2 flue.

The Iatan fuel yard has a rotary car dumper to unload unit trains of coal. The coal is stored in a common fuel yard. Fuel is reclaimed from the common fuel yard via a stacker reclaimer or a series of reclaim pits and transferred to Units 1 and 2 through a common conveyor system. Coal is transferred from the common conveyor system to dedicated unit conveyors (located near the final coal transfer points for each unit).

Both Iatan Units 1 and 2 have a fuel oil igniter system. Both units are supplied with fuel oil from a common fuel oil unloading and storage facility.

Both Units 1 and 2 have a wet scrubber that utilizes a common reagent preparation and gypsum handling facility. This facility includes a limestone unloading and storage area, a limestone slurry preparation system, a gypsum preparation system, and a gypsum stack-out and storage system.

Both Units 1 and 2 beneficially use coal combustion products off site. Coal combustion products that are not beneficially used off site are disposed of in the on-site landfill.

The following are the major systems and equipment that were included in the retirement and dismantlement of each unit and the major systems and equipment that were considered common (additional details are listed in the attached retirement and dismantlement schedules included in this Appendix).

IATAN UNIT 1

1. Boiler, SCR, and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Precipitator (currently retired in place).
4. Baghouse and wet scrubber.
5. Waste oil system.
6. Dedicated Unit 1 fuel handling equipment.
7. Dedicated Unit 1 fuel oil equipment.
8. Circulating water intake structure, circulating water piping, and circulating water equipment.

IATAN UNIT 2

1. Boiler, SCR, and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Baghouse and wet scrubber.
4. Dedicated Unit 2 fuel handling equipment.
5. Dedicated Unit 2 fuel oil equipment.
6. Cooling tower and wells.

COMMON

1. Administration building.
2. Fuel yard office building.
3. Training building.
4. Warehouses.
5. Maintenance shops.
6. Common fuel handling equipment.
7. Sewage treatment.
8. Fuel oil storage and unloading.
9. Fire water systems.
10. Reagent preparation and gypsum handling.
11. Unit 1 stack (currently retired in place).
12. Units 1 and 2 common stack.
13. Landfill.
14. Clarifiers, clarifier storage tanks, and zero-liquid discharge equipment and auxiliaries.

UNIT 1

Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

Owner Costs				
Pre-Retirement Activities		$100,822		
Retirement Activities		$661,769		
Post-Retirement Activities		$26,564		
Owner Direct Total			$789,155	
Owner Internal Costs	5.00%		$39,458	
Owner Contingency:	25.00%		$207,153	
Iatan 1 Retirement Opinion of Probable Cost:				$1,035,765.41

Activities Required by Permit or Regulation

Iatan 1 Intake Removal	$613,077	
Iatan Unit 1 Ash Pond Closure	$36,357,000	
Activities Required by Permit or Regulation:		$36,970,077

Iatan 1 Retirement

ID	Task Name	Cost
1	**Iatan 1 Retirement**	**$789,156.31**
2	**Pre-Engineering**	**$100,821.60**
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	$0.00
4	**KCL&L Overhead Costs**	**$115,245.60**
5	KCP&L Retirement Manager	$115,245.60
6	**Equipment Rentals**	**$39,070.50**
7	Vacuum truck	$39,070.50
8	**Retirement**	**$507,454.61**
9	**Electrical**	**$18,911.68**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Oil-Filled Power Transformers**	**$5,549.44**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
26	Drain and dispose of oil.	$2,642.88
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	$1,120.00
28	**Dry-type Power Transformers**	**$1,786.56**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
31	**Motors**	**$6,216.00**
32	De-energize all primary power at the source.	$1,786.56

Iatan 1 Retirement

ID	Task Name	Cost
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
34	Drian lube oil system (if applicable) and dispoe of oil.	$2,642.88
35	**Coal Handling**	**$27,475.44**
36	Empty all transfer hoppers.	$1,704.56
37	Burn out coal silos.	$1,685.44
38	Confirm all fuel lines, conveyors and trippers are clear of fuel.	$1,685.44
39	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site.	$22,400.00
40	**Fuel Oil and Igniter System**	**$2,528.16**
41	Drain fuel oil system	$2,528.16
42	**Waste Oil System**	**$1,685.44**
43	Drain all waste oil systems	$1,685.44
44	**Boiler Chemical Feed**	**$1,685.44**
45	Drain all chemical feed tanks.	$1,685.44
46	**Boiler**	**$27,484.77**
47	Open boiler doors.	$880.96
48	Gas side - perform cleaning of the boiler and bottom ash system.	$22,400.00
49	Drain boiler, drum, downcomers and headers.	$842.72
50	Open drum doors.	$880.96
51	Drain and clean the submerged flight conveyor system.	$2,480.13
52	**Stack and Ductwork**	**$326,961.04**
53	Open ductwork doors.	$880.96
54	Perform extensive cleaning of the ductwork.	$11,200.00
55	Place cap over stack opening to keep moisture out.	$314,880.08
56	**Condensate and Feedwater Piping**	**$1,685.44**
57	Drain water from the system.	$842.72
58	Leave open vents and drains.	$842.72
59	**Feedwater heaters**	**$2,528.16**
60	Drain feedwater heaters	$842.72
61	Leave open vents and drains.	$1,685.44
62	**Deaerator and Deaerator Storage Tank**	**$1,685.44**
63	Drain Deaerator and Storage	$842.72
64	Leave open vents and drains.	$842.72
65	**Baghouse**	**$17,351.92**
66	Multiple cleaning cycles for filter bags.	$2,528.16
67	Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves.	$842.72
68	Remove all filter bags and cages.	$880.96
69	Clear hoppers of all ash	$2,805.44
70	Mechanically secure all compartment dampers and hopper outlet valves in open position.	$880.96
71	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	$1,421.84

Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

ID	Task Name	Cost
72	Install bird screens across hopper ash outlet and ash line flanges.	$880.96
73	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	$880.96
74	If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut.	$880.96
75	If top-door plenum, close and secure top doors and remove/disable door lift hoist.	$1,723.68
76	If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure.	$945.44
77	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
78	**Wet FGD system**	**$23,908.00**
79	Multiple mist eliminator wash cycles. Remove ME's from absorber.	$2,145.04
80	Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	$1,723.68
81	Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc.	$4,624.08
82	Leave all tank drain valves open or remove. Install bird screens across openings.	$1,761.92
83	Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	$2,604.64
84	Mechanically secure all flue gas isolation dampers in open position or remove damper blades.	$1,761.92
85	Remove solids from all inlet and outlet ductwork as necessary	$2,240.00
86	Open all vent station air and control air lines. Leave in open position or remove vent valves	$1,723.68
87	Padlock or tack weld all access doors to modules and ductwork shut.	$1,762.24
88	Remove access doors to open-top tanks.	$880.96
89	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
90	**FGD Reagent Preparation-Limestone wet Scrubber**	**$10,262.88**
91	Remove limestone from day bins.	$1,402.72
92	Removed cartridges/bags from bin vent filters	$1,402.72
93	Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.)	$881.12
94	Remove bin discharge isolation valve and install bird screen.	$440.48
95	Thoroughly wash and drain mills	$1,402.72
96	Remove balls from any ball mills	$1,120.00
97	Padlock or tack weld mill access doors closed.	$881.12

Iatan 1 Retirement

ID	Task Name	Cost
98	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	$945.44
99	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$1,786.56
100	**FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters**	**$7,287.12**
101	Wash vacuum filter belt and remove all accumulated solids	$2,240.00
102	Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens.	$1,421.84
103	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	$945.44
104	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
105	**SCR**	**$10,054.00**
106	Vacuum fly ash from catalyst.	$2,240.00
107	Remove catalyst of salvage or disposal.	$2,881.92
108	Padlock or tack weld access doors shut.	$880.96
109	Remove ammonia from storage tank for resale.	$701.36
110	Wash out and drain storage tank and supply piping.	$701.36
111	Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens.	$861.84
112	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$1,786.56
113	**Turbine(s) and Condenser**	**$5,266.64**
114	Drain hotwell and leave doors open.	$861.84
115	Open main turbine doors.	$880.96
116	Open bfp turbine doors.	$880.96
117	Remove lube oil.	$2,642.88
118	**Generator**	**$6,095.76**
119	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
120	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
121	De-energize power supplies to generator excitation system at the source.	$446.64
122	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
123	Drain generator and exciter cooling water systems (if applicable).	$861.84
124	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
125	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
126	**Circulation Water and Turbine Cooling Water System**	**$3,409.12**
127	Drain.	$1,685.44

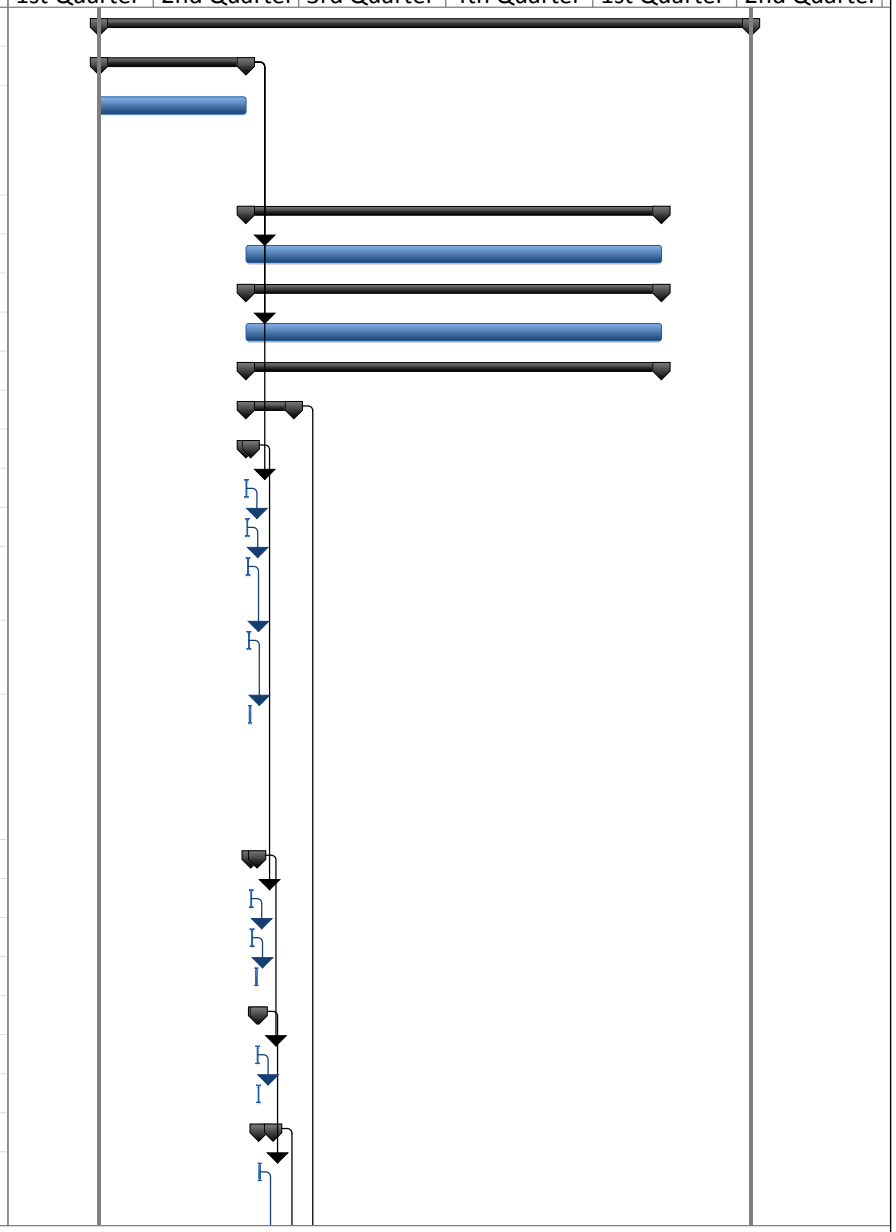
Iatan 1 Retirement

ID	Task Name	Cost
128	Open water box doors.	$880.96
129	Drain any circulating water chemical feed tanks.	$842.72
130	**Compressed Air System**	**$2,721.28**
131	Open vents and drains.	$842.72
132	Remove desiccant from desiccant dryers.	$1,878.56
133	**Auxiliary Steam System**	**$1,685.44**
134	Drain water from system.	$842.72
135	Remove aux boiler chemicals.	$842.72
136	**Auxiliary Cooling Water System**	**$842.72**
137	Drain water from system.	$842.72
138	**Condenser Air Extraction and Waterbox Priming System**	**$842.72**
139	Drain water from system.	$842.72
140	**Building Heating System**	**$842.72**
141	Drain water from system.	$842.72
142	**Battery System**	**$4,253.28**
143	De-energize all battery chargers from the source.	$446.64
144	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	$446.64
145	Remove and dispose of battery electrolyte.	$1,680.00
146	Remove and dispose of battery cells.	$1,120.00
147	Clean up and dispose of electrolyte on surface areas around batteries.	$560.00
148	**Post Retirement Activities**	**$26,564.00**
149	Post Retirement Activities	$26,564.00

Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

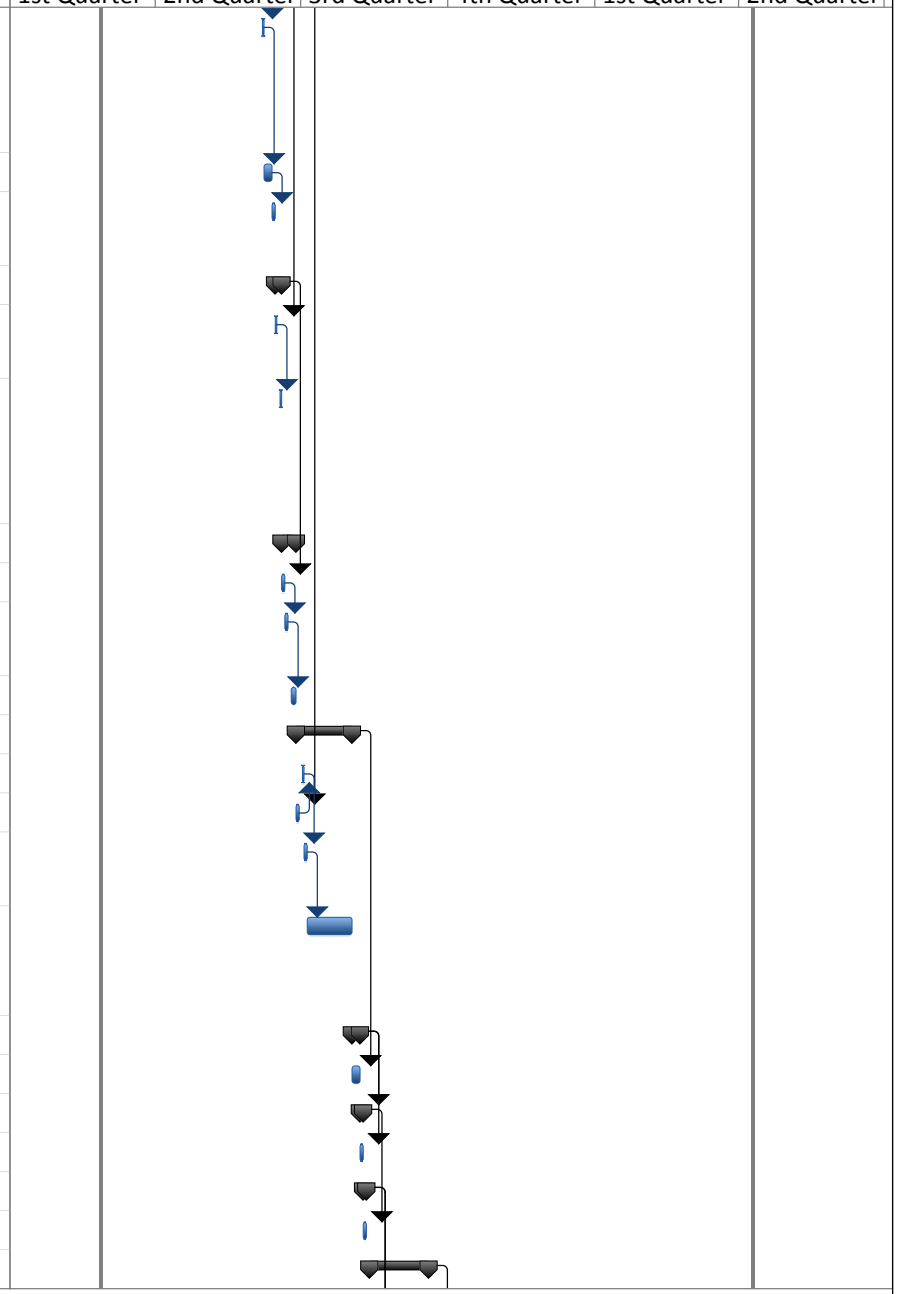
ID	Task Name	Duration
1	**Iatan 1 Retirement**	**292 days**
2	**Pre-Engineering**	**66 days**
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	66 days
4	**KCL&L Overhead Costs**	**186 days**
5	KCP&L Retirement Manager	186 days
6	**Equipment Rentals**	**186 days**
7	Vacuum truck	186 days
8	**Retirement**	**186 days**
9	**Electrical**	**22 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Oil-Filled Power Transformers**	**7 days**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

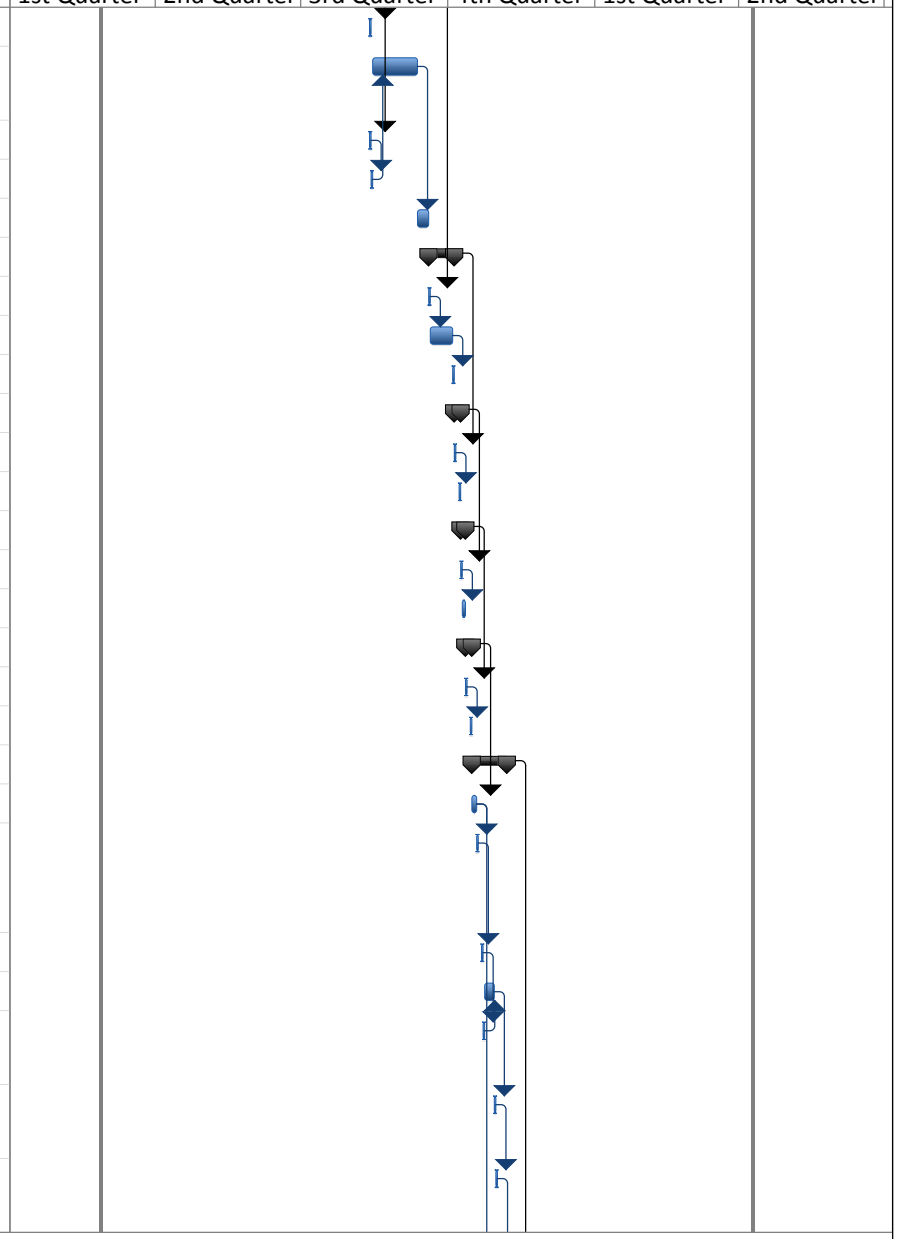
ID	Task Name	Duration
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
26	Drain and dispose of oil.	3 days
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	2 days
28	**Dry-type Power Transformers**	**2 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	2 days
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
34	Drian lube oil system (if applicable) and dispoe of oil.	3 days
35	**Coal Handling**	**25 days**
36	Empty all transfer hoppers.	1 day
37	Burn out coal silos.	2 days
38	Confirm all fuel lines, conveyors and trippers are clear of fuel.	2 days
39	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site.	20 days
40	**Fuel Oil and Igniter System**	**3 days**
41	Drain fuel oil system	3 days
42	**Waste Oil System**	**2 days**
43	Drain all waste oil systems	2 days
44	**Boiler Chemical Feed**	**2 days**
45	Drain all chemical feed tanks.	2 days
46	**Boiler**	**27 days**



Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

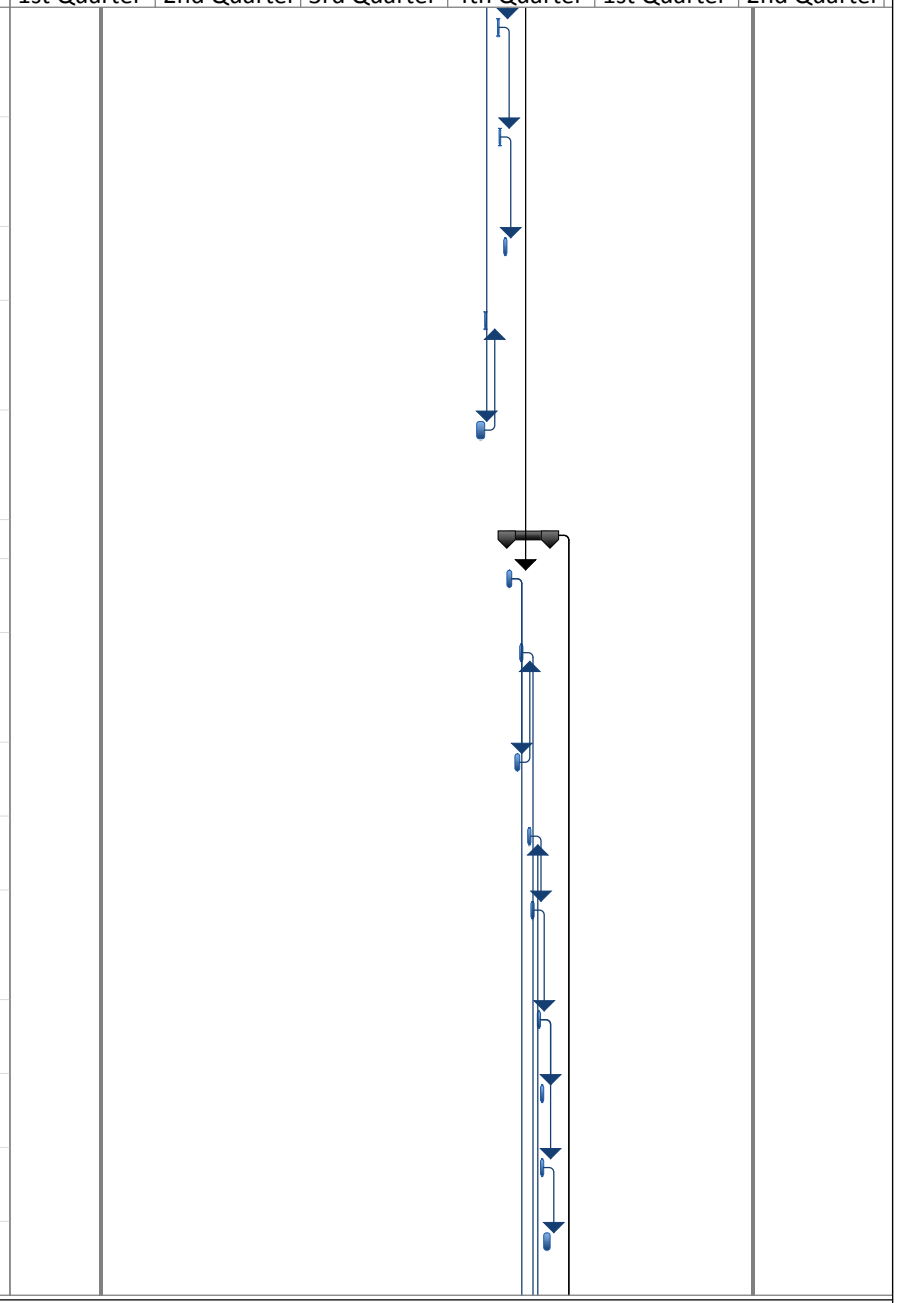
ID	Task Name	Duration
47	Open boiler doors.	1 day
48	Gas side - perform cleaning of the boiler and bottom ash system.	20 days
49	Drain boiler, drum, downcomers and headers.	1 day
50	Open drum doors.	1 day
51	Drain and clean the submerged flight conveyor system.	5 days
52	**Stack and Ductwork**	**12 days**
53	Open ductwork doors.	1 day
54	Perform extensive cleaning of the ductwork.	10 days
55	Place cap over stack opening to keep moisture out.	1 day
56	**Condensate and Feedwater Piping**	**2 days**
57	Drain water from the system.	1 day
58	Leave open vents and drains.	1 day
59	**Feedwater heaters**	**3 days**
60	Drain feedwater heaters	1 day
61	Leave open vents and drains.	2 days
62	**Deaerator and Deaerator Storage Tank**	**2 days**
63	Drain Deaerator and Storage	1 day
64	Leave open vents and drains.	1 day
65	**Baghouse**	**16 days**
66	Multiple cleaning cycles for filter bags.	3 days
67	Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves.	1 day
68	Remove all filter bags and cages.	1 day
69	Clear hoppers of all ash	4 days
70	Mechanically secure all compartment dampers and hopper outlet valves in open position.	1 day
71	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	1 day
72	Install bird screens across hopper ash outlet and ash line flanges.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

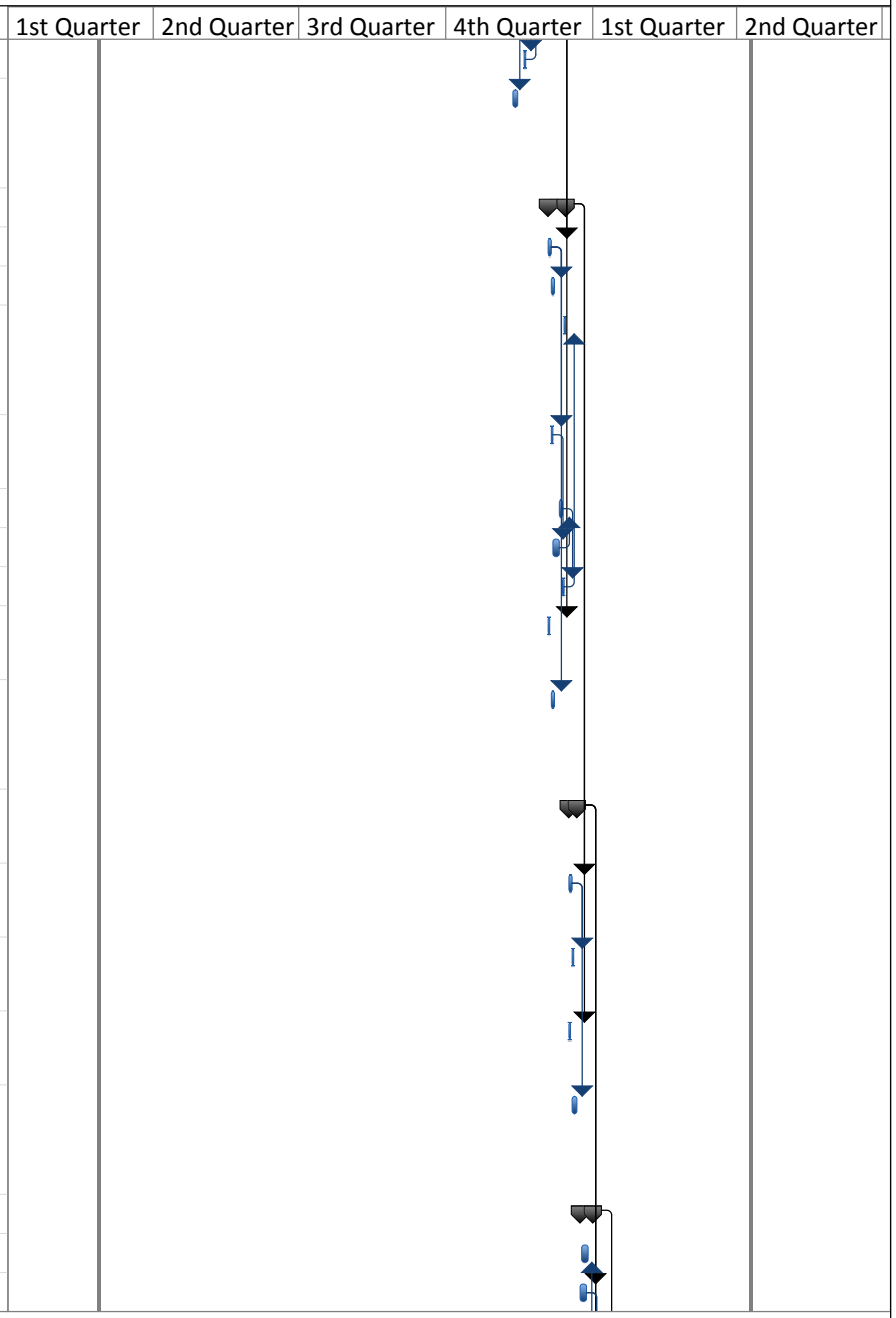
ID	Task Name	Duration
73	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	1 day
74	If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut.	1 day
75	If top-door plenum, close and secure top doors and remove/disable door lift hoist.	2 days
76	If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure.	1 day
77	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
78	**Wet FGD system**	**19 days**
79	Multiple mist eliminator wash cycles. Remove ME's from absorber.	3 days
80	Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	2 days
81	Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc.	3 days
82	Leave all tank drain valves open or remove. Install bird screens across openings.	2 days
83	Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	2 days
84	Mechanically secure all flue gas isolation dampers in open position or remove damper blades.	2 days
85	Remove solids from all inlet and outlet ductwork as necessary	2 days
86	Open all vent station air and control air lines. Leave in open position or remove vent valves	2 days
87	Padlock or tack weld all access doors to modules and ductwork shut.	2 days



Redactions Removed Pursuant to Commission Order

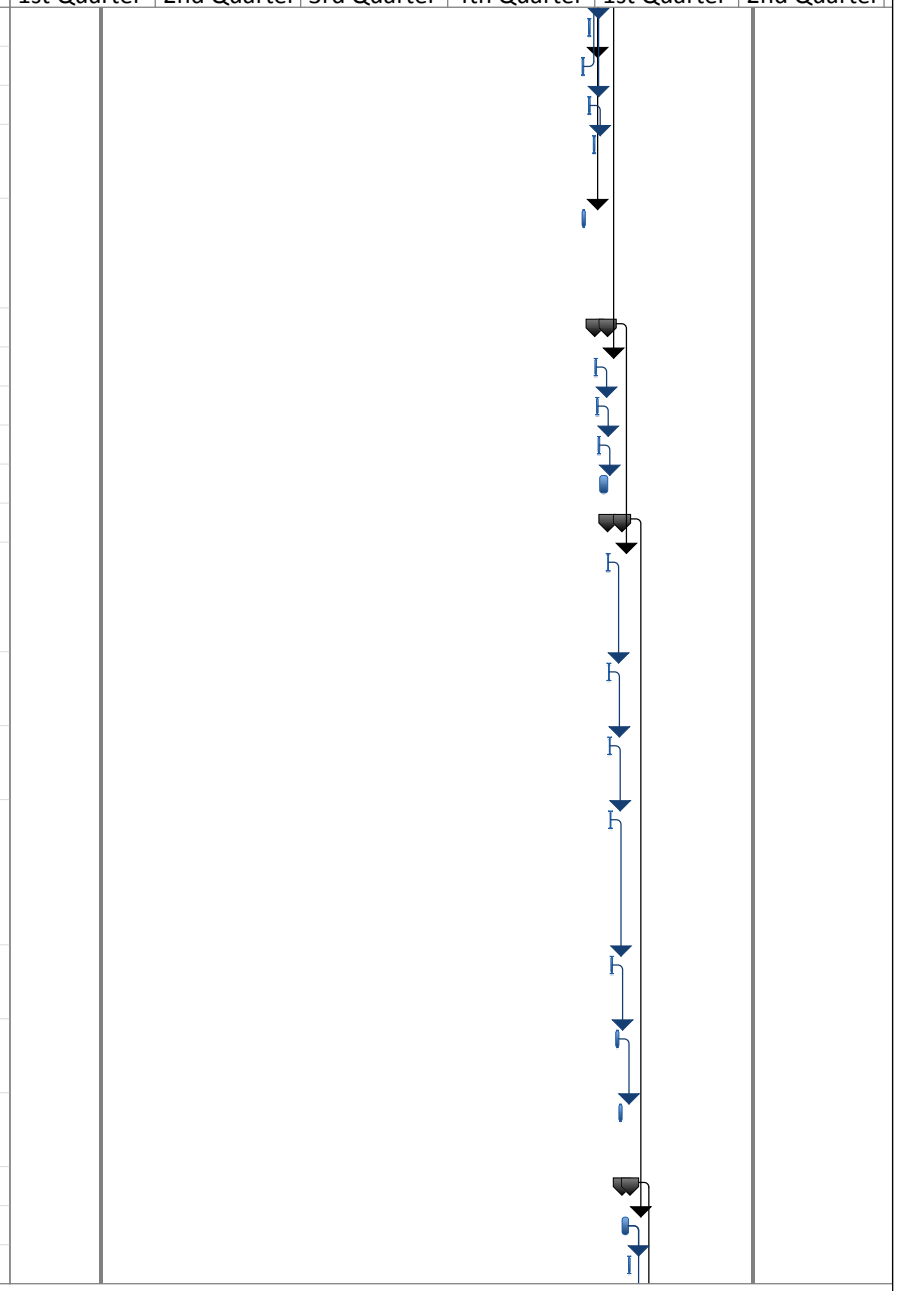
Iatan 1 Retirement

ID	Task Name	Duration
88	Remove access doors to open-top tanks.	1 day
89	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
90	**FGD Reagent Preparation-Limestone wet Scrubber**	**9 days**
91	Remove limestone from day bins.	2 days
92	Removed cartridges/bags from bin vent filters	2 days
93	Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.)	1 day
94	Remove bin discharge isolation valve and install bird screen.	1 day
95	Thoroughly wash and drain mills	2 days
96	Remove balls from any ball mills	2 days
97	Padlock or tack weld mill access doors closed.	1 day
98	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	1 day
99	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	2 days
100	**FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters**	**5 days**
101	Wash vacuum filter belt and remove all accumulated solids	2 days
102	Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens.	1 day
103	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	1 day
104	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
105	**SCR**	**6 days**
106	Vacuum fly ash from catalyst.	4 days
107	Remove catalyst of salvage or disposal.	4 days



Iatan 1 Retirement

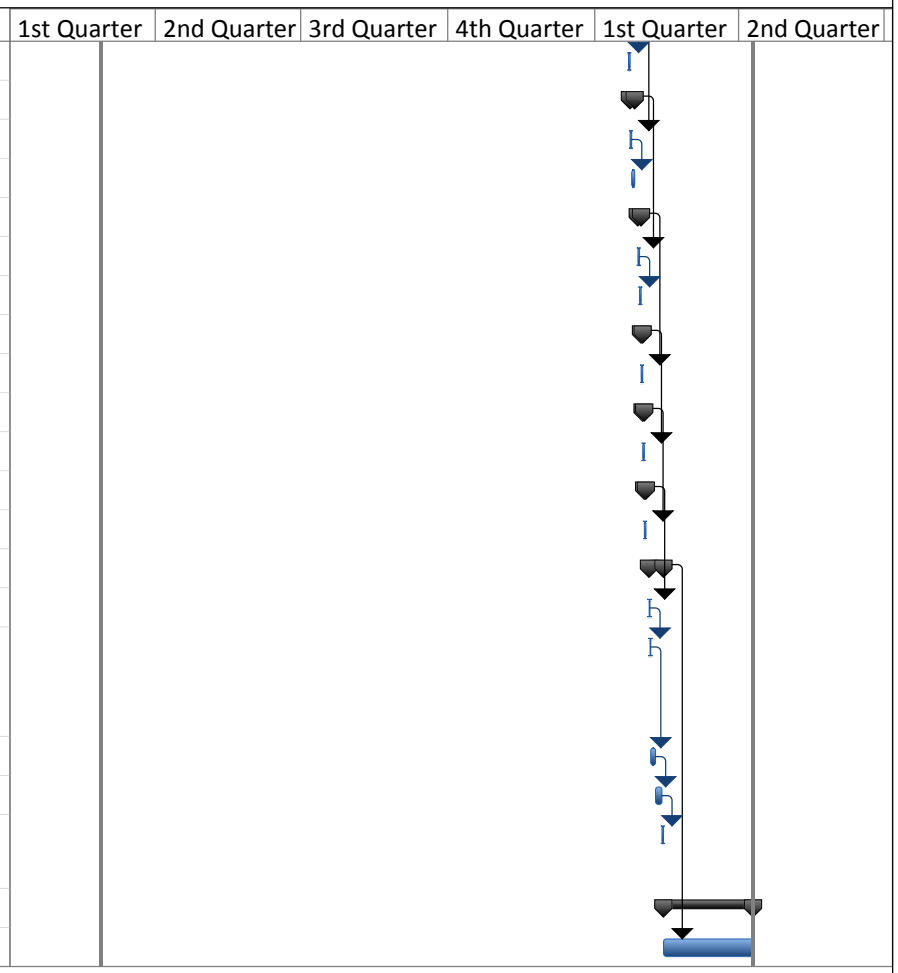
ID	Task Name	Duration
108	Padlock or tack weld access doors shut.	1 day
109	Remove ammonia from storage tank for resale.	1 day
110	Wash out and drain storage tank and supply piping.	1 day
111	Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens.	1 day
112	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	2 days
113	**Turbine(s) and Condenser**	**6 days**
114	Drain hotwell and leave doors open.	1 day
115	Open main turbine doors.	1 day
116	Open bfp turbine doors.	1 day
117	Remove lube oil.	3 days
118	**Generator**	**7 days**
119	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
120	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
121	De-energize power supplies to generator excitation system at the source.	0.5 days
122	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
123	Drain generator and exciter cooling water systems (if applicable).	1 day
124	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days
125	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
126	**Circulation Water and Turbine Cooling Water System**	**3 days**
127	Drain.	2 days
128	Open water box doors.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 1 Retirement

ID	Task Name	Duration
129	Drain any circulating water chemical feed tanks.	1 day
130	**Compressed Air System**	**3 days**
131	Open vents and drains.	1 day
132	Remove desiccant from desiccant dryers.	2 days
133	**Auxiliary Steam System**	**2 days**
134	Drain water from system.	1 day
135	Remove aux boiler chemicals.	1 day
136	**Auxiliary Cooling Water System**	**1 day**
137	Drain water from system.	1 day
138	**Condenser Air Extraction and Waterbox Priming System**	**1 day**
139	Drain water from system.	1 day
140	**Building Heating System**	**1 day**
141	Drain water from system.	1 day
142	**Battery System**	**7 days**
143	De-energize all battery chargers from the source.	0.5 days
144	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	0.5 days
145	Remove and dispose of battery electrolyte.	3 days
146	Remove and dispose of battery cells.	2 days
147	Clean up and dispose of electrolyte on surface areas around batteries.	1 day
148	**Post Retirement Activities**	**40 days**
149	Post Retirement Activities	40 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

Owner Costs					
Pre-Dismantlement Activities			$892,760		
Overhead During Dismantlement			$1,676,621		
Post-Dismantlement Activities			$65,520		
Owner Costs Total*				$2,634,901	
Demolition General Contractor (DGC) Costs					
Site Management			$1,255,135		
Equipment Rental			$2,172,838		
Consummables			$2,371,947		
Scrap Crew(s)			$2,149,631		
Dismantlement			$5,143,375		
Contractor Direct Cost*		$13,092,926			
Contractor Allowances					
DGC Insurance	2.00%		$261,859		
Contingency/Profit	15.00%		$2,003,218		
Performance Bond	2.00%		$307,160.04		
Contractor Costs Total:				$15,665,162	
Total:					$18,300,063
Owner Internal Costs:	5.00%				$915,003
Owner Contingency:	25.00%				$4,803,767
Iatan Unit 1 Dismantlement Opinion of Probable Cost:					$24,018,833

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $15,727,827

Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

ID	Task Name	Cost
1	**Iatan Unit 1 Dismantlement**	**$12,345,531.67**
2	**Pre-Demolition Activities**	**$892,760.32**
3	Detailed Planning & Hire Owner's Engineer	$104,441.28
4	Detailed Site Characterization Study	$610,335.44
5	Hire Demolition General Contractor	$167,184.00
6	KCP&L Prepares Unit for Dismantlement	$10,799.60
7	Demolition Contractor Mobilizes on Site	$0.00
8	**KCP&L Overhead during Dismantlement**	**$1,676,621.54**
9	KCP&L Project Manager	$266,427.98
10	KCP&L Administrative Support	$98,521.59
11	KCP&L Engineer	$437,911.97
12	Owners Engineer Project Manager	$130,720.00
13	Owners Engineer - Engineer	$743,040.00
14	**Demoliton Contractor Overhead during Dismantlement**	**$913,939.13**
15	Demolition Contractor Project Manager	$258,584.78
16	Demolition Contractor Safety Manager	$230,239.18
17	Demolition Contractor Superintendent	$425,115.17
18	**Demolition Contractor Equipment Rental Costs**	**$1,556,187.08**
19	Equipment Rental	$1,556,187.08
20	**Demolition Contractor Consummables**	**$1,552,575.20**
21	Consummables	$1,552,575.20
22	**Scrap Crew**	**$1,540,569.60**
23	Crew to Handle Scrap Material(s)	$1,540,569.60
24	**Dismantlement**	**$4,147,358.80**
25	**Phase 1 Demolition**	**$957,905.44**
26	**Phase 1 Electrical Demolition**	**$342,149.76**
27	Electrical Demolition of Phase 1 Equipment	$342,149.76
28	**Condensate System**	**$105,690.24**
29	Condensate Pumps	$3,582.72
30	Condensate Transfer Pumps	$1,791.36
31	Cycle Make-Up Pump	$1,791.36
32	Steam Packing Exhauster and Blower	$3,582.72
33	Low Pressure Heaters (except the condenser neck heat exchangers)	$53,740.80
34	Deaerator	$14,330.88
35	Deaerator Storage Tank	$8,956.80
36	Condensate Piping	$17,913.60
37	**Boiler Feed System**	**$67,816.96**
38	Boiler Feed Pump Turbine and Exhaust	$14,076.16
39	Boiler Feed Pump	$17,913.60
40	High Pressure Heaters	$35,827.20
41	**Critical Piping**	**$80,611.20**
42	Main Steam Piping	$26,870.40
43	Cold Reheat Piping	$26,870.40

Iatan 1 Dismantlement

ID	Task Name	Cost
44	Hot Reheat Piping	$26,870.40
45	**Extraction Steam System**	**$17,913.60**
46	Piping	$17,913.60
47	**Heater Drips**	**$14,330.88**
48	Piping	$14,330.88
49	**Auxiliary Steam**	**$25,079.04**
50	Auxiliary Boilers and Auxiliary Skids	$8,956.80
51	Auxiliary Steam Piping	$16,122.24
52	**Circulating Water (plant side)**	**$8,956.80**
53	Waterboxes	$8,956.80
54	**Bearing Cooling Water**	**$30,453.12**
55	Bearing Cooling Water Pumps	$3,582.72
56	Bearing Cooling Water Heat Exchanger	$8,956.80
57	Bearing Cooling Water Piping	$17,913.60
58	**Auxiliary Cooling Water**	**$28,661.76**
59	Auxiliary Cooling Water Heat Exchanger	$5,374.08
60	Auxiliary Cooling Water Pumps	$5,374.08
61	Auxiliary Cooling Water Piping	$17,913.60
62	**Service Water**	**$8,956.80**
63	Service Water Piping	$8,956.80
64	**Fuel Oil System (plant side)**	**$41,201.28**
65	Igniter Fuel Oil Pumps	$5,374.08
66	Igniter Fuel Oil and Atomizing Air Piping	$8,956.80
67	Igniters	$26,870.40
68	**Waste Oil System**	**$12,539.52**
69	Waste Oil Tank	$3,582.72
70	Waste Oil Transfer Pump	$3,582.72
71	Waste Oil Piping	$5,374.08
72	**Air Preheat System**	**$10,236.64**
73	Air Preheat Pumps	$3,582.72
74	Air Preheat Piping	$6,653.92
75	**Condenser Air Extraction System**	**$10,748.16**
76	Vacuum Pumps	$7,165.44
77	Extraction Piping	$3,582.72
78	**Turbine Seals and Drains**	**$12,539.52**
79	Piping	$12,539.52
80	**Turbine Lube Oil System**	**$20,363.52**
81	Turbine Lube Oil Tank	$11,406.72
82	Turbine Lube Oil Pumps	$7,165.44
83	Turbine Oil Mist Eliminator	$1,791.36
84	**Generator Auxiliary Systems**	**$32,244.48**
85	Hydrogen Cooler Skid and Piping	$8,956.80
86	Stator Cooling Water Skid and Piping	$8,956.80
87	Isophase Bus Duct	$7,165.44

Iatan 1 Dismantlement

ID	Task Name	Cost
88	Exciter Heat Exchanger	$3,582.72
89	EHC Coolers	$3,582.72
90	**Chemical Feed Systems**	**$19,303.20**
91	Tanks	$8,555.04
92	Pumps	$5,374.08
93	Piping	$5,374.08
94	**Sampling Systems**	**$6,434.40**
95	Field Mounted Heat Exchangers	$3,582.72
96	Piping	$2,851.68
97	**Building Heating Systems**	**$13,307.84**
98	Steam Unit Heaters	$9,505.60
99	Steam Piping	$3,802.24
100	**Compressed Air System**	**$26,870.40**
101	Air Compressors	$7,165.44
102	Air Drying Equipment	$5,374.08
103	Air Reciever Tanks	$5,374.08
104	Compressed Air Piping	$8,956.80
105	**Miscellaneous Equipment**	**$21,496.32**
106	Miscellaneous Equipment (including Fire Protection)	$21,496.32
107	**Phase 2 Demolition**	**$2,929,157.36**
108	**Precipitator**	**$107,481.60**
109	Remove Precipitator	$107,481.60
110	**Boiler Equipment**	**$732,490.24**
111	Fans	$63,246.40
112	Pulverizers	$71,654.40
113	Bottom Ash	$16,451.52
114	Air Heater	$200,632.32
115	Steam Drum	$89,568.00
116	Coal Bunkers	$71,654.40
117	Coal Feeders	$46,575.36
118	Soot Blowers	$50,895.36
119	Ductwork	$100,316.16
120	Miscellaneous Other	$21,496.32
121	**Boiler Removal**	**$401,264.64**
122	Furnace	$229,294.08
123	Back Pass	$171,970.56
124	**Boiler Steel Framing**	**$723,709.44**
125	Hanger Girders at Top	$107,481.60
126	All Other Framing	$336,775.68
127	Bracing and Girts	$164,805.12
128	Columns	$114,647.04
129	**Boiler Foundations**	**$128,977.92**
130	Equipment Foundation Demolition to Grade	$128,977.92
131	**Remove Turbine**	**$835,233.52**

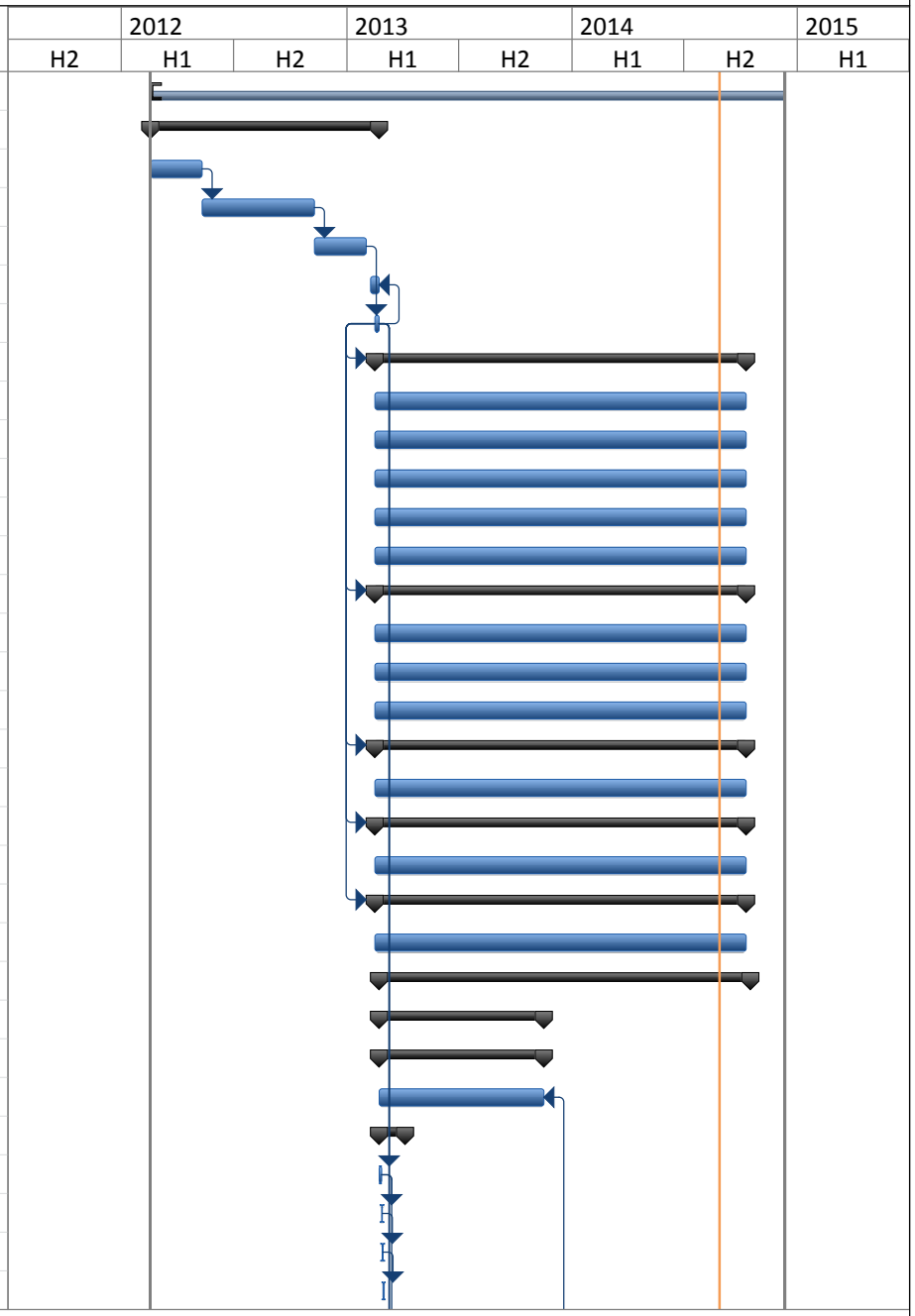
Iatan 1 Dismantlement

ID	Task Name	Cost
132	Remove HP Turbine	$26,321.60
133	Remove IP Turbine	$26,321.60
134	Remove LP Turbine	$26,321.60
135	Remove Generator	$52,643.20
136	Remove Condenser Neck Heat Exchanger	$26,321.60
137	Remove Condenser	$26,321.60
138	Remove Misc. Auxiliary Turbine Equipment	$39,482.40
139	**Turbine Pedestal Demolition to Grade**	**$268,480.32**
140	Top Slab and Beams	$105,286.40
141	Columns	$163,193.92
142	**Remove Turbine Building**	**$343,019.60**
143	Siding and Rooding	$108,682.80
144	All Framing Elevations	$157,929.60
145	Bracing and Girts	$52,643.20
146	Columns	$23,764.00
147	**Phase 3 Yard Demolition**	**$260,296.00**
148	**Circulating Water Pipe (yard)**	**$71,654.40**
149	Excavate Circulating Water Pipe	$17,913.60
150	Collapse Circulating Water Pipe	$35,827.20
151	Backfill Circulating Water Pipe	$17,913.60
152	**Remove Ash Handling Equipment and Piping**	**$35,827.20**
153	Remove Fly-Ash Silo and Scale	$26,870.40
154	Remove Ash Piping and Misc. Equipment	$8,956.80
155	Remove Laydown Equipment and Warehoused Equipment	$71,654.40
156	Remove Unit 1 Condensate Storage Tank and Pump	$9,505.60
157	Remove Unit 1 Make-Up Water Storage Tank	$17,913.60
158	Remove Unit 1 Water Treatment Equipment and Building	$53,740.80
159	**Post Dismantlement Activities**	**$65,520.00**
160	Post Dismantlement Activities	$65,520.00

Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

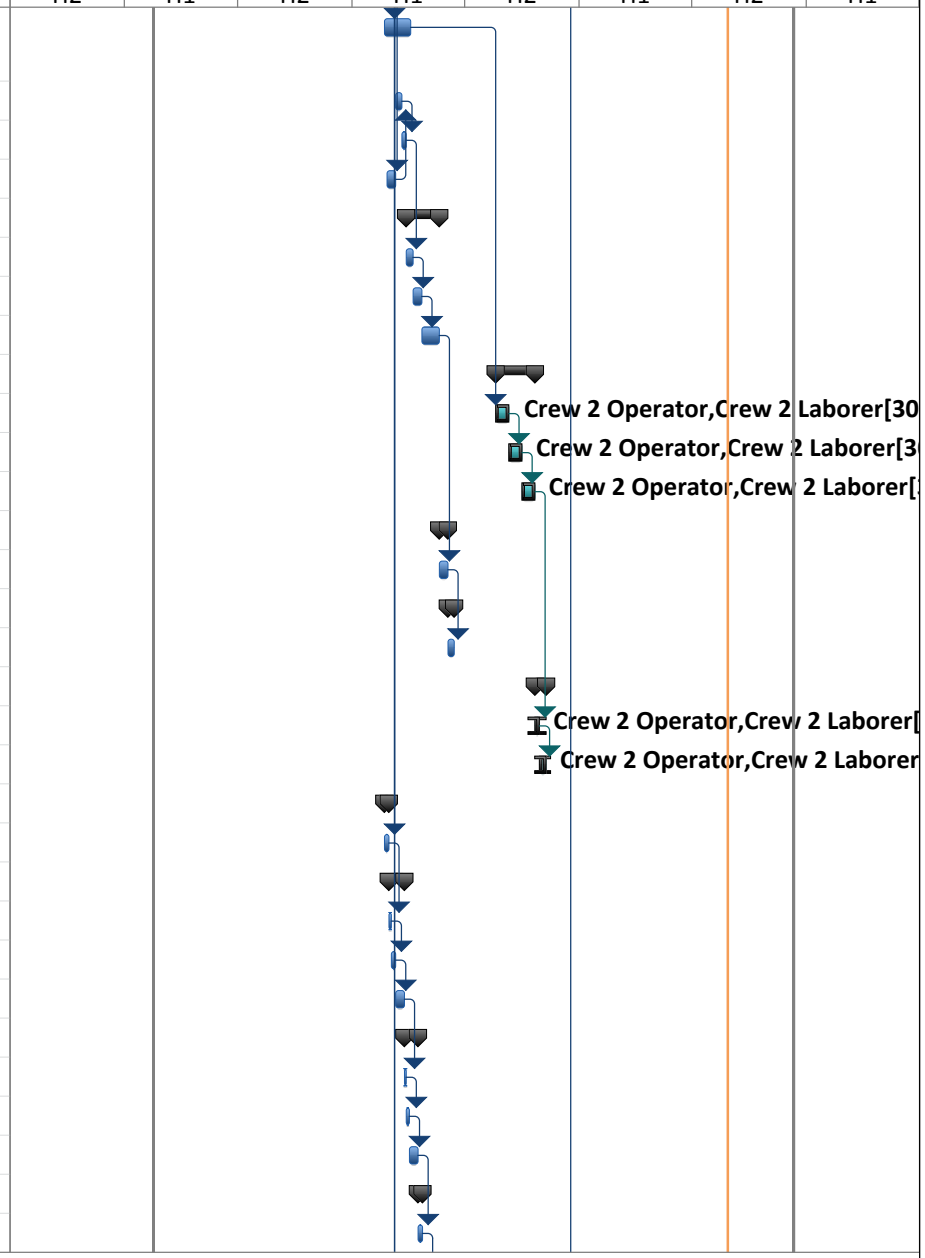
ID	Task Name	Duration
1	**Iatan Unit 1 Dismantlement**	
2	**Pre-Demolition Activities**	**265 days**
3	Detailed Planning & Hire Owner's Engineer	3 mons
4	Detailed Site Characterization Study	130 days
5	Hire Demolition General Contractor	3 mons
6	KCP&L Prepares Unit for Dismantlement	2 wks
7	Demolition Contractor Mobilizes on Site	5 days
8	**KCP&L Overhead during Dismantlement**	**430 days**
9	KCP&L Project Manager	430 days
10	KCP&L Administrative Support	430 days
11	KCP&L Engineer	430 days
12	Owners Engineer Project Manager	430 days
13	Owners Engineer - Engineer	430 days
14	**Demoliton Contractor Overhead during Dismantlement**	**430 days**
15	Demolition Contractor Project Manager	430 days
16	Demolition Contractor Safety Manager	430 days
17	Demolition Contractor Superintendent	430 days
18	**Demolition Contractor Equipment Rental Costs**	**430 days**
19	Equipment Rental	430 days
20	**Demolition Contractor Consummables**	**430 days**
21	Consummables	430 days
22	**Scrap Crew**	**430 days**
23	Crew to Handle Scrap Material(s)	430 days
24	**Dismantlement**	**430 days?**
25	**Phase 1 Demolition**	**191 days?**
26	**Phase 1 Electrical Demolition**	**191 days**
27	Electrical Demolition of Phase 1 Equipment	191 days
28	**Condensate System**	**30 days**
29	Condensate Pumps	2 days
30	Condensate Transfer Pumps	1 day
31	Cycle Make-Up Pump	1 day
32	Steam Packing Exhauster and Blower	2 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

