

Exhibit No.:
Issue: Dismantlement Costs
Witness: Christopher "Chris" Robert Rogers
Type of Exhibit: Direct Testimony
Sponsoring Party: Kansas City Power & Light Company
Case No.: ER-2014-0370
Date Testimony Prepared: October 30, 2014

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2014-0370

DIRECT TESTIMONY

OF

CHRISTOPHER "CHRIS" ROBERT ROGERS

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

**Kansas City, Missouri
October 2014**

DIRECT TESTIMONY
OF
CHRISTOPHER “CHRIS” ROBERT ROGERS

Case No. ER-2014-0370

1 **Q: Please state your name and business address.**

2 A: My name is Christopher “Chris” Robert Rogers and my business address is Sega, Inc.,
3 16041 Foster Street, Overland Park, Kansas 66085.

4 **Q: On whose behalf are you testifying?**

5 A: I am testifying on behalf of Kansas City Power & Light Company (“KCP&L” or the
6 “Company”).

7 **Q: What is the purpose of your testimony?**

8 A: The purpose of my testimony is to present and support the report attached to my
9 testimony as Schedule CRR-2 which separately addresses the near term costs of
10 retirement and the potential future costs for dismantlement of KCP&L’s fossil-fueled and
11 wind electric generating units.

12 **Q: Please describe your educational background, professional training and experience.**

13 A: Since graduating from Kansas State University with a Bachelor of Science in Mechanical
14 Engineering, I have practiced engineering, principally in the power industry, for 40 years.
15 During the first decade of my career, I performed design, construction contracting,
16 scheduling, and resident construction management services for new coal-fired electric
17 generating stations with a nationally-recognized architect/engineer firm in Kansas City.
18 During this interval I also completed a Master of Science in Civil Engineering
19 specializing in construction management from the University of Missouri-Columbia.

1 From 1983 through 1986 I served as the Manager of Generating Facilities on the
2 staff of the Missouri Public Service Commission (“Commission” or “MPSC”) and
3 participated in several major rate cases, including the AmerenUE Callaway Nuclear Plant
4 and KCP&L Wolf Creek Nuclear Plant rate cases before the MPSC. Later while
5 employed as a consultant, I provided testimony on behalf of Aquila, Inc. in the South
6 Harper Generating Facility certification case before the MPSC. I have also testified
7 before the Hawaii Public Utilities Commission on behalf of the Hawaii State Consumer
8 Advocate.

9 I am currently an employee-owner and Vice President of Sega, Inc., (“Sega”) an
10 engineering and technical services firm located in Overland Park, Kansas. Among other
11 things, I provide consulting and project management services for Sega’s electric power
12 generating clients. Since joining Sega, Inc. in 1994, I have worked on many projects for
13 KCP&L and our other electric utility clients. Sega, Inc. has performed numerous plant
14 betterment engineering projects on KCP&L’s generation stations.

15 In 2012, I provided pre-filed testimony in support of KCP&L before the Kansas
16 Corporation Commission in Docket No. 12-KCPE-764-RTS regarding the near term
17 costs of retirement and the potential future costs for dismantlement of the Company’s
18 fossil-fueled electric generating units.

19 **Q: Do you hold any professional licenses?**

20 A: Yes. I am a licensed professional engineer in the State of Missouri (License No. 21087)
21 and 11 other states. I also hold a Certificate of Record from the National Council of
22 Examiners for Engineering and Surveying (No. 19249).

1 **Q: Have you prepared an appendix that describes your training, licenses and power**
2 **industry experience?**

3 A: Yes. My professional qualifications are provided in Schedule CRR-1.

4 **Q: Have you previously testified in a proceeding before the MPSC or before any other**
5 **utility regulatory agency?**

6 A: Yes, I have previously testified before the MPSC, the Public Utility Commission of the
7 State of Hawaii and the Kansas Corporation Commission. The subject matter and
8 references for the cases in which I participated are provided at the back of Schedule
9 CRR-1.

10 SUMMARY

11 **Q: Would you briefly describe the retirement and dismantlement costs developed for**
12 **KCP&L's non-nuclear generating units?**

13 A: Sega, Inc. was retained by KCP&L to study the cost of decommissioning KCP&L's non-
14 nuclear generating units. Decommissioning is the planned and orderly retirement of a
15 generating unit and the dismantlement and reclamation of the site. The term
16 *decommissioning* includes both retirement and dismantlement activities. Upon retirement
17 from service, a generating unit may either be rendered safe and stored almost indefinitely
18 through on-going maintenance and security measures or it can be dismantled completely
19 and the site reclaimed for other potential uses. Based upon our experience in the electric
20 generation industry at large and our familiarity with KCP&L's generating fleet, Sega
21 developed opinions of probable cost for KCP&L to retire each of its fossil-fueled
22 generating units. Costs for dismantlement were also developed separately for each unit.

1 **Q: Please summarize retirement of an electric generating unit.**

2 A: Retirement, as used in this study, refers to the planned, orderly and safe shutdown and
3 removal from service of an electric generating unit, and assumes that the unit will not be
4 used for service again. No actions will be taken to preserve the unit or any of its
5 components for reuse. Retirement activities are specific to each unit and to the common
6 facilities at sites with multiple generating units. Since each of KCP&L's units except
7 Osawatomie is located on a multiple unit site, it was assumed that the common site
8 facilities will remain in service until the last unit on that site is retired.

9 Approximately three to six months before initiating retirement, a specific
10 retirement plan will be prepared for each unit that takes into account environmental
11 permits and regulatory requirements for removing that unit from service. The retirement
12 plan will also provide for necessary safety and security measures during retirement of the
13 unit and for the time period from retirement until dismantlement commences.

14 First, the unit is rendered safe by de-energizing it and disconnecting it from the
15 electric grid. The switchyards at each unit will remain in service, but isolated from the
16 retired facility. Mechanical systems are de-energized as well. Fuel unloading, handling
17 and storage facilities will be cleaned out, as well as all liquids, chemicals, coolants and
18 reagents. Certain activities are required by specific unit permits and/or state or federal
19 regulations to be performed when the unit ceases operations. These may include closure
20 of ash landfills, removal of river water intakes, and/or removal of fuel oil storage tanks.
21 However, retirement activities do not include asbestos and lead paint abatement measures
22 that are typically handled as ongoing maintenance expenses during the operating life of

1 the unit and continuing if necessary after retirement. More detail is provided on
2 retirement activities in the report, which is Schedule CRR-2.

3 **Q: Please summarize dismantlement of an electric generating unit.**

4 A: Once the unit or facility has been retired and its dismantlement is scheduled, an Owner's
5 Engineer will be retained to assist with environmental issues and technical details in a
6 dismantlement plan. The unit or facility will be characterized and the boundaries for
7 demolition defined to set the scope of the work. A specialty demolition contractor will be
8 hired to perform dismantlement and salvage for the company. Dismantlement as
9 contemplated in this study provides for the orderly removal of the unit's components to
10 maximize safety and scrap value while preventing damage to the surrounding facilities.
11 The assumptions for dismantlement for each of the units and facilities are provided in
12 Schedule CRR-2.

13 **Q: Did you consider salvage value in reaching your opinion of probable dismantlement
14 costs for these units?**

15 A: Yes, the approximate scrap value for iron and steel and non-ferrous metals were tallied
16 for each unit or facility, based upon estimated quantities and average current-year scrap
17 prices. These scrap values were listed separately because the scrap metal prices vary
18 considerably, depending on industrial trends, international events and uncontrollable
19 circumstances at the time of the salvage transactions.

20 **Q: What are the results of your study?**

21 A: The opinion of the probable costs for retirement and dismantlement developed by Sega
22 for each of KCP&L's fossil-fueled units and the common facilities at each plant site are
23 provided below in Table 1. All costs shown are in 2014 dollars and do not account for

1 ownership percentages and jurisdictional allocations. The development of these costs is
2 described and supported by the report in Schedule CRR-2.

3 As shown below in Table 1, there is a significant difference in cost between
4 retiring and dismantling a power plant. The cost to retire all of KCP&L's non-nuclear
5 generating units is estimated to be approximately \$105.4 million. To dismantle all of
6 KCP&L's non-nuclear units, I estimate that it would cost an additional \$255.4 million.
7 Some components could be sold for scrap during dismantlement thereby recovering an
8 estimated \$86.4 million and bringing the estimated Net Terminal Value (cost to dismantle
9 less salvage) for all of KCP&L's fossil-fueled plants to \$169 million.

Table 1 - Opinion of The Probable Costs for Decommissioning KCP&L's Electric Generating Units

(All cost values in 2014 dollars)

| Name | Unit No. | Capability ⁽¹⁾ | First Year In Service | Retirement | | | Dismantlement | | |
|---------------------------|----------|---------------------------|-----------------------|---------------------|--|----------------------|----------------------|----------------------------|----------------------|
| | | | | Unit Retirement | Activities Required by Permit, Regulation ⁽³⁾ , or Agreement ⁽⁴⁾ | Total Retirement | Dismantlement | Scrap Value ⁽⁵⁾ | Net Terminal Cost |
| Montrose | 1 | 170 | 1958 | \$496,957 | | \$496,957 | \$8,058,485 | \$4,260,000 | \$3,798,485 |
| | 2 | 164 | 1960 | \$496,957 | | \$496,957 | \$7,886,609 | \$4,170,000 | \$3,716,609 |
| | 3 | 176 | 1964 | \$496,957 | | \$496,957 | \$8,227,950 | \$4,350,000 | \$3,877,950 |
| | Common | | | \$447,132 | \$2,597,269 | \$3,044,401 | \$11,445,008 | \$2,170,000 | \$9,275,008 |
| Hawthorn | 5 | 564 | 1969 / 2001 | \$977,615 | | \$977,615 | \$21,004,708 | \$8,750,000 | \$12,254,708 |
| | Common | | | \$319,281 | \$1,198,746 | \$1,518,027 | \$9,942,959 | \$1,120,000 | \$8,822,959 |
| LaCygne | 1 | 735 | 1973 | \$1,047,834 | | \$1,047,834 | \$26,459,962 | \$10,250,000 | \$16,209,962 |
| | 2 | 686 | 1977 | \$998,295 | | \$998,295 | \$25,598,523 | \$9,840,000 | \$15,758,523 |
| | Common | | | \$593,828 | \$45,751,862 | \$46,345,690 | \$16,881,376 | \$1,920,000 | \$14,961,376 |
| Iatan | 1 | 705 | 1980 | \$1,035,765 | \$595,211 | \$1,630,976 | \$24,018,833 | \$10,000,000 | \$14,018,833 |
| | 2 | 881 | 2010 | \$1,031,343 | | \$1,031,343 | \$27,449,519 | \$11,430,000 | \$16,019,519 |
| | Common | | | \$590,627 | \$3,744,486 | \$4,335,113 | \$24,874,543 | \$6,850,000 | \$18,024,543 |
| Northeast | 11 | 48 | 1972 | \$516,768 | | \$1,041,802 | \$10,006,697 | \$784,000 | \$9,222,697 |
| | 12 | 51 | 1972 | | | | | | |
| | 13 | 51 | 1975 | | | | | | |
| | 14 | 54 | 1975 | | | | | | |
| | 15 | 50 | 1976 | | | | | | |
| | 16 | 44 | 1976 | | | | | | |
| | 17 | 54 | 1977 | | | | | | |
| | 18 | 56 | 1977 | | | | | | |
| Common | | | \$525,034 | | | | | | |
| Hawthorn | 7 | 77 | 2000 | \$344,453 | \$0 | \$344,453 | \$7,097,072 | \$196,000 | \$6,901,072 |
| | 8 | 77 | 2000 | | | | | | |
| West Gardner | 1 | 77 | 2003 | \$399,637 | \$0 | \$399,637 | \$11,621,879 | \$392,000 | \$11,229,879 |
| | 2 | 78 | | | | | | | |
| | 3 | 77 | | | | | | | |
| | 4 | 78 | | | | | | | |
| Osawatomie | 1 | 75 | 2003 | \$274,345 | \$0 | \$274,345 | \$5,483,584 | \$98,000 | \$5,385,584 |
| Hawthorn | 6 | 232 | 1979 | \$401,909 | \$640,900 | \$1,042,809 | \$9,378,046 | \$2,423,000 | \$6,955,046 |
| | 9 | | 2000 | | | | | | |
| Spearville ⁽²⁾ | 1 | 31.2 | 2006 | \$0 | \$27,042,605 | \$27,042,605 | \$0 | \$5,030,809 | (\$5,030,809) |
| | 2 | 14.9 | 2010 | \$0 | \$12,815,140 | \$12,815,140 | \$0 | \$2,402,775 | (\$2,402,775) |
| TOTALS | | 5,306 | | \$10,469,703 | \$94,911,253 | \$105,380,956 | \$255,435,753 | \$86,436,584 | \$168,999,169 |

Notes

- (1) Current net SPP accredited unit capability, MW.
- (2) Spearville Phase 1 nameplate capacity is 100.5 MW; Phase 2 nameplate capacity is 48 MW.
- (3) Activities required by permits and/or regulations that are to occur upon ceasing operations, including ash landfill closures, and river water intake.
- (4) The Spearville Land Leases require each wind turbine to be dismantled within 12 months of ceasing operation.
- (5) Current scrap values per averaged indices.

