

Lake Road Boiler 2 Dismantlement

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

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	<b>Boiler Foundations</b>	<b>\$71,654.40</b>
49	Equipment Foundation Demolition to Grade	\$71,654.40
50	<b>Project Close-Out</b>	<b>\$16,380.00</b>
51	Project Close-Out Activities	\$16,380.00

Lake Road Boiler 2 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
1	<b>Lake Road Boiler 2 Dismantlement</b>	<b>220 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>125 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>85 days</b>				
8	KCP&L Engineer	85 days				
9	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>85 days</b>				
10	Demolition Contractor Safety Manager	85 days				
11	Demolition Contractor Superintendent	85 days				
12	<b>Demolition Contractor Equipment Rental Costs</b>	<b>85 days</b>				
13	Equipment Rental	85 days				
14	<b>Demolition Contractor Consumables</b>	<b>85 days</b>				
15	Consumables	85 days				
16	<b>Scrap Crew(s)</b>	<b>85 days</b>				
17	Crew to Handle Scrap Material(s)	85 days				
18	<b>Dismantlement Directs</b>	<b>85 days</b>				
19	<b>Phase 1 Demolition</b>	<b>85 days</b>				
20	<b>Electrical Demolition</b>	<b>40 days</b>				
21	Electrical Demolition Equipment	40 days				
22	<b>Critical Piping</b>	<b>2 days</b>				
23	Main Steam Piping	2 days				
24	<b>Fuel Systems (plant side)</b>	<b>4 days</b>				
25	Gas Piping and Valves	1 day				
26	Fuel Oil Piping and Valves	1 day				
27	Igniters	2 days				
28	<b>Chemical Feed Systems</b>	<b>3 days</b>				
29	Tanks	1 day				
30	Pumps	1 day				
31	Piping	1 day				
32	<b>Sampling Systems</b>	<b>7 days</b>				

Lake Road Boiler 2 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
33	Field Mounted Heat Exchangers	2 days				
34	Piping	3 days				
35	Sample Panel	2 days				
36	<b>Miscellaneous Equipment</b>	<b>5 days</b>				
37	Miscellaneous Equipment (including Fire Protec	5 days				
38	<b>Boiler Equipment</b>	<b>20 days</b>				
39	Fans	5 days				
40	Drums	5 days				
41	Ductwork	10 days				
42	<b>Boiler Removal</b>	<b>20 days</b>				
43	Furnace	20 days				
44	<b>Boiler Steel Framing</b>	<b>14 days</b>				
45	Framing	5 days				
46	Bracing and Girts	5 days				
47	Columns	4 days				
48	<b>Boiler Foundations</b>	<b>10 days</b>				
49	Equipment Foundation Demolition to Grade	10 days				
50	<b>Project Close-Out</b>	<b>10 days</b>				
51	Project Close-Out Activities	10 days				

10/10/00

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**BOILER 3**



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

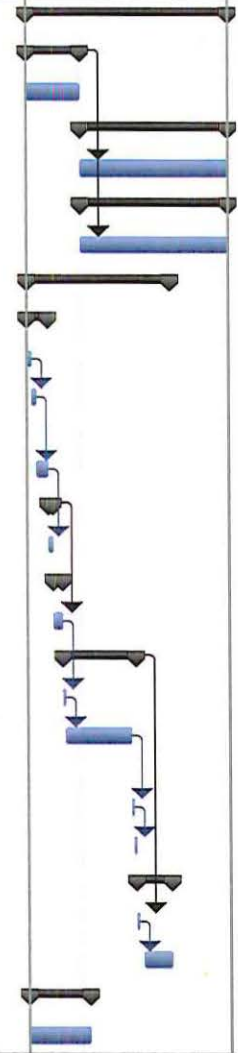
Lake Road Boiler 3 Retirement Opinion of Probable Cost: \$161,768

Lake Road Boiler 3 Retirement

ID	Task Name	Cost
1	<b>Lake Road Boiler 3 Retirement</b>	<b>\$123,252.08</b>
2	<b>Pre-Engineering</b>	<b>\$25,969.20</b>
3	Engineering analysis and establish isolation points.	\$0.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$27,882.00</b>
5	KCP&L Retirement Manager	\$27,882.00
6	<b>Equipment Rentals</b>	<b>\$9,446.40</b>
7	Vacuum truck	\$9,446.40
8	<b>Retirement</b>	<b>\$59,954.48</b>
9	<b>Motors</b>	<b>\$6,216.00</b>
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	<b>Fuel Gas Systems</b>	<b>\$1,685.44</b>
14	Vent the Fuel Gas Systems	\$1,685.44
15	<b>Boiler Chemical Feed</b>	<b>\$1,685.44</b>
16	Drain all chemical feed tanks and piping	\$1,685.44
17	<b>Boiler</b>	<b>\$25,004.64</b>
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	<b>Ductwork</b>	<b>\$12,080.96</b>
23	Open ductwork doors.	\$880.96
24	Perform extensive cleaning of the ductwork.	\$11,200.00
25	<b>Post Retirement Activities</b>	<b>\$13,282.00</b>
26	Post Retirement Activities	\$13,282.00

Lake Road Boiler 3 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
1	<b>Lake Road Boiler 3 Retirement</b>	<b>62 days</b>				
2	<b>Pre-Engineering</b>	<b>17 days</b>				
3	Engineering analysis and establish isolation points.	17 days				
4	<b>KCL&amp;L Overhead Costs</b>	<b>45 days</b>				
5	KCP&L Retirement Manager	45 days				
6	<b>Equipment Rentals</b>	<b>45 days</b>				
7	Vacuum truck	45 days				
8	<b>Retirement</b>	<b>45 days</b>				
9	<b>Motors</b>	<b>7 days</b>				
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	<b>Fuel Gas Systems</b>	<b>2 days</b>				
14	Vent the Fuel Gas Systems	2 days				
15	<b>Boiler Chemical Feed</b>	<b>2 days</b>				
16	Drain all chemical feed tanks and piping	2 days				
17	<b>Boiler</b>	<b>23 days</b>				
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	<b>Ductwork</b>	<b>11 days</b>				
23	Open ductwork doors.	1 day				
24	Perform extensive cleaning of the ductwork.	10 days				
25	<b>Post Retirement Activities</b>	<b>20 days</b>				
26	Post Retirement Activities	20 days				





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

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

Lake Road Boiler 3 Dismantlement

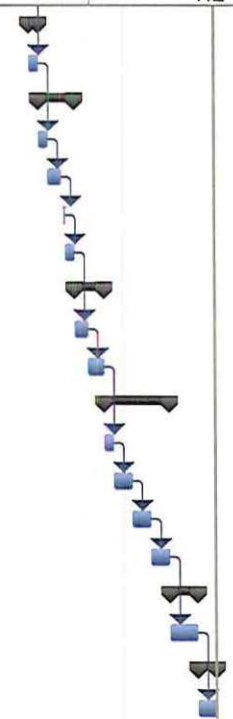
ID	Task Name	Cost
45	All Other Framing	\$71,654.40
46	Bracing and Girts	\$71,654.40
47	Columns	\$71,654.40
48	<b>Boiler Foundations</b>	<b>\$107,481.60</b>
49	Equipment Foundation Demolition to Grade	\$107,481.60
50	<b>Project Close-Out</b>	<b>\$16,380.00</b>
51	Project Close-Out Activities	\$16,380.00

Lake Road Boiler 3 Dismantlement

ID	Task Name	Duration	2012			2013
			H2	H1	H2	H1
1	<b>Lake Road Boiler 3 Dismantlement</b>	<b>163 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>55 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>98 days</b>				
8	KCP&L Engineer	98 days				
9	Owners Engineer Project Manager	98 days				
10	Owners Engineer - Engineer	98 days				
11	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>98 days</b>				
12	Demolition Contractor Safety Manager	98 days				
13	Demolition Contractor Superintendent	98 days				
14	<b>Demolition Contractor Equipment Rental Costs</b>	<b>98 days</b>				
15	Equipment Rental	98 days				
16	<b>Demolition Contractor Consumables</b>	<b>98 days</b>				
17	Consumables	98 days				
18	<b>Scrap Crew(s)</b>	<b>98 days</b>				
19	Crew to Handle Scrap Material(s)	98 days				
20	<b>Dismantlement Directs</b>	<b>98 days</b>				
21	<b>Phase 1 Demolition</b>	<b>98 days</b>				
22	<b>Electrical Demolition</b>	<b>60 days</b>				
23	Electrical Demolition Equipment	60 days				
24	<b>Boiler Feed System</b>	<b>2 days</b>				
25	Feedwater piping	2 days				
26	<b>Critical Piping</b>	<b>2 days</b>				
27	Main Steam Piping	2 days				
28	<b>Fuel Systems (Plant Side)</b>	<b>3 days</b>				
29	Gas Piping and Equipment	2 days				
30	Igniters	1 day				
31	<b>Air Preheat System</b>	<b>1 day</b>				
32	Steam Coil Air Heater Piping	1 day				

Lake Road Boiler 3 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
33	<b>Miscellaneous Equipment</b>	<b>5 days</b>				
34	Miscellaneous Equipment (including Fire Protec	5 days				
35	<b>Boiler Equipment</b>	<b>19 days</b>				
36	Fans	5 days				
37	Steam Drum	8 days				
38	Soot Blowers	1 day				
39	Ductwork	5 days				
40	<b>Boiler Removal</b>	<b>16 days</b>				
41	Furnace	8 days				
42	Back Pass	8 days				
43	<b>Boiler Steel Framing</b>	<b>35 days</b>				
44	Hanger Girders at Top	5 days				
45	All Other Framing	10 days				
46	Bracing and Girts	10 days				
47	Columns	10 days				
48	<b>Boiler Foundations</b>	<b>15 days</b>				
49	Equipment Foundation Demolition to Grade	15 days				
50	<b>Project Close-Out</b>	<b>10 days</b>				
51	Project Close-Out Activities	10 days				



**BOILER 4**

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

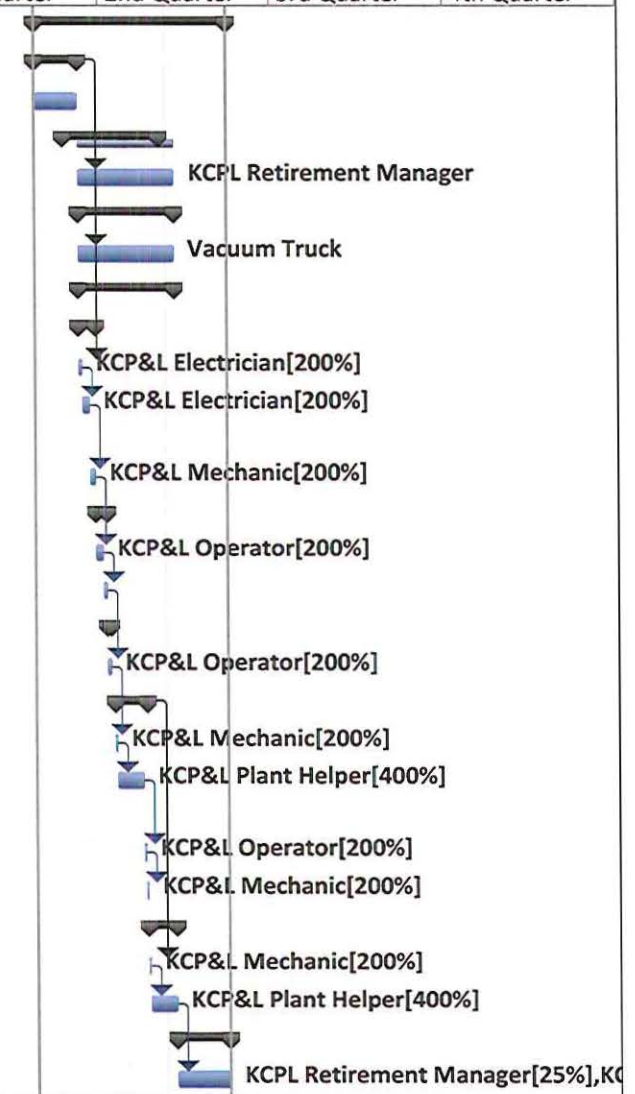
Lake Road Boiler 4 Retirement

ID	Task Name	Cost
1	<b>Lake Road Boiler 4 Retirement</b>	<b>\$105,415.92</b>
2	<b>Pre-Engineering</b>	<b>\$25,969.20</b>
3	Engineering analysis and establish isolation points.	\$0.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$22,925.20</b>
5	KCP&L Retirement Manager	\$22,925.20
6	<b>Equipment Rentals</b>	<b>\$7,767.04</b>
7	Vacuum truck	\$7,767.04
8	<b>Retirement</b>	<b>\$35,472.48</b>
9	<b>Motors</b>	<b>\$6,216.00</b>
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	<b>Fuel Systems</b>	<b>\$1,685.44</b>
14	Isolate and Vent the Fuel Gas Systems	\$1,685.44
15	Isolate and Vent the Fuel Oil Systems	\$0.00
16	<b>Boiler Chemical Feed</b>	<b>\$1,685.44</b>
17	Drain all chemical feed tanks and piping	\$1,685.44
18	<b>Boiler</b>	<b>\$13,804.64</b>
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	<b>Ductwork</b>	<b>\$12,080.96</b>
24	Open ductwork doors.	\$880.96
25	Perform extensive cleaning of the ductwork.	\$11,200.00
26	<b>Post Retirement Activities</b>	<b>\$13,282.00</b>
27	Post Retirement Activities	\$13,282.00



Lake Road Boiler 4 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
1	<b>Lake Road Boiler 4 Retirement</b>	<b>74 days</b>					
2	<b>Pre-Engineering</b>	<b>17 days</b>					
3	Engineering analysis and establish isolation points.	17 days					
4	<b>KCL&amp;L Overhead Costs</b>	<b>37 days</b>					
5	KCP&L Retirement Manager	37 days					
6	<b>Equipment Rentals</b>	<b>37 days</b>					
7	Vacuum truck	37 days					
8	<b>Retirement</b>	<b>37 days</b>					
9	<b>Motors</b>	<b>7 days</b>					
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	<b>Fuel Systems</b>	<b>4 days</b>					
14	Isolate and Vent the Fuel Gas Systems	2 days					
15	Isolate and Vent the Fuel Oil Systems	2 days					
16	<b>Boiler Chemical Feed</b>	<b>2 days</b>					
17	Drain all chemical feed tanks and piping	2 days					
18	<b>Boiler</b>	<b>13 days</b>					
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	<b>Ductwork</b>	<b>11 days</b>					
24	Open ductwork doors.	1 day					
25	Perform extensive cleaning of the ductwork.	10 days					
26	<b>Post Retirement Activities</b>	<b>20 days</b>					
27	Post Retirement Activities	20 days					



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

Lake Road Boiler 4 Dismantlement

ID	Task Name	Cost
1	<b>Lake Road Boiler 4 Dismantlement</b>	<b>\$2,658,542.36</b>
2	<b>Pre-Dismantlement Activities</b>	<b>\$186,483.32</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$298,939.20</b>
8	KCP&L Engineer	\$99,803.20
9	Owners Engineer Project Manager	\$29,792.00
10	Owners Engineer - Engineer	\$169,344.00
11	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$172,221.04</b>
12	Demolition Contractor Safety Manager	\$60,504.72
13	Demolition Contractor Superintendent	\$111,716.32
14	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$408,951.52</b>
15	Equipment Rental	\$408,951.52
16	<b>Demolition Contractor Consumables</b>	<b>\$408,002.32</b>
17	Consumables	\$408,002.32
18	<b>Scrap Crew(s)</b>	<b>\$404,847.36</b>
19	Crew to Handle Scrap Material(s)	\$404,847.36
20	<b>Dismantlement Directs</b>	<b>\$762,717.60</b>
21	<b>Phase 1 Demolition</b>	<b>\$762,717.60</b>
22	<b>Electrical Demolition</b>	<b>\$116,438.40</b>
23	Electrical Demolition Equipment	\$116,438.40
24	<b>Boiler Feed System</b>	<b>\$3,582.72</b>
25	Feedwater piping	\$3,582.72
26	<b>Critical Piping</b>	<b>\$3,582.72</b>
27	Main Steam Piping	\$3,582.72
28	<b>Fuel Systems (Plant Side)</b>	<b>\$5,374.08</b>
29	Gas Piping and Equipment	\$3,582.72
30	Fuel Oil Piping and Equipment	\$0.00
31	Igniters	\$1,791.36
32	<b>Air Preheat System</b>	<b>\$1,791.36</b>
33	Steam Coil Air Heater Piping	\$1,791.36
34	<b>Miscellaneous Equipment</b>	<b>\$8,956.80</b>
35	Miscellaneous Equipment (including Fire Protection)	\$8,956.80
36	<b>Boiler Equipment</b>	<b>\$78,418.08</b>
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	<b>Boiler Removal</b>	<b>\$143,308.80</b>
43	Furnace	\$71,654.40
44	Back Pass	\$71,654.40

Lake Road Boiler 4 Dismantlement

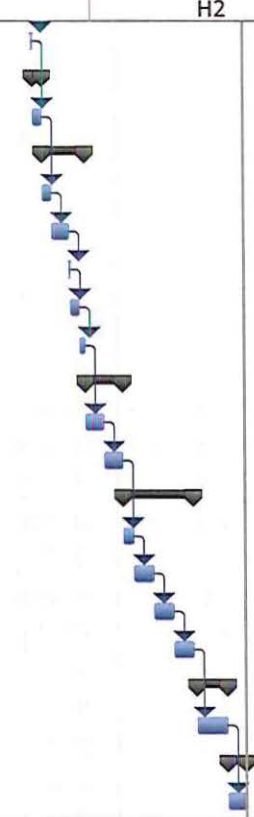
ID	Task Name	Cost
45	<b>Boiler Steel Framing</b>	<b>\$279,452.16</b>
46	Hanger Girders at Top	\$42,992.64
47	All Other Framing	\$78,819.84
48	Bracing and Girts	\$78,819.84
49	Columns	\$78,819.84
50	<b>Boiler Foundations</b>	<b>\$121,812.48</b>
51	Equipment Foundation Demolition to Grade	\$121,812.48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

Lake Road Boiler 4 Dismantlement

ID	Task Name	Duration	2012		2013
			H2	H1	H2
1	<b>Lake Road Boiler 4 Dismantlement</b>	<b>178 days</b>			
2	<b>Pre-Dismantlement Activities</b>	<b>55 days</b>			
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>98 days</b>			
8	KCP&L Engineer	98 days			
9	Owners Engineer Project Manager	98 days			
10	Owners Engineer - Engineer	98 days			
11	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>113 days</b>			
12	Demolition Contractor Safety Manager	113 days			
13	Demolition Contractor Superintendent	113 days			
14	<b>Demolition Contractor Equipment Rental Costs</b>	<b>113 days</b>			
15	Equipment Rental	113 days			
16	<b>Demolition Contractor Consumables</b>	<b>113 days</b>			
17	Consumables	113 days			
18	<b>Scrap Crew(s)</b>	<b>113 days</b>			
19	Crew to Handle Scrap Material(s)	113 days			
20	<b>Dismantlement Directs</b>	<b>113 days</b>			
21	<b>Phase 1 Demolition</b>	<b>113 days</b>			
22	<b>Electrical Demolition</b>	<b>65 days</b>			
23	Electrical Demolition Equipment	65 days			
24	<b>Boiler Feed System</b>	<b>2 days</b>			
25	Feedwater piping	2 days			
26	<b>Critical Piping</b>	<b>2 days</b>			
27	Main Steam Piping	2 days			
28	<b>Fuel Systems (Plant Side)</b>	<b>5 days</b>			
29	Gas Piping and Equipment	2 days			
30	Fuel Oil Piping and Equipment	2 days			
31	Igniters	1 day			
32	<b>Air Preheat System</b>	<b>1 day</b>			