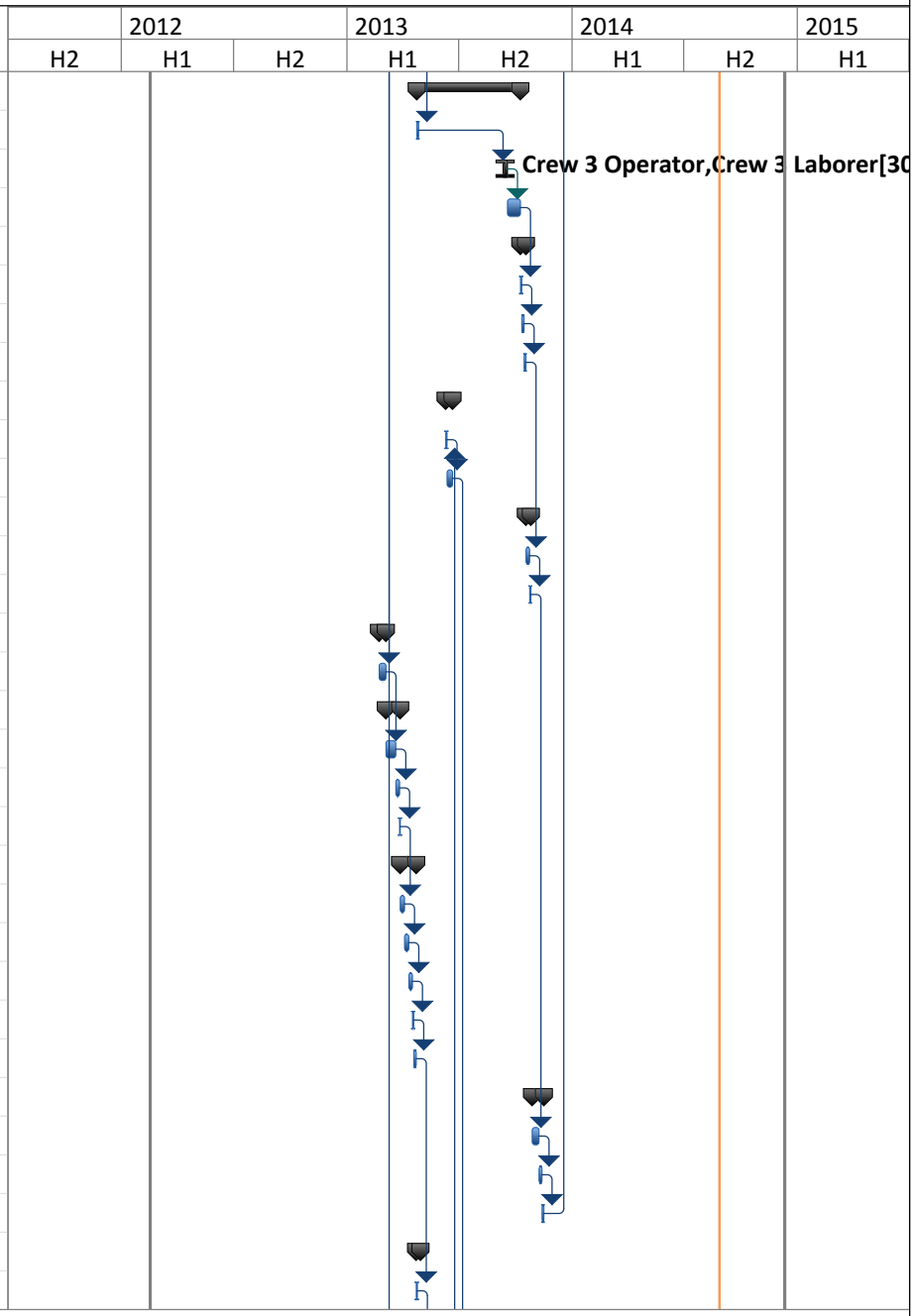
ID	Task Name	Duration
33	Low Pressure Heaters (except the condenser neck heat exchangers)	30 days
34	Deaerator	8 days
35	Deaerator Storage Tank	5 days
36	Condensate Piping	10 days
37	**Boiler Feed System**	**37 days**
38	Boiler Feed Pump Turbine and Exhaust	7 days
39	Boiler Feed Pump	10 days
40	High Pressure Heaters	20 days
41	**Critical Piping**	**45 days**
42	Main Steam Piping	15 days
43	Cold Reheat Piping	15 days
44	Hot Reheat Piping	15 days
45	**Extraction Steam System**	**10 days**
46	Piping	10 days
47	**Heater Drips**	**8 days**
48	Piping	8 days
49	**Auxiliary Steam**	**14 days**
50	Auxiliary Boilers and Auxiliary Skids	5 days
51	Auxiliary Steam Piping	9 days
52	**Circulating Water (plant side)**	**5 days**
53	Waterboxes	5 days
54	**Bearing Cooling Water**	**17 days**
55	Bearing Cooling Water Pumps	2 days
56	Bearing Cooling Water Heat Exchanger	5 days
57	Bearing Cooling Water Piping	10 days
58	**Auxiliary Cooling Water**	**16 days**
59	Auxiliary Cooling Water Heat Exchanger	3 days
60	Auxiliary Cooling Water Pumps	3 days
61	Auxiliary Cooling Water Piping	10 days
62	**Service Water**	**5 days**
63	Service Water Piping	5 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

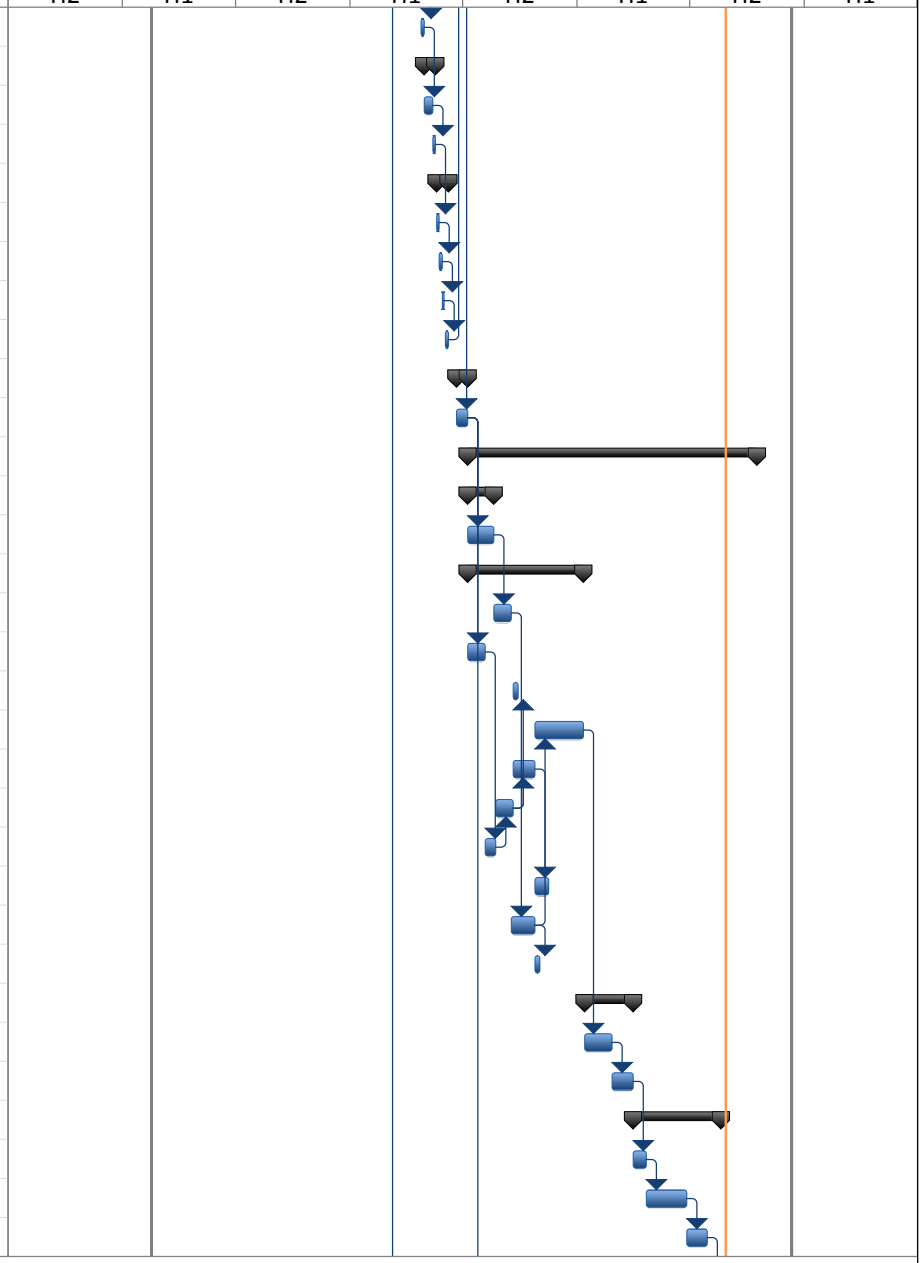
ID	Task Name	Duration
64	**Fuel Oil System (plant side)**	**120 days**
65	Igniter Fuel Oil Pumps	3 days
66	Igniter Fuel Oil and Atomizing Air Piping	5 days
67	Igniters	15 days
68	**Waste Oil System**	**7 days**
69	Waste Oil Tank	2 days
70	Waste Oil Transfer Pump	2 days
71	Waste Oil Piping	3 days
72	**Air Preheat System**	**9 days**
73	Air Preheat Pumps	2 days
74	Air Preheat Piping	7 days
75	**Condenser Air Extraction System**	**6 days**
76	Vacuum Pumps	4 days
77	Extraction Piping	2 days
78	**Turbine Seals and Drains**	**7 days**
79	Piping	7 days
80	**Turbine Lube Oil System**	**17 days?**
81	Turbine Lube Oil Tank	12 days
82	Turbine Lube Oil Pumps	4 days
83	Turbine Oil Mist Eliminator	1 day?
84	**Generator Auxiliary Systems**	**18 days**
85	Hydrogen Cooler Skid and Piping	5 days
86	Stator Cooling Water Skid and Piping	5 days
87	Isophase Bus Duct	4 days
88	Exciter Heat Exchanger	2 days
89	EHC Coolers	2 days
90	**Chemical Feed Systems**	**15 days**
91	Tanks	9 days
92	Pumps	3 days
93	Piping	3 days
94	**Sampling Systems**	**5 days**
95	Field Mounted Heat Exchangers	2 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

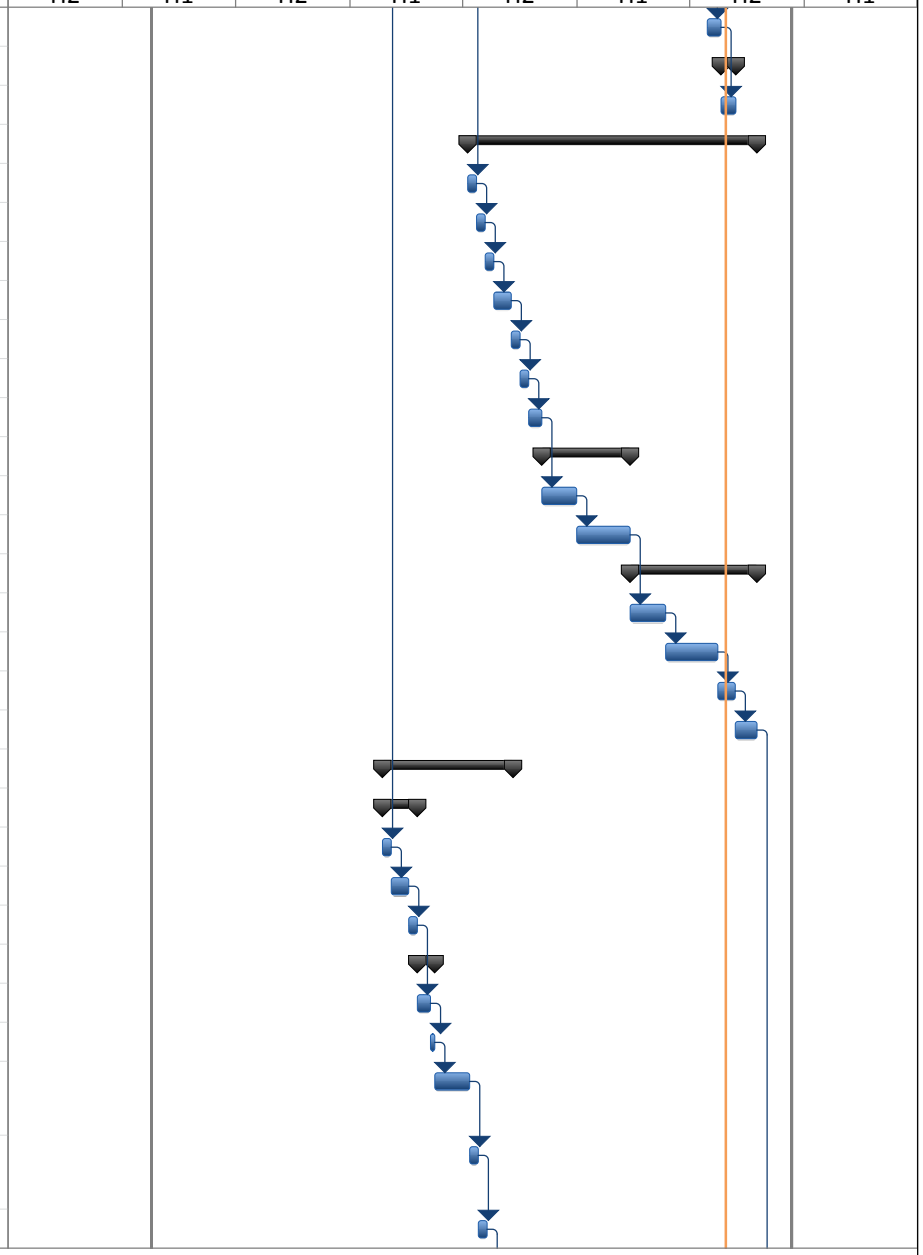
ID	Task Name	Duration
96	Piping	3 days
97	**Building Heating Systems**	**14 days**
98	Steam Unit Heaters	10 days
99	Steam Piping	4 days
100	**Compressed Air System**	**15 days**
101	Air Compressors	4 days
102	Air Drying Equipment	3 days
103	Air Reciever Tanks	3 days
104	Compressed Air Piping	5 days
105	**Miscellaneous Equipment**	**12 days**
106	Miscellaneous Equipment (including Fire Protection)	12 days
107	**Phase 2 Demolition**	**333 days**
108	**Precipitator**	**30 days**
109	Remove Precipitator	30 days
110	**Boiler Equipment**	**134 days**
111	Fans	20 days
112	Pulverizers	20 days
113	Bottom Ash	6 days
114	Air Heater	56 days
115	Steam Drum	25 days
116	Coal Bunkers	20 days
117	Coal Feeders	13 days
118	Soot Blowers	16 days
119	Ductwork	28 days
120	Miscellaneous Other	6 days
121	**Boiler Removal**	**56 days**
122	Furnace	32 days
123	Back Pass	24 days
124	**Boiler Steel Framing**	**101 days**
125	Hanger Girders at Top	15 days
126	All Other Framing	47 days
127	Bracing and Girts	23 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

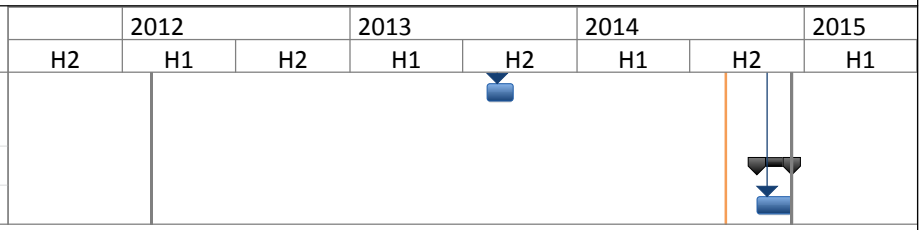
ID	Task Name	Duration
128	Columns	16 days
129	**Boiler Foundations**	**18 days**
130	Equipment Foundation Demolition to Grade	18 days
131	**Remove Turbine**	**333 days**
132	Remove HP Turbine	10 days
133	Remove IP Turbine	10 days
134	Remove LP Turbine	10 days
135	Remove Generator	20 days
136	Remove Condenser Neck Heat Exchanger	10 days
137	Remove Condenser	10 days
138	Remove Misc. Auxiliary Turbine Equipment	15 days
139	**Turbine Pedestal Demolition to Grade**	**102 days**
140	Top Slab and Beams	40 days
141	Columns	62 days
142	**Remove Turbine Building**	**146 days**
143	Siding and Rooding	41 days
144	All Framing Elevations	60 days
145	Bracing and Girts	20 days
146	Columns	25 days
147	**Phase 3 Yard Demolition**	**150 days**
148	**Circulating Water Pipe (yard)**	**40 days**
149	Excavate Circulating Water Pipe	10 days
150	Collapse Circulating Water Pipe	20 days
151	Backfill Circulating Water Pipe	10 days
152	**Remove Ash Handling Equipment and Piping**	**20 days**
153	Remove Fly-Ash Silo and Scale	15 days
154	Remove Ash Piping and Misc. Equipment	5 days
155	Remove Laydown Equipment and Warehoused Equipment	40 days
156	Remove Unit 1 Condensate Storage Tank and Pump	10 days
157	Remove Unit 1 Make-Up Water Storage Tank	10 days



Redactions Removed Pursuant to Commission Order

Iatan 1 Dismantlement

ID	Task Name	Duration
158	Remove Unit 1 Water Treatment Equipment and Building	30 days
159	**Post Dismantlement Activities**	**40 days**
160	Post Dismantlement Activities	40 days



Redactions Removed Pursuant to Commission Order

Iatan 1 AQCS

ID	Task Name	Cost
1	**Iatan Unit 1 AQCS Dismantlement**	**$3,382,301.12**
2	**Common Removal Overheads**	**$341,196.80**
3	Added Overhead Staff for Common Removals	$341,196.80
4	**Scrap Crew**	**$609,062.40**
5	Crew(s) to Handle Scrap Material	$609,062.40
6	**Demolition Contractor Consummables**	**$819,372.80**
7	Consummables	$819,372.80
8	**Demolition Contractor Equipment Rental Costs**	**$616,651.20**
9	Equipment Rental	$616,651.20
10	**Dismantlement**	**$996,017.92**
11	**Initial Structural**	**$130,313.68**
12	Remove SCR box & ductwork lagging & insulation	$17,913.60
13	Remove SCR expansion joints	$10,748.16
14	Remove ductwork lagging & insulation	$7,952.40
15	Remove ductwork expansion joints	$17,913.60
16	Remove ductwork access platforms & ladders	$17,913.60
17	Remove FF lagging, insulation, wall panel, & roof panels	$35,827.20
18	Remove ID fan lagging & insulation	$7,165.44
19	Removal all HVAC equipment located on FGD Bldg roof	$5,374.08
20	Remove FGD Bldg lagging, insulation, wall panel, & roof	$9,505.60
21	**General Electric**	**$202,423.68**
22	Remove breakers serving all FF equipment	$895.68
23	Remove breakers serving all FGD equipment	$1,791.36
24	Remove breakers serving all ID fan equipment	$895.68
25	Remove breakers serving all SCR equipment	$895.68
26	Remove breakers serving all comp air equipment	$895.68
27	Remove all ductwork primary instrumentation, controls & assoc'd cables, and conduit	$8,956.80
28	Remove all FGD primary instrumentation, controls & assoc'd cables, and conduit	$26,870.40
29	Remove all FF primary instrumentation, controls & assoc'd cables, and conduit	$17,913.60
30	Remove SCR primary instrumentation, controls, & assoc'd cable & conduit	$8,956.80
31	Remove NH3 supply primary instrumentation, controls, & assoc'd cable & conduit	$8,956.80
32	Remove wiring and conduit serving FGD equipment, HVAC, lighting and convenience outlets	$35,827.20
33	Remove wiring and conduit serving FF equipment, HVAC, lighting and convenience outlets	$17,913.60
34	Remove wiring and conduit serving the ID fans and assoc'd equipment	$21,496.32
35	Remove wiring & conduit serving SCR vaporization & injection equipment	$5,374.08

Iatan 1 AQCS

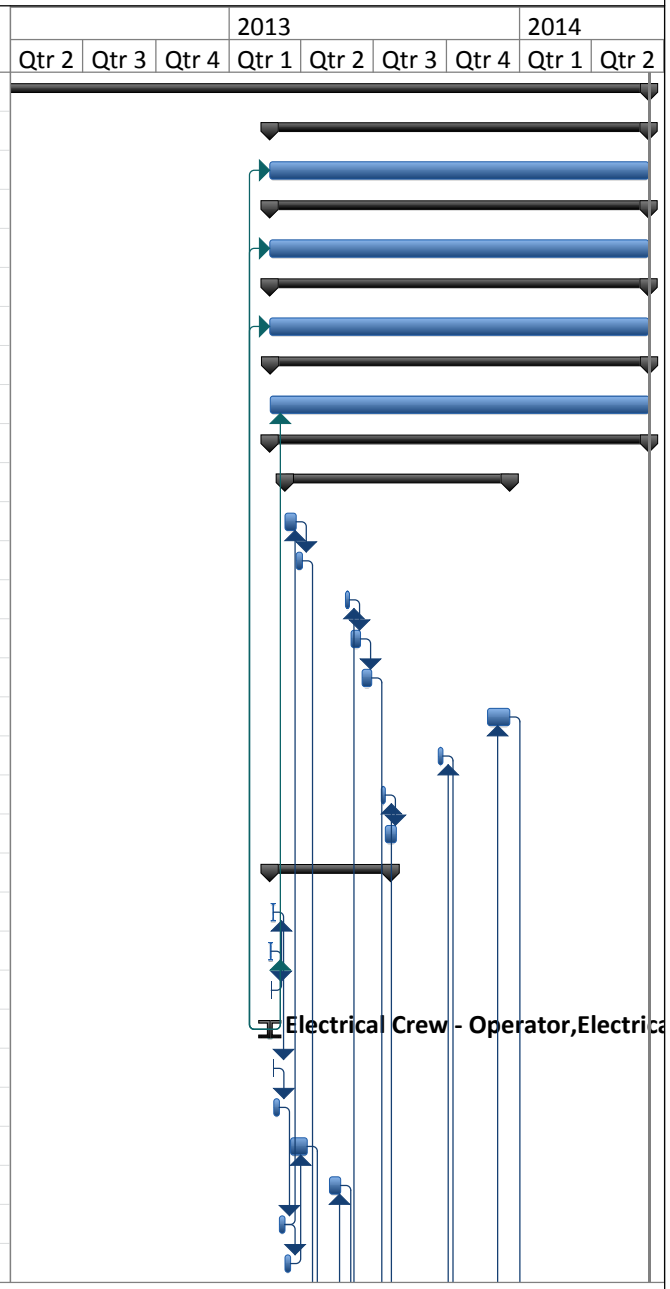
ID	Task Name	Cost
36	Remove wiring & conduit serving compressed air equipment	$5,374.08
37	Remove wiring & conduit serving comp air equipment	$3,582.72
38	Remove electrial control cabinets & switchgear	$17,913.60
39	Demolish electrical control room	$17,913.60
40	**FGD System**	**$201,109.68**
41	Remove ductwork between FGD module and chimney	$7,952.40
42	Remove support steel and access platforms between FGD and chimney	$5,374.08
43	Remove FGD elevator	$8,956.80
44	Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg	$35,827.20
45	Remove oxi air blowers	$895.68
46	Remove all FGD piping & valves other than recirc piping	$26,870.40
47	Remove ox air lines	$5,374.08
48	Remove FGD MEs panels	$9,542.88
49	Remove FGD outlet duct and top cone	$5,374.08
50	Remove FGD internal wash ME piping and ME supports	$5,374.08
51	Remove FGD internal spray header piping	$8,956.80
52	Remove FGD support steel, access provisions, stair tower, and recirc piping from top down	$35,827.20
53	Remove FGD module walls	$17,913.60
54	Remove FGD inlet duct	$5,374.08
55	Remove FGD reaction tank walls and floor	$17,913.60
56	Remove FGD Bldg trench floor grating	$3,582.72
57	**ID Fans**	**$78,819.84**
58	Remove ductwork between ID fan outlets and FGD module	$12,539.52
59	Remove support steel and access platforms between ID fan outlets and FGD module	$5,374.08
60	Remove ductwork between FF outlet and ID fan inlets	$12,539.52
61	Remove support steel between FF outlet and ID fan inlets	$5,374.08
62	Removed ID fan isolation dampers	$14,330.88
63	Removed ID fan drive motor	$7,165.44
64	Remove ID fan seal air system	$7,165.44
65	Remove fan casing & rotor	$14,330.88
66	**Fabric Filters**	**$309,905.28**
67	Remove ductwork between air heater and FF	$8,956.80
68	Remove ductwork structural steel between AH and FF	$5,374.08
69	Remove FF penthouse hoists and trolleys	$7,165.44
70	Remove FF hopper heaters, HVAC, lighting and convenience outlets	$17,913.60
71	Remove FF ash handling piping	$26,870.40
72	Remove compress air blower, dryers, and receivers, piping & valves	$17,913.60
73	Remove FF penthouse roof panels supporting steel	$17,913.60
74	Remove FF compartment roof hatches	$5,374.08

Iatan 1 AQCS

ID	Task Name	Cost
75	Remove FF compartment pulse air piping	$5,374.08
76	Remove FF compartment pulse air and compressed air supply piping	$10,748.16
77	Remove FF outlet poppet damper operators	$12,539.52
78	Remove FF bags & cages	$25,079.04
79	Remove FF bag support sheets	$25,079.04
80	Remove remaining FF roof	$7,165.44
81	Remove FF outlet dampers	$7,165.44
82	Remove ductwork between air heater and FF	$8,956.80
83	Remove FF wall panels to hopper level	$50,158.08
84	Remove ductwork structural steel between AH and FF	$5,374.08
85	Remove FF stair tower(s)	$17,913.60
86	Remove FF inlet dampers	$7,165.44
87	Remove FF hoppers	$12,539.52
88	Remove FF support steel	$7,165.44
89	**SCR and Ammonia Supply**	**$73,445.76**
90	Vacuum SCR catalyst	$3,582.72
91	Remove SCR catalyst	$16,122.24
92	Remove ammonia injection grid	$3,582.72
93	Remove NH3 piping between storage & injection	$3,582.72
94	Remove air horn air receiver & supply piping	$3,582.72
95	Remove SCR guillotine dampers	$7,165.44
96	Remove SCr muliti-louver dampers	$3,582.72
97	Remove SCR box, internal supports, & assoc'd ductwork	$26,870.40
98	Remove NH3 piping between storage & vaporizors	$5,374.08
99	**Site Preperation Work**	**$0.00**
100	<New Task>	$0.00

Iatan 1 AQCS Dismantlement

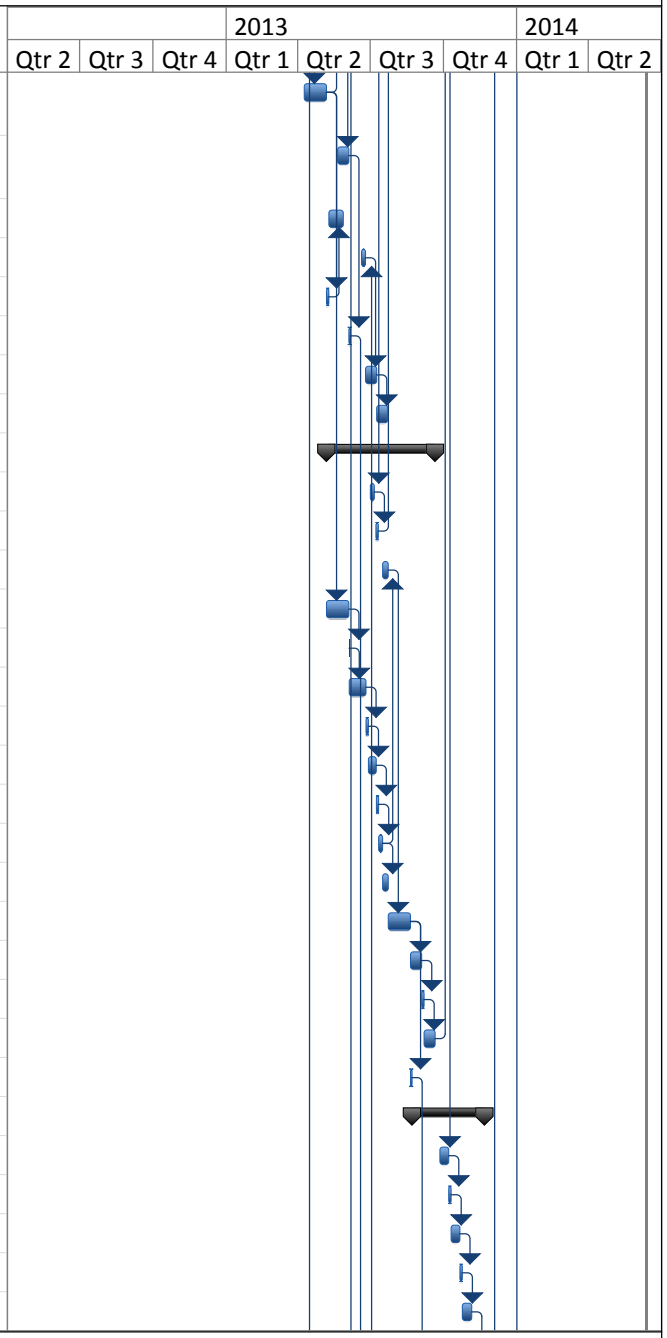
ID	Task Name	Duration
1	**Iatan Unit 1 AQCS Dismantlement**	**594.5 days**
2	**Common Removal Overheads**	**340 days**
3	Added Overhead Staff for Common Removals	340 days
4	**Scrap Crew**	**340 days**
5	Crew(s) to Handle Scrap Material	340 days
6	**Demolition Contractor Consummables**	**340 days**
7	Consummables	340 days
8	**Demolition Contractor Equipment Rental Costs**	**340 days**
9	Equipment Rental	340 days
10	**Dismantlement**	**340.5 days**
11	**Initial Structural**	**202.5 days**
12	Remove SCR box & ductwork lagging & insulation	10 days
13	Remove SCR expansion joints	6 days
14	Remove ductwork lagging & insulation	5 days
15	Remove ductwork expansion joints	10 days
16	Remove ductwork access platforms & ladders	10 days
17	Remove FF lagging, insulation, wall panel, & roof panels	20 days
18	Remove ID fan lagging & insulation	4 days
19	Removal all HVAC equipment located on FGD Bldg roof	3 days
20	Remove FGD Bldg lagging, insulation, wall panel, & roof	10 days
21	**General Electric**	**108 days**
22	Remove breakers serving all FF equipment	0.5 days
23	Remove breakers serving all FGD equipment	1 day
24	Remove breakers serving all ID fan equipment	0.5 days
25	Remove breakers serving all SCR equipment	0.5 days
26	Remove breakers serving all comp air equipment	0.5 days
27	Remove all ductwork primary instrumentation, controls & assoc'd cables, and c	5 days
28	Remove all FGD primary instrumentation, controls & assoc'd cables, and condu	15 days
29	Remove all FF primary instrumentation, controls & assoc'd cables, and conduit	10 days
30	Remove SCR primary instrumentation, controls, & assoc'd cable & conduit	5 days
31	Remove NH3 supply primary instrumentation, controls, & assoc'd cable & cond	5 days



Redactions Removed Pursuant to Commission Order

Iatan 1 AQCS Dismantlement

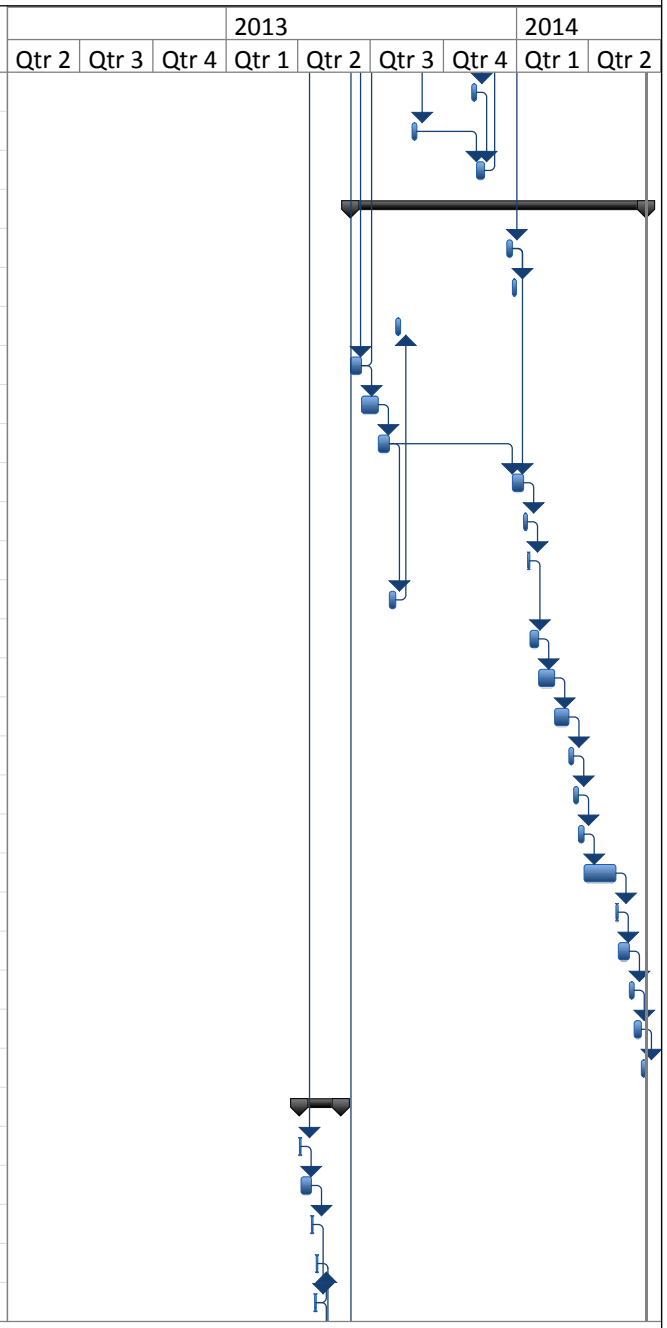
ID	Task Name	Duration
32	Remove wiring and conduit serving FGD equipment, HVAC, lighting and convenience outlets	20 days
33	Remove wiring and conduit serving FF equipment, HVAC, lighting and convenience outlets	10 days
34	Remove wiring and conduit serving the ID fans and assoc'd equipment	12 days
35	Remove wiring & conduit serving SCR vaporization & injection equipment	3 days
36	Remove wiring & conduit serving compressed air equipment	3 days
37	Remove wiring & conduit serving comp air equipment	2 days
38	Remove electrial control cabinets & switchgear	10 days
39	Demolish electrical control room	10 days
40	**FGD System**	**98.5 days**
41	Remove ductwork between FGD module and chimney	5 days
42	Remove support steel and access platforms between FGD and chimney	3 days
43	Remove FGD elevator	5 days
44	Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg	20 days
45	Remove oxi air blowers	0.5 days
46	Remove all FGD piping & valves other than recirc piping	15 days
47	Remove ox air lines	3 days
48	Remove FGD MEs panels	6 days
49	Remove FGD outlet duct and top cone	3 days
50	Remove FGD internal wash ME piping and ME supports	3 days
51	Remove FGD internal spray header piping	5 days
52	Remove FGD support steel, access provisions, stair tower, and recirc piping frc	20 days
53	Remove FGD module walls	10 days
54	Remove FGD inlet duct	3 days
55	Remove FGD reaction tank walls and floor	10 days
56	Remove FGD Bldg trench floor grating	2 days
57	**ID Fans**	**65 days**
58	Remove ductwork between ID fan outlets and FGD module	7 days
59	Remove support steel and access platforms between ID fan outlets and FGD m	3 days
60	Remove ductwork between FF outlet and ID fan inlets	7 days
61	Remove support steel between FF outlet and ID fan inlets	3 days
62	Removed ID fan isolation dampers	8 days



Redactions Removed Pursuant to Commission Order

Iatan 1 AQCS Dismantlement

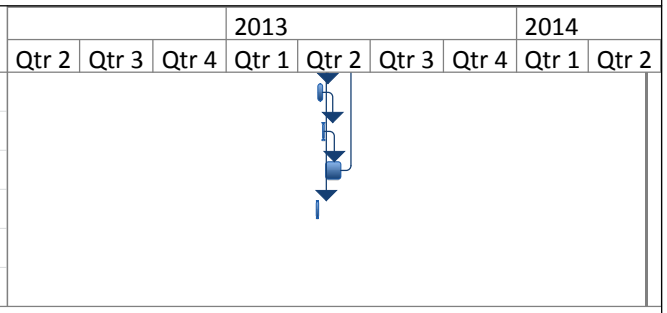
ID	Task Name	Duration
63	Removed ID fan drive motor	4 days
64	Remove ID fan seal air system	4 days
65	Remove fan casing & rotor	8 days
66	**Fabric Filters**	**265.5 days**
67	Remove ductwork between air heater and FF	5 days
68	Remove ductwork structural steel between AH and FF	3 days
69	Remove FF penthouse hoists and trolleys	4 days
70	Remove FF hopper heaters, HVAC, lighting and convenience outlets	10 days
71	Remove FF ash handling piping	15 days
72	Remove compress air blower, dryers, and receivers, piping & valves	10 days
73	Remove FF penthouse roof panels supporting steel	10 days
74	Remove FF compartment roof hatches	3 days
75	Remove FF compartment pulse air piping	3 days
76	Remove FF compartment pulse air and compressed air supply piping	6 days
77	Remove FF outlet poppet damper operators	7 days
78	Remove FF bags & cages	14 days
79	Remove FF bag support sheets	14 days
80	Remove remaining FF roof	4 days
81	Remove FF outlet dampers	4 days
82	Remove ductwork between air heater and FF	5 days
83	Remove FF wall panels to hopper level	28 days
84	Remove ductwork structural steel between AH and FF	3 days
85	Remove FF stair tower(s)	10 days
86	Remove FF inlet dampers	4 days
87	Remove FF hoppers	7 days
88	Remove FF support steel	4 days
89	**SCR and Ammonia Supply**	**38 days**
90	Vacuum SCR catalyst	2 days
91	Remove SCR catalyst	9 days
92	Remove ammonia injection grid	2 days
93	Remove NH3 piping between storage & injection	2 days
94	Remove air horn air receiver & supply piping	2 days



Redactions Removed Pursuant to Commission Order

Iatan 1 AQCS Dismantlement

ID	Task Name	Duration
95	Remove SCR guillotine dampers	4 days
96	Remove SCr muliti-louver dampers	2 days
97	Remove SCR box, internal supports, & assoc'd ductwork	15 days
98	Remove NH3 piping between storage & vaporizors	3 days
99	**Site Preperation Work**	**1 day**
100	<New Task>	1 day



Redactions Removed Pursuant to Commission Order

UNIT 2

Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

Owner Costs			
Pre-Retirement Activities		$100,822	
Retirement Activities		$658,400	
Post-Retirement Activities		$26,564	
Owner Direct Total		$785,786	
Owner Internal Costs	5.00%	$39,289	
Owner Contingency:	25.00%	$206,269	
Iatan 2 Retirement Opinion of Probable Cost:			$1,031,343.60

Iatan 2 Retirement

ID	Task Name	Cost
1	**Iatan 2 Retirement**	**$785,786.45**
2	**Pre-Engineering**	**$100,821.60**
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	$0.00
4	**KCL&L Overhead Costs**	**$114,006.40**
5	KCP&L Retirement Manager	$114,006.40
6	**Equipment Rentals**	**$38,625.28**
7	Vacuum truck	$38,625.28
8	**Retirement**	**$505,769.17**
9	**Electrical**	**$18,911.68**
10	**Medium and Low Voltage Draw out Switchgear**	**$2,679.84**
11	De-energize all buses at the source.	$446.64
12	Open all circuit breakers.	$446.64
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	$446.64
14	Verify that the closing/tripping springs are discharged.	$446.64
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	$893.28
16	**Motor Control Centers**	**$1,786.56**
17	De-energize all buses at the source.	$446.64
18	Open all circuit breakers and disconnect switches.	$446.64
19	Remove all fuses in control circuits.	$893.28
20	**Low-voltage Switchboards and Panelboards**	**$893.28**
21	De-energize all buses at the source.	$446.64
22	Open all circuit breakers and disconnect switches.	$446.64
23	**Oil-Filled Power Transformers**	**$5,549.44**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
26	Drain and dispose of oil.	$2,642.88
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	$1,120.00
28	**Dry-type Power Transformers**	**$1,786.56**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	$893.28
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	$893.28
31	**Motors**	**$6,216.00**
32	De-energize all primary power at the source.	$1,786.56

Iatan 2 Retirement

ID	Task Name	Cost
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	$1,786.56
34	Drain lube oil system (if applicable) and dispose of oil.	$2,642.88
35	**Coal Handling**	**$27,475.44**
36	Empty all transfer hoppers.	$1,704.56
37	Burn out coal silos.	$1,685.44
38	Confirm all fuel lines, conveyors and trippers are clear of fuel.	$1,685.44
39	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site.	$22,400.00
40	**Fuel Oil and Igniter System**	**$2,528.16**
41	Drain fuel oil system	$2,528.16
42	**Boiler Chemical Feed**	**$1,685.44**
43	Drain all chemical feed tanks.	$1,685.44
44	**Boiler**	**$27,484.77**
45	Open boiler doors.	$880.96
46	Gas side - perform cleaning of the boiler and bottom ash system.	$22,400.00
47	Drain boiler, drum, downcomers and headers.	$842.72
48	Open drum doors.	$880.96
49	Drain and clean the submerged flight conveyor system.	$2,480.13
50	**Stack and Ductwork**	**$326,961.04**
51	Open ductwork doors.	$880.96
52	Perform extensive cleaning of the ductwork.	$11,200.00
53	Place cap over stack opening to keep moisture out.	$314,880.08
54	**Condensate and Feedwater Piping**	**$1,685.44**
55	Drain water from the system.	$842.72
56	Leave open vents and drains.	$842.72
57	**Feedwater heaters**	**$2,528.16**
58	Drain feedwater heaters	$842.72
59	Leave open vents and drains.	$1,685.44
60	**Deaerator and Deaerator Storage Tank**	**$1,685.44**
61	Drain Deaerator and Storage	$842.72
62	Leave open vents and drains.	$842.72
63	**Baghouse**	**$17,351.92**
64	Multiple cleaning cycles for filter bags.	$2,528.16
65	Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves.	$842.72
66	Remove all filter bags and cages.	$880.96
67	Clear hoppers of all ash	$2,805.44
68	Mechanically secure all compartment dampers and hopper outlet valves in open position.	$880.96
69	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	$1,421.84
70	Install bird screens across hopper ash outlet and ash line flanges.	$880.96

Iatan 2 Retirement

ID	Task Name	Cost
71	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	$880.96
72	If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut.	$880.96
73	If top-door plenum, close and secure top doors and remove/disable door lift hoist.	$1,723.68
74	If top-door plenum, establish natural ventilation or maintain HVAC fan tc provide minimum air changes per hour in penthouse enclosure.	$945.44
75	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
76	**Wet FGD system**	**$23,908.00**
77	Multiple mist eliminator wash cycles. Remove ME's from absorber.	$2,145.04
78	Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	$1,723.68
79	Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc.	$4,624.08
80	Leave all tank drain valves open or remove. Install bird screens across openings.	$1,761.92
81	Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	$2,604.64
82	Mechanically secure all flue gas isolation dampers in open position or remove damper blades.	$1,761.92
83	Remove solids from all inlet and outlet ductwork as necessary	$2,240.00
84	Open all vent station air and control air lines. Leave in open position or remove vent valves	$1,723.68
85	Padlock or tack weld all access doors to modules and ductwork shut.	$1,762.24
86	Remove access doors to open-top tanks.	$880.96
87	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
88	**FGD Reagent Preparation-Limestone wet Scrubber**	**$10,262.88**
89	Remove limestone from day bins.	$1,402.72
90	Removed cartridges/bags from bin vent filters	$1,402.72
91	Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.)	$881.12
92	Remove bin discharge isolation valve and install bird screen.	$440.48
93	Thoroughly wash and drain mills	$1,402.72
94	Remove balls from any ball mills	$1,120.00
95	Padlock or tack weld mill access doors closed.	$881.12
96	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	$945.44

Iatan 2 Retirement

ID	Task Name	Cost
97	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$1,786.56
98	**FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters**	**$7,287.12**
99	Wash vacuum filter belt and remove all accumulated solids	$2,240.00
100	Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens.	$1,421.84
101	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	$945.44
102	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$2,679.84
103	**SCR**	**$10,054.00**
104	Vacuum fly ash from catalyst.	$2,240.00
105	Remove catalyst of salvage or disposal.	$2,881.92
106	Padlock or tack weld access doors shut.	$880.96
107	Remove ammonia from storage tank for resale.	$701.36
108	Wash out and drain storage tank and supply piping.	$701.36
109	Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens.	$861.84
110	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	$1,786.56
111	**Turbine(s) and Condenser**	**$5,266.64**
112	Drain hotwell and leave doors open.	$861.84
113	Open main turbine doors.	$880.96
114	Open bfp turbine doors.	$880.96
115	Remove lube oil.	$2,642.88
116	**Generator**	**$6,095.76**
117	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	$446.64
118	Verify that generator field breaker or contactor (if applicable) is open.	$446.64
119	De-energize power supplies to generator excitation system at the source.	$446.64
120	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	$446.64
121	Drain generator and exciter cooling water systems (if applicable).	$861.84
122	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	$1,685.44
123	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	$1,761.92
124	**Circulation Water and Turbine Cooling Water System**	**$3,409.12**
125	Drain.	$1,685.44
126	Open water box doors.	$880.96
127	Drain any circulating water chemical feed tanks.	$842.72

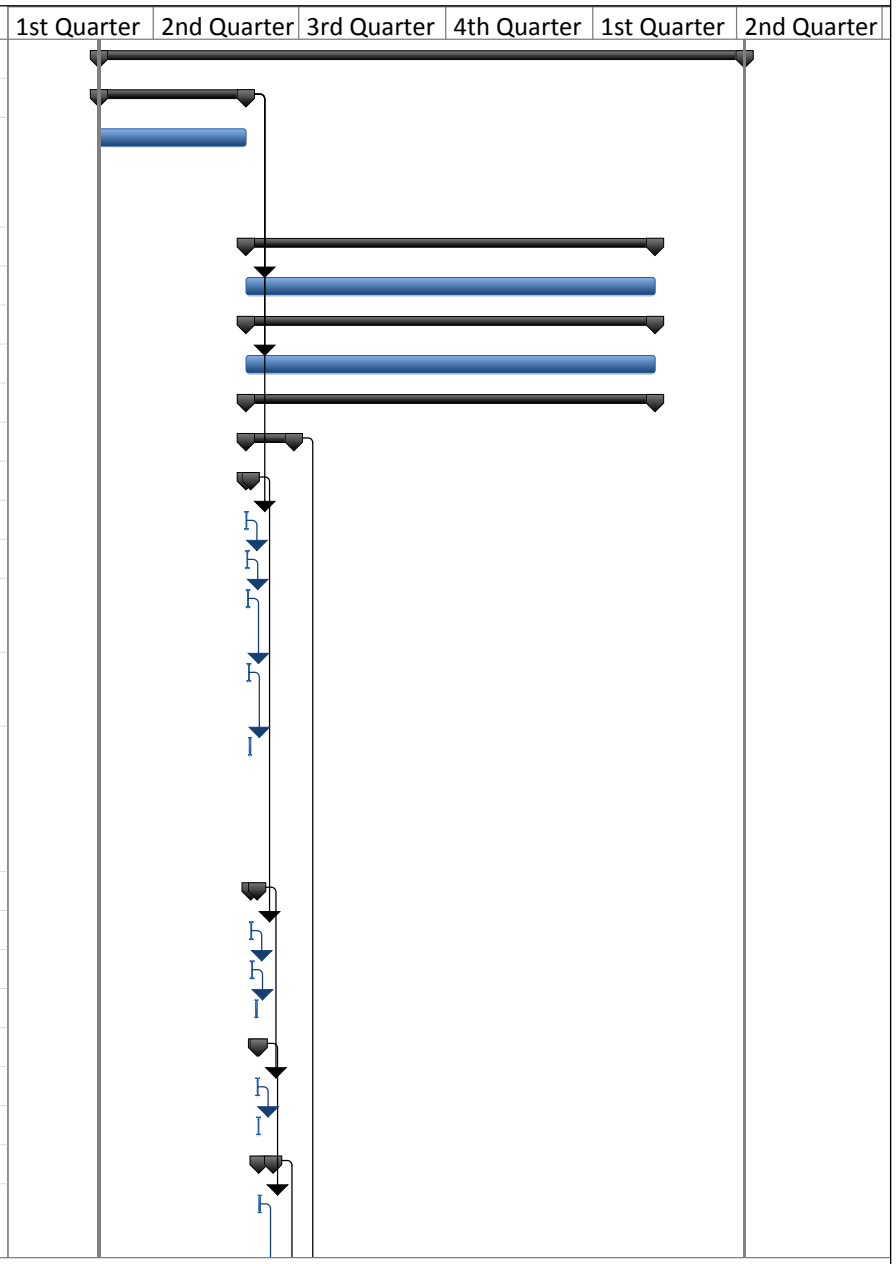
Iatan 2 Retirement

ID	Task Name	Cost
128	**Compressed Air System**	**$2,721.28**
129	Open vents and drains.	$842.72
130	Remove desiccant from desiccant dryers.	$1,878.56
131	**Auxiliary Steam System**	**$1,685.44**
132	Drain water from system.	$842.72
133	Remove aux boiler chemicals.	$842.72
134	**Auxiliary Cooling Water System**	**$842.72**
135	Drain water from system.	$842.72
136	**Condenser Air Extraction and Waterbox Priming System**	**$842.72**
137	Drain water from system.	$842.72
138	**Building Heating System**	**$842.72**
139	Drain water from system.	$842.72
140	**Battery System**	**$4,253.28**
141	De-energize all battery chargers from the source.	$446.64
142	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	$446.64
143	Remove and dispose of battery electrolyte.	$1,680.00
144	Remove and dispose of battery cells.	$1,120.00
145	Clean up and dispose of electrolyte on surface areas around batteries.	$560.00
146	**Post Retirement Activities**	**$26,564.00**
147	Post Retirement Activities	$26,564.00

Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

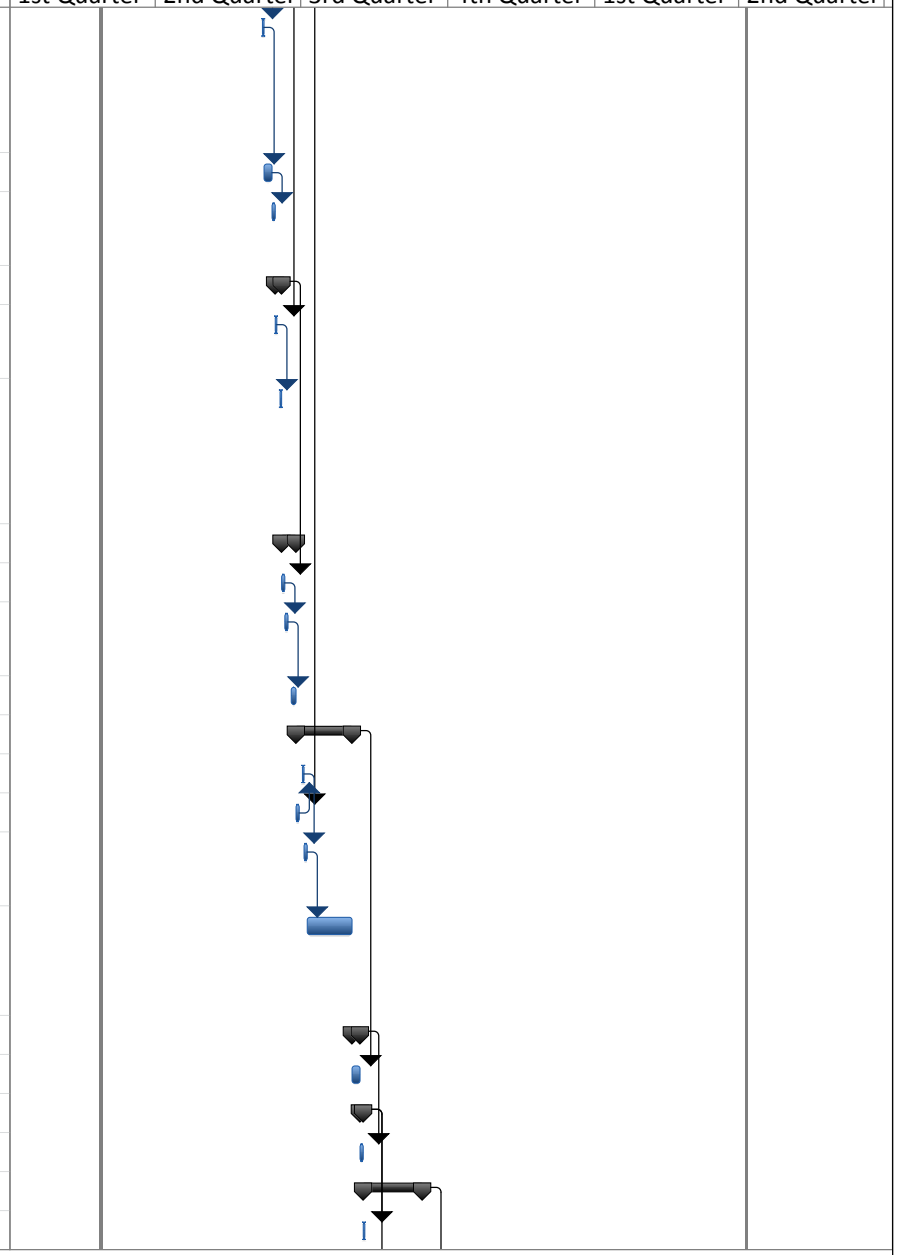
ID	Task Name	Duration
1	**Iatan 2 Retirement**	**290 days**
2	**Pre-Engineering**	**66 days**
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	66 days
4	**KCL&L Overhead Costs**	**184 days**
5	KCP&L Retirement Manager	184 days
6	**Equipment Rentals**	**184 days**
7	Vacuum truck	184 days
8	**Retirement**	**184 days**
9	**Electrical**	**22 days**
10	**Medium and Low Voltage Draw out Switchgear**	**3 days**
11	De-energize all buses at the source.	0.5 days
12	Open all circuit breakers.	0.5 days
13	Rack all circuit breakers into the fully withdrawn, disconnected position.	0.5 days
14	Verify that the closing/tripping springs are discharged.	0.5 days
15	De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle.	1 day
16	**Motor Control Centers**	**2 days**
17	De-energize all buses at the source.	0.5 days
18	Open all circuit breakers and disconnect switches.	0.5 days
19	Remove all fuses in control circuits.	1 day
20	**Low-voltage Switchboards and Panelboards**	**1 day**
21	De-energize all buses at the source.	0.5 days
22	Open all circuit breakers and disconnect switches.	0.5 days
23	**Oil-Filled Power Transformers**	**7 days**
24	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

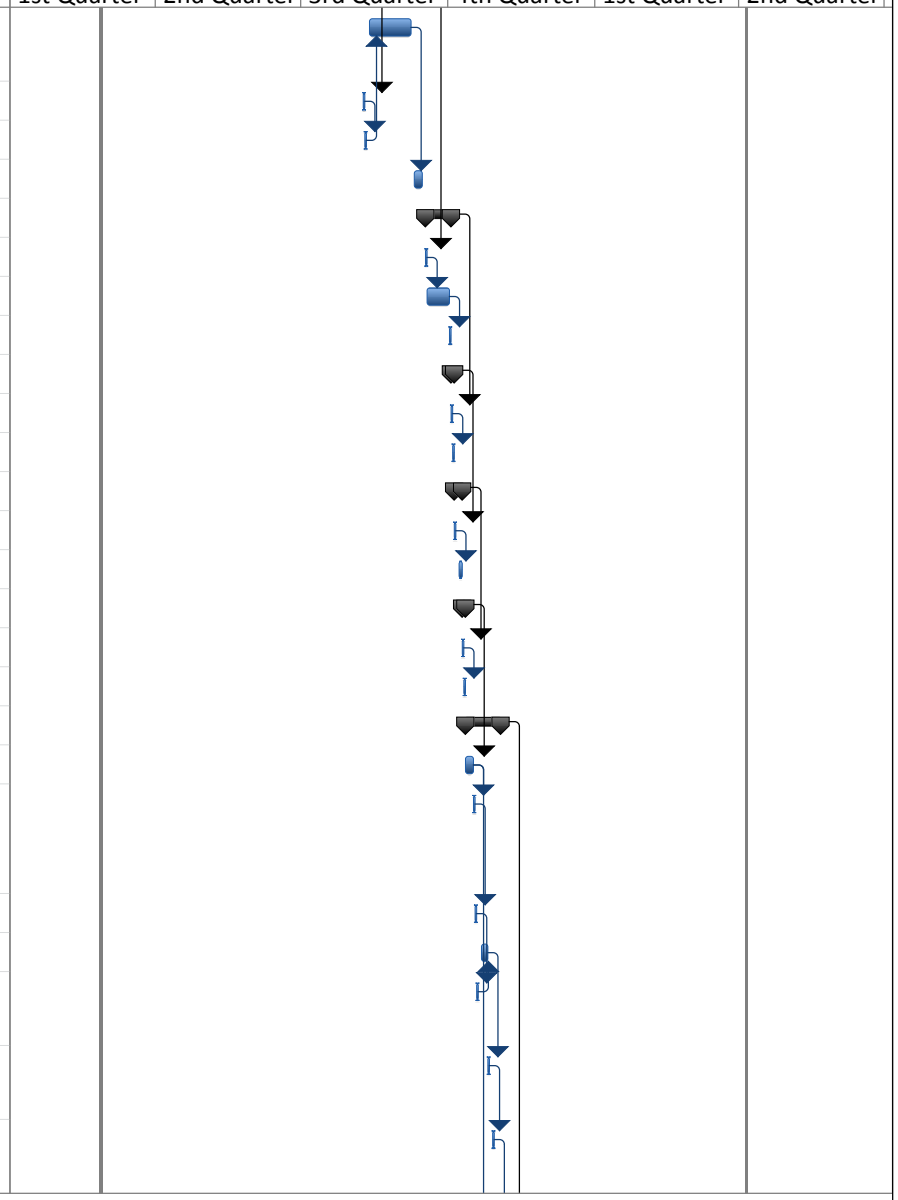
ID	Task Name	Duration
25	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
26	Drain and dispose of oil.	3 days
27	Clean up and dispose of oil on surface areas around the transformers on in containment pits.	2 days
28	**Dry-type Power Transformers**	**2 days**
29	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day
30	De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end.	1 day
31	**Motors**	**7 days**
32	De-energize all primary power at the source.	2 days
33	De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source.	2 days
34	Drain lube oil system (if applicable) and dispose of oil.	3 days
35	**Coal Handling**	**25 days**
36	Empty all transfer hoppers.	1 day
37	Burn out coal silos.	2 days
38	Confirm all fuel lines, conveyors and trippers are clear of fuel.	2 days
39	Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site.	20 days
40	**Fuel Oil and Igniter System**	**3 days**
41	Drain fuel oil system	3 days
42	**Boiler Chemical Feed**	**2 days**
43	Drain all chemical feed tanks.	2 days
44	**Boiler**	**27 days**
45	Open boiler doors.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

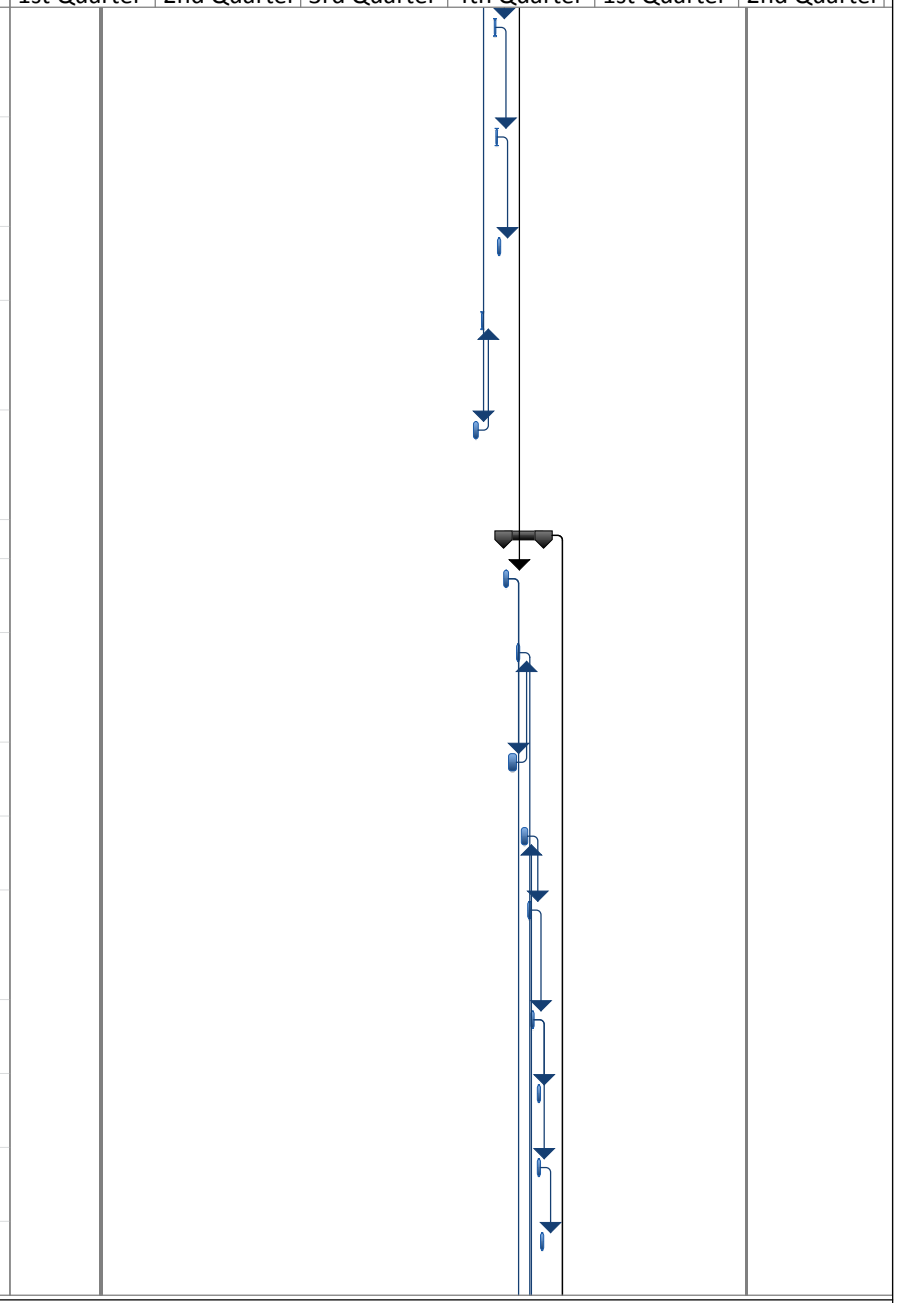
ID	Task Name	Duration
46	Gas side - perform cleaning of the boiler and bottom ash system.	20 days
47	Drain boiler, drum, downcomers and headers.	1 day
48	Open drum doors.	1 day
49	Drain and clean the submerged flight conveyor system.	5 days
50	**Stack and Ductwork**	**12 days**
51	Open ductwork doors.	1 day
52	Perform extensive cleaning of the ductwork.	10 days
53	Place cap over stack opening to keep moisture out.	1 day
54	**Condensate and Feedwater Piping**	**2 days**
55	Drain water from the system.	1 day
56	Leave open vents and drains.	1 day
57	**Feedwater heaters**	**3 days**
58	Drain feedwater heaters	1 day
59	Leave open vents and drains.	2 days
60	**Deaerator and Deaerator Storage Tank**	**2 days**
61	Drain Deaerator and Storage	1 day
62	Leave open vents and drains.	1 day
63	**Baghouse**	**16 days**
64	Multiple cleaning cycles for filter bags.	3 days
65	Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves.	1 day
66	Remove all filter bags and cages.	1 day
67	Clear hoppers of all ash	4 days
68	Mechanically secure all compartment dampers and hopper outlet valves in open position.	1 day
69	Disconnect ash transport piping and washdown baghouse hoppers and interior of casing.	1 day
70	Install bird screens across hopper ash outlet and ash line flanges.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