1 **Q: Are retirement costs optional for KCP&L?**

2 A: KCP&L is not required to dismantle its plants upon retirement, and therefore, it is not
3 known when, or even if, the portion of the costs in my study related only to
4 dismantlement will be incurred. However, that is not the case with the costs of retirement
5 only. Retirement costs represent the costs that unavoidably will be incurred by the
6 Company when the plant is shut-down, even if the closed plant is never dismantled.

7 **Q: How have the results of your study been used in this case?**

8 A: It is my understanding that the retirement costs I have identified have been incorporated
9 into the depreciation study performed for KCP&L by Company witness, Mr. John
10 Spanos. It is also my understanding that Mr. Spanos has not included the dismantling
11 costs from my study in his depreciation study. By keeping the two categories of costs
12 separate in my study, I have facilitated Mr. Spanos' efforts in this regard, and I have
13 provided substantial evidence to the Commission clearly showing the distinction between
14 the two categories of costs.

15 **Q: Was the Schedule CRR-2 study prepared under your direction and supervision?**

16 A: Yes. I was the Officer-in-Charge at Sega for this study and participated in determining
17 the methodology and in the performance of the work with our team. I visited each of the
18 plant sites, supervised the preparation of the report, and reviewed the results for
19 reasonableness and appropriateness.

20 **Q: Does this conclude your testimony?**

21 A: Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light)
Company's Request for Authority to Implement) Case No. ER-2014-0370
A General Rate Increase for Electric Service)

AFFIDAVIT OF CHRISTOPHER R. ROGERS

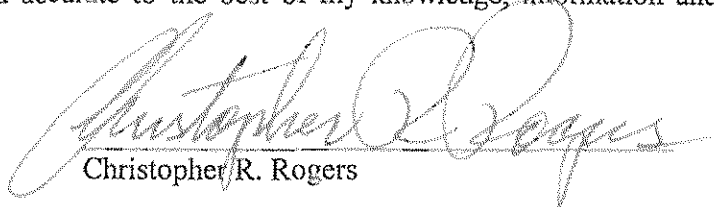
STATE OF KANSAS)
) ss
COUNTY OF JOHNSON)

Christopher R. Rogers, being first duly sworn on his oath, states:


1. My name is Christopher R. Rogers. I am employed by Sega, Inc. I have been retained to serve as an expert witness to provide testimony on behalf of Kansas City Power & Light Company.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of eight (8) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

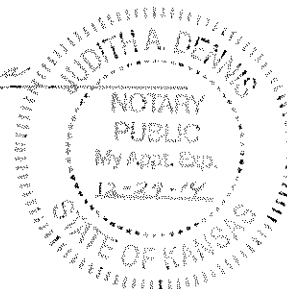
3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.


Christopher R. Rogers

Subscribed and sworn before me this 28th day of September, 2014.


Notary Public

My commission expires: December 29, 2014



Chris R. Rogers, P.E.

POSITION Vice President, Sega, Inc.

EDUCATION B.S.M.E., 1974
Kansas State University
Manhattan, Kansas

M.S.C.E. Civil Engineering – Construction Management, 1981
University of Missouri-Columbia
Columbia, Missouri

LICENSES Professional Engineer Licenses

- California
- Colorado
- Florida
- Hawaii
- Idaho
- Illinois
- Kansas
- Kentucky
- Michigan
- Missouri
- Montana
- North Carolina
- NCEES Record Certificate

AFFILIATIONS American Society of Mechanical Engineers

EXPERIENCE SUMMARY

Mr. Rogers is a Vice President of Sega, Inc. and a licensed professional engineer with 40 years of experience in the power industry. Among other things at Sega, he is responsible for corporate risk management activities and directs the firm’s planning and studies practice. Mr. Rogers also provides project management and engineering services for Sega’s electric power generating clients.

He has performed engineering and management services for many types of electric generating plants, including simple and combined cycle combustion turbine projects, coal and waste coal-fired fluidized bed boiler projects, pulverized coal units, and biomass-fired projects. He has performed engineering and feasibility reviews for financing, construction monitoring, and performance testing of numerous generating facilities.

Mr. Rogers served as the Manager of Generating Facilities in the Electric Department of the Missouri Public Service Commission from 1983 through 1986. He covered issues in conjunction with the construction management audits and rate cases for the Callaway Plant and Wolfcreek Nuclear Generating Station, had limited participation in the Grand Gulf Nuclear Station rate case, and performed other assignments concerning regulated generating facilities throughout the State of Missouri.

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During the first decade of his career, Mr. Rogers performed mechanical engineering for large utility-owned coal-fired central generating stations while employed by a nationally recognized engineering firm. He served on project design teams in the main office and as the chief mechanical resident engineer on a plant construction site.

SELECTED PROJECT EXPERIENCE

- **Kansas Municipal Energy Agency**, Overland Park, Kansas – Sega’s Officer-in-charge and project manager of a planning study for installation of a peaking plant in Garden City, Kansas. Performed technical assessment of candidate combustion turbine and reciprocating engine generator sets, evaluated potential sites, developed permitting strategies, and compiled preliminary project plan including contracting methodology, procurement lists, and opinions of probable cost and schedule.
- **City of Independence Power & Light Department**, Independence, Missouri – Sega’s Officer-in-charge for salvage and sale of a 50-MW GE Frame 7B regenerative combustion turbine generator. Sega developed requests for proposals, an informational website, and evaluated proposals, resulting in awards to four buyers.
- **City of Independence Power & Light Department**, Independence, Missouri – Sega’s Officer-in-charge for decommissioning study that provided an opinion of the probable cost to the City for retirement and dismantlement of the 40-MW, coal-fired Missouri City Power Plant.
- **Kansas City Power & Light Company**, Kansas City, Missouri – Sega’s Officer-in-charge and project manager for a generating plant siting study that investigated and evaluated multiple candidate sites for potential new 600-MW class combined cycle generating units, 200-MW nominal gas turbine peaking units and 100-MW reciprocating engine generator plants.
- **Kansas City Power & Light Company**, Kansas City, Missouri – Sega’s Officer-in-charge of decommissioning study for Kansas rate case providing opinions of probable costs for retirement and dismantlement of 24 generating units totaling 5,260-MW of capacity, including eight (8) coal-fired units, one (1) combined-cycle plant, and fifteen (15) combustion turbines.
- **Kansas City Power & Light Company**, Kansas City, Missouri – Sega’s project manager for combined cycle plant siting study that investigated and evaluated multiple candidate sites for potential new 600-MW class combined cycle generating station.

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- **Kansas City Power & Light Company**, Lake Road Generating Station, Kansas City, Missouri – Sega's project manager for a study that assessed the feasibility of the KCP&L industrial steam generation system to serve industrial steam customers.
- **Independence Power & Light Department**, Independence, Missouri – Master plan study for a nominal 320-MW municipal utility. Sega, Inc.'s project manager for study including existing generation assessment, transmission system assessment, load forecast, alternative power supply analysis and economic evaluation.
- **State of Hawaii Division of Consumer Advocacy** – Investigated island-wide blackouts that occurred on Oahu and Maui after the earthquakes on October 15, 2006 and on Oahu after lightning events on December 26, 2008. Project manager of Sega, Inc. team for investigation of causes of the outages, utility outage recovery operations and potential improvements to prevent or minimize future outages.
- **Kansas City Board of Public Utilities**, Nearman Creek CT4, Kansas City, Kansas – 85-MW simple-cycle peaking plant. Owner's Engineer (Sega, Inc.) site manager for commissioning, including checkout, performance testing, emissions testing and management of construction completion closeout activities.
- **Kansas City Power & Light-GMO** (Formerly Aquila), South Harper Peaking Facility, Peculiar, Missouri – 315-MW simple-cycle peaking plant. Project manager for the Owner's Engineer (Sega Inc.) for siting, permitting support, detailed installation design, balance of plant procurement, construction management services, commissioning, and documentation support. Sega's project manager.
- **Kansas City Power & Light**, West Gardner and Osawatomie Generating Stations – Two simple-cycle peaking projects. Sega, Inc's turnkey proposal manager for engineer-led EPC proposal for 400-MW of GE 7E gas turbine generator sets.
- **Idaho Power Company**, Mountain Home, Idaho – Sega's project manager for a study to convert 2 W 251B12 gas turbines from peaking to combined-cycle (150MW).
- **Trigen – Kansas City Energy Corporation**, Kansas City, Missouri – Sega, Inc.'s project manager for feasibility study to repower a district heating plant with an 80-MW combustion turbine and heat recovery steam generator cogeneration project.
- **Conserve Energy System**, Centralia, Illinois – Sega's project manager on a technical feasibility study for a 215-MW coal-fired atmospheric circulating fluidized bed boiler steam electric generating plant.

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- **Tulare County Power Projects**, Goshen and Tipton, California – Segal's project manager for conceptual design and detailed design proposal for 24-MW net, natural gas-fired reciprocating engine generator set peaking plants located planned at four existing utility substations.
- **High Plains Corp Cogeneration Project**, Wichita, Kansas – Segal's project manager for conceptual design, feasibility study and detailed design-build proposal for a 6-MW net, landfill recovery gas-fired combustion turbine and heat recovery steam generator cogeneration project.
- **City Utilities of Springfield, Missouri** – Segal's project manager for feasibility study for an 8-MW net, natural gas-fired combustion turbine and heat recovery steam generator cogeneration project at local university campus.
- **Cargill, Inc.**, Blair, Nebraska – Segal's project manager for feasibility study for a 100-MW net combustion turbine and heat recovery steam generator cogeneration project.
- **Quantum Dynamics, Inc. / Quebecor Printing, Inc.**, Fernley, Nevada – Segal's project manager for balance-of-plant design/build contract on a 3-MW net, gas-fired combustion turbine (ASE40) and heat recovery project at a printing plant.
- **Trigen – St. Louis Energy Corporation**, St. Louis, Missouri – Segal's project manager for detailed design, construction administration, and startup assistance for a 20-MW condensing steam turbine addition to an existing CHP plant on a fast-tracked basis.
- **University of Missouri-Rolla/Rolla Municipal Utilities** – Segal's project manager for a joint participation CHP project feasibility study that investigated alternative power supplies, generating options, and interconnection arrangements for the mutual benefit of the University and the City.
- **LTV Hennepin**, Hennepin, Illinois – Segal's project manager on an engineer-led EPC team for a 9-MW net, gas-fired combustion turbine (3 x ASE 40) and heat recovery project at LTV Steel Company plant in Hennepin, Illinois.
- **University of Missouri-Columbia** – Combustion turbine consultant for Owner's Engineer (Segal, Inc.) on feasibility study and subsequent detailed project design and equipment procurement for a 27-MW cogeneration project that used two Solar Titan 130 combustion turbine generator sets and heat recovery steam generators.
- **Witco Corporation**, Memphis, Tennessee – Segal's project manager on engineer-led EPC team 7-MW net, gas-fired combustion turbine (2 x ASE 50) and heat recovery project at Witco Corporation plant in Memphis, Tennessee.