Lake Road Boiler 4 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
33	Steam Coil Air Heater Piping	1 day				
34	<b>Miscellaneous Equipment</b>	<b>5 days</b>				
35	Miscellaneous Equipment (including Fire Protec	5 days				
36	<b>Boiler Equipment</b>	<b>22 days</b>				
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	<b>Boiler Removal</b>	<b>20 days</b>				
43	Furnace	10 days				
44	Back Pass	10 days				
45	<b>Boiler Steel Framing</b>	<b>39 days</b>				
46	Hanger Girders at Top	6 days				
47	All Other Framing	11 days				
48	Bracing and Girts	11 days				
49	Columns	11 days				
50	<b>Boiler Foundations</b>	<b>17 days</b>				
51	Equipment Foundation Demolition to Grade	17 days				
52	<b>Project Close-Out</b>	<b>10 days</b>				
53	Project Close-Out Activities	10 days				



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**BOILER 5**

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



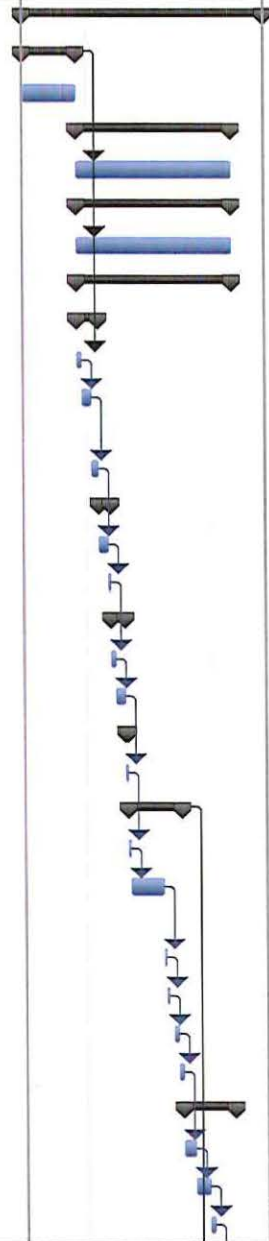
Lake Road Boiler 5 Retirement		
ID	Task Name	Cost
1	<b>Lake Road Boiler 5 Retirement</b>	<b>\$139,631.92</b>
2	<b>Pre-Engineering</b>	<b>\$25,969.20</b>
3	Engineering analysis and establish isolation points.	\$0.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$29,740.80</b>
5	KCP&L Retirement Manager	\$29,740.80
6	<b>Equipment Rentals</b>	<b>\$10,076.16</b>
7	Vacuum truck	\$10,076.16
8	<b>Retirement</b>	<b>\$60,563.76</b>
9	<b>Motors</b>	<b>\$6,216.00</b>
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	<b>Sulfur Injection System</b>	<b>\$2,522.72</b>
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	<b>Fuel Systems</b>	<b>\$4,208.16</b>
17	Open and Clean the Boiler 5 Bunker	\$1,685.44
18	Isolate and Vent the Gas Systems	\$2,522.72
19	<b>Boiler Chemical Feed</b>	<b>\$842.72</b>
20	Drain all chemical feed tanks and piping	\$842.72
21	<b>Boiler</b>	<b>\$13,804.64</b>
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	<b>Precipitator</b>	<b>\$20,181.76</b>
29	Multiple cleaning cycles for collection plates.	\$3,784.08
30	Clear hoppers of all ash	\$5,045.44
31	Disconnect transformers.	\$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	<b>Ductwork</b>	<b>\$6,480.96</b>
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	<b>Ash Handling</b>	<b>\$6,306.80</b>
41	Open and Vacuum the Ash Silo	\$5,045.44
42	Open and Clean Ash Handling Equipment	\$1,261.36
43	<b>Post Retirement Activities</b>	<b>\$13,282.00</b>
44	Post Retirement Activities	\$13,282.00

Lake Road Boiler 5 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
1	<b>Lake Road Boiler 5 Retirement</b>	<b>75 days</b>				
2	<b>Pre-Engineering</b>	<b>17 days</b>				
3	Engineering analysis and establish isolation points.	17 days				
4	<b>KCL&amp;L Overhead Costs</b>	<b>48 days</b>				
5	KCP&L Retirement Manager	48 days				
6	<b>Equipment Rentals</b>	<b>48 days</b>				
7	Vacuum truck	48 days				
8	<b>Retirement</b>	<b>48 days</b>				
9	<b>Motors</b>	<b>7 days</b>				
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	<b>Sulfur Injection System</b>	<b>3 days</b>				
14	Empty, Clean and Vent the Storage Tank	2 days				
15	Drain and Flush the Sulfur Injection System Piping and Vent	1 day				
16	<b>Fuel Systems</b>	<b>4 days</b>				
17	Open and Clean the Boiler 5 Bunker	2 days				
18	Isolate and Vent the Gas Systems	2 days				
19	<b>Boiler Chemical Feed</b>	<b>1 day</b>				
20	Drain all chemical feed tanks and piping	1 day				
21	<b>Boiler</b>	<b>17 days</b>				
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	<b>Precipitator</b>	<b>16 days</b>				
29	Multiple cleaning cycles for collection plates.	3 days				
30	Clear hoppers of all ash	4 days				
31	Disconnect transformers.	2 days				



Lake Road Boiler 5 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
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	<b>Ductwork</b>	<b>6 days</b>				
38	Open ductwork doors.	1 day				
39	Perform extensive cleaning of the ductwork.	5 days				
40	<b>Ash Handling</b>	<b>5 days</b>				
41	Open and Vacuum the Ash Silo	4 days				
42	Open and Clean Ash Handling Equipment	1 day				
43	<b>Post Retirement Activities</b>	<b>20 days</b>				
44	Post Retirement Activities	20 days				

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	
Consumables		\$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

Lake Road Boiler 5 Dismantlement

ID	Task Name	Cost
1	<b>Lake Road Boiler 5 Dismantlement</b>	<b>\$4,193,392.76</b>
2	<b>Pre-Dismantlement Activities</b>	<b>\$186,483.32</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$558,223.20</b>
8	KCP&L Engineer	\$186,367.20
9	Owners Engineer Project Manager	\$55,632.00
10	Owners Engineer - Engineer	\$316,224.00
11	<b>Demoliton Contractor Overhead during Dismantlement</b>	<b>\$278,906.64</b>
12	Demolition Contractor Safety Manager	\$97,985.52
13	Demolition Contractor Superintendent	\$180,921.12
14	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$662,284.32</b>
15	Equipment Rental	\$662,284.32
16	<b>Demolition Contractor Consumables</b>	<b>\$660,747.12</b>
17	Consumables	\$660,747.12
18	<b>Scrap Crew(s)</b>	<b>\$655,637.76</b>
19	Crew to Handle Scrap Material(s)	\$655,637.76
20	<b>Dismantlement Directs</b>	<b>\$1,174,730.40</b>
21	<b>Phase 1 Demolition</b>	<b>\$1,174,730.40</b>
22	<b>Electrical Demolition</b>	<b>\$125,395.20</b>
23	Electrical Demolition Equipment	\$125,395.20
24	<b>Boiler Feed System</b>	<b>\$3,582.72</b>
25	Feedwater piping	\$3,582.72
26	<b>Critical Piping</b>	<b>\$3,582.72</b>
27	Main Steam Piping	\$3,582.72
28	<b>Gas Systems (Plant Side)</b>	<b>\$5,374.08</b>
29	Gas Piping and Equipment	\$3,582.72
30	Igniters	\$1,791.36
31	<b>Air Preheat System</b>	<b>\$1,791.36</b>
32	Steam Coil Air Heater Piping	\$1,791.36
33	<b>Miscellaneous Equipment</b>	<b>\$14,330.88</b>
34	Miscellaneous Equipment (including Fire Protection)	\$14,330.88
35	<b>Boiler Equipment</b>	<b>\$175,151.52</b>
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	<b>Boiler Removal</b>	<b>\$207,797.76</b>
46	Furnace	\$107,481.60
47	Back Pass	\$100,316.16
48	<b>Boiler Steel Framing</b>	<b>\$351,106.56</b>
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	<b>Precipitator</b>	<b>\$143,308.80</b>
54	Remove Precipitator	\$143,308.80
55	<b>Boiler Foundations</b>	<b>\$143,308.80</b>
56	Equipment Foundation Demolition to Grade	\$143,308.80
57	<b>Project Close-Out</b>	<b>\$16,380.00</b>
58	Project Close-Out Activities	\$16,380.00

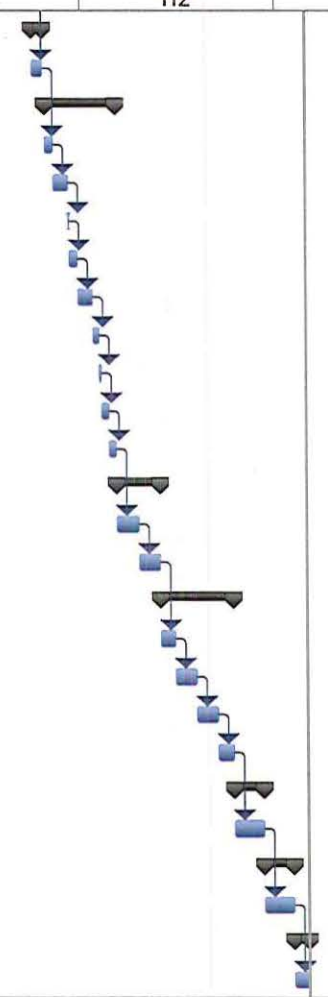
Lake Road Boiler 5 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
1	<b>Lake Road Boiler 5 Dismantlement</b>	<b>248 days</b>		[Gantt bar spanning H1 2012 and H2 2013]		
2	<b>Pre-Dismantlement Activities</b>	<b>55 days</b>		[Gantt bar in H1 2012]		
3	Detailed Planning & Hire Owner's Engineer	2 mons		[Blue bar in H1 2012]		
4	Hire Demolition General Contractor	2 mons		[Blue bar in H1 2012]		
5	KCP&L Prepares Unit for Dismantlement	1 wk		[Blue bar in H1 2012]		
6	Demolition Contractor Mobilizes on Site	5 days		[Blue bar in H1 2012]		
7	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
8	KCP&L Engineer	183 days		[Blue bar in H1 2012]		
9	Owners Engineer Project Manager	183 days		[Blue bar in H1 2012]		
10	Owners Engineer - Engineer	183 days		[Blue bar in H1 2012]		
11	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
12	Demolition Contractor Safety Manager	183 days		[Blue bar in H1 2012]		
13	Demolition Contractor Superintendent	183 days		[Blue bar in H1 2012]		
14	<b>Demolition Contractor Equipment Rental Costs</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
15	Equipment Rental	183 days		[Blue bar in H1 2012]		
16	<b>Demolition Contractor Consumables</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
17	Consumables	183 days		[Blue bar in H1 2012]		
18	<b>Scrap Crew(s)</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
19	Crew to Handle Scrap Material(s)	183 days		[Blue bar in H1 2012]		
20	<b>Dismantlement Directs</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
21	<b>Phase 1 Demolition</b>	<b>183 days</b>		[Gantt bar in H1 2012]		
22	<b>Electrical Demolition</b>	<b>70 days</b>		[Gantt bar in H1 2012]		
23	Electrical Demolition Equipment	70 days		[Blue bar in H1 2012]		
24	<b>Boiler Feed System</b>	<b>2 days</b>		[Blue bar in H1 2012]		
25	Feedwater piping	2 days		[Blue bar in H1 2012]		
26	<b>Critical Piping</b>	<b>2 days</b>		[Blue bar in H1 2012]		
27	Main Steam Piping	2 days		[Blue bar in H1 2012]		
28	<b>Gas Systems (Plant Side)</b>	<b>3 days</b>		[Blue bar in H1 2012]		
29	Gas Piping and Equipment	2 days		[Blue bar in H1 2012]		
30	Igniters	1 day		[Blue bar in H1 2012]		
31	<b>Air Preheat System</b>	<b>1 day</b>		[Blue bar in H1 2012]		
32	Steam Coil Air Heater Piping	1 day		[Blue bar in H1 2012]		



Lake Road Boiler 5 Dismantlement

ID	Task Name	Duration	2012			2013	
			H2	H1	H2	H1	H2
33	<b>Miscellaneous Equipment</b>	<b>8 days</b>					
34	Miscellaneous Equipment (including Fire Protec	8 days					
35	<b>Boiler Equipment</b>	<b>49 days</b>					
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	<b>Boiler Removal</b>	<b>29 days</b>					
46	Furnace	15 days					
47	Back Pass	14 days					
48	<b>Boiler Steel Framing</b>	<b>49 days</b>					
49	Hanger Girders at Top	10 days					
50	All Other Framing	14 days					
51	Bracing and Girts	14 days					
52	Columns	11 days					
53	<b>Precipitator</b>	<b>20 days</b>					
54	Remove Precipitator	20 days					
55	<b>Boiler Foundations</b>	<b>20 days</b>					
56	Equipment Foundation Demolition to Grade	20 days					
57	<b>Project Close-Out</b>	<b>10 days</b>					
58	Project Close-Out Activities	10 days					



**BOILER 8**

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

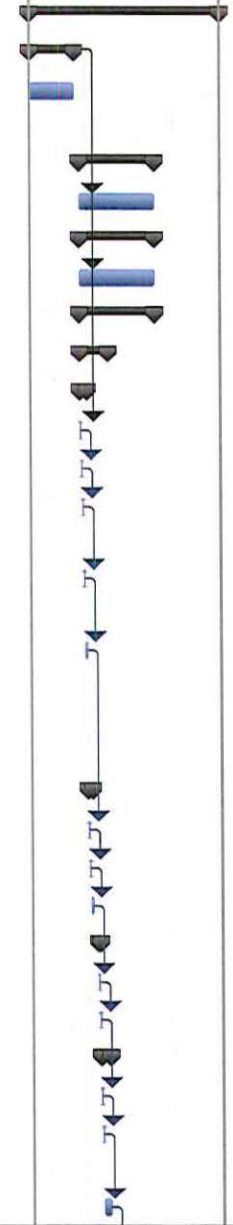
Lake Road Boiler 8 Retirement		
ID	Task Name	Cost
1	<b>Lake Road Boiler 8 Retirement</b>	<b>\$80,419.36</b>
2	<b>Pre-Engineering</b>	<b>\$22,914.00</b>
3	Permit review and engineering analysis and establish isolation points.	\$22,914.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$14,870.40</b>
5	KCP&L Retirement Manager	\$14,870.40
6	<b>Equipment Rentals</b>	<b>\$5,038.08</b>
7	Vacuum truck	\$5,038.08
8	<b>Retirement</b>	<b>\$24,314.88</b>
9	<b>Electrical</b>	<b>\$10,037.04</b>
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>\$2,679.84</b>
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	<b>Motor Control Centers</b>	<b>\$1,786.56</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$893.28</b>
21	De-energize all buses at the source.	\$446.64
22	Open all circuit breakers and disconnect switches.	\$446.64
23	<b>Motors</b>	<b>\$4,677.36</b>
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	<b>Fuel Systems</b>	<b>\$2,522.72</b>
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	<b>Boiler Chemical Feed</b>	<b>\$1,261.36</b>
31	Drain all chemical feed tanks.	\$1,261.36
32	<b>Boiler</b>	<b>\$4,844.64</b>
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	<b>Ductwork</b>	<b>\$3,120.96</b>
38	Open ductwork doors.	\$880.96
39	Perform extensive cleaning of the ductwork.	\$2,240.00
40	<b>Feedwater Piping</b>	<b>\$842.72</b>

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	<b>Deaerator and Deaerator Storage Tank</b>	<b>\$842.72</b>
44	Drain Deaerator and Storage	\$421.36
45	Leave open vents and drains.	\$421.36
46	<b>Compressed Air System</b>	<b>\$842.72</b>
47	Open vents and drains.	\$842.72
48	<b>Post Retirement Activities</b>	<b>\$13,282.00</b>
49	Post Retirement Activities	\$13,282.00

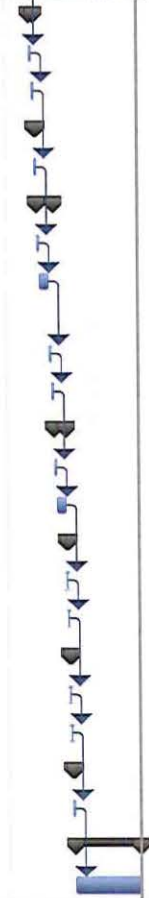
Lake Road Boiler 8 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
1	<b>Lake Road Boiler 8 Retirement</b>	<b>59 days</b>				
2	<b>Pre-Engineering</b>	<b>15 days</b>				
3	Permit review and engineering analysis and establish isolation points.	15 days				
4	<b>KCL&amp;L Overhead Costs</b>	<b>24 days</b>				
5	KCP&L Retirement Manager	24 days				
6	<b>Equipment Rentals</b>	<b>24 days</b>				
7	Vacuum truck	24 days				
8	<b>Retirement</b>	<b>24 days</b>				
9	<b>Electrical</b>	<b>10 days</b>				
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>3 days</b>				
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	<b>Motor Control Centers</b>	<b>2 days</b>				
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>1 day</b>				
21	De-energize all buses at the source.	0.5 days				
22	Open all circuit breakers and disconnect switches.	0.5 days				
23	<b>Motors</b>	<b>4 days</b>				
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				



Lake Road Boiler 8 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
27	<b>Fuel Systems</b>	<b>2 days</b>				
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	<b>Boiler Chemical Feed</b>	<b>1 day</b>				
31	Drain all chemical feed tanks.	1 day				
32	<b>Boiler</b>	<b>5 days</b>				
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	<b>Ductwork</b>	<b>3 days</b>				
38	Open ductwork doors.	1 day				
39	Perform extensive cleaning of the ductwork.	2 days				
40	<b>Feedwater Piping</b>	<b>1 day</b>				
41	Drain water from the system.	0.5 days				
42	Leave open vents and drains.	0.5 days				
43	<b>Deaerator and Deaerator Storage Tank</b>	<b>1 day</b>				
44	Drain Deaerator and Storage	0.5 days				
45	Leave open vents and drains.	0.5 days				
46	<b>Compressed Air System</b>	<b>1 day</b>				
47	Open vents and drains.	1 day				
48	<b>Post Retirement Activities</b>	<b>20 days</b>				
49	Post Retirement Activities	20 days				



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



Lake Road Boiler & Dismantlement

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

Lake Road Boiler & Dismantlement

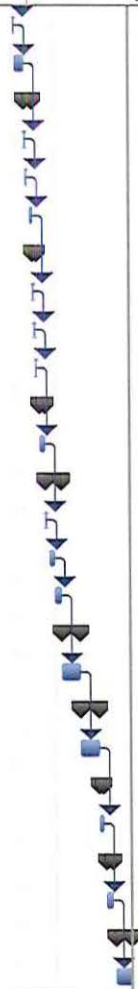
ID	Task Name	Cost
45	<b>Boiler Equipment</b>	<b>\$28,661.76</b>
46	Fans	\$3,582.72
47	Steam Drum	\$14,330.88
48	Ductwork	\$10,748.16
49	<b>Boiler Removal</b>	<b>\$71,654.40</b>
50	Furnace	\$71,654.40
51	<b>Boiler Steel Framing</b>	<b>\$71,654.40</b>
52	Framing and Supports	\$71,654.40
53	<b>Boiler Building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