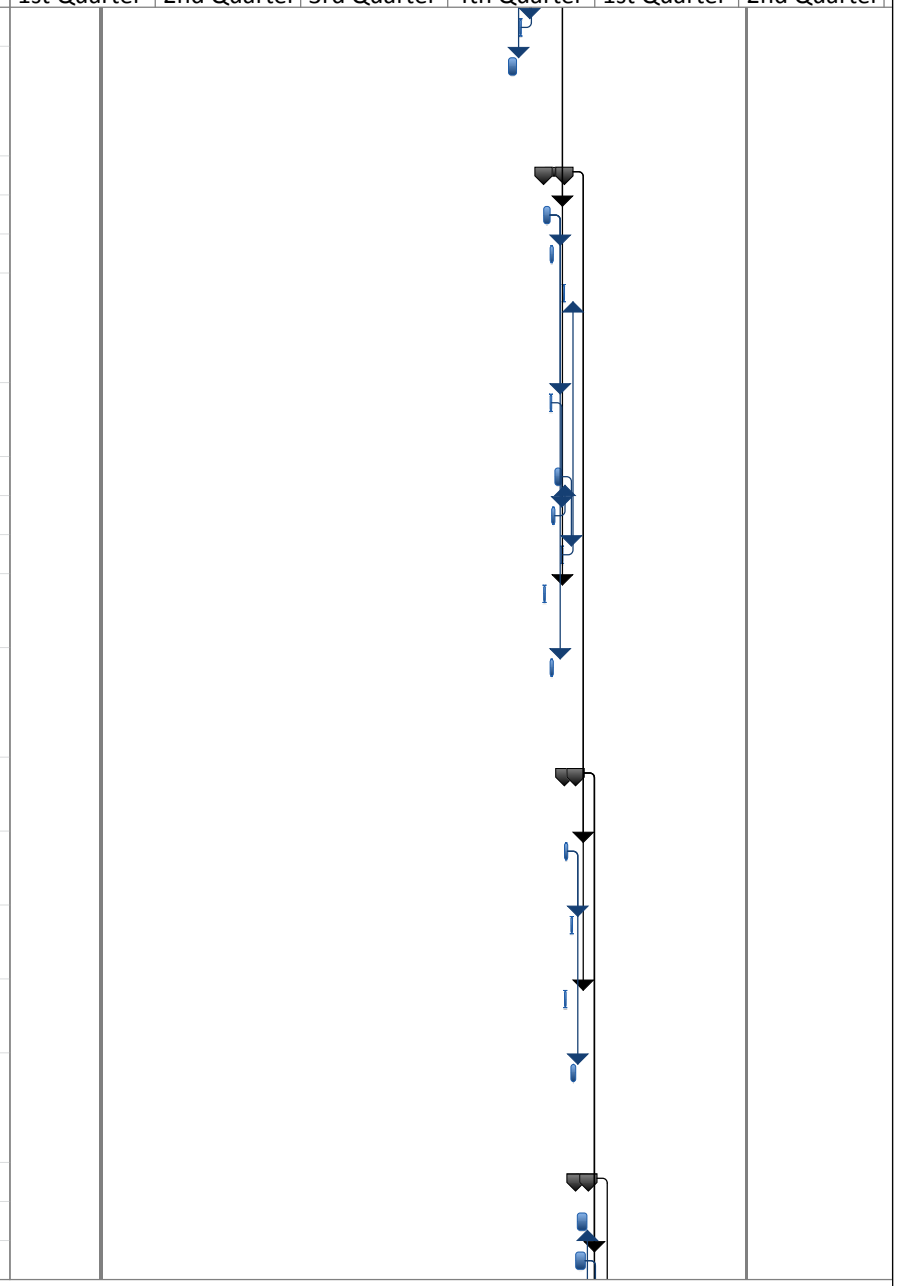
ID	Task Name	Duration
71	Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.)	1 day
72	If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut.	1 day
73	If top-door plenum, close and secure top doors and remove/disable door lift hoist.	2 days
74	If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure.	1 day
75	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
76	**Wet FGD system**	**19 days**
77	Multiple mist eliminator wash cycles. Remove ME's from absorber.	3 days
78	Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	2 days
79	Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc.	3 days
80	Leave all tank drain valves open or remove. Install bird screens across openings.	2 days
81	Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings.	2 days
82	Mechanically secure all flue gas isolation dampers in open position or remove damper blades.	2 days
83	Remove solids from all inlet and outlet ductwork as necessary	2 days
84	Open all vent station air and control air lines. Leave in open position or remove vent valves	2 days
85	Padlock or tack weld all access doors to modules and ductwork shut.	2 days



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

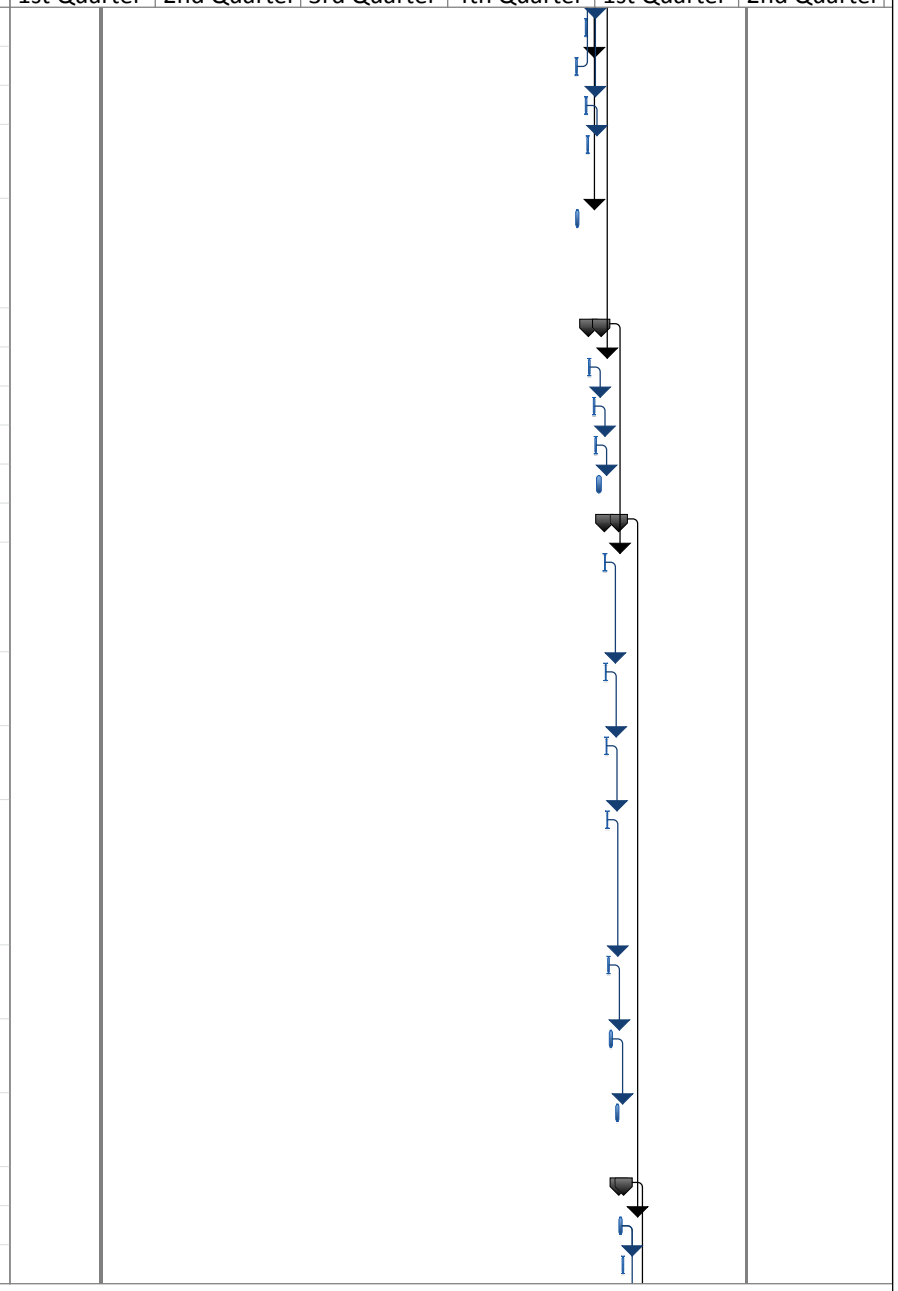
ID	Task Name	Duration
86	Remove access doors to open-top tanks.	1 day
87	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
88	**FGD Reagent Preparation-Limestone wet Scrubber**	**9 days**
89	Remove limestone from day bins.	2 days
90	Removed cartridges/bags from bin vent filters	2 days
91	Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.)	1 day
92	Remove bin discharge isolation valve and install bird screen.	1 day
93	Thoroughly wash and drain mills	2 days
94	Remove balls from any ball mills	2 days
95	Padlock or tack weld mill access doors closed.	1 day
96	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	1 day
97	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	2 days
98	**FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters**	**5 days**
99	Wash vacuum filter belt and remove all accumulated solids	2 days
100	Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens.	1 day
101	Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building.	1 day
102	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	3 days
103	**SCR**	**6 days**
104	Vacuum fly ash from catalyst.	4 days
105	Remove catalyst of salvage or disposal.	4 days



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

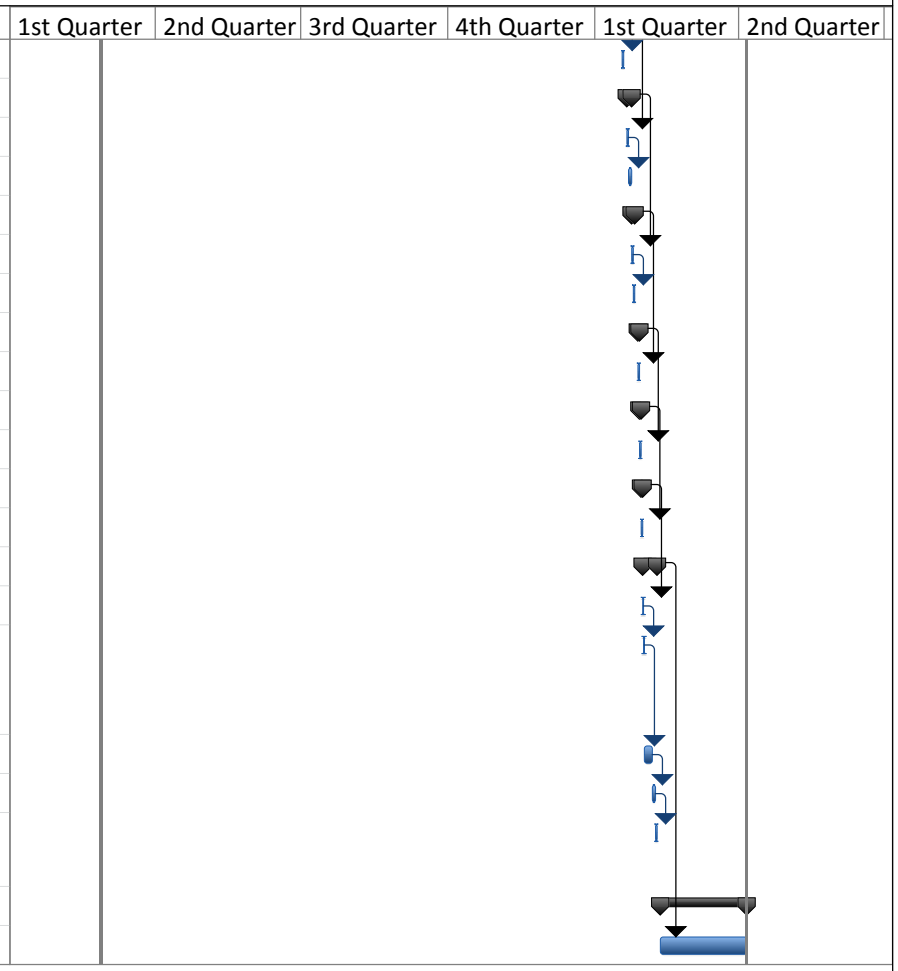
ID	Task Name	Duration
106	Padlock or tack weld access doors shut.	1 day
107	Remove ammonia from storage tank for resale.	1 day
108	Wash out and drain storage tank and supply piping.	1 day
109	Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens.	1 day
110	Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service.	2 days
111	**Turbine(s) and Condenser**	**6 days**
112	Drain hotwell and leave doors open.	1 day
113	Open main turbine doors.	1 day
114	Open bfp turbine doors.	1 day
115	Remove lube oil.	3 days
116	**Generator**	**7 days**
117	Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position.	0.5 days
118	Verify that generator field breaker or contactor (if applicable) is open.	0.5 days
119	De-energize power supplies to generator excitation system at the source.	0.5 days
120	De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter.	0.5 days
121	Drain generator and exciter cooling water systems (if applicable).	1 day
122	Disconnect and remove hydrogen gas tanks and purge generator hydrogen system.	2 days
123	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days
124	**Circulation Water and Turbine Cooling Water System**	**3 days**
125	Drain.	2 days
126	Open water box doors.	1 day



Redactions Removed Pursuant to Commission Order

Iatan 2 Retirement

ID	Task Name	Duration
127	Drain any circulating water chemical feed tanks.	1 day
128	**Compressed Air System**	**3 days**
129	Open vents and drains.	1 day
130	Remove desiccant from desiccant dryers.	2 days
131	**Auxiliary Steam System**	**2 days**
132	Drain water from system.	1 day
133	Remove aux boiler chemicals.	1 day
134	**Auxiliary Cooling Water System**	**1 day**
135	Drain water from system.	1 day
136	**Condenser Air Extraction and Waterbox Priming System**	**1 day**
137	Drain water from system.	1 day
138	**Building Heating System**	**1 day**
139	Drain water from system.	1 day
140	**Battery System**	**7 days**
141	De-energize all battery chargers from the source.	0.5 days
142	Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries.	0.5 days
143	Remove and dispose of battery electrolyte.	3 days
144	Remove and dispose of battery cells.	2 days
145	Clean up and dispose of electrolyte on surface areas around batteries.	1 day
146	**Post Retirement Activities**	**40 days**
147	Post Retirement Activities	40 days



Redactions Removed Pursuant to Commission Order

Iatan 2 Dismantlement

Owner Additional Costs					
Pre-Dismantlement Activities			$1,020,485		
Overhead During Dismantlement			$1,916,492		
Post-Dismantlement Activities			$70,596		
Owner Costs Total*				$3,007,573	
Demolition General Contractor (DGC) Costs					
Additional Site Management			$1,434,705		
Equipment Rental			$2,483,702		
Consummables			$2,711,297		
Scrap Crew(s)			$2,457,174		
Dismantlement*			$5,879,227		
Contractor Direct Cost*		$14,966,105			
Contractor Allowances					
DGC Insurance	2.00%		$299,322		
Contingency/Profit	15.00%		$2,289,814		
Performance Bond	2.00%		$351,104.82		
Contractor Costs Total:				$17,906,346	
Total:					$20,913,919
Owner Internal Costs:	5.00%				$1,045,696
Owner Contingency:	25.00%				$5,489,904
Iatan Unit 2 Dismantlement Opinion of Probable Cost:					$27,449,519

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $17,973,678

Redactions Removed Pursuant to Commission Order

COMMON

Redactions Removed Pursuant to Commission Order

Iatan Common Retirement

Owner Costs				
Pre-Retirement Activities		$52,449		
Retirement Activities		$365,473		
Post-Retirement Activities		$32,080		
Owner Direct Total			$450,002	
Owner Internal Costs	5.00%		$22,500	
Owner Contingency:	25.00%		$118,125	
Iatan Common Retirement Opinion of Probable Cost:				$590,627.36

Activities Required by Permit or Regulation

Iatan Fuel Oil Tank Removal	$239,995	
Iatan Ash Landfill Closure, Phase 1	$1,470,192	
Iatan Ash Landfill Closure, Phase 2	$2,308,430	
Iatan Ash Landfill Post Closure, Phase 1 & 2	$2,024,220	
Activities Required by Permit or Regulation:		$6,042,837

Iatan Common Retirement

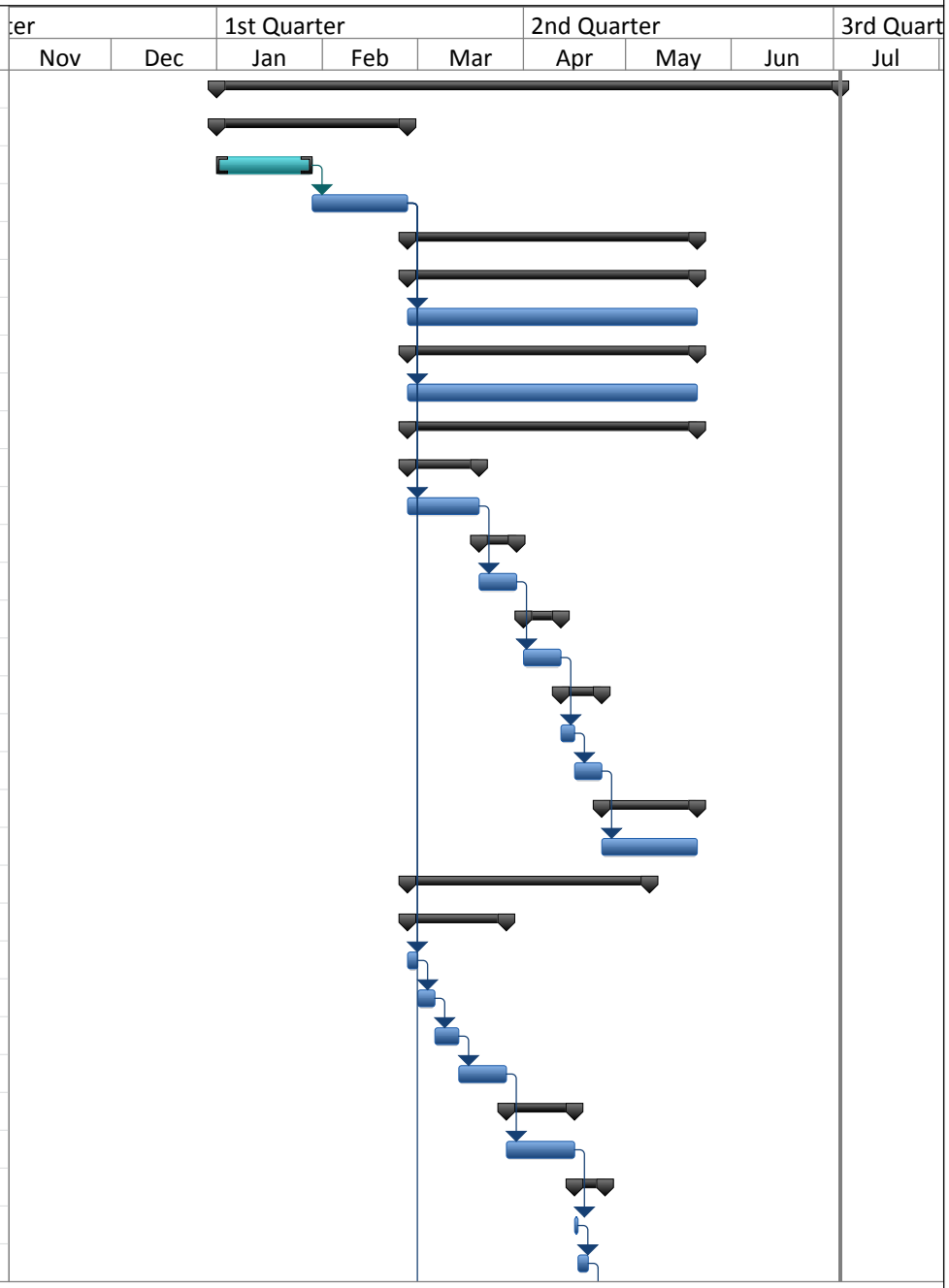
ID	Task Name	Cost
1	**Iatan Common Retirement**	**$450,003.76**
2	**Pre-Retirement Activities**	**$52,448.80**
3	Permitting Review	$26,224.40
4	Develop Detailed Retirement Plan	$26,224.40
5	**Overheads**	**$102,172.56**
6	**Common Retirement Overheads**	**$89,367.44**
7	Added Overhead Staff for Common Retirement	$89,367.44
8	**Common Retirment Equipment Rental**	**$12,805.12**
9	Common Removal Equipment Rental	$12,805.12
10	**Retirement Activities**	**$263,301.60**
11	**Administration Building**	**$17,175.60**
12	Secure Administration Building	$17,175.60
13	**Fuel Yard Office Building**	**$10,305.36**
14	Secure Fuel Yard Office Building	$10,305.36
15	**Training Building**	**$10,305.36**
16	Secure Training Building	$10,305.36
17	**Warehouse(s)**	**$10,607.20**
18	Secure Unit 1 Warehouse	$3,736.96
19	Secure Unit 2 Warehouse	$6,870.24
20	**Maintenance Shop**	**$25,951.20**
21	Secure Maintenance Shop	$25,951.20
22	**Fuel Yard**	**$131,234.64**
23	**Transfer Towers**	**$80,527.44**
24	Clean Transfer Tower 1	$3,784.08
25	Clean Transfer Tower 2	$3,784.08
26	Clean and Secure Crusher Building	$6,306.80
27	Clean Stockout Conveyor Reclaim Pit	$12,613.60
28	**Conveyors**	**$17,659.04**
29	Clean Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	$17,659.04
30	**Car Dumper**	**$8,829.52**
31	Empty Car Dumper Hoppers	$1,261.36
32	Clean Car Dumper	$3,784.08
33	Secure Dumper Building	$3,784.08
34	**Remove Stacker/Reclaimer**	**$19,173.20**
35	Clean and Secure Stacker/Reclaimer	$6,306.80
36	**Unit 1 Reclaim**	**$5,045.44**
37	Clean Unit 1 Reclaim	$2,522.72
38	Secure Unit 1 Reclaim Building	$2,522.72
39	**Sewage Treatment**	**$4,202.72**
40	Clean Sewage Treatment and Transfer Points	$4,202.72
41	**Fuel Oil Storage and Unloading**	**$842.72**
42	Remove Fuel Oil from Fuel Oil Storage and Vent	$842.72
43	**Yard Fire Water Systems**	**$842.72**
44	Drain Yard Fire Water System	$842.72

Iatan Common Retirement

ID	Task Name	Cost
45	**Reagent Prep and Gypsum Handling**	**$29,365.20**
46	Clean and Secure Limestone Unloading Facility	$3,784.08
47	Clean and Secure Limestone Storage Facility	$3,784.08
48	Clean Limestone Conveyor	$3,859.92
49	Clean and Secure Limestone Prep Building	$6,433.20
50	Clean Gypsum Stackout Conveyor	$2,573.28
51	Clean and Secure PCM-1	$2,573.28
52	Clean and Secure PCM-2	$2,573.28
53	Clean and Secure the Vacuum Pump and Air Compressor Building	$3,784.08
54	**Water Pretreatment and ZLD**	**$22,468.88**
55	Drain and Clean Clarifiers	$3,784.08
56	Drain and Clean ZLD System	$7,568.16
57	Clean and Secure ZLD Building	$8,593.92
58	Drain and Vent Storage Tanks	$2,522.72
59	**Post Retirement Closure Activities**	**$32,080.80**
60	Post Retirement Closure Activities	$32,080.80

Iatan Common Retirement

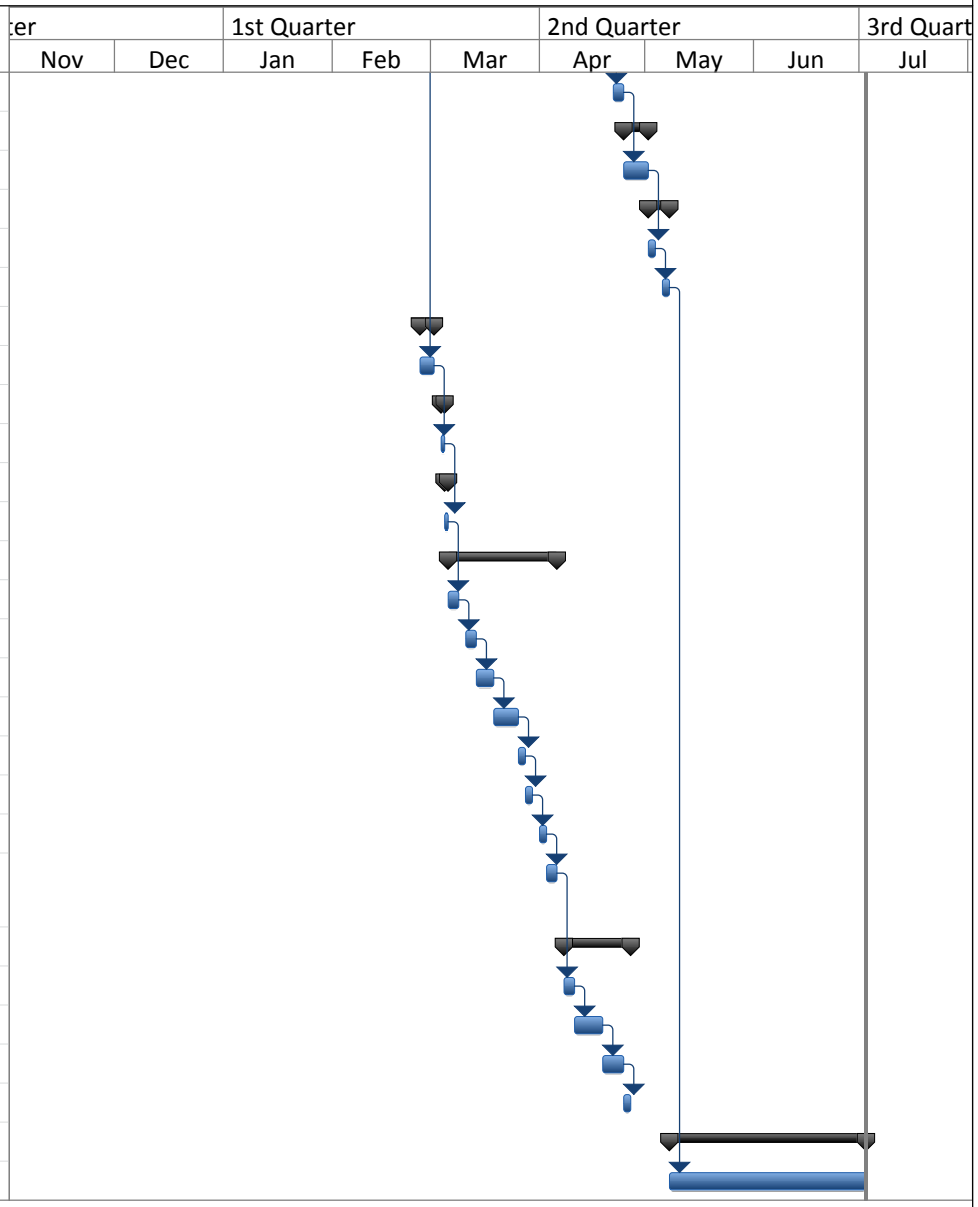
ID	Task Name	Duration
1	**Iatan Common Retirement**	**131 days**
2	**Pre-Retirement Activities**	**40 days**
3	Permitting Review	20 days
4	Develop Detailed Retirement Plan	20 days
5	**Overheads**	**61 days**
6	**Common Retirement Overheads**	**61 days**
7	Added Overhead Staff for Common Retirement	61 days
8	**Common Retirment Equipment Rental**	**61 days**
9	Common Removal Equipment Rental	61 days
10	**Retirement Activities**	**61 days**
11	**Administration Building**	**15 days**
12	Secure Administration Building	15 days
13	**Fuel Yard Office Building**	**9 days**
14	Secure Fuel Yard Office Building	9 days
15	**Training Building**	**9 days**
16	Secure Training Building	9 days
17	**Warehouse(s)**	**8 days**
18	Secure Unit 1 Warehouse	2 days
19	Secure Unit 2 Warehouse	6 days
20	**Maintenance Shop**	**20 days**
21	Secure Maintenance Shop	20 days
22	**Fuel Yard**	**51 days**
23	**Transfer Towers**	**21 days**
24	Clean Transfer Tower 1	3 days
25	Clean Transfer Tower 2	3 days
26	Clean and Secure Crusher Building	5 days
27	Clean Stockout Conveyor Reclaim Pit	10 days
28	**Conveyors**	**14 days**
29	Clean Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	14 days
30	**Car Dumper**	**7 days**
31	Empty Car Dumper Hoppers	1 day
32	Clean Car Dumper	3 days



Redactions Removed Pursuant to Commission Order

Iatan Common Retirement

ID	Task Name	Duration
33	Secure Dumper Building	3 days
34	**Remove Stacker/Reclaimer**	**5 days**
35	Clean and Secure Stacker/Reclaimer	5 days
36	**Unit 1 Reclaim**	**4 days**
37	Clean Unit 1 Reclaim	2 days
38	Secure Unit 1 Reclaim Building	2 days
39	**Sewage Treatment**	**4 days**
40	Clean Sewage Treatment and Transfer Points	4 days
41	**Fuel Oil Storage and Unloading**	**1 day**
42	Remove Fuel Oil from Fuel Oil Storage and Vent	1 day
43	**Yard Fire Water Systems**	**1 day**
44	Drain Yard Fire Water System	1 day
45	**Reagent Prep and Gypsum Handling**	**23 days**
46	Clean and Secure Limestone Unloading Facility	3 days
47	Clean and Secure Limestone Storage Facility	3 days
48	Clean Limestone Conveyor	3 days
49	Clean and Secure Limestone Prep Building	5 days
50	Clean Gypsum Stackout Conveyor	2 days
51	Clean and Secure PCM-1	2 days
52	Clean and Secure PCM-2	2 days
53	Clean and Secure the Vacuum Pump and Air Compressor Building	3 days
54	**Water Pretreatment and ZLD**	**15 days**
55	Drain and Clean Clarifiers	3 days
56	Drain and Clean ZLD System	6 days
57	Clean and Secure ZLD Building	4 days
58	Drain and Vent Storage Tanks	2 days
59	**Post Retirement Closure Activities**	**40 days**
60	Post Retirement Closure Activities	40 days



Redactions Removed Pursuant to Commission Order

Iatan Common Dismantlement

Owner Additional Costs					
Pre-Dismantlement Activities			$0		
Overhead During Dismantlement			$0		
Post-Dismantlement Activities					
Owner Costs Total*				$0	
Demolition General Contractor (DGC) Costs					
Additional Site Management			$86,011		
Equipment Rental			$419,326		
Consummables			$628,251		
Scrap Crew(s)			$623,393		
Dismantlement			$14,083,108		
Contractor Direct Cost*		$15,840,089			
Contractor Allowances					
DGC Insurance	2.00%		$316,802		
Contingency/Profit	15.00%		$2,423,534		
Performance Bond	2.00%		$371,608.49		
Contractor Costs Total:				$18,952,033	
Total:					$18,952,033
Owner Internal Costs:	5.00%				$947,602
Owner Contingency:	25.00%				$4,974,909
Iatan Common Dismantlement Opinion of Probable Cost:					$24,874,543

*Owner Costs Total + Contractor Direct Costs = Manpower Loaded Schedule Total w/o Contractor Allowances
= $15,840,089

Redactions Removed Pursuant to Commission Order

Iatan Common Dismantlement

ID	Task Name	Cost
1	**Iatan Common Dismantlement**	**$15,840,077.07**
2	**Overheads**	**$1,756,968.56**
3	**Common Removal Overheads**	**$86,011.67**
4	Added Overhead Staff for Common Removals	$86,011.67
5	**Common Removal Equipment Rental**	**$419,326.08**
6	Common Removal Equipment Rental	$419,326.08
7	**Scrap Crew**	**$623,393.36**
8	Crew(s) to Handle Scrap Material	$623,393.36
9	**Demolition Contractor Consummables**	**$628,237.44**
10	Consummables	$628,237.44
11	**Dismantlement Activities**	**$14,083,108.51**
12	**Administration Building**	**$35,827.20**
13	Remove Administration Building	$35,827.20
14	**Fuel Yard Office Building**	**$17,913.60**
15	Remove Fuel Yard Office Building	$17,913.60
16	**Training Building**	**$17,913.60**
17	Remove Training Building	$17,913.60
18	**Parking Lots and Plant Roads**	**$82,402.56**
19	Plant Roads and Parking Areas	$71,654.40
20	Guard Shack	$10,748.16
21	**Warehouse(s)**	**$35,827.20**
22	Remove Unit 1 Warehouse	$17,913.60
23	Remove Unit 2 Warehouse	$17,913.60
24	**Maintenance Shop**	**$23,215.20**
25	Remove Maintenance Shop	$23,215.20
26	**Fuel Yard**	**$752,371.20**
27	**Remove Transfer Towers**	**$465,753.60**
28	Transfer Tower 1	$35,827.20
29	Transfer Tower 2	$35,827.20
30	Crusher Building	$71,654.40
31	Stockout Conveyor Reclaim Pit	$89,568.00
32	**Remove Conveyors**	**$125,395.20**
33	Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	$125,395.20
34	**Remove Car Dumper**	**$89,568.00**
35	Remove Underground Equipment	$17,913.60
36	Remove Above Ground Equipment	$35,827.20
37	Remove Building	$17,913.60
38	Backfill Dumper Structure	$17,913.60
39	**Remove Stacker/Reclaimer**	**$7,165.44**
40	Remove Stacker/Reclaimer	$3,582.72
41	**Remove Unit 1 Reclaim**	**$64,488.96**
42	Remove Underground Equipment	$17,913.60
43	Remove Above Ground Equipment	$17,913.60
44	Remove Building	$14,330.88

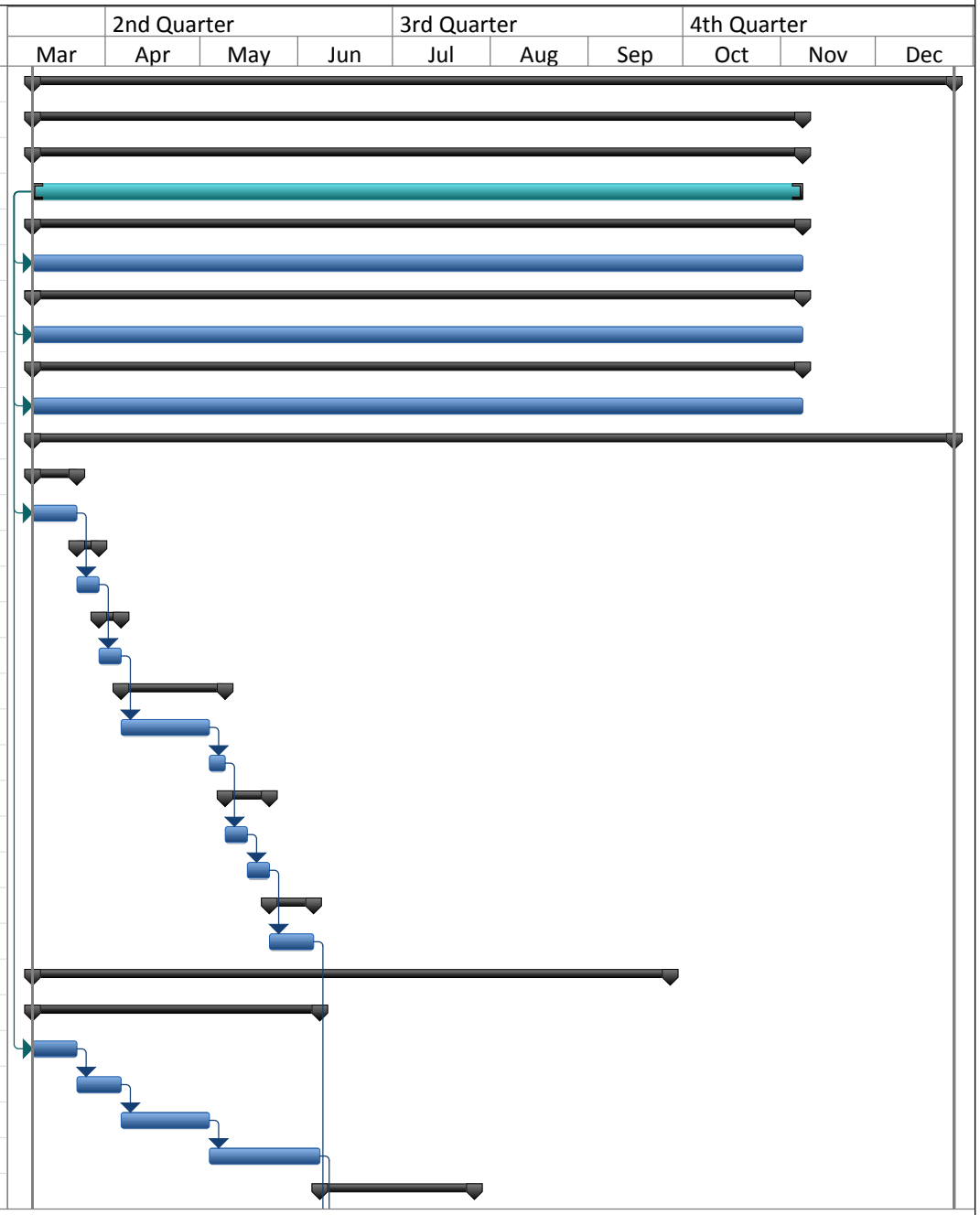
Iatan Common Dismantlement

ID	Task Name	Cost
45	Backfill Structure	$14,330.88
46	**Sewage Treatment**	**$21,496.32**
47	Remove Sewage Treatment Pumps and Miscellaneous Equipment	$7,165.44
48	Remove Sewage Treatment Concrete Structures	$14,330.88
49	**Yard Fire Water Systems**	**$35,827.20**
50	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	$35,827.20
51	**Water Pretreatment Clarifiers and ZLD**	**$121,812.48**
52	Remove Clarifier Vessels	$10,748.16
53	Remove Pump House	$17,913.60
54	Remove Clarifier Water Storage Tanks	$17,913.60
55	Remove Water Treatment Equipment	$10,748.16
56	Remove Water Treatment Building	$17,913.60
57	Remove ZLD Equipment	$10,748.16
58	Remove ZLD Building	$17,913.60
59	Remove Condensate Storage Tanks	$17,913.60
60	**Stacks**	**$11,027,325.89**
61	Remove Unit 1 Stack to Grade	$4,198,401.00
62	Remove Common Stack to Grade	$6,828,924.89
63	**Reagent Prep and Gypsum Handling**	**$336,775.68**
64	Remove Limestone Unloading Facility	$35,827.20
65	Remove Limestone Storage Facility	$17,913.60
66	Remove Limestone Conveyor	$17,913.60
67	Remove Limestone Prep Building	$143,308.80
68	Remove Gypsum Stackout Conveyor	$17,913.60
69	Remove PCM-1	$7,165.44
70	Remove PCM-2	$7,165.44
71	Remove the Vacuum Pump and Air Compressor Building	$71,654.40
72	Remove Miscellaneous Equipment	$17,913.60
73	**Final Site Grading and Drainage**	**$1,574,400.38**
74	Final Site Grading and Drainage	$1,574,400.38

Redactions Removed Pursuant to Commission Order

Iatan Common Dismantlement

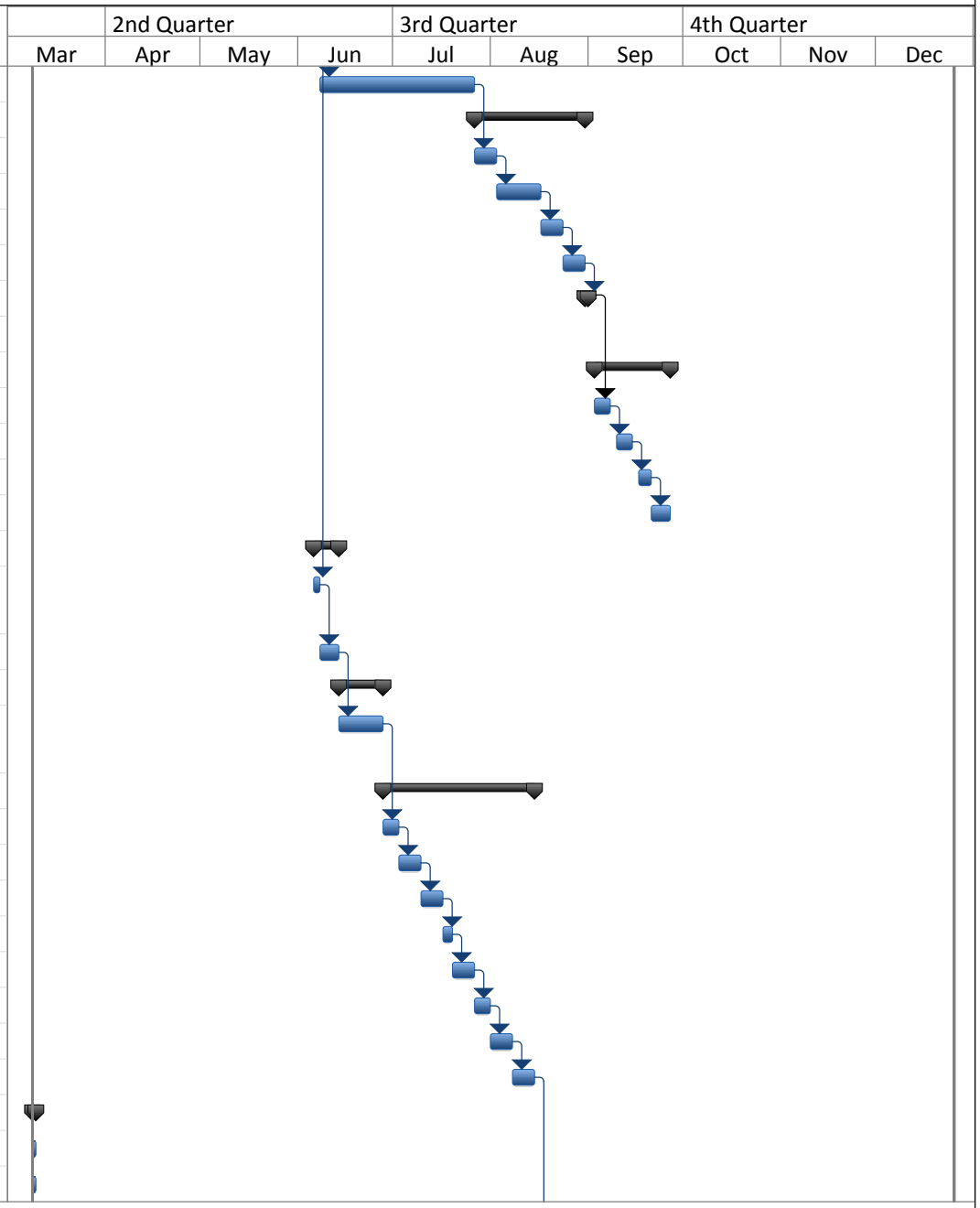
ID	Task Name	Duration
1	**Iatan Common Dismantlement**	**208 days?**
2	**Overheads**	**174 days**
3	**Common Removal Overheads**	**174 days**
4	Added Overhead Staff for Common Removal	174 days
5	**Common Removal Equipment Rental**	**174 days**
6	Common Removal Equipment Rental	174 days
7	**Scrap Crew**	**174 days**
8	Crew(s) to Handle Scrap Material	174 days
9	**Demolition Contractor Consummables**	**174 days**
10	Consummables	174 days
11	**Dismantlement Activities**	**208 days?**
12	**Administration Building**	**10 days**
13	Remove Administration Building	10 days
14	**Fuel Yard Office Building**	**5 days**
15	Remove Fuel Yard Office Building	5 days
16	**Training Building**	**5 days**
17	Remove Training Building	5 days
18	**Parking Lots and Plant Roads**	**23 days**
19	Plant Roads and Parking Areas	20 days
20	Guard Shack	3 days
21	**Warehouse(s)**	**10 days**
22	Remove Unit 1 Warehouse	5 days
23	Remove Unit 2 Warehouse	5 days
24	**Maintenance Shop**	**10 days**
25	Remove Maintenance Shop	10 days
26	**Fuel Yard**	**144 days?**
27	**Remove Transfer Towers**	**65 days**
28	Transfer Tower 1	10 days
29	Transfer Tower 2	10 days
30	Crusher Building	20 days
31	Stockout Conveyor Reclaim Pit	25 days
32	**Remove Conveyors**	**35 days**



Redactions Removed Pursuant to Commission Order

Iatan Common Dismantlement

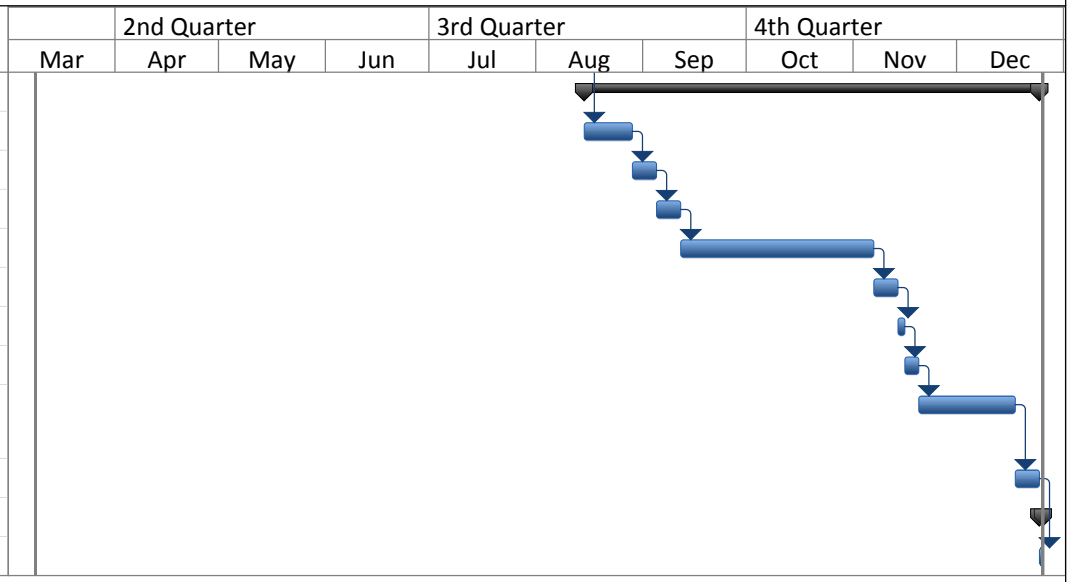
ID	Task Name	Duration
33	Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	35 days
34	**Remove Car Dumper**	**25 days**
35	Remove Underground Equipment	5 days
36	Remove Above Ground Equipment	10 days
37	Remove Building	5 days
38	Backfill Dumper Structure	5 days
39	**Remove Stacker/Reclaimer**	**1 day?**
40	Remove Stacker/Reclaimer	
41	**Remove Unit 1 Reclaim**	**18 days**
42	Remove Underground Equipment	5 days
43	Remove Above Ground Equipment	5 days
44	Remove Building	4 days
45	Backfill Structure	4 days
46	**Sewage Treatment**	**6 days**
47	Remove Sewage Treatment Pumps and Miscellaneous Equipment	2 days
48	Remove Sewage Treatment Concrete Structu	4 days
49	**Yard Fire Water Systems**	**10 days**
50	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	10 days
51	**Water Pretreatment Clarifiers and ZLD**	**34 days**
52	Remove Clarifier Vessels	3 days
53	Remove Pump House	5 days
54	Remove Clarifier Water Storage Tanks	5 days
55	Remove Water Treatment Equipment	3 days
56	Remove Water Treatment Building	5 days
57	Remove ZLD Equipment	3 days
58	Remove ZLD Building	5 days
59	Remove Condensate Storage Tanks	5 days
60	**Stacks**	**1 day?**
61	Remove Unit 1 Stack to Grade	1 day?
62	Remove Common Stack to Grade	1 day?



Redactions Removed Pursuant to Commission Order

Iatan Common Dismantlement

ID	Task Name	Duration
63	**Reagent Prep and Gypsum Handling**	**94 days**
64	Remove Limestone Unloading Facility	10 days
65	Remove Limestone Storage Facility	5 days
66	Remove Limestone Conveyor	5 days
67	Remove Limestone Prep Building	40 days
68	Remove Gypsum Stackout Conveyor	5 days
69	Remove PCM-1	2 days
70	Remove PCM-2	2 days
71	Remove the Vacuum Pump and Air Compressor Building	20 days
72	Remove Miscellaneous Equipment	5 days
73	**Final Site Grading and Drainage**	**1 day?**
74	Final Site Grading and Drainage	1 day?



Redactions Removed Pursuant to Commission Order

APPENDIX B

OPINIONS OF COSTS FOR SCRAP

Redactions Removed Pursuant to Commission Order

OPINIONS OF SCRAP VALUES

The opinion of scrap value was based on a scrap value of:

1. Mixed Scrap: $370.00/GT.
2. Insulated Cables: $2.56/lb.
3. Motors: $0.37/lb.

These scrap values were taken from www.scrapmonster.com. This website is an industry-recognized source of scrap information that provides daily scrap pricing for the worldwide scrap market.

Attached in the back of this Appendix is information that was developed from the quantities used to build a 20-MW, coal-fired power plant (CFPP) located in the Midwest. Per the attached spreadsheet:

1. 20-MW, CFPP Scrap Value: $483,672.

The AACE International Capacity Factor Method (AACE) was used to estimate the scrap value of the other coal-fired units. The capacity factor method is based on the following calculation:

UnitA(scrap value)=CFPP(scrap value)*(CapacityUnitA/CapacityCFPP)^e

Where:

1. UnitA(scrap value) = Unit A Scrap Value.
2. CFPP(scrap value)= 20-MW, CFPP Scrap Value: $483,672.
3. CapacityUnitA = Capacity of Unit A.
4. CapacityCFPP = 20 MW.
5. e = Proration Factor: 0.6 per the AACE guidelines.

Therefore, the scrap value of the other CFPPs is as follows:

SIBLEY UNIT 1

1. Capacity A = 51 MW.
2. Scrap Value = $848,154.

SIBLEY UNIT 2

1. Capacity A = 51 MW.
2. Scrap Value = $848,154.

SIBLEY UNIT 3

1. Capacity A = 363.8 MW.
2. Scrap Value = $2,757,087.

LAKE ROAD 4/6

1. Capacity A = 99 MW.
2. Scrap Value = $1,262,740.

The value of the common portion of these facilities was estimated at approximately 12-percent of the combined scrap values of the units on site.

Therefore:

1. Sibley Common: Scrap Value = $1,564,200.
2. Lake Road Common: Scrap Value = $248,964.

The scrap value of a 75-MW combustion turbine was calculated based on the following scrap weights:

1. Combustion Turbine: 250,000 lbs.
2. Generator: 280,000 lbs.
3. Total: 530,000 lbs.
4. Scrap Value of a 75-MW Combustion Turbine:
   (530,000 lbs/2,000 lbs/ton) * 370/GT = $98,000.

The AACE method was used to estimate the scrap value of the GMO combustion turbines as described above.

SOUTH HARPER

1. Capacity A = 104.6 MW.
2. Number of CTs = Three.
3. Scrap Value = $358,946.

GREENWOOD

1. Capacity A = 63.2 MW.
2. Number of CTs = Four.
3. Scrap Value = $353,746.

CROSSROADS

1. Capacity A = 74.2 MW.
2. Number of CTs = Four.
3. Scrap Value = $389,486.

KCI

1. Capacity A = 21 MW.
2. Number of CTs = Two.
3. Scrap Value = $91,317.

NEVADA

1. Capacity A = 21 MW.
2. Number of CTs = One.
3. Scrap Value = $45,397.

RALPH GREEN

1. Capacity A = 71.5 MW.
2. Number of CTs = One.
3. Scrap Value = $95,230.

LAKE ROAD CT 5

1. Capacity A = 63 MW.
2. Number of CTs = One.
3. Scrap Value = $88,266.

LAKE ROAD CTS 6 AND 7

1. Capacity A = 21 MW.
2. Number of CTs = Two.
3. Scrap Value = $91,317.

The approximate weight of a 160-MW turbine is 342 tons. The AACE method was used to estimate the weight of the Lake Road turbines to determine scrap value.

LAKE ROAD STEAM TURBINE GENERATOR 1

1. Weight = 103 tons.
2. Scrap Value = $38,162.

LAKE ROAD STEAM TURBINE GENERATOR 2

1. Weight = 118 tons.
2. Scrap Value = $43,797.

LAKE ROAD STEAM TURBINE GENERATOR 3

1. Weight = 69 tons.
2. Scrap Value = $25,661.

The approximate weight of the boiler that produces 220,000 lbs/hr of steam is 561 tons. The AACE method was used to estimate the weight of the Lake Road boilers to determine scrap value.

LAKE ROAD BOILER 1

1. Weight = 317 tons.
2. Scrap Value = $117,312.

LAKE ROAD BOILER 2

1. Weight = 317 tons.
2. Scrap Value = $117,312.

LAKE ROAD BOILER 3

1. Weight = 410 tons.
2. Scrap Value = $151,376.

LAKE ROAD BOILER 4

1. Weight = 530 tons.
2. Scrap Value = $196,024.

LAKE ROAD BOILER 5

1. Weight = 605 tons.
2. Scrap Value = $224,107.

LAKE ROAD BOILER 8

1. Weight = 605 tons.
2. Scrap Value = $224,107.

Baghouse Ductwork and Paneling Weights

Member	Number	Length (foot)	lb/foot	weight (lb)	
L2X2X1/4	4	6	3.19	76.56	
C5X6.7	4	36	6.7	964.8	
C6X8.2	4	25	8.2	820	
L3X2X1/4	4	13	4.1	213.2	
C5X6.7	2	45	6.7	603	
C7X9.8	1	52	9.8	509.6	
W10X26	1	30	26	780	
L2 1/2X1 1/2 X 1/4	1	23	3.22	74.06	
C5X6.7	1	60	6.7	402	
W10X26	1	20	26	520	
C5X6.7	1	2332	6.7	15624.4	
C5X6.7	2	3424	6.7	45881.6	
C4x5.4	2	440	5.4	4752	
C5X6.7	1	990	6.7	6633	
W10X26	1	1164	26	30264	
				108,118	lbs
Assume plate adds 50% additional weight:				162,177	lbs
Weight of Ductwork:				**270,296**	lbs
Drawings of the baghouse structural steel was not available.					
Assume that the steel weighs approximately 60% of the boiler steel:				**138,000**	lbs
Total Estimated Scrap Weight of Baghouse:				**408,000**	lbs

Pipe Description	Length (ft)	Material Spec.	Equipment List #	Found on sheet:	Pipe Diameter	Unit Weight (lbs.)	Total Weight (lbs.)
8" Main Steam	112	P1	A01	8, 9, 18, 19	8	50.9	5700.8
4" Aux from Main to PRV	15	P1	A02	19	4	14.98	224.7
6" Steam from A2 to Desuperheating nozzle	8.5	P1	A03	19	6	28.57	242.845
3" Aux Steam	99	P1	A04	8, 9, 18, 19	3	10.25	1014.75
2" Aux Steam	13	P1	A05	8	2	5.02	65.26
1.5" Steam from A5 to Aux Oil Turbine Pump	58	P1	A06	8	1.5	3.63	210.54
1" Aux Steam from A5 to Starting Ejector	16.5	P1	A07	8	1	2.17	35.805
Auxillary steam PRV to flange past 260# safty valve	45	P2	A08	18	6	28.57	1285.65
A8 to 260# header	5	P5	A09	18	6	18.97	94.85
260# common header	25	P5	A11	18, 21	6	18.97	474.25
A11 to 150# safty valve	1	P5	A12	18	1	28.57	28.57
150# steam header	7	P5	A13	18	6	18.97	132.79
A13 to boiler burner header	10	P5	A14	18	6	18.97	189.7
A22 to building heating system	70	P5	A23	18	6	18.97	1327.9
A22 to intake structure heating system	45	P5	A24	18, 21	3	18.97	853.65
10" Extraction No. 4 to Heater No. 1	21	P5	B01	11, 13	10	40.5	850.5
8" Extraction No. 3 to Heater No. 2	135	P5	B02	11, 14, 16	8	28.6	3861
6" Extraction No. 2 to Heater No. 3	36	P5	B03	11, 13	6	18.97	682.92
6" Extraction (B3) to 8" Extraction (B2)	20	P5	B04	11	6	18.97	379.4
6" Extraction (B3) to Evaporator	96	P5	B05	11, 14, 16	6	18.97	1821.12
4" Extraction No. 1 to Heater No. 4	54	P5	B06	11, 14	4	10.79	582.66
4" Extraction (B6) to 8" Extraction (B2)	22	P5	B07	11, 14	4	10.79	237.38
4" Extraction (B6) to B5	11	P5	B08a	11	4	10.79	118.69
4" Extraction (B6) to B5	18	P5	B08b	11	6	18.97	341.46
8" Line from B2 to Back Pressure Valve	16	P5	C01	16	8	28.6	457.6
8" line from Evaporator to C1	8.5	P5	C02	16	8	28.6	243.1
Evaporator to Evaporator Feed Heater	7.5	P5	C03	16	8	28.6	214.5
8" Steam Exhaust	134	P5	C04a		8	28.6	3832.4
6" Disch. From Priming Eject	28.5	P5	C04b	8, 9	6	18.97	540.645
4" Exhaust from Aux Oil Pump	45.5	P5	C05	8, 9	4	10.79	490.945
B.F.P. Turbine Exhaust to line B2	7	P5	C06	15	8	28.6	200.2
B.F. Pumps Disch. To and including Header	153	P3	D01	11, 15, 18, 19, 20,	4	14.98	2291.94
Header to Heater No. 3 including bypass	25	P3	D02	12	4	14.98	374.5
Heater No. 3 to Heater No. 4 including bypass	30	P3	D03	12	4	14.98	449.4
Heater No. 4 to Boiler stop check valve	30	P3	D04	14	4	14.98	449.4
Emergency feed from D1 to boiler stop check valve	30	P3	D05	14	4	14.98	449.4

Pipe Description	Length (ft)	Material Spec.	Equipment List #	Found on sheet:	Pipe Diameter	Unit Weight (lbs.)	Total Weight (lbs.)
T.D.B.F. Pump recirculation to Htr. No. 2	64	P3	D06a	12, 16	1.25	3	192
T.D.B.F. Pump recirculation to Htr. No. 2	18	P3	D06b	12, 16	1	2.17	39.06
M.D.B.F. Pump recirculation to D6	5	P3	D07	12	1	2.17	10.85
D1 to desuperheater in line A8	42	P3	D08	19	1	2.17	91.14
D8 to Chem Feed Tank	57	P3	D09	11, 12, 15, 19	1.25	3	171
Chem Feed tank to boiler connection	28	P3	D10	19	1	2.17	60.76
Hotwell to Condensate Pumps	2	P6	E01	13	6	18.97	37.94
Condensate pump to condensate cooler including bypass	35	P6	E02	11, 15	4	10.79	377.65
Condensate cooler to hyd. Cooler including bypass	16	P6	E03a	11	4	10.79	172.64
Condensate cooler to hyd. Cooler including bypass	35	P6	E03b	11	6	18.97	663.95
Hyd. Cooler to air ejector	15	P6	E04	11, 13	4	10.79	161.85
E3 to bearing water make-up	25	P6	E05a	11	2	3.65	91.25
E3 to bearing water make-up	14	P6	E05b	11	1.5	1.09	15.26
E5 to gland water storage	103	P6	E06	11, 16	1.5	1.09	112.27
Air ejector to Heater No. 1 including bypass	35	P6	E07	13	4	10.79	377.65
Recirculation line from E7 to condenser	20	P6	E08	13	2.5	5.79	115.8
bypass from E7 to lower surge tank	15	P6	E09	14	3	7.58	113.7
Heater No. 1 to Heater No. 2	62	P6	E10	14, 16	6	18.97	1176.14
Heater No. 1 to Drip Pump	18	P6	E11	15	2.5	5.79	104.22
Drip Pump to E10	9	P6	E12	14	2.5	5.79	52.11
Recirculation line from E12 to Heater No. 1	21	P6	E13	14	3	7.58	159.18
Drip Pump bypass from E11 to condenser.	6	P6	E14	15	3	7.58	45.48
Return line from lower surge tank to condenser	40	P6	E15	12, 14	3	7.58	303.2
Lower Surge Tank to transfer pump	5	P6	E16	14	4	10.79	53.95
Transfer pump to E10	18	P6	E17	12	3	7.58	136.44
Heater No. 2 to B.F. Pumps	74	P6	E18	12, 15, 16	1.25	3	222
Heater No. 2 overflow to lower surge tank	58	P6	E19	12, 15, 16	6	18.97	1100.26
Heater No. 2 drain to line E19	4.5	P6	E20	16	2	3.65	16.425
Line E19 to drain	25	P6	E21	14, 15	6	18.97	474.25
Lower surge tank overflow to line E21	10	P6	E22	14	3	7.58	75.8
Gland seal water tank to turbine	same as E6	same as E6	E23	same as E6	same as E6		n/a
Heater No. 1 bypass from line E29 to E14	10	P6	E24	15	2.5	5.79	57.9

Pipe Description	Length (ft)	Material Spec.	Equipment List #	Found on sheet:	Pipe Diameter	Unit Weight (lbs.)	Total Weight (lbs.)
Condensate return header from lower surge tank No. 1 to lower surge tank No. 2	60	P6	E25	17	4	10.79	647.4
Heater No. 4 drips to Heater No. 3	13	P6	E26	13, 14	2.5	5.79	75.27
Heater No. 3 bypass from line E26 to line E28	10	P6	E27	14	2.5	5.79	57.9
Heater No. 3 drips to Heater No. 2	53	P6	E28	15, 16	4	10.79	571.87
Line E28 to Heater No. 1	19	P6	E29	15	2.5	5.79	110.01
Boiler drum safety valve vents through roof	63	P6	G01	22	8	28.6	1801.8
superheater safety valve vent thru roof	61.5	P6	G02	22	6	18.97	1166.655
Drip pan elbows to line F8		P6	G03				0
Safety valve drains to line G3		P6	G04				0
Condensate pump vents to condenser	21	P6	G05	13, 15	4	10.79	226.59
Heater No.1 vent to condenser	15	P6	G06	15	3	7.58	113.7
Drip Pump vent to Heater No. 1	10	P6	G07	15	3	7.58	75.8
Blowdown tank vent thru roof	102	P6	G08	20	8	28.6	2917.2
Drain header to ash sump	43	P6	G09	17	3	7.58	325.94
Evaporator drain to line G9	56	P6	G10	17	3	7.58	424.48
Evaporator Feed Heater drain to line G10	71	P6	G11	16, 17	3	7.58	538.18
6" Air Suction	51	P6	K1 & K2	8, 9	6	18.97	967.47

Total Weight (per Unit): **47,554** lbs
Total Weight: **95,108** lbs

APPENDIX C

REFERENCE DOCUMENTS

Redactions Removed Pursuant to Commission Order

REFERENCE DOCUMENTS

1. *Decommissioning Handbook for Coal-Fired Power Plants*, EPRI, Palo Alto, CA: 2004. (1011220)

2. *Decommissioning Process for Fossil-Fueled Power Plants*, EPRI, Palo Alto, CA: 2010. (1020652)

3. Association for the Advancement of Cost Estimating (AACE) International, *Skills and Knowledge of Cost Engineering*, 5th Edition, 2004.