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- **Trigen – St. Louis Energy Corporation**, St. Louis, Missouri – Sega's project manager for detailed installation design for 15-MW net, gas-fired combustion turbine (two Solar Taurus 60/STAC) and heat recovery project.
- **Independence Power & Light Department**, Independence, Missouri – Sega's project manager for major refurbishment program on six GE Frame 5 and one GE 7B-regenerative, oil and gas-fired gas turbines. Services included condition assessments, specifications, and contracting for renewal and upgrade components, unit controls replacement, remote digital controls addition, and major overhaul of each unit.
- **Somerset Generating Station**, Somerset, Massachusetts – Black & Veatch's project manager on independent engineering review, performing condition assessments for Montaup Electric Company's divestiture of a 40-MW net, oil-fired combustion turbine (2 x FT4) black start peaking unit, a 100-MW coal-fired power plant, a total of 16-MW of diesel generators (8 x 2-MW GM-EMD) and a 2-MW hydro electric plant.
- **Constellation Energy**, Freehold, New Jersey – Sega's project manager for review of project proforma and preparation of testimony before the New Jersey Board of Public Utilities for NPV of a 110-MW net, gas-fired combined cycle cogeneration project.
- **Cherokee County Cogeneration Project**, Gaffney, South Carolina – Sega's project manager for an 80-MW net, gas-fired combined cycle (GE 106FA) CHP project in Gaffney, South Carolina for Prudential Power Financing. Performed technical review of project during design, permitting, contracting, and financing. Conducted construction monitoring for lender. Also served as interim president of project development entity during lender's takeover of project and equity sale to Florida Power & Light.
- **Independence of Power and Light**, Independence, Missouri – Sega's project manager for study of 100-MW coal-fired steam electric unit, including conceptual design and estimating performance and cost for client's comparison to participation in Iatan II Project. Compiled and compared capital and operation and maintenance cost of alternative 100-MW coal-fired steam electric plants including pulverized coal and CFB plants, and natural gas-fired combined cycle and simple cycle units of the same size.
- **University of New Mexico** – Sega's project manager for cogeneration feasibility study evaluating replacement of campus central heating plant with a 30-MW net, gas-fired combustion turbine and heat recovery steam generator.

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- **Florida State Correction Facility**, Starke, Florida – Bibb and Associates' project manager for independent review for potential equity investor, KLT Power, Inc. on a 23-MW, wood gasification and natural gas-fired, combined-cycle cogeneration project proposed near Starke, Florida.
- **Indeck-Oswego Energy Center**, Oswego, New York – Bibb and Associates' project manager on independent engineering review for BA Securities, Inc. regarding the power sales agreement during term of financing of 51-MW, gas-fired combined-cycle (GE 6B) cogeneration project in Oswego, New York.
- **Honeywell FM&T**, Kansas City, Missouri – Bibb and Associates' project manager on AlliedSignal's engineering team for feasibility studies, conceptual design, permitting support, bidding, and evaluation of developer qualifications for a 40-MW, gas-fired, combustion turbine cogeneration project providing steam and electric service to a federal government complex in Kansas City, Missouri.
- **North Carolina EMC**, Raleigh, North Carolina – Bibb and Associates' project manager of the Owner's Engineer team that wrote specifications and evaluated EPC proposals for a 330-MW gas-fired combined-cycle project and 100-MW gas-fired simple-cycle project in North Carolina.
- **Indeck-Olean Energy Center**, Olean, New York – Bibb and Associates' project manager on independent engineering review for bank group that included Canadian Imperial Bank of Commerce, BOT Financial, Inc., Westpac Banking Corporation, and Toronto Dominion Bank. Project was a 79-MW, gas-fired combined-cycle (GE 6B) cogeneration project in Olean, New York. Scope included review of technical feasibility and economic viability of project for financing, construction progress monitoring and oversight of performance demonstration tests.
- **Orlando CoGen Limited**, L.P, Orlando, Florida. – Bibb and Associates' project manager for independent engineering review for senior lender, the Sumitomo Bank, Limited of a 120-MW gas-fired, single-shaft combined cycle (ABB11N1/VAX) cogeneration project in Orlando, Florida developed by Air Products and Chemicals, Inc. and Utilicorp United.
- **Empire Cogen**, Tampa, Florida – Bibb and Associates' project manager for an independent engineering review for senior lender, National Westminster Bank PLC of a 10-MW, gas-fired multiple gas turbine (Allison/US Turbine) cogeneration project located on MacDill Air Force Base near Tampa, Florida.

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- **ACE Cogeneration Project**, Trona, California – Bibb and Associates’ project manager for independent engineering review for equity investor, US West Capital, Inc., including design, permit status, operations and maintenance of an existing 96-MW, coal-fired CFB steam electric plant.
- **Arroyo Cogeneration**, Escondido, California – Bibb and Associates’ project manager for engineering review of project for development financing for Heller Financial, Inc, including alternate site selection program for a 49.9-MW, gas-fired, combined cycle (GE LM6000) cogeneration project.
- **Nestles Freehold Cogeneration Project**, Freehold, New Jersey – Bibb and Associates’ project manager for independent engineering review for development financing by Heller Financial, Inc. of a proposed 110-MW, gas-fired, single-shaft combined cycle (ABB11N1/VAX) cogeneration project by Constellation Energy.
- **Northeast Cogen**, Solvay, New York – Bibb and Associates’ independent review engineer for development financing by Heller Financial, Inc. for a proposed 49-MW, gas-fired combined cycle (GE6B/LM6000) cogeneration project.
- **Newbay Cogeneration Project**, East Providence, Rhode Island – Bibb and Associates’ project manager for independent engineering review for development/bridge financing by Heller Financial, Inc of a proposed 72.2 MW, coal-fired circulating fluidized bed boiler generating plant. Reviewed design, permit applications, and development status.
- **Redding Power Project**, Redding, California – Bibb and Associates’ project manager for independent engineering review for National Westminster Bank PLC during lay-up, preservation, foreclosure, receivership, and resale of 23-MW, two biomass-fired stoker boiler generating units.
- **San Joaquin Valley Energy Partners I**, Fresno, California – Bibb and Associates’ project manager for independent engineering review for take-over lender Canadian Imperial Bank of Commerce, for the evaluation, and equity re-sale of a 43-MW, three unit, biomass-fired fluidized bed boiler plant.
- **Redding Peaking**, Redding, California – Bibb and Associates’ project manager for engineering review for bridge financing by Heller Financial, Inc. of a proposed 49.9-MW, gas-fired simple cycle combustion turbine (GE 6) peaking plant.
- **Intercontinental Energy**, Bellingham, Massachusetts and Sayreville, New Jersey – Bibb and Associates’ project manager for independent engineering review for potential equity investor, American Energy Division of Potomac Capital Investment Corporation, for two 300-MW, gas-fired combined cycle (2 x W501D) cogeneration projects.

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- **Gifford-Hill Cement Cogeneration Project**, Oro Grande, California – Bibb and Associates' project manager for independent engineering review for US West Capital, Inc., for financing the sale/lease back of an existing 20-MW heat recovery steam electric cogeneration plant.
- **Sunnyside Cogeneration Project**, Carbon County, Utah – RW Beck and Associates' project manager for independent engineering review for senior lender, Swiss Bank Corporation, of the design and permitting review of a 50-MW waste coal-fired circulating fluidized bed boiler electric generating plant.
- **North Branch Power Project**, Bayard, West Virginia – RW Beck and Associates' project manager on independent engineering review for financing and construction monitoring for senior lender, Security Pacific Bank of a 80-MW waste coal-fired, circulating fluidized bed boiler project.
- **Unocal Geothermal**, Monterey, California – RW Beck and Associates' engineer, retained by Unocal to provide independent third-party oversight and monitoring of biennial performance tests by Pacific Gas and Electric Company at the Moss Landing Power Station (two 750-MW super-critical, gas and oil-fired steam electric generating units) related to geothermal steam pricing at Unocal's Geysers Geothermal projects.
- **Viking Power Projects** in Lincoln and McBain, Michigan, and Northumberland, Pennsylvania – RW Beck and Associates' project manager on independent engineering review for financing, construction monitoring and performance testing for senior lender, CIGNA, of three 16-MW biomass fueled stoker-generating plants.
- **St. Nicholas Power Project**, Mahanoy Township, Pennsylvania – RW Beck and Associates' project manager on independent engineering review for financing, construction monitoring and performance test monitoring for senior lender, Bank of New England for an 80-MW waste coal-fired steam electric plant.
- **Chinese Station**, Inyokern, California – RW Beck and Associates' project manager on engineering review for take-over and resale; reviewed design, plant betterment program, and projected operation and maintenance program of a 25-MW biomass-fired generating plant.
- **Koma Kulshan Hydro Project**, Whatcom County, Washington – RW Beck and Associates' project manager on independent engineering review of design and construction monitoring for senior lender National Westminster Bank PLC of a 12-MW hydroelectric station.

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- **Scrubgrass Power Project**, Venango County, Pennsylvania – RW Beck and Associates' project manager on independent engineering review of design, permits, and contracts for financing and construction monitoring for senior lender, National Westminster Bank, PLC of an 80-MW waste coal-fired, circulating fluidized-bed boiler project.
- **Callaway Nuclear Generating Station**, Fulton, Missouri – Manager of Generating Facilities for the Missouri PSC staff, investigated and/or provided testimony concerning project construction management, in-service criteria, net electric capability, decommissioning funding, and in-service completion in rate case for a 1,150-MW PWR nuclear generating station.
- **Wolf Creek Nuclear Generating Station**, Burlington, Kansas – Manager of Generating Facilities for the Missouri PSC staff, investigated and/or provided testimony concerning project construction management, in-service criteria and startup, related fossil-fuel plant retirements, related plant accreditations, depreciation, and net electric capability in rate case for an 1,120-MW PWR nuclear generating station.
- **Grand Gulf Generating Station I**, Grand Gulf, Mississippi – Manager of Generating Facilities for the Missouri PSC staff, investigated and provided testimony concerning in-service criteria, in-service status, and overall project NRC inspection and licensing status for a 1,250-MW BWR nuclear generating station.
- **Plains-Escalante Generating Station, Unit 1**, Prewitt, New Mexico – Burns & McDonnell's senior mechanical design engineer for mechanical equipment and systems, equipment procurement, construction contracting and coordination; and chief resident mechanical engineer for construction of 210-MW pulverized coal power plant.
- **EPRI-DOE Fuel Cell Demonstration Project**, San Jose, California – Burns & McDonnell's mechanical engineer on cogeneration feasibility study for commercial demonstration of 5-MW fuel cell cogeneration demonstration project.
- **Basin Electric Power Cooperative, Inc.**, Laramie River Station, Wheatland, Wyoming - Burns & McDonnell's mechanical design engineer for equipment and systems, equipment procurement, and construction contracting and CPM scheduler for coordination of construction completion of systems with sequenced system start-up program for three, 550-MW net, pulverized coal-generating units for the Missouri Basin Joint Power Project Agency, lead by the Basin Electric Power Cooperative, Inc.

**TESTIMONY BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION**

| <u>Issue Description</u> | <u>Exhibit No.</u> | <u>Transcript Vol. No.</u> | <u>Page Nos.</u> |
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| Phase II – Net Electric Capability | Direct | C-76 | |
| | Surrebuttal | C-77 | 30 2852-2868 |
| Phase III – Funding Decommissioning | Surrebuttal | C-38 | 28 2434-2440 |
| Phase III – Inservice Review | Supplemental (1-28-85) | NA | NA NA |
| AMEREN CASE NO. ER-85-20 | | | |
| Status of Grand Gulf 1 and Waterford 3 | Supplemental | 12 | 4 118-181 |
| KANSAS CITY POWER & LIGHT CASE NO. ER-85-128 & EO-85-185 | | | |
| Phase I – Inservice Criteria Startup | Affidavits | | NA NA |
| | Direct (filed 1/10/85) | | |
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MISSOURI PUBLIC SERVICE COMMISSION (Cont'd)**

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KANSAS CITY POWER & LIGHT (Formerly AQUILA, INC.)

| | | | |
|--|-------------------------|-----|-----|
| CASE NO. EA-2006-0309 | | | |
| South Harper Peaking Facility Site Selection | Direct (filed 01/27/06) | N/A | N/A |

**TESTIMONY BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII**

| <u>Issue Description</u> | <u>Exhibit No.</u> | <u>Transcript Vol. No.</u> | <u>Page Nos.</u> |
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| 1. Shop/Warehouse Building | 12 | II | 301 – 309 |
| 2. Fire Protection System | Direct Examination | II | 309 - 313 |
| 3. Water Treatment System | Commissioners' Exam | | |
| 4. Inclusion in Rate Base Amounts | | | |

**HAWAII ELECTRIC COMPANY, INC.,
MAUI ELECTRIC COMPANY, LTD., AND
HAWAII ELECTRIC LIGHT COMPANY, INC.**

| | | | |
|---|-----------------------------|--|--|
| DOCKET NO. 2006-0431 | | | |
| Consumer Advocates Statement of Position: | Filed August 24, 2007 | | |
| Consumer Advocate's Supplement | Filed: September , 19, 2008 | | |

Chris R. Rogers, P.E.