Lake Road Boiler 8 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
1	<b>Lake Road Boiler 8 Dismantlement</b>	<b>151 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>75 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>66 days</b>				
7	KCP&L Engineer	66 days				
8	<b>Demoliton Contractor Overhead during Dismantlemer</b>	<b>66 days</b>				
9	Demolition Contractor Project Manager	66 days				
10	Demolition Contractor Safety Manager	66 days				
11	Demolition Contractor Superintendent	66 days				
12	<b>Demolition Contractor Equipment Rental Costs</b>	<b>66 days</b>				
13	Equipment Rental	66 days				
14	<b>Demolition Contractor Consummables</b>	<b>66 days</b>				
15	Consummables	66 days				
16	<b>Scrap Crew(s)</b>	<b>66 days</b>				
17	Crew to Handle Scrap Material(s)	66 days				
18	<b>Dismantlement Directs</b>	<b>66 days</b>				
19	<b>Phase 1 Demolition</b>	<b>66 days</b>				
20	<b>Electrical Demolition</b>	<b>40 days</b>				
21	Electrical Demolition Equipment	40 days				
22	<b>Condensate System</b>	<b>5 days</b>				
23	Deaerator	2 days				
24	Deaerator Storage Tank	1 day				
25	Condensate Piping	2 days				
26	<b>Boiler Feed System</b>	<b>3 days</b>				
27	Boiler Feed Pumps	2 days				
28	Feedwater piping	1 day				
29	<b>Critical Piping</b>	<b>3 days</b>				
30	Main Steam Piping	3 days				
31	<b>Fuel Systems</b>	<b>8 days</b>				
32	Fuel Oil Piping	2 days				

Lake Road Boiler 8 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
33	Gas Piping	1 day				
34	Igniters	5 days				
35	<b>Chemical Feed Systems</b>	<b>4 days</b>				
36	Tanks	1 day				
37	Pumps	1 day				
38	Piping	2 days				
39	<b>Sampling Systems</b>	<b>3 days</b>				
40	Field Mounted Heat Exchangers	1 day				
41	Piping	1 day				
42	Sample Panel	1 day				
43	<b>Miscellaneous Equipment</b>	<b>4 days</b>				
44	Miscellaneous Equipment (including Fire Protec	4 days				
45	<b>Boiler Equipment</b>	<b>8 days</b>				
46	Fans	1 day				
47	Steam Drum	4 days				
48	Ductwork	3 days				
49	<b>Boiler Removal</b>	<b>10 days</b>				
50	Furnace	10 days				
51	<b>Boiler Steel Framing</b>	<b>10 days</b>				
52	Framing and Supports	10 days				
53	<b>Boiler Building</b>	<b>3 days</b>				
54	Remove Boiler Building	3 days				
55	<b>Boiler Foundations</b>	<b>5 days</b>				
56	Equipment Foundation Demolition to Grade	5 days				
57	<b>Project Close-Out</b>	<b>10 days</b>				
58	Project Close-Out Activities	10 days				





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

Activities Required by Permit or Regulation

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	<b>Lake Road 4/6 Retirement</b>	<b>\$294,400.77</b>
2	<b>Pre-Engineering</b>	<b>\$61,104.00</b>
3	Permit review and engineering analysis and establish isolation points.	\$61,104.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$73,732.40</b>
5	KCP&L Retirement Manager	\$73,732.40
6	<b>Equipment Rentals</b>	<b>\$24,980.48</b>
7	Vacuum truck	\$24,980.48
8	<b>Retirement</b>	<b>\$108,019.89</b>
9	<b>Electrical</b>	<b>\$20,052.88</b>
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>\$2,679.84</b>
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	<b>Motor Control Centers</b>	<b>\$1,786.56</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$893.28</b>
21	De-energize all buses at the source.	\$446.64
22	Open all circuit breakers and disconnect switches.	\$446.64
23	<b>Oil-Filled Power Transformers</b>	<b>\$5,549.44</b>
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	<b>Dry-type Power Transformers</b>	<b>\$1,786.56</b>
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	<b>Motors</b>	<b>\$7,357.20</b>
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

Lake Road 4/6 Retirement

ID	Task Name	Cost
34	Drain lube oil system (if applicable) and dispose of oil.	\$3,784.08
35	<b>Coal Handling</b>	<b>\$5,466.80</b>
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	<b>Gas System</b>	<b>\$2,522.72</b>
40	Isolate lines from source, open and vent.	\$2,522.72
41	<b>Boiler Chemical Feed</b>	<b>\$2,522.72</b>
42	Drain all chemical feed tanks.	\$2,522.72
43	<b>Demineralizer</b>	<b>\$5,371.84</b>
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	<b>Boiler</b>	<b>\$26,508.85</b>
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	<b>Precipitator</b>	<b>\$8,357.60</b>
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	<b>Ductwork</b>	<b>\$9,840.96</b>
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	<b>Condensate and Feedwater Piping</b>	<b>\$1,685.44</b>
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	<b>Feedwater heaters</b>	<b>\$3,370.88</b>
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	<b>Deaerator and Deaerator Storage Tank</b>	<b>\$1,685.44</b>
78	Drain Deaerator and Storage	\$842.72
79	Leave open vents and drains.	\$842.72
80	<b>Turbine(s) and Condenser</b>	<b>\$3,504.72</b>
81	Drain hotwell and leave doors open.	\$861.84
82	Open main turbine doors.	\$880.96
83	Remove lube oil.	\$1,761.92
84	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>\$2,566.40</b>
93	Drain.	\$842.72
94	Open water box doors.	\$880.96
95	Drain any circulating water chemical feed tanks.	\$842.72
96	<b>Compressed Air System</b>	<b>\$842.72</b>
97	Open vents and drains.	\$842.72
98	<b>Auxiliary Steam System</b>	<b>\$842.72</b>
99	Drain water from system.	\$842.72
100	<b>Closed Cooling Water System</b>	<b>\$1,685.44</b>
101	Drain water from system.	\$842.72
102	Vent piping.	\$842.72
103	<b>Condenser Air Extraction</b>	<b>\$842.72</b>
104	Drain water from system.	\$842.72
105	<b>Battery System</b>	<b>\$4,253.28</b>
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

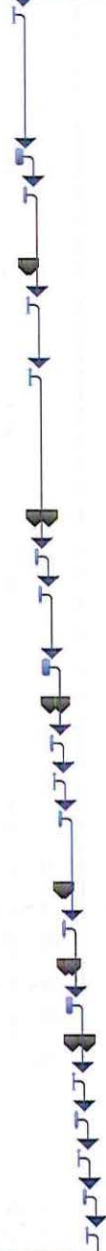
ID	Task Name	Cost
109	Remove and dispose of battery cells.	\$1,120.00
110	Clean up and dispose of electrolyte on surface areas around batteries.	\$560.00
111	<b>Post Retirement Activities</b>	<b>\$26,564.00</b>
112	Post Retirement Activities	\$26,564.00

Lake Road 4/6 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter
1	<b>Lake Road 4/6 Retirement</b>	<b>199 days</b>						
2	<b>Pre-Engineering</b>	<b>40 days</b>						
3	Permit review and engineering analysis and establish isolation points.	40 days						
4	<b>KCL&amp;L Overhead Costs</b>	<b>119 days</b>						
5	KCP&L Retirement Manager	119 days						
6	<b>Equipment Rentals</b>	<b>119 days</b>						
7	Vacuum truck	119 days						
8	<b>Retirement</b>	<b>119 days</b>						
9	<b>Electrical</b>	<b>22 days</b>						
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>3 days</b>						
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	<b>Motor Control Centers</b>	<b>2 days</b>						
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>1 day</b>						
21	De-energize all buses at the source.	0.5 days						
22	Open all circuit breakers and disconnect switches.	0.5 days						
23	<b>Oil-Filled Power Transformers</b>	<b>7 days</b>						
24	De-energize all transformer primaries and verify that the 1 day secondary is de-energized.	1 day						

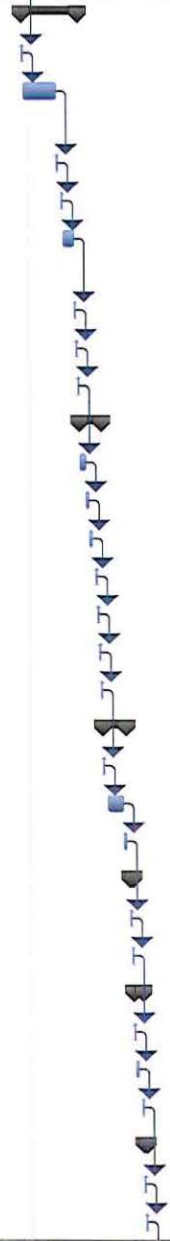
Lake Road 4/6 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter
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	<b>Dry-type Power Transformers</b>	<b>2 days</b>						
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	<b>Motors</b>	<b>7 days</b>						
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	<b>Coal Handling</b>	<b>5 days</b>						
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	<b>Gas System</b>	<b>2 days</b>						
40	Isolate lines from source, open and vent.	2 days						
41	<b>Boiler Chemical Feed</b>	<b>2 days</b>						
42	Drain all chemical feed tanks.	2 days						
43	<b>Demineralizer</b>	<b>7 days</b>						
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						



Lake Road 4/6 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter
49	<b>Boiler</b>	<b>26 days</b>						
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	<b>Precipitator</b>	<b>10 days</b>						
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 hoppers	1 day						
63	Disconnect ash transport piping and washdown hoppers and	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	<b>Ductwork</b>	<b>11 days</b>						
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	<b>Condensate and Feedwater Piping</b>	<b>2 days</b>						
71	Drain water from the system.	1 day						
72	Leave open vents and drains.	1 day						
73	<b>Feedwater heaters</b>	<b>4 days</b>						
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	<b>Deaerator and Deaerator Storage Tank</b>	<b>2 days</b>						
78	Drain Deaerator and Storage	1 day						
79	Leave open vents and drains.	1 day						



Lake Road 4/6 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter
80	<b>Turbine(s) and Condenser</b>	<b>4 days</b>						
81	Drain hotwell and leave doors open.	1 day						
82	Open main turbine doors.	1 day						
83	Remove lube oil.	2 days						
84	<b>Generator</b>	<b>7 days</b>						
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>3 days</b>						
93	Drain.	1 day						
94	Open water box doors.	1 day						
95	Drain any circulating water chemical feed tanks.	1 day						
96	<b>Compressed Air System</b>	<b>1 day</b>						
97	Open vents and drains.	1 day						
98	<b>Auxiliary Steam System</b>	<b>1 day</b>						
99	Drain water from system.	1 day						
100	<b>Closed Cooling Water System</b>	<b>2 days</b>						
101	Drain water from system.	1 day						
102	Vent piping.	1 day						
103	<b>Condenser Air Extraction</b>	<b>1 day</b>						



Lake Road 4/6 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter
104	Drain water from system.	1 day						
105	<b>Battery System</b>	<b>7 days</b>						
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	<b>Post Retirement Activities</b>	<b>40 days</b>						
112	Post Retirement Activities	40 days						

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	
Consumables		\$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



11/11/2020 10:00 AM

### TURBINE GENERATOR 1

11/11/2020 10:00 AM

11/11/2020 10:00 AM

11/11/2020 10:00 AM

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	<b>Lake Road Turbine Generator 1 Retirement</b>	<b>\$37,599.30</b>
2	<b>Pre-Engineering</b>	<b>\$7,638.00</b>
3	Engineering analysis and establish isolation points.	\$7,638.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$13,631.20</b>
5	KCP&L Retirement Manager	\$13,631.20
6	<b>Retirement</b>	<b>\$13,009.60</b>
7	<b>Feedwater Piping</b>	<b>\$1,685.44</b>
8	Drain water from the system and isolate from system.	\$842.72
9	Leave open vents and drains.	\$842.72
10	<b>Turbine(s) and Condenser</b>	<b>\$4,385.68</b>
11	Drain hotwell and leave doors open.	\$861.84
12	Open main turbine doors.	\$880.96
13	Remove lube oil.	\$2,642.88
14	<b>Circulating Water System</b>	<b>\$0.00</b>
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	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Condenser Air Extraction</b>	<b>\$842.72</b>
27	Drain water from system.	\$842.72
28	<b>Post Retirement Activities</b>	<b>\$3,320.50</b>
29	Post Retirement Activities	\$3,320.50

Lake Road Turbine Generator 1 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
1	<b>Lake Road Turbine Generator 1 Retirement</b>	<b>32 days</b>				
2	<b>Pre-Engineering</b>	<b>5 days</b>				
3	Engineering analysis and establish isolation points.	5 days				
4	<b>KCL&amp;L Overhead Costs</b>	<b>22 days</b>				
5	KCP&L Retirement Manager	22 days				
6	<b>Retirement</b>	<b>22 days</b>				
7	<b>Feedwater Piping</b>	<b>2 days</b>				
8	Drain water from the system and isolate from system.	1 day				
9	Leave open vents and drains.	1 day				
10	<b>Turbine(s) and Condenser</b>	<b>5 days</b>				
11	Drain hotwell and leave doors open.	1 day				
12	Open main turbine doors.	1 day				
13	Remove lube oil.	3 days				
14	<b>Circulating Water System</b>	<b>7 days</b>				
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	<b>Generator</b>	<b>7 days</b>				
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				

Lake Road Turbine Generator 1 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days				
26	<b>Condenser Air Extraction</b>	<b>1 day</b>				
27	Drain water from system.	1 day				
28	<b>Post Retirement Activities</b>	<b>5 days</b>				
29	Post Retirement Activities	5 days				

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

Lake Road Turbine Generator 1 Dismantlement		
ID	Task Name	Cost
1	<b>Lake Road T/G 1 Removal</b>	<b>\$1,557,861.80</b>
2	<b>Pre-Dismantlement Activities</b>	<b>\$172,583.80</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$92,674.40</b>
7	KCP&L Engineer	\$92,674.40
8	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$89,966.24</b>
9	Demolition Contractor Superintendent	\$89,966.24
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$329,332.64</b>
11	Equipment Rental	\$329,332.64
12	<b>Demolition Contractor Consumables</b>	<b>\$328,568.24</b>
13	Consumables	\$328,568.24
14	<b>Scrap Crew(s)</b>	<b>\$326,027.52</b>
15	Crew to Handle Scrap Material(s)	\$326,027.52
16	<b>Dismantlement Directs</b>	<b>\$210,518.96</b>
17	<b>Phase 1 Demolition</b>	<b>\$210,518.96</b>
18	<b>Critical Piping</b>	<b>\$3,582.72</b>
19	Remove Main Steam Piping to the Turbine	\$3,582.72
20	<b>Circulating Water (plant side)</b>	<b>\$3,582.72</b>
21	Waterboxes	\$3,582.72
22	<b>Condenser Air Extraction System</b>	<b>\$3,582.72</b>
23	Vacuum Pumps	\$3,582.72
24	<b>Turbine Seals and Drains</b>	<b>\$7,165.44</b>
25	Piping	\$7,165.44
26	<b>Turbine Lube Oil System</b>	<b>\$18,443.76</b>
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	<b>Generator Auxiliary Systems</b>	<b>\$21,496.32</b>
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	<b>Remove Turbine</b>	<b>\$126,343.68</b>
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	<b>Cooling Tower 1</b>	<b>\$26,321.60</b>
43	Remove Cooling Tower 1	\$26,321.60
44	<b>Project Close-Out</b>	<b>\$8,190.00</b>

Lake Road Turbine Generator 1 Dismantlement

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

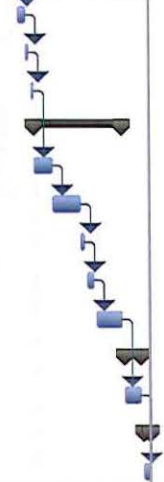


Lake Road Turbine Generator 1 Dismantlement

ID	Task Name	Duration	2012			2013
			H2	H1	H2	H1
1	<b>Lake Road T/G 1 Removal</b>	<b>171 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>75 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>91 days</b>				
7	KCP&L Engineer	91 days				
8	<b>Demoliton Contractor Overhead during Dismantlemer</b>	<b>91 days</b>				
9	Demolition Contractor Superintendent	91 days				
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>91 days</b>				
11	Equipment Rental	91 days				
12	<b>Demolition Contractor Consummables</b>	<b>91 days</b>				
13	Consummables	91 days				
14	<b>Scrap Crew(s)</b>	<b>91 days</b>				
15	Crew to Handle Scrap Material(s)	91 days				
16	<b>Dismantlement Directs</b>	<b>91 days</b>				
17	<b>Phase 1 Demolition</b>	<b>91 days</b>				
18	<b>Critical Piping</b>	<b>2 days</b>				
19	Remove Main Steam Piping to the Turbine	2 days				
20	<b>Circulating Water (plant side)</b>	<b>2 days</b>				
21	Waterboxes	2 days				
22	<b>Condenser Air Extraction System</b>	<b>2 days</b>				
23	Vacuum Pumps	2 days				
24	<b>Turbine Seals and Drains</b>	<b>4 days</b>				
25	Piping	4 days				
26	<b>Turbine Lube Oil System</b>	<b>11 days</b>				
27	Turbine Lube Oil Tank	5 days				
28	Turbine Lube Oil Pumps	4 days				
29	Turbine Oil Mist Eliminator	2 days				
30	<b>Generator Auxiliary Systems</b>	<b>12 days</b>				
31	Hydrogen Cooler Skid and Piping	2 days				
32	Stator Cooling Water Skid and Piping	2 days				

Lake Road Turbine Generator 1 Dismantlement

ID	Task Name	Duration	2012			2013
			H2	H1	H2	H1
33	Isophase Bus Duct	4 days				
34	Exciter Heat Exchanger	2 days				
35	EHC Coolers	2 days				
36	<b>Remove Turbine</b>	<b>48 days</b>				
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	<b>Cooling Tower 1</b>	<b>10 days</b>				
43	Remove Cooling Tower 1	10 days				
44	<b>Project Close-Out</b>	<b>5 days</b>				
45	Project Close-Out Activities	5 days				





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

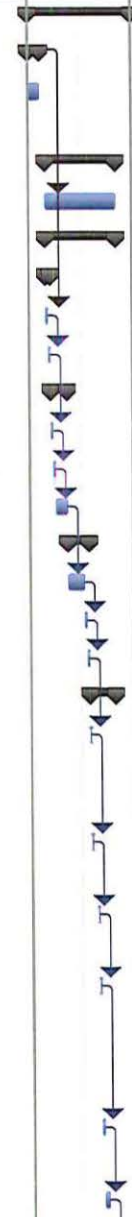
Lake Road T/G 2 Retirement Opinion of Probable Cost: \$49,349

Lake Road Turbine Generator 2 Retirement

ID	Task Name	Cost
1	<b>Lake Road Turbine Generator 2 Retirement</b>	<b>\$37,599.30</b>
2	<b>Pre-Engineering</b>	<b>\$7,638.00</b>
3	Engineering analysis and establish isolation points.	\$7,638.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$13,631.20</b>
5	KCP&L Retirement Manager	\$13,631.20
6	<b>Retirement</b>	<b>\$13,009.60</b>
7	<b>Feedwater Piping</b>	<b>\$1,685.44</b>
8	Drain water from the system and isolate from system.	\$842.72
9	Leave open vents and drains.	\$842.72
10	<b>Turbine(s) and Condenser</b>	<b>\$4,385.68</b>
11	Drain hotwell and leave doors open.	\$861.84
12	Open main turbine doors.	\$880.96
13	Remove lube oil.	\$2,642.88
14	<b>Circulating Water System</b>	<b>\$0.00</b>
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	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Condenser Air Extraction</b>	<b>\$842.72</b>
27	Drain water from system.	\$842.72
28	<b>Post Retirement Activities</b>	<b>\$3,320.50</b>
29	Post Retirement Activities	\$3,320.50

Lake Road Turbine Generator 2 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
1	<b>Lake Road Turbine Generator 2 Retirement</b>	<b>32 days</b>				
2	<b>Pre-Engineering</b>	<b>5 days</b>				
3	Engineering analysis and establish isolation points.	5 days				
4	<b>KCL&amp;L Overhead Costs</b>	<b>22 days</b>				
5	KCP&L Retirement Manager	22 days				
6	<b>Retirement</b>	<b>22 days</b>				
7	<b>Feedwater Piping</b>	<b>2 days</b>				
8	Drain water from the system and isolate from system.	1 day				
9	Leave open vents and drains.	1 day				
10	<b>Turbine(s) and Condenser</b>	<b>5 days</b>				
11	Drain hotwell and leave doors open.	1 day				
12	Open main turbine doors.	1 day				
13	Remove lube oil.	3 days				
14	<b>Circulating Water System</b>	<b>7 days</b>				
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	<b>Generator</b>	<b>7 days</b>				
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				