4. Combustion Fossil Power, Fourth Edition, 1991.

5. Steam Its Generation and Use, 40th Edition, 1992.

6. Daniel International Corporation, La Cygne Station - Unit 2, Weekly Progress Report No. 175, October 1, 1976.

7. Black & Veatch, Iatan Steam Generating Station Monthly Progress Report, November 1979.

APPENDIX D

ARO - SOURCE OF REQUIREMENT

Redactions Removed Pursuant to Commission Order

Station	Equipment		Source of Requirement
Greenwood	Fuel Oil Storage Tanks		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
Nevada	Fuel Oil Storage Tank		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
Ralph Green	Ash Pond Landfill Closure		Missouri Regulation 10 CSR 80-2.030
Sibley	Propane Storage Tanks		Missouri Regulation 10 CSR 20-15.020 Release Reporting and Initial Release Response Measures
	Common Pond		Missouri State Operating Permit MO-0004871, Missouri Regulation 10 CSR 80-2.030
	Landfill Stage A		Solid Waste Operating Permit #709505
	Units 1 & 2 River Intake		US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899
	Unit 3 River Intake		US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899
Lake Road	Boiler 5 Pond		Missouri State Operating Permit MO-0004898
	Turbine Generator 4 River Intake		US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899
	Boiler 5 Tank		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
	Boiler 6 Tank		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
	Boiler 7 Tank		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
Iatan	Iatan Fuel Oil Tank Removal		Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
	Iatan Landfill Retirement		Solid Waste Operating Permit No. 0916501

EXHIBIT JAL-35

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Figgs Katie Interrogatories - KCC_20161102
Date of Response: 11/10/2016

Question:342

In 2015, the Tecumseh, Lawrence & Murry Gill power plants produced energy at an average station capacity factor of 60.9% for Tecumseh, 53% for Lawrence and 58% for Murry Gill. Since these units were dispatched based on least cost ranking in SPP, when the units are retired, the next most expensive generation sources will be needed to replace both this generation and any load growth.

1. Please provide any analysis or other explanation of what the expected annual impact on energy production, energy purchases or lost energy sales may be based on these units being retired.

2. Please provide the annual impact to customers in the Fuel Adjustment Clause mechanism or other off system sales mechanisms.

3. Please explain if these costs will or will not be included in the cost to implement as part of the Cost Savings analysis.

Number of Attachments:

Response:

1. Please see Westar's response.

2. Please see Westar's response.

3. It is not known for certain at this time whether these costs would be included in the cost to implement as part of the Cost Savings analysis. To the extent that any of these costs are included in the cost to implement as part of the Cost Savings analysis, whether such treatment is appropriate would be an issue that could be addressed by the Commission in setting rates for the subject utility.

Attachment: Q342_Verification.pdf

DRAFT - FOR DISCUSSION PURPOSES ONLY
AS OF 11.09.2016

Forecast Annual Energy Production (MWh)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LEC4	362,917	383,086	320,154	302,458	352,538	383,060	411,669	438,061	470,676	509,658
LEC5	1,576,301	1,456,330	1,321,680	1,254,955	1,428,125	1,436,420	1,605,655	1,753,805	1,807,715	1,972,360
TEC7	198,548	191,539	168,169	151,397	184,023	215,690	223,471	286,935	314,831	301,261
MGEC3	38,512	54,780	63,348	64,224	80,096	47,880	49,372	50,796	52,844	51,756
MGEC4	30,759	37,201	49,061	49,368	60,130	25,942	28,861	32,869	32,838	32,673

No Change in Forecast Energy Purchase

Decrease in Energy Sales with Loss of Unit (MWh)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LEC4	362,917	383,086	320,154	302,458	352,538	383,060	411,669	438,061	470,676	509,658
LEC5	1,576,301	1,456,330	1,321,680	1,254,955	1,428,125	1,436,420	1,605,655	1,753,805	1,807,715	1,972,360
TEC7	198,548	191,539	168,169	151,397	184,023	215,690	223,471	286,935	314,831	301,261
MGEC3	38,512	54,780	63,348	64,224	80,096	47,880	49,372	50,796	52,844	51,756
MGEC4	30,759	37,201	49,061	49,368	60,130	25,942	28,861	32,869	32,838	32,673

Forecast Increase in RECA Energy Cost with Loss of Unit ($)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LEC4	946,840	1,590,878	1,338,816	1,095,607	1,725,618	3,257,866	3,859,333	4,238,577	4,881,976	5,254,023
LEC5	6,753,105	8,245,064	7,026,886	5,825,516	8,148,769	9,691,261	11,425,652	13,362,951	17,397,935	18,073,305
TEC7	1,533,671	529,275	376,600	156,014	480,937	1,428,501	1,640,698	710,191	1,319,409	1,295,638
MGEC3	886,138	1,218,554	1,236,180	1,208,646	1,555,094	174,002	173,897	128,954	190,020	144,964
MGEC4	734,529	834,605	940,030	897,723	1,181,841	115,057	159,401	-305,238	1,660,609	374,801

TOTAL COST INCREASE, 2017-2020: $43,374,677 **TOTAL COST INCREASE, 2017-2026: $157,120,719**

Forecast Increase in RECA Energy Cost with Loss of Unit ($/MWh)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
LEC4	0.05	0.08	0.06	0.05	0.08	0.15	0.18	0.20	0.23	0.25
LEC5	0.33	0.40	0.34	0.28	0.39	0.46	0.54	0.63	0.82	0.85
TEC7	0.07	0.03	0.02	0.01	0.02	0.07	0.08	0.03	0.06	0.06
MGEC3	0.04	0.06	0.06	0.06	0.07	0.01	0.01	0.01	0.01	0.01
MGEC4	0.04	0.04	0.05	0.04	0.06	0.01	0.01	-0.01	0.08	0.02

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request #342 , submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: _____

Title: Model Development Manager,
Energy Resource Management

Date: November 10, 2016

Redactions Removed Pursuant to Commission Order

CONFIDENTIAL
EXHIBIT JAL-36

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Figgs Katie Interrogatories - KCC_20161102
Date of Response: 11/09/2016

Question:332

In 2015, the Montrose station had capacity factors of Unit 1 -0%, Unit -2 -35% and Unit 3 - 34%. Sibley Power Station had capacity factors of Unit 1 - 25%, Unit 2 - 19% and Unit 3 - 58% respectively. Since these units were dispatched based on least cost ranking in SPP, when the units are retired, the next most expensive generation sources will be needed to replace both this generation and any load growth.

1. Please provide any analysis or other explanation of what the expected annual impact on energy production, energy purchases or lost energy sales may be based on these units being retired.

2. Please provide the annual impact to customers in the Fuel Adjustment Clause mechanism or other off system sales mechanisms.

3. Please explain if these costs will or will not be included in the cost to implement as part of the Cost Savings analysis.

Number of Attachments:

Response:

This response including the question itself is **Confidential** as it contains marketing analysis or other market-specific information relating to services offered in competition with others and also strategies employed, to be employed, or under consideration.

1. Attached are modeling results from the Company's 2014 IRP Updates (for both KCPL and KCPL-GMO) for selected alternative resource plans that illustrate the impact on generation levels, energy purchases and sales resulting from the retirement of the units mentioned above.

   For KCPL, two plans are presented: AAAKA and ABBKA. In AAAKA, all units continue operations through the study period. In ABBKA, Montrose 1 is shut down in 2016 and Montrose 2 & 3 are shut down in 2021.

   For GMO, two plans are presented: AAAGA and AIDGA. In AAAGA, all units continue operations through the study period. In AIDGA, Lake Road 4/6 is shut down in 2016 and the Sibley units are shut down in 2019.

   The file "Q332-CONF-2014IRP_AnnualGeneration_SelectPlans.xlsx" reflects the unit specific generation levels for the twenty year study period (2014 – 2033) for the four resource plans described above.

The files "Q332-CONF-AAAKA_SalesPurch.xlsx", "Q332-CONF-ABBKA_SalesPurch.xlsx", "Q332-CONF-AAAGA_SalesPurch.xlsx", and "Q332-CONF-AIDGA_SalesPurch.xlsx" reflect the non-firm off-system sales quantities and revenues and the non-firm off-system purchase quantities and costs for each of the four resource plans described above.

Note that in the IRP process, 27 different scenarios were modeled for each of the resource plans. The results of each of these scenarios (Endpoints) are shown, along with the expected values for the plans.

2. No analyses of the Fuel Adjustment Clause mechanisms were performed as part of the IRP analysis.

3. It is not known for certain at this time whether these costs would be included in the cost to implement as part of the Cost Savings analysis. To the extent that any of these costs are included in the cost to implement as part of the Cost Savings analysis, whether such treatment is appropriate would be an issue that could be addressed by the Commission in setting rates for the subject utility.

ATTACHMENTS:

Q332-CONF-2014IRP_AnnualGeneration_SelectPlans.xlsx
Q332-CONF-AAAKA_SalesPurch.xlsx
Q332-CONF-ABBKA_SalesPurch.xlsx
Q332-CONF-AAAGA_SalesPurch.xlsx
Q332-CONF-AIDGA_SalesPurch.xlsx
Q332 Verification.pdf

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request #332, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: _____

Title: Model Development Manager,
Energy Resource Management

Date: 11/4/16

Redactions Removed Pursuant to Commission Order

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request #332, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: _____

Title: Model Development Manager,
Energy Resource Management

Date: 11/4/16

Redactions Removed Pursuant to Commission Order

KCPL

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan ABBKA
Non-Firm Sales Quantities

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	7,798,180	8,847,553	8,824,425	9,102,564	9,082,017	9,380,596	6,519,349	3,668,005	3,416,081	2,759,459	2,450,306	2,246,137	1,579,751	1,466,583	1,610,464	1,506,391	1,638,690	1,676,347	1,493,534	1,562,517
2	7,798,180	8,847,553	8,824,425	9,102,564	9,082,017	9,372,671	8,911,699	7,207,262	7,495,937	6,906,836	7,204,297	7,319,787	6,990,740	6,900,601	7,088,489	6,593,723	6,443,498	6,319,812	5,712,653	5,503,560
3	7,798,180	8,847,553	8,824,425	9,102,564	9,082,017	9,373,153	8,903,564	7,225,769	7,585,462	6,962,208	7,248,461	7,618,654	7,103,533	6,965,863	7,176,635	6,674,296	6,484,193	6,389,523	5,772,117	5,562,971
4	7,802,700	8,850,225	8,827,595	9,121,926	9,074,361	6,104,476	3,910,146	2,434,913	1,377,249	631,946	452,432	305,083	236,286	174,899	179,912	178,461	198,545	187,431	213,079	220,475
5	7,802,700	8,850,225	8,827,595	9,121,926	9,074,361	9,341,065	7,957,148	5,640,149	4,778,629	3,966,585	4,101,474	4,201,266	3,794,862	3,734,374	3,910,275	3,500,673	3,433,319	3,069,046	2,840,829	2,783,594
6	7,802,700	8,850,225	8,827,595	9,121,926	9,074,361	9,350,960	8,894,579	7,256,371	7,570,028	6,970,129	7,275,567	7,655,116	7,156,989	7,008,752	7,222,484	6,742,191	6,525,768	6,453,568	5,864,519	5,593,241
7	7,853,001	8,864,765	8,849,171	9,064,171	6,462,254	2,164,128	679,168	931,388	221,532	52,241	51,756	60,737	60,538	34,132	46,080	33,361	23,699	11,369	11,386	9,445
8	7,853,001	8,864,765	8,849,171	9,064,171	6,462,254	4,700,799	3,797,432	3,999,482	2,591,731	1,669,009	1,258,587	1,806,159	1,827,921	1,672,035	1,739,132	1,431,236	1,044,600	861,321	737,892	699,374
9	7,853,001	8,864,765	8,849,171	9,064,171	6,462,254	5,154,133	6,958,743	7,232,541	6,415,264	4,232,324	4,471,563	5,856,617	6,957,097	6,710,424	7,183,545	6,757,639	6,125,535	5,980,641	5,937,829	5,715,514
10	7,864,619	8,942,506	8,969,804	9,281,627	9,312,355	9,641,826	6,924,706	4,065,918	3,888,953	3,213,242	2,937,620	2,765,591	2,015,595	1,910,850	2,127,334	2,082,101	2,271,220	2,382,517	2,254,507	2,331,305
11	7,864,619	8,942,506	8,969,804	9,281,627	9,312,355	9,636,742	9,260,182	7,661,747	8,013,822	7,490,509	7,816,054	8,005,108	7,733,108	7,718,201	7,960,445	7,540,440	7,450,799	7,422,470	6,910,732	6,745,746
12	7,864,619	8,942,506	8,969,804	9,281,627	9,312,355	9,636,594	9,251,976	7,680,989	8,100,313	7,542,600	7,854,316	8,282,861	7,833,022	7,774,256	8,034,463	7,609,685	7,484,392	7,487,896	6,968,671	6,794,213
13	7,869,496	8,945,129	8,972,806	9,299,660	9,303,757	6,431,465	4,278,446	2,784,274	1,635,683	795,697	582,617	400,298	323,841	251,856	254,222	257,964	281,812	299,505	334,624	379,413
14	7,869,496	8,945,129	8,972,806	9,299,660	9,303,757	9,605,263	8,338,206	6,100,115	5,297,876	4,492,097	4,672,962	4,852,506	4,446,419	4,468,678	4,737,417	4,345,867	4,323,791	4,004,446	3,860,586	3,837,740
15	7,869,496	8,945,129	8,972,806	9,299,660	9,303,757	9,614,472	9,242,554	7,709,500	8,084,028	7,547,682	7,879,388	8,316,618	7,884,695	7,813,031	8,076,567	7,672,706	7,521,760	7,543,838	7,060,070	6,820,301
16	7,919,438	8,959,440	8,994,035	9,243,636	6,734,338	2,382,773	794,446	1,103,686	290,254	80,313	74,294	96,146	102,018	67,493	79,975	76,700	51,272	25,478	22,285	26,002
17	7,919,438	8,959,440	8,994,035	9,243,636	6,734,338	5,031,631	4,164,395	4,411,802	2,991,291	1,993,680	1,575,138	2,237,037	2,283,575	2,181,695	2,298,379	1,965,642	1,455,671	1,259,290	1,140,439	1,091,991
18	7,919,438	8,959,440	8,994,035	9,243,636	6,734,338	5,476,603	7,330,425	7,684,694	6,933,060	4,761,247	5,052,808	6,537,235	7,686,591	7,516,473	8,042,397	7,679,456	7,130,397	7,006,270	7,132,827	6,936,239
19	7,927,255	9,038,347	9,109,896	9,449,786	9,523,663	9,876,524	7,216,652	4,469,668	4,357,336	3,682,841	3,449,275	3,315,285	2,489,384	2,419,061	2,700,000	2,721,711	2,990,250	3,174,117	3,078,709	3,221,813
20	7,927,255	9,038,347	9,109,896	9,449,786	9,523,663	9,870,866	9,476,001	8,085,288	8,480,909	8,029,776	8,380,130	8,620,403	8,394,897	8,453,203	8,737,170	8,393,238	8,365,629	8,403,454	7,989,239	7,884,476
21	7,927,255	9,038,347	9,109,896	9,449,786	9,523,663	9,870,776	9,467,597	8,102,275	8,563,102	8,078,566	8,415,292	8,883,238	8,488,684	8,495,475	8,790,405	8,447,976	8,386,353	8,458,198	8,034,808	7,915,006
22	7,932,537	9,040,870	9,112,521	9,466,752	9,514,495	6,742,478	4,645,063	3,135,687	1,921,274	949,399	680,118	488,674	411,226	325,226	336,350	352,715	413,703	457,527	517,265	619,298
23	7,932,537	9,040,870	9,112,521	9,466,752	9,514,495	9,840,338	8,571,257	6,541,829	5,797,055	5,017,748	5,236,755	5,490,641	5,114,895	5,218,550	5,571,737	5,207,872	5,213,586	4,979,723	4,876,100	4,908,821
24	7,932,537	9,040,870	9,112,521	9,466,752	9,514,495	9,848,556	9,458,442	8,129,222	8,546,152	8,082,097	8,439,152	8,912,591	8,534,920	8,530,082	8,827,644	8,504,816	8,417,747	8,505,944	8,120,577	7,939,025
25	7,982,173	9,055,090	9,133,762	9,411,850	6,986,834	2,615,076	895,347	1,269,347	342,595	105,763	92,881	126,384	124,150	84,544	87,715	93,536	76,253	57,820	47,651	63,884
26	7,982,173	9,055,090	9,133,762	9,411,850	6,986,834	5,354,740	4,526,937	4,829,302	3,410,549	2,361,294	1,905,377	2,716,449	2,793,336	2,750,682	2,908,987	2,579,860	1,981,477	1,778,880	1,659,624	1,635,109
27	7,982,173	9,055,090	9,133,762	9,411,850	6,986,834	5,788,341	7,579,760	8,105,689	7,406,675	5,283,799	5,624,591	7,177,806	8,341,280	8,242,375	8,795,753	8,507,619	8,041,682	7,975,198	8,185,380	8,047,904
Expected	7,879,824	8,948,272	8,976,024	9,278,431	8,658,806	7,931,474	6,947,898	5,625,444	5,111,030	4,324,021	4,390,358	4,683,140	4,487,855	4,437,622	4,644,142	4,352,172	4,225,645	4,121,788	3,913,805	3,845,079

KCPL

2014 IRP Results - Plan ABBKA
Non-Firm Sales Revenues

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Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	278,041,568	294,525,344	333,166,560	376,631,168	413,173,472	572,006,592	535,449,824	309,904,896	331,374,560	288,707,360	272,276,800	268,014,592	187,896,496	178,437,056	200,521,424	192,084,736	214,056,624	218,256,880	201,166,480	215,534,816
2	278,041,568	294,525,344	333,166,560	376,631,168	413,173,472	499,277,888	561,969,152	452,346,592	509,198,336	501,711,488	550,079,296	577,054,016	566,629,568	582,819,712	613,970,432	601,631,552	617,895,424	613,521,728	585,231,360	580,392,384
3	278,041,568	294,525,344	333,166,560	376,631,168	413,173,472	478,739,520	491,766,528	384,364,928	428,885,888	422,915,072	459,150,656	489,504,032	474,336,608	484,361,280	513,108,832	510,385,856	525,022,848	529,483,968	503,946,720	499,448,608
4	259,021,632	284,147,200	314,449,280	332,336,576	331,062,784	323,940,928	294,863,200	195,000,992	126,464,256	60,311,844	44,660,300	31,474,228	24,046,132	17,786,812	18,478,662	19,212,418	21,960,198	20,894,304	25,462,774	27,638,674
5	259,021,632	284,147,200	314,449,280	332,336,576	331,062,784	394,821,344	421,980,832	325,885,632	288,941,056	250,233,152	268,671,616	291,392,320	270,963,392	275,119,424	294,824,448	273,494,112	275,101,888	248,253,568	241,853,824	245,097,200
6	259,021,632	284,147,200	314,449,280	332,336,576	331,062,784	372,816,608	392,147,968	338,778,080	349,720,512	335,161,312	358,621,248	394,471,904	390,110,400	394,671,008	417,308,352	409,552,704	406,801,728	410,963,968	394,925,344	387,189,248
7	242,289,072	274,703,392	296,429,120	289,135,648	191,479,616	100,511,320	48,182,200	71,929,568	18,623,760	4,239,773	4,168,982	5,138,506	5,118,994	2,862,443	3,735,470	2,865,532	1,953,264	952,360	1,073,337	902,243
8	242,289,072	274,703,392	296,429,120	289,135,648	191,479,616	160,736,448	174,247,824	212,293,616	139,475,360	92,294,712	72,283,664	111,862,368	116,514,968	109,392,064	115,967,328	97,786,344	71,723,920	59,881,732	53,278,840	52,206,520
9	242,289,072	274,703,392	296,429,120	289,135,648	191,479,616	159,050,832	236,111,824	288,093,696	236,339,264	154,801,664	163,635,616	229,836,000	288,625,696	285,057,056	312,948,288	303,812,864	273,628,736	275,458,288	285,735,552	287,877,536
10	280,524,320	297,967,872	339,207,936	384,763,168	424,739,328	589,505,216	569,436,544	344,211,264	378,099,552	337,102,144	327,566,304	331,282,656	240,887,984	233,361,392	266,146,464	266,857,456	297,990,464	311,568,096	305,456,352	324,043,680
11	280,524,320	297,967,872	339,207,936	384,763,168	424,739,328	514,840,960	585,870,784	483,056,480	546,921,984	546,991,232	600,277,056	634,600,448	630,557,568	656,158,656	694,814,144	693,706,624	721,079,232	727,725,504	715,865,472	720,118,400
12	280,524,320	297,967,872	339,207,936	384,763,168	424,739,328	493,650,272	512,760,896	410,598,976	460,500,576	461,060,448	500,949,248	535,974,336	526,881,696	544,800,576	579,775,616	587,447,936	612,219,456	627,371,072	615,917,632	618,044,416
13	261,339,552	287,457,088	320,125,728	339,444,736	340,244,576	341,685,344	323,007,072	223,471,168	150,537,232	76,285,488	57,805,460	41,554,408	33,115,628	25,806,076	26,295,372	27,866,646	31,227,654	33,790,592	40,301,020	47,778,652
14	261,339,552	287,457,088	320,125,728	339,444,736	340,244,576	407,137,792	443,248,864	353,583,104	321,205,280	284,359,200	307,430,176	337,967,296	318,989,728	331,032,128	359,364,288	341,767,072	348,620,800	326,439,552	331,128,992	340,957,024
15	261,339,552	287,457,088	320,125,728	339,444,736	340,244,576	384,445,184	408,852,192	361,717,920	375,393,312	365,161,408	390,983,232	431,574,144	432,948,256	443,434,624	470,909,984	470,448,704	473,586,080	485,710,528	481,204,640	478,403,616
16	244,425,680	277,879,392	301,745,248	295,377,024	199,847,152	110,832,320	56,270,476	85,382,088	24,357,936	6,477,003	5,923,096	8,177,186	8,642,572	5,758,084	6,530,388	6,512,091	4,211,294	2,119,120	1,915,150	2,487,721
17	244,425,680	277,879,392	301,745,248	295,377,024	199,847,152	172,358,800	191,343,136	234,779,712	161,426,864	110,730,296	90,964,064	139,316,032	146,465,712	143,726,464	154,395,136	135,492,336	100,814,880	88,300,248	83,145,592	82,292,520
18	244,425,680	277,879,392	301,745,248	295,377,024	199,847,152	169,273,968	249,353,216	307,603,232	256,538,624	174,837,920	185,899,984	257,975,568	320,950,368	321,491,040	353,177,792	348,235,936	321,227,616	325,995,008	347,245,344	353,911,008
19	282,871,936	301,426,528	345,017,216	392,417,408	435,400,960	605,356,096	593,785,984	378,945,152	424,386,464	387,230,912	385,695,424	398,296,864	298,751,424	296,447,264	338,995,008	350,170,048	393,629,280	416,490,176	419,096,128	449,997,120
20	282,871,936	301,426,528	345,017,216	392,417,408	435,400,960	528,811,296	600,963,456	511,834,880	581,286,400	589,188,288	646,823,168	686,750,144	688,077,824	722,734,656	767,637,760	777,483,968	815,929,600	830,720,896	835,118,784	850,097,472
21	282,871,936	301,426,528	345,017,216	392,417,408	435,400,960	507,065,184	526,003,104	435,058,176	489,275,680	496,613,056	539,836,416	578,359,040	574,489,792	599,374,976	639,288,832	657,305,664	691,966,592	715,135,040	717,125,376	727,871,104
22	263,534,048	290,781,280	325,580,352	346,144,480	348,705,728	358,570,560	351,066,272	252,192,096	177,087,280	91,450,736	67,840,744	50,821,764	42,404,324	33,429,434	35,121,916	38,452,584	46,302,200	52,195,528	62,737,020	78,714,200
23	263,534,048	290,781,280	325,580,352	346,144,480	348,705,728	418,199,936	456,545,952	380,228,672	352,279,616	318,541,824	345,714,560	383,706,176	368,269,152	388,202,784	424,583,360	411,630,272	422,563,488	408,288,000	420,819,296	439,075,904
24	263,534,048	290,781,280	325,580,352	346,144,480	348,705,728	394,886,496	419,461,824	383,126,080	398,756,096	393,178,656	421,134,464	465,322,688	471,570,848	487,449,952	518,686,048	525,493,312	534,502,944	552,643,776	558,891,904	563,112,576
25	246,448,288	281,073,216	306,864,448	301,248,384	207,628,944	121,762,640	63,458,608	98,452,624	28,837,008	8,452,771	7,389,822	10,557,575	10,340,270	7,071,848	7,079,610	7,854,728	6,265,230	4,723,427	4,173,952	6,192,541
26	246,448,288	281,073,216	306,864,448	301,248,384	207,628,944	183,715,232	208,270,720	257,507,472	184,502,336	131,629,672	110,506,360	169,873,104	180,130,672	182,302,688	196,631,920	179,132,496	138,285,424	125,575,488	121,935,224	124,511,832
27	246,448,288	281,073,216	306,864,448	301,248,384	207,628,944	179,143,408	258,382,688	325,869,888	275,175,264	194,665,856	207,793,728	284,545,472	350,220,352	354,679,936	388,906,656	388,516,640	364,869,664	373,981,888	402,148,192	415,077,760
Expected	**261,876,277**	**287,694,270**	**320,246,618**	**339,653,378**	**326,085,705**	**363,409,042**	**384,861,791**	**322,806,138**	**304,320,546**	**269,579,408**	**282,837,946**	**310,916,320**	**303,510,484**	**310,286,497**	**333,150,837**	**326,770,078**	**330,249,251**	**327,830,994**	**327,070,133**	**332,911,290**
AAAKA Expected	**261876277**	**287694270**	**339641654**	**358702366**	**344425420**	**383559545.3**	**407465268.1**	**411057731.8**	**375557760.4**	**310980666.1**	**322333012.5**	**347798737.3**	**343814317.2**	**354272500.3**	**378844011.4**	**379951699.6**	**392430702.4**	**392282483.6**	**398611833.4**	**412298841.5**
DIFF	0	0	-19,395,036	-19,048,988	-18,339,715	-20,150,504	-22,603,477	-88,251,594	-71,237,215	-41,401,258	-39,495,066	-36,882,417	-40,303,833	-43,986,003	-45,693,175	-53,181,621	-62,181,451	-64,451,489	-71,541,701	-79,387,552

2017-2026 -397,714,067
2017-2020 -80,142,684

	Decrease in NF Sales	Increase in NF Purchases	Net Increase in NF Costs
2017 - 2020			
KCP&L	$80.1	$1.2	$81.3
KCP&L-GMO			
Total KCPL			
2017-2026			
KCP&L	$397.7	$10.1	$407.8
KCP&L-GMO			
Total KCPL			

KCPL

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan ABBKA
Non-Firm Purchase Quantities

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	55,211	57,675	31,219	22,712	26,892	9,680	159,476	501,877	428,614	725,866	769,404	840,500	1,405,820	1,519,397	1,378,946	1,411,689	1,292,305	1,186,662	1,342,393	1,334,349
2	55,211	57,675	31,219	22,712	26,892	9,717	5,896	50,030	33,372	61,037	68,377	54,386	104,270	94,311	88,053	122,497	136,820	143,413	197,097	224,933
3	55,211	57,675	31,219	22,712	26,892	9,717	5,896	51,133	33,203	60,731	68,126	53,716	101,745	91,307	86,053	120,762	132,848	132,057	190,983	223,233
4	55,174	57,631	33,058	22,712	25,608	152,431	369,974	742,598	1,281,965	2,258,560	2,549,618	2,722,792	3,088,981	3,240,024	3,187,847	3,358,290	3,277,006	3,235,013	3,363,603	3,322,936
5	55,174	57,631	33,058	22,712	25,608	9,235	51,621	155,242	191,783	432,663	429,657	346,748	501,265	467,903	410,307	566,054	636,755	638,887	723,234	771,031
6	55,174	57,631	33,058	22,712	25,608	9,284	5,805	50,400	36,067	60,627	66,704	51,912	99,680	90,323	82,833	119,403	130,134	132,522	184,674	222,605
7	53,823	57,442	31,219	21,686	111,040	906,854	2,179,115	1,886,912	3,033,761	4,019,198	4,201,554	3,941,357	4,124,168	4,257,668	4,142,417	4,370,447	4,531,357	4,620,240	4,792,524	4,749,334
8	53,823	57,442	31,219	21,686	111,040	206,218	363,249	375,178	642,637	1,238,636	1,448,967	1,057,640	1,118,650	1,168,735	1,144,573	1,364,970	1,772,798	1,933,308	2,180,169	2,205,848
9	53,823	57,442	31,219	21,686	111,040	210,772	150,381	50,264	77,745	398,432	358,282	164,700	122,297	104,255	82,537	118,666	157,977	166,510	172,094	208,211
10	51,184	53,207	26,813	19,199	21,151	6,460	126,447	402,774	319,502	541,795	571,412	646,301	1,126,726	1,195,588	1,024,993	1,029,632	865,863	748,600	891,357	871,108
11	51,184	53,207	26,813	19,199	21,151	6,473	2,386	33,754	19,224	35,041	38,823	28,372	64,424	46,710	41,531	61,745	57,390	62,914	96,392	82,159
12	51,184	53,207	26,813	19,199	21,151	6,473	2,386	34,317	19,014	35,025	38,717	27,886	63,192	45,296	38,142	61,429	55,234	58,318	93,789	81,189
13	51,157	53,191	28,532	19,199	20,294	124,363	296,851	594,432	1,063,955	2,000,239	2,267,645	2,390,203	2,771,094	2,880,308	2,820,499	2,926,955	2,875,135	2,771,018	2,838,561	2,741,655
14	51,157	53,191	28,532	19,199	20,294	6,183	37,074	112,125	129,226	304,016	319,972	241,809	340,345	301,403	259,916	342,063	395,122	335,675	443,510	468,998
15	51,157	53,191	28,532	19,199	20,294	6,183	2,316	33,731	20,817	34,538	37,656	26,886	62,540	44,800	35,561	61,257	52,672	58,371	90,390	79,458
16	49,944	53,094	26,813	18,429	95,258	788,570	2,016,268	1,678,837	2,780,219	3,751,432	3,915,400	3,601,819	3,795,182	3,894,893	3,819,789	3,991,984	4,130,568	4,208,273	4,427,952	4,311,752
17	49,944	53,094	26,813	18,429	95,258	162,260	284,322	293,150	486,664	1,029,700	1,135,999	785,579	854,354	831,155	810,227	980,818	1,355,279	1,435,444	1,642,142	1,629,125
18	49,944	53,094	26,813	18,429	95,258	168,113	118,866	33,693	48,103	280,375	269,942	107,661	73,656	54,321	35,450	60,661	72,665	81,482	86,292	69,154
19	47,455	49,135	22,993	15,992	16,553	4,038	103,642	315,681	236,687	407,055	411,073	476,009	901,474	930,469	745,131	773,617	577,208	443,507	552,786	517,203
20	47,455	49,135	22,993	15,992	16,553	4,038	1,236	22,190	10,423	19,596	22,914	14,716	35,665	19,227	18,544	31,512	22,688	24,577	39,631	23,036
21	47,455	49,135	22,993	15,992	16,553	4,038	1,236	22,409	10,143	19,596	22,844	14,423	35,543	19,138	15,397	31,391	22,360	22,190	38,428	22,805
22	47,445	49,135	24,548	15,992	16,066	98,082	240,789	476,819	857,158	1,776,723	2,019,607	2,099,190	2,427,768	2,559,415	2,387,827	2,544,751	2,403,805	2,258,455	2,365,752	2,214,446
23	47,445	49,135	24,548	15,992	16,066	3,992	26,558	79,377	87,304	217,831	227,937	158,031	207,760	186,299	157,786	211,317	257,808	159,387	262,704	269,964
24	47,445	49,135	24,548	15,992	16,066	3,992	1,227	21,915	10,705	18,966	22,440	14,189	35,165	18,911	13,423	31,178	20,912	22,067	37,082	22,337
25	46,350	49,112	22,993	15,620	81,785	675,842	1,848,410	1,488,624	2,564,333	3,528,511	3,629,002	3,316,863	3,503,227	3,574,180	3,463,830	3,657,852	3,702,001	3,792,112	4,040,804	3,818,025
26	46,350	49,112	22,993	15,620	81,785	123,376	227,828	222,175	357,093	831,070	878,877	569,388	619,819	587,482	547,714	688,946	968,729	1,025,005	1,218,497	1,165,399
27	46,350	49,112	22,993	15,620	81,785	130,275	98,721	21,915	27,946	201,051	193,004	67,249	39,524	25,456	13,423	30,844	32,762	35,806	36,083	18,536
Expected	50,935	53,266	27,814	19,092	39,601	100,066	225,932	284,631	433,090	758,442	820,467	745,130	874,685	885,919	842,017	926,482	972,881	958,291	1,054,682	1,037,605

KCPL

2014 IRP Results - Plan ABBKA
Non-Firm Purchases Cost

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	2,106,025	2,496,535	1,214,252	1,111,564	1,436,067	764,808	12,323,610	41,755,264	41,534,904	76,563,560	86,605,744	101,571,896	168,525,808	184,940,640	171,436,272	179,876,992	169,372,768	155,713,952	181,372,864	185,653,584
2	2,106,025	2,496,535	1,214,252	1,111,564	1,436,067	682,886	500,875	3,628,086	2,910,317	5,393,312	6,118,668	5,364,932	10,829,775	9,694,885	9,138,445	13,140,409	15,727,319	17,591,278	23,155,564	27,051,440
3	2,106,025	2,496,535	1,214,252	1,111,564	1,436,067	659,424	471,894	3,158,475	2,483,850	4,588,590	5,135,049	4,417,858	8,895,919	7,867,001	7,536,534	11,108,916	13,041,301	14,045,251	19,358,436	23,100,798
4	1,948,278	2,388,098	1,226,258	974,450	1,072,940	8,006,382	28,001,716	60,129,452	119,340,520	223,995,504	268,635,808	306,426,656	346,842,304	365,258,432	361,604,192	390,513,408	385,485,696	379,347,136	410,100,224	416,375,200
5	1,948,278	2,388,098	1,226,258	974,450	1,072,940	471,529	2,730,452	9,175,833	11,818,638	27,712,184	28,988,888	25,032,164	37,660,320	35,665,048	32,361,724	45,581,852	52,938,108	54,408,560	63,365,468	69,610,648
6	1,948,278	2,388,098	1,226,258	974,450	1,072,940	452,713	392,241	2,727,357	2,179,689	3,623,808	3,869,942	3,388,957	7,275,477	6,260,958	5,871,524	8,689,611	9,799,262	10,815,024	14,422,878	17,967,404
7	1,767,390	2,279,212	1,073,977	788,161	3,427,984	42,682,068	151,422,896	145,468,256	260,038,480	354,922,176	386,435,392	391,133,536	411,772,928	421,996,000	412,544,096	443,304,864	451,919,872	461,070,432	499,400,832	515,215,104
8	1,767,390	2,279,212	1,073,977	788,161	3,427,984	7,318,612	16,819,502	20,268,038	35,889,960	71,118,272	87,157,528	68,431,040	75,488,552	80,182,464	80,994,880	98,488,848	128,931,368	141,224,928	164,843,296	172,190,736
9	1,767,390	2,279,212	1,073,977	788,161	3,427,984	6,696,111	5,059,801	2,312,465	3,155,220	14,782,217	13,565,455	6,861,674	6,446,588	5,208,408	4,353,719	6,307,372	8,048,700	9,191,205	9,574,794	12,168,634
10	1,950,550	2,304,126	1,038,484	945,218	1,124,421	511,082	9,674,693	33,416,136	30,956,746	56,939,412	64,096,816	78,021,096	134,683,808	144,811,408	126,826,640	130,437,584	112,896,824	97,878,168	119,786,936	120,565,496
11	1,950,550	2,304,126	1,038,484	945,218	1,124,421	456,057	201,324	2,432,445	1,699,041	3,076,007	3,420,187	2,829,649	6,728,604	4,762,192	4,313,590	6,476,846	6,528,467	7,831,894	11,089,699	9,828,920
12	1,950,550	2,304,126	1,038,484	945,218	1,124,421	440,395	198,629	2,105,726	1,445,144	2,637,904	2,870,698	2,311,782	5,550,240	3,869,596	3,360,204	5,557,570	5,369,664	6,325,922	9,341,756	8,377,678
13	1,804,710	2,204,542	1,055,276	828,370	848,141	6,562,958	22,373,848	48,027,964	99,049,360	198,131,744	239,000,128	269,593,024	311,814,176	325,965,344	320,347,680	341,464,800	339,050,592	326,319,200	347,084,032	343,925,376
14	1,804,710	2,204,542	1,055,276	828,370	848,141	314,968	1,911,790	6,597,788	7,937,926	19,394,580	21,464,200	17,438,920	25,582,244	22,748,554	20,308,830	27,248,816	32,573,848	28,485,352	38,430,432	41,932,180
15	1,804,710	2,204,542	1,055,276	828,370	848,141	300,481	166,408	1,813,103	1,275,278	2,044,037	2,148,396	1,765,645	4,591,416	3,069,495	2,542,977	4,410,780	3,930,208	4,854,607	6,931,590	6,386,152
16	1,638,883	2,106,914	918,680	672,093	2,927,776	37,120,652	140,166,208	129,377,328	238,872,864	331,577,952	360,784,640	358,859,296	379,845,088	387,795,808	381,983,488	406,751,520	413,848,640	422,091,264	463,586,976	470,523,168
17	1,638,883	2,106,914	918,680	672,093	2,927,776	5,781,223	13,098,941	15,772,824	27,174,564	59,005,772	68,347,784	50,817,028	57,717,008	57,016,724	57,335,960	70,674,944	98,482,728	104,917,976	123,947,056	127,150,368
18	1,638,883	2,106,914	918,680	672,093	2,927,776	5,371,289	3,962,938	1,541,625	1,941,232	10,342,989	10,174,410	4,437,418	3,940,552	2,630,993	1,888,451	3,200,813	3,636,155	4,474,649	4,706,806	4,023,878
19	1,805,616	2,127,186	886,588	790,209	872,567	319,676	7,897,756	26,149,424	22,952,478	42,582,000	46,043,008	57,326,040	107,496,440	112,192,360	92,005,368	97,317,664	74,930,912	57,620,548	74,038,704	71,190,104
20	1,805,616	2,127,186	886,588	790,209	872,567	284,891	106,369	1,582,472	940,848	1,714,910	1,951,221	1,493,096	3,709,219	1,927,297	1,922,724	3,222,136	2,577,127	3,059,913	4,442,534	2,638,262
21	1,805,616	2,127,186	886,588	790,209	872,567	275,143	101,612	1,360,418	787,670	1,474,319	1,632,899	1,213,816	3,102,917	1,609,864	1,359,512	2,774,431	2,174,086	2,409,864	3,740,374	2,255,486
22	1,671,233	2,035,442	904,765	692,367	667,830	5,182,288	18,084,276	38,556,200	79,865,800	175,974,560	213,149,152	237,539,616	273,910,976	290,550,112	271,951,552	297,513,696	283,735,552	266,369,712	289,635,040	277,476,672
23	1,671,233	2,035,442	904,765	692,367	667,830	203,895	1,352,771	4,645,446	5,366,844	13,818,349	15,234,600	11,414,664	15,569,255	13,918,512	12,232,257	16,713,665	21,052,300	13,383,609	22,620,110	23,906,154
24	1,671,233	2,035,442	904,765	692,367	667,830	194,539	87,161	1,164,840	670,534	1,116,206	1,243,678	948,051	2,558,983	1,272,728	962,407	2,206,773	1,556,186	1,836,830	2,766,446	1,730,956
25	1,518,938	1,947,778	784,372	570,748	2,504,518	31,807,942	128,512,736	114,688,576	220,652,512	312,290,848	335,253,440	331,545,504	351,765,568	357,784,544	348,655,200	374,416,672	372,939,904	382,812,800	425,228,800	418,352,544
26	1,518,938	1,947,778	784,372	570,748	2,504,518	4,402,670	10,459,900	11,936,699	19,937,930	47,560,948	52,856,160	36,752,408	41,836,076	40,215,776	38,807,232	49,570,604	70,323,560	74,731,528	91,605,720	90,688,080
27	1,518,938	1,947,778	784,372	570,748	2,504,518	4,172,247	3,272,508	993,223	1,117,472	7,360,839	7,279,690	2,768,799	2,113,349	1,205,161	718,368	1,602,840	1,625,796	1,945,316	1,931,890	1,054,236
ABBKA Expected	**$1,802,169**	**$2,208,627**	**$1,022,292**	**$821,401**	**$1,451,227**	**$4,452,165**	**$14,702,518**	**$20,765,731**	**$35,494,751**	**$63,263,517**	**$72,313,151**	**$73,282,936**	**$87,094,417**	**$89,145,665**	**$85,753,749**	**$95,227,778**	**$98,599,194**	**$97,047,629**	**$109,672,349**	**$111,045,255**
			Montrose 1					**Monstrose 2-3**												
AAAKA Expected	**$1,802,169**	**$2,208,627**	**$894,981**	**$526,101**	**$1,008,961**	**$4,059,431**	**$14,682,097**	**$18,251,636**	**$33,961,275**	**$62,213,463**	**$71,502,755**	**$72,508,028**	**$84,848,352**	**$87,621,811**	**$84,605,059**	**$93,377,282**	**$96,318,580**	**$93,802,379**	**$105,830,056**	**$106,626,976**
Difference	$0	$0	$127,311	$295,301	$442,266	$392,734	$20,420	$2,514,095	$1,533,476	$1,050,054	$810,396	$774,908	$2,246,065	$1,523,854	$1,148,690	$1,850,495	$2,280,615	$3,245,250	$3,842,293	$4,418,280
2017-2026	**$10,079,714**																			
2017-2020	$1,150,720																			

KCPL

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan ABBKA

Endpoint	Joint prob
1	1.6%
2	3.1%
3	1.6%
4	3.1%
5	6.3%
6	3.1%
7	1.6%
8	3.1%
9	1.6%
10	3.1%
11	6.3%
12	3.1%
13	6.3%
14	12.5%
15	6.3%
16	3.1%
17	6.3%
18	3.1%
19	1.6%
20	3.1%
21	1.6%
22	3.1%
23	6.3%
24	3.1%
25	1.6%
26	3.1%
27	1.6%

KCPL - GMO

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AAAGA
Non-Firm Sales Quantities

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	389,485	407,199	725,279	573,793	571,585	316,297	82,706	20,473	9,367	224	303	649	1,793	3,079	2,399	678	2,281	3,044	6,092	2,807
2	389,485	407,199	725,279	573,793	571,585	577,755	441,435	300,332	279,693	155,116	155,865	101,448	133,697	123,145	77,824	112,539	139,338	130,709	124,085	70,575
3	389,485	407,199	725,279	573,793	571,585	577,799	573,010	572,700	575,792	495,819	487,070	475,176	468,396	433,007	408,710	368,540	360,215	332,494	303,219	190,239
4	389,485	406,578	724,633	425,999	387,146	159,684	24,972	7,733	4,964	0	0	0	269	68	99	6	44	57	348	89
5	389,485	406,578	724,633	425,999	387,146	318,198	232,542	245,772	182,636	18,076	17,735	14,038	16,657	14,759	11,288	9,140	8,429	6,438	9,395	4,998
6	389,485	406,578	724,633	425,999	387,146	442,579	544,889	568,593	560,933	243,790	252,412	272,415	309,028	292,719	284,032	257,716	264,018	244,314	242,579	147,394
7	387,851	405,297	723,760	255,228	220,129	11,579	15,159	5,574	1,606	0	0	0	0	0	0	0	0	0	0	0
8	387,851	405,297	723,760	255,228	220,129	94,142	39,048	53,849	13,807	8,474	6,647	6,109	10,207	4,448	4,541	3,768	1,917	1,933	4,141	1,433
9	387,851	405,297	723,760	255,228	220,129	202,158	212,324	305,966	228,085	20,786	19,128	21,635	31,504	27,986	19,198	16,680	11,998	12,470	20,882	11,236
10	395,808	417,350	753,080	609,103	613,771	356,353	105,271	20,774	11,696	293	541	1,477	3,876	5,577	3,001	1,238	2,829	5,435	8,862	1,821
11	395,808	417,350	753,080	609,103	613,771	634,999	495,314	343,117	327,556	174,465	189,453	130,477	175,388	164,759	100,711	158,939	181,996	176,284	170,860	83,993
12	395,808	417,350	753,080	609,103	613,771	634,883	636,714	632,525	638,436	571,036	580,577	587,856	587,791	548,304	524,765	491,058	476,374	444,257	411,996	255,284
13	395,808	416,722	752,390	454,716	420,036	170,127	29,077	9,566	5,673	0	0	0	794	239	43	62	93	78	6	0
14	395,808	416,722	752,390	454,716	420,036	355,488	268,367	270,466	207,111	23,403	21,714	18,685	23,516	23,923	15,889	15,573	10,944	12,726	14,977	5,282
15	395,808	416,722	752,390	454,716	420,036	489,484	608,249	629,361	622,326	282,712	307,045	353,259	400,476	378,062	369,192	347,958	350,671	330,594	330,760	202,877
16	394,165	415,446	751,535	273,548	234,602	13,511	16,901	6,920	2,071	0	0	0	0	0	0	0	0	0	0	0
17	394,165	415,446	751,535	273,548	234,602	107,401	46,220	57,770	16,976	10,945	8,815	8,551	15,551	8,340	6,763	5,617	2,280	2,683	5,037	605
18	394,165	415,446	751,535	273,548	234,602	227,211	244,780	348,633	260,236	27,245	22,983	29,275	46,716	42,617	27,257	29,812	16,479	20,754	32,646	14,080
19	406,856	434,488	795,616	661,920	675,218	401,884	127,017	30,311	18,495	543	623	2,038	6,288	4,159	4,623	2,222	5,676	9,730	13,465	3,479
20	406,856	434,488	795,616	661,920	675,218	700,067	563,999	410,194	402,561	247,352	272,927	181,356	227,860	220,184	209,397	241,251	261,771	251,608	274,903	152,089
21	406,856	434,488	795,616	661,920	675,218	699,815	709,691	734,685	762,768	711,846	705,776	719,399	728,872	708,406	700,263	670,116	651,943	623,773	615,646	410,396
22	406,856	433,850	794,899	498,546	468,234	195,444	33,212	12,825	7,205	17	0	0	1,616	142	80	35	242	178	606	73
23	406,856	433,850	794,899	498,546	468,234	401,198	312,529	318,790	259,528	28,744	28,629	22,521	28,620	22,692	26,524	20,159	18,795	23,314	22,098	8,289
24	406,856	433,850	794,899	498,546	468,234	545,939	679,126	731,744	745,771	382,422	393,282	453,079	494,458	498,519	503,360	500,540	491,717	468,822	500,840	321,406
25	405,183	432,532	794,064	304,056	262,025	15,526	18,913	9,386	2,610	0	0	0	0	0	0	0	0	0	0	0
26	405,183	432,532	794,064	304,056	262,025	119,542	53,898	81,929	24,532	13,864	10,996	11,155	20,675	8,730	9,530	8,007	4,433	5,017	8,561	1,227
27	405,183	432,532	794,064	304,056	262,025	249,888	281,360	416,365	324,812	34,534	32,536	37,965	66,619	54,204	55,326	52,752	29,889	36,724	58,343	29,144
Expected	396,577	418,303	756,036	451,766	426,038	342,792	278,615	266,075	236,610	106,406	109,661	106,407	120,530	113,540	104,117	104,610	104,952	100,371	101,707	59,743

KCPL - GMO

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AAAGA
Non-Firm Sales Revenues

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	12,314,374	12,209,034	24,643,168	20,991,318	23,341,894	18,236,212	7,561,275	2,064,911	1,044,240	23,172	32,238	88,561	194,833	343,126	275,817	80,698	276,705	368,584	766,952	363,222
2	12,314,374	12,209,034	24,643,168	20,991,318	23,341,894	27,635,284	26,095,388	18,019,492	18,561,804	10,965,693	11,829,001	8,097,112	10,704,853	9,619,391	6,345,774	9,574,746	12,135,517	11,555,724	11,622,724	6,738,109
3	12,314,374	12,209,034	24,643,168	20,991,318	23,341,894	26,300,792	29,125,528	28,015,748	30,134,632	28,397,510	28,881,316	28,160,110	28,902,344	27,292,364	26,801,278	25,684,838	26,391,568	25,063,466	24,158,530	15,427,547
4	11,568,513	11,828,872	23,311,490	14,004,723	13,106,507	8,655,763	3,347,896	1,178,820	880,806	0	0	0	27,877	7,166	10,824	597	4,537	5,962	39,309	9,827
5	11,568,513	11,828,872	23,311,490	14,004,723	13,106,507	13,004,396	12,680,177	13,840,747	11,255,370	2,101,910	2,037,417	1,720,924	1,662,566	1,173,955	989,541	794,597	704,811	572,495	844,368	479,241
6	11,568,513	11,828,872	23,311,490	14,004,723	13,106,507	16,588,244	22,876,266	24,892,756	24,618,692	12,286,814	12,326,422	13,434,493	16,309,832	15,106,367	15,185,697	14,318,502	14,996,646	14,119,713	14,975,983	9,149,803
7	10,803,479	11,455,799	22,149,370	7,378,686	6,540,495	1,557,634	2,307,462	996,532	230,282	0	0	0	0	0	0	0	0	0	0	0
8	10,803,479	11,455,799	22,149,370	7,378,686	6,540,495	4,112,322	3,367,830	3,847,067	1,682,988	1,030,446	981,974	1,041,059	1,055,290	388,845	436,849	421,504	121,856	180,757	377,038	132,473
9	10,803,479	11,455,799	22,149,370	7,378,686	6,540,495	6,461,104	7,940,267	12,241,922	8,561,225	1,917,756	1,488,645	1,722,247	2,136,166	1,271,061	1,062,205	865,929	701,233	823,344	1,272,920	649,384
10	12,520,397	12,527,985	25,666,292	22,373,136	25,191,948	20,651,776	9,437,588	2,159,849	1,318,573	30,128	59,682	219,536	427,883	618,665	339,466	144,941	342,321	656,825	1,106,815	236,072
11	12,520,397	12,527,985	25,666,292	22,373,136	25,191,948	30,588,392	29,383,332	20,702,958	21,876,882	12,491,274	14,469,557	10,479,325	14,077,749	12,988,334	8,313,274	13,696,854	16,057,385	15,795,859	16,237,600	8,054,403
12	12,520,397	12,527,985	25,666,292	22,373,136	25,191,948	29,123,174	32,518,452	31,156,426	33,746,956	32,916,784	34,690,788	35,244,216	36,629,976	34,961,176	34,788,404	34,591,384	35,346,924	33,913,676	33,217,546	20,865,906
13	11,761,219	12,137,053	24,274,070	15,002,162	14,278,305	9,294,166	3,781,941	1,418,847	998,558	0	0	0	80,473	24,665	4,511	6,495	9,851	8,227	699	0
14	11,761,219	12,137,053	24,274,070	15,002,162	14,278,305	14,573,871	14,597,344	15,292,318	12,821,257	2,585,225	2,443,361	2,229,576	2,253,776	1,876,605	1,390,283	1,297,042	926,677	1,112,443	1,357,060	548,711
15	11,761,219	12,137,053	24,274,070	15,002,162	14,278,305	18,419,396	25,600,194	27,711,934	27,557,442	14,306,969	15,045,220	17,498,380	21,249,588	19,708,248	19,966,568	19,574,760	20,188,564	19,409,540	20,700,192	12,704,623
16	10,983,210	11,753,767	23,060,352	7,936,784	7,008,545	1,738,834	2,551,222	1,190,240	287,816	0	0	0	0	0	0	0	0	0	0	0
17	10,983,210	11,753,767	23,060,352	7,936,784	7,008,545	4,644,499	3,832,813	4,190,294	2,015,748	1,281,754	1,215,115	1,349,834	1,478,847	672,989	626,222	598,200	146,814	275,498	489,672	91,149
18	10,983,210	11,753,767	23,060,352	7,936,784	7,008,545	7,262,066	9,081,715	14,002,852	9,834,199	2,304,668	1,772,512	2,204,902	2,948,419	1,954,855	1,472,415	1,469,449	961,816	1,278,351	1,924,696	851,131
19	12,877,331	13,061,405	27,206,478	24,425,274	27,858,286	23,352,224	11,238,930	3,042,012	2,029,228	55,359	71,400	323,310	690,637	459,165	521,344	262,521	685,226	1,174,338	1,723,338	449,667
20	12,877,331	13,061,405	27,206,478	24,425,274	27,858,286	33,849,460	33,574,640	24,980,256	27,016,630	17,715,006	20,751,572	14,502,272	18,379,844	17,638,724	17,473,536	21,067,260	23,599,866	22,983,078	26,550,090	14,754,215
21	12,877,331	13,061,405	27,206,478	24,425,274	27,858,286	32,230,254	36,389,528	36,526,320	40,676,780	41,382,336	42,663,648	43,422,688	45,678,776	45,752,388	47,035,696	48,035,912	49,047,256	48,262,048	50,201,448	34,003,824
22	12,095,831	12,652,849	25,726,148	16,509,847	15,975,515	10,644,129	4,223,871	1,791,304	1,211,639	1,621	0	0	159,968	14,041	8,002	3,696	24,875	19,065	63,772	7,849
23	12,095,831	12,652,849	25,726,148	16,509,847	15,975,515	16,501,094	16,904,136	18,092,548	16,006,805	3,073,457	3,023,240	2,666,290	2,705,714	1,903,857	2,296,173	1,714,854	1,585,817	1,987,641	2,002,384	848,581
24	12,095,831	12,652,849	25,726,148	16,509,847	15,975,515	20,637,880	28,670,278	32,465,276	33,221,008	19,084,666	19,406,248	22,567,654	26,281,350	26,360,762	27,626,754	28,637,598	28,729,386	27,952,956	31,686,948	20,350,068
25	11,295,394	12,251,680	24,433,690	8,853,440	7,827,430	1,933,720	2,819,129	1,482,005	351,913	0	0	0	0	0	0	0	0	0	0	0
26	11,295,394	12,251,680	24,433,690	8,853,440	7,827,430	5,143,614	4,320,976	5,562,525	2,588,761	1,560,335	1,430,486	1,645,872	1,905,171	749,673	849,841	812,279	284,705	478,310	790,698	159,760
27	11,295,394	12,251,680	24,433,690	8,853,440	7,827,430	7,996,649	10,347,606	16,792,022	12,266,024	2,720,831	2,203,692	2,692,993	3,936,882	2,577,434	2,768,243	2,521,414	1,614,719	2,084,239	3,253,041	1,648,342
Expected	11,791,960	12,190,817	24,441,097	15,206,647	15,327,897	15,258,632	14,896,423	13,903,485	12,916,365	6,624,883	6,946,053	6,672,184	7,722,664	7,084,936	6,678,861	7,116,478	7,406,250	7,268,147	7,781,931	4,564,908

KCPL - GMO

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AAAGA
Non-Firm Purchase Quantities