**TESTIMONY BEFORE THE
KANSAS CORPORATION COMMISSION**

| Issue Description | Exhibit No. | Transcript Vol. No. | Page Nos. |
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**KANSAS CITY POWER & LIGHT COMPANY, INC.
DOCKET NO. 12-KCPE-764-RTS**

| | |
|---|--|
| The Costs of Retirement and Dismantlement: Decommissioning KCP&L Fossil-Fueled Generating Units | Pre-filed Direct Testimony Pre-filed Rebuttal Testimony |
|---|--|

Kansas City Power & Light Co.



The Costs of Retirement and Dismantlement: *Decommissioning KCP&L's Generating Units*



Kansas City Power & Light Co.



The Costs of Retirement and Dismantlement: *Decommissioning KCP&L's Generating Units*

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October 2014



Project No. 14-0162

ENGINEERING & TECHNICAL SERVICES

Schedule CRR-2

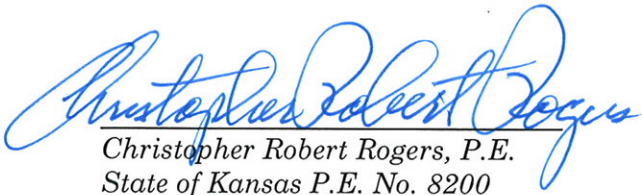
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CERTIFICATION

I hereby certify that this plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Kansas.


Christopher Robert Rogers, P.E.
State of Kansas P.E. No. 8200



SECTION 1

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1.1 INTRODUCTION

Kansas City Power & Light Company (KCP&L) retained Sega, Inc. (Sega) to provide an opinion of probable costs for retirement and dismantlement of its electric generating units with the exception of the Wolf Creek Nuclear Generating Facility which has been covered under a separate study. This report presents the results of Sega's study of the costs for decommissioning these facilities.

Decommissioning is comprised of two principal phases: *retirement* and *dismantlement*. *Retirement* is the shutdown or closure and removal from service of a generating unit or facility, and includes disconnection, de-energization, cleanout, and securing of the units to render them safe. *Retirement* triggers unavoidable costs for compliance with the mandatory provisions of the various plants' permits and with the specific requirements of State and Federal regulations for the closure of ash landfills, the removal and remediation of fuel-oil tanks, and the reclamation of river water intakes.

KCP&L is not required to dismantle its plants upon retirement, and therefore, it is not known when, or even if, dismantlement costs will be incurred. Often a unit may not be dismantled until sometime after it is retired, particularly if there are other operational generating units on the same site. *Dismantlement* is the orderly demolition of the unit in a controlled and safe manner so as to preserve the scrap value of reclaimed materials while appropriately protecting the workers and the environment. Scrap values are considered separately from dismantlement costs because scrap values have proven volatile over time. Scrap values in this report were developed from current average index prices, and were netted out against dismantlement costs to produce net terminal costs for each unit. All costs are provided in current day, 2014 dollars.

1.2 DESCRIPTION OF FACILITIES

The KCP&L generating facilities are located on eight sites and include 15 simple-cycle combustion turbines, one combined-cycle plant, two wind generation units, and eight steam electric generating units. The major attributes of each unit are provided in Figure 1.1 and further described below.

| Plant Name | Unit No. | Current Net SPP Accredited Capability, MW | First Year In Service | Fuel / Type |
|--------------|----------|---|-----------------------|--------------------------------------|
| Montrose | 1 | 170 | 1958 | Coal / Steam |
| | 2 | 164 | 1960 | |
| | 3 | 176 | 1964 | |
| Hawthorn | 5 | 564 | 1969 / 2001 | Coal / Steam |
| La Cygne | 1 | 735 | 1973 | Coal / Steam |
| | 2 | 686 | 1977 | Coal / Steam |
| Iatan | 1 | 705 | 1980 | Coal / Steam |
| | 2 | 881 | 2010 | Coal / Steam |
| Northeast | 11 | 48 | 1972 | Distillate-Fired Combustion Turbines |
| | 12 | 51 | | |
| | 13 | 51 | | |
| | 14 | 54 | 1975 | |
| | 15 | 50 | 1976 | |
| | 16 | 44 | | |
| | 17 | 54 | 1977 | |
| 18 | 56 | | | |
| Hawthorn | 7 | 77 | 2000 | Natural Gas-Fired Gas Turbines |
| | 8 | 77 | 2000 | |
| Hawthorn | 6 | 232 | 1997 | Natural Gas-Fired Gas Turbine |
| | 9 | | 2000 | HRSG & Turbine in Combined Cycle |
| West Gardner | 1 | 77 | 2003 | Natural Gas-Fired Gas Turbines |
| | 2 | 78 | | |
| | 3 | 77 | | |
| | 4 | 78 | | |
| Osawatomie | 1 | 75 | 2003 | Natural Gas-Fired Gas Turbine |
| Spearville | 1 | 100.5 | 2006 | Wind |
| | 2 | 48 | 2010 | |

Figure 1.1 - KCP&L Electric Generating Units

1.2.1 Facility Descriptions

Montrose Generating Station is a three-unit pulverized coal-fired electric generating station located in rural Henry County, near the town of Montrose, Missouri. Each Montrose unit has an electrostatic precipitator.

Hawthorn Generating Station is located in eastern Kansas City within Jackson County, Missouri and is comprised of several different types of units. Unit 5 is a pulverized coal-fired steam electric plant with a selective catalytic reduction (SCR) system, baghouse, and dry scrubber. Unit 6 is a natural gas-fired combustion turbine generator that can be operated alone in simple cycle through its bypass stack or in combined cycle in conjunction with Unit 9, a heat recovery steam generator (HRSG) with a condensing steam turbine generator that was originally part of Unit 4. Units 1 through 3 and the remainder of Unit 4 were coal and natural gas-fired steam electric generators that were retired in place awaiting dismantlement. Units 7 and 8 are simple-cycle, natural gas-fired combustion turbine generator sets.

La Cygne Generating Station is comprised of two coal-fired steam electric units in rural Linn County near the town of La Cygne, Kansas. Unit 1 is a super-critical, coal-fired cyclone boiler steam electric plant with an SCR and wet scrubber. Unit 2 is a pulverized coal-fired steam electric plant with an electrostatic precipitator. Each unit is currently being retrofitted with a baghouse and wet scrubber. Unit 2 is also being retrofitted with an SCR. This report includes the opinions of probable costs to retire and dismantle the new equipment.

Iatan Generating Station is located in rural Platte County, near the town of Weston, Missouri. Unit 1 is a pulverized coal-fired, sub-critical steam electric plant with an SCR, baghouse, and wet scrubber. Unit 2 is a pulverized coal-fired, super-critical steam electric plant with an SCR, baghouse, and wet scrubber.

Northeast Generating Station is an eight-unit, distillate oil-fired combustion turbine peaking plant located near downtown Kansas City, in Jackson County, Missouri.

West Gardner Generating Station is a four-unit, natural gas-fired combustion turbine peaking plant in suburban Johnson County, near the town of Gardner, Kansas.

Osawatomie Generating Station is a single-unit, natural gas-fired combustion peaking plant located in rural Miami County, between the towns of Osawatomie and Paola, Kansas.

Spearville Generating Station is a wind generation plant located in rural Ford County near Spearville, Kansas. Unit 1 has 67 wind turbines. Unit 2 has 32 wind turbines.

1.3 APPROACH

Sega met with representatives of KCP&L to gather information about the generating units and visited each of the plant sites. Discussions were held with certain plant staff, further documentation was obtained, and a walkdown of each unit was conducted. Sega utilized Microsoft® Project 2010 (MS Project) software with resource loading to develop and compile opinions of probable costs and schedules for the retirement of each unit. Costs were developed based on KCP&L current labor rates and those of its present maintenance contractors. Site-specific retirement costs were developed using a bottom-up approach for each task.

The basis and limits for retiring or dismantling each unit were defined while visiting the plant sites. For instance, it was assumed that the switchyard and/or substation (as applicable) for each generator would remain in service following either retirement or dismantlement. In general, plant roads, fencing, and site grading were presumed to remain undisturbed unless otherwise specifically required to be removed. Closure of ash landfills, and the removal and remediation of river water intakes and fuel oil storage tanks were included in the retirement phase as required by applicable permits.

Because specific quantity information was available for Iatan Unit 1 and La Cygne Unit 2, the dismantlement costs of these two units were developed from the ground up. It was assumed that common facilities at each plant site, such as coal unloading, storage and handling systems, water treatment systems, ash handling systems, and office buildings,

would remain in service until the last unit is retired. For multiple-unit sites, retirement and dismantlement costs were developed separately for the common plant facilities. For instance, applicable ash landfill closure costs for the units were included in the common plant category rather than for individual units. In the case of Hawthorn, the common facilities associated with the coal-fired unit, Hawthorn 5, will be retired with that unit. The remaining units at the Hawthorn site are gas-fired and do not require many of the common site facilities for operation.

Spearville will be dismantled per the Spearville Wind Project Decommissioning Agreement between KCP&L and Ford County, Kansas. This agreement states that the dismantlement of each wind turbine shall include the removal of the turbine and tower, removal of the tower foundation to a depth at least 4 feet below grade, and removal of the interconnection transmission poles and lines. The dismantlement of the wind turbines shall commence within 12 months after each unit is retired.

The estimates of probable cost for “stack removal” and “final site grading and drainage” for the various sites were not developed using MS Project software. The “stack removal” costs for the various stacks were based on a budgetary estimate for the demolition of the existing Iatan Unit 1 stack. This estimate was scaled to estimate the demolition for the other stacks involved in this study. The “final site grading and drainage” estimate of probable cost was developed by Sega but was not developed in an MS Project schedule. Both of these activities are represented in the MS Project schedule in Appendix A for the applicable units as a onetime cost/use in the resource allocation section of the file; therefore, they appear as a one-day activity in the schedule with the estimated costs as a one-time expense.

1.4 RESULTS

The opinion of the probable costs for retirement and dismantlement developed by Sega for each of KCP&L’s units and the common facilities at each plant site are provided in Figure 1.2. All costs shown are in 2014 dollars. The costs are provided for the full ownership of these generating facilities. Fractional shares of ownership and jurisdictional allocations have not been taken into account in these costs. Ongoing expenses for the sites such as security, routine inspections, groundwater monitoring, etc., which would continue

as long as the Company continues to own the sites, are not included in the decommissioning costs. Retirement costs are separately provided for each unit and for related common plant facilities. The costs of dismantlement and scrap values are provided for each unit and for common plant, as well as the final net terminal costs.

As shown in Figure 1.2, there is a significant difference between the costs of retiring and the costs of dismantling a power plant. In Segas opinion, the probable cost to dismantle all of KCP&Ls units is approximately \$255 million. Some materials could be sold for scrap, thereby recovering approximately \$86 million and bringing the estimated net terminal value for dismantling all of KCP&Ls plants to \$169 million, based upon the current averaged scrap indices.