Lake Road Turbine Generator 2 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter
25	Disconnect and remove fire protection system gas/foam tanks and purge fire protection system.	2 days				
26	<b>Condenser Air Extraction</b>	<b>1 day</b>				
27	Drain water from system.	1 day				
28	<b>Post Retirement Activities</b>	<b>5 days</b>				
29	Post Retirement Activities	5 days				

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	
Consumables		\$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



Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Cost
1	<b>Lake Road T/G 2 Removal</b>	<b>\$1,712,377.80</b>
2	<b>Pre-Dismantlement Activities</b>	<b>\$172,583.80</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$102,858.40</b>
7	KCP&L Engineer	\$102,858.40
8	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$99,852.64</b>
9	Demolition Contractor Superintendent	\$99,852.64
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$365,523.04</b>
11	Equipment Rental	\$365,523.04
12	<b>Scrap Crew(s)</b>	<b>\$361,854.72</b>
13	Crew to Handle Scrap Material(s)	\$361,854.72
14	<b>Demolition Contractor Consummables</b>	<b>\$364,674.64</b>
15	Consummables	\$364,674.64
16	<b>Dismantlement Directs</b>	<b>\$236,840.56</b>
17	<b>Phase 1 Demolition</b>	<b>\$236,840.56</b>
18	<b>Critical Piping</b>	<b>\$3,582.72</b>
19	Remove Main Steam Piping to the Turbine	\$3,582.72
20	<b>Circulating Water (plant side)</b>	<b>\$3,582.72</b>
21	Waterboxes	\$3,582.72
22	<b>Condenser Air Extraction System</b>	<b>\$3,582.72</b>
23	Vacuum Pumps	\$3,582.72
24	<b>Turbine Seals and Drains</b>	<b>\$7,165.44</b>
25	Piping	\$7,165.44
26	<b>Turbine Lube Oil System</b>	<b>\$18,443.76</b>
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	<b>Generator Auxiliary Systems</b>	<b>\$21,496.32</b>
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	<b>Remove Turbine</b>	<b>\$147,400.96</b>
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	<b>Cooling Tower 2</b>	<b>\$31,585.92</b>
43	Remove Cooling Tower 2	\$31,585.92
44	<b>Project Close-Out</b>	<b>\$8,190.00</b>

Lake Road Turbine Generator 2 Dismantlement

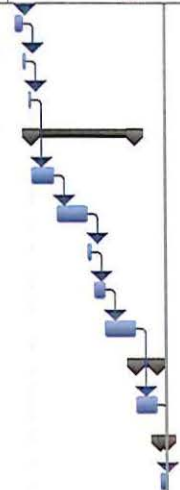
ID	Task Name	Cost
45	Project Close-Out Activities	\$8,190.00

Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
1	<b>Lake Road T/G 2 Removal</b>	<b>181 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>75 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>101 days</b>				
7	KCP&L Engineer	101 days				
8	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>101 days</b>				
9	Demolition Contractor Superintendent	101 days				
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>101 days</b>				
11	Equipment Rental	101 days				
12	<b>Scrap Crew(s)</b>	<b>101 days</b>				
13	Crew to Handle Scrap Material(s)	101 days				
14	<b>Demolition Contractor Consumables</b>	<b>101 days</b>				
15	Consumables	101 days				
16	<b>Dismantlement Directs</b>	<b>101 days</b>				
17	<b>Phase 1 Demolition</b>	<b>101 days</b>				
18	<b>Critical Piping</b>	<b>2 days</b>				
19	Remove Main Steam Piping to the Turbine	2 days				
20	<b>Circulating Water (plant side)</b>	<b>2 days</b>				
21	Waterboxes	2 days				
22	<b>Condenser Air Extraction System</b>	<b>2 days</b>				
23	Vacuum Pumps	2 days				
24	<b>Turbine Seals and Drains</b>	<b>4 days</b>				
25	Piping	4 days				
26	<b>Turbine Lube Oil System</b>	<b>11 days</b>				
27	Turbine Lube Oil Tank	5 days				
28	Turbine Lube Oil Pumps	4 days				
29	Turbine Oil Mist Eliminator	2 days				
30	<b>Generator Auxiliary Systems</b>	<b>12 days</b>				
31	Hydrogen Cooler Skid and Piping	2 days				
32	Stator Cooling Water Skid and Piping	2 days				

Lake Road Turbine Generator 2 Dismantlement

ID	Task Name	Duration	2012				2013	
			H2	H1	H2	H1		
33	Isophase Bus Duct	4 days						
34	Exciter Heat Exchanger	2 days						
35	EHC Coolers	2 days						
36	<b>Remove Turbine</b>	<b>56 days</b>						
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	<b>Cooling Tower 2</b>	<b>12 days</b>						
43	Remove Cooling Tower 2	12 days						
44	<b>Project Close-Out</b>	<b>5 days</b>						
45	Project Close-Out Activities	5 days						



**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

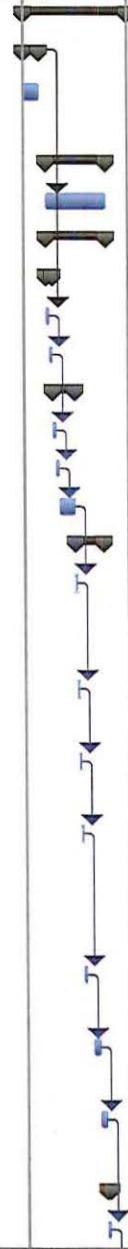
Lake Road T/G 3 Retirement Opinion of Probable Cost: \$43,656

Lake Road Turbine Generator 3 Retirement

ID	Task Name	Cost
1	<b>Lake Road Turbine Generator 3 Retirement</b>	<b>\$33,262.10</b>
2	<b>Pre-Engineering</b>	<b>\$7,638.00</b>
3	Engineering analysis and establish isolation points.	\$7,638.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$9,294.00</b>
5	KCP&L Retirement Manager	\$9,294.00
6	<b>Retirement</b>	<b>\$13,009.60</b>
7	<b>Feedwater Piping</b>	<b>\$1,685.44</b>
8	Drain water from the system and isolate from system.	\$842.72
9	Leave open vents and drains.	\$842.72
10	<b>Turbine(s) and Condenser</b>	<b>\$4,385.68</b>
11	Drain hotwell and leave doors open.	\$861.84
12	Open main turbine doors.	\$880.96
13	Remove lube oil.	\$2,642.88
14	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Condenser Air Extraction</b>	<b>\$842.72</b>
23	Drain water from system.	\$842.72
24	<b>Post Retirement Activities</b>	<b>\$3,320.50</b>
25	Post Retirement Activities	\$3,320.50

Lake Road Turbine Generator 3 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter
1	<b>Lake Road Turbine Generator 3 Retirement</b>	<b>25 days</b>			
2	<b>Pre-Engineering</b>	<b>5 days</b>			
3	Engineering analysis and establish isolation points.	5 days			
4	<b>KCL&amp;L Overhead Costs</b>	<b>15 days</b>			
5	KCP&L Retirement Manager	15 days			
6	<b>Retirement</b>	<b>15 days</b>			
7	<b>Feedwater Piping</b>	<b>2 days</b>			
8	Drain water from the system and isolate from system.	1 day			
9	Leave open vents and drains.	1 day			
10	<b>Turbine(s) and Condenser</b>	<b>5 days</b>			
11	Drain hotwell and leave doors open.	1 day			
12	Open main turbine doors.	1 day			
13	Remove lube oil.	3 days			
14	<b>Generator</b>	<b>7 days</b>			
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	<b>Condenser Air Extraction</b>	<b>1 day</b>			
23	Drain water from system.	1 day			





Lake Road Turbine Generator 3 Retirement

ID	Task Name	Duration	4th Quarter	1st Quarter	2nd Quarter
24	<b>Post Retirement Activities</b>	<b>5 days</b>			
25	Post Retirement Activities	5 days			

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

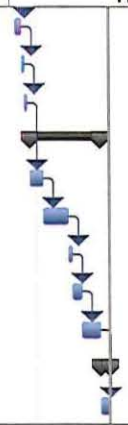
ID	Task Name	Cost
1	<b>Lake Road T/G 3 Removal</b>	<b>\$1,235,059.80</b>
2	<b>Pre-Dismantlement Activities</b>	<b>\$172,583.80</b>
3	Hire Demolition General Contractor	\$167,184.00
4	KCP&L Prepares Unit for Dismantlement	\$5,399.80
5	Demolition Contractor Mobilizes on Site	\$0.00
6	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$71,288.00</b>
7	KCP&L Engineer	\$71,288.00
8	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$69,204.80</b>
9	Demolition Contractor Superintendent	\$69,204.80
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$253,332.80</b>
11	Equipment Rental	\$253,332.80
12	<b>Demolition Contractor Consumables</b>	<b>\$252,744.80</b>
13	Consumables	\$252,744.80
14	<b>Scrap Crew(s)</b>	<b>\$250,790.40</b>
15	Crew to Handle Scrap Material(s)	\$250,790.40
16	<b>Dismantlement Directs</b>	<b>\$156,925.20</b>
17	<b>Phase 1 Demolition</b>	<b>\$156,925.20</b>
18	<b>Critical Piping</b>	<b>\$3,582.72</b>
19	Remove Main Steam Piping to the Turbine	\$3,582.72
20	<b>Circulating Water (plant side)</b>	<b>\$3,582.72</b>
21	Waterboxes	\$3,582.72
22	<b>Condenser Air Extraction System</b>	<b>\$3,582.72</b>
23	Vacuum Pumps	\$3,582.72
24	<b>Turbine Seals and Drains</b>	<b>\$7,165.44</b>
25	Piping	\$7,165.44
26	<b>Turbine Lube Oil System</b>	<b>\$18,443.76</b>
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	<b>Generator Auxiliary Systems</b>	<b>\$17,913.60</b>
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	<b>Remove Turbine</b>	<b>\$102,654.24</b>
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	<b>Project Close-Out</b>	<b>\$8,190.00</b>
43	Project Close-Out Activities	\$8,190.00

Lake Road Turbine Generator 3 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
1	<b>Lake Road T/G 3 Removal</b>	<b>150 days</b>				
2	<b>Pre-Dismantlement Activities</b>	<b>75 days</b>				
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>70 days</b>				
7	KCP&L Engineer	70 days				
8	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>70 days</b>				
9	Demolition Contractor Superintendent	70 days				
10	<b>Demolition Contractor Equipment Rental Costs</b>	<b>70 days</b>				
11	Equipment Rental	70 days				
12	<b>Demolition Contractor Consumables</b>	<b>70 days</b>				
13	Consumables	70 days				
14	<b>Scrap Crew(s)</b>	<b>70 days</b>				
15	Crew to Handle Scrap Material(s)	70 days				
16	<b>Dismantlement Directs</b>	<b>70 days</b>				
17	<b>Phase 1 Demolition</b>	<b>70 days</b>				
18	<b>Critical Piping</b>	<b>2 days</b>				
19	Remove Main Steam Piping to the Turbine	2 days				
20	<b>Circulating Water (plant side)</b>	<b>2 days</b>				
21	Waterboxes	2 days				
22	<b>Condenser Air Extraction System</b>	<b>2 days</b>				
23	Vacuum Pumps	2 days				
24	<b>Turbine Seals and Drains</b>	<b>4 days</b>				
25	Piping	4 days				
26	<b>Turbine Lube Oil System</b>	<b>11 days</b>				
27	Turbine Lube Oil Tank	5 days				
28	Turbine Lube Oil Pumps	4 days				
29	Turbine Oil Mist Eliminator	2 days				
30	<b>Generator Auxiliary Systems</b>	<b>10 days</b>				
31	Hydrogen Cooler Skid and Piping	1 day				
32	Stator Cooling Water Skid and Piping	2 days				

Lake Road Turbine Generator 3 Dismantlement

ID	Task Name	Duration	2012		2013	
			H2	H1	H2	H1
33	Isophase Bus Duct	3 days				
34	Exciter Heat Exchanger	2 days				
35	EHC Coolers	2 days				
36	<b>Remove Turbine</b>	<b>39 days</b>				
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	<b>Project Close-Out</b>	<b>5 days</b>				
43	Project Close-Out Activities	5 days				



**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	<b>Lake Road CT 5 Retirement</b>	<b>\$159,780.68</b>
2	<b>Pre-Retirement Activities</b>	<b>\$43,834.00</b>
3	Permitting Review	\$23,466.00
4	Develop Detailed Retirement Plan	\$20,368.00
5	<b>Retirement</b>	<b>\$93,370.68</b>
6	<b>Project Management During Retirement</b>	<b>\$43,309.08</b>
7	Project Management During Retirement	\$43,309.08
8	<b>Retirement Activities</b>	<b>\$50,061.60</b>
9	<b>Electrical</b>	<b>\$27,691.68</b>
10	<b>Medium and Low Voltage Drawout Switchgear</b>	<b>\$5,359.68</b>
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	<b>Motor Control Centers</b>	<b>\$2,679.84</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$1,786.56</b>
21	De-energize all buses at the source.	\$893.28
22	Open all circuit breakers and disconnect switches.	\$893.28
23	<b>Oil-Filled Power Transformers</b>	<b>\$7,146.24</b>
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	<b>Dry-type Power Transformers</b>	<b>\$4,466.40</b>
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	<b>Motors</b>	<b>\$6,252.96</b>
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	<b>Fuel System</b>	<b>\$3,466.80</b>



Lake Road CT 5 Retirement

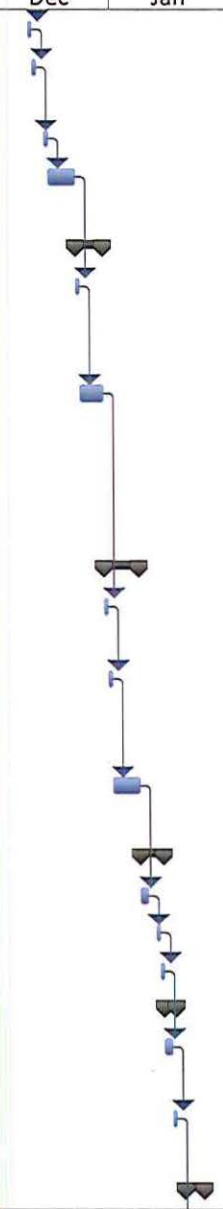
ID	Task Name	Cost
36	Isolate Fuel Oil System	\$2,604.96
37	Drain and Vent Fuel Oil Piping	\$861.84
38	Open and vent gas piping.	\$0.00
39	<b>Lube Oil Cooling Water System</b>	<b>\$2,585.52</b>
40	Open and Drain the Water Side of the Lube Oil Coolers	\$1,723.68
41	Open and Vent the Coolers and Expansion Tank	\$861.84
42	<b>Miscelleaneous Piping</b>	<b>\$4,309.20</b>
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	<b>Fire Protection Piping</b>	<b>\$3,428.24</b>
47	Empty the CO2 Storage Tank	\$2,566.40
48	Open and Vent the Fire Protection Piping	\$861.84
49	<b>Lube Oil System</b>	<b>\$8,580.16</b>
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	<b>Post Retirement Closure Activity</b>	<b>\$22,576.00</b>
54	Post Retirement Closure Activity	\$22,576.00

Lake Road CT 5 Retirement

ID	Task Name	Duration	3rd Quarter			4th Quarter			1st Quarter			
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
1	<b>Lake Road CT 5 Retirement</b>	<b>114 days</b>										
2	<b>Pre-Retirement Activities</b>	<b>40 days</b>										
3	Permitting Review	20 days										
4	Develop Detailed Retirement Plan	20 days										
5	<b>Retirement</b>	<b>54 days</b>										
6	<b>Project Management During Retirement</b>	<b>54 days</b>										
7	Project Management During Retirement	54 days										
8	<b>Retirement Activities</b>	<b>54 days</b>										
9	<b>Electrical</b>	<b>31 days</b>										
10	<b>Medium and Low Voltage Drawout Switchgear</b>	<b>6 days</b>										
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	<b>Motor Control Centers</b>	<b>3 days</b>										
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>2 days</b>										
21	De-energize all buses at the source.	1 day										
22	Open all circuit breakers and disconnect switches.	1 day										
23	<b>Oil-Filled Power Transformers</b>	<b>8 days</b>										

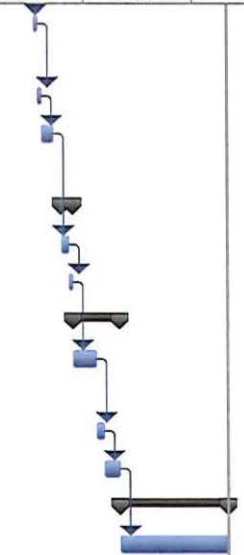
Lake Road CT 5 Retirement

ID	Task Name	Duration	3rd Quarter			4th Quarter		1st Quarter				
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
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	<b>Dry-type Power Transformers</b>	<b>5 days</b>										
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	<b>Motors</b>	<b>7 days</b>										
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	<b>Fuel System</b>	<b>4 days</b>										
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	<b>Lube Oil Cooling Water System</b>	<b>3 days</b>										
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	<b>Miscellaneous Piping</b>	<b>5 days</b>										



Lake Road CT 5 Retirement

ID	Task Name	Duration	3rd Quarter			4th Quarter			1st Quarter			
			Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
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	<b>Fire Protection Piping</b>	<b>3 days</b>										
47	Empty the CO2 Storage Tank	2 days										
48	Open and Vent the Fire Protection Piping	1 day										
49	<b>Lube Oil System</b>	<b>8 days</b>										
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	<b>Post Retirement Closure Activity</b>	<b>20 days</b>										
54	Post Retirement Closure Activity	20 days										



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

Lake Road CTG 5 Dismantlement

ID	Task Name	Cost
1	<b>Lake Road CTG 5 Dismantlement</b>	<b>\$1,595,561.08</b>
2	<b>Pre-Demolition Activities</b>	<b>\$242,211.32</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$95,729.60</b>
8	KCP&L Engineer	\$95,729.60
9	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$199,791.36</b>
10	Demolition Contractor Project Manager	\$56,527.84
11	Demolition Contractor Safety Manager	\$50,331.36
12	Demolition Contractor Superintendent	\$92,932.16
13	<b>Demolition Contractor Equipment Rental Cost</b>	<b>\$340,189.76</b>
14	Equipment Rental	\$340,189.76
15	<b>Demolition Contractor Consumables</b>	<b>\$339,400.16</b>
16	Consumables	\$339,400.16
17	<b>Scrap Crews</b>	<b>\$89,352.64</b>
18	Crew to Handle Scrap Material(s)	\$89,352.64
19	<b>Dismantlement</b>	<b>\$272,506.24</b>
20	<b>Electrical</b>	<b>\$107,481.60</b>
21	Electrical Demolition of Equipment	\$107,481.60
22	<b>Fuel Gas System</b>	<b>\$10,967.68</b>
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	<b>Lube Oil System</b>	<b>\$17,913.60</b>
27	Lube Oil Piping	\$5,374.08
28	Lube Oil Pumps	\$5,374.08
29	Lube Oil Tanks	\$7,165.44
30	<b>Fire Protection</b>	<b>\$26,870.40</b>
31	Fire Protection Piping	\$10,748.16
32	Firewater Tank	\$8,956.80
33	CO2 Storage Tank	\$7,165.44
34	<b>Generator</b>	<b>\$7,165.44</b>
35	Generator	\$7,165.44
36	<b>Combustion Turbine</b>	<b>\$75,237.12</b>
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	<b>Stack</b>	<b>\$26,870.40</b>
43	Stack	\$26,870.40
44	<b>Post Dismantlement Activities</b>	<b>\$16,380.00</b>