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	1,351,239	1,511,933	1,007,995	1,021,741	1,108,078	1,409,453	1,998,889	2,747,144	3,012,664	3,410,224	3,550,232	3,630,287	3,363,240	3,397,966	3,437,674	3,480,555	3,443,396	3,446,790	3,447,786	3,647,560
2	1,351,239	1,511,933	1,007,995	1,021,741	1,108,078	1,119,549	1,234,866	1,481,176	1,523,416	1,813,156	1,912,059	2,051,088	2,065,038	2,061,528	2,263,378	2,204,119	2,185,388	2,300,930	2,336,337	2,674,062
3	1,351,239	1,511,933	1,007,995	1,021,741	1,108,078	1,119,386	1,118,278	1,132,586	1,144,742	1,165,603	1,226,234	1,262,836	1,314,197	1,404,698	1,497,100	1,560,984	1,658,950	1,783,806	1,883,270	2,229,152
4	1,351,267	1,513,860	1,008,022	1,191,391	1,329,585	1,860,432	2,806,553	3,120,090	3,568,568	3,799,172	3,830,178	3,867,214	3,651,990	3,724,162	3,801,762	3,811,370	3,802,674	3,805,952	3,786,698	3,896,736
5	1,351,267	1,513,860	1,008,022	1,191,391	1,329,585	1,447,024	1,638,107	1,681,761	1,815,992	2,850,684	2,977,477	2,998,450	2,993,066	3,025,136	3,115,784	3,177,342	3,227,347	3,281,942	3,321,117	3,528,886
6	1,351,267	1,513,860	1,008,022	1,191,391	1,329,585	1,288,006	1,133,888	1,134,444	1,146,751	1,558,722	1,614,550	1,569,056	1,550,000	1,624,776	1,708,070	1,753,525	1,839,762	1,949,727	1,994,196	2,334,933
7	1,353,175	1,517,248	1,008,078	1,478,130	1,757,942	3,113,434	3,680,871	3,569,348	3,846,512	3,981,228	3,996,349	3,999,880	3,928,432	3,958,174	3,975,406	4,006,016	4,006,640	4,004,676	4,002,956	4,034,664
8	1,353,175	1,517,248	1,008,078	1,478,130	1,757,942	2,097,136	2,579,591	2,276,286	2,972,268	3,476,614	3,596,022	3,560,824	3,232,855	3,346,967	3,398,352	3,460,226	3,531,864	3,620,424	3,630,030	3,785,068
9	1,353,175	1,517,248	1,008,078	1,478,130	1,757,942	1,822,092	1,747,568	1,466,156	1,720,651	2,828,644	2,894,494	2,733,777	2,560,889	2,609,504	2,739,201	2,772,586	2,988,888	3,021,844	2,959,410	3,089,250
10	1,332,091	1,476,605	962,862	956,713	1,020,037	1,300,701	1,866,179	2,628,968	2,887,562	3,276,560	3,432,920	3,515,885	3,204,782	3,251,819	3,245,530	3,289,655	3,227,950	3,209,453	3,200,746	3,454,682
11	1,332,091	1,476,605	962,862	956,713	1,020,037	1,014,964	1,106,478	1,308,156	1,312,654	1,579,266	1,667,913	1,803,445	1,783,258	1,764,434	1,933,413	1,858,268	1,804,370	1,898,438	1,912,662	2,253,542
12	1,332,091	1,476,605	962,862	956,713	1,020,037	1,016,412	991,433	964,361	954,136	946,460	990,306	1,008,782	1,043,733	1,092,433	1,153,203	1,189,797	1,261,938	1,348,442	1,427,307	1,743,482
13	1,332,117	1,478,526	962,779	1,121,678	1,235,477	1,756,776	2,708,272	3,032,359	3,477,232	3,733,449	3,775,726	3,809,884	3,536,960	3,621,156	3,695,550	3,699,434	3,692,243	3,677,354	3,652,442	3,803,810
14	1,332,117	1,478,526	962,779	1,121,678	1,235,477	1,338,538	1,517,395	1,512,841	1,618,243	2,681,240	2,802,034	2,821,685	2,799,328	2,839,914	2,888,006	2,946,877	2,966,176	3,010,302	3,052,663	3,292,722
15	1,332,117	1,478,526	962,779	1,121,678	1,235,477	1,183,970	1,005,209	967,150	958,990	1,327,925	1,358,127	1,305,114	1,268,723	1,310,282	1,365,788	1,393,949	1,448,082	1,534,406	1,557,254	1,856,882
16	1,334,164	1,481,939	962,853	1,403,655	1,666,701	3,042,333	3,633,970	3,501,911	3,821,053	3,959,348	3,976,960	3,978,570	3,890,617	3,925,876	3,939,246	3,955,717	3,981,476	3,973,776	3,963,732	4,009,932
17	1,334,164	1,481,939	962,853	1,403,655	1,666,701	1,990,550	2,472,030	2,130,563	2,838,348	3,359,031	3,504,444	3,446,023	3,065,122	3,195,774	3,205,323	3,277,968	3,361,385	3,442,084	3,448,704	3,660,976
18	1,334,164	1,481,939	962,853	1,403,655	1,666,701	1,716,968	1,621,358	1,295,385	1,516,684	2,655,976	2,709,870	2,536,880	2,315,066	2,365,254	2,439,214	2,459,424	2,673,046	2,686,084	2,590,724	2,722,558
19	1,306,797	1,426,665	903,881	876,988	915,467	1,155,189	1,686,962	2,464,010	2,712,634	3,139,808	3,254,844	3,371,176	2,997,725	3,030,120	2,999,884	3,035,978	2,910,311	2,878,896	2,852,200	3,150,871
20	1,306,797	1,426,665	903,881	876,988	915,467	881,710	941,083	1,121,352	1,104,149	1,314,894	1,349,745	1,494,746	1,458,698	1,401,486	1,478,558	1,406,266	1,371,778	1,415,292	1,409,778	1,735,050
21	1,306,797	1,426,665	903,881	876,988	915,467	882,253	830,797	796,268	774,395	743,509	750,030	723,153	738,443	754,614	794,649	796,322	836,740	869,050	943,417	1,205,644
22	1,306,819	1,428,560	903,979	1,036,758	1,127,339	1,616,092	2,588,068	2,895,078	3,360,410	3,648,474	3,689,123	3,741,103	3,379,928	3,479,202	3,525,423	3,542,913	3,517,199	3,468,337	3,420,436	3,607,215
23	1,306,819	1,428,560	903,979	1,036,758	1,127,339	1,194,343	1,343,773	1,326,003	1,402,432	2,485,788	2,589,520	2,598,076	2,541,444	2,551,493	2,595,830	2,648,452	2,651,244	2,661,106	2,670,609	2,961,656
24	1,306,819	1,428,560	903,979	1,036,758	1,127,339	1,046,439	843,483	797,467	778,773	1,088,285	1,086,084	1,015,040	961,855	971,877	1,014,280	996,495	1,018,440	1,047,013	1,071,907	1,327,888
25	1,308,987	1,431,983	904,141	1,308,390	1,549,189	2,941,165	3,588,572	3,409,632	3,765,804	3,926,898	3,972,599	3,960,339	3,815,554	3,869,768	3,886,215	3,905,279	3,951,496	3,907,662	3,884,274	3,952,006
26	1,308,987	1,431,983	904,141	1,308,390	1,549,189	1,864,192	2,335,650	1,935,375	2,677,218	3,226,329	3,342,443	3,291,752	2,836,847	2,956,733	2,997,276	3,052,610	3,094,730	3,169,983	3,172,000	3,431,528
27	1,308,987	1,431,983	904,141	1,308,390	1,549,189	1,576,237	1,453,187	1,112,739	1,298,513	2,460,812	2,500,397	2,293,130	2,027,221	2,037,298	2,077,094	2,063,174	2,304,924	2,251,221	2,103,642	2,247,072
Expected	1,331,084	1,475,241	959,415	1,146,812	1,284,994	1,512,156	1,788,938	1,826,381	2,047,913	2,593,425	2,673,669	2,682,092	2,548,085	2,594,668	2,657,603	2,682,216	2,712,218	2,753,414	2,761,831	2,993,864

KCPL - GMO

2014 IRP Results - Plan AAAGA
Non-Firm Purchases Cost

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	52,870,564	55,574,884	42,974,176	47,975,980	57,324,864	93,178,368	166,949,312	230,564,544	291,615,232	357,583,008	396,828,608	435,688,928	404,906,080	415,548,320	429,151,488	445,625,568	451,215,040	450,980,544	467,219,264	506,832,160
2	52,870,564	55,574,884	42,974,176	47,975,980	57,324,864	67,623,272	85,781,936	100,642,696	112,061,224	141,290,512	156,042,896	170,692,208	177,932,640	186,020,976	208,253,792	215,145,248	226,113,872	241,478,080	258,846,128	303,154,848
3	52,870,564	55,574,884	42,974,176	47,975,980	57,324,864	64,958,628	69,567,520	68,225,416	73,563,872	79,587,760	87,075,368	90,335,832	98,306,640	108,680,400	119,366,608	133,248,208	150,320,896	165,098,400	183,329,968	220,469,568
4	48,982,156	53,491,200	40,446,404	48,087,508	53,520,428	101,517,216	211,740,944	249,593,104	327,163,488	371,882,176	396,665,536	426,199,040	403,760,320	413,290,560	423,706,592	437,621,824	442,513,856	443,352,480	460,371,744	487,693,152
5	48,982,156	53,491,200	40,446,404	48,087,508	53,520,428	66,014,992	92,024,456	102,492,808	113,896,856	181,264,608	198,031,808	210,741,040	218,101,264	227,408,016	240,038,976	253,679,328	264,305,120	272,585,152	288,739,040	316,989,760
6	48,982,156	53,491,200	40,446,404	48,087,508	53,520,428	56,252,260	55,698,456	59,869,732	59,643,556	81,451,056	86,641,432	88,076,880	93,006,104	100,337,496	108,495,824	117,388,288	126,464,696	137,404,000	148,668,384	177,840,464
7	45,364,928	51,514,392	37,823,016	51,241,868	55,030,632	143,852,016	253,149,456	272,804,352	325,231,072	347,174,976	361,358,464	388,237,952	384,347,552	384,997,024	385,815,040	397,858,624	391,240,512	392,321,216	411,810,560	432,672,448
8	45,364,928	51,514,392	37,823,016	51,241,868	55,030,632	73,890,872	118,823,296	122,570,536	160,826,752	195,345,408	211,238,112	224,614,944	213,535,968	226,138,448	234,991,968	245,563,264	252,683,664	260,455,888	271,179,520	291,596,192
9	45,364,928	51,514,392	37,823,016	51,241,868	55,030,632	58,780,988	62,541,740	63,330,536	67,502,160	104,056,568	108,022,192	109,813,048	111,132,080	115,768,352	125,080,504	131,062,752	139,393,888	146,166,688	150,846,176	165,904,080
10	52,149,596	54,308,644	41,082,392	45,000,776	52,918,072	86,015,928	155,742,272	220,302,128	279,028,160	343,398,464	383,293,344	421,520,992	385,941,952	397,696,672	405,293,344	421,388,320	422,925,760	419,880,064	433,751,328	479,940,032
11	52,149,596	54,308,644	41,082,392	45,000,776	52,918,072	61,450,784	76,919,608	88,841,064	96,345,912	123,094,664	136,107,728	149,836,208	153,511,792	159,063,168	177,530,640	181,325,344	186,732,128	198,932,432	212,049,568	256,025,728
12	52,149,596	54,308,644	41,082,392	45,000,776	52,918,072	59,114,920	61,826,428	58,371,096	61,437,432	64,847,012	70,688,392	72,348,848	78,329,128	84,782,552	92,189,464	102,248,192	115,198,864	125,545,992	140,058,368	173,563,616
13	48,313,016	52,273,436	38,661,672	45,319,424	49,786,516	95,939,576	204,194,944	242,354,848	318,617,376	365,496,064	391,102,432	419,974,752	391,195,872	402,043,840	411,978,944	425,007,008	429,637,120	428,579,232	444,393,216	476,140,768
14	48,313,016	52,273,436	38,661,672	45,319,424	49,786,516	61,146,936	85,258,168	92,255,408	101,473,928	170,327,856	186,190,448	197,998,496	203,820,096	213,172,672	222,244,096	235,126,528	242,714,432	249,679,552	265,179,472	295,464,832
15	48,313,016	52,273,436	38,661,672	45,319,424	49,786,516	51,776,548	49,473,844	51,287,336	49,976,392	69,404,032	72,968,152	73,228,048	76,285,432	80,926,776	86,779,008	93,636,488	99,879,856	108,349,960	116,590,696	142,284,704
16	44,750,408	50,343,948	36,154,144	48,692,916	52,211,256	140,546,992	249,931,856	267,577,024	323,015,744	345,422,624	359,747,168	386,411,936	380,664,064	381,827,712	382,449,152	393,102,912	389,046,464	389,468,672	407,961,024	430,063,008
17	44,750,408	50,343,948	36,154,144	48,692,916	52,211,256	70,155,448	113,814,864	114,702,736	153,413,088	188,737,152	205,814,640	217,271,136	202,613,536	216,092,832	221,939,232	233,046,240	240,783,216	247,916,880	258,012,032	282,273,120
18	44,750,408	50,343,948	36,154,144	48,692,916	52,211,256	55,423,680	58,055,812	55,928,112	59,481,320	97,627,808	101,074,816	101,734,128	100,251,808	104,632,376	111,092,920	116,060,616	124,528,952	129,681,720	131,949,904	146,383,072
19	51,208,752	52,541,464	38,626,104	41,347,848	47,628,576	76,506,032	140,847,504	205,836,352	261,649,088	328,723,392	363,052,064	403,680,992	361,031,840	370,665,408	374,505,504	388,798,464	381,136,960	376,331,232	386,462,304	437,476,832
20	51,208,752	52,541,464	38,626,104	41,347,848	47,628,576	53,623,460	65,679,288	75,938,384	80,914,816	102,488,256	110,303,808	123,834,128	125,294,520	125,706,808	135,546,592	136,975,600	141,718,208	147,719,920	156,266,288	197,785,504
21	51,208,752	52,541,464	38,626,104	41,347,848	47,628,576	51,548,872	52,170,556	48,201,776	49,930,196	50,963,872	53,566,360	52,248,392	56,041,212	58,762,832	63,721,832	68,589,528	76,967,736	81,160,072	93,247,488	121,276,792
22	47,439,216	50,571,992	36,360,100	41,943,724	45,476,392	88,283,784	194,987,904	231,023,968	307,727,744	357,238,656	382,258,496	412,516,992	374,064,224	386,342,656	393,056,768	407,087,200	409,385,568	404,560,544	416,518,432	451,880,928
23	47,439,216	50,571,992	36,360,100	41,943,724	45,476,392	54,599,588	75,668,192	80,799,864	87,989,216	157,782,768	171,653,776	181,837,280	184,693,168	190,923,408	199,206,400	210,806,528	216,342,576	220,292,864	231,814,720	265,427,824
24	47,439,216	50,571,992	36,360,100	41,943,724	45,476,392	45,815,312	41,766,948	42,302,008	40,614,260	56,863,512	58,315,896	56,922,216	58,050,920	59,941,248	64,183,228	66,662,632	70,403,232	73,879,336	80,415,896	102,594,240
25	43,946,852	48,708,184	34,003,068	45,467,520	48,611,660	135,849,504	246,733,120	260,311,968	318,355,136	342,702,272	359,482,880	384,906,432	373,445,184	376,479,488	377,418,688	388,018,848	386,344,608	383,416,864	400,174,080	423,944,224
26	43,946,852	48,708,184	34,003,068	45,467,520	48,611,660	65,799,484	107,567,536	104,108,144	144,537,872	181,256,704	196,376,432	207,415,280	187,758,208	200,162,160	207,783,376	217,342,736	222,150,400	228,923,008	237,837,136	264,970,688
27	43,946,852	48,708,184	34,003,068	45,467,520	48,611,660	50,991,240	52,165,764	47,891,968	50,906,996	90,365,952	92,935,744	91,638,128	87,528,568	89,533,128	94,068,544	96,839,112	106,860,376	108,318,312	107,069,440	120,900,016
Expected	48,330,370	52,179,015	38,509,946	45,922,548	50,999,631	71,131,301	109,215,302	122,399,667	147,568,832	188,830,034	203,747,689	217,760,417	212,032,561	219,771,997	228,610,310	238,659,855	244,721,603	250,196,176	262,744,382	293,198,342

KCPL - GMO

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AAAGA

Endpoint	Joint prob
1	1.6%
2	3.1%
3	1.6%
4	3.1%
5	6.3%
6	3.1%
7	1.6%
8	3.1%
9	1.6%
10	3.1%
11	6.3%
12	3.1%
13	6.3%
14	12.5%
15	6.3%
16	3.1%
17	6.3%
18	3.1%
19	1.6%
20	3.1%
21	1.6%
22	3.1%
23	6.3%
24	3.1%
25	1.6%
26	3.1%
27	1.6%

KCPL

2014 IRP Results - Plan AAAKA
Non-Firm Sales Quantities

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	7,798,180	8,847,553	9,321,126	9,587,790	9,614,204	9,894,291	6,917,242	4,546,172	4,005,850	2,863,845	2,501,714	2,241,337	1,591,573	1,461,774	1,657,917	1,531,965	1,769,063	1,842,879	1,657,450	1,719,916
2	7,798,180	8,847,553	9,321,126	9,587,790	9,614,204	9,886,553	9,408,200	9,407,860	9,602,944	8,270,090	8,424,575	8,299,337	7,942,970	8,025,340	8,271,786	8,126,127	8,455,693	8,364,348	7,950,848	7,771,670
3	7,798,180	8,847,553	9,321,126	9,587,790	9,614,204	9,886,822	9,401,060	9,414,220	9,672,946	9,181,747	9,272,139	9,617,980	9,190,982	9,186,193	9,240,965	8,859,662	8,768,512	8,657,765	8,105,201	7,952,103
4	7,802,700	8,850,225	9,330,605	9,594,968	9,606,392	6,495,702	4,074,492	2,697,032	1,496,797	626,406	446,629	307,732	238,579	172,659	181,563	182,623	191,392	176,840	202,835	254,833
5	7,802,700	8,850,225	9,330,605	9,594,968	9,606,392	9,863,307	8,475,316	7,618,389	6,063,756	4,177,789	4,340,858	4,416,252	4,003,564	3,950,920	4,151,322	3,747,844	3,704,054	3,284,127	3,132,047	3,022,812
6	7,802,700	8,850,225	9,330,605	9,594,968	9,606,392	9,868,866	9,380,291	9,429,140	9,660,323	9,169,387	9,273,866	9,628,846	9,212,432	9,209,991	9,265,794	8,916,979	8,794,742	8,686,621	8,153,878	7,971,592
7	7,853,000	8,864,765	9,344,397	9,536,828	6,682,998	2,171,456	706,256	995,842	242,476	51,910	50,119	59,924	62,320	35,726	44,572	33,235	22,888	19,211	16,953	18,866
8	7,853,000	8,864,765	9,344,397	9,536,828	6,682,998	4,960,336	4,001,766	4,964,784	2,835,530	1,664,703	1,297,422	1,811,550	1,847,026	1,669,955	1,763,177	1,466,994	1,015,636	823,990	677,076	735,214
9	7,853,000	8,864,765	9,344,397	9,536,828	6,682,998	5,528,820	7,455,226	9,408,852	8,618,957	4,407,000	4,655,624	6,185,885	7,539,578	7,343,234	7,937,076	7,556,272	6,667,232	6,672,726	6,914,892	6,870,541
10	7,864,619	8,942,506	9,449,233	9,738,300	9,810,070	10,112,595	7,278,290	4,914,020	4,461,199	3,328,621	2,986,171	2,760,264	2,033,985	1,908,756	2,168,519	2,108,304	2,414,219	2,539,818	2,475,490	2,514,721
11	7,864,619	8,942,506	9,449,233	9,738,300	9,810,070	10,106,222	9,713,591	9,732,938	9,956,047	8,777,453	8,936,444	8,912,202	8,617,599	8,752,877	9,021,870	8,944,273	9,302,241	9,323,794	8,941,306	8,978,569
12	7,864,619	8,942,506	9,449,233	9,738,300	9,810,070	10,106,167	9,705,441	9,736,289	10,017,501	9,640,168	9,711,352	10,093,533	9,760,346	9,792,629	9,901,773	9,602,551	9,561,525	9,570,478	9,060,868	9,090,938
13	7,869,496	8,945,129	9,458,352	9,744,824	9,803,157	6,799,605	4,429,921	3,037,402	1,750,351	778,624	580,086	400,800	320,871	244,072	260,622	254,936	275,926	294,835	337,288	406,169
14	7,869,496	8,945,129	9,458,352	9,744,824	9,803,157	10,084,555	8,817,489	8,006,796	6,525,472	4,725,958	4,902,084	5,062,175	4,644,746	4,677,360	4,959,614	4,586,705	4,589,617	4,241,090	4,180,649	4,084,845
15	7,869,496	8,945,129	9,458,352	9,744,824	9,803,157	10,090,160	9,684,449	9,748,175	10,007,211	9,627,561	9,712,215	10,101,186	9,775,056	9,810,078	9,922,365	9,653,428	9,583,787	9,593,800	9,102,450	9,107,934
16	7,919,438	8,959,440	9,471,767	9,689,196	6,948,480	2,389,622	817,137	1,159,170	296,835	78,112	75,114	97,779	96,479	64,954	76,913	76,912	44,344	40,250	27,260	25,840
17	7,919,438	8,959,440	9,471,767	9,689,196	6,948,480	5,288,718	4,352,974	5,356,500	3,233,870	1,991,883	1,615,814	2,238,402	2,319,036	2,174,529	2,310,243	1,984,880	1,434,143	1,203,190	1,069,519	1,115,176
18	7,919,438	8,959,440	9,471,767	9,689,196	6,948,480	5,842,306	7,808,952	9,729,321	8,994,866	4,962,628	5,227,316	6,852,216	8,228,022	8,111,268	8,716,893	8,410,700	7,646,542	7,731,128	8,029,187	8,100,746
19	7,927,254	9,038,347	9,569,831	9,880,525	9,987,330	10,291,435	7,600,886	5,288,921	4,905,240	3,801,454	3,501,329	3,307,894	2,512,858	2,420,392	2,742,524	2,754,924	3,131,262	3,320,926	3,303,106	3,397,315
20	7,927,254	9,038,347	9,569,831	9,880,525	9,987,330	10,283,533	9,957,527	10,023,810	10,255,072	9,229,320	9,395,175	9,408,222	9,220,780	9,361,399	9,663,796	9,631,994	9,969,773	10,081,461	9,768,792	9,843,825
21	7,927,254	9,038,347	9,569,831	9,880,525	9,987,330	10,283,576	9,949,763	10,019,889	10,303,454	10,021,391	10,087,315	10,475,379	10,212,585	10,278,316	10,417,794	10,183,488	10,179,978	10,269,057	9,858,564	9,920,494
22	7,932,536	9,040,870	9,577,986	9,886,837	9,980,946	7,095,138	4,781,654	3,381,768	2,046,250	938,821	698,266	481,908	422,372	317,142	356,525	353,543	400,693	431,761	526,127	656,050
23	7,932,536	9,040,870	9,577,986	9,886,837	9,980,946	10,264,619	9,079,888	8,367,776	6,954,453	5,243,400	5,451,509	5,690,135	5,295,272	5,412,778	5,763,466	5,425,710	5,451,076	5,215,708	5,168,251	5,139,610
24	7,932,536	9,040,870	9,577,986	9,886,837	9,980,946	10,268,771	9,930,926	10,030,166	10,295,716	10,009,828	10,087,133	10,479,848	10,223,970	10,289,528	10,435,765	10,229,829	10,197,239	10,287,294	9,893,723	9,934,116
25	7,982,172	9,055,090	9,590,751	9,830,850	7,193,948	2,622,535	923,448	1,328,473	345,618	97,436	95,264	126,872	121,274	80,396	99,429	97,603	74,368	67,092	66,167	65,363
26	7,982,172	9,055,090	9,590,751	9,830,850	7,193,948	5,595,169	4,701,935	5,745,306	3,652,193	2,364,394	1,952,100	2,719,253	2,835,270	2,736,989	2,924,436	2,593,787	1,947,679	1,731,923	1,554,104	1,651,713
27	7,982,172	9,055,090	9,590,751	9,830,850	7,193,948	6,130,037	8,108,694	10,015,658	9,325,067	5,481,299	5,788,204	7,466,482	8,857,551	8,764,944	9,387,378	9,145,440	8,493,625	8,640,289	8,985,298	9,068,055
Expected	7,879,824	8,948,272	9,457,418	9,727,118	9,086,430	8,327,273	7,316,254	7,077,413	6,229,947	4,947,899	4,951,036	5,201,501	5,042,137	5,026,439	5,224,656	5,004,706	4,939,183	4,843,942	4,687,448	4,685,547

KCPL

2014 IRP Results - Plan AAAKA
Non-Firm Sales Revenues

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	278,041,568	294,525,344	354,453,056	399,889,280	440,414,592	606,945,152	571,686,848	392,478,144	396,013,184	301,023,872	279,411,264	268,030,560	189,562,928	177,848,816	207,648,992	196,372,672	234,327,648	244,784,880	227,611,728	243,529,312
2	278,041,568	294,525,344	354,453,056	399,889,280	440,414,592	530,217,280	597,567,616	601,707,584	665,564,864	615,078,080	659,084,352	668,354,944	657,873,152	692,841,600	733,272,320	757,651,008	828,669,952	830,253,248	831,514,240	837,503,040
3	278,041,568	294,525,344	354,453,056	399,889,280	440,414,592	508,491,968	523,240,800	511,247,360	559,880,128	569,666,816	600,370,368	631,029,888	625,463,936	650,974,848	675,676,288	690,913,152	725,048,704	734,020,544	722,821,824	730,338,816
4	259,021,632	284,147,200	334,691,968	352,325,536	352,673,792	346,663,200	309,195,456	219,310,544	139,198,416	59,681,192	44,197,072	31,683,080	24,223,202	17,514,166	18,785,960	19,641,404	21,264,810	19,822,104	24,279,584	32,017,174
5	259,021,632	284,147,200	334,691,968	352,325,536	352,673,792	419,307,104	452,243,296	447,491,712	375,550,080	266,938,816	288,908,256	310,362,432	290,269,792	295,084,096	318,153,952	297,582,464	302,071,744	271,128,288	272,294,272	273,005,984
6	259,021,632	284,147,200	334,691,968	352,325,536	352,673,792	395,856,192	416,649,504	449,424,576	456,342,464	449,938,080	467,217,984	506,533,216	511,772,704	528,732,448	547,328,064	552,240,128	559,676,800	565,844,224	560,607,552	565,036,160
7	242,289,072	274,703,392	315,090,176	306,417,952	198,921,968	101,248,600	50,786,172	78,041,776	20,512,704	4,224,588	4,079,256	5,001,966	5,217,496	3,026,702	3,615,542	2,875,328	1,884,906	1,605,503	1,507,766	1,784,704
8	242,289,072	274,703,392	315,090,176	306,417,952	198,921,968	170,751,920	185,210,800	270,201,344	155,492,720	92,356,608	75,670,424	113,061,464	118,107,688	109,404,064	118,183,392	100,550,920	69,729,472	57,131,800	48,874,928	55,254,612
9	242,289,072	274,703,392	315,090,176	306,417,952	198,921,968	171,838,736	254,868,832	382,344,032	323,458,816	163,034,688	173,106,768	246,561,696	318,651,712	317,818,592	353,497,824	346,837,632	303,186,752	314,162,976	340,799,264	356,531,584
10	280,524,320	297,967,872	359,766,784	406,753,344	450,279,168	621,621,632	601,888,960	424,030,304	440,745,152	350,704,768	334,305,216	330,970,144	243,389,152	233,156,512	272,454,784	271,373,856	320,390,144	337,687,904	339,662,752	355,593,952
11	280,524,320	297,967,872	359,766,784	406,753,344	450,279,168	543,201,536	618,508,608	624,104,128	691,884,480	654,795,328	701,060,096	719,726,336	716,073,920	758,372,032	802,818,944	837,977,856	916,832,704	931,999,872	941,970,240	974,195,712
12	280,524,320	297,967,872	359,766,784	406,753,344	450,279,168	520,936,224	541,567,104	530,226,496	581,594,560	600,616,704	631,263,360	665,128,192	667,366,080	697,575,872	727,845,248	753,521,216	795,983,744	817,823,744	814,663,936	841,335,040
13	261,339,552	287,457,088	339,676,096	358,346,368	360,565,440	363,067,328	336,260,640	246,954,192	162,843,088	74,479,432	57,758,236	41,532,092	32,739,978	24,971,572	27,106,898	27,467,524	30,710,500	33,447,900	40,735,724	51,310,728
14	261,339,552	287,457,088	339,676,096	358,346,368	360,565,440	429,669,280	471,258,176	470,799,232	403,974,528	302,805,632	326,910,368	356,447,520	337,573,696	350,505,376	381,095,552	365,402,592	375,446,400	351,466,784	364,297,856	369,341,952
15	261,339,552	287,457,088	339,676,096	358,346,368	360,565,440	405,659,808	431,210,528	465,929,472	474,118,592	474,396,928	491,159,904	533,665,056	545,644,992	566,113,792	589,182,976	601,487,616	613,924,032	629,899,968	630,865,664	650,648,192
16	244,425,680	277,879,392	319,755,584	311,726,208	207,034,800	111,539,600	58,505,556	90,744,384	25,075,244	6,306,468	6,006,370	8,243,939	8,086,482	5,543,454	6,297,134	6,505,298	3,635,314	3,430,792	2,386,673	2,389,762
17	244,425,680	277,879,392	319,755,584	311,726,208	207,034,800	182,245,392	201,489,456	291,427,104	177,319,104	110,867,992	94,356,280	140,091,392	149,192,560	143,388,640	155,678,544	137,054,176	99,320,016	84,334,808	77,830,424	84,192,096
18	244,425,680	277,879,392	319,755,584	311,726,208	207,034,800	181,732,992	267,315,600	396,439,424	338,291,424	184,291,248	194,898,864	273,942,368	349,225,376	352,668,608	389,800,768	388,083,808	349,693,312	366,387,008	398,250,624	422,957,088
19	282,871,936	301,426,528	364,771,648	413,216,608	459,240,640	633,815,744	628,793,280	455,999,232	484,275,552	401,116,480	392,726,304	397,472,576	301,910,464	296,735,104	345,398,144	355,643,712	415,833,536	441,153,728	453,295,136	479,756,160
20	282,871,936	301,426,528	364,771,648	413,216,608	459,240,640	553,877,184	635,509,824	644,113,280	714,181,824	690,018,560	738,601,536	761,394,304	768,310,400	813,176,448	862,328,064	905,403,200	986,616,384	1,012,712,832	1,034,825,792	1,074,358,656
21	282,871,936	301,426,528	364,771,648	413,216,608	459,240,640	531,168,352	556,523,520	546,974,976	599,705,920	626,381,504	657,758,144	692,581,888	701,148,864	734,938,496	768,891,456	802,672,512	851,582,016	882,448,064	891,878,592	923,986,112
22	263,534,048	290,781,280	344,348,448	364,030,656	367,716,192	379,008,448	363,020,128	274,921,568	190,249,808	90,206,376	69,816,912	50,023,328	43,500,548	32,577,938	37,379,040	38,503,912	44,867,796	49,416,420	63,918,920	83,298,120
23	263,534,048	290,781,280	344,348,448	364,030,656	367,716,192	438,115,424	486,116,576	492,368,096	430,241,088	336,341,472	364,060,736	401,229,152	385,437,408	406,459,648	443,457,344	433,152,960	446,761,952	433,011,040	451,166,560	465,334,304
24	263,534,048	290,781,280	344,348,448	364,030,656	367,716,192	413,595,584	443,196,640	480,544,032	488,974,912	494,797,184	511,662,816	555,412,352	573,145,088	595,991,232	622,195,264	640,182,144	656,289,856	679,234,688	689,939,904	714,296,448
25	246,448,288	281,073,216	324,121,632	316,657,056	214,559,856	122,421,368	65,989,092	103,976,192	29,204,960	7,788,785	7,572,083	10,632,909	10,081,405	6,701,590	8,051,570	8,201,338	6,142,463	5,538,673	5,741,380	6,178,170
26	246,448,288	281,073,216	324,121,632	316,657,056	214,559,856	192,904,928	217,632,752	312,388,256	200,169,536	131,959,504	114,076,024	170,581,360	183,369,648	181,542,112	197,973,792	180,229,776	135,957,488	122,317,344	113,949,832	125,822,384
27	246,448,288	281,073,216	324,121,632	316,657,056	214,559,856	190,730,000	277,986,912	409,036,864	351,261,600	203,891,424	216,189,776	299,144,320	377,316,288	382,344,832	421,190,208	423,507,968	389,953,792	411,218,592	447,917,792	475,812,448
Expected	261,876,277	287,694,270	339,641,654	358,702,366	344,425,420	383,559,545	407,465,268	411,057,732	375,557,760	310,980,666	322,333,012	347,798,737	343,814,317	354,272,500	378,844,011	379,951,700	392,430,702	392,282,484	398,611,833	412,298,842

KCPL

2014 IRP Results - Plan AAAKA
Non-Firm Purchase Quantities

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	55,211	57,675	28,101	16,365	16,050	4,035	149,237	436,587	397,563	699,701	772,895	828,756	1,406,869	1,487,789	1,379,206	1,392,514	1,258,226	1,198,216	1,273,991	1,287,875
2	55,211	57,675	28,101	16,365	16,050	4,035	2,594	9,265	2,415	17,110	30,161	12,229	41,079	36,752	25,779	46,954	32,176	28,247	47,481	58,028
3	55,211	57,675	28,101	16,365	16,050	4,035	2,594	9,265	1,925	11,356	24,402	7,340	23,611	13,060	12,256	30,699	27,198	26,473	44,704	56,948
4	55,174	57,631	29,253	16,365	16,050	138,246	385,899	724,682	1,271,033	2,269,532	2,536,780	2,736,730	3,067,055	3,232,302	3,219,776	3,335,478	3,308,143	3,252,747	3,380,629	3,263,385
5	55,174	57,631	29,253	16,365	16,050	3,520	44,772	63,369	148,783	411,546	415,253	327,165	482,014	442,223	397,384	539,012	602,959	566,481	671,619	739,241
6	55,174	57,631	29,253	16,365	16,050	3,520	2,524	9,265	1,925	11,014	24,122	6,997	23,611	12,702	10,993	30,173	26,238	26,403	44,571	56,740
7	53,823	57,442	28,101	18,239	92,704	886,544	2,175,584	1,861,239	3,045,973	4,036,462	4,199,356	3,956,935	4,109,640	4,259,664	4,159,054	4,366,628	4,549,666	4,515,801	4,705,532	4,683,146
8	53,823	57,442	28,101	18,239	92,704	198,422	375,188	304,280	589,456	1,224,666	1,461,107	1,052,331	1,121,360	1,155,060	1,179,982	1,361,400	1,779,774	1,936,100	2,183,880	2,208,526
9	53,823	57,442	28,101	18,239	92,704	192,344	133,225	9,340	28,548	377,889	349,184	147,866	74,912	57,553	50,704	70,958	111,949	119,675	87,590	85,587
10	51,184	53,207	24,484	13,126	12,708	2,224	121,630	358,204	297,503	521,318	571,117	623,600	1,126,820	1,172,730	1,030,684	1,020,638	853,521	773,453	841,108	842,878
11	51,184	53,207	24,484	13,126	12,708	2,224	1,134	6,515	1,298	7,679	18,433	5,837	22,628	19,592	7,388	21,641	14,284	9,506	18,624	21,399
12	51,184	53,207	24,484	13,126	12,708	2,224	1,134	6,515	808	5,387	15,346	3,707	9,248	3,975	2,748	12,965	11,037	8,316	18,426	20,242
13	51,157	53,191	25,516	13,126	12,708	108,148	307,630	589,106	1,055,408	2,014,701	2,266,239	2,417,708	2,753,323	2,900,208	2,811,027	2,944,506	2,868,131	2,773,404	2,868,166	2,740,366
14	51,157	53,191	25,516	13,126	12,708	1,841	33,424	48,716	100,599	292,110	313,429	229,983	326,338	286,958	259,283	330,187	382,338	303,580	433,258	413,292
15	51,157	53,191	25,516	13,126	12,708	1,841	1,134	6,515	808	5,374	15,082	3,707	9,248	3,975	2,611	12,659	10,421	8,246	18,426	20,234
16	49,944	53,094	24,484	14,832	78,150	767,829	2,015,452	1,658,569	2,809,888	3,768,781	3,914,964	3,615,583	3,806,855	3,915,132	3,814,513	4,005,924	4,115,490	4,134,030	4,308,521	4,230,932
17	49,944	53,094	24,484	14,832	78,150	153,793	295,169	245,488	454,829	1,012,676	1,147,387	781,478	848,127	829,590	825,064	982,137	1,331,489	1,420,351	1,697,875	1,663,044
18	49,944	53,094	24,484	14,832	78,150	150,530	107,394	6,515	20,112	273,523	265,625	97,919	40,376	32,369	20,601	43,343	54,152	60,983	31,302	40,464
19	47,455	49,135	21,324	10,431	10,221	1,019	99,157	279,765	216,191	391,386	404,296	446,231	901,646	907,052	748,483	765,319	574,926	456,781	502,157	484,374
20	47,455	49,135	21,324	10,431	10,221	1,019	578	4,422	608	3,281	13,707	3,457	12,172	9,404	1,258	9,761	7,082	4,209	7,442	5,792
21	47,455	49,135	21,324	10,431	10,221	1,019	578	4,422	275	2,539	10,256	2,050	3,994	1,692	471	5,331	5,356	3,347	7,307	5,476
22	47,445	49,135	22,140	10,431	10,221	84,105	248,816	470,872	840,956	1,776,610	2,001,440	2,112,893	2,408,594	2,566,605	2,359,096	2,542,645	2,414,320	2,282,630	2,368,168	2,204,696
23	47,445	49,135	22,140	10,431	10,221	763	26,299	35,888	67,067	211,282	227,036	147,014	203,013	179,906	158,895	207,259	253,367	154,524	247,691	216,132
24	47,445	49,135	22,140	10,431	10,221	763	578	4,422	275	2,539	10,128	2,050	3,994	1,692	471	5,051	5,068	3,277	7,307	5,476
25	46,350	49,112	21,324	12,060	65,616	647,348	1,836,337	1,467,063	2,588,021	3,532,450	3,633,262	3,327,434	3,497,938	3,583,650	3,419,943	3,635,493	3,717,708	3,700,086	3,844,980	3,741,913
26	46,350	49,112	21,324	12,060	65,616	118,966	233,490	186,767	339,084	811,214	886,528	555,470	614,046	584,414	537,538	699,296	959,018	1,010,797	1,260,168	1,216,729
27	46,350	49,112	21,324	12,060	65,616	114,247	85,078	4,422	14,118	199,091	189,288	61,195	19,472	16,787	7,732	26,462	25,930	29,201	12,459	18,018
Expected	50,935	53,266	25,102	13,694	29,355	92,035	225,692	245,889	411,849	743,918	811,096	734,301	851,135	868,299	829,195	906,110	949,755	925,791	1,016,131	993,424

KCPL

2014 IRP Results - Plan AAAKA
Non-Firm Purchases Cost

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	2,106,025	2,496,535	1,058,672	713,666	797,688	330,896	11,379,087	35,649,968	38,200,452	73,680,872	86,861,264	100,429,008	168,599,248	180,850,928	171,423,616	176,937,504	163,654,832	156,020,400	171,570,080	178,757,968
2	2,106,025	2,496,535	1,058,672	713,666	797,688	294,061	205,857	586,988	227,033	1,396,046	2,408,628	1,125,165	3,895,711	3,226,155	2,465,201	4,684,848	3,448,017	3,193,204	5,214,796	7,389,461
3	2,106,025	2,496,535	1,058,672	713,666	797,688	284,020	192,912	493,877	151,806	845,008	1,647,429	605,557	2,027,124	1,006,538	1,012,825	2,735,587	2,576,689	2,580,010	4,259,485	6,281,849
4	1,948,278	2,388,098	1,050,263	626,283	636,218	7,263,049	29,182,568	58,551,284	118,062,328	225,212,352	267,188,240	308,108,096	344,280,064	364,339,456	365,611,360	387,911,488	389,149,984	381,832,352	412,144,192	408,959,904
5	1,948,278	2,388,098	1,050,263	626,283	636,218	189,463	2,290,802	3,525,879	8,759,996	25,939,600	27,687,572	23,329,038	35,447,672	33,107,034	31,034,900	42,818,788	49,167,420	47,447,548	58,063,024	66,212,296
6	1,948,278	2,388,098	1,050,263	626,283	636,218	181,079	157,695	437,864	123,524	657,492	1,262,992	454,301	1,673,675	779,503	727,478	2,140,638	1,902,453	1,995,416	3,296,553	4,869,388
7	1,767,390	2,279,212	937,214	622,471	2,824,786	41,719,284	151,195,200	143,612,800	261,025,424	356,526,784	385,871,552	392,702,432	410,333,216	422,392,608	414,422,144	442,945,760	453,366,816	451,239,808	491,048,736	508,838,816
8	1,767,390	2,279,212	937,214	622,471	2,824,786	7,078,248	17,322,512	15,984,356	32,702,162	70,426,088	87,855,792	68,189,504	75,416,016	79,312,728	83,546,320	98,278,896	129,343,088	141,295,200	165,131,712	172,169,296
9	1,767,390	2,279,212	937,214	622,471	2,824,786	6,078,846	4,385,241	377,562	1,024,786	13,783,767	13,094,151	6,019,014	3,488,478	2,540,105	2,529,701	3,552,152	5,358,638	5,945,351	4,568,145	4,983,084
10	1,950,550	2,304,126	920,630	572,437	624,976	183,237	9,226,274	29,261,808	28,525,120	54,702,824	63,986,284	75,472,544	134,378,512	141,927,392	127,588,968	128,943,288	110,635,824	100,567,080	112,790,952	116,902,872
11	1,950,550	2,304,126	920,630	572,437	624,976	162,836	92,322	412,574	123,850	595,828	1,459,938	542,228	2,056,488	1,682,099	698,923	2,166,288	1,512,615	1,032,786	1,976,324	2,568,971
12	1,950,550	2,304,126	920,630	572,437	624,976	157,265	81,063	347,467	64,295	371,816	1,021,715	313,887	777,520	286,841	213,357	1,163,838	1,051,736	796,946	1,689,099	2,140,632
13	1,804,710	2,204,542	914,629	502,271	498,888	5,681,453	23,195,360	47,510,076	98,082,552	199,601,088	238,839,024	272,929,440	309,834,016	328,282,784	319,346,048	343,619,232	338,153,120	326,352,064	350,981,408	344,244,448
14	1,804,710	2,204,542	914,629	502,271	498,888	98,583	1,695,210	2,712,294	5,901,358	18,360,290	20,863,572	16,401,302	23,958,112	21,338,184	20,175,766	26,043,320	31,130,274	25,319,806	37,217,888	36,727,044
15	1,804,710	2,204,542	914,629	502,271	498,888	94,327	67,678	308,440	52,328	292,459	779,062	249,105	636,267	229,008	163,862	900,895	758,147	618,992	1,312,235	1,671,156
16	1,638,883	2,106,914	815,108	506,141	2,366,534	36,135,572	140,145,712	127,909,784	241,066,144	333,121,056	360,819,584	360,451,872	381,138,048	389,886,112	381,460,096	408,245,248	412,143,680	414,791,616	452,229,280	462,370,272
17	1,638,883	2,106,914	815,108	506,141	2,366,534	5,498,493	13,606,798	12,915,681	25,267,728	58,104,068	69,010,480	50,651,616	56,914,024	56,931,012	58,479,336	70,907,192	96,752,776	103,675,728	128,677,216	129,790,648
18	1,638,883	2,106,914	815,108	506,141	2,366,534	4,761,626	3,508,886	263,021	712,883	9,981,031	9,950,900	3,947,530	1,822,977	1,394,543	1,033,891	2,198,266	2,587,447	3,007,014	1,606,022	2,281,608
19	1,805,616	2,127,186	800,706	454,365	497,030	83,878	7,496,894	22,824,088	20,673,290	40,889,376	45,176,668	53,792,920	107,190,232	109,280,408	92,440,792	96,091,008	74,408,984	59,239,932	67,046,240	67,036,584
20	1,805,616	2,127,186	800,706	454,365	497,030	74,599	45,247	281,028	58,345	251,823	1,076,596	319,660	1,079,282	809,931	116,032	981,288	756,371	441,639	763,034	694,226
21	1,805,616	2,127,186	800,706	454,365	497,030	71,996	39,594	236,849	22,069	174,710	678,227	172,607	329,187	124,595	34,867	482,648	515,516	312,985	645,359	592,817
22	1,671,233	2,035,442	791,828	398,683	397,144	4,417,890	18,712,352	37,965,000	78,228,128	176,080,624	211,195,648	239,315,424	271,554,368	291,470,848	268,544,768	297,048,928	285,103,264	269,424,704	290,067,584	276,109,632
23	1,671,233	2,035,442	791,828	398,683	397,144	39,721	1,318,936	2,000,550	3,920,484	13,241,868	15,133,969	10,471,757	14,910,050	13,309,783	12,309,955	16,307,527	20,543,002	12,764,522	21,218,818	19,078,176
24	1,671,233	2,035,442	791,828	398,683	397,144	38,038	32,773	210,604	17,980	137,872	521,685	136,917	274,253	97,852	28,759	357,794	371,911	241,335	501,714	463,030
25	1,518,938	1,947,778	708,932	410,935	1,978,582	30,450,644	127,637,440	113,086,936	222,624,672	312,978,624	336,006,336	332,843,360	351,554,496	358,917,344	343,984,832	372,122,496	374,525,728	373,789,056	405,439,936	410,656,704
26	1,518,938	1,947,778	708,932	410,935	1,978,582	4,275,365	10,731,310	9,826,836	18,844,298	46,439,656	53,307,528	35,958,708	41,230,044	40,016,560	38,136,500	50,398,908	69,579,976	73,748,944	95,200,552	94,590,696
27	1,518,938	1,947,778	708,932	410,935	1,978,582	3,610,101	2,774,109	179,392	495,984	7,243,178	7,100,764	2,458,519	872,642	715,209	391,293	1,345,804	1,243,886	1,428,818	615,417	1,017,456
Expected	**1,802,169**	**2,208,627**	**894,981**	**526,101**	**1,008,961**	**4,059,431**	**14,682,097**	**18,251,636**	**33,961,275**	**62,213,463**	**71,502,755**	**72,508,028**	**84,848,352**	**87,621,811**	**84,605,059**	**93,377,282**	**96,318,580**	**93,802,379**	**105,830,056**	**106,626,976**

KCPL

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AAAKA

Endpoint	Joint prob
1	1.6%
2	3.1%
3	1.6%
4	3.1%
5	6.3%
6	3.1%
7	1.6%
8	3.1%
9	1.6%
10	3.1%
11	6.3%
12	3.1%
13	6.3%
14	12.5%
15	6.3%
16	3.1%
17	6.3%
18	3.1%
19	1.6%
20	3.1%
21	1.6%
22	3.1%
23	6.3%
24	3.1%
25	1.6%
26	3.1%
27	1.6%

KCPL - GMO

2014 IRP Results - Plan AIDGA
Non-Firm Sales Quantities

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	389,485	407,199	449,554	310,167	328,987	12,987	14,674	4,717	2,676	53	49	1,037	134	1,006	891	459	535	1,029	1,470	204
2	389,485	407,199	449,554	310,167	328,987	12,256	17,229	14,332	17,784	11,935	11,900	9,413	7,941	7,402	4,070	2,565	1,286	1,653	2,317	391
3	389,485	407,199	449,554	310,167	328,987	11,447	18,653	15,800	17,824	17,917	15,381	10,350	9,585	9,139	7,862	3,571	2,519	3,158	4,218	2,848
4	389,485	406,578	449,104	219,038	219,327	14,891	14,760	5,400	5,037	48	49	33	0	0	28	0	0	0	0	0
5	389,485	406,578	449,104	219,038	219,327	14,916	18,942	16,461	17,522	14,098	12,218	7,198	7,380	8,699	5,740	3,076	2,519	2,793	3,368	2,602
6	389,485	406,578	449,104	219,038	219,327	14,003	18,525	18,128	18,845	20,091	13,855	9,826	11,265	8,841	7,008	3,605	3,061	3,327	4,643	2,623
7	387,851	405,297	448,321	166,978	195,953	11,593	15,815	5,416	2,671	0	0	0	0	0	0	0	0	0	0	0
8	387,851	405,297	448,321	166,978	195,953	14,733	16,674	11,625	10,607	13,073	7,278	5,631	6,591	4,458	3,638	3,527	544	1,428	2,314	1,836
9	387,851	405,297	448,321	166,978	195,953	14,318	17,730	18,238	15,864	15,047	9,639	10,089	10,362	9,132	5,944	3,209	3,190	3,761	4,643	2,637
10	395,808	417,350	467,376	331,363	354,950	15,540	16,965	6,020	3,754	243	168	1,800	762	1,575	738	546	951	1,736	2,747	436
11	395,808	417,350	467,376	331,363	354,950	14,565	19,619	16,385	20,423	15,460	15,481	12,777	10,630	10,888	5,916	3,908	3,527	3,032	3,586	1,282
12	395,808	417,350	467,376	331,363	354,950	13,745	21,057	17,622	20,669	22,123	18,923	13,816	12,683	12,658	9,907	5,024	4,953	4,691	5,708	4,252
13	395,808	416,722	466,908	235,118	237,062	17,222	16,733	7,005	6,708	243	32	188	86	5	0	0	0	0	0	0
14	395,808	416,722	466,908	235,118	237,062	17,753	21,666	18,479	19,982	17,007	15,568	9,736	9,444	12,033	7,246	4,223	4,940	4,326	4,718	3,669
15	395,808	416,722	466,908	235,118	237,062	16,554	21,013	20,105	21,746	24,193	17,473	12,998	14,818	12,158	8,524	4,787	5,482	4,860	6,133	3,691
16	394,165	415,446	466,132	177,942	209,975	13,047	18,164	7,032	3,135	0	0	0	0	0	0	0	0	0	0	0
17	394,165	415,446	466,132	177,942	209,975	16,829	18,517	13,704	12,807	15,366	9,279	7,404	8,341	6,111	4,494	4,410	1,732	2,181	3,805	2,695
18	394,165	415,446	466,132	177,942	209,975	16,671	20,036	20,553	18,329	17,962	12,436	13,185	13,767	13,034	6,668	4,290	5,623	5,307	6,133	3,569
19	406,856	434,488	496,031	365,077	394,200	17,904	20,099	8,199	5,710	913	624	2,853	1,231	1,158	2,393	899	1,039	2,480	7,394	1,563
20	406,856	434,488	496,031	365,077	394,200	16,568	23,430	21,586	23,698	20,566	19,325	17,427	17,245	12,059	14,244	8,026	8,738	7,126	10,566	3,377
21	406,856	434,488	496,031	365,077	394,200	15,721	24,861	22,796	24,340	27,664	22,982	18,429	18,555	13,742	18,017	9,507	9,692	8,464	12,128	7,462
22	406,856	433,850	495,538	260,504	266,737	19,306	19,160	9,236	8,818	901	624	607	444	104	82	0	0	0	112	7
23	406,856	433,850	495,538	260,504	266,737	20,317	25,810	23,670	23,044	20,777	18,614	12,792	14,705	12,734	15,048	7,829	9,411	7,940	10,881	5,325
24	406,856	433,850	495,538	260,504	266,737	18,750	24,902	25,376	25,218	29,449	21,039	17,250	20,934	12,628	15,939	8,325	10,046	8,495	12,360	5,327
25	405,183	432,532	494,748	195,401	234,358	14,696	21,267	9,351	3,735	0	0	0	86	0	28	12	10	0	0	0
26	405,183	432,532	494,748	195,401	234,358	18,964	21,554	16,732	15,062	17,908	11,582	9,847	11,890	7,233	7,140	5,776	2,203	2,906	4,760	3,552
27	405,183	432,532	494,748	195,401	234,358	18,663	23,620	25,759	21,031	21,933	15,081	17,099	19,318	14,352	13,028	7,508	9,855	8,933	12,211	4,994
Expected	396,577	418,303	469,537	247,237	262,733	16,217	19,961	15,542	15,697	13,886	11,173	8,576	8,839	7,924	6,312	3,724	3,623	3,422	4,597	2,534

KCPL - GMO

2014 IRP Results - Plan AIDGA
Non-Firm Sales Revenues

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	12,314,374	12,209,034	15,056,598	11,174,651	13,263,989	1,996,782	2,578,025	842,262	454,786	6,894	6,743	176,467	14,909	113,271	103,601	53,726	64,479	123,970	183,604	26,532
2	12,314,374	12,209,034	15,056,598	11,174,651	13,263,989	1,721,920	2,521,262	1,841,433	2,588,792	1,893,154	1,922,341	1,345,975	1,181,247	767,489	416,392	350,298	109,027	144,167	215,358	56,538
3	12,314,374	12,209,034	15,056,598	11,174,651	13,263,989	1,529,834	2,742,838	1,803,284	2,395,871	2,696,823	2,261,755	1,329,394	1,264,709	972,263	1,018,204	473,254	285,654	392,455	551,572	587,758
4	11,568,513	11,828,872	14,251,799	7,194,580	7,370,419	2,061,707	2,715,466	1,067,449	983,079	5,519	5,825	4,180	8	0	3,031	0	0	0	0	0
5	11,568,513	11,828,872	14,251,799	7,194,580	7,370,419	1,891,938	2,840,929	2,122,976	2,471,953	2,213,972	1,842,527	1,252,630	998,101	978,284	705,868	397,794	309,240	331,080	389,112	530,069
6	11,568,513	11,828,872	14,251,799	7,194,580	7,370,419	1,758,986	2,580,551	2,176,591	2,358,424	2,999,480	1,847,244	1,204,648	1,547,869	849,795	799,193	406,989	332,487	352,762	574,818	423,241
7	10,803,479	11,455,799	13,579,683	4,786,104	5,637,167	1,797,142	2,482,764	1,056,727	370,980	0	0	0	0	0	0	0	0	0	0	0
8	10,803,479	11,455,799	13,579,683	4,786,104	5,637,167	1,900,653	2,515,089	1,890,898	1,705,999	1,709,274	1,161,171	1,092,349	881,043	568,807	480,860	493,970	44,863	198,286	304,630	297,679
9	10,803,479	11,455,799	13,579,683	4,786,104	5,637,167	1,585,856	2,311,838	2,113,274	1,777,074	2,111,101	1,270,543	1,303,614	1,288,060	758,647	643,923	317,271	364,083	500,069	586,646	536,280
10	12,520,397	12,527,985	15,700,322	11,981,785	14,385,877	2,263,918	2,903,716	1,046,053	628,688	33,157	23,144	305,092	85,703	175,985	85,589	63,671	114,501	206,823	389,203	89,839
11	12,520,397	12,527,985	15,700,322	11,981,785	14,385,877	1,933,854	2,799,192	2,135,534	2,972,607	2,328,250	2,368,147	1,773,932	1,552,114	1,170,452	719,466	535,549	350,735	317,539	410,095	230,415
12	12,520,397	12,527,985	15,700,322	11,981,785	14,385,877	1,728,687	3,010,810	2,053,653	2,770,385	3,151,122	2,639,565	1,705,834	1,633,581	1,311,156	1,310,659	642,327	515,511	572,303	762,189	857,849
13	11,761,219	12,137,053	14,857,384	7,744,802	8,006,714	2,297,713	2,997,264	1,300,236	1,230,700	28,388	3,791	24,466	11,359	484	0	0	0	0	0	0
14	11,761,219	12,137,053	14,857,384	7,744,802	8,006,714	2,125,663	3,136,760	2,394,147	2,821,758	2,528,400	2,187,927	1,595,748	1,237,591	1,317,333	926,245	529,169	542,184	507,773	567,492	725,358
15	11,761,219	12,137,053	14,857,384	7,744,802	8,006,714	1,964,637	2,828,266	2,441,378	2,702,630	3,403,290	2,174,978	1,502,069	1,942,945	1,120,534	995,370	517,289	516,842	499,280	764,032	579,792
16	10,983,210	11,753,767	14,155,027	5,116,197	6,081,392	1,954,406	2,769,216	1,280,589	428,515	0	0	0	0	0	0	0	0	0	0	0
17	10,983,210	11,753,767	14,155,027	5,116,197	6,081,392	2,071,420	2,741,331	2,158,571	1,986,924	1,928,302	1,365,563	1,357,501	1,076,607	758,575	583,417	604,945	149,602	292,868	460,280	417,214
18	10,983,210	11,753,767	14,155,027	5,116,197	6,081,392	1,741,590	2,521,470	2,383,806	2,046,037	2,335,225	1,463,849	1,593,792	1,621,948	1,039,851	748,325	400,357	526,265	660,255	765,288	695,086
19	12,877,331	13,061,405	16,712,503	13,253,623	16,058,980	2,538,254	3,320,853	1,352,232	917,612	125,394	88,260	481,081	153,358	135,320	292,959	118,523	143,886	295,945	1,047,873	326,831
20	12,877,331	13,061,405	16,712,503	13,253,623	16,058,980	2,145,576	3,172,390	2,626,048	3,416,615	2,893,480	2,855,236	2,319,780	2,267,178	1,441,114	1,572,059	994,296	922,238	777,485	1,210,964	559,982
21	12,877,331	13,061,405	16,712,503	13,253,623	16,058,980	1,927,139	3,359,948	2,475,449	3,215,623	3,689,643	3,057,586	2,152,776	2,160,100	1,540,568	1,988,227	1,069,284	933,287	923,313	1,363,633	1,335,394
22	12,095,831	12,652,849	15,811,849	8,601,105	9,040,694	2,533,773	3,327,855	1,603,962	1,528,217	106,688	76,107	80,736	60,066	12,614	8,924	0	0	0	12,027	1,149
23	12,095,831	12,652,849	15,811,849	8,601,105	9,040,694	2,362,245	3,510,765	2,850,055	3,220,190	2,898,930	2,528,486	1,964,318	1,691,021	1,494,991	1,605,906	853,487	936,031	838,742	1,129,031	937,694
24	12,095,831	12,652,849	15,811,849	8,601,105	9,040,694	2,168,742	3,128,154	2,854,877	3,084,045	3,859,784	2,503,364	1,833,713	2,427,538	1,262,173	1,483,155	754,022	827,788	760,096	1,229,451	744,554
25	11,295,394	12,251,680	15,059,986	5,632,032	6,808,945	2,128,062	3,121,146	1,575,716	508,410	0	0	0	9,905	0	3,391	1,444	1,283	0	0	0
26	11,295,394	12,251,680	15,059,986	5,632,032	6,808,945	2,251,669	3,024,280	2,492,687	2,275,263	2,159,207	1,587,666	1,643,589	1,365,830	922,534	797,700	735,915	213,714	385,199	579,731	523,148
27	11,295,394	12,251,680	15,059,986	5,632,032	6,808,945	1,895,169	2,761,871	2,765,865	2,327,054	2,592,671	1,653,603	1,875,273	1,990,921	1,235,073	1,065,399	558,579	759,303	904,346	1,129,232	820,850
Expected	11,791,960	12,190,817	14,979,769	8,225,810	9,222,044	2,046,157	2,922,264	2,059,517	2,195,463	1,952,288	1,549,170	1,216,307	1,125,239	845,158	724,649	439,772	361,751	381,798	532,813	448,678
AAAGA																				
Expected	11791959.75	12190817.25	24441096.88	15206646.56	15327897.13	15258631.53	14896423.28	13903485.15	12916364.8	6624883.375	6946052.962	6672183.752	7722664.333	7084935.973	6678861.414	7116478.04	7406249.871	7268147.457	7781931.427	4564907.539
Diff	0	0	-9,461,328	-6,980,837	-6,105,853	-13,212,475	-11,974,160	-11,843,968	-10,720,902	-4,672,595	-5,396,883	-5,455,877	-6,597,425	-6,239,778	-5,954,212	-6,676,706	-7,044,499	-6,886,349	-7,249,119	-4,116,230
2017-2026	-82,960,976	-$83.0																		
2017-2020	-38,273,325	-$38.3																		
2017-2026	572545912.3																			
2017-2020	193916604.2																			

KCPL - GMO

2014 IRP Results - Plan AIDGA
Non-Firm Purchase Quantities

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	1,351,239	1,511,933	1,386,613	1,450,482	1,530,803	3,296,433	3,423,505	3,572,860	3,660,799	3,715,927	3,772,140	3,813,896	3,598,770	3,622,654	3,652,587	3,675,697	3,631,612	3,637,737	3,646,386	3,800,786
2	1,351,239	1,511,933	1,386,613	1,450,482	1,530,803	3,309,334	3,307,180	3,300,078	3,307,649	3,376,809	3,386,239	3,389,426	3,399,198	3,436,751	3,486,269	3,540,581	3,543,628	3,578,753	3,616,284	3,759,256
3	1,351,239	1,511,933	1,386,613	1,450,482	1,530,803	3,311,586	3,308,496	3,306,399	3,310,138	3,375,602	3,390,728	3,391,910	3,403,009	3,440,644	3,489,795	3,539,141	3,546,673	3,581,554	3,617,916	3,758,204
4	1,351,267	1,513,860	1,386,834	1,658,104	1,754,734	3,326,440	3,545,748	3,654,354	3,769,370	3,879,690	3,895,142	3,921,043	3,770,930	3,832,050	3,881,720	3,889,871	3,885,156	3,875,575	3,863,432	3,934,346
5	1,351,267	1,513,860	1,386,834	1,658,104	1,754,734	3,316,520	3,310,904	3,301,496	3,320,886	3,408,225	3,431,714	3,447,874	3,409,210	3,444,021	3,493,812	3,546,652	3,551,244	3,583,665	3,619,950	3,760,842
6	1,351,267	1,513,860	1,386,834	1,658,104	1,754,734	3,324,872	3,323,114	3,310,508	3,320,768	3,380,870	3,396,706	3,396,986	3,405,800	3,447,029	3,493,773	3,546,361	3,550,828	3,583,558	3,619,521	3,762,422
7	1,353,175	1,517,248	1,386,980	1,852,645	1,905,433	3,592,987	3,741,188	3,771,131	3,888,214	3,933,681	3,944,310	3,962,369	3,924,307	3,944,198	3,961,907	3,988,104	3,988,171	3,989,177	3,980,606	4,011,940
8	1,353,175	1,517,248	1,386,980	1,852,645	1,905,433	3,343,990	3,436,946	3,409,588	3,582,430	3,681,814	3,753,399	3,740,998	3,469,008	3,527,161	3,600,576	3,629,736	3,657,998	3,723,232	3,737,454	3,860,284
9	1,353,175	1,517,248	1,386,980	1,852,645	1,905,433	3,331,965	3,337,133	3,318,986	3,335,843	3,396,155	3,408,064	3,403,955	3,413,000	3,448,090	3,502,709	3,550,539	3,554,348	3,585,420	3,624,166	3,762,602
10	1,332,091	1,476,605	1,334,488	1,374,146	1,437,252	3,226,404	3,353,960	3,502,084	3,602,037	3,655,408	3,709,032	3,757,050	3,495,494	3,504,269	3,548,144	3,562,012	3,516,436	3,521,240	3,512,258	3,698,686
11	1,332,091	1,476,605	1,334,488	1,374,146	1,437,252	3,241,613	3,233,949	3,218,662	3,229,235	3,277,569	3,287,481	3,266,425	3,280,013	3,304,176	3,352,928	3,406,065	3,414,645	3,453,738	3,478,120	3,650,414
12	1,332,091	1,476,605	1,334,488	1,374,146	1,437,252	3,246,558	3,235,800	3,226,622	3,235,500	3,277,186	3,295,395	3,270,643	3,285,761	3,308,764	3,360,146	3,403,678	3,420,943	3,457,701	3,483,542	3,648,618
13	1,332,117	1,478,526	1,334,708	1,581,842	1,658,910	3,260,596	3,481,006	3,597,460	3,726,551	3,842,276	3,866,434	3,895,055	3,694,967	3,760,148	3,820,755	3,826,840	3,822,937	3,803,548	3,783,042	3,881,813
14	1,332,117	1,478,526	1,334,708	1,581,842	1,658,910	3,255,762	3,239,138	3,220,685	3,246,954	3,311,234	3,339,313	3,329,649	3,293,020	3,313,364	3,363,524	3,413,418	3,429,512	3,463,523	3,485,934	3,654,560
15	1,332,117	1,478,526	1,334,708	1,581,842	1,658,910	3,263,113	3,252,235	3,230,982	3,246,576	3,284,876	3,303,876	3,276,812	3,290,788	3,318,366	3,366,282	3,414,336	3,429,795	3,463,628	3,488,140	3,656,864
16	1,334,164	1,481,939	1,334,861	1,780,830	1,812,731	3,552,306	3,710,102	3,733,495	3,859,603	3,906,648	3,918,745	3,936,604	3,881,404	3,915,485	3,929,942	3,956,018	3,957,103	3,958,622	3,945,942	3,982,958
17	1,334,164	1,481,939	1,334,861	1,780,830	1,812,731	3,284,550	3,368,503	3,334,283	3,522,674	3,615,749	3,693,472	3,670,801	3,354,816	3,402,232	3,482,247	3,511,361	3,550,019	3,618,104	3,632,176	3,794,823
18	1,334,164	1,481,939	1,334,861	1,780,830	1,812,731	3,272,687	3,266,858	3,240,088	3,262,876	3,303,890	3,316,915	3,285,586	3,299,210	3,321,658	3,377,828	3,421,245	3,434,588	3,465,680	3,492,640	3,658,480
19	1,306,797	1,426,665	1,267,062	1,282,919	1,320,896	3,149,892	3,261,038	3,425,894	3,515,226	3,550,676	3,633,173	3,668,798	3,347,840	3,380,058	3,373,017	3,385,880	3,340,531	3,312,755	3,286,881	3,534,392
20	1,306,797	1,426,665	1,267,062	1,282,919	1,320,896	3,167,497	3,139,609	3,121,962	3,102,244	3,132,666	3,144,104	3,109,244	3,107,704	3,139,509	3,154,719	3,191,106	3,190,690	3,231,313	3,252,056	3,484,097
21	1,306,797	1,426,665	1,267,062	1,282,919	1,320,896	3,170,315	3,141,693	3,132,276	3,110,336	3,135,430	3,151,970	3,116,162	3,114,892	3,146,034	3,166,324	3,191,464	3,198,873	3,236,177	3,260,876	3,483,936
22	1,306,819	1,428,560	1,267,225	1,484,932	1,540,733	3,184,878	3,401,216	3,528,179	3,658,090	3,787,088	3,811,771	3,852,918	3,588,972	3,663,034	3,721,278	3,710,792	3,698,260	3,671,442	3,627,486	3,770,264
23	1,306,819	1,428,560	1,267,225	1,484,932	1,540,733	3,179,216	3,146,160	3,125,977	3,120,848	3,168,020	3,196,554	3,184,523	3,122,665	3,152,214	3,169,482	3,201,309	3,211,204	3,245,202	3,264,086	3,489,170
24	1,306,819	1,428,560	1,267,225	1,484,932	1,540,733	3,185,971	3,160,544	3,136,208	3,125,496	3,142,449	3,163,049	3,124,009	3,121,520	3,159,348	3,172,551	3,207,261	3,212,117	3,245,010	3,268,138	3,493,842
25	1,308,987	1,431,983	1,267,364	1,685,542	1,694,704	3,484,858	3,671,456	3,678,250	3,823,328	3,864,397	3,878,454	3,894,209	3,816,211	3,863,243	3,884,719	3,907,640	3,917,776	3,904,546	3,882,881	3,933,578
26	1,308,987	1,431,983	1,267,364	1,685,542	1,694,704	3,210,443	3,277,474	3,247,148	3,423,058	3,509,101	3,610,084	3,564,188	3,185,538	3,265,288	3,276,281	3,308,410	3,381,048	3,439,169	3,443,225	3,655,293
27	1,308,987	1,431,983	1,267,364	1,685,542	1,694,704	3,197,228	3,177,222	3,145,715	3,143,947	3,162,462	3,179,684	3,134,444	3,132,270	3,164,220	3,183,237	3,215,359	3,218,799	3,250,617	3,273,559	3,496,667
Expected	1,331,084	1,475,241	1,330,854	1,574,686	1,636,149	3,272,915	3,319,734	3,330,829	3,389,512	3,454,348	3,484,255	3,479,473	3,386,334	3,423,146	3,466,734	3,501,899	3,510,154	3,537,192	3,550,731	3,708,928