However, were KCP&L to retire its generating units in place without dismantlement, Segas believes the cost would be approximately \$105 million. As explained more fully in Section 2 - Retirement, the bulk of these retirement costs are tied to activities that must be completed upon retirement of the unit or whenever the unit ceases operations, as required by regulation, permits, or agreements. KCP&L accounts for most of these costs in asset retirement obligations (AROs).

| Name | Unit No. | Dismantlement | | | | | |
|--------------|----------|---------------------|---|----------------------|----------------------|---------------------|----------------------|
| | | Unit Retirement | Activities Required by Permit Agreement (4) or Regulation (2) | Total Retirement | Dismantlement | Scrap Value (3) | Net Terminal Cost |
| Montrose | 1 | \$496,957 | | \$496,957 | \$8,058,485 | \$4,260,000 | \$3,798,485 |
| | 2 | \$496,957 | | \$496,957 | \$7,886,609 | \$4,170,000 | \$3,716,609 |
| | 3 | \$496,957 | | \$496,957 | \$8,227,950 | \$4,350,000 | \$3,877,950 |
| | Common | \$447,132 | \$2,597,269 | \$3,044,401 | \$11,445,008 | \$2,170,000 | \$9,275,008 |
| Hawthorn | 5 | \$977,615 | | \$977,615 | \$21,004,708 | \$8,750,000 | \$12,254,708 |
| | Common | \$319,281 | \$1,198,746 | \$1,518,027 | \$9,942,959 | \$1,120,000 | \$8,822,959 |
| LaCygne | 1 | \$1,047,834 | | \$1,047,834 | \$26,459,962 | \$10,250,000 | \$16,209,962 |
| | 2 | \$998,295 | | \$998,295 | \$25,598,523 | \$9,840,000 | \$15,758,523 |
| | Common | \$593,828 | \$45,751,862 | \$46,345,690 | \$16,881,376 | \$1,920,000 | \$14,961,376 |
| Iatan | 1 | \$1,035,765 | \$595,211 | \$1,630,976 | \$24,018,833 | \$10,000,000 | \$14,018,833 |
| | 2 | \$1,031,343 | | \$1,031,343 | \$27,449,519 | \$11,430,000 | \$16,019,519 |
| | Common | \$590,627 | \$3,744,486 | \$4,335,113 | \$24,874,543 | \$6,850,000 | \$18,024,543 |
| Northeast | 11 | | | | | | |
| | 12 | | | | | | |
| | 13 | | | | | | |
| | 14 | \$516,768 | | \$1,041,802 | \$10,006,697 | \$784,000 | \$9,222,697 |
| | 15 | | | | | | |
| | 16 | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| Common | | \$525,034 | | | | | |
| Hawthorn | 7 | \$344,453 | \$0 | \$344,453 | \$7,097,072 | \$196,000 | \$6,901,072 |
| | 8 | | | | | | |
| West Gardner | 1 | | | | | | |
| | 2 | \$399,637 | \$0 | \$399,637 | \$11,621,879 | \$392,000 | \$11,229,879 |
| | 3 | | | | | | |
| | 4 | | | | | | |
| Osawatomie | 1 | \$274,345 | \$0 | \$274,345 | \$5,483,584 | \$98,000 | \$5,385,584 |
| Hawthorn | 6 | \$401,909 | \$640,900 | \$1,042,809 | \$9,378,046 | \$2,423,000 | \$6,955,046 |
| | 9 | | | | | | |
| Spearville | 1 | \$0 | \$27,042,605 | \$27,042,605 | \$0 | \$5,030,809 | (\$5,030,809) |
| | 2 | \$0 | \$12,815,140 | \$12,815,140 | \$0 | \$2,402,775 | (\$2,402,775) |
| | | \$10,469,703 | \$94,911,253 | \$105,380,956 | \$255,435,753 | \$86,436,584 | \$168,999,169 |

**Figure 1.2 - Probable Costs of Decommissioning
KCP&L Electric Generating Units (1)**

- (1) All values in 2014 U.S. dollars.
- (2) Activities required by permits and/or regulations that are to occur upon ceasing operations, including ash landfill closures, and river water intake.
- (3) Current scrap values per averaged indices.
- (4) The Spearville Land Lease requires the wind turbines be dismantled within 12 months of retirement.

SECTION 2

RETIREMENT

RETIREMENT

2.1 INTRODUCTION

Sega developed an opinion of probable cost to retire the KCP&L facilities previously listed in Figure 1.1 and further described in Appendix A. The opinion of probable cost is a buildup of estimated costs to perform the retirement activities to leave each facility in a safe state. A resource-loaded MS Project schedule was developed for the retirement of each facility. Each schedule includes the activity, duration of the activity, resources required for each activity, and the probable cost of each activity. The results for each facility are provided in Appendix A of this report.

The opinion of probable cost for the retirement of each coal-fired generating facility is broken down into the retirement of each unit, plus the retirement of the common facilities. With the exception of Hawthorn, the common facilities will be retired when the last unit is retired at a site. In the case of Hawthorn, the common facilities associated with the coal-fired unit, Hawthorn 5, will be retired with that unit. The remaining units at the Hawthorn site are gas-fired and do not require many of the common site facilities for operation.

2.2 OPINION OF PROBABLE COST BASIS

Retirement activities will be performed by KCP&L bargaining unit personnel and managed by KCP&L. Man-hour costs for both management and bargaining unit personnel were provide by KCP&L. At the direction of KCP&L, the direct man-hour rate was multiplied by 1.4 to account for benefits and overhead loadings.

The estimates of probable cost to retire the combustion turbines are based on retiring all of the combustion turbines at a given site, not on an individual combustion turbine retirement basis.

A 5-percent “Owner Internal Costs” is included in the opinion of probable cost. This line item is included to cover the costs of various internal KCP&L departments that will charge to the project during the implementation of the retirement activities.

A 25-percent “Owner Contingency” is included in the opinion of probable cost. This level of contingency is consistent with Association for the Advancement of Cost Engineering (AACE-International) contingency level guidelines based on the engineering progress completed at the point when the cost estimate was developed.

2.3 RETIREMENT ACTIVITIES

Prior to starting the actual retirement activities, a retirement plan will be developed. This plan will address any laws, ordinances, regulations, and standards dictating how ash, slag, scrubber by-products, and any other waste stream is stored and/or removed from the plant site. An environmental assessment will be performed to develop a plan to address these issues and to assure that permits required to complete the retirement activities are in place. The retirement plan will also address plant safety during the time interval between plant retirement and eventual dismantlement. This plan should include the requirements for periodic inspections to assess the condition and integrity of the plant structures so that contractors can safely demolish the plant when so required. The costs to perform these activities are estimated in the “Pre-Retirement Activities” line item of each facility’s opinion of probable cost.

The following activities and conditions are required to leave a generating facility (unit, common facilities, or entire plant, as may be applicable) in a safe state and are included in each facility’s opinion of probable cost:

1. All equipment, tanks, vessels, containers, drums, headers, exchangers, and sumps will be drained and vented. Fuel oil, lubricating oil, liquid propane, bulk hydrogen, Halon, liquid ammonia, water treatment chemicals, lab chemicals, cleaning solutions, and Freon will be handled per plant procedures and plan permitting requirements. Man-ways, hand-holes, vents, and drains will be opened to ensure drainage. Drains will remain open.

2. The electrical sources will be isolated from the facility. The exact details of this scope of work will be determined during the pre-retirement activities phase. At a minimum, all electrical buses will be disconnected at the source. The medium- and low-voltage switchgear will be racked out by fully withdrawing the circuit breakers. Fuses will be removed, and circuit breakers and disconnect switches will be left in the open position. Motors will be disconnected at the source and motor lube oil will be drained (as applicable).
3. Fuel yard equipment will be cleaned and vacuumed to reduce or eliminate the hazards of fugitive coal dust.
4. To the maximum extent possible, all drains will be emptied and vented. Low-point drains will remain open.
5. Fuel gas piping and city/rural water piping will be cut and capped at the property line.
6. Chimney Federal Aviation Agency (FAA) required lighting will be kept in service.
7. Buildings will be “secured”. The determination of the detailed activities required to leave a building in a secure state is included in the pre-retirement activities and will include isolating all power sources, draining potable water lines, draining and venting sewage lines, securing doors and windows, capping any means of egress for vermin, removing hazardous materials, and moving any relevant plant documentation to alternate off-site storage sites.
8. Fuel oil and waste oil will be drained and removed.
9. Boiler chemicals will be drained and removed.
10. Boilers and HRSGs will be drained. The water and steam side will be vented. The gas side will be vacuumed to remove ash and slag. Drum doors and boiler doors will be left open. Bottom ash systems will be drained, cleaned, and vented.
11. Ductwork will be vacuumed and left opened.
12. Condensate and feedwater piping will be drained and vented.
13. Feedwater heaters will be drained and vented.
14. Deaerator and deaerator storage tanks will be drained and vented.
15. The turbine and condenser will be drained and vented. Turbine lube oil will be removed.

16. The generator will be electrically and mechanically isolated. The generator and exciter cooling water systems will be drained and vented. Hydrogen gas tanks and the generator hydrogen systems will be vented.
17. Compressed air systems will be drained and vented. Desiccant will be removed from the compressed air dryer systems.
18. Circulating water systems and turbine cooling water systems will be drained and vented. Circulating water chemical feeds will be drained and vented.
19. Baghouses will be opened, cleaned, and vented. Filter bags and cages will be removed.
20. Wet Flue Gas Desulfurization (FGD) systems will be drained, opened, cleaned, and vented.
21. Dry FGD systems will be drained, opened, cleaned, and vented.
22. Re-agent preparation facilities will be drained, opened, cleaned, and vented.
23. SCRs will be opened, cleaned, and vented. Catalyst will be removed. Ammonia storage tanks will be emptied and vented.
24. The battery systems will have the battery electrolytes and battery cells removed and disposed.
25. Sewage treatment facilities will be drained, cleaned, and vented.
26. Oily drain tanks will be opened and pumped out.
27. CO₂ systems used for fire protection will be drained, opened, and vented.
28. Any other activities required by law, regulation or permit for a specific unit, common facility or plant site will be performed.

Once the site retirement activities are complete, several months of post-retirement activities will commence. These activities include determining the disposition of site documentation, assuring permits are in correct condition, developing plans to monitor the retired facility, accounting and environmental activities, and re-assigning personnel as required.

2.4 ARO ACTIVITIES

Asset Retirement Obligations (AROs) are a means that KCP&L utilizes to track the costs of activities that are required to be performed when one of its generating units ceases operation and is removed from service. These are activities that are required to be performed upon retirement according to permits, statutes, agreements, and regulations. For certain activities, such as ash landfill closures, KCP&L is required to periodically report estimated cost updates to state environmental agencies (Kansas Department of Health and Environment and Missouri Department of Natural Resources). These agencies require KCP&L to periodically demonstrate the ability to fund these closure activities. This is because the costs for ash landfill closures and post-closure activities are significant. In fact, landfill closure costs and post-closure activities exceed the costs of all other retirement activities for the respective units at the Montrose, La Cygne, and Iatan Generating Stations.

Other activities, such as the removal of river water intakes, are stated requirements in the standard form permits issued by the United States Army Corp of Engineers. Also included in AROs are amounts for the abatement and removal of fuel oil storage tanks of the plants located in Missouri (Montrose, Northeast, and Iatan Generating Stations). Since the Kansas fuel oil tank permits do not specifically require their removal upon ending operation, the costs for their removal are in the demolition (La Cygne Generating Station).

While KCP&L accounts for asbestos abatement activities in AROs for the La Cygne, Montrose, and Hawthorn Generating Stations, these activities were excluded from the retirement and decommissioning costs. Asbestos abatement activities are ongoing at each of these sites during the life of the units, and will continue to be performed after retirement, but before dismantlement. Thus, asbestos abatement was not included in this decommissioning study.

In addition, Sega included amounts for closure and removal of the sanitary waste lagoons at the Montrose and La Cygne Generating Stations, since these activities are required by Kansas and Missouri regulations when operations cease. However, the probable costs for these closures are below KCP&L's threshold for maintaining an ARO.

Wherever KCP&L already had estimates and a basis for valuing the costs of such ARO closure activities, Sega reviewed and utilized these estimates, adjusting to 2014 present-day dollars. Where there was no prior estimate available, Sega developed an opinion of probable costs for their closure. Each of these costs is provided in Appendix A.