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	1st Quarter		1st Quarter
			Jan	Jan	Jan
1	<b>Lake Road CTG 5 Dismantlement</b>	<b>319 days</b>			
2	<b>Pre-Demolition Activities</b>	<b>60 days</b>			
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>94 days</b>			
8	KCP&L Engineer	94 days			
9	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>94 days</b>			
10	Demolition Contractor Project Manager	94 days			
11	Demolition Contractor Safety Manager	94 days			
12	Demolition Contractor Superintendent	94 days			
13	<b>Demolition Contractor Equipment Rental Cost</b>	<b>94 days</b>			
14	Equipment Rental	94 days			
15	<b>Demolition Contractor Consumables</b>	<b>94 days</b>			
16	Consumables	94 days			
17	<b>Scrap Crews</b>	<b>94 days</b>			
18	Crew to Handle Scrap Material(s)	94 days			
19	<b>Dismantlement</b>	<b>94 days</b>			
20	<b>Electrical</b>	<b>60 days</b>			
21	Electrical Demolition of Equipment	60 days			
22	<b>Fuel Gas System</b>	<b>8 days</b>			
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	<b>Lube Oil System</b>	<b>10 days</b>			
27	Lube Oil Piping	3 days			
28	Lube Oil Pumps	3 days			
29	Lube Oil Tanks	4 days			
30	<b>Fire Protection</b>	<b>15 days</b>			
31	Fire Protection Piping	6 days			



Lake Road CTG 5 Dismantlement

ID	Task Name	Duration	1st Quarter		1st Quarter
			Jan	Jan	Jan
32	Firewater Tank	5 days			
33	CO2 Storage Tank	4 days			
34	<b>Generator</b>	<b>4 days</b>			
35	Generator	4 days			
36	<b>Combustion Turbine</b>	<b>42 days</b>			
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	<b>Stack</b>	<b>15 days</b>			
43	Stack	15 days			
44	<b>Post Dismantlement Activities</b>	<b>10 days</b>			
45	Post Dismantlement Activities	10 days			

**COMBUSTION TURBINES 6 AND 7**

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

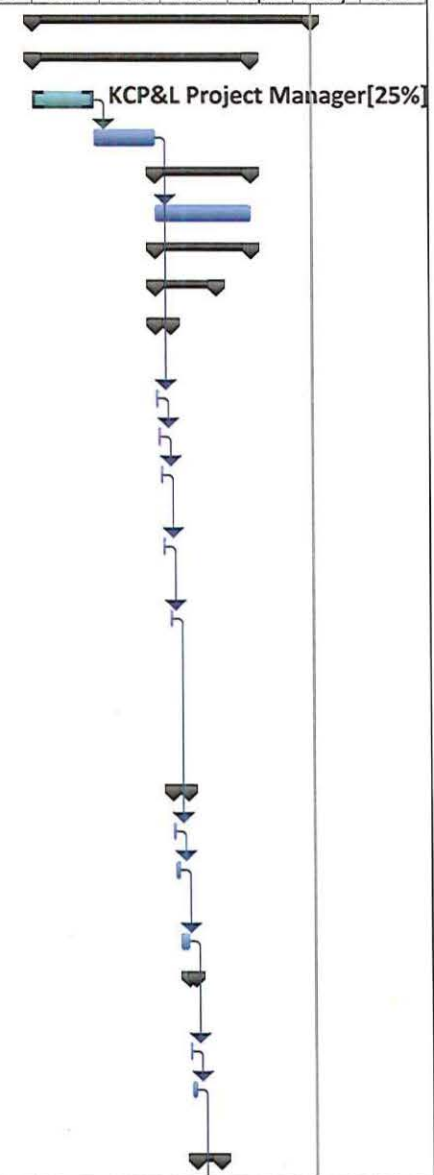
Lake Road CT 6 & 7 Retirement Opinion of Probable Cost: \$159,554

Lake Road CTG 6 and 7 Retirement

ID	Task Name	Cost
1	<b>Lake Road CTG 6 and 7 Retirement</b>	<b>\$121,565.68</b>
2	<b>Pre-Retirement Activities</b>	<b>\$69,498.64</b>
3	Permitting Review	\$23,466.00
4	Develop Detailed Retirement Plan	\$20,368.00
5	<b>Project Management During Retirement</b>	<b>\$25,664.64</b>
6	Project Management During Retirement	\$25,664.64
7	<b>Retirement Activities</b>	<b>\$29,491.04</b>
8	<b>Electrical</b>	<b>\$17,865.60</b>
9	<b>Medium and Low Voltage Drawout Switchgear</b>	<b>\$4,466.40</b>
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	<b>Motor Control Centers</b>	<b>\$4,466.40</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$2,679.84</b>
20	De-energize all buses at the source.	\$893.28
21	Open all circuit breakers and disconnect switches.	\$1,786.56
22	<b>Motors</b>	<b>\$6,252.96</b>
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	<b>Fuel Oil System</b>	<b>\$3,026.16</b>
27	Isolate Fuel Oil System	\$1,302.48
28	Drain and Vent Fuel Oil Piping	\$1,723.68
29	<b>Lube Oil Cooling Water System</b>	<b>\$2,585.52</b>
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	<b>Lube Oil System</b>	<b>\$6,013.76</b>
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	<b>Post Retirement Closure Activity</b>	<b>\$22,576.00</b>
37	Post Retirement Closure Activity	\$22,576.00

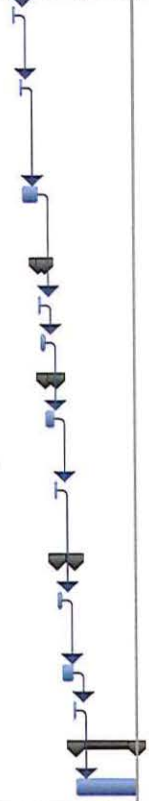
Lake Road CTG 6 and 7 Retirement

ID	Task Name	Duration	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	<b>Lake Road CTG 6 and 7 Retirement</b>	<b>92 days</b>																
2	<b>Pre-Retirement Activities</b>	<b>72 days</b>																
3	Permitting Review	20 days																
4	Develop Detailed Retirement Plan	20 days																
5	<b>Project Management During Retirement</b>	<b>32 days</b>																
6	Project Management During Retirement	32 days																
7	<b>Retirement Activities</b>	<b>32 days</b>																
8	<b>Electrical</b>	<b>20 days</b>																
9	<b>Medium and Low Voltage Drawout Switchgear</b>	<b>5 days</b>																
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	<b>Motor Control Centers</b>	<b>5 days</b>																
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>3 days</b>																
20	De-energize all buses at the source.	1 day																
21	Open all circuit breakers and disconnect switches.	2 days																
22	<b>Motors</b>	<b>7 days</b>																



Lake Road CTG 6 and 7 Retirement

ID	Task Name	Duration	2nd Quarter				3rd Quarter			4th Quarter			1st Quarter		2nd Quarter			
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
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	<b>Fuel Oil System</b>	<b>3 days</b>																
27	Isolate Fuel Oil System	1 day																
28	Drain and Vent Fuel Oil Piping	2 days																
29	<b>Lube Oil Cooling Water System</b>	<b>3 days</b>																
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	<b>Lube Oil System</b>	<b>6 days</b>																
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	<b>Post Retirement Closure Activity</b>	<b>20 days</b>																
37	Post Retirement Closure Activity	20 days																



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	<b>Lake Road CT 6 and 7 Dismantlement</b>	<b>\$1,114,119.36</b>
2	<b>Pre-Demolition Activities</b>	<b>\$191,883.12</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$99,918.00</b>
8	KCP&L Project Manager	\$37,795.60
9	KCP&L Engineer	\$62,122.40
10	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$129,651.84</b>
11	Demolition Contractor Project Manager	\$36,682.96
12	Demolition Contractor Safety Manager	\$32,661.84
13	Demolition Contractor Superintendent	\$60,307.04
14	<b>Demolition Contractor Equipment Rental Cost</b>	<b>\$220,761.44</b>
15	Equipment Rental	\$220,761.44
16	<b>Demolition Contractor Consumables</b>	<b>\$220,249.04</b>
17	Consumables	\$220,249.04
18	<b>Scrap Crews</b>	<b>\$57,984.16</b>
19	Crew to Handle Scrap Material(s)	\$57,984.16
20	<b>Dismantlement</b>	<b>\$160,911.76</b>
21	<b>Electrical</b>	<b>\$53,740.80</b>
22	Electrical Demolition of Equipment	\$53,740.80
23	<b>Fuel Oil System</b>	<b>\$1,480.72</b>
24	Remove all above grade fuel oil piping.	\$1,480.72
25	<b>Lube Oil System</b>	<b>\$10,748.16</b>
26	Lube Oil Piping	\$1,791.36
27	Lube Oil Pumps	\$3,582.72
28	Lube Oil Tanks	\$5,374.08
29	<b>Fire Protection</b>	<b>\$10,748.16</b>
30	Fire Protection Piping	\$3,582.72
31	CO2 Storage Tank	\$7,165.44
32	<b>Generator</b>	<b>\$17,913.60</b>
33	Generators	\$17,913.60
34	<b>Combustion Turbine</b>	<b>\$62,697.60</b>
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	<b>Stack</b>	<b>\$3,582.72</b>
41	Stacks	\$3,582.72
42	<b>Post Dismantlement Activities</b>	<b>\$32,760.00</b>
43	Post Dismantlement Activities	\$32,760.00

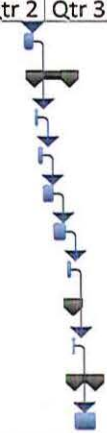


Lake Road CT 6 & 7 Dismantlement

ID	Task Name	Duration	2012				2013				2014				2015			
			Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2		
1	<b>Lake Road CT 6 and 7 Dismantlement</b>	<b>633 days</b>																
2	<b>Pre-Demolition Activities</b>	<b>95 days</b>																
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>61 days</b>																
8	KCP&L Project Manager	61 days																
9	KCP&L Engineer	61 days																
10	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>61 days</b>																
11	Demolition Contractor Project Manager	61 days																
12	Demolition Contractor Safety Manager	61 days																
13	Demolition Contractor Superintendent	61 days																
14	<b>Demolition Contractor Equipment Rental Cost</b>	<b>61 days</b>																
15	Equipment Rental	61 days																
16	<b>Demolition Contractor Consumables</b>	<b>61 days</b>																
17	Consumables	61 days																
18	<b>Scrap Crews</b>	<b>61 days</b>																
19	Crew to Handle Scrap Material(s)	61 days																
20	<b>Dismantlement</b>	<b>61 days</b>																
21	<b>Electrical</b>	<b>30 days</b>																
22	Electrical Demolition of Equipment	30 days																
23	<b>Fuel Oil System</b>	<b>2 days</b>																
24	Remove all above grade fuel oil piping.	2 days																
25	<b>Lube Oil System</b>	<b>6 days</b>																
26	Lube Oil Piping	1 day																
27	Lube Oil Pumps	2 days																
28	Lube Oil Tanks	3 days																
29	<b>Fire Protection</b>	<b>6 days</b>																
30	Fire Protection Piping	2 days																
31	CO2 Storage Tank	4 days																
32	<b>Generator</b>	<b>10 days</b>																

Lake Road CT 6 & 7 Dismantlement

ID	Task Name	Duration	2012				2013				2014				2015	
			Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
33	Generators	10 days														
34	<b>Combustion Turbine</b>	<b>35 days</b>														
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	<b>Stack</b>	<b>2 days</b>														
41	Stacks	2 days														
42	<b>Post Dismantlement Activities</b>	<b>20 days</b>														
43	Post Dismantlement Activities	20 days														



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**COMMON**

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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

Activities Required by Permit or Regulation

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

Lake Road Common Retirement

ID	Task Name	Cost
45	<b>Wells</b>	<b>\$299,000.00</b>
46	Close 13 Wells	\$299,000.00
47	<b>900 Lb. Steam Header System</b>	<b>\$5,045.44</b>
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	<b>200 Lb. Steam Header System</b>	<b>\$2,522.72</b>
51	Open and Vent the 200 Lb. Steam Header System	\$2,522.72
52	<b>Low Side Water Treatment</b>	<b>\$22,704.48</b>
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	<b>Low Side Feedwater System</b>	<b>\$2,522.72</b>
62	Open and Vent BFP Suction and Discharge Piping	\$1,261.36
63	Open and Vent the Feedwater Heaters	\$1,261.36
64	<b>Post Retirement Closure Activities</b>	<b>\$26,224.40</b>
65	Post Retirement Closure Activities	\$26,224.40









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

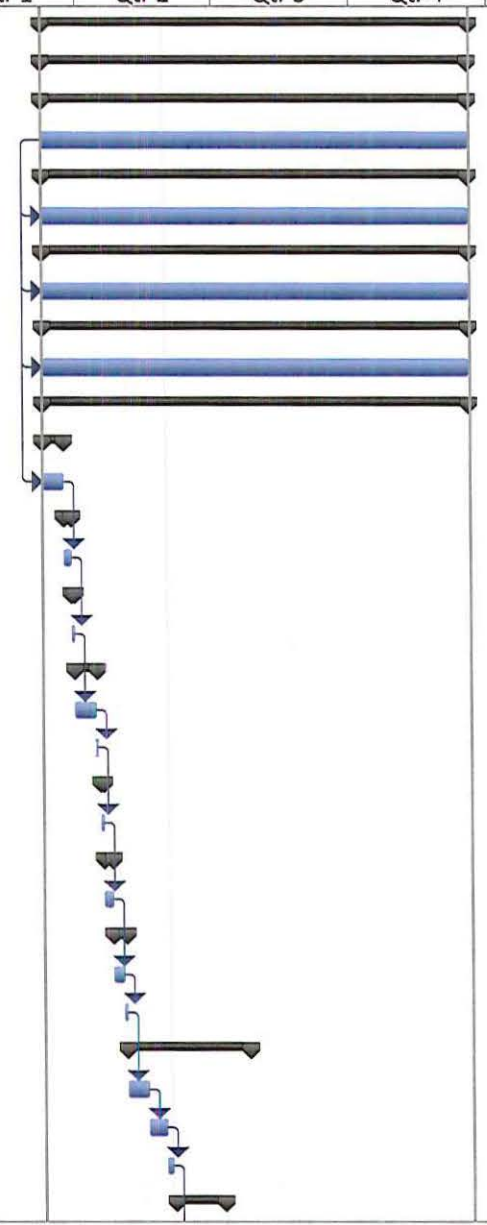
Lake Road Common Dismantlement		
ID	Task Name	Cost
1	<b>Lake Road Common Dismantlement</b>	<b>\$2,582,020.72</b>
2	<b>Overheads</b>	<b>\$2,049,812.80</b>
3	<b>Common Removal Overheads</b>	<b>\$100,346.96</b>
4	Added Overhead Staff for Common Removals	\$100,346.96
5	<b>Common Removal Equipment Rental</b>	<b>\$489,213.76</b>
6	Common Removal Equipment Rental	\$489,213.76
7	<b>Demolition Contractor Consummables</b>	<b>\$732,959.92</b>
8	Consummables	\$732,959.92
9	<b>Scrap Crew</b>	<b>\$727,292.16</b>
10	Crew(s) to Handle Scrap Material	\$727,292.16
11	<b>Dismantlement Activities</b>	<b>\$532,207.92</b>
12	<b>Administration Building</b>	<b>\$35,827.20</b>
13	Administration Building	\$35,827.20
14	<b>Fuel Yard Office Building</b>	<b>\$10,748.16</b>
15	Remove Fuel Yard Office Building	\$10,748.16
16	<b>Butler Building</b>	<b>\$7,165.44</b>
17	Butler Building	\$7,165.44
18	<b>Parking Lots and Plant Roads</b>	<b>\$39,409.92</b>
19	Plant Roads and Parking Areas	\$35,827.20
20	Guard Shack	\$3,582.72
21	<b>Dozer Building</b>	<b>\$7,165.44</b>
22	Dozer Building	\$7,165.44
23	<b>Laboratory</b>	<b>\$9,286.08</b>
24	Laboratory	\$9,286.08
25	<b>Fuel Equipment</b>	<b>\$11,607.60</b>
26	Remove Propane Tanks and above ground piping	\$11,607.60
27	Remove Gas Metering Station and above ground piping	\$0.00
28	<b>Fuel Yard</b>	<b>\$147,260.16</b>
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	<b>Conveyors</b>	<b>\$58,038.00</b>
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	<b>Underground Circulating Water Piping between Condensers and Intake</b>	<b>\$39,409.92</b>
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	<b>Yard Fire Water Systems</b>	<b>\$10,748.16</b>
41	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	\$10,748.16
42	<b>Low Side Water Treatment</b>	<b>\$60,359.52</b>
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	<b>Low Side Feedwater System</b>	<b>\$16,250.64</b>
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	<b>Boiler/Turbine Building</b>	<b>\$23,215.20</b>
57	Remove the Common Boiler and Turbine Building	\$23,215.20
58	<b>Water Storage Tanks</b>	<b>\$16,250.64</b>
59	Remove the Non-Potable/Fire Protection Water Tank	\$11,607.60
60	Remove the Condensate Storage Tank	\$4,643.04
61	<b>Steam Header Systems</b>	<b>\$13,929.12</b>
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	<b>Stacks</b>	<b>\$83,574.72</b>
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	<b>Final Site Grading and Drainage</b>	<b>\$0.00</b>
69	Final Site Grading and Drainage	\$0.00

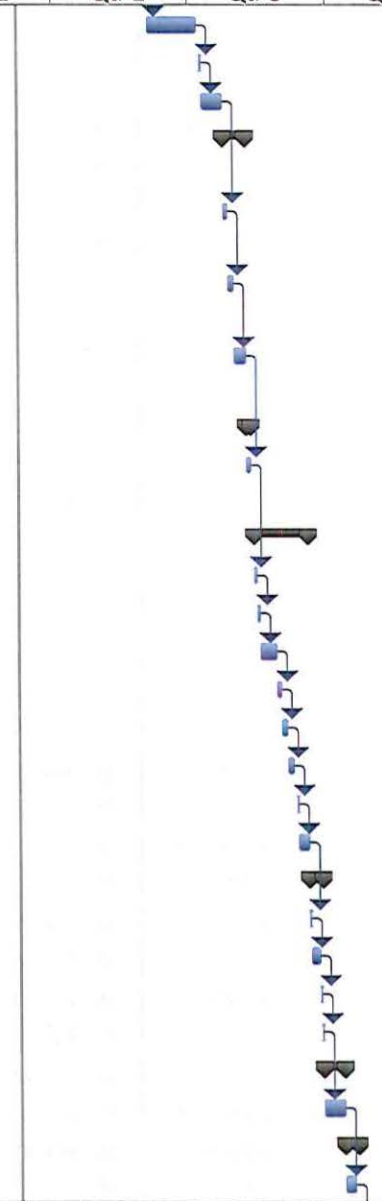
Lake Road Common Dismantlement

ID	Task Name	Duration	2012					2013
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
1	<b>Lake Road Common Dismantlement</b>	<b>204 days</b>						
2	<b>Overheads</b>	<b>203 days</b>						
3	<b>Common Removal Overheads</b>	<b>203 days</b>						
4	Added Overhead Staff for Common Removals	203 days						
5	<b>Common Removal Equipment Rental</b>	<b>203 days</b>						
6	Common Removal Equipment Rental	203 days						
7	<b>Demolition Contractor Consummables</b>	<b>203 days</b>						
8	Consummables	203 days						
9	<b>Scrap Crew</b>	<b>203 days</b>						
10	Crew(s) to Handle Scrap Material	203 days						
11	<b>Dismantlement Activities</b>	<b>203 days</b>						
12	<b>Administration Building</b>	<b>10 days</b>						
13	Administration Building	10 days						
14	<b>Fuel Yard Office Building</b>	<b>3 days</b>						
15	Remove Fuel Yard Office Building	3 days						
16	<b>Butler Building</b>	<b>2 days</b>						
17	Butler Building	2 days						
18	<b>Parking Lots and Plant Roads</b>	<b>11 days</b>						
19	Plant Roads and Parking Areas	10 days						
20	Guard Shack	1 day						
21	<b>Dozer Building</b>	<b>2 days</b>						
22	Dozer Building	2 days						
23	<b>Laboratory</b>	<b>4 days</b>						
24	Laboratory	4 days						
25	<b>Fuel Equipment</b>	<b>7 days</b>						
26	Remove Propane Tanks and above ground piping	5 days						
27	Remove Gas Metering Station and above ground piping	2 days						
28	<b>Fuel Yard</b>	<b>58 days</b>						
29	Remove Car Dumper	10 days						
30	Remove West Yard Reclaim	8 days						
31	Remove Boiler 4 and Boiler 5 Tripper	4 days						
32	<b>Conveyors</b>	<b>25 days</b>						