KCPL - GMO

2014 IRP Results - Plan AIDGA
Non-Firm Purchases Cost

HIGHLY CONFIDENTIAL

Endpoint	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
1	52,870,564	55,574,884	58,342,992	66,899,972	77,803,352	207,882,048	279,850,048	299,293,344	354,147,552	390,080,352	421,856,544	457,734,784	432,810,976	442,646,400	455,709,664	470,293,056	475,634,976	475,594,752	493,487,296	527,172,832
2	52,870,564	55,574,884	58,342,992	66,899,972	77,803,352	183,661,408	215,762,528	216,057,824	234,151,328	255,590,368	269,445,056	277,785,344	287,101,472	302,389,248	315,440,352	337,325,120	356,580,032	365,955,264	389,169,024	415,631,520
3	52,870,564	55,574,884	58,342,992	66,899,972	77,803,352	176,451,136	189,333,568	184,525,824	196,727,232	215,385,824	225,861,728	229,657,488	239,309,456	251,558,160	263,251,520	284,731,136	303,351,104	314,464,256	333,664,288	355,123,904
4	48,982,156	53,491,200	54,922,680	65,909,992	69,827,064	176,963,856	266,548,704	292,293,280	345,317,056	379,104,832	402,688,000	431,426,432	416,460,160	425,017,216	432,393,216	446,286,944	451,722,016	451,119,904	469,133,888	491,899,648
5	48,982,156	53,491,200	54,922,680	65,909,992	69,827,064	145,212,768	178,754,800	194,078,448	202,198,752	217,014,768	228,580,048	242,742,928	248,464,496	258,837,904	269,381,248	283,075,360	290,781,472	297,463,840	314,202,400	337,094,496
6	48,982,156	53,491,200	54,922,680	65,909,992	69,827,064	137,740,608	151,311,280	161,874,176	160,623,472	170,054,400	175,673,104	184,255,968	195,533,664	204,297,232	212,974,320	226,701,296	233,712,064	241,946,400	257,415,232	274,931,520
7	45,364,928	51,514,392	51,380,768	64,111,552	59,882,688	166,161,536	256,634,448	287,948,160	328,040,384	342,487,072	356,078,976	384,084,096	382,894,336	382,864,192	383,803,552	395,417,536	388,923,008	390,354,912	408,997,984	429,797,568
8	45,364,928	51,514,392	51,380,768	64,111,552	59,882,688	115,521,896	157,418,144	181,266,880	193,961,264	206,695,712	220,281,616	235,817,184	228,773,552	237,914,016	248,570,560	257,218,336	261,365,424	267,620,224	278,885,888	297,007,936
9	45,364,928	51,514,392	51,380,768	64,111,552	59,882,688	103,759,536	114,874,400	138,060,784	126,486,128	125,385,328	127,548,576	137,158,192	147,933,920	152,664,256	159,925,888	167,160,336	165,684,864	173,001,952	183,410,736	199,601,456
10	52,149,596	54,308,644	56,208,612	63,500,688	73,244,536	203,588,096	274,212,416	293,342,112	348,429,216	383,658,176	414,743,904	450,902,592	420,683,872	428,655,712	442,997,024	456,216,352	460,955,424	460,783,968	475,962,880	513,535,232
11	52,149,596	54,308,644	56,208,612	63,500,688	73,244,536	180,055,584	211,254,768	210,938,960	228,797,344	248,367,264	261,797,312	268,131,008	277,243,232	291,149,856	303,766,528	324,982,688	343,928,896	353,703,296	374,842,784	404,354,848
12	52,149,596	54,308,644	56,208,612	63,500,688	73,244,536	173,140,416	185,434,576	180,329,504	192,576,640	209,474,656	219,827,680	221,995,536	231,365,984	242,411,584	254,111,312	274,300,480	293,097,600	304,196,896	322,012,672	345,495,392
13	48,313,016	52,273,436	52,914,136	62,942,416	66,129,160	173,541,776	261,690,688	287,711,936	341,364,832	375,427,040	399,725,504	428,614,272	408,217,376	417,176,704	425,687,616	439,254,624	444,594,560	443,009,408	459,628,352	485,475,904
14	48,313,016	52,273,436	52,914,136	62,942,416	66,129,160	142,718,544	175,108,928	189,517,504	197,892,752	211,021,280	222,634,368	234,697,648	240,211,792	249,305,168	259,639,184	272,757,472	281,180,160	287,938,720	302,984,960	328,083,520
15	48,313,016	52,273,436	52,914,136	62,942,416	66,129,160	135,349,792	148,336,256	158,210,544	157,292,800	165,547,104	171,161,776	178,224,800	189,296,976	197,189,648	205,788,432	218,753,264	226,287,616	234,479,728	248,768,256	267,980,000
16	44,750,408	50,343,948	49,501,344	61,696,312	57,079,860	164,274,416	254,448,528	285,013,312	325,545,568	340,021,760	353,629,792	381,467,904	378,433,984	379,857,792	380,545,792	391,985,568	385,761,024	387,156,608	405,272,768	426,416,288
17	44,750,408	50,343,948	49,501,344	61,696,312	57,079,860	113,588,016	154,401,024	177,392,672	190,785,392	203,011,936	216,787,040	231,436,560	221,445,904	229,744,016	240,677,488	249,095,824	253,950,384	260,349,120	271,331,808	292,202,880
18	44,750,408	50,343,948	49,501,344	61,696,312	57,079,860	102,029,272	112,642,464	134,994,816	123,946,048	122,208,008	124,359,824	132,737,552	143,303,008	147,451,008	154,630,304	161,478,064	160,453,552	167,666,640	177,278,032	194,635,776
19	51,208,752	52,541,464	53,465,012	59,439,076	67,541,616	198,999,152	266,749,136	286,965,568	340,009,856	372,728,928	406,180,768	440,339,712	403,435,776	413,834,080	421,766,304	434,338,048	438,608,928	434,227,136	446,257,888	491,464,448
20	51,208,752	52,541,464	53,465,012	59,439,076	67,541,616	176,228,160	205,365,968	204,865,792	220,198,592	237,875,088	250,819,008	255,637,424	263,269,152	277,082,592	286,606,848	305,339,520	322,517,024	331,871,840	351,553,600	387,019,776
21	51,208,752	52,541,464	53,465,012	59,439,076	67,541,616	169,366,416	180,301,376	175,356,960	185,572,384	200,998,240	210,811,840	212,042,432	220,049,264	231,081,168	240,426,368	258,153,456	275,378,304	285,819,296	302,700,544	331,039,648
22	47,439,216	50,571,992	50,329,112	59,206,524	61,566,960	169,697,760	255,687,824	282,145,728	335,048,032	370,056,640	394,189,088	424,209,344	396,850,304	406,555,328	414,834,848	426,296,416	430,662,944	428,188,032	441,408,160	472,081,440
23	47,439,216	50,571,992	50,329,112	59,206,524	61,566,960	139,593,520	170,306,448	184,169,264	190,509,536	202,286,944	213,419,168	224,689,200	228,197,744	237,549,024	245,259,856	256,323,184	264,061,776	270,455,648	284,416,672	313,845,760
24	47,439,216	50,571,992	50,329,112	59,206,524	61,566,960	132,364,712	144,401,888	153,859,616	151,839,424	158,844,768	164,293,200	170,393,920	180,209,664	188,395,520	194,797,408	206,445,280	213,126,640	220,694,768	234,215,744	257,052,992
25	43,946,852	48,708,184	47,080,696	58,533,660	53,494,096	161,186,288	251,727,760	280,788,256	322,441,504	336,196,960	349,862,720	377,258,912	371,798,336	374,786,528	376,092,512	387,023,200	381,707,264	381,663,648	398,351,936	420,608,288
26	43,946,852	48,708,184	47,080,696	58,533,660	53,494,096	111,141,600	150,334,800	172,875,808	185,517,200	197,108,848	211,944,256	224,772,368	210,599,328	220,774,544	226,926,016	235,186,352	242,362,336	248,016,080	257,724,928	281,938,848
27	43,946,852	48,708,184	47,080,696	58,533,660	53,494,096	99,820,256	109,738,584	131,333,456	119,759,416	117,304,608	119,514,344	126,982,240	136,536,320	140,920,608	146,322,624	152,481,216	151,166,944	157,986,224	166,965,488	186,765,984
Expected	48,330,370	52,179,015	52,740,594	62,586,310	65,417,202	151,053,827	192,128,046	207,316,522	225,537,950	242,136,630	255,757,233	270,640,582	269,579,593	278,640,452	287,754,884	301,049,328	308,577,307	314,139,052	329,539,728	354,458,603
AAAGA Expected	48330369.5	52179014.75	38509945.75	45922547.5	50999630.75	71131300.63	109215301.6	122399666.6	147568832.4	188830034	203747688.5	217760417.4	212032560.8	219771997.1	228610309.6	238659855.3	244721603.3	250196175.5	262744382	293198341.9
Diff	0	0	14,230,649	16,663,762	14,417,571	79,922,527	82,912,744	84,916,855	77,969,117	53,306,596	52,009,544	52,880,165	57,547,032	58,868,455	59,144,574	62,389,473	63,855,704	63,942,877	66,795,346	61,260,261
2017-2026	572,545,912	$572.55																		
2017-2020	193,916,604	$193.92																		

Time Period	Decrease in NF Sales (Millions of $)	Increase in NF Purchases (Millions of $)	Total Increase in NF Costs (Millions of $)
2017 - 2020			
KCP&L	$80.10	$1.20	$81.30
KCP&L-GMO	$38.30	$193.92	$232.22
Total KCP&L	**$118.40**	**$195.12**	**$313.52**
2017-2026			
KCP&L	$397.70	$10.10	$407.80
KCP&L-GMO	$83.00	$572.55	$655.55
Total KCP&L	**$480.70**	**$582.65**	**$1,063.35**

KCPL - GMO

HIGHLY CONFIDENTIAL

2014 IRP Results - Plan AIDGA

Endpoint	Joint prob
1	1.6%
2	3.1%
3	1.6%
4	3.1%
5	6.3%
6	3.1%
7	1.6%
8	3.1%
9	1.6%
10	3.1%
11	6.3%
12	3.1%
13	6.3%
14	12.5%
15	6.3%
16	3.1%
17	6.3%
18	3.1%
19	1.6%
20	3.1%
21	1.6%
22	3.1%
23	6.3%
24	3.1%
25	1.6%
26	3.1%
27	1.6%

PUBLIC VERSION OF CONFIDENTIAL EXHIBIT JAL-36

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-37

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Figgs Katie Interrogatories - KCC_20160916
Date of Response: 11/04/2016

Question:68

RE: Mr. Kemp's Direct Testimony

Refer to the June 28, 2016 Kemp Testimony at page 6, lines 7 and 11. The testimony states that the total savings of approximately $426 million over a 3.5-year period includes "both O&M expense savings and the revenue requirement impact of capital expenditure reductions".

a.) Provide detailed estimates for each of the O&M expense savings.

b.) Identify and describe each of the capital expenditure reductions.

c.) Provide detailed estimates for each of the capital reductions included in the total savings.

Number of Attachments:

Response:

a. See the response to KCC-7 and associated workpapers for the details on the estimates of non-fuel O&M savings.

b-c. The estimated capex reductions by functional area were provided on the "CAPEX" tab of Q7_CONF_Workpaper_Merger Savings Model_5-14-16.xlsx provided in response to KCC Staff Data Request 7.

To assist KCC staff, the numbers supporting the capex reduction estimates flow as follows:

1. See the "T&D Capex" tab for the baseline data and all the source data and logic for the various line items of savings in that area.
2. The reductions in IT were hard input into the "CAPEX" tab, and were all related to Customer Service (elimination of the planned new Westar CIS). They were included in the T&D/Customer Service functional area. The estimates were provided by GPE executives in interviews.
3. The reductions in Generation capex were a hard input into the "CAPEX" tab, and reflected adjustments to planned capex for a representative generation plan rationalization scenario that is consistent with the assumptions in the "Data" tab. The optional generation plant rationalization plan will be decided in an IRP process.
4. The reductions in Supply Chain capex are shown directly on the "SUPPLY CHAIN" tab. Due to specific requirements for applying capital carrying

charges to supply chain items, the revenue requirement impact of the Supply Chain capex reductions was included in the NFOM savings numbers.

5. The capex reductions for Generation and T&D/Customer Service functional areas were divided into 7 and 35 year depreciation lifetime categories, based on advice from GPE financial management, and run through GPE's financial model to determine the revenue requirement impact. (There were no estimated capex savings for Shared Services.)

Attachment: Q68_Verification.pdf

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request# 37, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: William K Kemp

Title: Senior Managing Director

Date: September 15, 2016

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-38

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Bond Ashley Interrogatories - BPU_20161108
Date of Response: 11/22/2016

Question:4-1

Referring to the response to CURB-42, where Mr. Kemp states he relied on GPE financial management for the 7-year and 35-year depreciable lives for generation and T&D capital expenditures, respectively, please:

1. Provide the basis for these depreciation lifetime assumptions.

2. Provide a copy of GPE's most recent depreciation study or studies prepared for KCPL and Aquila.

3. Identify the KCC docket(s) in which the study or studies provided in response to part 2 above was introduced and the testifying witness(es).

4. Provide all documentation, underlying data, analyses and workpapers that support the response to this request. Provide all responsive spreadsheets in live format, with all formulas in place and functional.

5. Identify the person at GPE most knowledgeable about the issues referenced in this request.

Number of Attachments:

Response:

1. The estimated depreciation lifetime assumptions were provided by GPE to Mr. Kemp as general assumptions for which to categorize capital expenditure savings for use in the financial model attached to CURB-42. To simplify the financial modeling, two overall categories were used: (1) short-term life assets with an average useful life of 7 years such as information technology and software assets and (2) long-term life assets with an average useful life of 35 years including generation, transmission and distribution assets. GPE's financial modeling used these two categories of savings to determine depreciation and revenue requirement impacts.

2. No specific depreciation studies for KCP&L or Aquila were prepared or used in determining the two categories of depreciable lives.

The latest depreciation studies that were prepared within the context of rate cases are attached.

Redactions Removed Pursuant to Commission Order

For KCP&L KS the 2012 study is a full study whereas the 2015 is a partial study for just certain accounts.

The 2012 study can be found in attachment:
KCPL Kansas Depreciation Study Dane Watson Docket No 12-KCPE-764-RTS
The 2015 Partial Study can be found in attachment:
Dane Direct Testimony 15-KCPE-116-RTS

For KCP&L MO the 2014 Study is a full study and the 2016 is a partial study for just certain accounts.

The 2014 Study can be found in attachment:
Spanos Direct 10-30-2014

The 2016 Partial Study can be found in attachment:
Spanos Direct 7-1-2016 Final Includes Exhibits

The GMO study is a full study and can be found in attachments:
Spanos Schedule JJS-1 Part 1 - GMO Combined 2-23-2016
Spanos Schedule JJS-1 Part 2 - GMO Combined 2-23-2016
Spanos Schedule JJS-1 Part 3 - GMO Combined 2-23-2016

3. See response to part 2.

4. See response to part 2.

5. Mike Meyer, Director Financial Analysis, KCP&L is most knowledgeable about the assumptions used in the financial modeling attached to CURB-42.

Attachments:
Dane Direct Testimony 15-KCPE-116-RTS.pdf
KCPL Kansas Depreciation Study Dane Watson Docket No 12-KCPE-764-RTS.pdf
Spanos Direct 10-30-2014.pdf
Spanos Direct 7-1-2016 Final Includes Exhibits.pdf
Spanos Schedule JJS-1 Part 1 - GMO Combined 2-23-2016.pdf
Spanos Schedule JJS-1 Part 2 - GMO Combined 2-23-2016.pdf
Spanos Schedule JJS-1 Part 3 - GMO Combined 2-23-2016.pdf
Q4-1_Verification.pdf

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to BPU Data Request# 4-1, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: [illegible]

Title: Director, Financial Analysis

Date: 11/18/16

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-39

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Bond Ashley Interrogatories - BPU_20161107
Date of Response: 11/18/2016

Question:3-3

In reference to the response to BPU-2-10 and KCC-115, please identify which company or companies the references to "Prairie" and "Sky" refer to.

Number of Attachments:

Response:

Prairie was the code word for GPE. Sky was the code word for Westar.

Attachment: Q3-3_Verification.pdf

Redactions Removed Pursuant to Commission Order

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to BPU Data Request# 3-3, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: William K Kemp

Title: Senior Managing Director

Date: November 14, 2016

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-40

Redactions Removed Pursuant to Commission Order

KCPL and KCPL GMO
Case Name: Westar Aquisition
Case Number: EM-2016-0324

Response to Murray David Interrogatories - MPSC_20160615
Date of Response: 6/24/2016

Question:0003

Please provide a copy of all due diligence reviews performed by Great Plains Energy and Westar Energy with regard to the proposed transaction. Provide a copy of all supporting documentation relied upon in the completion of all due diligence reviews. DR requested by David Murray (david.murray@psc.mo.gov).

Response:

See attachment Q0003_HC_Project Wizard Due Diligence Summary Master FINAL.pptx for Great Plains Energy's summary of due diligence. The supporting documentation for Great Plains Energy's due diligence efforts was the documentation provided by Westar in their data room, which was established during the sale process. Other supporting information came through management meetings or calls between Great Plains Energy and Westar.

This information is considered **HIGHLY CONFIDENTIAL** as it contains market-specific information related to services offered in competition with others.

Additional information responsive to this request is subject to the attorney-client privilege.

Great Plains Energy has no information regarding due diligence documentation by Westar Energy.

Information provided by Julie Shull, Sr. Director, Corporate Strategy

Attachment:
Q0003_HC_Project Wizard Due Diligence Summary Master FINAL.pptx
Q0003_Verification.pdf

Verification of Response

Kansas City Power & Light Company
AND
KCP&L Greater Missouri Operations

Docket No. EM-2016-0324

The response to Data Request #___0003_____ is true and accurate to the best of my knowledge and belief.

Signed: Tim Rush

Date: June 24, 2016

Redactions Removed Pursuant to Commission Order

GREAT PLAINS ENERGY

Project Wizard Due Diligence

KCP&L energizing life

HIGHLY CONFIDENTIAL

Redactions Removed Pursuant to Commission Order

RESTRICTED/HIGHLY CONFIDENTIAL

Key Questions and Due Diligence Areas

Key areas of focus for Round 2 include, but are not limited to:

Financial

- Business plan drivers: customer growth rates, non-fuel O&M drivers, customer rate impacts ***(Wright)***
- Potential synergies, Insurance ***(Busser/Wright)***
- Tax, acceleration of NOLs, etc. ***(Busser/Hardesty)***
- Risk management and hedging ***(Busser/Wright/Noblet/Anstaett)***
- Tax audits and contests ***(Hardesty)***
- Financing documents (restrictive covenants) ***(Wright)***
- Contractual obligations, such as leases or long-term contracts ***(Huddleston)***
- Collateral posting requirements ***(Busser/Wright/Noblet/Anstaett)***

Regulatory

- Understanding of regulatory undertakings between Wizard and KCC; prior merger conditions ***(Ives)***
- Regulatory strategy: rate case plans, capital structure ***(Ives)***
- Regulatory assets/liabilities ***(Ives)***
- FERC compliance ***(Fairchild)***
- Understanding regulatory landscape and merger approval process in KS ***(Ives/Huddleston/Hack)***

Environmental

- Any contingent liabilities related to environmental issues ***(Ling)***
- Review of any environmental site assessments/audits and proposed remediation plans ***(Ling)***
- Ongoing / potential litigation ***(Ling/Huddleston)***
- Compliance plans and programs; violations/exceptions ***(Fairchild)***
- Impact of new and potential environmental rules on generation fleet ***(Noblet/Anstaett/Crawford)***

Key Questions and Due Diligence Areas *(cont.)*

Key areas of focus for Round 2 include, but are not limited to:

Operations

- Status of physical infrastructure and testing (generation, etc.) ***(Noblet/Anstaett)***
- Capital expenditure plans – T&D maintenance / expansion ***(Noblet/Anstaett)***
- Assessment of Management's continued ability to operate independently ***(Noblet/Anstaett)***
- Commercial contracts (new wind build, PPAs, fuel) ***(Noblet/Anstaett/Crawford)***
- Power plant operations and performance, including SPP transmission costs ***(Noblet/Anstaett)***
- Governance and rights related to jointly-owned plants ***(Noblet/Anstaett)***
- Franchise terms, if relevant ***(Caisley)***
- Customer service ***(Noblet/Anstaett)***

Labor / Other

- Status of pension funding, recovery rates, etc. ***(Murphy)***
- IT ***(King)***
- Status of collective bargaining agreements ***(Murphy)***
- Stock plans and other benefit plans ***(Murphy)***
- Severance and change of control plans ***(Fairchild)***
- Review of compensation and benefits packages for current employees ***(Murphy)***
- Incentive compensation plans currently in place **(Murphy)**

Due Diligence Team

Well-Rounded, Appropriately Sized Internal Due Diligence Team

FINANCE

- Bryant (Lead)
- Busser
- Hardesty
- Meyer
- Shull
- Wright
- Gilligan
- Clizer
- Higley
- Jones

REGULATORY

- Humphrey (Lead)
- Caisley
- Ives
- McDonald
- Hack

LEGAL

- Humphrey (Lead)
- Huddleston

ENVIRONMENTAL/COMPLIANCE

- Fairchild (Lead)
- Ling
- Jackson

OPERATIONS

- Heidtbrink (Lead)
- Anstaett
- Noblet
- Crawford
- Jenks

LABOR / HR AND OTHER

- Humphrey (Lead)
- King
- Murphy

OUTSIDE EXPERTS

- Financial Advisory (Goldman Sachs)
- Legal (Bracewell)
- Rating Agencies, Tax/Accounting
- Synergies (Enovation)

Due Diligence Category – Legal

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Wizard and Utility Subsidiary First Mortgage Bonds	High	Complete	▪ Wizard and Utility Subsidiary First Mortgage Bonds Folder 4.6.1	▪ Based on an initial review of the documents there does not appear to be any obligation to refinance the Mortgage Bonds as a result of the transaction ▪ Calls of the Wizard/Utility Subsidiary first mortgage fixed rate bonds require a make-whole premium (spreads range from 15 to 50 bps). ▪ Issuance of Wizard first mortgage bonds is limited to (i) 60% of the lesser of cost and fair market value of bondable property additions and (iii) net earnings for a period of 12 consecutive months in any 15 months preceding issuance being either at least 2x interest coverage or 10% of the principal of indebtedness outstanding. ▪ Issuance of Utility Subsidiary first mortgage bonds is limited to (i) $3.5 billion, (ii) 70% of the lesser of cost and fair market value of bondable property additions and (iii) net earnings for a period of 12 consecutive months in any 15 months preceding issuance being either at least 2.5x interest coverage or 10% of the principal of indebtedness outstanding. ▪ Utility Subsidiary required under the Utility Subsidiary first mortgage bonds to expend or accrue each year at least 15% of gross operating revenues towards maintenance or retirement (subject to a 5 year carryforward). ▪ $50 million of 4.85% pollution control bonds are to be refunded in June 2016	▪ None at this time	Humphrey

Due Diligence Category – Legal *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Change of Control Provisions in Debt Documents and Other covenants	High	Complete	▪ Revolving Credit Facilities Folder 4.6.2 ▪ Commercial Paper Agreements	▪ A "change in control" (i.e. acquisition of 30+%) triggers an "event of default" under both the Wizard $730 million and $270 million revolving credit facilities. ▪ As of 12/31/15, there were no borrowings under either facility and there were $19.2 million of outstanding letters of credit (which would need to be cash collateralized or replaced if the revolving credit lenders do not consent to the proposed transaction) and $308.9 million of short-term borrowings under Sky's commercial paper program, that is back-stopped by the revolving credit facilities, the commercial paper is all 30 day maturities and would be due without corresponding support in the event that the revolving credit lenders do not consent to the Proposed Transaction. ▪ Both facilities require maintenance of a consolidated debt to capitalization ratio of 65% or less	▪ None at this time	Humphrey
Variable Interest Entities	High	Complete	▪ Summaries of treatment Folder 4.4 and facility documents Folder 5.4	▪ Utility Subsidiary holds its undivided 50% interest in La Cygne through a sale-leaseback and has an option to purchase the interest for the lesser of fair sale value and $342.63 million at the end of the basic lease term in 2029 ▪ In February 2016, Utility Subsidiary effected a refunding of the La Cygne $162.1 million bonds reducing the stated interest rate from 5.647% to 2.398% via fixed rate bonds (which are subject to a T+50 make-whole call) and swapped rate bonds.	▪ None at this time	Humphrey

Due Diligence Category – Legal *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Benefits – 280G Issues	Medium	In-Progress	▪ 2015 10-K ▪ Dataroom documents Folder 13 ▪ Wizard Definitive Proxy Statement	▪ A number of employees have RSU that will likely result in large (relative to such employees) change of control payments. So far we estimate based on your first round bid and information in Sky's public Definitive Proxy Statement ("DEF14A") that payments to the top five officers for the RSUs will total greater than $15 million, with over $8 million of that going to the top officer. We know that there are a number of additional RSUs issued, however Sky has not provided the list and the pricing information. Many of these employees also have severance agreements, where additional payments would need to be made if they are terminated after the change in control. ▪ The Definitive Proxy Statement lists potential payments upon change in control for five officers, including the vesting of all RSUs, and indicated that the value of RSU that will vest for each officer would be below the 280G threshold; however the Definitive Proxy Statement, contemplated a share price of $42.6225. Sky has represented that they do not have any calculations contemplating a higher price. If a higher price per share is offered, the value of the RSUs that vest could exceed the 280G threshold resulting in a loss of compensation deduction for a portion of the RSUs and a 20% excise tax for the officers. 208G calculations should be made as soon as practical after the final bidder is determined.	▪ We have asked Wizard for new 280G calculations and supporting documents, including base amount for each of the three officers and the valuation of the accelerated vesting of the RSUs under 280G.	Humphrey

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Redactions Removed Pursuant to Commission Order

Due Diligence Category – Legal *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
FERC Audits	High	In-Progress	Publicly filed FERC documents	▪There are two open FERC audits, the scope and size of which is large. The audits cover many issues, including accounting and transmission rate issues, and cover multi-year periods. Wizard is awaiting FERC's audit findings. In response to diligence questions on this subject, the Companies have noted that they are not aware of any material violations that FERC has found in the course of the audits.	▪Awaiting FERC to issue audit findings	Humphrey
FERC Rate Filings	High	Complete	Publicly filed FERC documents	▪Sky's market-based rate filings reference Utility Sub, but Utility Sub does not have its own rate filings. Utility Sub has represented to us that it only makes sales to Sky and that it makes no balancing sales to SPP. We believe that Utility Sub should have its own rate filings pursuant to the Federal Power Act for the sales it makes to Sky and should file one as soon as possible. Although FERC could impose monetary penalties, it is unlikely..	None at this time	Humphrey
FERC Market Power	High	Complete		▪As previously discussed with you, we engaged a consultant to examine potential FERC market power concerns, because Prairie and Sky are neighboring utilities, and there could be load pockets etc., that could raise issues. The consultant has initially determined that a combination the parties' generation portfolios should not raise market power concerns at FERC, nonetheless, FERC will require a detailed analysis for its approval process. .	None at this time	Humphrey

Due Diligence Category – Legal *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Transmission Development Exclusivity	High	Complete	Sky Competitive Transmission Joint Ventures Prairie Transource Joint Venture	▪ Each of Prairie and Sky have entered into their own exclusive joint ventures for the development of competitive transmission projects. Each of these joint ventures prohibit Prairie and Sky, and their respective affiliates, from pursuing any competitive transmission project outside of their respective joint ventures. Upon consummation of the Proposed Transaction, the exclusive areas covered by these joint ventures would become inconsistent, so this will need to be addressed prior to the consummation of the Proposed Transaction. ▪ In addition to competitive transmission projects, the Prairie transmission JV also has exclusivity over essentially all non-utility regulated transmission projects. Sky has a JV with Electric Transmission America ("Prairie Wind Transmission") for a specific transmission line, which would be carved out of the Prairie Transmission JV exclusivity, however Prairie Wind Transmission would be limited in its ability to undertake new merchant projects post-closing.	None at this time	Humphrey

Due Diligence Category – Delivery

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Vegetation Management	Medium	In Process	Received T&D vegetation management program O&M budget data and total line miles.	Sky 95% complete on first cycle and 9% into second cycle (4 year urban and 5 year rural). Sky has 14 internal employees for program management, customer communications, and field inspection. Most the work is under fixed price contracts one year in length with remainder done on time & material. In 2016 the work is split 50/50 between Asplundh and Wright. Historical Spend is as follows: 2013 - $34.1M 2014 - $33.5M 2015 - $30.2M 2016 budget of $31M ($29m dist, and $2M tran) - $22M of the $29M is fixed price. Electric Transmission (Greater than 35kV) - Majority of the transmission work is mowing and spraying of right of ways.	Request copies of Sky contractor agreements and IBEW Local 304 agreements with contractors. Electric Distribution (35kV and below) – Request data on line miles by voltage, urban, rural, backbone, and lateral. Also, want data on history for budgets and actual spend by type of work. Electric Transmission (Greater than 35kV) - Request data on line miles urban vs rural. These additional data requests are not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett

Due Diligence Category – Delivery *(cont)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Control and Call Centers	Medium	In Process		There is generally little overlap in the Delivery field operations between Sky and Prairie. So limited to no opportunity expected to close service centers or reduce field staffing. However, possibility to stage in combining of control centers into one and call centers into one depending on multiple issues including cost. Example: would we have space at one of the current call centers to combine both or would we need to relocate both to one location. Same question for the control centers. **Control Centers** – Per Sky union contract it appears Sky uses union personnel in their DSO, TSO, and PSO. Sky's GSO and TSO are located in Topeka while Sky's DSO is located in Wichita. Opportunity to at the least eliminate back up operations centers at each company (ie Prairie's LSOC). **Call Center** – Per 1QC benchmark data for the Sky Call Center their cost is tier 2 while performance is tier 4. Sky has 125 employees and uses union call center personnel working out of Wichita.	• Disaster recovery plans for Sky DSO, TSO, and Call Center. • Outage Management software being install in 2016 for Sky DSO. • Software vendor being used in Sky TSO. • Does Sky use temps in their Call Center and if so are they included in the 125 employee count and if used but not included in the 125 what was their average number of temps used in 2015.	Anstaett

Due Diligence Category – Delivery *(cont)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Line Contractors	Low	In Process		May be some opportunity for either Sky or Prairie to negotiate improved pricing with line contractors.	Sky line contractor agreements, IBEW Local 304 contractor agreement, data on volume of work performed, by type of work, and historical spend at the most detail level available. Data requested is not absolutely necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
T&D Asset Management Plans	Low	In Process	No detailed data available on the data-site. Sky does have $50M of Distribution Reliability spend included in their abbreviated rate case (ARC).	Per Heidtbrink conversation with Sky. Sky has not historically done pole inspection & treatment until recently with current reject rates around 15% versus 2% for a utility consistently using such a program. There appears to be some risk here for Prairie.		Anstaett
Fleet Vehicles	Low	In Process	Sky vehicles stock on capital lease of about $17M .	Received data on Sky vehicles including quantities by type, age., and purchase price. Expect minimal opportunity for savings here.	Historical data on replacement and maintenance spend. Additional data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett

Due Diligence Category – Delivery *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Joint Use	Low	In Process		Expect minimal, if any, savings or revenue enhancement opportunity here .	Request annual revenue from joint use (invoiced and actually collected). And, copies of Joint Use agreements for Sky's largest attachers. Data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
Security	High	In Process		Sky noted they are in compliance with CIP.	Request Sky CIP audit results documentation. Data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
Safety	High	Complete		Sky appears to have tier 1 safety performance. Probably an opportunity for Prairie to identify safety improvements at Prairie.		Anstaett
Franchise concerns with any of Sky's major communities.	Low	Complete		Based on conversation there are no franchises of concern with any of Sky's major communities.		Anstaett

Due Diligence Category – Delivery *(cont)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Street Lighting & Area/Dusk to Dawn Lighting Maintenance	Low	In Process		Expect minimal opportunity for savings here.	Request data on number of lights by type and location as well as data on historical spend over multiple years. Additional data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
Locates	Low	In Process		Confirmed that sky outsources locates but still don't know to who to (probably USIC/SMP similar to Prairie). As a result expect minimal, if any, savings opportunity here .	Request State One Call agreements. Eventually still need volume of work, actual spend for multiple years, and any contracts for locate contractor(s). Additional data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
Reliability metrics	Med	In Process		Metrics look typical for a highly rural utility.	Sky's split on line miles rural vs urban. Data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett
Distribution Construction Performance	Low	In Process		Sky is currently installing Maximo for T&D work management with plans to complete in early 2017. Possibly an opportunity for augmenting Prairie plans to eventually move to Maximo for T&D work management.	Details on Maximo installation for T&D. Data requested is not necessary for initial synergy estimates and can wait until deeper into synergy preparations.	Anstaett

Due Diligence Category – Generation

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Resource Planning – Capacity Adequacy /	Low	In-Progress	1.2.2	Load and capability report indicates that capacity appears adequate to meet load requirements through 2028. Currently 477 MW excess capacity May be opportunity for significant DSM program implementation	Are there any plans to increase DSM programs? If so, please provide any details. Has a retirement evaluation been completed for Lawrence Energy Center 4? What are the specific retirement drivers for each generating plant? Please provide any detail on the proposed 2025 generation capacity addition.	Noblet
Resource Planning/Wholesale Contracts	Low	In-Progress	1.2.2, 7.1.2.1 through 7.1.2.13	Need additional data	Are the full requirements wholesale customer load forecasts included in the load and capability file peak native load forecast? Please provide copies of all capacity purchase contracts. Please provide copies of the Chanute and MKEC capacity sales contracts. Please provide copies of full requirements wholesale customer load forecasts.	Noblet

Due Diligence Category – Generation (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Resource Planning/ Renewable Compliance	Low	In-Progress	1.2.2, 7.4.2.1	Wind resources well in excess of amount needed to meet the Kansas renewable energy standard No additional wind resources in planning stage beyond what has been publically announced Option to purchase 50% of the Kingman wind facility (200 MW total) before substantial completion	Do you have any disputes related to SPP Reliability Directives? Please provide copies of all wind contracts.	Noblet
Future Liabilities /Retired Generating Units	Medium	In-Progress	1.2.2	Data does not appear to be present to evaluate	For the five generating units retired in 2015, is your plan to retire in place or demolition? Decommissioning timeline? Decommissioning cost estimates? Any additional liabilities? Please provide copy of any and all decommissioning / dismantlement studies.	Noblet
Capital Budgets / Long-term capital requirements	Low	In-Progress	4.1.1.2	Partial data provided for next 5 years	Are there any major equipment additions or replacements planned or expected over the next 20 years? Please provide copy of any long-term (years 5 -20) capital projects for life extensions.	Noblet

Due Diligence Category – Generation (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Status of physical infrastructure / Operational performance of plants	Low	In-Progress	1.2.1	Generating Plant equivalent forced outage rates (EFOR) appears reasonable, except Gordon Evans Units 1 & 2 are high. Since these are gas-fired steam units (approx. 539 MW total), this should not have much impact on overall costs. In addition, Jeffery Energy Center Unit 1 EFOR rates were a bit high in 2013-2015.	Are there any formal plant availability improvement initiatives underway for coal and/or gas-fired steam resources? Please provide all benchmarking studies.	Noblet
Environmental Compliance/ Clean Power Plan	Low	In Progress	10.1	Data does not appear to be present to evaluate.	Please provide any Clean Power Plan impact assessments.	Noblet
Transmission / Adequacy and obligations	Low	In-Progress	None	Data does not appear to be present to evaluate.	Which wind resources in place or under contract have firm transmission service? For any wind facilities in place or under contract that do not have firm transmission, which facilities have SPP transmission service requests in process? Do you have any point-to-point transmission obligations? If so, please describe.	Noblet

Due Diligence Category – Generation (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Generation Dispatching	Low	In-Progress	None	Data does not appear to be present to evaluate.	What is your bidding strategy for your generation units? Do you self commit your units?	Noblet
Fuel and Rail Transportation	Low	In-Progress	None	Data does not appear to be present to evaluate. Firm Gas Service: Emporia 25% firm, (enough to run the 4 LM6000s around the clock), Evans 25%, Stateline 100% (Sky share), No firm gas at Hutchinson, and No firm gas at Spring Creek Additional firm gas supply may be needed	What is your buying strategy for coal? What is your buying strategy for natural gas? Do you have a formal or informal hedging strategy for fuel purchases? Please provide all fuel related contracts.	Noblet
Energy Trading	Low	In-Progress	4.5.2.1	Data does not appear to be present to evaluate. All non-asset based trading flows through to shareholders.	Please provide a copy of each outstanding letter of credit. Please provide a copy of each active Energy Management Agreement (EMA).	Noblet

Due Diligence Category – Supply Chain

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Overall Supply Chain Health • Sourcing savings • FTE efficiency	Medium	In process	▪Q&A Log ▪Management presentation ▪Supplier Alliances list ▪7.3 Suppliers ▪6.5.1 Enterprise Risk Management ▪6.4.1 2015 SOX management report ▪6.4.2 2015 SOX Deficiencies ▪2.4.1 Audit Committee minutes ▪1.4.2 Veg Mgmt ▪4.11.2 Shared Services Benchmarking ▪4.1.1.6 Historical Capex ▪13.6 Headcount Summary ▪8.1 Management Deck ▪Select Supply Chain operating metrics	▪Sky has opportunity in the supply chain. It appears that focus has been more on transactional processing and improving technology with implementation of PS 9.2. Little has been done in terms of strategic sourcing, category management, supplier risk assessment, supplier performance management, inventory and logistics optimization, and investment recovery. Opportunities for cost synergies and efficiencies are fairly high. Risks around availability of data for this round of review. ▪A few of the categories with biggest potential early on include MRO, vegetation management, and boiler services. ▪Synergy assumptions are predicated upon ability to move Sky to Prairie's PeopleSoft instance early on, as well as ability to cleanse Sky's spend data, inventory item master, and supplier item database. ▪FTE analysis needs more rigor due to incomplete information available at this time. From data that was provided, it appears that supply chain staffing is very lean and some materials functions are handled by suppliers.	▪Supplier risk assessment was not available ▪Not all operating metrics requested were available ▪FTE's provided – the sum of the parts did not equal the total provided ▪Need budget information both for Procurement and SCO ▪Need spend, by vendor, for past 3 years ▪Please describe what work has been done with Optima Supply Chain group and results ▪SC Organization chart ▪Total sourceable spend numbers did not seem to add up. Need to understand $200M increase in 2015 ▪*Information not critical at this time, but will be needed for a more comprehensive assessment*	Jenks
Inventory	Medium	In process	▪Q&A Log; Inv and SKU list by location	▪T&D inventory levels at Sky are double Prairie's $ value and triple Prairie's # SKU's. Sky's inventory levels at their coal plants are about 65% higher than Prairie's $ value and almost double # SKU's. Sky's generation inventory per MW and T&D inventory per T&D mile appear to be 4th quartile. ▪Obsolete or excess inventory could be a risk and a thorough review should be done before transaction close to identify any areas of concern	▪Need to better understand composition of the inventory, turnover, aging of items in stock, and history of write-offs ▪Will we have regulatory approval to share inventory across jurisdictions and be able to manage inventory centrally as a combined company?	Jenks

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Redactions Removed Pursuant to Commission Order

Due Diligence Category – Supply Chain (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Supply Chain technology/systems	Medium	In process	▪1.3.1 IT Applications List ▪4.1.1.1.17 IT forecast ▪Q&A Log	▪PeopleSoft is Sky's system of record for inventory, same as Prairie. Would need to cleanse inventory item master. ▪PeopleSoft is Sky's system of record for core purchasing functions. Sky's initial implementation of PS 9.1 had challenges in the supply chain modules. They have since re-engineered their supply chain functionality with their recent upgrade of PS 9.2. While improvements were made, Prairie's PS and Oracle based supply chain technology platforms provide enhanced functionality and analytics capabilities and will be critical to our ability to drive synergy savings from sourcing and inventory management.	▪Where are requisitions entered ▪What electronic interfaces do you have with suppliers ▪Do all of your facilities use the same inventory item taxonomy, naming conventions and descriptions ▪*Note: none of this information is critical for this round of diligence*	Jenks
Warehousing and Logistics Model	Medium	In process	▪Q&A Log; Inventory & Sku list by location ▪1.4.7 Territory Map	▪ Sky runs two large warehouses in Topeka and Wichita. From there, they ship to the smaller locations. Vendor direct shipments are also employed. They do not characterize either of these warehouses as a central distribution facility. Sky runs some consignment programs with vendors, but nothing too significant. ▪There could be potential for significant transportation/freight savings as well as warehousing costs and efficiencies by creating a central distribution warehouse in KC metro area, near a rail and interstate hub. Other benefits could be achieved by leveraging central distributor's warehouse in the KC metro as well. Would need to conduct a thorough review of the materials and equipment requirements/movements, existing facilities, fleet, logistics to determine optimal warehousing and logistics model/framework for combined entity.	▪Listing of internal delivery and back-haul routes by location and frequency ▪Volume and nature of vendor drop ships ▪Will we have regulatory approval to share inventory across jurisdictions and be able to manage inventory centrally as a combined company? What are tax implications? ▪Should we look at implementing Purchasing Company?	Jenks

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Due Diligence Category – Supply Chain *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Investment Recovery	Low	In process	▪See above	▪Prairie's investment recovery function (repair/refurbishment of transformers and other electrical apparatus, oil reclamation, scrap metal, and CMF) could be used to serve same function for Sky and from same facilities, as Sky does not have a similar capability. Apparatus could be back-hauled using internal fleet and logistics network. Prairie realizes approx. $5M/year savings from such activities.	▪Describe your investment recovery function/capabilities.	Jenks
Wolf Creek Supply Chain	Medium	In process	▪See above	▪With close to 100% ownership, efficiencies could be gained by strategically sourcing Wolf Creek spend with the combined Prairie-Sky spend and managing the strategic procurements centrally. There would also be transactional efficiencies to move Wolf Creek to Prairie's supply chain systems. Wolf Creek does not run supply chain on Sky's systems today.	▪Sourceable spend by category or vendor for Wolf Creek.	Jenks
Warranty program	Low	In process	▪See above	▪Uncertain whether Sky has a formal warranty management program. If not, there will be opportunities in terms of cost savings.	▪Does Sky have a formal warranty management program? If so, please describe	Jenks

Due Diligence Category – Accounting

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
SEC/FERC Reporting	High	Complete	▪None	Restatements of financial statements	In the last 5 years have there been any financial statement restatements, passed audit differences, significant deficiencies or material weaknesses. All documents, if any.	Busser
FERC Audit	High	In progress		FERC audit, if any	Summarize any initial findings/conversations with auditors to date. All FERC Audit correspondence to date.	Busser
SEC Reporting	High	In progress	▪TBD	SEC Comment Letters	Have there been any SEC comment letters received in conjunction with the SEC review of the filed SEC documents. All SEC comment letters.	Busser
Benefit Plan Reporting	High	In progress	▪TBD	IRS or DOL audits on benefit plans	Are there any on-going IRS or DOL audits covering company benefit plans? Any related IRS/DOL correspondence.	Busser

Due Diligence Category – Accounting (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Financial Forecast	Medium		Financial Forecast	Summary of load forecast assumptions	Please provide a summary of the load forecasting process and a detailed discussion of the primary drivers.	Meyer
Financial Forecast	Medium		Financial Forecast	Summary of load forecast assumptions	Please provide a summary of the forecasted revenues, MWh's and growth rates by customer class.	Meyer
Financial Forecast	Medium		Financial Forecast	Summary of load forecast assumptions	Please provide a summary of the historical revenues, MWh's and growth rates by customer class for 2011-2015.	Meyer
Financial Forecast	Medium		Financial Forecast	Summary of forecast assumptions	Please provide a forecast of historical capex by function for 2011-2015	Meyer
Financial Forecast	Medium		Financial Forecast	Inclusion of CWIP in rate base	On the rate base schedule, CWIP is included in KCC rate base. Please confirm that you will be able to include CWIP in rate base in KS general rate cases.	Meyer/ Ives
Financial Forecast	Medium		Change of Control	Schedule of employees eligible to receive change of control payments	Please provide a listing of employees covered by change of control payments and the approximate amounts for each.	Busser
Review of financial derivatives accounting	Med	In progress	Financial Accounting	Sky has a hedging/derivatives process for gas purchases	Evaluation of the strategy, risk and accounting around derivatives.	Noblet/ Busser

Due Diligence Category – Financial

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Credit Facility/Short Term Debt	High	In-Progress	▪ $270 mm Credit Agreement dated 2/18/2011 (now $250 mm effective 2/16) ▪ $730 mm Credit Agreement dated 9/29/2011 (now $750 mm) ▪ 10-K/10-Q	▪ $270 mm credit facility expires 2/18/17 ▪ $20 mm terminated in 2/16 ▪ No remaining extensions available ▪ WF admin agent ▪ Increase option of $130 mm ▪ $730 mm credit facility expires in 9/29/19 ▪ $20.7 mm terminates in 9/17 ▪ One 1-yr extension available ▪ JPM admin agent ▪ Increase option of $270 mm ▪ Credit facilities backs-up CP program ▪ No existing A/R facilities	▪ Have you evaluated using an A/R facility? ▪ Please discuss your approach to short term financing. ▪ Please describe your treasury/cash management process and your approach to cash forecasting. ▪ Please provide a listing of all bank accounts.	Wright
Long Term Debt/Debt Capacity/Capital Markets	High	In-Progress	▪ Indentures ▪ 10-K/10-Q	▪ All LTD is secured ($3.2B billion) issued by Sky Energy and KGE ▪ As of 12/31/15 approximately $851 mm of addl FMB could be issued by Sky and $1.5 billion by KGE	▪ Please discuss your approach to the capital markets ▪ Provide a listing of all current security holders and their holdings (debt and equity). ▪ Provide individual subsidiary capital structures ▪ Provide shelf registration ▪ Provide information on regulatory authority to issue long term debt	Wright
GXP Financing Plan	High	In-Progress		▪ Short –term financing strategy ▪ Long-term take-out strategy ▪ Market risk mitigation tools ▪ Determination of our all cash option?		Wright

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Rating Agencies – RAS/RES services	High	In-Progress	▪ Rating Agency Financial Forecast March 2016	▪ S&P and Moody's Advisory Services ▪ Combined forecast required ▪ Potential review of 3 scenarios ▪ Assume 1-2 week turnaround		Wright
Dividend Restrictions	High	In-Progress	▪ 10-K	▪ Consolidated Debt to Capital Ratio < 0.65 to 1.00 ▪ Consolidated Debt definition excludes VIE debt	▪ Please provide the most current dividend restriction calculations.	Wright
Capital Expenditures	High	In-Progress	▪ Rating Agency Financial Forecast March 2016 ▪ 10-K	▪ $400 mm in 2016 for Wind ▪ $91 mm Smart Grid in 2016-2018 ▪ $87 mm in Cap Ex in 2019 to pay GMO for ownership interest in Jeffrey Energy Ctr. ▪ 10-K and Rating Agency Presentation agree with totals	▪ Please explain Grid Resiliency expenditure planned for 2016 and Smart Grid	Wright
Vendor Payment Options	Medium	In-Progress		▪ Sky does not have V-Card program ▪ Currently evaluating P-Card vendors (RFP outstanding)	▪ Who is your credit card vendor (T&E/Fleet/Procurement)? ▪ Please provide a breakdown and A/P payments by payment type (check, ACH, wire) for 2015?	Wright

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Sky Shareholder Taxability	High	In-Progress	▪ None	▪ Assume that a 50% or 100% cash offer would mean that the deal would be taxable to the shareholders	▪ Not a Sky diligence item ▪ Need to confirm with bankers and/or outside counsel	Hardesty
Sky Taxability	High	Complete	▪ None	▪ It is in the best interest of Sky and Prairie to create a sub under Prairie and merge Sky into it at the time of the acquisition. Do not want to trigger or elect taxability at Sky.	▪ None	Hardesty
Impact to Prairie NOL Utilization	Medium	Complete	▪ Forecasted taxable income provided by Sky including bonus depreciation, Due Diligence Questions	▪ 5-Year forecast adds $790M of taxable income to Prairie ▪ May accelerate Prairie NOL utilization by approximately 3 years ▪ Apportionment Factor in MO decreased to 38% - MO NOL value reduced by $25M ▪ May not need Prairie valuation allowance on MO Only NOLs – approx. $2M benefit ▪ Include limited bonus depreciation for 2015 & 2016.	▪ None	Hardesty
Sky KS State Tax Credits	High	Complete	▪ Forecasted taxable income provided by Sky including bonus depreciation	▪ $180M of KS HPIP tax credit carryforward to 2016. ▪ Need to evaluate whether or not a valuation allowance would be needed for this. ▪ Valuation allowance of $7M	None	Hardesty
Uncertain Tax Positions	Medium	Complete	▪ 10K, 2014 Tax Return, Due Diligence Questions	▪ UTPs listed identified in 2015 10K not material. ▪ No tax opinions in the last 5 years. ▪ No issues identified.	▪ None	Hardesty

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Flow Through Computations	Medium	Complete	▪Sky income tax projections	▪Large flow-through tax adjustments. Not surprising considering KS is a flow-through state.	▪None	Hardesty
Property Tax Rider Kansas	Low	Complete	▪Sky forecast	▪Sky has a full property tax rider in KS	▪None	Hardesty
FERC Formula Rate ADIT Issue	Medium	Complete	▪TBD	▪Sky has the ADIT formula rate issue. Should be resolved similar to Prairie's ADIT formula rate issue.	▪None	Hardesty
Golden Parachute Payments – 280G	High	Complete	▪Change in control payment plan	▪See HR section	▪None	Hardesty
Section 382 – Tax Attribute Limitation	High	Complete	▪Prairie offer letter ▪Previous 12 months LTAFR	▪$54 times 141.6M shares =$7.6B purchase price ▪The Section 382 limit for tax attributes is generally the purchase price times the Long Term Federal Applicable Interest Rate (estimated to be 2.5%-3.0%) ▪ 382 limit is estimated to be $190M per year ▪At this level, there should be no problem using the NOLs and tax credits carried forward to Prairie from Sky	▪None	Hardesty
Tangible Property Regulations Change in Accounting Method	High	Complete	▪2014 Federal Tax Return - Form 3115	▪Resulted in a $99M 481a adjustment in 2014	▪None	Hardesty

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Late General Asset Election	Medium	Complete	▪2013 Federal Tax Return	▪Protective election made to preserve casualty loss deductions ▪Consistent with KCPL & GMO	▪None	Hardesty
Federal Tax Audit Risk	High	Complete	▪None found in data room, ▪Due Diligence Questions	▪No IRS correspondence in dataroom ▪2012 forward open under statute of limitations ▪No tax years under IRS audit	▪None	Hardesty
Kansas Tax Audit	Medium	Complete	▪Kansas Tax Audit documents	▪KS tax audit to start in mid-2016- documents - appears normal ▪Audit also appears to be fairly current which is a good sign	▪None	Hardesty
Foreign/Overall Foreign Loss	Medium	Complete	▪10K ▪2013 Federal Tax Return ▪2014 Federal Tax Return	▪Very little foreign activity included in tax returns or 10K ▪No issues identified	▪None	Hardesty
Effective Tax Rate	High	Complete	▪10K, 2015 income tax provision	▪Has been 30-33% for last three years ▪Represents large benefits for PTC, COLI and expense on flow-through adjustments ▪No foreign activity	▪None	Hardesty
Composite Rate/State Apportionment Factors	Medium	Complete	▪2014 MO, KS, OK, MS State income tax returns	▪Composite rate is for Sky is 39.55% ▪Appears reasonable for a utility primarily in KS ▪We expect a material change to Prairie's composite rate used for computing income taxes or valuing deferred taxes est. 39.3% ▪Prairie increase in ADIT Liabilities $20M ▪Skye decrease in ADIT Liabilities $10M	▪None	Hardesty

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Sky Property Insurance	High	Complete	▪1.2.3.1 – 1.2.3.14, 11.1, 11.2, 4.5.2.1 ▪EEI Insurance Survey 2014 & 2015	▪Recent change in carrier lineup to achieve significant premium reduction it appears. Less favorable but still investment grade insurance carriers. ▪Appropriate limits for risk exposure ($1B) and retention in line with expectations. ▪Identified transformer losses over the past 5 years. Information shared with Operations for further analysis. Will have some near term impact on renewals and loss control.	▪Loss results should be shared with Operations Team for evaluation of operational equipment.	Higley
Sky Excess Liability Insurance	High	Complete	▪11.1, 11.2 ▪EEI Insurance Survey 2014 & 2015	▪~$100M in coverage with Utility Mutual Insurance carriers. Limit and deductible are appropriate. ▪No know losses and litigation report looks clean from an insurance perspective.	▪10 year Excess Liability Insurance Claims history (Identifying Open and Closed Claims)	Higley
Sky Auto Insurance	Medium	Complete	▪11.1	▪No insurance detail provided other than summary. ▪Limit and deductible are in line with expectations. ▪No known loss history.		Higley
Sky OCIP Insurance	Medium	Complete	▪11.1, 11.2	▪Risk transfer insurance providing work comp and general liability for outage / contractor work at Generating sites. ▪Cost savings and dedicated limits provide nice risk umbrella for reduced cost assuming you maintain strong safety culture. ▪Potential for long tail difficult claims as injured workers leave Sky worksites.		Higley

Due Diligence Category – Financial *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Sky Directors & Officers Insurance Sky Fiduciary appears to be included in D&O Evaluation of size of expected D&O Claim and subsequent insurance impact	High	Complete	▪11.1, 11.2 ▪EEI Insurance Survey 2014 & 2015	▪Appropriate limits and deductible for risk transfer. Diverse and strong carrier lineup. ▪Difficult to determine size or complexity of D&O claim following M&A. ▪Believe D&O and Fiduciary policies are combined to achieve premium savings. Will erode D&O limits quicker if claim impacts Fiduciary policy as well.	▪10 year Directors and Officers Claim history.	Higley
Sky Workers Compensation Insurance	Medium	Complete	▪11.1, 11.2, 4.5.2.2 ▪EEI Insurance Survey 2014 & 2015	▪Statutory limits of coverage with $750k deductible placed with reputable carriers ▪$188M in reported payroll	▪Ground up Work Comp loss data for all open Work Comp claims ▪10 year insurance layer Workers Compensation claims (open and closed)	Higley
Sky Cyber Insurance	Low	Complete	▪11.1, 11.2, 4.5.2.2	▪Appropriate limit and deductible for risk profile. Placed with reputable carriers with experience in the field. ▪Premium seems high compared to risk. IT engaged to evaluate potential loss or increased exposure	▪10 year Cyber Insurance loss history ▪Any notification to carrier of cyber breach? If yes, information related to breach. ▪*Share any breach data with IT	Higley

DRAFT

Due Diligence Category – Labor/Other: Non-Union Health & Welfare and Ancillary Benefits

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Benefits – Non-Union Actives	Medium	Complete	▪13.4.1.1 Non Union Benefit Summary ▪13.4.1.5 Non-Union Business Travel Insurance ▪13.4.1.6 Non-Union Dental ▪13.4.1.7 Non-Union EAP ▪13.4.1.8 Non-Union Flex Benefits ▪13.4.5.2.4 LTD Plan	▪Medical plan covers non-union actives, and includes medical, dental vision and life ▪Medical TPA is Aetna, Rx is provided by Express Scripts ▪Medical benefit options are HSA Investment Plan or Health Alliance Plan (PPO) ▪In Network 80%/20%, Out-of-Network is 60%/40% for PPO ad 50%/50% for HSA ▪Dental benefits appear to be comparable le: Standard and Premium plans offered $1,000 or $2,000 annual max, $2,000 ortho max for both. Dental carrier is Delta. ▪Vision benefits appear to be comparable, Vision carrier is Surency. Base and buy-up options offered ▪Offers H.S.A. ▪Offers F.S .A. ▪Offers Dependent Care F.S.A. ▪EAP provided by Employee Assistance Consultants (Empac), 6 sessions/year ▪Life – 1X is provided, can buy up to 4X ▪ADD – 1X is provided, can buy up to 4X ▪Supplemental Life – appears comparable ▪Sick leave appears comparable but accrual schedule differs ▪Dependent Care more generous – up to 5 days ▪Adoption Asst - $2,000 for Sky vs $5,000 for Prairie ▪Business travel insurance offered up to 10X salary capped at $1MM ▪Vacation – comparable but slightly different schedule. Sky slightly less generous than Prairie. ▪LTD appears to be a self-insured, unfunded plan	▪Stop loss carrier and levels (but not material)	Murphy