Appendix D is a table showing the source of the requirement that dictates each ARO activity.

SECTION 3

DISMANTLEMENT

DISMANTLEMENT

3.1 INTRODUCTION

Sega developed an opinion of probable cost to dismantle the KCP&L facilities that are listed in Appendix A. The opinion of probable cost is a buildup of estimated costs to perform the dismantlement activities to remove equipment and building superstructures down to grade-level foundations. Below-grade foundations, piping, and duct banks will be abandoned in place. A resource-loaded MS Project schedule was developed for the dismantlement of the facilities. Each schedule includes the activity, duration of the activity, resource required for each activity, and the probable cost of each activity. The results for each of the facilities are provided in Appendix A.

The opinion of probable cost for the dismantlement of each coal-fired generating facility is broken down into the dismantlement of each unit, plus the dismantlement of the common facilities. The common facilities will be dismantled when the last unit at the site is dismantled.

The estimate of probable cost to dismantle the combustion turbines are based on dismantling all of the combustion turbines at the site, not on an individual combustion turbine dismantlement basis.

The estimate of probable cost to dismantle the wind generation facility is based on dismantling all of the wind turbines at the site, not on an individual wind turbine dismantlement basis.

3.2 OPINION OF PROBABLE COST BASIS

The project will be managed by KCP&L staff. KCP&L will hire an Owner's Engineer to assist with environmental issues and the technical dismantlement details. KCP&L will hire a Demolition General Contractor (DGC) to perform the complete dismantlement of each unit.

The opinion of probable cost is presented as the straight netting of the DGC's firm price cost, minus the current scrap value of the equipment and materials.

At the initiation of dismantlement, this study assumes that the unit or common facility has been previously decommissioned as detailed in Section 2 - Retirement.

A resource-loaded MS Project dismantlement schedule and opinion of probable cost was developed for Spearville (both units), Northeast (all eight units), Hawthorn 7 and 8 (both units combined), West Gardner (all four units), Osawatomie (one unit), Hawthorn 6 and 9 (both units combined), Iatan Unit 1, La Cygne Unit 2, and the Common facilities for each of these plant sites. The dismantlement schedules for Iatan Unit 1 and La Cygne Unit 2 were developed based on the actual quantities and materials documented in the final construction reports for each unit. The costs for these units were used to derive the dismantlement costs for Montrose Units 1, 2, and 3, Iatan Unit 2, Hawthorn Unit 5, and La Cygne Unit 1 using the AACE International Capacity Factor Method.

A 5-percent "Owner Internal Cost" is included in the opinion of probable cost. This line item is included to cover the costs of various internal KCP&L departments that will charge to the project during the implementation of the dismantlement activities.

A 25-percent "Owner Contingency" is included in the opinion of probable cost. This level of contingency is consistent with the AACE International contingency level based on the engineering progress completed at the point when the cost estimate is developed.

3.3 DISMANTLEMENT ACTIVITIES

The dismantlement of a facility is divided into pre-dismantlement activities, dismantlement activities, and project closure activities.

3.3.1 Pre-Dismantlement Activities

Pre-dismantlement activities consist of the detailed pre-planning of the dismantlement process. This pre-planning includes establishing the KCP&L project management team;

hiring an Owner's Engineer; developing a detailed dismantlement scope of work, including how to address any environmental issues; developing a level 1 project schedule; and contracting with a DGC.

The KCP&L project management team will be responsible for the project execution and will consist of a full-time project manager, two full-time engineers, a full-time project administrative assistant, and a part-time procurement specialist. This team will have the authority to manage the dismantlement of the plant.

The Owner's Engineer will assist KCP&L with the technical aspects of executing the project. The Owner's Engineer will help establish the boundaries of demolition, provide environmental consulting, and develop the technical specifications for the DGC contract request for proposal. The Owner's Engineer will provide 1-1/2 full-time equivalent field engineers during the demolition phase of the project. The Owner's Engineer will also provide detailed design for equipment that requires modifications to keep other units or common facilities in operation during demolition and after the unit is dismantled.

The KCP&L project management team and the Owner's Engineer will review all existing permits to assure that any relevant existing permit requirements are met during demolition. This team will also get any additional required permits in place for demolition (outside of the normal permits that are the responsibility of the DGC).

Prior to dismantlement activities, a detailed site characterization study will be performed. This study involves a series of site investigations to determine potential subsurface environmental issues at the site, a description of the hydrological and hydrogeological conditions on the site, and a determination of potential waste streams generated during the demolition work. Based on the outcome of the site characterization study, reclamation, and remediation plans that address the environmental issues and site conditions will be developed. The site characterization study and the development of the remediation plans can take up to six months to complete. The site characterization study will be performed by the Owner's Engineer.

The KCP&L project management team will identify the boundaries of dismantlement and the location of system and equipment isolation points between the unit to be demolished, common facilities, and units to remain.

The KCP&L project management team will be responsible for bidding and contracting with a qualified DGC.

Prior to the DGC mobilizing on site, the KCP&L project management team will confirm that the unit to be dismantled is ready to be turned over to the DGC.

3.3.2 Dismantlement Activities for a Coal-Fired Unit

The demolition contractor will be structured into several crews that will bring equipment and materials to the ground. A separate dedicated crew will be responsible for classifying the scrap by type and removing the scrap from the site.

The coal-fired units will be demolished in a phased and sequential manner to assure worker safety and to minimize any interferences with surrounding equipment. Please refer to the man-power loaded schedule and graphs in Appendix A for the details of each demolition phase.

3.3.2.1 Phase 1 Demolition - Boiler and Turbine Equipment Removal

Mechanical and electrical equipment and material inside the boiler and turbine building footprints will be removed. The goal of this phase is to remove the majority of the equipment in the boiler and turbine buildings leaving only the boiler, turbine, building, and support steel.

In this phase of the project, the switchyard is disconnected from the generating facility.

3.3.2.2 Phase 2 Demolition - Boiler and Turbine Removal

The boiler equipment will be removed at the start of this phase. Then, the boiler furnace and backpass will be removed from the bottom up (boilers are hung from the top of the boiler structure) and the structural steel is removed from the top down. Once the structural steel and all equipment are removed, the boiler equipment foundations will be demolished to existing grade.

In parallel with the above activities, the turbine, condenser neck heat exchangers, condenser, and miscellaneous turbine equipment will be removed. The turbine building and turbine pedestal is then demolished to grade.

3.3.2.3 Phase 3 Demolition - Precipitator and AQCS Dismantlement

If the unit has a precipitator, the precipitator will be removed similar to the process for removing the boiler. The precipitator internals will be removed from the bottom up and the precipitator structural steel will be removed from the top down. The precipitator foundation will be removed down to grade.

If the unit has a wet or dry scrubber and/or a baghouse, the dismantlement will start at the stack and work back towards the boiler to avoid dismantlement activities interferences.

3.3.2.4 Phase 4 Demolition - Yard Demolition

This phase removes equipment and materials external to the boiler and turbine areas. Underground piping, conduit, and duct banks will be abandoned in place with the exception of the circulating water pipe. The concrete reinforced circulating water pipes will be excavated, collapsed by crushing, and backfilled. Electrical man-holes will be collapsed by crushing and backfilled. Special care will be taken to assure that any materials left in the ground will not adversely impact site drainage.

3.3.2.5 Phase 5 - Final Site Grading and Drainage

Final grading and drainage includes a minimum amount of grading to assure that the site drainage facilities remain in place and includes final seeding of the site.

3.3.3 Dismantlement Activities for a Combustion Turbine Site

The demolition contractor will be structured into several crews that will bring equipment and materials to the ground. A separate dedicated crew will be responsible for classifying the scrap by type and removing the scrap from the site.

The combustion turbines, auxiliary equipment, and buildings will be demolished in a phased and sequential manner to assure worker safety and to minimize any interferences with surrounding equipment. Please refer to the man-power loaded schedule and graphs in Appendix A for the details of each demolition phase.

Final grading and drainage includes a minimum amount of grading to assure that the site drainage facilities remain in place and includes final seeding of the site.

3.3.4 Dismantlement Activities for Common Facilities

The demolition contractor will be structured into several crews that will bring equipment and materials to the ground. A separate dedicated crew will be responsible for classifying the scrap by type and removing the scrap from the site.

The common facilities dismantlement activities consist primarily of the removal of chimneys, fuel yard equipment, removal of site-specific common equipment, and the removal of facility buildings. The phasing of the common dismantlement processes are site specific and will be determined during the pre-dismantlement activity phase of the project.

Final grading and drainage includes a minimum amount of grading to assure that the site drainage facilities remain in place and includes final seeding of the site.

3.3.5 Dismantlement Activities for Wind Generation Plants

Each wind turbine will be brought down to the ground. The scrap structural steel, generators, and gearboxes will be loaded onto trucks and transported to the appropriate recycling facility. The turbine blades are fabricated from polyester thermoset glass reinforced plastic which is currently not a recyclable material and will have to be landfilled. The turbine blades will be cut into pieces on site, loaded onto 53-foot trailers, and transported to the appropriate landfill. The underground collection cables will be removed and the cable will be recycled. The foundation support columns will be removed down to the foundation bases. The plant roads will be removed by removing the geo-fabric and gravel.

3.4 PROJECT CLOSURE ACTIVITIES

This phase of the project confirms that the remediation and reclamation of the site has been successfully complete and that all required “record” documentation needed by KCP&L is complete and on file.

3.5 SCRAP METAL VALUES

Scrap metal weights were developed for Iatan Unit 1 based on the actual quantities and materials documented in the final construction reports. These scrap metal weights were applied to the other coal-fired units using the AACE International Capacity Factor Method.

Scrap metal weights for the combustion turbines were based on combustion turbine weights and generator weights for similar-sized combustion turbines and generators from previous Segal projects.

Scrap metal weights for the wind turbines were based on actual quantities and materials documented in the shipping bill of lading found in the original plant construction documentation.

Please see Appendix B for the opinion of current average scrap values for each unit.

APPENDICES

APPENDIX A

OPINIONS OF COSTS BY UNITS

MONTROSE

MONTROSE STATION

The Montrose Generating Station consists of three coal-fired power plants.

Montrose Unit 1 has an SPP-accredited unit rating of 170 MW and was placed in service in 1958. Unit 1 has a sub-critical Combustion Engineering boiler and a General Electric turbine. Lake water is used for condenser cooling. Unit 1 has an electrostatic precipitator for particulate removal.

Montrose Unit 2 has an SPP-accredited unit rating of 164 MW and was placed in service in 1960. Unit 2 has a sub-critical Combustion Engineering boiler and a General Electric turbine. Lake water is used for condenser cooling. Unit 2 has an electrostatic precipitator for particulate removal.

Montrose Unit 3 has an SPP-accredited unit rating of 176 MW and was placed in service in 1964. Unit 3 has a sub-critical Combustion Engineering boiler and a Westinghouse turbine. Lake water is used for condenser cooling. Unit 3 has an electrostatic precipitator for particulate removal.

The Montrose fuel yard has a rotary car dumper to unload unit trains of coal. Coal is stored in a common fuel yard. Fuel is reclaimed from the common fuel yard via a reclaim pit. Coal is transferred from the common conveyor system to dedicated unit conveyors (located near the final coal transfer points for each unit).

All three Montrose units have a fuel oil igniter system. The units are supplied with fuel oil from a common fuel oil unloading and storage facility.

All three units beneficially use coal combustion products off site. Coal combustion products that are not beneficially used off site are disposed of in the on-site solid waste 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).

MONTROSE UNIT 1

1. Boiler and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Electrostatic precipitator.
4. Circulating water intake structure.
5. Dedicated Unit 1 fuel handling equipment.
6. Dedicated Unit 1 fuel oil equipment.

MONTROSE UNIT 2

1. Boiler and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Electrostatic precipitator.
4. Circulating water intake structure.
5. Dedicated Unit 2 fuel handling equipment.
6. Dedicated Unit 2 fuel oil equipment.

MONTROSE UNIT 3

1. Boiler and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Electrostatic precipitator.
4. Circulating water intake structure and piping.