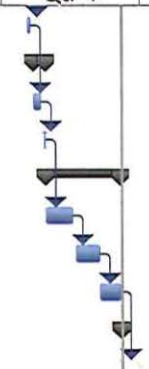
Lake Road Common Dismantlement

ID	Task Name	Duration	2012					2013
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
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	<b>Underground Circulating Water Piping between Condensers and Intake and Cooling Towers</b>	<b>11 days</b>						
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	<b>Yard Fire Water Systems</b>	<b>3 days</b>						
41	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	3 days						
42	<b>Low Side Water Treatment</b>	<b>26 days</b>						
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	<b>Low Side Feedwater System</b>	<b>7 days</b>						
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	<b>Boiler/Turbine Building</b>	<b>10 days</b>						
57	Remove the Common Boiler and Turbine Building	10 days						
58	<b>Water Storage Tanks</b>	<b>7 days</b>						
59	Remove the Non-Potable/Fire Protection Water Tank	5 days						



Lake Road Common Dismantlement

ID	Task Name	Duration	2012					2013	
			Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	
60	Remove the Condensate Storage Tank	2 days							
61	<b>Steam Header Systems</b>	<b>6 days</b>							
62	Remove 900 Lb. Steam Header Piping and Equipment	5 days							
63	Remove 200 Lb. Steam Header Piping and Equipment	1 day							
64	<b>Stacks</b>	<b>36 days</b>							
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	<b>Final Site Grading and Drainage</b>	<b>1 day</b>							
69	Final Site Grading and Drainage	1 day							



**IATAN**



# IATAN STATION

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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**

latan 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

latan 1 Retirement Opinion of Probable Cost: \$1,035,765.41

Activities Required by Permit or Regulation

latan 1 Intake Removal	\$613,077
latan 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	<b>Iatan 1 Retirement</b>	<b>\$789,156.31</b>
2	<b>Pre-Engineering</b>	<b>\$100,821.60</b>
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	\$0.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$115,245.60</b>
5	KCP&L Retirement Manager	\$115,245.60
6	<b>Equipment Rentals</b>	<b>\$39,070.50</b>
7	Vacuum truck	\$39,070.50
8	<b>Retirement</b>	<b>\$507,454.61</b>
9	<b>Electrical</b>	<b>\$18,911.68</b>
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>\$2,679.84</b>
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	<b>Motor Control Centers</b>	<b>\$1,786.56</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$893.28</b>
21	De-energize all buses at the source.	\$446.64
22	Open all circuit breakers and disconnect switches.	\$446.64
23	<b>Oil-Filled Power Transformers</b>	<b>\$5,549.44</b>
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	<b>Dry-type Power Transformers</b>	<b>\$1,786.56</b>
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	<b>Motors</b>	<b>\$6,216.00</b>
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	Drain lube oil system (if applicable) and dispose of oil.	\$2,642.88
35	<b>Coal Handling</b>	<b>\$27,475.44</b>
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	<b>Fuel Oil and Igniter System</b>	<b>\$2,528.16</b>
41	Drain fuel oil system	\$2,528.16
42	<b>Waste Oil System</b>	<b>\$1,685.44</b>
43	Drain all waste oil systems	\$1,685.44
44	<b>Boiler Chemical Feed</b>	<b>\$1,685.44</b>
45	Drain all chemical feed tanks.	\$1,685.44
46	<b>Boiler</b>	<b>\$27,484.77</b>
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	<b>Stack and Ductwork</b>	<b>\$326,961.04</b>
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	<b>Condensate and Feedwater Piping</b>	<b>\$1,685.44</b>
57	Drain water from the system.	\$842.72
58	Leave open vents and drains.	\$842.72
59	<b>Feedwater heaters</b>	<b>\$2,528.16</b>
60	Drain feedwater heaters	\$842.72
61	Leave open vents and drains.	\$1,685.44
62	<b>Deaerator and Deaerator Storage Tank</b>	<b>\$1,685.44</b>
63	Drain Deaerator and Storage	\$842.72
64	Leave open vents and drains.	\$842.72
65	<b>Baghouse</b>	<b>\$17,351.92</b>
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

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	<b>Wet FGD system</b>	<b>\$23,908.00</b>
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	<b>FGD Reagent Preparation-Limestone wet Scrubber</b>	<b>\$10,262.88</b>
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	<b>FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters</b>	<b>\$7,287.12</b>
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	<b>SCR</b>	<b>\$10,054.00</b>
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	<b>Turbine(s) and Condenser</b>	<b>\$5,266.64</b>
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	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>\$3,409.12</b>
127	Drain.	\$1,685.44

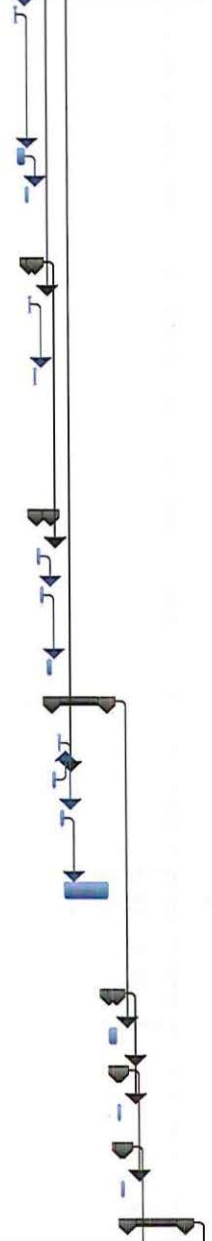
Iatan 1 Retirement

ID	Task Name	Cost
128	Open water box doors.	\$880.96
129	Drain any circulating water chemical feed tanks.	\$842.72
130	<b>Compressed Air System</b>	<b>\$2,721.28</b>
131	Open vents and drains.	\$842.72
132	Remove desiccant from desiccant dryers.	\$1,878.56
133	<b>Auxiliary Steam System</b>	<b>\$1,685.44</b>
134	Drain water from system.	\$842.72
135	Remove aux boiler chemicals.	\$842.72
136	<b>Auxiliary Cooling Water System</b>	<b>\$842.72</b>
137	Drain water from system.	\$842.72
138	<b>Condenser Air Extraction and Waterbox Priming System</b>	<b>\$842.72</b>
139	Drain water from system.	\$842.72
140	<b>Building Heating System</b>	<b>\$842.72</b>
141	Drain water from system.	\$842.72
142	<b>Battery System</b>	<b>\$4,253.28</b>
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	<b>Post Retirement Activities</b>	<b>\$26,564.00</b>
149	Post Retirement Activities	\$26,564.00

Iatan 1 Retirement			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
1	<b>Iatan 1 Retirement</b>	<b>292 days</b>						
2	<b>Pre-Engineering</b>	<b>66 days</b>						
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	66 days						
4	<b>KCL&amp;L Overhead Costs</b>	<b>186 days</b>						
5	KCP&L Retirement Manager	186 days						
6	<b>Equipment Rentals</b>	<b>186 days</b>						
7	Vacuum truck	186 days						
8	<b>Retirement</b>	<b>186 days</b>						
9	<b>Electrical</b>	<b>22 days</b>						
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>3 days</b>						
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	<b>Motor Control Centers</b>	<b>2 days</b>						
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>1 day</b>						
21	De-energize all buses at the source.	0.5 days						
22	Open all circuit breakers and disconnect switches.	0.5 days						
23	<b>Oil-Filled Power Transformers</b>	<b>7 days</b>						
24	De-energize all transformer primaries and verify that the secondary is de-energized.	1 day						

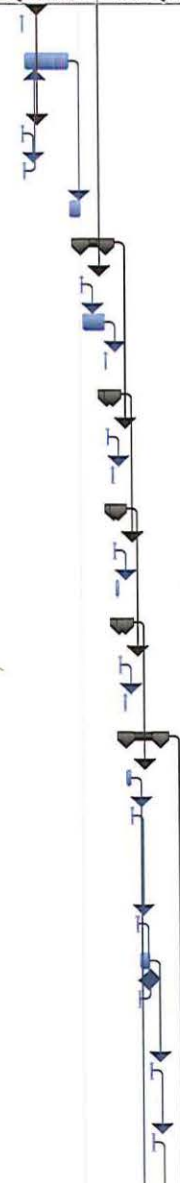
Iatan 1 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Dry-type Power Transformers</b>	<b>2 days</b>						
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	<b>Motors</b>	<b>7 days</b>						
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	<b>Coal Handling</b>	<b>25 days</b>						
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	<b>Fuel Oil and Igniter System</b>	<b>3 days</b>						
41	Drain fuel oil system	3 days						
42	<b>Waste Oil System</b>	<b>2 days</b>						
43	Drain all waste oil systems	2 days						
44	<b>Boiler Chemical Feed</b>	<b>2 days</b>						
45	Drain all chemical feed tanks.	2 days						
46	<b>Boiler</b>	<b>27 days</b>						



Iatan 1 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Stack and Ductwork</b>	<b>12 days</b>						
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	<b>Condensate and Feedwater Piping</b>	<b>2 days</b>						
57	Drain water from the system.	1 day						
58	Leave open vents and drains.	1 day						
59	<b>Feedwater heaters</b>	<b>3 days</b>						
60	Drain feedwater heaters	1 day						
61	Leave open vents and drains.	2 days						
62	<b>Deaerator and Deaerator Storage Tank</b>	<b>2 days</b>						
63	Drain Deaerator and Storage	1 day						
64	Leave open vents and drains.	1 day						
65	<b>Baghouse</b>	<b>16 days</b>						
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						



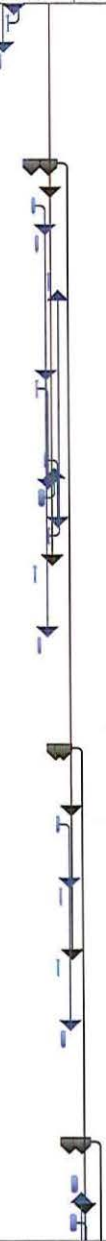
Iatan 1 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Wet FGD system</b>	<b>19 days</b>						
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						

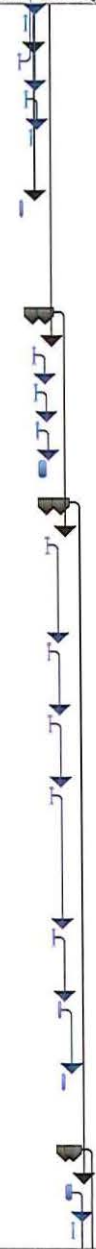


Iatan 1 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>FGD Reagent Preparation-Limestone wet Scrubber</b>	<b>9 days</b>						
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	<b>FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters</b>	<b>5 days</b>						
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	<b>SCR</b>	<b>6 days</b>						
106	Vacuum fly ash from catalyst.	4 days						
107	Remove catalyst of salvage or disposal.	4 days						



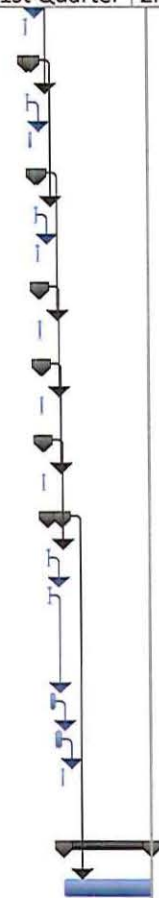
Iatan 1 Retirement								
ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
108	Padlock or tack weld access doors shut.	1 day						
109	Remove ammonia from storage tank for resale.	1 day						
110	Wash out and drain storage tank and supply piping.	1 day						
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	<b>Turbine(s) and Condenser</b>	<b>6 days</b>						
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	<b>Generator</b>	<b>7 days</b>						
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>3 days</b>						
127	Drain.	2 days						
128	Open water box doors.	1 day						





Iatan 1 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
129	Drain any circulating water chemical feed tanks.	1 day						
130	<b>Compressed Air System</b>	<b>3 days</b>						
131	Open vents and drains.	1 day						
132	Remove desiccant from desiccant dryers.	2 days						
133	<b>Auxiliary Steam System</b>	<b>2 days</b>						
134	Drain water from system.	1 day						
135	Remove aux boiler chemicals.	1 day						
136	<b>Auxiliary Cooling Water System</b>	<b>1 day</b>						
137	Drain water from system.	1 day						
138	<b>Condenser Air Extraction and Waterbox Priming System</b>	<b>1 day</b>						
139	Drain water from system.	1 day						
140	<b>Building Heating System</b>	<b>1 day</b>						
141	Drain water from system.	1 day						
142	<b>Battery System</b>	<b>7 days</b>						
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	<b>Post Retirement Activities</b>	<b>40 days</b>						
149	Post Retirement Activities	40 days						



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

Iatan 1 Dismantlement		
ID	Task Name	Cost
1	<b>Iatan Unit 1 Dismantlement</b>	<b>\$12,345,531.67</b>
2	<b>Pre-Demolition Activities</b>	<b>\$892,760.32</b>
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>\$1,676,621.54</b>
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	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>\$913,939.13</b>
15	Demolition Contractor Project Manager	\$258,584.78
16	Demolition Contractor Safety Manager	\$230,239.18
17	Demolition Contractor Superintendent	\$425,115.17
18	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$1,556,187.08</b>
19	Equipment Rental	\$1,556,187.08
20	<b>Demolition Contractor Consumables</b>	<b>\$1,552,575.20</b>
21	Consumables	\$1,552,575.20
22	<b>Scrap Crew</b>	<b>\$1,540,569.60</b>
23	Crew to Handle Scrap Material(s)	\$1,540,569.60
24	<b>Dismantlement</b>	<b>\$4,147,358.80</b>
25	<b>Phase 1 Demolition</b>	<b>\$957,905.44</b>
26	<b>Phase 1 Electrical Demolition</b>	<b>\$342,149.76</b>
27	Electrical Demolition of Phase 1 Equipment	\$342,149.76
28	<b>Condensate System</b>	<b>\$105,690.24</b>
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	<b>Boiler Feed System</b>	<b>\$67,816.96</b>
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	<b>Critical Piping</b>	<b>\$80,611.20</b>
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	<b>Extraction Steam System</b>	<b>\$17,913.60</b>
46	Piping	\$17,913.60
47	<b>Heater Drips</b>	<b>\$14,330.88</b>
48	Piping	\$14,330.88
49	<b>Auxiliary Steam</b>	<b>\$25,079.04</b>
50	Auxiliary Boilers and Auxiliary Skids	\$8,956.80
51	Auxiliary Steam Piping	\$16,122.24
52	<b>Circulating Water (plant side)</b>	<b>\$8,956.80</b>
53	Waterboxes	\$8,956.80
54	<b>Bearing Cooling Water</b>	<b>\$30,453.12</b>
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	<b>Auxiliary Cooling Water</b>	<b>\$28,661.76</b>
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	<b>Service Water</b>	<b>\$8,956.80</b>
63	Service Water Piping	\$8,956.80
64	<b>Fuel Oil System (plant side)</b>	<b>\$41,201.28</b>
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	<b>Waste Oil System</b>	<b>\$12,539.52</b>
69	Waste Oil Tank	\$3,582.72
70	Waste Oil Transfer Pump	\$3,582.72
71	Waste Oil Piping	\$5,374.08
72	<b>Air Preheat System</b>	<b>\$10,236.64</b>
73	Air Preheat Pumps	\$3,582.72
74	Air Preheat Piping	\$6,653.92
75	<b>Condenser Air Extraction System</b>	<b>\$10,748.16</b>
76	Vacuum Pumps	\$7,165.44
77	Extraction Piping	\$3,582.72
78	<b>Turbine Seals and Drains</b>	<b>\$12,539.52</b>
79	Piping	\$12,539.52
80	<b>Turbine Lube Oil System</b>	<b>\$20,363.52</b>
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	<b>Generator Auxiliary Systems</b>	<b>\$32,244.48</b>
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	<b>Chemical Feed Systems</b>	<b>\$19,303.20</b>
91	Tanks	\$8,555.04
92	Pumps	\$5,374.08
93	Piping	\$5,374.08
94	<b>Sampling Systems</b>	<b>\$6,434.40</b>
95	Field Mounted Heat Exchangers	\$3,582.72
96	Piping	\$2,851.68
97	<b>Building Heating Systems</b>	<b>\$13,307.84</b>
98	Steam Unit Heaters	\$9,505.60
99	Steam Piping	\$3,802.24
100	<b>Compressed Air System</b>	<b>\$26,870.40</b>
101	Air Compressors	\$7,165.44
102	Air Drying Equipment	\$5,374.08
103	Air Receiver Tanks	\$5,374.08
104	Compressed Air Piping	\$8,956.80
105	<b>Miscellaneous Equipment</b>	<b>\$21,496.32</b>
106	Miscellaneous Equipment (including Fire Protection)	\$21,496.32
107	<b>Phase 2 Demolition</b>	<b>\$2,929,157.36</b>
108	<b>Precipitator</b>	<b>\$107,481.60</b>
109	Remove Precipitator	\$107,481.60
110	<b>Boiler Equipment</b>	<b>\$732,490.24</b>
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	<b>Boiler Removal</b>	<b>\$401,264.64</b>
122	Furnace	\$229,294.08
123	Back Pass	\$171,970.56
124	<b>Boiler Steel Framing</b>	<b>\$723,709.44</b>
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	<b>Boiler Foundations</b>	<b>\$128,977.92</b>
130	Equipment Foundation Demolition to Grade	\$128,977.92
131	<b>Remove Turbine</b>	<b>\$835,233.52</b>

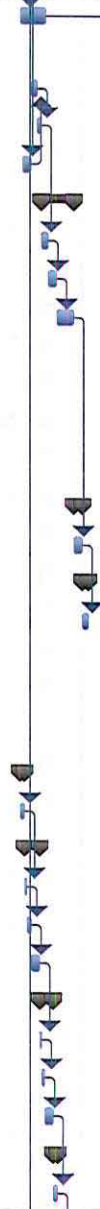
Iatan 1 Dismantlement		
ID	Task Name	Cost
132	Remove HP Turbine	\$26,321.60
133	Remove IP Turbine	\$26,321.60
134	Remove LP Turbine	\$26,321.60
135	Remove Generator	\$52,643.20
136	Remove Condenser Neck Heat Exchanger	\$26,321.60
137	Remove Condenser	\$26,321.60
138	Remove Misc. Auxiliary Turbine Equipment	\$39,482.40
139	<b>Turbine Pedestal Demolition to Grade</b>	<b>\$268,480.32</b>
140	Top Slab and Beams	\$105,286.40
141	Columns	\$163,193.92
142	<b>Remove Turbine Building</b>	<b>\$343,019.60</b>
143	Siding and Roofing	\$108,682.80
144	All Framing Elevations	\$157,929.60
145	Bracing and Girts	\$52,643.20
146	Columns	\$23,764.00
147	<b>Phase 3 Yard Demolition</b>	<b>\$260,296.00</b>
148	<b>Circulating Water Pipe (yard)</b>	<b>\$71,654.40</b>
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	<b>Remove Ash Handling Equipment and Piping</b>	<b>\$35,827.20</b>
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	<b>Post Dismantlement Activities</b>	<b>\$65,520.00</b>
160	Post Dismantlement Activities	\$65,520.00