Due Diligence Category – Labor/Other: Non-Union Health & Welfare and Ancillary Benefits *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Benefits – Non-Union Actives, Cont'd	Medium	Complete	▪13.4.1.8 Non-Union Flex Benefits ▪13.4.1.9 Non-Union General Welfare Plans ▪13.4.1.10 Non-Union Life and ADD Insurance ▪13.4.1.11 Non-Union Long Term Disability ▪13.4.1.12 Non-Union Medical	▪Flex dollars can be elected from pay to be used to reduce pay and toward for tax-free premiums ▪Eligible premiums for flex benefits include medical, dental, vision, group life, AD&D, dependent care reimbursement, health care reimbursement and healthcare savings account ▪Non-Union Life and ADD provided by Principal ▪Life Insurance for non-union retirees for those that retire prior to 10/1/14 is 50% of eligibility when they retired ▪LTD eligibility begins after 180 days sick leave	▪Do non-union retirees who retire after 10/1/14 receive life insurance? Additional review required (but not material)	Murphy
Benefits – Non-Union Retirees	Medium	Complete	▪13.4.1.27 VEBA (Retiree Health Benefits Trust) Summary of Plan Assets (12/31/15) ▪13.4.1.29 Summary of Non-Union Retirement Benefits for those hired after 1/1/02 ▪13.4.1.31 Summary of Non-Union Retirement Benefits for those hired before 5/1/2000 ▪13.4.5.2.5 Retiree Welfare Plan Valuation ▪13.4.1.26 2015 Retiree Welfare Plan Document ▪13.4.1.30 Summary of NU Ret Benefits for those hired 5/1/00-12/10	▪Retiree medical outsourced to One Exchange ▪HRA one-time funding at $1,425 for each YOS for those hired between 5/1/2000-1/1/02 and after 1/1/02 ▪HRA for those hired before 5/1/2000 is for pre-65ers: $10,440/yr for retiree and $3,468 for spouse and post-65 is $2,520 for retiree plus $1,680 for spouse ▪Life insurance provided of $20,000 ▪VEBA appears to be managed and recordkept at Russell and has approximately $115 MM as of 12/31/15 ▪Funded levels appear in order ▪Dental offered through age 65		Murphy

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Due Diligence Category – Labor/Other: Union Health & Welfare Benefits

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Benefits – Union Actives	Medium	Complete	▪ 13.4.1.2 Union Benefit Summary ▪ 13.4.1.18 Union Dental ▪ 13.4.1.19 Union EAP ▪ 13.4.1.20 Flex Benefits ▪ 13.4.1.21 Union General Welfare Plans ▪ 13.4.1.22 Union Life and ADD Insurance ▪ 13.4.1.23 Union LTD ▪ 13.4.1.24 Union Medical ▪ 13.4.5.2.4	▪ Medical plan covers union actives, includes medical, dental, vision and life ▪ All Non-Union and Union dental is provided by Delta, max covered benefit $1,500/year, max implant is $2,000/life, max ortho is $1,200/life ▪ Union employees receive same EAP benefits as non-union from EMPAC, up to 6 visits/year ▪ Union employees appear to be eligible for Flex Benefits. If no active election they default to coverage including medical Health Alliance, group life at 2X base, ADD - $10K ▪ Union Life provided by Principal, spouse life up to $100K, child life $5 or $10K ▪ Union LTD provided by Principal, primary benefit is 60% of pay, up to $5K/Month ▪ Medical provided by Aetna, coinsurance on both plans is 80% in net work, 50% out of network ▪ Union Rx provided by Express Scripts ▪ Sky seeds H.S.A. participants $750 or $1,500, deductibles are $1,300 or $2,600 ▪ Sky deductible for Health Alliance is $50 per person, $100 max ▪ All union med plans have premiums ▪ Can participate in healthcare F.S.A. at $2,500 and Dependent Care FSA up to $5,000 ▪ LTD appears to be a self-insured, unfunded plan	▪ Confirm understanding of union eligibility for Flex benefits ▪ Governance structure of benefit plans? ▪ What is relationship between Aetna and Century Health Solutions?	Murphy

Due Diligence Category – Labor/Other: Union Health & Welfare Benefits *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Benefits – Union Retirees	Medium	Complete	▪ 13.4.1.27 ▪ 13.4.1.32 Union Retiree Benefits for hired after 1/1/12 ▪ 13.4.1.33 Union Retiree Benefits for hired 1/21/00-12/31/11 ▪ 13.4.1.34 Union Retiree Benefits for hired before 1/21/00 ▪ 13.4.5.2.5 Retiree Welfare Plan Valuation ▪ 13.4.1.26 2015 Retiree Welfare Plan Document	▪ Retiree medical outsourced to One Exchange ▪ HRA funded at $9,000/year for retiree and $3,000/year for spouse up to age 65 (unless hired prior to Jan 21, 2000) ▪ If hired prior to 1/21/00 get amounts listed above ($9k, $3k) through age 65, then $1,680/year for each retiree plus spouse ▪ Dental offered through age 65 ▪ Life insurance provided of $20,000 ▪ VEBA appears to be managed and recordkept at Russell and has approximately $115 MM as of 12/31/15 ▪ Funded levels appear in order		Murphy

Due Diligence Category – Labor/Other: Pension

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Pension Design	Medium	Complete	▪13.4.1.1 Non-Union Benefit Summary ▪13.4.1.2 Union Benefit Summary ▪13.4.1.13 Non-Union Retirement Plan ▪13.4.1.25 Union Retirement Plan ▪13.4.1.26 Pension Plan Summary of Assets (12/31/15) ▪13.4.1.37.1 1st Amendment to Sky Retirement Plan ▪13.4.5.2.6 Retirement Plan 2016 ▪13.4.1.37.4 1st Amendment to 2015 Reinstatement (same doc as 13.4.1.37.1)	▪All employees are covered under same pension plan ▪Non-union employees hired up to 12/31/01 are final average earnings formula, those hired after 1/1/01 are in cash balance formula, sliding scale between 4-12% of eligible pay, interest credit is not fixed and varies year to year ▪Union employees hired up to 1/21/00 are in different FAE formula than those hired 1/21/00-12/31/11. Union employees hired after 1/1/12 are in Cash Balance plan ▪Normal retirement age is 65, early retirement is available at age 50 plus 5 years of service, unreduced retirement is at age 62 plus _ YOS or 60 and 35 YOS ▪Sky and Prairie plans are more similar for union population, quite dissimilar for non-union ▪Pension appears to be managed by SEI and was approx $650 MM	▪Governance structure?	Murphy
Pension Funding	Medium	Complete	▪13.4.5.2.3 2015 Retirement Funding Report ▪13.4.5.2.1 Wolf Creek Method One Stop Report ▪13.4.5.1 Towers Report Pre-Read ▪13.4.5.2.2. Wolf Creek Serp One Stop Report	▪Pensions for Sky and WCNOC appears to be adequately funded		Murphy
Pension Recoverability	Low	Complete	▪7.1.2.3.9 Summary of Pension Trackers	▪Pension expense is recovered in trackers		Murphy

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Due Diligence Category – Labor/Other: 401(k)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
401(k) and ESOP Plan	Medium	Complete	▪13.4.1.1 Non-Union Benefit Summary ▪13.4.1.2 Union Benefit Summary ▪13.4.1.3 Non-Union 401(k) 2014 Changes ▪13.4.1.4 Non-Union 401(k) SPD ▪13.4.1.16 Union 401(k) 2014 Changes ▪13.4.1.17 Union 401(k) SPD ▪13.4.1.36.1 1st Amendment to 401(k) Plan ▪13.4.1.36.2 2nd Amendment to 401(k) Plan ▪13.4.1.36.4 401(k) Savings Plan signed 3/5/12	▪All employees are eligible for same plan ▪Can defer up to 50% of base pay ▪Eligibility for plan begins 1st of month after start date ▪Company match provided after 1 year of service and I s 75% of first 6% contributed ▪Non-union can take in-service withdrawals starting at age 59.5 ▪Sky stock is offered in plan but capped at 15% of a participants holdings ▪Quarterly fees of $13.25 are deducted from participants accounts for recordkeeping fees ▪Didn't see ESOP component	▪Who governs 401(k)? ▪What value, percent of holdings and participants are invested in Sky stock ? Was company match ever made in company stock? Were there ever any restrictions to sale of restricted stock? ▪Is there an ESOP component to 401(k)?	Murphy
401(k) Plan Benefit Audit	Medium	Complete		▪Didn't locate any information in documents provided to date	▪As noted above in request for all audit/5500s related to benefit plans, could audit/5500 be provide d for past two years?	Murphy

Due Diligence Category – Labor/Other: Comp/Performance

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Comp Policies and Plan(s)	Low	Complete	13.4.3 Narrative of Compensation Practices 13.4.1.35 STI Plan	▪Appears well designed and administered ▪Only non-union is eligible ▪Management discretion by division to allocate to each individual		Murphy
Performance Management	Low	Complete		▪Didn't locate any information in documents provided to date	▪Please provide any performance management philosophy , or other policy or plan documents be provided?*	Murphy
Engagement Survey	Low	Complete		▪Didn't locate any information in documents provided to date	▪Are engagement surveys offered? Can summary results be provided from last time offered?*	Murphy
Recognition Platform	Low	Complete		▪Didn't locate any information in documents provided to date	▪What recognition platforms are offered in the way of discretionary awards or e-cards? Can summary documents of utilization be provided?*	Murphy
Service and Retirement Awards	Low	Complete		▪Didn't locate any information in documents provided to date	▪Does Sky have a service or retirement award program? Can summary documents on numbers and cost be provided?*	Murphy
Relocation Policy	Low	Complete	•13.4.4.2 Professional Relocation Policy •13.4.4.1 Executive Relocation Policy •13.4.4.3 Standard Relocation Policy	• Appears consistent with industry		Murphy

Due Diligence Category – Labor/Other: Union

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Union Contracts	Medium	Complete	▪ 13.5.1 Union 2014-2017 Contract ▪ 13.5.6 Notice to Organize	▪ Initial review complete but will need more thorough review to map differences and alternative approaches ▪ Last organizing appears to be in 2014 for I&C Techs and 3/11/15 for IT Data Center ▪ Local 1523 appears to be generation, Local 304 appears to be IT (?)	▪ Would like additional clarity on which areas are covered by Local 1523 and Local 304	Murphy
Grievance, Arbitration or litigation	Medium	Complete	▪ 13.5.3 Employee Grievances Filed 2013-2015 ▪ 13.5.5 NLRB Charges ▪ 13.5.2 Arbitration Decisions and Settlements ▪ 13.5.4 Future Obligations ▪ 13.5.7 Open Grievances	▪ Process to resolve grievances seems to be well-managed, numbers and topics appear somewhat high but reasonable ▪ There are several NLRB charges that appear to be resolved and one open charge related to call-out. Number of NLRB charges seems slightly high, perhaps a reflection of labor relations.		Murphy

Due Diligence Category – Labor/Other: Comp/Performance

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Comp Policies and Plan(s)	Medium	In Progress		▪ Didn't locate any information in documents provided to date	▪ What STI plans are offered to employees? Who is eligible? ▪ Please provide any comp philosophy or other policy or plan documents.	Murphy
Performance Management	Low	In-Progress		▪ Didn't locate any information in documents provided to date	▪ Please provide any performance management philosophy , or other policy or plan documents be provided?	Murphy
Engagement Survey	Medium	In-Progress		▪ Didn't locate any information in documents provided to date	▪ Are engagement surveys offered? Can summary results be provided from last time offered?	Murphy
Recognition Platform	Low	In-Progress		▪ Didn't locate any information in documents provided to date	▪ What recognition platforms are offered in the way of discretionary awards or e-cards? Can summary documents of utilization be provided?	Murphy
Service and Retirement Awards	Low	In-Progress		▪ Didn't locate any information in documents provided to date	▪ Does Sky have a service or retirement award program? Can summary documents on numbers and cost be provided?	Murphy

Due Diligence Category – Labor/Other: Union

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Union Contracts	Medium	In-Progress	▪ 13.5.1 Union 2014-2017 Contract	▪ Initial review complete but will need more thorough review to map differences and alternative approaches	▪ What divisions/groups are represented by Locals 304 and 1523?	Murphy
Grievance, Arbitration or litigation	Medium	In-Progress		▪ Didn't locate any information in documents provided to date	▪ Could a summary be provided on the grievance history by local for the past 5 years by number and type of grievance? ▪ What current grievance, arbitration or other employee litigation (or threat thereof) exists?	Murphy

Due Diligence Category – NERC

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
NERC CIP	Medium	In-Progress	8.2.5.1	NERC CIP Audit on V5 compliance scheduled for 2016. Date continues to move due to NERC/SPP change in compliance deadlines	Monitor 2016 NERC CIP Audit timing and results	Fairchild
NERC 693	Low	In-Progress	8.2.5.1	NERC 693 Audit scheduled for 2016	Monitor 2016 NERC 693 Audit timing and results	Fairchild
NERC 693	Medium	In-Progress	8.2.5.4	Self-Report for Mitigated Offer	Monitor investigation and enforcement actions resulting from self-report	Fairchild
2015 FERC Audit	High	In-Progress	8.2.5.1 – FERC Form 1/TFR; Docket Nos. FA15-09 &FA15-15	Wizard is awaiting the FERC draft audit reports.	Monitor for completion of FERC draft audit report	Fairchild

Due Diligence Category – Environmental

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Environmental Liabilities - Asbestos Handling or Disposal	Medium	Complete	10.13 & 4.1.2.10	Current assessment of material asbestos environmental liabilities: Sky completed an asbestos removal study in 2005 of generation facilities and has asbestos related AROs for liability.		Ling / Fairchild
Environmental Liabilities - Ash ponds	Medium	Complete	10.14, 10.8, 4.1.2.10, & 4.1.1.1	Current assessment of material ash pond environmental liabilities: Sky provided ash pond structural stability audits , ground water monitoring results for current permit requirements, proposed related environmental expenditures and related AROs for liability. Sky has not developed a strategy or potential costs associated with a CCR rule triggering event requiring immediate pond closure and corrective action for active ponds and landfills.		Ling / Fairchild
Environmental Liabilities - Material Items Not Listed Including Liabilities Relating to Formerly Owned or Operated Facilities	Medium	Complete	10.1 & 4.1.2.10	Current assessment of any other material environmental liabilities including liabilities relating to formerly owned or operated facilities: Sky provided response in Q&A that it has five remediated properties for which it is a PRP but has not disclosed any remediation liability. Sky has asbestos, PCB, and ash pond related AROs for liability.		Ling / Fairchild

Due Diligence Category – Environmental (cont.)

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Environmental Non-Compliance - Environmental Site Assessments/Inspections With Material Findings	Low	Complete	10.1	Current environmental site assessment/inspections reports with material findings: Sky provided response in Q&A that it has no reports of material findings for any of its facilities within the last five years.		Ling / Fairchild
Environmental Non-Compliance - Material Violations, Notice of Non-Compliance, Letters of Warning, or Citations	Low	Complete	10.11	Current material environmental non-compliance issues: Sky provided no material non-compliance.		Ling / Fairchild
Environmental Compliance Plans, budget, and recovery mechanisms – Coal Combustion Residual Rule and Effluent Limitation Guidelines.	Medium	Complete	10.14, 10.8, 4.1.2.10, & 4.1.1.1	Environmental Compliance Plans , budget, and investment recovery mechanisms for Coal Combustion Residual Rule and Effluent Limitation Guidelines: Sky provided ash pond structural stability audits , ground water monitoring results for current permit requirements, proposed related environmental expenditures and related AROs for liability. Sky has not developed a strategy , potential costs associated with a CCR rule triggering event requiring immediate pond closure and corrective action for active ponds and landfills or cost recovery mechanisms.		Ling / Fairchild

Due Diligence Category – Environmental *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Any pending or threatened federal, state or local administrative or judicial enforcement proceedings, orders, claims by any federal, state or local agency or any private citizen relating to environmental matters, including personal injury claims, relating to any present or former operations and properties.	Medium	Complete	10.1	Sky provided response in Q&A that it has no pending or threatened federal, state or local administrative or judicial enforcement proceedings, orders, claims by any federal, state or local agency or any private citizen relating to environmental matters, including personal injury claims, relating to any present or former operations and properties.		Ling / Fairchild

Due Diligence Category – IT

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
IT budget	Medium	Complete	IT 5 Year Capital Plan	▪Need to obtain a 5 year view of the IT capital plan (at a more granular level) and O&M view	▪5 year IT capital plan obtained, waiting on O&M data ▪Is there any third party labor/services included in the O&M and/or capital budgets?	King Busser
Staffing of functions	Medium	Complete	▪TBD	▪Need to obtain an IT organizational chart to assess headcount and synergy opportunity	▪Please provide an IT organizational chart including headcount by function	King
Any third party outsourcing of IT functions	Medium	Complete	▪PwC Outsourcing Agreement ▪FIS mainframe agreement	▪No direct references found to outsourcing, but believe that some IT functions/support are outsourced	▪Agreements provided for mainframe outsourcing (less costs) and application outsourcing arrangement with PwC (costs included)	King
Contractor headcount and/or SOW agreements	Medium	Complete	▪PwC Outsourcing Agreement ▪FIS mainframe agreement	▪Need to understand any third party staffing and commitments, including outsourcing arrangements	▪Does Sky have any short and/or long term contractor staffing and/or outsourcing arrangements?	King
IT projected view of attrition	Medium	Complete	▪TBD	▪Need to understand anticipated future view of IT attrition/retirements	▪Like to understand anticipated view of IT attrition/retirements.	King
Cyber assessment and event/incident history	Low	In-Progress	▪Fishnet Assessment, June 2014	▪Would like to obtain a copy of any penetration test and/or cyber assessments along with a cyber incident history	▪Copy of FishNet web app vulnerability provided ▪Like to obtain any other network penetration testing/assessments	King
Cyber tools	Low	Complete	▪TBD	▪What tools are currently used from a cyber security and CIP perspective?	▪Like to obtain a list of current cyber security and/or CIP tools	King
System stability	Low	Complete	▪TBD	▪Like to understand historical view of core system reliability	▪Statement provided that systems are stable	King

Due Diligence Category – IT *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Microwave system	Low	Complete	▪TBD	▪Sky has a larger fiber deployment than Prairie and thus smaller scale microwave deployment. How large is the Sky private microwave system?	▪Sky has 15 towers, all owned	King
Cyber insurance	Low	Complete	▪Insurance Summary	▪Have a $35M cyber insurance policy with 12 month term		King
View of CIP version 5 planning and related investments	Medium	In-Progress	▪TBD	▪Like to understand CIP version 5 preparations – investments, process definitions/ownership, readiness status	▪Please provide understanding of Sky CIP version 5 preparation – ownership, investments, processes.	King Fairchild Heidtbrink
IT Incident Response Procedure	Low	Complete	▪TBD	▪Would like to obtain a copy of the Sky incident response plan to help assess cyber program maturity	▪Like to see a copy of the Sky IT Incident Response procedure.	King
IT systems support	Medium	Complete	▪TBD	▪Like to have a view of IT systems support from a vendor perspective	▪How much of current system portfolio (software and hardware) is under vendor maintenance?	King
Integration approach or strategy	Low	Complete	▪TBD	▪Like to understand if existing integration between Sky systems in point-to-point (custom) or if any shared services (e.g. SOA) are used	▪Most legacy systems have point to point interfaces and new systems are integrated via services	King

Due Diligence Category – Regulatory

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Sky Undertakings-Rate Case	Medium	In-Progress	▪18.1 Mgmt presentation ▪18.2 Mgmt call presentation	Abbreviated case 2016 ▪File Oct 2016, effective July 2017 ▪Approx $15M ask ▪True-up LaCygne env and WC outage ▪Add $50 grid resiliency investment ▪Expect rate base to $5.1B General Rate Case 2018 ▪File May 2018, effective Feb 2019 ▪Approx $100M ask ▪Expect rate base to $5.9B ▪Wind and other investment thru 12/31/17 ▪$87M JEC prch option ▪Loss of $150M wind PTCs ▪Loss of $40M wholesale contract ▪Combo of 2 losses is $60M rev reduction	▪Potential for expansion of grid resiliency pilot ▪Is there potential for CWIP other for wind? ▪Continued pursuit of residential DG tariff ▪AMI meters being installed territory wide by 2018	Ives
Sky Undertakings-Rate Case – Generation leases	Medium/Low	In-Progress	▪5.4.2 LaCygne leveraged lease ▪5.3.2 JEC leveraged lease	▪Regulatory treatment differences for LaCygne sale/leaseback ▪Also an 8% interest in JEC acquired from Aquila is under lease with option to buyout considered for 2018 case	▪Need to understand Ops/legal alternatives upon conclusion of lease terms	Ives
Sky Undertakings-COLI	Medium	In-Progress	▪8.1.2.1 – COLI ref to 3.3 ▪4.3 COLI	▪Sky has Corporate Owned Life Insurance – COLI ▪Set up in 1986 in response to WC issues. Plan called for earnings for 40 years to customers then remainder of earnings to shareholders thereafter	▪Schedule 4.3.1.2 2016 summary update shows earning shortfall below original projections both for customers and shareholders, mostly due to lower than projected interest rates. ▪Is the shortfall going to be a regulatory issue?	Ives
Sky Undertakings-KEEIA	Low	In-Progress	▪8.1.2.9 Energy Efficiency Rider Summary	▪Sky currently has limited EE programs in place. Around the 2015 case they filed then pulled a more extensive EE portfolio	▪Is there an opportunity to initiate a KEEIA portfolio and filing for Sky?	Ives

Due Diligence Category – Regulatory *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
FERC Generation formula rates	Low	In-Progress	▪18.2 Mgmt Call Presentation ▪7.1.1.2 wholesale revenues customers	▪Sky has FERC Generation formula rates ▪Reset January annually ▪Applies to certain full requirements wholesale customers (150Mw to 200Mwunder formula	▪What is impact to formula of $40M lost wholesale revenues contemplated in 2018 case ▪Are there any other unique nuances to formula?	Ives
FERC transmission formula rates	Low	In-Progress	▪18.2 Mgmt Call Presentation	▪Sky has FERC Transmission formula rates ▪Reset January annually ▪Retail rates adjusted through TDC without full GRC for transmission formula rate changes ▪Use of forward test year ▪ROE recently settled at 10.3% inclusive of 0.5% RTO participation	▪Need to document differences from Prairie TFR and TDC during integration planning	Ives
Retail alternative rate mechanisms	Low	In-Progress	▪18.1 Mgmt Presentation ▪18.2 Mgmt Call Presentation ▪8.1.2 various mechanism summaries	▪Sky has fuel ECA, TDC, EER, PTS, CWIP and Predetermination, previous ECRR (environmental costs), extraordinary storm deferral, CIP/Cyber tracker, Pension trackers and availability of abbreviated rate cases	▪Need to document differences from Prairie alternative mechanisms during integration planning	Ives
KPL/KGE Merger documents	Medium	In-Progress	▪8.1.2.3 KGE merger documents	▪KGE/KPL merger approved Nov 1991 ▪Rate freeze until 1995 ▪Cash refunds on merger effective and in year 2 ▪**50/50 synergy sharing with offset for partial acquisition premium recovery** ▪Synergy tracking required	▪Need to use structure as informative for merger approval filing. ▪Need to review merger stipulation and order to ensure no other commitments to be considered in new merger approval filing.	Ives
FERC Audits	Low	In-Progress	▪8.2.5 Summary of Regulatory Audits ▪Mgmt Presentation	▪ Sky has had a fair amount of FERC/regulatory audits recently ▪Indications are have been fairly routine and no significant unsettled issues expected	▪Need to thoroughly evaluate during integration planning	Ives

Due Diligence Category – Regulatory *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Regulatory assets/liabilities	Low	In-Progress	▪4.1.2.14 Regulatory Asset and Liability summaries	▪As of 3/31/16 Regulatory Assets in the amount of $1.177B (current and long term). Largest of which is Pensions and OPEBs $406M. ▪As pf 3/31/16 Regulatory Liabilities in the amount of $461M (current and long term). Largest of which is Deferred gain from sale/leaseback of $148M.	•Need full assessment of Reg Asset and Liabilities during integration planning	Ives
Understanding regulatory landscape and merger approval process in KS and MO	High	In-Progress		▪Approval required by KS Commission. Also FERC. 300 day process in KS by statute. Don't anticipate approval required in MO. Typically an 8-12month process in MO.	▪Need development of regulatory stakeholder communication plan post announcement ▪MO no detriment standard ▪Consideration of Prairie holding company agreement language in MO ▪KS net benefit standard	Ives
Regulatory strategy: Customers	Medium	Complete	▪TBD	▪ Sky has a few special customer contracts	▪Need to find specifics of special retail customer contracts in data room. ▪What is the associated rate treatment?	Ives
Regulatory strategy: Customers	Medium/Low	Complete	▪TBD	▪ Customer Complaints	▪Does Sky have pending formal customer complaints?	Ives

Due Diligence Category – Regulatory *(cont.)*

Topic / Issue	Priority (H, M or L)	Evaluation Status	Documents Reviewed (Data Room Citation)	Summary of Assessment	Outstanding Questions / Information Desired	Owner
Regulatory strategy: Compliance	High	Complete	▪TBD	▪ Reporting and Compliance Effort	▪Identify a listing of jurisdictional reporting/compliance filings in data room or during integration planning	Ives
FERC	Medium	In-Progress		▪Market based rate authority	▪Does Sky have Market Based Rate authority. ▪Find information in data room or determine during integration planning.	Ives

EXHIBIT JAL-41

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Figgs Katie Interrogatories - KCC_20160914
Date of Response: 09/23/2016

Question:40

Regarding the statement on page 11, lines 21 and 22 of Mr. Kemp's Direct Testimony, please identify the "proven tools and processes" to which Mr. Kemp refers, and explain how each of the tools and processes have been proven.

Number of Attachments:

Response:

The question refers to the standard of conservatism in the savings estimates, *i.e.*, "Conservative: including only savings that reasonably could be achieved with proven tools and processes."

In this context, "proven tools and processes" means operational practices that have been put into place successfully at Great Plains Energy (GPE), Westar or other utilities, *i.e.*, they have been proven by experience. They would not include practices that are untried or carry high execution risks. Mr. Kemp's testimony on page 19, lines 1-9 further explains why GPE's savings estimation methodology was conservative.

For example, substantial savings in the Supply Chain functional area are expected to be driven in years after 2018 by implementation of the practice of strategic sourcing across the combined supply chain spend of GPE and Westar. Strategic sourcing is a well-known and well-proven approach to managing supply chain costs. Enovation Partners professionals have assisted other utilities and industrial companies in implementing strategic sourcing successfully.

Another example is the estimates of savings in the Generation functional area. The savings from rationalizing the combined generation fleet and accelerating planned plant retirements were estimated through straightforward budget analysis techniques. GPE reviewed budgeted NFOM and capex for each of the generation plants that are potential candidates for accelerated retirement, and adjusted the aggregate budget to reflect the effects of such retirements, across a representative range of retirement scenarios.

Attachment: Q40_Verification.pdf

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request# 40, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: William K Kemp

Title: Senior Managing Director

Date: September 20, 2016

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-42

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Bond Ashley Interrogatories - BPU_20160928
Date of Response: 11/04/2016

Question:2-14

Referring to the Direct Testimony of William Kemp, at 14:9-11, for the functional area "Supply Chain," please:

1. Provide detailed estimates and a complete narrative of the referenced savings potential, the analytical basis for the savings potential, and how GPE/EP validated the savings potentials.

2. Provide all such savings estimates by individual FERC account.

3. Identify all Supply Chain savings estimates that cannot be achieved but for the proposed merger and provide a detailed narrative explanation.

4. Provide all supporting documents and workpapers used in responding to this request.

Number of Attachments:

Response:

1. See the supporting workpapers for Schedule WJK-3, which have been provided to the KCC and referenced in the response to BPU Data Request 2-2. The Supply Chain-related elements of the Description sheet and the Supply Chain sheet of workpaper "Q7_CONF_Workpaper_Merger Savings Model_5-14-16_Annotated", provide the information requested.

2. Neither GPE nor Mr. Kemp estimated Supply Chain savings by FERC account.

3. Mr. Kemp did not conduct "but for" estimates of savings related to proposed Transaction.

4. All such documents have already been provided or referenced.

Attachment: Q2-14_Verification.pdf

Redactions Removed Pursuant to Commission Order

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request# 2-14, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: William K Kemp

Title: Senior Managing Director

Date: October 11, 2016

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-43

Redactions Removed Pursuant to Commission Order

KCPL KS
Case Name: 2016 Westar Acquisition
Case Number: 16-KCPE-593-ACQ

Response to Bond Ashley Interrogatories - BPU_20160928
Date of Response: 11/04/2016

Question:2-33

Referring to the Direct Testimony of William Kemp at 25:22-23, please:

1. Identify the specific best practices in "intra and inter-company logistics" referenced by Mr. Kemp.

2. Identify all intra and inter-company logistics "best practices" that cannot be implemented by the companies but for the proposed merger. For each such "best practice," provide a complete explanation as to why it cannot be implemented but for the proposed merger, including all legal, regulatory, or other prohibitions.

Number of Attachments:

Response:

1. See the Supply Chain sheet in the annotated merger savings workbook that was provided in the response to BPU Data Response 2-2.

2. Mr. Kemp has not taken a position on legal/regulatory prohibitions against best practice sharing. He is aware of benchmarking groups to which GPE and/or Westar belong, which contain some elements of best practice sharing. However, due to the competition that currently exists between GPE and Westar in some areas of their business (e.g., financing, customers, power marketing), natural barriers to sharing of best practices between the two companies still exist.

   The upper part of the Supply Chain sheet in the workpaper referenced in part 1 above lays out estimates of savings from applying GPE's Supply Chain practices to Westar.

   Furthermore, a very substantial portion of the estimated Supply Chain savings derives from the increased scale of the combined company. Its larger combined Supply Chain spend will give it greater bargaining power with its suppliers.

Attachment: Q2-33_Verification.pdf

Redactions Removed Pursuant to Commission Order

Verification of Response

Kansas City Power & Light Company

Docket No. 16-KCPE-593-ACQ

The response to KCC Data Request# 2-33, submitted by KCP&L, is covered by this Verification of Response:

I have read the foregoing Information Request(s) and answer(s) thereto and find answer(s) to be true, accurate, full and complete, and contain no material misrepresentations or omissions to the best of my knowledge and belief; and I will disclose to the Commission Staff any matter subsequently discovered which affects the accuracy or completeness of the answer(s) to this Information Request(s).

Signed: William K Kemp

Title: Senior Managing Director

Date: October 11, 2016

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-44

Redactions Removed Pursuant to Commission Order

1

"Privileged and Confidential – Prepared at Request of Counsel in Anticipation of Litigation."

SORT	IMPROVEMENT AREA	COMMENT	ACTIONS TO ACHIEVE	COMPUTATION LOGIC	PRAIRIE BASIS	TOTAL PRAIRIE SAVINGS	PRAIRIE YEARS	SAVINGS %/YR	SKY BASIS	SKY SAVINGS PER YEAR	OM/CAPEX SPLIT	START YEAR	2018-2022 TOTAL O&M SAVINGS	2017-2022 TOTAL COSTS TO ACHIEVE	2017 COST TO ACHIEVE	2017 NFOM SAVINGS	2017 CAPEX SAVINGS	2017 COST TO ACHIEVE
	DEMONSTRATED PRAIRIE SAVINGS APPLIED TO ADDITIONAL SKY SPEND																	
	Select best company's contracts OM	Prairie results: $87M/5 years;	Immediately compare current contracts	706 (2014), 802 (2015) = $754M; 87M, 33% OM	754	87	5	2.31%	677	15.62	5.20	1	26.01	1.00	1.00	2.60		
	Select best company's contracts CAPEX		Immediately compare current contracts	707 (2014), 802 (2015) = $754M; 87M, 67% CAPEX	754	87	5	2.31%	677	15.62	10.42	1					5.21	
	Strategic Sourcing and automated transactions OM	Prairie results: $22M/4 years;	automate transactions; cleanse data; deploy	754 Annual Spend, 4 YEARS,22M, 33% OM	754	22	4	0.73%	677	4.94	1.64	1.5	7.40	1.00	1.00			
	Strategic Sourcing and automated transactions CAPEX		automate transactions; cleanse data; deploy	755 Annual Spend, 4 YEARS 22M, 67% CAPEX	754	22	4	0.73%	677	4.94	3.29	1.5						
	Projects to reduce spending OM	Prairie results: $36M/5 years;	Select specific target process, refine	754 Annual Spend, 36M, 33% OM	754	36	5	0.95%	677	6.46	2.15	1	10.76	1.00	1.00	1.08		
	Projects to reduce spending CAPEX		Select specific target process, refine	755 Annual Spend, 36M, 67% CAPEX	754	36	5	0.95%	677	6.46	4.31	1					2.16	
	Specific rebid: MRO OM (included above)	Prairie results: $1.3M per year; INCLUDED ABOVE									27.03		108.10			13.51		
	Wolf Creek procurement improvements OM	Prairie estimate .8 per year .33 OM	procurement savings	Prairie estimate; assume .4 first-year systems costs							0.20	1.5	0.90	0.40	0.40			
	Wolf Creek procurement improvements CAPEX	Prairie estimate .8 per year .67 CAPEX	procurement savings	Prairie estimate; assume .4 first-year systems costs							0.60	1.5						
	Procurement headcount consolidation OM year 1 (redeploy?)	assume generic headcount = $100,000; 30% severence		24 + 29 = 53; assume 40, save 13 heads; 8 year 1					8		0.80	1	4.00	0.24	0.24	0.40		
	Procurement headcount consolidation OM year 2 (redeploy?)			25 + 29 = 53; assume 40, save 13 heads; 5 year 2 (use y1)					5		0.50	1	2.50	0.15	0.15	0.25		
	Other Supply Chain headcount reductions -merger OM year 1 (redeploy?)	assume generic headcount = $100,000; 30% severence		147+ 88, less 53 procurement; save 15 heads; 5 year 1					5		0.50	1	2.50	0.15	0.15	0.25		
	Other Supply Chain headcount reductions -merger OM year 2 (redeploy?)			147+ 88, less 53 procurement; save 15 heads; 10 year 2 (use y1)					10		1.00	1	5.00	0.30	0.30	0.50		
	Consolidate KCPL and GMO inventories; Support Ctrs. OM	$2M per year (inventory); TBD: taxes, freight, logisitics	ASSUMES MO PSC ALLOWS SHARED INV.							2.00	2.00	1	10.00			1.00		
	Broad inventory reduction - inventory OM	reduce inventory each year; carrying cost (18.5%)every year	Asume 10% savings over 5 years, 2% per year	Prairie savings $14M last 5 years; higher Inv at SKY		14	5	2.00%	133	2.66	0.89	1	4.43			0.44		
	Broad inventory reduction - inventory CAPEX	reduce inventory each year; carrying cost (18.5%)every year	Asume 10% savings over 5 years, 2% per year	Prairie savings $14M last 5 years; higher Inv at SKY							1.77	1					0.89	
	Broad inventory reduction and carrying cost saved OM -Carrying cost	*This line to be deleted through corrections in rebuttal testimony*	Assume carrying cost of 18.5% per year	Prairie savings $14M last 5 years; higher Inv at SKY				18.50%	compound	0.16	0.16	1	2.26			0.08		
	Salvage value for inventory clean-up	assume $.4 per year savings						0.40		0.40	0.40	1	2.00			0.20		
	Optimize P-card spending and control; P-card rebates OM	Graybar MRO at SKY, perceived good control	Pursue savings from bank; Prairie $.7/year	Apply .7 as seen at Prairie						0.70	0.70	1	3.50			0.35		
	Improve reclaim and salvage savings OM	$4.6M achieved; predict $5.3M Sky, .5 O&M	Prairie does have 17 headcount; add this cost	adjust gross savings of 5.3, by deducting 17 heads = 1.7						5.30	2.65	1	13.25	9.35	0.85	1.33		1.70
	Improve reclaim and salvage savings CAPEX	$4.6M achieved; predict $5.3M Sky, .5 CAPEX	Use exisiting capacity and space	Start savings year 1						5.30	2.65	1			-		1.33	
	Pursue improved waranty accountability OM	Assume $1M for Sky	Identify contract language and failures	Prairie savings about $1M per year; add one head count@$100K							1.00	1	5.00	0.55	0.05	0.50		0.10
	Fleet reserve inventory reduction from consolidation OM	$2M annual saved at Asteroid; base case 50% = $1M	Save maintenance on sold reserve items								1.00	1	5.00			0.50		
	Fleet reserve inventory reduction from consolidation CAPEX	$17M annual lease Sky; 8% saved at Astroid; use 50%	Sell redundant reserve items	Reduce lease cost. Might sell Prairie assets							0.68	1			-		0.34	
	Tree Trimming competition? (assume in above)			Numbers included in summaries above														
	Rationalize Supply Chain systems projects (address in IT analysis)	Determine licensing and project costs to rationalize Supply Chain											0.00					
	Reduction in inventory from plant shutdowns CAPEX																	
	Reduction in inventory from plant shutdowns OM																	
	Reduction in inventory from plant shutdowns carrying cost on capex																	
	DEMONSTRATED PRAIRIE SAVINGS APPLIED TO ADDITIONAL SKY SPEND - TOTAL PER YEAR					**304.00**				**70.58**			**212.61**	**14.14**	**5.14**	**22.99**	**9.93**	**1.80**
	AVOIDED INVENTORY CARRYING CHARGES 1/2 2017 (CONTINUING THRU YEAR 5)	Annual carrying charge for inventory (capital + O&M costs)															1.84	
	AVOIDED INVENTORY CARRYING CHARGES 2018 (CONTINUING THRU YEAR 5)	0.185																
	AVOIDED INVENTORY CARRYING CHARGES 2019 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2020 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2021 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2022 (CONTINUING THRU YEAR 5)																	
	DEMONSTRATED SAVINGS: TOTAL NFOM SAVINGS + AVOIDED INVENTORY CARRYING CHARGES															24.83		
	ADDITIONAL PROJECTED SAVINGS ON COMBINED PRAIRIE+SKY SPEND																	
	Pursue Strategic Sourcing for large construction projects CAPEX	Assume Sky/Prairie major projects $200M per year; save 2.0%						2.00%	200		4.00	3		0.50	0.50			
	Apply combined $1.4B (1.2 net)spend to Strategic sourcing OM	Above assumptions deal with incremental Sky spend	Rebid and resource $1.4B of annual spend	Could achieve 1.25% savings on $1.4B (LESS .2B projects)		1.25%		1200	15	OM	4.995	3	22.48	1.00	1.00			
	Apply combined $1.4B (1.2 net)spend to Strategic sourcing CAPEX									CAPEX	10.005	2		1.00	1.00			
	Generaion Spares inventory, consolidate and reduce CAPEX		Reduce inventory	reduce inventory $5M year 3, 7.5M year 4; 10.0M year 5								2						
	T&D inventory reduction from consolidation CAPEX		Reduce inventory	reduce $10M year 2; reduce $10M year 3; $10M year 4; $10 yr 5					10	CAPEX	6.67	2						
	T&D inventory reduction from consolidation OM		Reduce inventory							OM	3.33	2	16.65					
	T&D inventory reduction from consolidation carrying costs OM only		Save inventory carrying costs(18.5%, each year)					0.185	10	OM	0.62	2	8.62				0.20	
	Day & Zimmerman vs. Enerfab competition? CAPEX	Enerfab $20M per year; $40M combined;	Consolidate spend and rebid	1% year1; 2% year, 3% year 4, 3% year 5				1.00%	40	0.40	0.40	1						
	Procurement savings for Wolf Creek OM			150M spend, 1% year 1, 2.5% yr 2, 1.5% year 3 - 5				1.00%	150	1.50	0.50	1	4.00			0.25		
	Procurement savings for Wolf Creek CAPEX			TBD							1.00	1						
	Inventory reduction Wolf Creek CAPEX							3.00%	75	2.25	1.50	1						
	Inventory reduction Wolf Creek OM										0.75	1	3.75					
	Inventory reduction Wolf Creek OM carrying on OM							18.50%			0.14	1	2.08					
	Broad inventory reduction and carrying cost saved OM -inventory (added 10%)	reduce inventory each year; carrying cost (18.5%)every year	Asume 10% savings over 5 years, 2% per year	Prairie savings $14M last 5 years; higher Inv at SKY		14	5	2.00%	93	1.86	0.62	1	3.10					
	Broad inventory reduction and carrying cost saved CAPEX -inventory (+10%)	reduce inventory each year; carrying cost (18.5%)every year	Asume 10% savings over 5 years, 2% per year	Prairie savings $14M last 5 years; higher Inv at SKY							1.24	1						
	Broad inventory reduction and carrying cost saved OM -Carrying cost (+10%)	*This line to be deleted through corrections in rebuttal testimony*	Assume carrying cost of 18.5% per year	Prairie savings $14M last 5 years; higher Inv at SKY				18.50%		0.11	0.11	1	2.06					
	Improve reclaim and salvage savings OM	$4.6M achieved; predict $5.3M Sky, .5 O&M; ADD $.7M								0.70	0.35	1	1.75			0.18	0.18	
	Improve reclaim and salvage savings CAPEX	$4.6M achieved; predict $5.3M Sky, .5 CAPEX ADD $.7M								0.70	0.35	1			-			
	Fleet reserve inventory reduction from consolidation OM ADD 50%	$2M annual saved at Astroid; base case 50% = $1M; add $1m	Save maintenance on sold reserve items								1.00	1	5.00			0.50	0.34	
	Fleet reserve inventory reduction from consolidation CAPEX ADD 50%	$17M annual lease Sky; 8% saved at Astroid; use 50%; add 4%	Sell redundant reserve items	Reduce lease cost. Might sell Prairie assets							0.68	1	2.04		-			
	Reduction in inventory from plant shutdowns CAPEX																	
	Reduction in inventory from plant shutdowns OM																	
	Reduction in inventory from plant shutdowns carrying cost on OM																	
	ADDITIONAL PROJECTED SAVINGS ON COMBINED PRAIRIE+SKY SPEND - TOTAL PER YEAR			**AGGRESSIVE CASE ADDED IMPACT OM**									**69.48**	**2.50**	**2.50**	**0.92**	**0.72**	**-**
	AVOIDED INVENTORY CARRYING CHARGES 1/2 2017 (CONTINUING THRU YEAR 5)	Annual carrying charge for inventory (capital + O&M costs)															0.13	
	AVOIDED INVENTORY CARRYING CHARGES 2018 (CONTINUING THRU YEAR 5)	0.185																
	AVOIDED INVENTORY CARRYING CHARGES 2019 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2020 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2021 (CONTINUING THRU YEAR 5)																	
	AVOIDED INVENTORY CARRYING CHARGES 2022 (CONTINUING THRU YEAR 5)																	
	ADDITIONAL PROJECTED SAVINGS: TOTAL NFOM SAVINGS + AVOIDED INVENTORY CARRYING CHARGES															**1.06**		
	DEMONSTRATED + PROJECTED ADDITIONAL SAVINGS: TOTAL PER YEAR			**BASE PLUS AGGRESSIVE CASE TOTALS**									**173.99**	**16.64**	**7.64**	**23.92**	**10.64**	**1.80**
	CAPITAL CARRYING CHARGE AVOIDANCE			**CAPEX AVOIDANCE COST**												**1.97**		
	TOTAL OM SAVINGS + CAPEX AVOIDANCE COST SAVINGS			**TOTAL OM SAVINGS + CAPEX AVOIDANCE COST SAVINGS**												**25.88**		

Redactions Removed Pursuant to Commission Order

2

and Confidential – Prepared at Request of Counsel in Anticipation of Litigation."

(2021-2022 projections not used in testimony)

IMPROVEMENT AREA	2018		2019			2020			2021			2022		
	NFOM SAVINGS	CAPEX SAVINGS	COST TO ACHIEVE	NFOM SAVINGS	CAPEX SAVINGS	COST TO ACHIEVE	NFOM SAVINGS	CAPEX SAVINGS	COST TO ACHIEVE	NFOM SAVINGS	CAPEX SAVINGS	COST TO ACHIEVE	NFOM SAVINGS	CAPEX SAVINGS
DEMONSTRATED PRAIRIE SAVINGS APPLIED TO ADDITIONAL SKY SPEND														
Select best company's contracts OM	2.60			7.80			5.20			5.20			5.20	
Select best company's contracts CAPEX		5.21			15.63			10.42			10.42			10.42
Strategic Sourcing and automated transactions OM	0.82			1.64			1.64			1.64			1.64	
Strategic Sourcing and automated transactions CAPEX		1.65			3.29			3.29			3.29			3.29
Projects to reduce spending OM	1.08			3.23			2.15			2.15			2.15	
Projects to reduce spending CAPEX		2.16			6.47			4.31			4.31			4.31
Specific rebid: MRO OM (included above)				27.03			27.03			27.03			27.03	
Wolf Creek procurement improvements OM	0.10			0.20			0.20			0.20			0.20	
Wolf Creek procurement improvements CAPEX		0.30			0.60					0.60			0.60	
Procurement headcount consolidation OM year 1 (redeploy?)	0.80			0.80			0.80			0.80			0.80	
Procurement headcount consolidation OM year 2 (redeploy?)	0.50			0.50			0.50			0.50			0.50	
Other Supply Chain headcount reductions -merger OM year 1 (redeploy?)	0.50			0.50			0.50			0.50			0.50	
Other Supply Chain headcount reductions -merger OM year 2 (redeploy?)	1.00			1.00			1.00			1.00			1.00	
Consolidate KCPL and GMO inventories; Support Ctrs. OM	1.00			3.00			2.00			2.00			2.00	
Broad inventory reduction - inventory OM	0.44			1.33			0.89			0.89			0.89	
Broad inventory reduction - inventory CAPEX		0.89			2.66			1.77			1.77			1.77
Broad inventory reduction and carrying cost saved OM -Carrying cost	0.12			0.29			0.45			0.62			0.78	
Salvage value for inventory clean-up	0.40			0.40			0.40			0.40			0.40	
Optimize P-card spending and control; P-card rebates OM	0.35			1.05			0.70			0.70			0.70	
Improve reclaim and salvage savings OM	2.65		1.70	2.65		1.70	2.65		1.70	2.65		1.70	2.65	
Improve reclaim and salvage savings CAPEX		2.65			2.65			2.65			2.65			2.65
Pursue improved waranty accountability OM	1.00		0.10	1.00		0.10	1.00		0.10	1.00		0.10	1.00	
Fleet reserve inventory reduction from consolidation OM	1.00			1.00			1.00			1.00			1.00	
Fleet reserve inventory reduction from consolidation CAPEX		0.68			0.68			0.68			0.68			0.68
Tree Trimming competition? (assume in above)														
Rationalize Supply Chain systems projects (address in IT analysis)													0.00	
Reduction in inventory from plant shutdowns CAPEX														
Reduction in inventory from plant shutdowns OM														
Reduction in inventory from plant shutdowns carrying cost on capex														
DEMONSTRATED PRAIRIE SAVINGS APPLIED TO ADDITIONAL SKY SPEND - TOTAL PER YEAR	**14.36**	**13.53**	**1.80**	**53.42**	**31.99**	**1.80**	**48.12**	**23.13**	**1.80**	**48.88**	**23.13**	**1.80**	**49.04**	**23.13**
AVOIDED INVENTORY CARRYING CHARGES 1/2 2017 (CONTINUING THRU YEAR 5)		1.84			1.84			1.84			1.84			1.84
AVOIDED INVENTORY CARRYING CHARGES 2018 (CONTINUING THRU YEAR 5)		2.50			2.50			2.50			2.50			2.50
AVOIDED INVENTORY CARRYING CHARGES 2019 (CONTINUING THRU YEAR 5)					5.92			5.92			5.92			5.92
AVOIDED INVENTORY CARRYING CHARGES 2020 (CONTINUING THRU YEAR 5)								4.28			4.28			4.28
AVOIDED INVENTORY CARRYING CHARGES 2021 (CONTINUING THRU YEAR 5)											4.28			4.28
AVOIDED INVENTORY CARRYING CHARGES 2022 (CONTINUING THRU YEAR 5)														4.28
DEMONSTRATED SAVINGS: TOTAL NFOM SAVINGS + AVOIDED INVENTORY CARRYING CHARGES	18.70			63.68			62.65			67.70			72.13	
ADDITIONAL PROJECTED SAVINGS ON COMBINED PRAIRIE+SKY SPEND														
Pursue Strategic Sourcing for large construction projects CAPEX								4.00			4.00			4.00
Apply combined $1.4B (1.2 net)spend to Strategic sourcing OM				7.49			5.00			5.00			5.00	
Apply combined $1.4B (1.2 net)spend to Strategic sourcing CAPEX					15.01			10.01			10.01			10.01
Generaion Spares inventory, consolidate and reduce CAPEX					5.00			7.50			10.00			10.00
T&D inventory reduction from consolidation CAPEX					13.34			6.67			6.67			6.67
T&D inventory reduction from consolidation OM				6.66			3.33			3.33			3.33	
T&D inventory reduction from consolidation carrying costs OM only				1.23			1.85			2.46			3.08	
Day & Zimmerman vs. Enerfab competition? CAPEX		0.40			0.80			1.20			1.20			1.20
Procurement savings for Wolf Creek OM	0.50			1.25			0.75			0.75			0.75	
Procurement savings for Wolf Creek CAPEX		1.00			2.50			1.50			1.50			1.50
Inventory reduction Wolf Creek CAPEX		1.50			1.50			1.50			1.50			1.50
Inventory reduction Wolf Creek OM	0.75			0.75			0.75			0.75			0.75	
Inventory reduction Wolf Creek OM carrying on OM	0.14			0.28			0.42			0.55			0.69	
Broad inventory reduction and carrying cost saved OM -inventory (added 10%)				1.24			0.62			0.62			0.62	
Broad inventory reduction and carrying cost saved CAPEX -inventory (+10%)					3.01			1.24			1.24			1.24
Broad inventory reduction and carrying cost saved OM -Carrying cost (+10%)				0.34			0.46			0.57			0.69	
Improve reclaim and salvage savings OM	0.35			0.35			0.35			0.35			0.35	
Improve reclaim and salvage savings CAPEX		0.35			0.35			0.35			0.35			0.35
Fleet reserve inventory reduction from consolidation OM ADD 50%	1.00			1.00			1.00			1.00			1.00	
Fleet reserve inventory reduction from consolidation CAPEX ADD 50%		0.68			0.68		0.68	0.68		0.68			0.68	
Reduction in inventory from plant shutdowns CAPEX														
Reduction in inventory from plant shutdowns OM														
Reduction in inventory from plant shutdowns carrying cost on OM														
ADDITIONAL PROJECTED SAVINGS ON COMBINED PRAIRIE+SKY SPEND - TOTAL PER YEAR	**2.74**	**3.93**	**-**	**20.59**	**42.19**	**-**	**15.20**	**34.65**	**-**	**16.06**	**36.47**	**-**	**16.93**	**36.47**
AVOIDED INVENTORY CARRYING CHARGES 1/2 2017 (CONTINUING THRU YEAR 5)		0.13			0.13			0.13			0.13			0.13
AVOIDED INVENTORY CARRYING CHARGES 2018 (CONTINUING THRU YEAR 5)		0.73			0.73			0.73			0.73			0.73
AVOIDED INVENTORY CARRYING CHARGES 2019 (CONTINUING THRU YEAR 5)					7.81			7.81			7.81			7.81
AVOIDED INVENTORY CARRYING CHARGES 2020 (CONTINUING THRU YEAR 5)								6.41			6.41			6.41
AVOIDED INVENTORY CARRYING CHARGES 2021 (CONTINUING THRU YEAR 5)											6.75			6.75
AVOIDED INVENTORY CARRYING CHARGES 2022 (CONTINUING THRU YEAR 5)														6.75
ADDITIONAL PROJECTED SAVINGS: TOTAL NFOM SAVINGS + AVOIDED INVENTORY CARRYING CHARGES	**3.60**			**29.26**			**30.27**			**37.89**			**45.50**	28.57
DEMONSTRATED + PROJECTED ADDITIONAL SAVINGS: TOTAL PER YEAR	**17.09**	**17.46**	**1.80**	**74.01**	**74.18**	**1.80**	**63.31**	**57.78**	**1.80**	**64.94**	**59.60**	**1.80**	**65.97**	**59.60**
CAPITAL CARRYING CHARGE AVOIDANCE	**5.20**			**18.92**			**29.61**			**40.64**			**51.66**	
TOTAL OM SAVINGS + CAPEX AVOIDANCE COST SAVINGS	**22.29**			**92.94**			**92.92**			**105.58**			**117.64**	

Redactions Removed Pursuant to Commission Order

EXHIBIT JAL-45

Redactions Removed Pursuant to Commission Order

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D.C. 20426

OFFICE OF ENERGY MARKET REGULATION

In Reply Refer To:
Great Plains Energy Incorporated
Westar Energy, Inc.
Docket No. EC16-146-000

October 7, 2016

Catherine P. McCarthy
Bracewell LLP
2001 M Street, N.W.
Suite 900
Washington, D.C. 20036

Margaret H. Claybour
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1050 Thomas Jefferson Street, N.W.
Washington, D.C. 20007

Reference: Joint Application for Authorization of Disposition of Jurisdictional Assets and Merger Under Sections 203(a)(1) and 203(a)(2) of the Federal Power Act

Dear Counsel:

On July 11, 2016, you filed an application on behalf of Great Plains Energy Incorporated (Great Plains) and Westar Energy Inc. (Westar) (collectively, Applicants) pursuant to sections 203(a)(1) and 203(a)(2) of the Federal Power Act[1] requesting Commission authorization for a transaction whereby Great Plains would acquire Westar (Proposed Transaction).

Please be advised that the application is deficient and the Commission requires additional information in order to process it. Accordingly, please respond to the information requested below.

[1] 16 U.S.C. § 824b (2012).

Geographic Markets

Commission staff requires further information to determine whether there are submarkets within SPP that may be relevant to the Proposed Transaction.

The Commission has designated submarkets within RTO/ISO markets when there is historical congestion in the day-ahead and real-time markets.[2] The Commission has also considered price separation as an indication that a submarket may exist. We note that the SPP Market Monitor has studied the Kansas City area to determine whether it should be designated a Frequently Constrained Area.[3] SPP defines a Frequently Constrained Area as having one or more binding transmission constraints for at least five hundred hours during a twelve month period and having one or more pivotal suppliers.[4] In 2013, SPP designated the Kansas City Area as a Frequently Constrained Area but removed the area as a Frequently Constrained Area in 2014 because the area no longer met the pivotal supplier requirement. Please answer the following questions related to the Kansas City Area within SPP:

1. For 2013, 2014, 2015, including the most recent 12 month period, provide the number of hours where there were binding constraints for the Kansas City Area in the day-ahead market and the real-time market, and. when those hours occurred.

2. Is there additional information that Applicants have regarding whether or not the Kansas City Area is a submarket within SPP, including, but not limited to, whether there are frequently binding transmission constraints in that area? If so, please provide that information.

3. If Applicants have in response to question 3 information indicating that the Kansas City Area is a submarket within SPP, please provide a delivered price test sensitivity study of the Kansas City Area submarket.

Delivered Price Test

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[2] *See Exelon Corp.*, 138 FERC ¶ 61,167, at P 31 (2012).

[3] *See* Southwest Power Pool, *Frequently Constrained Area Study* (2015), https://www.spp.org/documents/41607/fca%202015%20report.pdf.

[4] *See* Southwest Power Pool, Inc. FERC FPA Electric Tariff Open Access Transmission Tariff, Sixth Revised Volume No. 1 Southwest Power Pool, Inc., FERC FPA Electric Tariff, Open Access Transmission Tariff, Sixth Revised Volume No. 1 >Attachment AF, Attachment AF Market Power Mitigation Plan, 1.1.0 .

4. Commission staff is unable replicate the results of the delivered price test as submitted by Applicants because the model will not run. Please provide detailed instructions, including file nomenclature, which would enable Commission staff to verify Applicants' results.

Cost of Debt

5. Please explain whether there will be any public utility debt financings that are triggered by the Proposed Transaction. If so, please explain whether there will be an effect on rates and what that effect is anticipated to be.

Effect on Retail Rates

6. In light of the Missouri Public Service Commission's comments in this proceeding and the statement in the Merger Policy Statement concerning when the Commission will consider addressing a merger's effect on retail rates,[5] please explain the Proposed Transaction's effect on retail rates.

The information requested in this letter will constitute an amendment to the application. The application will not be a completed application for purposes of section 33.11(a) of the Commission's regulations, 18 C.F.R. § 33.11(a) (2016), until the information requested in this letter is submitted. A notice of amendment will be issued upon receipt of your response.

This letter is issued pursuant to the authority delegated to the Director, Division of Electric Power Regulation – West, under 18 C.F.R. § 375.307(a)(1)(v)(2016) and is interlocutory. This order is not subject to rehearing pursuant to 18 C.F.R. § 385.713 (2016). Please file the requested information within 30 days of the date of this letter.

Please submit your response electronically.

In addition, please provide a copy of the response to all parties that have either requested or been granted intervention in this proceeding. Failure to respond to this letter within the time period specified may result in an order rejecting the filing.

Sincerely,

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[5] *Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act: Policy Statement*, Order No. 592, FERC Stats. & Regs. ¶ 31,044, at ¶ 30,128 (1996) (Merger Policy Statement), *reconsideration denied*, Order No. 592-A, 79 FERC ¶ 61,321 (1997).

Steve P. Rodgers, Director
Division of Electric Power Regulation – West

Document Content(s)

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EXHIBIT JAL-46

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November 7, 2016

By Electronic Filing

Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: Great Plains Energy Incorporated and Westar Energy, Inc.
Docket No. EC16-146-___

Dear Secretary Bose:

This letter responds to the Federal Energy Regulatory Commission's ("FERC" or "Commission") October 7, 2016 letter requesting additional information ("October 7 Data Request") from Great Plains Energy Incorporated ("Great Plains Energy") and Westar Energy, Inc. ("Westar") (collectively, the "Applicants") in the above-referenced proceeding. With the exception of Question 4, the Applicants' response to each question from the October 7 Data Request is provided below. On October 18, 2016, Great Plains Energy submitted a response to Commission Staff Question 4 in this proceeding.

This response is being served electronically on all parties and consists of the following documents:

1. This transmittal letter;
2. An affidavit by Dr. David Hunger and Mr. Edo Macan of Charles River Associates ("Affidavit") (Attachment 1);
3. A copy of the Stipulation and Agreement between Great Plains Energy, Kansas City Power & Light Company ("KCP&L"), KCP&L Greater Missouri Operations Company ("GMO") and the Missouri Public Service Commission ("MPSC") Staff ("MPSC Staff") (Attachment 2);
4. A copy of the Stipulation and Agreement between Great Plains Energy, KCP&L, GMO and the Office of the Public Counsel ("OPC") (Attachment 3); and
5. An executed verification by personnel at the Applicants who reviewed and verified the responses provided herein (Attachment 4).

Questions 1 through 3 of the October 7 Data Request inquire about whether the Kansas City Area should be considered a submarket within the Southwest Power Pool, Inc. ("SPP"). The Applicants asked Dr. David Hunger and Mr. Edo Macan to analyze Questions

1 through 3.[1] Their analysis is briefly summarized herein and is presented in detail in the attached Affidavit, included as Attachment 1 hereto.

1. ***For 2013, 2014, 2015, including the most recent 12 month period, provide the number of hours where there were binding constraints for the Kansas City Area in the day-ahead market and the real-time market, and when those hours occurred.***

The Affidavit identifies and summarizes certain findings by the independent SPP Market Monitoring Unit ("MMU") regarding binding constraints for the Kansas City Area that are responsive to this question. The Affidavit also includes analyses by Dr. Hunger and Mr. Macan that are responsive to this question.

As background, the SPP Open Access Transmission Tariff ("OATT") defines a Frequently Constrained Area ("FCA") as an electrical area with one or more binding transmission constraints or Reserve Zone constraints that are expected to be binding for at least five-hundred (500) hours during a given twelve (12)-month period and within which one or more suppliers are pivotal.[2] The SPP OATT requires the SPP MMU to determine whether current FCA designations continue to be warranted and/or whether any new areas need to be designated as an FCA.[3]

The 2013 SPP MMU's FCA report identified the Kansas City Area as an FCA, with the Iatan–Stranger Creek 345 kV transmission line as the primary constraint.[4] The Affidavit explains that following certain transmission upgrades, the 2014 SPP MMU FCA report found that even in the most conservative case, the percentage of binding hours with a pivotal supplier on the only constraint, the Iatan–Stranger Creek transmission line, dropped to 18 percent (a significant decrease from the 2013 SPP MMU FCA report of 94 percent). Accordingly, the 2014 SPP MMU FCA report determined: "The conclusions regarding the Kansas City candidate FCA are equally unambiguous; the Kansas City [A]rea does not warrant continued designation as a Frequently Constrained Area."[5] The 2015 SPP MMU FCA report noted continued reductions in both the number of hours of binding constraints around Kansas City and in the number of those hours with a pivotal supplier, and found it appropriate to maintain its earlier finding from the 2014 SPP MMU FCA report that the Kansas City Area is no longer an FCA.[6]

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[1] Dr. Hunger and Mr. Macan performed the competitive analysis included in the application submitted on July 12, 2016 in this proceeding ("Application").

[2] SPP OATT, Attachment AF, Section 3.1.1.

[3] SPP OATT, Attachment AF, Section 3.1.1.3.

[4] *See* Affidavit at PP 5-6 (citing the Potomac Economics, *Study of Frequently Constrained Areas in the Southwest Power* Pool, at 5, 9 (Oct. 2013)).

[5] *Id*. at P 8 (citing the *SPP Frequently Constrained Areas – 2014 Study,* at 6 (Feb. 2015)).

[6] *Id*. at P 9 (citing the *SPP Frequently Constrained Areas – 2015 Study,* at 5-8 (Dec. 2015)).