5. Dedicated Unit 3 fuel handling equipment.
6. Dedicated Unit 3 fuel oil equipment.

COMMON

1. Administration building.
2. Fuel yard office building.
3. Training building.
4. Warehouses.
5. Maintenance shops.
6. Water treatment.
7. Miscellaneous small buildings and enclosures
8. Common fuel handling equipment.
9. Fuel oil storage and unloading.
10. Fire water systems.
11. Stacks (three).
12. Landfill.

UNIT 1

Montrose 1 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,822 |
| Retirement Activities | \$251,249 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$378,635

Owner Internal Costs 5.00% \$18,932

Owner Contingency: 25.00% \$99,392

Montrose 1 Retirement Opinion of Probable Cost: \$496,957.91

| Montrose 1 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Montrose 1 Retirement | \$378,635.89 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$100,821.60 |
| 4 | KCC&L Overhead Costs | \$86,124.40 |
| 5 | KCP&L Retirement Manager | \$86,124.40 |
| 6 | Equipment Rentals | \$29,178.88 |
| 7 | Vacuum truck | \$29,178.88 |
| 8 | Retirement | \$135,947.01 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$1,786.56 |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | \$2,642.88 |
| 35 | Coal Handling | \$27,475.44 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Burn out coal silos. | \$1,685.44 |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | \$1,685.44 |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 40 | Fuel Oil and Igniter System | \$2,528.16 |























| Montrose 1 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 41 | Drain fuel oil system | \$2,528.16 |
| 42 | Waste Oil System | \$1,685.44 |
| 43 | Drain all waste oil systems | \$1,685.44 |
| 44 | Boiler Chemical Feed | \$1,685.44 |
| 45 | Drain all chemical feed tanks. | \$1,685.44 |
| 46 | Boiler | \$27,484.77 |
| 47 | Open boiler doors. | \$880.96 |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 49 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 50 | Open drum doors. | \$880.96 |
| 51 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 52 | Stack and Ductwork | \$12,080.96 |
| 53 | Open ductwork doors. | \$880.96 |
| 54 | Perform cleaning of the ductwork. | \$11,200.00 |
| 55 | Condensate and Feedwater Piping | \$1,685.44 |
| 56 | Drain water from the system. | \$842.72 |
| 57 | Leave open vents and drains. | \$842.72 |
| 58 | Feedwater heaters | \$2,528.16 |
| 59 | Drain feedwater heaters | \$842.72 |
| 60 | Leave open vents and drains. | \$1,685.44 |
| 61 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 62 | Drain Deaerator and Storage | \$842.72 |
| 63 | Leave open vents and drains. | \$842.72 |
| 64 | Precipitator | \$14,114.96 |
| 65 | Multiple cleaning cycles for collection plates. | \$2,528.16 |
| 66 | Clear hoppers of all ash | \$2,805.44 |
| 67 | Disconnect transformers. | \$2,036.80 |
| 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 |
| 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 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 73 | Turbine(s) and Condenser | \$5,266.64 |
| 74 | Drain hotwell and leave doors open. | \$861.84 |
| 75 | Open main turbine doors. | \$880.96 |
| 76 | Open bfp turbine doors. | \$880.96 |
| 77 | Remove lube oil. | \$2,642.88 |
| 78 | Generator | \$6,095.76 |
| 79 | 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 |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 81 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 82 | 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 |
| 83 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |

| Montrose 1 Retirement | | |
|-----------------------|---|--------------------|
| ID | Task Name | Cost |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 86 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
| 87 | Drain. | \$1,685.44 |
| 88 | Open water box doors. | \$880.96 |
| 89 | Drain any circulating water chemical feed tanks. | \$842.72 |
| 90 | Compressed Air System | \$842.72 |
| 91 | Open vents and drains. | \$842.72 |
| 92 | Auxiliary Steam System | \$1,685.44 |
| 93 | Drain water from system. | \$842.72 |
| 94 | Remove aux boiler chemicals. | \$842.72 |
| 95 | Auxiliary Cooling Water System | \$842.72 |
| 96 | Drain water from system. | \$842.72 |
| 97 | Condenser Air Extraction | \$842.72 |
| 98 | Drain water from system. | \$842.72 |
| 99 | Building Heating System | \$842.72 |
| 100 | Drain water from system. | \$842.72 |
| 101 | Battery System | \$4,253.28 |
| 102 | De-energize all battery chargers from the source. | \$446.64 |
| 103 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | \$446.64 |
| 104 | Remove and dispose of battery electrolyte. | \$1,680.00 |
| 105 | Remove and dispose of battery cells. | \$1,120.00 |
| 106 | Clean up and dispose of electrolyte on surface areas around batteries. | \$560.00 |
| 107 | Post Retirement Activities | \$26,564.00 |
| 108 | Post Retirement Activities | \$26,564.00 |

Montrose 1 Retirement

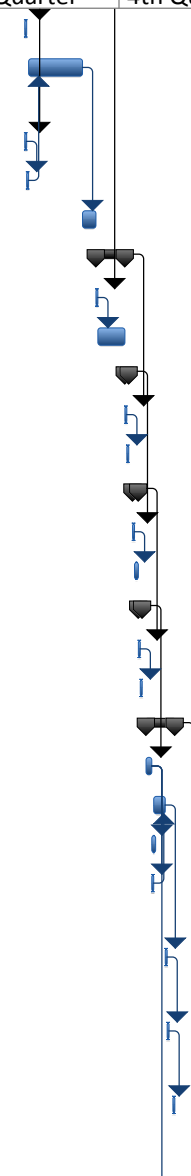
| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Montrose 1 Retirement | 245 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | 66 days | | | | | |
| 4 | KCC&L Overhead Costs | 139 days | | | | | |
| 5 | KCP&L Retirement Manager | 139 days | | | | | |
| 6 | Equipment Rentals | 139 days | | | | | |
| 7 | Vacuum truck | 139 days | | | | | |
| 8 | Retirement | 139 days | | | | | |
| 9 | Electrical | 22 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 7 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

Montrose 1 Retirement

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

Montrose 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st 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 | Stack and Ductwork | 11 days | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | |
| 54 | Perform cleaning of the ductwork. | 10 days | | | | | |
| 55 | Condensate and Feedwater Piping | 2 days | | | | | |
| 56 | Drain water from the system. | 1 day | | | | | |
| 57 | Leave open vents and drains. | 1 day | | | | | |
| 58 | Feedwater heaters | 3 days | | | | | |
| 59 | Drain feedwater heaters | 1 day | | | | | |
| 60 | Leave open vents and drains. | 2 days | | | | | |
| 61 | Deaerator and Deaerator Storage Tank | 2 days | | | | | |
| 62 | Drain Deaerator and Storage | 1 day | | | | | |
| 63 | Leave open vents and drains. | 1 day | | | | | |
| 64 | Precipitator | 11 days | | | | | |
| 65 | Multiple cleaning cycles for collection plates. | 3 days | | | | | |
| 66 | Clear hoppers of all ash | 4 days | | | | | |
| 67 | Disconnect transformers. | 2 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 | | | | | |
| 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 | | | | | |



Montrose 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|--|---------------|-------------|-------------|-------------|-------------|-------------|
| 72 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 73 | Turbine(s) and Condenser | 6 days | | | | | |
| 74 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 75 | Open main turbine doors. | 1 day | | | | | |
| 76 | Open bfp turbine doors. | 1 day | | | | | |
| 77 | Remove lube oil. | 3 days | | | | | |
| 78 | Generator | 7 days | | | | | |
| 79 | 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 | | | | | |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | |
| 81 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | |
| 82 | 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 | | | | | |
| 83 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | |
| 86 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | |
| 87 | Drain. | 2 days | | | | | |
| 88 | Open water box doors. | 1 day | | | | | |
| 89 | Drain any circulating water chemical feed tanks. | 1 day | | | | | |
| 90 | Compressed Air System | 1 day | | | | | |
| 91 | Open vents and drains. | 1 day | | | | | |
| 92 | Auxiliary Steam System | 2 days | | | | | |
| 93 | Drain water from system. | 1 day | | | | | |

Montrose 1 Dismantlement

Owner Costs

| | |
|-------------------------------|-----------|
| Pre-Dismantlement Activities | \$387,025 |
| Overhead During Dismantlement | \$725,955 |
| Post-Dismantlement Activities | \$28,369 |

Owner Costs Total \$1,141,349

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$395,724 |
| Equipment Rental | \$673,809 |
| Consummables | \$672,245 |
| Scrap Crew(s) | \$667,046 |
| Dismantlement* | \$1,768,874 |

DGC Insurance 2.00% \$83,554

Contingency/Profit 15.00% \$639,188

Performance Bond 2.00% \$98,009

Contractor Costs Total: \$4,998,449

Total: \$6,139,798

Owner Internal Costs: 5.00% \$306,990

Owner Contingency: 25.00% \$1,611,697

Montrose Unit 1 Dismantlement Opinion of Probable Cost: \$8,058,485

UNIT 2

Montrose 2 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,822 |
| Retirement Activities | \$251,249 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$378,635

Owner Internal Costs 5.00% \$18,932

Owner Contingency: 25.00% \$99,392

Montrose 2 Retirement Opinion of Probable Cost: \$496,957.91

| Montrose 2 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Montrose 2 Retirement | \$378,635.89 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$100,821.60 |
| 4 | KCL&L Overhead Costs | \$86,124.40 |
| 5 | KCP&L Retirement Manager | \$86,124.40 |
| 6 | Equipment Rentals | \$29,178.88 |
| 7 | Vacuum truck | \$29,178.88 |
| 8 | Retirement | \$135,947.01 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$1,786.56 |

| Montrose 2 Retirement | | |
|-----------------------|---|--------------------|
| ID | Task Name | Cost |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | \$2,642.88 |
| 35 | Coal Handling | \$27,475.44 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Burn out coal silos. | \$1,685.44 |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | \$1,685.44 |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 40 | Fuel Oil and Igniter System | \$2,528.16 |
| 41 | Drain fuel oil system | \$2,528.16 |
| 42 | Waste Oil System | \$1,685.44 |
| 43 | Drain all waste oil systems | \$1,685.44 |
| 44 | Boiler Chemical Feed | \$1,685.44 |
| 45 | Drain all chemical feed tanks. | \$1,685.44 |
| 46 | Boiler | \$27,484.77 |
| 47 | Open boiler doors. | \$880.96 |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 49 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 50 | Open drum doors. | \$880.96 |
| 51 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 52 | Stack and Ductwork | \$12,080.96 |
| 53 | Open ductwork doors. | \$880.96 |
| 54 | Perform cleaning of the ductwork. | \$11,200.00 |
| 55 | Condensate and Feedwater Piping | \$1,685.44 |
| 56 | Drain water from the system. | \$842.72 |
| 57 | Leave open vents and drains. | \$842.72 |
| 58 | Feedwater heaters | \$2,528.16 |
| 59 | Drain feedwater heaters | \$842.72 |
| 60 | Leave open vents and drains. | \$1,685.44 |
| 61 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 62 | Drain Deaerator and Storage | \$842.72 |
| 63 | Leave open vents and drains. | \$842.72 |
| 64 | Precipitator | \$14,114.96 |
| 65 | Multiple cleaning cycles for collection plates. | \$2,528.16 |
| 66 | Clear hoppers of all ash | \$2,805.44 |
| 67 | Disconnect transformers. | \$2,036.80 |
| 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 |
| 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 |

| Montrose 2 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 72 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 73 | Turbine(s) and Condenser | \$5,266.64 |
| 74 | Drain hotwell and leave doors open. | \$861.84 |
| 75 | Open main turbine doors. | \$880.96 |
| 76 | Open bfp turbine doors. | \$880.96 |
| 77 | Remove lube oil. | \$2,642.88 |
| 78 | Generator | \$6,095.76 |
| 79 | 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 |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 81 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 82 | 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 |
| 83 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 86 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
| 87 | Drain. | \$1,685.44 |
| 88 | Open water box doors. | \$880.96 |
| 89 | Drain any circulating water chemical feed tanks. | \$842.72 |
| 90 | Compressed Air System | \$842.72 |
| 91 | Open vents and drains. | \$842.72 |
| 92 | Auxiliary Steam System | \$1,685.44 |
| 93 | Drain water from system. | \$842.72 |
| 94 | Remove aux boiler chemicals. | \$842.72 |
| 95 | Auxiliary Cooling Water System | \$842.72 |
| 96 | Drain water from system. | \$842.72 |
| 97 | Condenser Air Extraction | \$842.72 |
| 98 | Drain water from system. | \$842.72 |
| 99 | Building Heating System | \$842.72 |
| 100 | Drain water from system. | \$842.72 |
| 101 | Battery System | \$4,253.28 |
| 102 | De-energize all battery chargers from the source. | \$446.64 |
| 103 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | \$446.64 |
| 104 | Remove and dispose of battery electrolyte. | \$1,680.00 |
| 105 | Remove and dispose of battery cells. | \$1,120.00 |
| 106 | Clean up and dispose of electrolyte on surface areas around batteries. | \$560.00 |
| 107 | Post Retirement Activities | \$26,564.00 |