Iatan 1 Dismantlement

ID	Task Name	Duration	2012		2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2
1	<b>Iatan Unit 1 Dismantlement</b>								
2	<b>Pre-Demolition Activities</b>	<b>265 days</b>							
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	<b>KCP&amp;L Overhead during Dismantlement</b>	<b>430 days</b>							
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	<b>Demolition Contractor Overhead during Dismantlement</b>	<b>430 days</b>							
15	Demolition Contractor Project Manager	430 days							
16	Demolition Contractor Safety Manager	430 days							
17	Demolition Contractor Superintendent	430 days							
18	<b>Demolition Contractor Equipment Rental Costs</b>	<b>430 days</b>							
19	Equipment Rental	430 days							
20	<b>Demolition Contractor Consumables</b>	<b>430 days</b>							
21	Consumables	430 days							
22	<b>Scrap Crew</b>	<b>430 days</b>							
23	Crew to Handle Scrap Material(s)	430 days							
24	<b>Dismantlement</b>	<b>430 days?</b>							
25	<b>Phase 1 Demolition</b>	<b>191 days?</b>							
26	<b>Phase 1 Electrical Demolition</b>	<b>191 days</b>							
27	Electrical Demolition of Phase 1 Equipment	191 days							
28	<b>Condensate System</b>	<b>30 days</b>							
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							

Iatan 1 Dismantlement

ID	Task Name	Duration	2012			2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2	H1
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	<b>Boiler Feed System</b>	<b>37 days</b>								
38	Boiler Feed Pump Turbine and Exhaust	7 days								
39	Boiler Feed Pump	10 days								
40	High Pressure Heaters	20 days								
41	<b>Critical Piping</b>	<b>45 days</b>								
42	Main Steam Piping	15 days								
43	Cold Reheat Piping	15 days								
44	Hot Reheat Piping	15 days								
45	<b>Extraction Steam System</b>	<b>10 days</b>								
46	Piping	10 days								
47	<b>Heater Drips</b>	<b>8 days</b>								
48	Piping	8 days								
49	<b>Auxiliary Steam</b>	<b>14 days</b>								
50	Auxiliary Boilers and Auxiliary Skids	5 days								
51	Auxiliary Steam Piping	9 days								
52	<b>Circulating Water (plant side)</b>	<b>5 days</b>								
53	Waterboxes	5 days								
54	<b>Bearing Cooling Water</b>	<b>17 days</b>								
55	Bearing Cooling Water Pumps	2 days								
56	Bearing Cooling Water Heat Exchanger	5 days								
57	Bearing Cooling Water Piping	10 days								
58	<b>Auxiliary Cooling Water</b>	<b>16 days</b>								
59	Auxiliary Cooling Water Heat Exchanger	3 days								
60	Auxiliary Cooling Water Pumps	3 days								
61	Auxiliary Cooling Water Piping	10 days								
62	<b>Service Water</b>	<b>5 days</b>								
63	Service Water Piping	5 days								

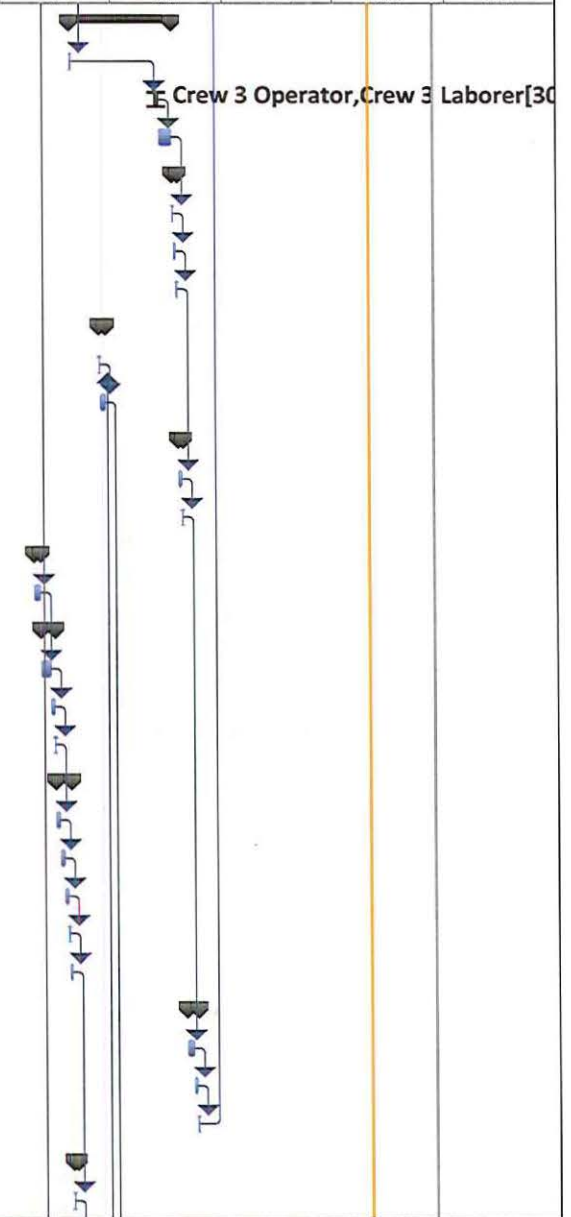


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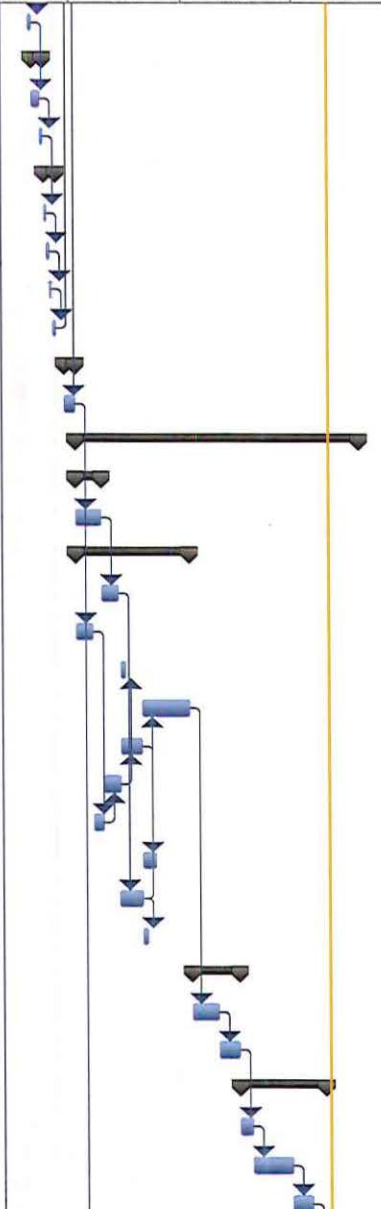
Iatan 1 Dismantlement

ID	Task Name	Duration	2012		2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2
64	<b>Fuel Oil System (plant side)</b>	<b>120 days</b>							
65	Igniter Fuel Oil Pumps	3 days							
66	Igniter Fuel Oil and Atomizing Air Piping	5 days							
67	Igniters	15 days							
68	<b>Waste Oil System</b>	<b>7 days</b>							
69	Waste Oil Tank	2 days							
70	Waste Oil Transfer Pump	2 days							
71	Waste Oil Piping	3 days							
72	<b>Air Preheat System</b>	<b>9 days</b>							
73	Air Preheat Pumps	2 days							
74	Air Preheat Piping	7 days							
75	<b>Condenser Air Extraction System</b>	<b>6 days</b>							
76	Vacuum Pumps	4 days							
77	Extraction Piping	2 days							
78	<b>Turbine Seals and Drains</b>	<b>7 days</b>							
79	Piping	7 days							
80	<b>Turbine Lube Oil System</b>	<b>17 days?</b>							
81	Turbine Lube Oil Tank	12 days							
82	Turbine Lube Oil Pumps	4 days							
83	Turbine Oil Mist Eliminator	1 day?							
84	<b>Generator Auxiliary Systems</b>	<b>18 days</b>							
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	<b>Chemical Feed Systems</b>	<b>15 days</b>							
91	Tanks	9 days							
92	Pumps	3 days							
93	Piping	3 days							
94	<b>Sampling Systems</b>	<b>5 days</b>							
95	Field Mounted Heat Exchangers	2 days							



Iatan 1 Dismantlement

ID	Task Name	Duration	2012		2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2
96	Piping	3 days							
97	<b>Building Heating Systems</b>	<b>14 days</b>							
98	Steam Unit Heaters	10 days							
99	Steam Piping	4 days							
100	<b>Compressed Air System</b>	<b>15 days</b>							
101	Air Compressors	4 days							
102	Air Drying Equipment	3 days							
103	Air Reciever Tanks	3 days							
104	Compressed Air Piping	5 days							
105	<b>Miscellaneous Equipment</b>	<b>12 days</b>							
106	Miscellaneous Equipment (including Fire Protection)	12 days							
107	<b>Phase 2 Demolition</b>	<b>333 days</b>							
108	<b>Precipitator</b>	<b>30 days</b>							
109	Remove Precipitator	30 days							
110	<b>Boiler Equipment</b>	<b>134 days</b>							
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	<b>Boiler Removal</b>	<b>56 days</b>							
122	Furnace	32 days							
123	Back Pass	24 days							
124	<b>Boiler Steel Framing</b>	<b>101 days</b>							
125	Hanger Girders at Top	15 days							
126	All Other Framing	47 days							
127	Bracing and Girts	23 days							



Iatan 1 Dismantlement

ID	Task Name	Duration	2012		2013		2014		2015
			H2	H1	H2	H1	H2	H1	H2
128	Columns	16 days							
129	<b>Boiler Foundations</b>	<b>18 days</b>							
130	Equipment Foundation Demolition to Grade	18 days							
131	<b>Remove Turbine</b>	<b>333 days</b>							
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	<b>Turbine Pedestal Demolition to Grade</b>	<b>102 days</b>							
140	Top Slab and Beams	40 days							
141	Columns	62 days							
142	<b>Remove Turbine Building</b>	<b>146 days</b>							
143	Siding and Roofing	41 days							
144	All Framing Elevations	60 days							
145	Bracing and Girts	20 days							
146	Columns	25 days							
147	<b>Phase 3 Yard Demolition</b>	<b>150 days</b>							
148	<b>Circulating Water Pipe (yard)</b>	<b>40 days</b>							
149	Excavate Circulating Water Pipe	10 days							
150	Collapse Circulating Water Pipe	20 days							
151	Backfill Circulating Water Pipe	10 days							
152	<b>Remove Ash Handling Equipment and Piping</b>	<b>20 days</b>							
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							

Iatan 1 Dismantlement

ID	Task Name	Duration	2012		2013		2014		2015	
			H2	H1	H2	H1	H2	H1	H2	H1
158	Remove Unit 1 Water Treatment Equipment and Building	30 days								
159	<b>Post Dismantlement Activities</b>	<b>40 days</b>								
160	Post Dismantlement Activities	40 days								

## Iatan 1 AQCS

ID	Task Name	Cost
1	<b>Iatan Unit 1 AQCS Dismantlement</b>	<b>\$3,382,301.12</b>
2	<b>Common Removal Overheads</b>	<b>\$341,196.80</b>
3	Added Overhead Staff for Common Removals	\$341,196.80
4	<b>Scrap Crew</b>	<b>\$609,062.40</b>
5	Crew(s) to Handle Scrap Material	\$609,062.40
6	<b>Demolition Contractor Consummables</b>	<b>\$819,372.80</b>
7	Consummables	\$819,372.80
8	<b>Demolition Contractor Equipment Rental Costs</b>	<b>\$616,651.20</b>
9	Equipment Rental	\$616,651.20
10	<b>Dismantlement</b>	<b>\$996,017.92</b>
11	<b>Initial Structural</b>	<b>\$130,313.68</b>
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	<b>General Electric</b>	<b>\$202,423.68</b>
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 electrical control cabinets & switchgear	\$17,913.60
39	Demolish electrical control room	\$17,913.60
40	<b>FGD System</b>	<b>\$201,109.68</b>
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	<b>ID Fans</b>	<b>\$78,819.84</b>
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	<b>Fabric Filters</b>	<b>\$309,905.28</b>
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	<b>SCR and Ammonia Supply</b>	<b>\$73,445.76</b>
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	<b>Site Preperation Work</b>	<b>\$0.00</b>
100	<New Task>	\$0.00

Iatan 1 AQCS Dismantlement

ID	Task Name	Duration	2013				2014					
			Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
1	<b>Iatan Unit 1 AQCS Dismantlement</b>	<b>594.5 days</b>	[Gantt bar spanning from Qtr 2 2013 to Qtr 2 2014]									
2	<b>Common Removal Overheads</b>	<b>340 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
3	Added Overhead Staff for Common Removals	340 days	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
4	<b>Scrap Crew</b>	<b>340 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
5	Crew(s) to Handle Scrap Material	340 days	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
6	<b>Demolition Contractor Consummables</b>	<b>340 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
7	Consummables	340 days	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
8	<b>Demolition Contractor Equipment Rental Costs</b>	<b>340 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
9	Equipment Rental	340 days	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
10	<b>Dismantlement</b>	<b>340.5 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
11	<b>Initial Structural</b>	<b>202.5 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 4 2013]									
12	Remove SCR box & ductwork lagging & insulation	10 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
13	Remove SCR expansion joints	6 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
14	Remove ductwork lagging & insulation	5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
15	Remove ductwork expansion joints	10 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
16	Remove ductwork access platforms & ladders	10 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
17	Remove FF lagging, insulation, wall panel, & roof panels	20 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
18	Remove ID fan lagging & insulation	4 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
19	Removal all HVAC equipment located on FGD Bldg roof	3 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
20	Remove FGD Bldg lagging, insulation, wall panel, & roof	10 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
21	<b>General Electric</b>	<b>108 days</b>	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
22	Remove breakers serving all FF equipment	0.5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
23	Remove breakers serving all FGD equipment	1 day	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
24	Remove breakers serving all ID fan equipment	0.5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
25	Remove breakers serving all SCR equipment	0.5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
26	Remove breakers serving all comp air equipment	0.5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
27	Remove all ductwork primary instrumentation, controls & assoc'd cables, and c	5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
28	Remove all FGD primary instrumentation, controls & assoc'd cables, and condu	15 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
29	Remove all FF primary instrumentation, controls & assoc'd cables, and conduit	10 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
30	Remove SCR primary instrumentation, controls, & assoc'd cable & conduit	5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									
31	Remove NH3 supply primary instrumentation, controls, & assoc'd cable & cond	5 days	[Gantt bar from Qtr 2 2013 to Qtr 2 2014]									

Electrical Crew - Operator, Electrician



Iatan 1 AQCS Dismantlement

ID	Task Name	Duration	2013				2014	
			Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
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 electrical control cabinets & switchgear	10 days						
39	Demolish electrical control room	10 days						
40	<b>FGD System</b>	<b>98.5 days</b>						
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 fr	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	<b>ID Fans</b>	<b>65 days</b>						
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 r	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						

Iatan 1 AQCS Dismantlement

ID	Task Name	Duration	2013				2014	
			Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
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	<b>Fabric Filters</b>	<b>265.5 days</b>						
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	<b>SCR and Ammonia Supply</b>	<b>38 days</b>						
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						

Iatan 1 AQCS Dismantlement

ID	Task Name	Duration	2013				2014					
			Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	
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 & vaporizers	3 days										
99	<b>Site Preperation Work</b>	<b>1 day</b>										
100	<New Task>	1 day										



## UNIT 2

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	<b>Iatan 2 Retirement</b>	<b>\$785,786.45</b>
2	<b>Pre-Engineering</b>	<b>\$100,821.60</b>
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	\$0.00
4	<b>KCL&amp;L Overhead Costs</b>	<b>\$114,006.40</b>
5	KCP&L Retirement Manager	\$114,006.40
6	<b>Equipment Rentals</b>	<b>\$38,625.28</b>
7	Vacuum truck	\$38,625.28
8	<b>Retirement</b>	<b>\$505,769.17</b>
9	<b>Electrical</b>	<b>\$18,911.68</b>
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>\$2,679.84</b>
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	<b>Motor Control Centers</b>	<b>\$1,786.56</b>
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>\$893.28</b>
21	De-energize all buses at the source.	\$446.64
22	Open all circuit breakers and disconnect switches.	\$446.64
23	<b>Oil-Filled Power Transformers</b>	<b>\$5,549.44</b>
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	<b>Dry-type Power Transformers</b>	<b>\$1,786.56</b>
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	<b>Motors</b>	<b>\$6,216.00</b>
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	<b>Coal Handling</b>	<b>\$27,475.44</b>
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	<b>Fuel Oil and Igniter System</b>	<b>\$2,528.16</b>
41	Drain fuel oil system	\$2,528.16
42	<b>Boiler Chemical Feed</b>	<b>\$1,685.44</b>
43	Drain all chemical feed tanks.	\$1,685.44
44	<b>Boiler</b>	<b>\$27,484.77</b>
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	<b>Stack and Ductwork</b>	<b>\$326,961.04</b>
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	<b>Condensate and Feedwater Piping</b>	<b>\$1,685.44</b>
55	Drain water from the system.	\$842.72
56	Leave open vents and drains.	\$842.72
57	<b>Feedwater heaters</b>	<b>\$2,528.16</b>
58	Drain feedwater heaters	\$842.72
59	Leave open vents and drains.	\$1,685.44
60	<b>Deaerator and Deaerator Storage Tank</b>	<b>\$1,685.44</b>
61	Drain Deaerator and Storage	\$842.72
62	Leave open vents and drains.	\$842.72
63	<b>Baghouse</b>	<b>\$17,351.92</b>
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 to 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	<b>Wet FGD system</b>	<b>\$23,908.00</b>
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	<b>FGD Reagent Preparation-Limestone wet Scrubber</b>	<b>\$10,262.88</b>
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	<b>FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters</b>	<b>\$7,287.12</b>
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	<b>SCR</b>	<b>\$10,054.00</b>
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	<b>Turbine(s) and Condenser</b>	<b>\$5,266.64</b>
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	<b>Generator</b>	<b>\$6,095.76</b>
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>\$3,409.12</b>
125	Drain.	\$1,685.44
126	Open water box doors.	\$880.96
127	Drain any circulating water chemical feed tanks.	\$842.72

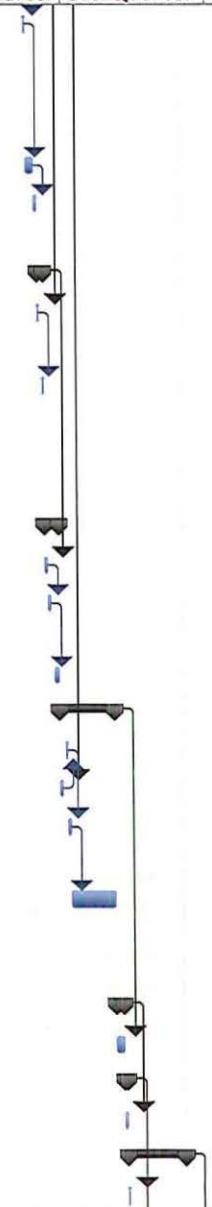
Iatan 2 Retirement

ID	Task Name	Cost
128	<b>Compressed Air System</b>	<b>\$2,721.28</b>
129	Open vents and drains.	\$842.72
130	Remove desiccant from desiccant dryers.	\$1,878.56
131	<b>Auxiliary Steam System</b>	<b>\$1,685.44</b>
132	Drain water from system.	\$842.72
133	Remove aux boiler chemicals.	\$842.72
134	<b>Auxiliary Cooling Water System</b>	<b>\$842.72</b>
135	Drain water from system.	\$842.72
136	<b>Condenser Air Extraction and Waterbox Priming System</b>	<b>\$842.72</b>
137	Drain water from system.	\$842.72
138	<b>Building Heating System</b>	<b>\$842.72</b>
139	Drain water from system.	\$842.72
140	<b>Battery System</b>	<b>\$4,253.28</b>
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	<b>Post Retirement Activities</b>	<b>\$26,564.00</b>
147	Post Retirement Activities	\$26,564.00