In addition to reviewing and summarizing the SPP MMU FCA reports, the Affidavit discusses Dr. Hunger's and Mr. Macan's analysis of day-ahead and real-time binding constraints for the Kansas City Area since the start of the SPP Integrated Marketplace.[7] The Affidavit describes Dr. Hunger's and Mr. Macan's conclusion that no evidence suggests that the Kansas City Area is a submarket within SPP.[8] Dr. Hunger and Mr. Macan rely on publicly available data from SPP's website regarding congestion on transmission facilities on both a real-time and day-ahead basis. The Affidavit describes their analysis of these data in detail. Figures 1 through 4 in the Affidavit detail the frequency of binding constraints by date and shadow price and identify the total number of hours of the constraints. Consistent with the 2014 and 2015 findings of the SPP MMU, Dr. Hunger's and Mr. Macan's binding constraint analysis shows that such constraints were formerly more frequent on the Iatan–Stranger Creek transmission line but are virtually eliminated today.

Dr. Hunger and Mr. Macan also explain in the Affidavit that even in the past, any such constraints did not rise to a level that would result in the SPP MMU designating them as frequently constrained.[9] More importantly, Dr. Hunger and Mr. Macan's analysis shows that the frequency and magnitude of such constraints have fallen in recent years to the point that, following the April 2015 addition of the Iatan–Nashua 345 kV transmission line, congestion has "practically disappeared" in the Kansas City Area, with constraints binding only 1.7 percent of hours in day-ahead and 1.6 percent of hours in real-time, and with constraints binding *and* price separation of greater than $5/MWh occurring in only 0.4 percent and 1.0 percent of those hours, respectively.[10]

2. *Is there additional information that Applicants have regarding whether or not the Kansas City Area is a submarket within SPP, including, but not limited to, whether there are frequently binding transmission constraints in that area? If so, please provide that information.*

As detailed in the attached Affidavit, Dr. Hunger and Mr. Macan present additional information analyzing price separation and price correlation, which data show that the Kansas City Area is not a submarket within SPP.[11] This information complements the analysis of day-ahead and real-time binding constraints discussed above in response to Question 1 and supports the conclusion that there are no frequently binding transmission constraints in the Kansas City Area.

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7 *See id*. at PP 10-16.

8 *Id*.

9 *Id*. at P 16.

10 *Id*. at PP 16, 24.

11 *See id.* at PP 17-24.

With regard to price separation, Dr. Hunger and Mr. Macan observe that, to the extent that locational marginal prices ("LMPs") vary across different SPP areas, the LMP trends are driven by geographical location and associated generation resources rather than by specific transmission constraints between zones.[12] With regard to price correlation for KCP&L, its neighbors and the two major SPP hubs, the data show that these areas are all part of the same market, as evidenced by the high correlation coefficients for the six pricing points for both the day-ahead and real-time balancing markets for the entire year, as well as more granular summer, winter, peak and off-peak time periods.[13]

Finally, Dr. Hunger and Mr. Macan conclude and explain in the Affidavit that the upgrades to the transmission system in the Kansas City Area have resulted in persistent and systematic long-term *reductions* in binding constraints in the Kansas City Area (as opposed to other more transient causes that could reduce binding constraints and congestion, such as mild weather or relative generator economics). In particular, as mentioned above, following the April 2015 addition of the Iatan–Nashua 345 kV transmission line by Great Plains Energy's affiliate Transource Missouri, LLC, congestion has "practically disappeared" in the Kansas City Area, with constraints binding only 1.7 percent of hours in day-ahead and 1.6 percent of hours in real-time, and with constraints binding *and* price separation of greater than $5/MWh occurring in only 0.4 percent and 1.0 percent of those hours, respectively.[14] In addition to past transmission upgrades, the Mullin Creek–Sibley 345kV transmission line and station is planned to be energized by Transource Missouri, LLC by year-end 2016 and is expected to reduce any remaining constraints.

3. ***If Applicants have in response to question 3 [sic] information indicating that the Kansas City Area is a submarket within SPP, please provide a delivered price test sensitivity study of the Kansas City Area submarket.***

As discussed herein and in the attached Affidavit, the analysis involved in responding to Questions 1 and 2 does not in any way support the conclusion that the Kansas City Area is a submarket within SPP. As a result, no delivered price test sensitivity study of the Kansas City Area submarket is included in this response. Rather, the data and analysis included in this response and the Affidavit support the conclusion that the appropriate destination market for the delivered price test is the full SPP footprint.[15]

4. ***Commission staff is unable replicate the results of the delivered price test as submitted by Applicants because the model will not run. Please provide***

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12 *Id*. at PP 18-19.

13 *Id*. at PP 20-23.

14 *Id*. at P 24.

15 *See id.* at P 25.

detailed instructions, including file nomenclature, which would enable Commission staff to verify Applicants' results.

On October 18, 2016, Great Plains Energy submitted a response to Commission Staff Question 4 in this proceeding.

5. ***Please explain whether there will be any public utility debt financings that are triggered by the Proposed Transaction. If so, please explain whether there will be an effect on rates and what that effect is anticipated to be.***

With regard to the proposed merger and disposition of assets that is the subject of the above-captioned proceeding (the "Proposed Transaction"), none of the Proposed Transaction-related financings, including any debt financings, will occur at, or be guaranteed by or have recourse to, a subsidiary company level. As such, none of the Proposed Transaction-related financings will involve debt financings by any of the operating public utility subsidiaries that will be subsidiaries of Great Plains Energy following the Proposed Transaction.[16] As noted in the October 11 Answer, all debt or other financings triggered by the Proposed Transaction will occur at the holding company level only, *i.e.*, at the level of Great Plains Energy.[17]

Separately, with regard to any potential effect on FERC-jurisdictional rates of transactions carried out at the holding company level, the Applicants have made hold harmless commitments in this proceeding to ensure that the operating public utility subsidiaries and their customers will not be adversely affected by financing of their parent company or financing transactions of other non-utility affiliates, including debt financing transactions.[18] For example, the additional hold harmless protections included in the Applicants' October 11 Answer expressly detail that the Great Plains Energy operating public utility subsidiaries will maintain separate debt so that the operating public utility subsidiaries will not be responsible for the debts of affiliates, including Great Plains Energy and that without prior regulatory approval from the relevant state commission, the Great Plains Energy operating public utility subsidiaries will not guarantee the debt or credit instruments of Great Plains Energy or any other Great Plains Energy affiliate.[19]

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[16] *See* "Protest of Kansas City, Kansas Board of Public Utilities," Docket No. EC16-146 (filed Sept. 23, 2016) at Exhibit 13 page 21 (Direct Testimony of Kevin E. Bryant on Behalf of Great Plains Energy Incorporated and Kansas City Power & Light Company, Before the State Corporation Commission of the State of Kansas, Docket No. 16-KCPE-593-ACQ ("Bryant Testimony")).

[17] October 11 Answer at 9-10; *see also* Bryant Testimony at 21, included in BPU Protest at Exhibit 13 (explaining that "100% of this Transaction-related financing will occur at the GPE [holding company] level, and none will occur at, or be guaranteed by or have recourse to, any utility subsidiary").

[18] Application at 26; *see also* October 11 Answer at Sections II.B.2 and II.B.4.

[19] *See* October 11 Answer at Section II.B.2.

6. ***In light of the Missouri Public Service Commission's comments in this proceeding and the statement in the Merger Policy Statement concerning when the Commission will consider addressing a merger's effect on retail rates,[20] please explain the Proposed Transaction's effect on retail rates.***

First, with regard to any concerns that could arise in this proceeding regarding retail rate issues in Kansas, the Kansas Corporation Commission ("KCC") has not requested FERC to review Kansas retail rate issues in connection with the Proposed Transaction; the KCC is presently reviewing the Proposed Transaction in an ongoing KCC proceeding.[21] Second, with respect to any Missouri retail rate concerns, the Applicants refer Commission Staff to the October 12, 2016 "Stipulation and Agreement" among Great Plains Energy, KCP&L and GMO, and the MPSC Staff ("Missouri Stipulation"), Attachment 2 hereto. The Missouri Stipulation specifically addresses the settlement of various concerns that arose in the context of the Proposed Transaction, including, among other things, Missouri retail rate issues and is discussed further below. On October 26, 2016, Great Plains Energy, KCP&L and GMO entered into a further Stipulation and Agreement with the OPC ("OPC Stipulation") that incorporates by reference the Missouri Stipulation and includes other commitments related to the Proposed Transaction. The OPC Stipulation is included as Attachment 3 hereto. In addition, Section II.A of the Applicants' October 11 Answer in this proceeding responds to the MPSC's comments and discusses the relevant Commission policy and precedent regarding FERC review of retail rate issues.

The parties to the Missouri Stipulation submitted that agreement to the MPSC as part of a joint request for an order from the MPSC granting a variance from its affiliate transaction regulations in connection with the Proposed Transaction.[22] The parties to the Missouri Stipulation have requested the MPSC grant the joint request on or before November 30, 2016, subject to the conditions provided in the Missouri Stipulation.

Great Plains Energy makes the fundamental commitment in the Missouri Stipulation "that retail rates for Missouri KCP&L and GMO customers shall not increase as a result of the Transaction."[23] Additionally, Great Plains Energy commits in the Missouri Stipulation that any acquisition premium paid by Great Plains Energy for Westar will be maintained on

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[20] *Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act: Policy Statement*, Order No. 592, FERC Stats. & Regs. ¶ 31,044, at ¶ 30,128 (1996) (Merger Policy Statement), *reconsideration denied*, Order No. 592-A, 79 FERC ¶ 61,321 (1997).

[21] *See* State Corporation Commission of the State of Kansas, Docket No. 16-KCPE-593-ACQ.

[22] *See In the Matter of the Joint Application of Great Plains Energy Incorporated, Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company for a variance from 4 CSR 240-20.015*, Verified Application of Great Plains Energy Incorporated, Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company For a Limited Variance From the Commission's Affiliate Transactions Rule, Case No. EE-2017-0113 (filed Oct. 12, 2016).

[23] *See* Attachment 2, Missouri Stipulation at 8.

the books of Great Plains Energy and will not be recovered in retail rates unless otherwise separately ordered by the MPSC.[24] KCP&L and GMO also commit not to seek direct or indirect recovery or recognition in retail rates of any acquisition premium through any acquisition savings "sharing" or similar adjustment in current or future rate cases, subject to limited exception.[25] Transaction costs for purposes of retail rates are also described in the Missouri Stipulation, and KCP&L and GMO commit not to seek either direct or indirect recovery or recognition in retail rates of any transaction costs in any future rate cases, subject to limited exceptions.[26] Transition costs for purposes of retail rates are also addressed in the Missouri Stipulation and the Missouri Stipulation provides that certain non-capital transition costs can be deferred on the books of either KCP&L or GMO to be considered for recovery in KCP&L and GMO retail rate cases only with prior approval of the MPSC.[27] If subsequent rate recovery is sought for such transition costs, KCP&L and GMO will have the burden of proving that such recoveries are just and reasonable and that the costs provide benefits to Missouri customers.[28] In addition to agreement related to retail rate and accounting conditions, pursuant to the Missouri Stipulation, Great Plains Energy, KCP&L and/or GMO provide various other retail-related commitments including but not limited to commitments related to financing,[29] affiliate transactions and cost allocation,[30] customer service,[31] integration,[32] access to records[33] and parent company conditions.[34]

The Applicants' responses provided herein, along with the response to Question 4 submitted on October 18, 2016, fully respond to the October 7 Data Request concerning the

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24 *Id*. at 6-7.

25 *Id*. at 7.

26 *Id*. at 7-8.

27 *Id*. at 8.

28 *Id*.

29 *Id*. at 2-6.

30 *Id*. at 8-10.

31 *Id*. at 10-11.

32 *Id*. at 11-17.

33 *Id*. at 18-19.

34 *Id*. at 20.

Proposed Transaction. If you have any questions on the information contained in this response filing please contact the undersigned.

Very truly yours,

/s/ Catherine P. McCarthy
Catherine P. McCarthy
Seth T. Lucia

Counsel to Great Plains Energy Incorporated

Attachment 1:

Affidavit of
Dr. David Hunger and Mr. Edo Macan

Redactions Removed Pursuant to Commission Order

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Great Plains Energy Incorporated	)	
	)	**Docket No. EC16-146-000**
Westar Energy, Inc.	)	

Affidavit of Dr. David Hunger and Mr. Edo Macan
In Response to the Commission's Deficiency Letter of October 7, 2016

1. We are David Hunger and Edo Macan. We submitted testimony (Exhibit J-1) analyzing the effect of the proposed merger of Great Plains Energy Incorporated ("Great Plains Energy" or "GPE") and Westar Energy, Inc. ("Westar") (collectively, "Applicants") that was submitted with their application pursuant to Section 203 of the Federal Power Act in Docket No. EC16-146-000. Our qualifications are contained therein. The purpose of this affidavit is to provide certain data and analysis in support of the Applicants' response to the letter the Commission sent to Applicants on October 7, 2016 that requested answers to six questions. This affidavit addresses the first three questions in the Commission's letter related to whether the Kansas City Area should be designated as a submarket within the Southwest Power Pool, Inc. ("SPP") Regional Transmission Organization ("RTO").

2. In our initial testimony, we concluded, among other things, that the combination of the electric generating assets owned or controlled by GPE and those owned or controlled by Westar would not have the potential to create or enhance the Applicants' ability to increase prices in the relevant geographic electricity market. We made this determination based on the results of a Delivered Price Test ("DPT") that assumed that SPP is the relevant geographic market. Exceptions to the presumption that an RTO is the smallest relevant market occur when a sub-area within an RTO has been defined as a load pocket that needs to be analyzed separately. The Commission's precedent is to define submarkets for which analysis is required only when the area is a load pocket that is price-separated from the larger market on a frequent basis, and the Commission has made no such findings in the case of SPP.

Redactions Removed Pursuant to Commission Order

3. In this testimony, our primary focus is to address questions posed by the Commission regarding the possibility that the Kansas City Area should be designated as a submarket within SPP for the purposes of market power analyses. Here, we provide the results of analyses of both binding constraint data and day-ahead and real-time Locational Marginal Price ("LMP") data around the Kansas City Area. We conclude that binding constraints are not frequent on the paths between the Kansas City Area and its neighbors, nor does the Kansas City Area see persistent price separation from neighboring areas. These conclusions are in line with those of the independent SPP Market Monitoring Unit ("MMU") that performs similar assessments on an annual basis.[1] Furthermore, the results of these analyses are what we would expect considering the intended impact of recent transmission upgrades in and around Kansas City.

QUESTION 1: For 2013, 2014, 2015, including the most recent 12 month period, provide the number of hours where there were binding constraints for the Kansas City Area in the day-ahead market and the real-time market, and when those hours occurred.

4. This question gets to whether the Kansas City Area should be considered a submarket within SPP. We first review the SPP MMU's findings on this topic, which show that the Kansas City Area may have been frequently constrained in the past, but no longer meets SPP's definition of Frequently Constrained Area ("FCA").[2] We then review binding constraint data on potentially limiting elements around the Kansas City Area, which also shows decreasing incidence of binding constraints over the period between the beginning of 2013 and the present. We supplement the analysis of binding constraints data by examining price correlations between the LMPs of the Kansas City Area and LMPs of neighboring areas.

SPP Market Monitoring Reports on Frequently Constrained Areas

5. Starting in 2013, SPP commissioned a report from Potomac Economics with the goal of identifying "electrical areas within SPP where one or more transmission constraints are expected to be binding for a significant number of hours. These areas are subject to greater risk of market power abuse than areas that have only occasional and transitory congestion."[3] The resulting designated FCAs would be used by SPP in its market

[1] *See* SPP Open Access Transmission Tariff, Attachment AF, Section 3.1.1.3 (requiring the SPP MMU to examine FCA designations to determine whether current designations continue to be warranted and whether any new areas need to be designated as an FCA).
[2] *See id*. at Section 3.1.1 (defining a Frequently Constrained Area as an electrical area with one or more binding transmission constraints or Reserve Zone constraints that are expected to be binding for at least five-hundred (500) hours during a given twelve (12)-month period and within which one or more suppliers are pivotal).
[3] Potomac Economics, *Study of Frequently Constrained Areas in the Southwest Power Pool,"* October 2013, p. 1.

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mitigation procedures that were to be part of the Integrated Marketplace. In principle, for generation resources inside an FCA, more stringent mitigation measures would be warranted.

6. The first FCA study in 2013 focused on market data from 2011 and 2012 in the real-time balancing market. This analysis focused on transmission constraints for which there was at least one pivotal supplier, a market participant with the ability to dispatch its resources to cause a constraint to bind at a given time. Potomac Economics identified primary and secondary constraints in different areas as candidates, and counted the number of hours in which constraints were binding. In the 2013 study, the Kansas City Area was identified as an FCA, with the Iatan – Stranger Creek 345 kV transmission line as the primary constraint (for the loss of St. Joe – Iatan 345 kV line).[4] This constraint had a pivotal supplier in 1,247 hours during 2012, with a total of 1,389 constrained hours during the same period.[5] The Lake Road – Alabama 161 kV line was also identified as a less severe candidate.[6]

7. The SPP MMU prepared the 2014 FCA report. The SPP MMU revised the definition of an FCA to match that in the SPP Open Access Transmission Tariff ("OATT"): "electrical areas with one or more binding transmission constraints or Reserve Zone constraints that are expected to be binding for at least five-hundred (500) hours during a given twelve (12)-month period and within which one or more suppliers are pivotal."[7] To determine which hours had a pivotal supplier, the SPP MMU employed a trigger value of $25/MWh for the constraint shadow price, which the SPP MMU states accounts for times when there are low-cost resources available within the FCA to prohibit a pivotal supplier from accruing significant benefits by employing a withholding strategy.[8] The 2014 study looked at the real-time binding constraint data from the period from September 1, 2013 to August 31, 2014. It found that the Lake Road to Alabama constraint had been relieved by development of the Eastowne transformer, which connected a 161 kV electrical system north of Kansas City to the 345 kV line from St. Joseph to Iatan, effectively relieving all congestion following the in-service date.[9]

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[4] *Id*. at pp. 5, 9.
[5] *Id*. at pp. 5, 7.
[6] *Id*. at p. 9.
[7] SPP, *SPP Frequently Constrained Areas – 2014 Study,* February 2015, p. 2. (referencing SPP Open Access Transmission Tariff, Attachment AF, Section 3.1.1).
[8] In the Integrated Marketplace mitigation system, the pivotal supplier threshold value was $5/MWh at market start, which figure was used in the 2013 FCA study. The threshold was increased to $15/MWh on September 1, 2014 and changed from $15/MWh to $25/MWh on March 1, 2015. *Id*. at p. 18. *See also SPP Frequently Constrained Areas – 2015 Study,* December 2015, p. 10.
[9] SPP, *SPP Frequently Constrained Areas – 2014 Study,* February 2015, p. 12.

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8. Constraints around Kansas City that remained in the 2014 report included only the Iatan – Stranger Creek transmission line. Looking at this constraint, the SPP MMU then counted the number of binding hours (999) and the number of those hours during which the constraint is susceptible to the exercise of market power by a pivotal supplier. The constraint met both criteria in 79 hours (with a $15/MWh impact as the trigger), well below the 500 hour threshold in SPP's FCA definition.[10] The SPP MMU also performed a sensitivity analysis with trigger values of $5/MWh (175 hours) and $25/MWh (58 hours), finding that neither alternative analysis met the 500 hour threshold.[11] Furthermore, the SPP MMU found that even in the most conservative case ($5/MWh trigger), the percentage of binding hours with a pivotal supplier dropped to 18 percent in 2014 from the 2013 study result of 94 percent.[12] Accordingly, the SPP MMU stated, "The conclusions regarding the Kansas City candidate FCA are equally unambiguous; the Kansas City Area does not warrant continued designation as a Frequently Constrained Area."[13]

9. The SPP MMU also prepared the 2015 FCA report, covering the period from September 1, 2014 to August 31, 2015. For this period, the SPP MMU notes continued reductions in both the number of hours when there are binding constraints around Kansas City, and in the number of those hours with a pivotal supplier.[14] The total number of hours with a binding constraint at Iatan – Stranger Creek fell to 668 during the study period, with only 36 hours hitting the $25/MWh price trigger for having a pivotal supplier.[15] The SPP MMU concluded that it was appropriate to maintain its recommendation to no longer consider the Kansas City Area an FCA.[16]

Binding Constraints at Border of Kansas City Area

10. The above discussion represents a clear finding by an independent entity that the Kansas City Area should not be considered a submarket within SPP. However, to further bolster this position, we have replicated the MMU's analysis and carried it through the September 30, 2016, a period for which the MMU has not yet published results. Furthermore, we have looked at day-ahead binding constraints, a data set that has not

[10] *Id*. at p. 5.
[11] *Id*.
[12] *Id*. at p. 6.
[13] *Id*.
[14] *SPP Frequently Constrained Areas – 2015 Study,* December 2015, Figure 3-8 at p. 21.
[15] *Id.* at Figures 3-7 through 3-9 at pp. 20-21.
[16] *Id*.at p. 5-8 (concluding that the Kansas City Area is "well below the 500 hour threshold and do[es] not warrant designation [as an FCA]"). The SPP MMU also notes that "Kansas City's proximity to the eastern seam of the footprint exacerbates the congestion issues in the area. Market-to-Market (M2M) coordination with MISO should alleviate some of the congestion but the full impacts of market-to-market coordination are not captured in the study period." *Id.,* p. 14.

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been discussed in the MMU's annual reports but that was requested by the Commission in its deficiency letter. We find that further analysis provides that, in a more recent study period, there is even stronger evidence to support that the Kansas City Area should not be designated as an FCA or an SPP submarket.

11. To assess the prevalence of binding constraints in the day-ahead market, we used data from the SPP Integrated Marketplace Portal. We examined the period dating from the start of the Integrated Marketplace, March 2014, through the end of September 2016. Our focus was on the Iatan – Stranger Creek line as the monitored facility, which was the constraint that had been identified as a concern in the FCA studies. The data suggests that the contingent facility for this constraint changed designations from the St. Joe – Hawthorn 345kV line to the Nashua – Hawthorn 345 kV line after November 2015.[17] Accordingly, our analysis accounts for the change in constraint definition in the middle of the analysis period.

12. Figure 1 shows the frequency of binding constraints at the Iatan – Stranger Creek facility by the date and shadow price of the constraint. Since the beginning of the Integrated Marketplace, it is clear that this constraint has bound less frequently and less severely over time. In fact, this constraint has bound in only 156 hours in the most recent 12 months (1.8 percent of hours), with more than half of those hours taking place in October 2015. In 2016 to date, the constraint in question bound in only 54 of 6,576 hours (0.8 percent of hours). Moreover, the average shadow price during hours in which the constraint bound fell from $18.09/MWh in 2014 to $6.56/MWh in 2015 to just $4.14/MWh in 2016.

[17] This shows up in the data as a change in constraint name from IATSTRSTJHAW to IATSTRNASHAW.

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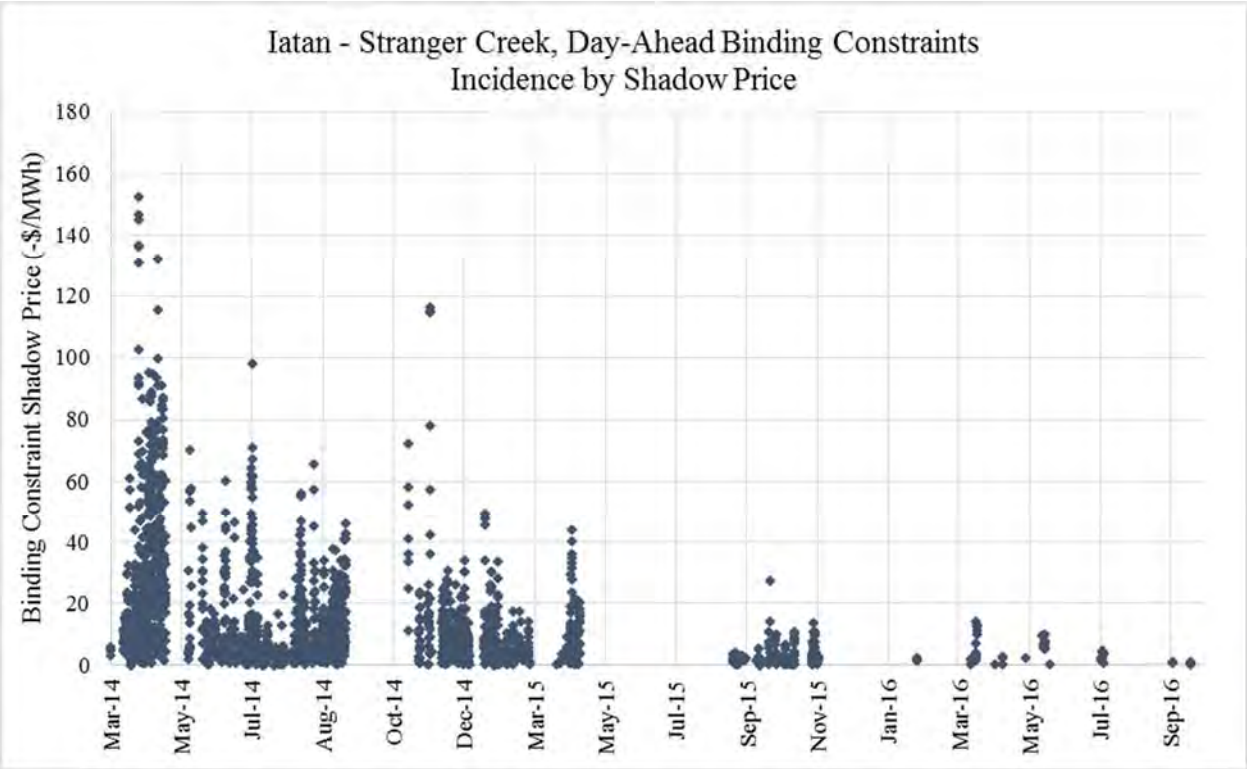
Figure 1: Iatan - Stranger Creek, shadow price of binding constraint hours in day-ahead



13. Figure 2 breaks down the same data by month, looking more specifically at the number of hours during which the Iatan – Stranger Creek constraint bound and whether certain shadow price levels were reached. Again, we see the clear trend in the diminishing frequency and magnitude of binding constraints. We are also able to observe more clearly how few hours meet even the most conservative of the trigger prices considered by the SPP MMU, $5/MWh. At that level, in the most recent 12-month period, there have been 39 such hours when the constraint bound. At either of the higher levels discussed, which are likely more accurate indicators of when there is incentive to exercise market power and unavailable low cost relief, there have been *zero hours* during that period when the constraint bound and the shadow price exceeded $15/MWh or $25/MWh.

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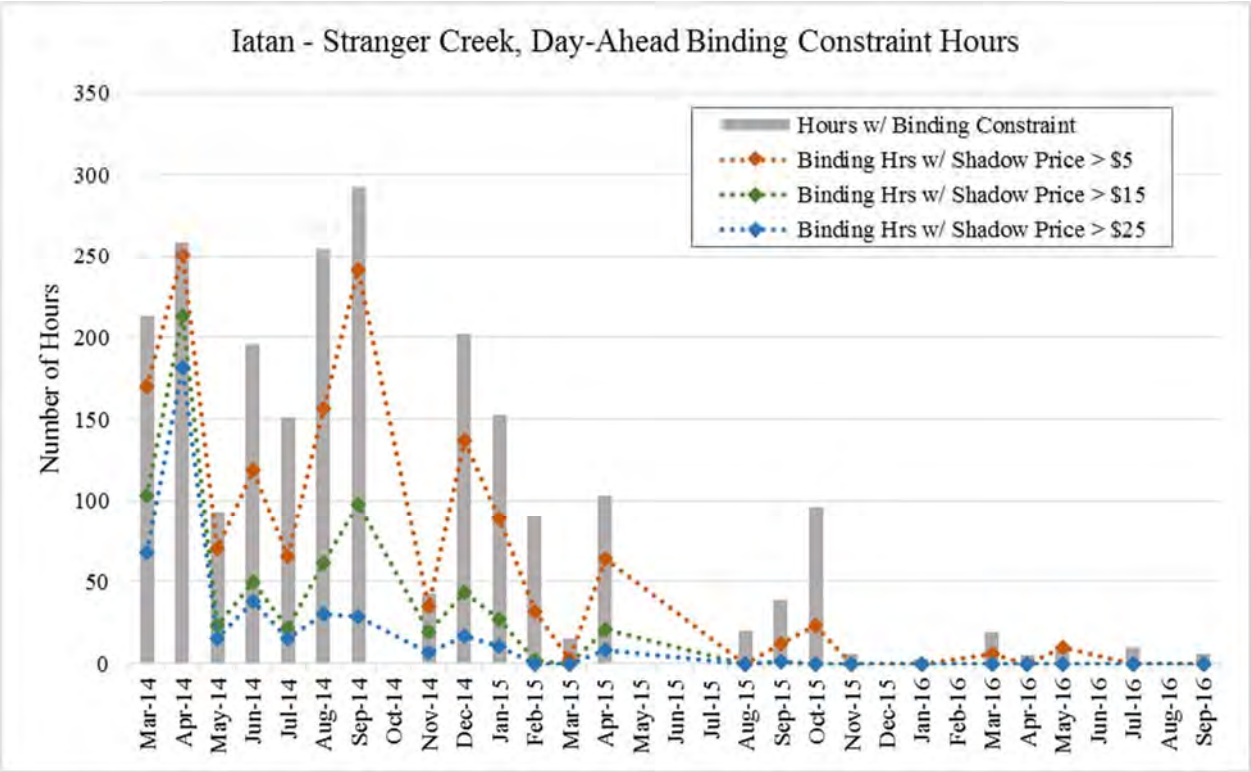
Figure 2: Iatan - Stranger Creek, frequency of binding constraint hours in day-ahead



14. We performed the same analysis – using the same data source – to assess the frequency and severity of binding constraints in the real-time market. While real-time data is available prior to March 2014, when the Energy Imbalance Service ("EIS") market was in effect, we do not include data from this period prior to the implementation of the Integrated Marketplace. The rules and market dynamics of the Integrated Marketplace are sufficiently different from the EIS market that comparing across the two periods would be an "apples-to-oranges" comparison. Furthermore, market power concerns in a merger proceeding are forward looking, so referencing data from a market paradigm that is no longer in effect would have little value.

15. The results of the real-time binding constraint analysis are shown in Figure 3 and Figure 4. This analysis shows the same trends and results as those from the day-ahead market data. Binding constraints were more common in 2014 and early 2015, but have fallen significantly since then to much lower levels, and have persisted at those low levels. Similar to the reduced constraints in day-ahead data, the real-time data for 2016 through September shows 70 hours (1.0 percent of hours) in which constraints have bound across the Iatan – Stranger Creek line, and 44 hours (0.6 percent of hours) in which the shadow price across that constraint exceeded the $5/MWh level, the lowest threshold considered.

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Furthermore, there were only 21 hours in which the shadow price across that constraint exceeded $25/MWh in any one 5-minute period.

Figure 3: Iatan - Stranger Creek, shadow price of binding constraint hours in real-time

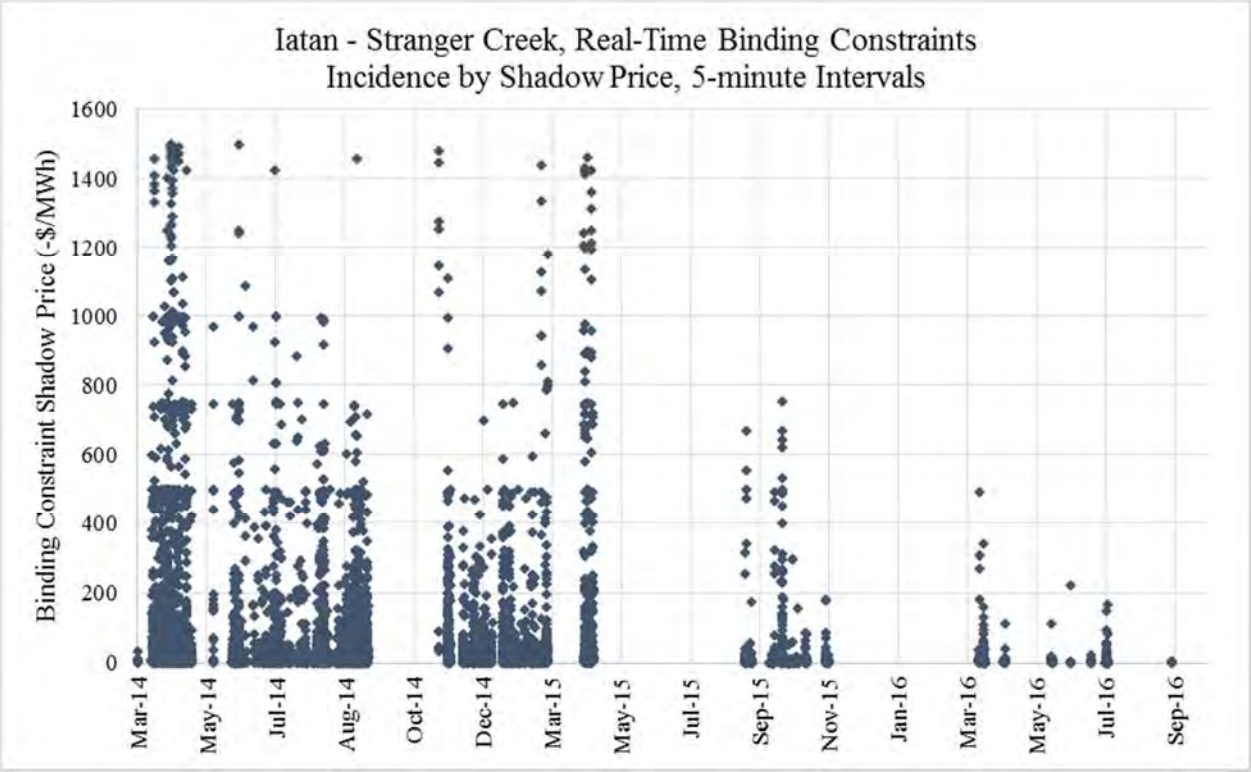

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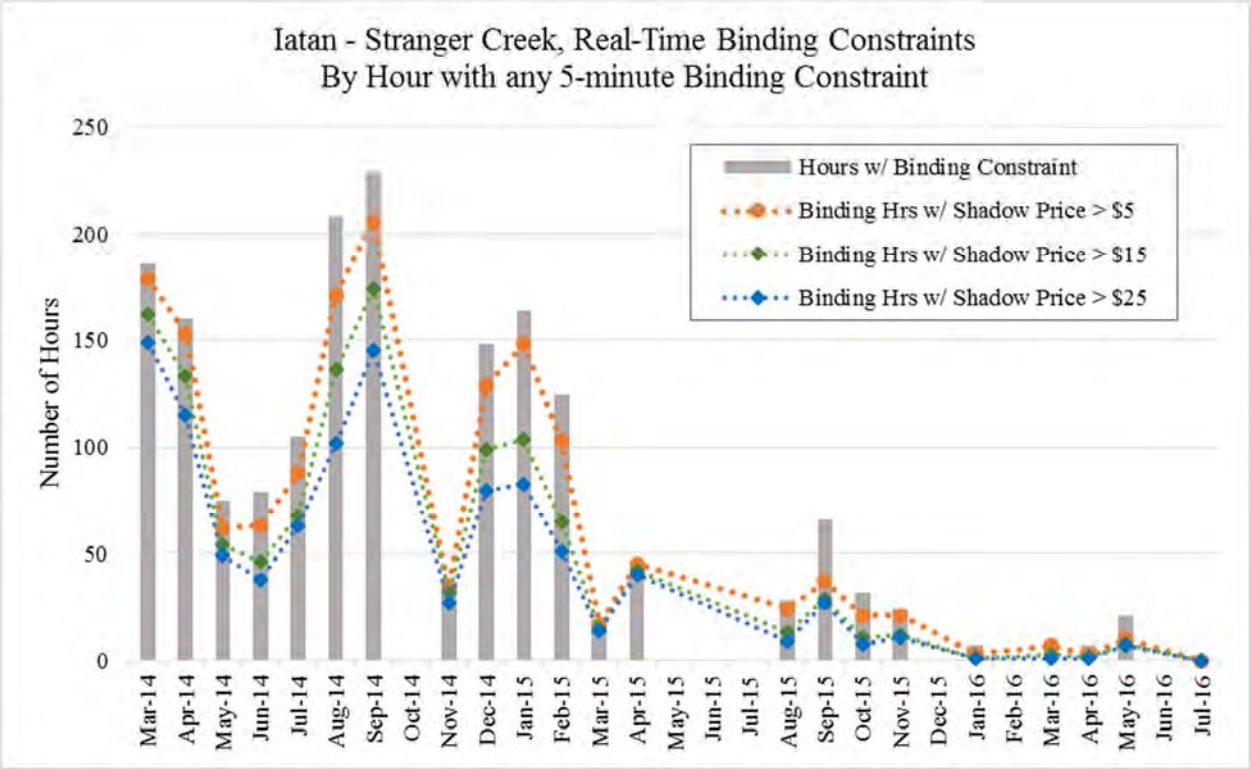
Figure 4: Iatan - Stranger Creek, frequency of binding constraint hours in real-time, by hour with any 5-minute binding interval



16. Based on our analyses of binding constraint data for the Kansas City Area and in the period since the start of the Integrated Marketplace, we conclude that there is no evidence to suggest that the Kansas City Area is a submarket within SPP. In line with the findings of the SPP MMU, binding constraints were formerly more frequent on the Iatan – Stranger Creek line. Even then, they did not rise to the level that the SPP MMU would consider them frequently constrained based on conservative criteria consistent with the SPP OATT. Moreover, the frequency and magnitude of such constraints have fallen in recent years. Binding constraints around the Kansas City Area are uncommon and, in cases where constraints do bind, relatively mild. As we will discuss later, these changes result from transmission system upgrades that provide long term relief by strengthening or expanding congested elements.

QUESTION 2: Is there additional information that Applicants have regarding whether or not the Kansas City Area is a submarket within SPP, including, but not limited to, whether there are frequently binding transmission constraints in that area? If so, please provide that information.

17. Yes. We present two additional sets of information showing that the Kansas City Area is not a submarket within SPP. This information complements the analysis of day-ahead

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and real-time binding constraints and supports the same conclusions. First, we address whether LMPs in SPP and the Kansas City Area demonstrate the kind of price separation that would be expected in the case of a submarket. Second, we describe completed and planned transmission upgrades made around the Kansas City Area that inform the observed analytical results. Note that, for the purposes of the analyses using LMP data, we refer to the "KCP&L area" to more precisely capture the geographic footprint to which the LMPs are relevant.[18]

LMP Separation and Correlations between KCP&L Area and Neighboring Areas

18. Another approach to analyzing whether an area within an RTO is appropriately considered a submarket is to look at price separation. If there is persistent congestion indicative of a load pocket, one would expect to see prices deviate in the congested area and be higher than the rest of the market. To check this, we compared the average electricity prices in the KCP&L area, three representative neighboring pricing areas, and the two SPP hubs. Table 1 shows the results of this comparison across both the day-ahead and real-time markets, summer and winter seasons, and peak and off-peak time periods. Table 2 shows the percentage differences between the KCP&L area and the other pricing points. Note that the KCP&L area and the representative surrounding areas that we selected (from north to south: Omaha Public Power District ("OPPD"), Westar, Empire District Electric ("Empire")) fall geographically between the SPP North and SPP South trading hubs.

19. We do observe some price variation across the different areas within SPP. However, the patterns as they relate to the KCP&L area do not indicate the kind of price separation associated with a load pocket. First, LMPs are also generally higher as you move south within SPP. This likely reflects the prevalence of low-cost wind generation in western and northern SPP. Prices in the KCP&L area observe the north-south trend within SPP. Second, we do not see large spreads between the KCP&L area and surrounding areas that would indicate a possible submarket in the Kansas City Area. While prices are higher in the KCP&L area than north in the OPPD area, they are also lower than prices south in the Empire area. Most importantly, prices are nearly identical between the Westar area and the KCP&L area, which is significant because most transfers between the KCP&L area and the rest of SPP flow between those two areas and that is where we would expect to see the most price separation if the Kansas City Area were indeed a load pocket. Overall

[18] For LMPs to represent the "Kansas City Area," we used LMP data for the KCP&L aggregate pricing node. Thus, for the purposes of the LMP-related analyses, we refer to it as the "KCP&L area." This shows up in the LMP data available on the SPP Integrated Marketplace Portal under the Settlement Location "KCPL_KCPL" and Pnode "KCPL_LA." For neighboring pricing areas, we used analogous LMP data.

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LMP trends appear more driven by geographical location and associated generation resources than specific transmission constraints between areas.

Table 1: Average Electricity Price by Time Period, Organized from North to South, Mar-2014 to Sep-2016 ($/MWh)

Area	Day-Ahead				Real-Time			
	Summer		Winter		Summer		Winter	
	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
SPP North Hub	29.35	19.12	24.57	17.39	27.64	16.99	24.04	14.80
OPPD Area	29.56	19.36	24.74	17.56	27.75	17.25	24.09	14.93
Westar Area	31.97	21.66	27.48	20.04	30.62	21.03	27.08	19.50
KCPL Area	**32.10**	**21.57**	**28.10**	**20.44**	**30.90**	**21.15**	**27.82**	**20.05**
Empire Area	34.08	24.06	29.96	22.87	32.97	23.59	29.99	23.09
SPP South Hub	34.93	25.51	30.29	23.82	34.01	25.69	30.01	23.46

Table 2: Percent Difference in Average Electricity Price by Time Period, Organized from North to South, Mar-2014 to Sep-2016

Area	Day-Ahead				Real-Time			
	Summer		Winter		Summer		Winter	
	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak
SPP North Hub	-9%	-11%	-13%	-15%	-11%	-20%	-14%	-26%
OPPD Area	-8%	-10%	-12%	-14%	-10%	-18%	-13%	-26%
Westar Area	0%	0%	-2%	-2%	-1%	-1%	-3%	-3%
KCPL Area	---	---	---	---	---	---	---	---
Empire Area	6%	12%	7%	12%	7%	12%	8%	15%
SPP South Hub	9%	18%	8%	17%	10%	21%	8%	17%

20. To complement the analysis of price separation, we also looked at price correlations. If an area is indeed a load pocket, we would expect price deviations to be joined by a lack of correlation between prices inside and outside the load pocket; as congestion binds at the edge of an area, prices would diverge (*i.e.*, separate) without corresponding (and correlated) changes outside the area. These price deviations would result in low correlations between the LMPs inside a load pocket and the LMPs in the rest of the market, whereas highly correlated LMPs would be expected for different areas within a single market. Accordingly, we analyzed the correlations between LMPs in the KCP&L area and its neighboring areas. We performed this computation for both the day-ahead and real-time markets with data starting from the beginning of the Integrated Marketplace (March 1, 2014) and running through the end of September 2016.

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21. To present the results of our analysis, we created correlation coefficient matrixes. In each matrix, each cell shows the correlation coefficient between the variables in the row and column of the cell. Again, if the other pricing areas within SPP show high correlation coefficients with each other but not with the KCP&L area prices, that would indicate that the Kansas City Area is a separate submarket. That is unambiguously not the case here. However we look at the LMP data, the correlation among the pricing points is very high. Focusing on the correlation coefficients for the six pricing points below – including KCP&L area, its neighbors, and the two major SPP hubs – it is clear that they are all part of the same market. In the day-ahead market, where the majority of power is settled, the KCP&L area has a correlation coefficient of 0.96 with Westar, 0.88 with OPPD, and 0.94 with Empire, the areas surrounding KCP&L to the West, North, and South, respectively. KCP&L is also highly correlated with both SPP trading hubs. A correlation coefficient of 1 would indicate a perfect linear relationship between the two price series. Table 3 shows these results across all hours.

Table 3: Day-Ahead Correlation Coefficient Matrix, Mar-2014 to Sept-2016, All Hours

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1**					
Westar Area	**0.96**	1				
OPPD Area	**0.88**	0.91	1			
Empire Area	**0.94**	0.94	0.89	1		
SPP North Hub	**0.88**	0.9	1.00	0.88	1	
SPP South Hub	**0.93**	0.93	0.87	0.94	0.87	1

n = 22,677

22. In the real-time balancing market, the correlation coefficients are still quite high, although slightly lower than the day-ahead market. This was expected, as the real-time market is generally more volatile than the day-ahead market and clears only a fraction of the energy volumes as the day-ahead market. Nonetheless, as shown in Table 4, the real-time correlation coefficients tell the same story; correlation is sufficiently high to indicate all six pricing points should be considered part of the same market.[19]

[19] The correlation coefficients shown in Tables 3 and 4 are statistically significant at extremely high levels across the results, with all of the price correlations significant at the 0.001 level (in other words, greater than 99.9% confidence level that the calculated correlations are not the result of chance).

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Table 4: Real-Time Correlation Coefficient Matrix, Mar-2014 to Sept-2016, All Hours

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1**					
Westar Area	**0.95**	1				
OPPD Area	**0.78**	0.83	1			
Empire Area	**0.88**	0.86	0.76	1		
SPP North Hub	**0.78**	0.83	1.00	0.76	1	
SPP South Hub	**0.91**	0.93	0.81	0.88	0.81	1

n = 22,672[20]

23. To further analyze SPP electricity price correlations, we broke down the data from Table 3 and Table 4 into various time periods to ensure there were not more granular time periods during which there was distinct separation between the six pricing points analyzed. We reviewed day-ahead and real-time correlations during summer (May-October), winter (November-April), peak (5x16 strip), and off-peak (5x8 plus 2x24 strip) hours. All of these correlation tables can be found in Appendix A. During none of these periods did we observe correlation coefficients that are meaningfully lower than those shown in Table 3 and Table 4. In conclusion, our assessment of pricing correlations further suggests that the Kansas City Area should not be considered a separate submarket within SPP.

Transmission Developments to Reduce Congestion around the Kansas City Area

24. In addition to the quantitative analysis of day-ahead and real-time LMPs, and of binding constraints on the transmission system around Kansas City, we observe that KCP&L and its affiliate Transource Missouri, LLC have been making upgrades to the transmission system that materially impact market outcomes and inform the underlying causes behind our analytical results. Of course, physical system upgrades are reflected in changes to economic and operating indicators like congestion and binding constraints. These changes affect trends in analyses like those we have described here, and provide insight into whether the observed reduction in frequency of binding constraints should persist in the future, or perhaps only reflect cyclical indicators like fuel price or weather patterns. Specifically, transmission system upgrades to constrained pathways should – as they are intended to – provide systematic, long-term relief to congestion. This stands opposed to other causes that could drive reduced binding constraints and congestion, like mild

[20] The n value, the number of observations (hours) used in the analysis, vary between the day-ahead and real-time analysis due to a small number of hours where data was not available in the real-time market.

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weather or relative generator economics, which could be cyclical and suggest only temporary congestion relief. Here, relevant upgrades include:

- Eastowne Transformer upgrade (completed May 2014)
- Iatan–Nashua 345 kV transmission line (energized April 2015)
- Mullin Creek–Sibley 345kV transmission line and station (planned to be energized, December 2016)

Particularly across the time period for which we have examined, the effects of the Iatan-Nashua transmission line upgrades are observable and have clearly resulted in persistent reductions in binding constraints in the Kansas City Area. As shown in Figures 1-4, following the April 2015 addition of the Iatan–Nashua 345 kV transmission line, congestion has practically disappeared in the Kansas City Area, with constraints binding only 1.7 percent of hours in day-ahead and 1.6 percent of hours in real-time, and with constraints binding *and* price separation of greater than $5/MWh occurring in only 0.4 percent and 1.0 percent of those hours, respectively.[21]

25. We are also aware that additional upgrades will be put into service around Kansas City in 2019. These upgrades are expected to continue to reduce congestion around the Kansas City Area. However, we will not address such upgrades here, as they are several years into the future and the analysis of the impact of upgrades that have already been made is sufficient to show that the Kansas City Area is not, in fact, a load pocket that should be categorized as a submarket within SPP.

QUESTION 3: If Applicants have in response to question 3 information indicating that the Kansas City Area is a submarket within SPP, please provide a delivered price test sensitivity study of the Kansas City Area submarket.

26. As we have described above, there is significant evidence supporting our conclusion that the Kansas City Area is *not* a submarket within SPP. Accordingly, we have not included a delivered price test sensitivity study of the Kansas City Area submarket. We continue to believe that the appropriate destination market for the DPT is the full SPP footprint and it is unnecessary to study any submarkets for the purposes of the instant application.

27. This concludes our testimony.

[21] These calculations consider data from May 1, 2015 – Sept 30, 2016.

Appendix A: Correlation Coefficient Matrixes for Alternative Time Periods

Table 5: Day-Ahead Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Summer

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.95**	1.00				
OPPD Area	**0.88**	0.93	1.00			
Empire Area	**0.93**	0.93	0.90	1.00		
SPP North Hub	**0.88**	0.92	1.00	0.89	1.00	
SPP South Hub	**0.92**	0.93	0.87	0.94	0.86	1.00

n = 12,504

Table 6: Day-Ahead Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Winter

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.98**	1.00				
OPPD Area	**0.87**	0.89	1.00			
Empire Area	**0.95**	0.94	0.87	1.00		
SPP North Hub	**0.87**	0.89	1.00	0.87	1.00	
SPP South Hub	**0.93**	0.94	0.87	0.94	0.87	1.00

n = 10,173

Table 7: Day-Ahead Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Peak

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.94**	1.00				
OPPD Area	**0.84**	0.89	1.00			
Empire Area	**0.93**	0.93	0.88	1.00		
SPP North Hub	**0.84**	0.89	1.00	0.88	1.00	
SPP South Hub	**0.92**	0.94	0.87	0.94	0.86	1.00

n = 10,576

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Table 8: Day-Ahead Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Off-Peak

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.98**	1.00				
OPPD Area	**0.88**	0.89	1.00			
Empire Area	**0.92**	0.92	0.84	1.00		
SPP North Hub	**0.87**	0.89	1.00	0.83	1.00	
SPP South Hub	**0.90**	0.91	0.84	0.92	0.83	1.00

n = 12,101

Table 9: Real-Time Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Summer

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.92**	1.00				
OPPD Area	**0.77**	0.84	1.00			
Empire Area	**0.86**	0.84	0.75	1.00		
SPP North Hub	**0.78**	0.84	1.00	0.75	1.00	
SPP South Hub	**0.88**	0.91	0.79	0.86	0.79	1.00

n = 12,504

Table 10: Real-Time Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Winter

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.97**	1.00				
OPPD Area	**0.78**	0.82	1.00			
Empire Area	**0.90**	0.88	0.76	1.00		
SPP North Hub	**0.79**	0.83	1.00	0.77	1.00	
SPP South Hub	**0.94**	0.95	0.82	0.89	0.83	1.00

n = 10,168

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Table 11: Real-Time Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Peak

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.96**	1.00				
OPPD Area	**0.85**	0.89	1.00			
Empire Area	**0.91**	0.89	0.83	1.00		
SPP North Hub	**0.86**	0.90	1.00	0.83	1.00	
SPP South Hub	**0.94**	0.95	0.87	0.90	0.88	1.00

n = 10,575

Table 12: Real-Time Correlation Coefficient Matrix, Mar-2014 to Sep-2016, Off-Peak

	KCPL Area	Westar Area	OPPD Area	Empire Area	SPP North Hub	SPP South Hub
KCPL Area	**1.00**					
Westar Area	**0.93**	1.00				
OPPD Area	**0.60**	0.68	1.00			
Empire Area	**0.82**	0.80	0.59	1.00		
SPP North Hub	**0.61**	0.68	1.00	0.60	1.00	
SPP South Hub	**0.85**	0.88	0.67	0.82	0.67	1.00

n = 12,097

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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Great Plains Energy Incorporated	)	
	)	**Docket No. EC16-146-000**
Westar Energy, Inc.	)	

APPLICATION
UNDER SECTION 203 OF THE FEDERAL POWER ACT

AFFIDAVIT IN RESPONSE TO THE COMMISSION'S DEFCEINCY LETTER OF OCTOBER 7, 2016

I, David Hunger, Ph.D., being duly sworn, depose and state that the foregoing Affidavit on behalf of Great Plains Energy, Inc. and Westar Energy, Inc. is true, correct, accurate, and complete to the best of my knowledge, information, and belief.

David Hunger, Ph.D.

SUBSCRIBED AND SWORN to
before me this 2 day of November, 2016

Christopher J. Jackson
Notary Public
Commonwealth of Virginia
My Commission Expires June 30, 2017
Registration: 348154

Redactions Removed Pursuant to Commission Order

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Great Plains Energy Incorporated	)	
	)	**Docket No. EC16-146-000**
Westar Energy, Inc.	)	

APPLICATION
UNDER SECTION 203 OF THE FEDERAL POWER ACT

AFFIDAVIT IN RESPONSE TO THE COMMISSION'S DEFCEINCY LETTER OF OCTOBER 7, 2016

I, Edo Macan, being duly sworn, depose and state that the foregoing Affidavit on behalf of Great Plains Energy, Inc. and Westar Energy, Inc. is true, correct, accurate, and complete to the best of my knowledge, information, and belief.

Edo Macan

Edo Macan

SUBSCRIBED AND SWORN to
before me this 2nd day of November, 2016

Suzanne M. Walsh

SUZANNE M. WALSH
MY COMM. EXPIRES FEB. 9, 2018
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS

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Attachment 2:

Stipulation and Agreement
of Great Plains Energy Incorporated,
Kansas City Power & Light Company,
KCP&L Greater Missouri Operations
Company and the
Missouri Public Service Commission
Staff

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BEFORE THE PUBLIC SERVICE
COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Joint Application of Great Plains Energy Incorporated, Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company for a variance from 4 CSR 240-20.015.	))))	Case No. EE-2017-_____

STIPULATION AND AGREEMENT

COME NOW Kansas City Power & Light Company, KCP&L Greater Missouri Operations Company and Great Plains Energy Incorporated ("KCP&L", "GMO" and "GPE", respectively, and collectively referred to herein as "Joint Applicants") and the Staff of the Missouri Public Service Commission ("Staff") (Joint Applicants and Staff are collectively referred to herein as the "Signatories" or, individually, as a "Signatory"), by and through their undersigned counsel and, pursuant to Missouri Public Service Commission ("Commission") Rule 4 CSR 240-2.115, request that the Commission approve this Stipulation and Agreement ("Stipulation") as a comprehensive settlement of all issues relevant to the Joint Application filed herein. In support thereof, the Signatories hereto agree as follows:

BACKGROUND

On October, 12 2016, Joint Applicants filed a Joint Application with the Commission under 4 CSR 240-20.015(10), requesting an order from the Commission granting a variance from 4 CSR 240-20.015 in connection with an Agreement and Plan of Merger dated May 29, 2016 (the "Agreement"), pursuant to which GPE and GP Star, Inc., will acquire all of the stock of Westar Energy, Inc. ("Westar") (the "Transaction").

The Signatories have met to discuss resolution of this matter on a number of occasions. As a result, the Signatories have now reached a Stipulation and Agreement

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("Stipulation") set forth below which they recommend to the Commission, subject to the conditions and representations contained in this Stipulation.

The Signatories hereto recommend that the Commission approve the variance requested by GPE, KCP&L and GMO subject to the following conditions:

A. FINANCING CONDITIONS

The following Financing Conditions shall remain in effect until such time as the Commission may order otherwise in a general rate case or other proceeding brought for that purpose:

1. GPE, KCP&L and GMO shall maintain separate capital structures to finance the activities and operations of each entity unless otherwise authorized by the Commission. Unless the Commission authorizes otherwise, GPE, KCP&L and GMO shall maintain separate Corporate Credit Ratings, and separate debt[1] so that neither GPE, KCP&L nor GMO will be responsible for the debts of each other or their other affiliated companies. GPE, KCP&L and GMO shall also maintain separate revolving credit facilities and commercial paper, if any, unless the Commission authorizes otherwise. GPE, KCP&L and GMO shall also maintain separate preferred stock, if any. Neither KCP&L nor GMO shall guarantee the debt of the other, or of GPE, or of any of GPE's other affiliates, or otherwise enter into make-well or similar agreements, unless otherwise authorized by the Commission. Neither KCP&L nor GMO shall pledge their respective stock or assets as collateral for obligations of any other entity, unless otherwise authorized by the Commission.

[1] GMO's Promissory Notes to GPE dated May 19, 2011 and June 15, 2012 that mature June 1, 2021 and June 15, 2022, respectively, are considered separate GMO debt.

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2. KCP&L and GMO have indicated to the Staff their intent to utilize their respective utility-specific capital structure in general rate case filings subsequent to the close of the Transaction. In such filings, KCP&L or GMO (as applicable) shall provide (a) evidence demonstrating that the Transaction has not resulted in a downgrade to that utility's Corporate Credit Rating that exists at the time the general rate case is filed compared to the Corporate Credit Rating of that utility that existed as of May 27, 2016, or (b) if such a Corporate Credit Rating downgrade resulting from the Transaction exists at the time the general rate case is filed, evidence demonstrating that Missouri customers are held harmless from any cost increases resulting from such a downgrade, and (c) evidence supporting the reasonableness of using the utility-specific capital structure of KCP&L or GMO in determining a fair and reasonable rate of return for the applicable utility. GPE, KCP&L and GMO acknowledge that this provision shall not limit the position or positions any party to a rate case may take, or that the Commission may order, regarding the appropriate capital structure to be used for setting rates for KCP&L or GMO.

3. In the event KCP&L or GMO should have its respective Standard & Poor's ("S&P") Corporate Credit Rating downgraded to below BBB- as a result of the Transaction, KCP&L and/or GMO (the "Impacted Utility") commits to file:

a. Notice with the Commission within five (5) business days of such downgrade;

b. A pleading with the Commission within 60 days which shall include the following:

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i. Actions the Impacted Utility may take to raise its S&P Corporate Credit Rating to BBB-, including the costs and benefits of such actions and any plan the Impacted Utility may have to undertake such actions;

ii. The change, if any, on the capital costs of the Impacted Utility due to its S&P Corporate Credit Rating being below BBB-;

iii. Documentation detailing how the Impacted Utility will not request from its Missouri customers, directly or indirectly, any higher capital costs incurred due to a downgrade of its S&P Corporate Credit Rating below BBB;

c. File with the Commission, every 45 days thereafter until the Impacted Utility has regained its S&P Corporate Credit Rating of BBB- or above, an updated status report with respect to the items required in ¶A.3.b. above.

4. If the Commission determines that the decline of the Impacted Utility's S&P Corporate Credit Rating to a level below BBB- has caused its service to decline, then the Impacted Utility shall be required to file a plan with the Commission detailing the steps that will be taken to restore service levels that existed prior to the ratings decline.

5. In the event KCP&L or GMO's affiliation with GPE or any of its affiliates is the reason for KCP&L or GMO's respective S&P Corporate Credit Rating to be downgraded to below BBB-, KCP&L and/or GMO shall pursue additional legal and structural separation, if necessary, from the affiliate(s) causing the downgrade, and

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the Impacted Utility shall not pay a common dividend without Commission approval or until the Impacted Utility's S&P Corporate Credit Rating has been restored to BBB- or above.

6. If KCP&L or GMO's respective S&P Corporate Credit Rating declines below BBB- as a result of the Transaction, the Impacted Utility shall file with the Commission a comprehensive risk management plan that assures the Impacted Utility's access to and cost of capital will not be further impaired. The plan shall include a non-consolidation opinion if required by S&P.

7. Neither KCP&L nor GMO shall seek an increase to the cost of capital as a result of the Transaction or KCP&L and GMO's ongoing affiliation with GPE and its affiliates other than KCP&L and GMO after the Transaction. Any net increase in the cost of capital that KCP&L and GMO seek shall be supported by documentation that: (a) the increases are a result of factors not associated with the Transaction or the post-Transaction operations of GPE or its non-KCP&L and non-GMO affiliates; (b) the increases are not a result of changes in business, market, economic or other conditions caused by the Transaction or the post-Transaction operations of GPE or its non-KCP&L and non-GMO affiliates; and (c) the increases are not a result of changes in the risk profile of KCP&L or GMO caused by the Transaction or the post-Transaction operations of GPE or its non-KCP&L and non-GMO affiliates. The provisions of this section are intended to recognize the Commission's authority to consider, in appropriate proceedings, whether this Transaction or the post-Transaction operations of GPE or its non-KCP&L and non-GMO affiliates have resulted in capital cost increases for KCP&L

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or GMO. Nothing in this Stipulation shall restrict the Commission from disallowing such capital cost increases from recovery in KCP&L or GMO's rates.

8. The goodwill arising from the Transaction will be maintained on the books of GPE and is therefore not expected to negatively affect KCP&L or GMO's cost of capital; however, if such goodwill becomes impaired other than as a result of a Commission order and such impairment negatively affects KCP&L or GMO's cost of capital, all net costs associated with the decline in the Impacted Utility's credit quality specifically attributed to the goodwill impairment, considering all other capital cost effects of the Transaction and the impairment, shall be excluded from the determination of the Impacted Utility's rates.

9. For the first five years after closing of the Transaction, GPE shall provide Staff and OPC its annual goodwill impairment analysis in a format that includes spreadsheets in their original format with formulas and links to other spreadsheets intact and any printed materials within 30 days after the filing of GPE's Form 10-Q for the period in which the analysis is performed, as well as all supporting documentation. Thereafter, this analysis will be made available to Staff and OPC upon request.

10. Staff will retain a copy of GPE's financial/valuation model that was provided by GPE on a highly confidential basis in response to a Staff data request in Case No. EM-2016-0324. Staff will continue to protect the confidentiality of the information contained within that model.

B. <u>RATEMAKING/ACCOUNTING CONDITIONS</u>

1. Goodwill associated with the premium over book value of the assets paid for the shares of Westar stock (referred to for purposes of this Stipulation as "Acquisition