Iatan 2 Retirement			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
1	<b>Iatan 2 Retirement</b>	<b>290 days</b>						
2	<b>Pre-Engineering</b>	<b>66 days</b>						
3	Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons.	66 days						
4	<b>KCL&amp;L Overhead Costs</b>	<b>184 days</b>						
5	KCP&L Retirement Manager	184 days						
6	<b>Equipment Rentals</b>	<b>184 days</b>						
7	Vacuum truck	184 days						
8	<b>Retirement</b>	<b>184 days</b>						
9	<b>Electrical</b>	<b>22 days</b>						
10	<b>Medium and Low Voltage Draw out Switchgear</b>	<b>3 days</b>						
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	<b>Motor Control Centers</b>	<b>2 days</b>						
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	<b>Low-voltage Switchboards and Panelboards</b>	<b>1 day</b>						
21	De-energize all buses at the source.	0.5 days						
22	Open all circuit breakers and disconnect switches.	0.5 days						
23	<b>Oil-Filled Power Transformers</b>	<b>7 days</b>						
24	De-energize all transformer primaries and verify that the 1 day secondary is de-energized.	1 day						

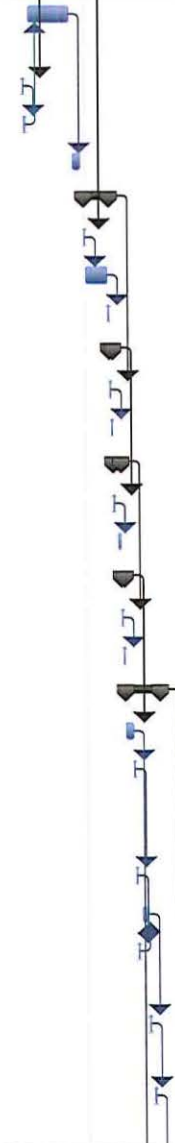
Iatan 2 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Dry-type Power Transformers</b>	<b>2 days</b>						
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	<b>Motors</b>	<b>7 days</b>						
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	<b>Coal Handling</b>	<b>25 days</b>						
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	<b>Fuel Oil and Igniter System</b>	<b>3 days</b>						
41	Drain fuel oil system	3 days						
42	<b>Boiler Chemical Feed</b>	<b>2 days</b>						
43	Drain all chemical feed tanks.	2 days						
44	<b>Boiler</b>	<b>27 days</b>						
45	Open boiler doors.	1 day						



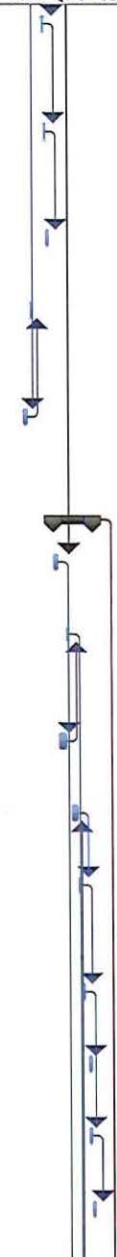
Iatan 2 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Stack and Ductwork</b>	<b>12 days</b>						
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	<b>Condensate and Feedwater Piping</b>	<b>2 days</b>						
55	Drain water from the system.	1 day						
56	Leave open vents and drains.	1 day						
57	<b>Feedwater heaters</b>	<b>3 days</b>						
58	Drain feedwater heaters	1 day						
59	Leave open vents and drains.	2 days						
60	<b>Deaerator and Deaerator Storage Tank</b>	<b>2 days</b>						
61	Drain Deaerator and Storage	1 day						
62	Leave open vents and drains.	1 day						
63	<b>Baghouse</b>	<b>16 days</b>						
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						



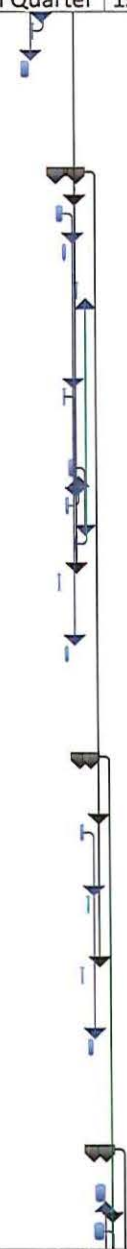
Iatan 2 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>Wet FGD system</b>	<b>19 days</b>						
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						



Iatan 2 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
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	<b>FGD Reagent Preparation-Limestone wet Scrubber</b>	<b>9 days</b>						
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	<b>FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters</b>	<b>5 days</b>						
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	<b>SCR</b>	<b>6 days</b>						
104	Vacuum fly ash from catalyst.	4 days						
105	Remove catalyst of salvage or disposal.	4 days						

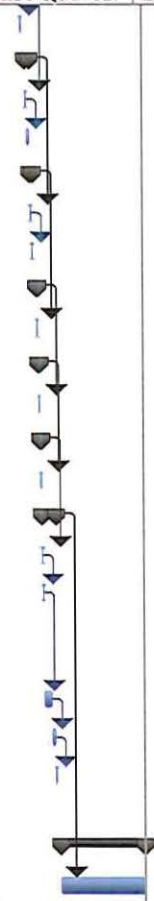


Iatan 2 Retirement								
ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
106	Padlock or tack weld access doors shut.	1 day						
107	Remove ammonia from storage tank for resale.	1 day						
108	Wash out and drain storage tank and supply piping.	1 day						
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	<b>Turbine(s) and Condenser</b>	<b>6 days</b>						
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	<b>Generator</b>	<b>7 days</b>						
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	<b>Circulation Water and Turbine Cooling Water System</b>	<b>3 days</b>						
125	Drain.	2 days						
126	Open water box doors.	1 day						



Iatan 2 Retirement

ID	Task Name	Duration	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
127	Drain any circulating water chemical feed tanks.	1 day						
128	<b>Compressed Air System</b>	<b>3 days</b>						
129	Open vents and drains.	1 day						
130	Remove desiccant from desiccant dryers.	2 days						
131	<b>Auxiliary Steam System</b>	<b>2 days</b>						
132	Drain water from system.	1 day						
133	Remove aux boiler chemicals.	1 day						
134	<b>Auxiliary Cooling Water System</b>	<b>1 day</b>						
135	Drain water from system.	1 day						
136	<b>Condenser Air Extraction and Waterbox Priming System</b>	<b>1 day</b>						
137	Drain water from system.	1 day						
138	<b>Building Heating System</b>	<b>1 day</b>						
139	Drain water from system.	1 day						
140	<b>Battery System</b>	<b>7 days</b>						
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	<b>Post Retirement Activities</b>	<b>40 days</b>						
147	Post Retirement Activities	40 days						



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

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

Iatan Common Retirement

ID	Task Name	Cost
45	<b>Reagent Prep and Gypsum Handling</b>	<b>\$29,365.20</b>
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	<b>Water Pretreatment and ZLD</b>	<b>\$22,468.88</b>
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	<b>Post Retirement Closure Activities</b>	<b>\$32,080.80</b>
60	Post Retirement Closure Activities	\$32,080.80

Iatan Common Retirement

ID	Task Name	Duration	er											
			1st Quarter			2nd Quarter			3rd Quarter					
			Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			
1	<b>Iatan Common Retirement</b>	<b>131 days</b>	[Gantt bar spanning from Jan to Jul]											
2	<b>Pre-Retirement Activities</b>	<b>40 days</b>	[Gantt bar spanning from Jan to Feb]											
3	Permitting Review	20 days	[Gantt bar spanning from Jan to Feb]											
4	Develop Detailed Retirement Plan	20 days	[Gantt bar spanning from Jan to Feb]											
5	<b>Overheads</b>	<b>61 days</b>	[Gantt bar spanning from Feb to May]											
6	<b>Common Retirement Overheads</b>	<b>61 days</b>	[Gantt bar spanning from Feb to May]											
7	Added Overhead Staff for Common Retirement	61 days	[Gantt bar spanning from Feb to May]											
8	<b>Common Retirement Equipment Rental</b>	<b>61 days</b>	[Gantt bar spanning from Feb to May]											
9	Common Removal Equipment Rental	61 days	[Gantt bar spanning from Feb to May]											
10	<b>Retirement Activities</b>	<b>61 days</b>	[Gantt bar spanning from Feb to May]											
11	<b>Administration Building</b>	<b>15 days</b>	[Gantt bar spanning from Feb to Mar]											
12	Secure Administration Building	15 days	[Gantt bar spanning from Feb to Mar]											
13	<b>Fuel Yard Office Building</b>	<b>9 days</b>	[Gantt bar spanning from Mar to Apr]											
14	Secure Fuel Yard Office Building	9 days	[Gantt bar spanning from Mar to Apr]											
15	<b>Training Building</b>	<b>9 days</b>	[Gantt bar spanning from Mar to Apr]											
16	Secure Training Building	9 days	[Gantt bar spanning from Mar to Apr]											
17	<b>Warehouse(s)</b>	<b>8 days</b>	[Gantt bar spanning from Mar to Apr]											
18	Secure Unit 1 Warehouse	2 days	[Gantt bar spanning from Mar to Apr]											
19	Secure Unit 2 Warehouse	6 days	[Gantt bar spanning from Mar to Apr]											
20	<b>Maintenance Shop</b>	<b>20 days</b>	[Gantt bar spanning from Mar to Apr]											
21	Secure Maintenance Shop	20 days	[Gantt bar spanning from Mar to Apr]											
22	<b>Fuel Yard</b>	<b>51 days</b>	[Gantt bar spanning from Mar to May]											
23	<b>Transfer Towers</b>	<b>21 days</b>	[Gantt bar spanning from Mar to Apr]											
24	Clean Transfer Tower 1	3 days	[Gantt bar spanning from Mar to Apr]											
25	Clean Transfer Tower 2	3 days	[Gantt bar spanning from Mar to Apr]											
26	Clean and Secure Crusher Building	5 days	[Gantt bar spanning from Mar to Apr]											
27	Clean Stockout Conveyor Reclaim Pit	10 days	[Gantt bar spanning from Mar to Apr]											
28	<b>Conveyors</b>	<b>14 days</b>	[Gantt bar spanning from Mar to Apr]											
29	Clean Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	14 days	[Gantt bar spanning from Mar to Apr]											
30	<b>Car Dumper</b>	<b>7 days</b>	[Gantt bar spanning from Mar to Apr]											
31	Empty Car Dumper Hoppers	1 day	[Gantt bar spanning from Mar to Apr]											
32	Clean Car Dumper	3 days	[Gantt bar spanning from Mar to Apr]											

Iatan Common Retirement												
ID	Task Name	Duration	Order	1st Quarter			2nd Quarter			3rd Quarter		
				Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
33	Secure Dumper Building	3 days										
34	<b>Remove Stacker/Reclaimer</b>	<b>5 days</b>										
35	Clean and Secure Stacker/Reclaimer	5 days										
36	<b>Unit 1 Reclaim</b>	<b>4 days</b>										
37	Clean Unit 1 Reclaim	2 days										
38	Secure Unit 1 Reclaim Building	2 days										
39	<b>Sewage Treatment</b>	<b>4 days</b>										
40	Clean Sewage Treatment and Transfer Points	4 days										
41	<b>Fuel Oil Storage and Unloading</b>	<b>1 day</b>										
42	Remove Fuel Oil from Fuel Oil Storage and Vent	1 day										
43	<b>Yard Fire Water Systems</b>	<b>1 day</b>										
44	Drain Yard Fire Water System	1 day										
45	<b>Reagent Prep and Gypsum Handling</b>	<b>23 days</b>										
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	<b>Water Pretreatment and ZLD</b>	<b>15 days</b>										
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	<b>Post Retirement Closure Activities</b>	<b>40 days</b>										
60	Post Retirement Closure Activities	40 days										



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

Iatan Common Dismantlement		
ID	Task Name	Cost
1	<b>Iatan Common Dismantlement</b>	<b>\$15,840,077.07</b>
2	<b>Overheads</b>	<b>\$1,756,968.56</b>
3	<b>Common Removal Overheads</b>	<b>\$86,011.67</b>
4	Added Overhead Staff for Common Removals	\$86,011.67
5	<b>Common Removal Equipment Rental</b>	<b>\$419,326.08</b>
6	Common Removal Equipment Rental	\$419,326.08
7	<b>Scrap Crew</b>	<b>\$623,393.36</b>
8	Crew(s) to Handle Scrap Material	\$623,393.36
9	<b>Demolition Contractor Consummables</b>	<b>\$628,237.44</b>
10	Consummables	\$628,237.44
11	<b>Dismantlement Activities</b>	<b>\$14,083,108.51</b>
12	<b>Administration Building</b>	<b>\$35,827.20</b>
13	Remove Administration Building	\$35,827.20
14	<b>Fuel Yard Office Building</b>	<b>\$17,913.60</b>
15	Remove Fuel Yard Office Building	\$17,913.60
16	<b>Training Building</b>	<b>\$17,913.60</b>
17	Remove Training Building	\$17,913.60
18	<b>Parking Lots and Plant Roads</b>	<b>\$82,402.56</b>
19	Plant Roads and Parking Areas	\$71,654.40
20	Guard Shack	\$10,748.16
21	<b>Warehouse(s)</b>	<b>\$35,827.20</b>
22	Remove Unit 1 Warehouse	\$17,913.60
23	Remove Unit 2 Warehouse	\$17,913.60
24	<b>Maintenance Shop</b>	<b>\$23,215.20</b>
25	Remove Maintenance Shop	\$23,215.20
26	<b>Fuel Yard</b>	<b>\$752,371.20</b>
27	<b>Remove Transfer Towers</b>	<b>\$465,753.60</b>
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	<b>Remove Conveyors</b>	<b>\$125,395.20</b>
33	Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B	\$125,395.20
34	<b>Remove Car Dumper</b>	<b>\$89,568.00</b>
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	<b>Remove Stacker/Reclaimer</b>	<b>\$7,165.44</b>
40	Remove Stacker/Reclaimer	\$3,582.72
41	<b>Remove Unit 1 Reclaim</b>	<b>\$64,488.96</b>
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	<b>Sewage Treatment</b>	<b>\$21,496.32</b>
47	Remove Sewage Treatment Pumps and Miscellaneous Equipment	\$7,165.44
48	Remove Sewage Treatment Concrete Structures	\$14,330.88
49	<b>Yard Fire Water Systems</b>	<b>\$35,827.20</b>
50	Remove Hydrants and Fire Water System Piping Down to 3' Below Grade	\$35,827.20
51	<b>Water Pretreatment Clarifiers and ZLD</b>	<b>\$121,812.48</b>
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	<b>Stacks</b>	<b>\$11,027,325.89</b>
61	Remove Unit 1 Stack to Grade	\$4,198,401.00
62	Remove Common Stack to Grade	\$6,828,924.89
63	<b>Reagent Prep and Gypsum Handling</b>	<b>\$336,775.68</b>
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	<b>Final Site Grading and Drainage</b>	<b>\$1,574,400.38</b>
74	Final Site Grading and Drainage	\$1,574,400.38

Iatan Common Dismantlement

ID	Task Name	Duration	2nd Quarter				3rd Quarter			4th Quarter				
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
1	<b>Iatan Common Dismantlement</b>	<b>208 days?</b>	[Gantt bar from Mar to Dec]											
2	<b>Overheads</b>	<b>174 days</b>	[Gantt bar from Mar to Nov]											
3	<b>Common Removal Overheads</b>	<b>174 days</b>	[Gantt bar from Mar to Nov]											
4	Added Overhead Staff for Common Removal	174 days	[Gantt bar from Mar to Nov]											
5	<b>Common Removal Equipment Rental</b>	<b>174 days</b>	[Gantt bar from Mar to Nov]											
6	Common Removal Equipment Rental	174 days	[Gantt bar from Mar to Nov]											
7	<b>Scrap Crew</b>	<b>174 days</b>	[Gantt bar from Mar to Nov]											
8	Crew(s) to Handle Scrap Material	174 days	[Gantt bar from Mar to Nov]											
9	<b>Demolition Contractor Consummables</b>	<b>174 days</b>	[Gantt bar from Mar to Nov]											
10	Consummables	174 days	[Gantt bar from Mar to Nov]											
11	<b>Dismantlement Activities</b>	<b>208 days?</b>	[Gantt bar from Mar to Dec]											
12	<b>Administration Building</b>	<b>10 days</b>	[Gantt bar in Mar]											
13	Remove Administration Building	10 days	[Gantt bar in Mar]											
14	<b>Fuel Yard Office Building</b>	<b>5 days</b>	[Gantt bar in Apr]											
15	Remove Fuel Yard Office Building	5 days	[Gantt bar in Apr]											
16	<b>Training Building</b>	<b>5 days</b>	[Gantt bar in Apr]											
17	Remove Training Building	5 days	[Gantt bar in Apr]											
18	<b>Parking Lots and Plant Roads</b>	<b>23 days</b>	[Gantt bar in Apr]											
19	Plant Roads and Parking Areas	20 days	[Gantt bar in Apr]											
20	Guard Shack	3 days	[Gantt bar in Apr]											
21	<b>Warehouse(s)</b>	<b>10 days</b>	[Gantt bar in May]											
22	Remove Unit 1 Warehouse	5 days	[Gantt bar in May]											
23	Remove Unit 2 Warehouse	5 days	[Gantt bar in May]											
24	<b>Maintenance Shop</b>	<b>10 days</b>	[Gantt bar in May]											
25	Remove Maintenance Shop	10 days	[Gantt bar in May]											
26	<b>Fuel Yard</b>	<b>144 days?</b>	[Gantt bar from Mar to Oct]											
27	<b>Remove Transfer Towers</b>	<b>65 days</b>	[Gantt bar from Mar to Jun]											
28	Transfer Tower 1	10 days	[Gantt bar in Mar]											
29	Transfer Tower 2	10 days	[Gantt bar in Mar]											
30	Crusher Building	20 days	[Gantt bar in Apr]											
31	Stockout Conveyor Reclaim Pit	25 days	[Gantt bar in Apr]											
32	<b>Remove Conveyors</b>	<b>35 days</b>	[Gantt bar in May]											

Iatan Common Dismantlement

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

Iatan Common Dismantlement

ID	Task Name	Duration	2nd Quarter				3rd Quarter		4th Quarter			
			Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
63	<b>Reagent Prep and Gypsum Handling</b>	<b>94 days</b>										
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	<b>Final Site Grading and Drainage</b>	<b>1 day?</b>										
74	Final Site Grading and Drainage	1 day?										

**APPENDIX B**

**OPINIONS OF COSTS FOR SCRAP**

# OPINIONS OF SCRAP VALUES

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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](http://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:

$$\text{UnitA}(\text{scrap value}) = \text{CFPP}(\text{scrap value}) * (\text{CapacityUnitA} / \text{CapacityCFPP})^e$$

Where:

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



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:  
 $(530,000 \text{ lbs}/2,000 \text{ lbs/ton}) * 370/\text{GT} = \$98,000.$

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.

KCP&L-GMO  
Baghouse Weights

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:				<b>270,296 lbs</b>
Drawings of the baghouse structural steel was not available.				
Assume that the steel weighs approximately 60% of the boiler steel:				<b>138,000 lbs</b>
Total Estimated Scrap Weight of Baghouse:				<b>408,000 lbs</b>

KCP&L-GMO  
Pipe Weights (per Unit)

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

KCP&L-GMO  
Pipe Weights (per Unit)

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



KCP&L-GMO  
Pipe Weights (per Unit)

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**

## REFERENCE DOCUMENTS

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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**

Appendix D  
ARO - Source of Requirement

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
latan	latan Fuel Oil Tank Removal	Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures
	latan Landfill Retirement	Solid Waste Operating Permit No. 0916501