Montrose 2 Retirement

| ID | Task Name | Cost |
|-----|----------------------------|-------------|
| 108 | Post Retirement Activities | \$26,564.00 |

Montrose 2 Retirement

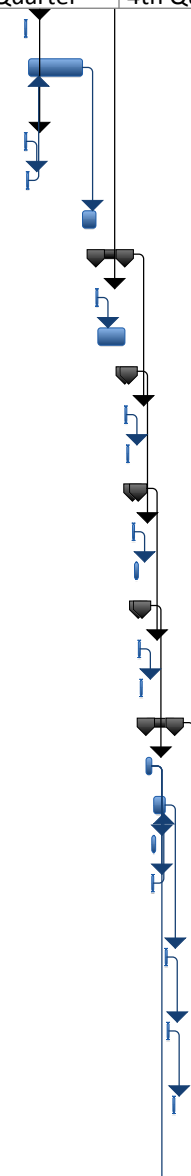
| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Montrose 2 Retirement | 245 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | 66 days | | | | | |
| 4 | KCL&L Overhead Costs | 139 days | | | | | |
| 5 | KCP&L Retirement Manager | 139 days | | | | | |
| 6 | Equipment Rentals | 139 days | | | | | |
| 7 | Vacuum truck | 139 days | | | | | |
| 8 | Retirement | 139 days | | | | | |
| 9 | Electrical | 22 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 7 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

Montrose 2 Retirement

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

Montrose 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st 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 | Stack and Ductwork | 11 days | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | |
| 54 | Perform cleaning of the ductwork. | 10 days | | | | | |
| 55 | Condensate and Feedwater Piping | 2 days | | | | | |
| 56 | Drain water from the system. | 1 day | | | | | |
| 57 | Leave open vents and drains. | 1 day | | | | | |
| 58 | Feedwater heaters | 3 days | | | | | |
| 59 | Drain feedwater heaters | 1 day | | | | | |
| 60 | Leave open vents and drains. | 2 days | | | | | |
| 61 | Deaerator and Deaerator Storage Tank | 2 days | | | | | |
| 62 | Drain Deaerator and Storage | 1 day | | | | | |
| 63 | Leave open vents and drains. | 1 day | | | | | |
| 64 | Precipitator | 11 days | | | | | |
| 65 | Multiple cleaning cycles for collection plates. | 3 days | | | | | |
| 66 | Clear hoppers of all ash | 4 days | | | | | |
| 67 | Disconnect transformers. | 2 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 | | | | | |
| 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 | | | | | |

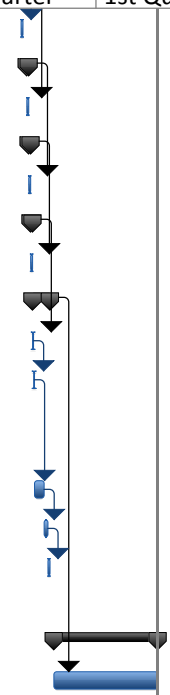


Montrose 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|--|---------------|-------------|-------------|-------------|-------------|-------------|
| 72 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 73 | Turbine(s) and Condenser | 6 days | | | | | |
| 74 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 75 | Open main turbine doors. | 1 day | | | | | |
| 76 | Open bfp turbine doors. | 1 day | | | | | |
| 77 | Remove lube oil. | 3 days | | | | | |
| 78 | Generator | 7 days | | | | | |
| 79 | 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 | | | | | |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | |
| 81 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | |
| 82 | 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 | | | | | |
| 83 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | |
| 86 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | |
| 87 | Drain. | 2 days | | | | | |
| 88 | Open water box doors. | 1 day | | | | | |
| 89 | Drain any circulating water chemical feed tanks. | 1 day | | | | | |
| 90 | Compressed Air System | 1 day | | | | | |
| 91 | Open vents and drains. | 1 day | | | | | |
| 92 | Auxiliary Steam System | 2 days | | | | | |
| 93 | Drain water from system. | 1 day | | | | | |

Montrose 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|---|----------------|-------------|-------------|-------------|-------------|-------------|
| 94 | Remove aux boiler chemicals. | 1 day | | | | | |
| 95 | Auxiliary Cooling Water System | 1 day | | | | | |
| 96 | Drain water from system. | 1 day | | | | | |
| 97 | Condenser Air Extraction | 1 day | | | | | |
| 98 | Drain water from system. | 1 day | | | | | |
| 99 | Building Heating System | 1 day | | | | | |
| 100 | Drain water from system. | 1 day | | | | | |
| 101 | Battery System | 7 days | | | | | |
| 102 | De-energize all battery chargers from the source. | 0.5 days | | | | | |
| 103 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | |
| 104 | Remove and dispose of battery electrolyte. | 3 days | | | | | |
| 105 | Remove and dispose of battery cells. | 2 days | | | | | |
| 106 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | |
| 107 | Post Retirement Activities | 40 days | | | | | |
| 108 | Post Retirement Activities | 40 days | | | | | |



Montrose 2 Dismantlement

Owner Costs

| | |
|-------------------------------|-----------|
| Pre-Dismantlement Activities | \$378,770 |
| Overhead During Dismantlement | \$710,472 |
| Post-Dismantlement Activities | \$27,764 |

Owner Costs Total \$1,117,006

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$387,284 |
| Equipment Rental | \$659,437 |
| Consumables | \$657,907 |
| Scrap Crew(s) | \$652,819 |
| Dismantlement* | \$1,731,147 |

DGC Insurance 2.00% \$81,772

Contingency/Profit 15.00% \$625,554.90

Performance Bond 2.00% \$95,918.42

Contractor Costs Total: \$4,891,839

Total: \$6,008,845

Owner Internal Costs: 5.00% \$300,442.27

Owner Contingency: 25.00% \$1,577,321.89

Montrose Unit 2 Dismantlement Opinion of Probable Cost: \$7,886,609.46

UNIT 3

Montrose 3 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,822 |
| Retirement Activities | \$251,249 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$378,635

Owner Internal Costs 5.00% \$18,932

Owner Contingency: 25.00% \$99,392

Montrose 3 Retirement Opinion of Probable Cost: \$496,957.91

| Montrose 3 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Montrose 3 Retirement | \$378,635.89 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$100,821.60 |
| 4 | KCL&L Overhead Costs | \$86,124.40 |
| 5 | KCP&L Retirement Manager | \$86,124.40 |
| 6 | Equipment Rentals | \$29,178.88 |
| 7 | Vacuum truck | \$29,178.88 |
| 8 | Retirement | \$135,947.01 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$1,786.56 |

| Montrose 3 Retirement | | |
|-----------------------|---|--------------------|
| ID | Task Name | Cost |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | \$2,642.88 |
| 35 | Coal Handling | \$27,475.44 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Burn out coal silos. | \$1,685.44 |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | \$1,685.44 |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 40 | Fuel Oil and Igniter System | \$2,528.16 |
| 41 | Drain fuel oil system | \$2,528.16 |
| 42 | Waste Oil System | \$1,685.44 |
| 43 | Drain all waste oil systems | \$1,685.44 |
| 44 | Boiler Chemical Feed | \$1,685.44 |
| 45 | Drain all chemical feed tanks. | \$1,685.44 |
| 46 | Boiler | \$27,484.77 |
| 47 | Open boiler doors. | \$880.96 |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 49 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 50 | Open drum doors. | \$880.96 |
| 51 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 52 | Stack and Ductwork | \$12,080.96 |
| 53 | Open ductwork doors. | \$880.96 |
| 54 | Perform cleaning of the ductwork. | \$11,200.00 |
| 55 | Condensate and Feedwater Piping | \$1,685.44 |
| 56 | Drain water from the system. | \$842.72 |
| 57 | Leave open vents and drains. | \$842.72 |
| 58 | Feedwater heaters | \$2,528.16 |
| 59 | Drain feedwater heaters | \$842.72 |
| 60 | Leave open vents and drains. | \$1,685.44 |
| 61 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 62 | Drain Deaerator and Storage | \$842.72 |
| 63 | Leave open vents and drains. | \$842.72 |
| 64 | Precipitator | \$14,114.96 |
| 65 | Multiple cleaning cycles for collection plates. | \$2,528.16 |
| 66 | Clear hoppers of all ash | \$2,805.44 |
| 67 | Disconnect transformers. | \$2,036.80 |
| 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 |
| 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 |

| Montrose 3 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 72 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 73 | Turbine(s) and Condenser | \$5,266.64 |
| 74 | Drain hotwell and leave doors open. | \$861.84 |
| 75 | Open main turbine doors. | \$880.96 |
| 76 | Open bfp turbine doors. | \$880.96 |
| 77 | Remove lube oil. | \$2,642.88 |
| 78 | Generator | \$6,095.76 |
| 79 | 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 |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 81 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 82 | 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 |
| 83 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 86 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
| 87 | Drain. | \$1,685.44 |
| 88 | Open water box doors. | \$880.96 |
| 89 | Drain any circulating water chemical feed tanks. | \$842.72 |
| 90 | Compressed Air System | \$842.72 |
| 91 | Open vents and drains. | \$842.72 |
| 92 | Auxiliary Steam System | \$1,685.44 |
| 93 | Drain water from system. | \$842.72 |
| 94 | Remove aux boiler chemicals. | \$842.72 |
| 95 | Auxiliary Cooling Water System | \$842.72 |
| 96 | Drain water from system. | \$842.72 |
| 97 | Condenser Air Extraction | \$842.72 |
| 98 | Drain water from system. | \$842.72 |
| 99 | Building Heating System | \$842.72 |
| 100 | Drain water from system. | \$842.72 |
| 101 | Battery System | \$4,253.28 |
| 102 | De-energize all battery chargers from the source. | \$446.64 |
| 103 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | \$446.64 |
| 104 | Remove and dispose of battery electrolyte. | \$1,680.00 |
| 105 | Remove and dispose of battery cells. | \$1,120.00 |
| 106 | Clean up and dispose of electrolyte on surface areas around batteries. | \$560.00 |
| 107 | Post Retirement Activities | \$26,564.00 |

Montrose 3 Retirement

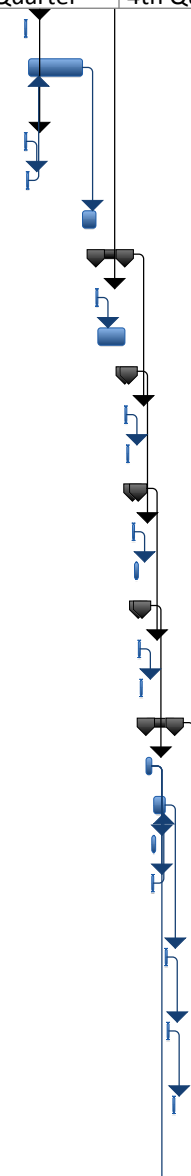
| ID | Task Name | Cost |
|-----|----------------------------|-------------|
| 108 | Post Retirement Activities | \$26,564.00 |

| Montrose 3 Retirement | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----------------------|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Montrose 3 Retirement | 245 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | 66 days | | | | | |
| 4 | KCL&L Overhead Costs | 139 days | | | | | |
| 5 | KCP&L Retirement Manager | 139 days | | | | | |
| 6 | Equipment Rentals | 139 days | | | | | |
| 7 | Vacuum truck | 139 days | | | | | |
| 8 | Retirement | 139 days | | | | | |
| 9 | Electrical | 22 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 7 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

Montrose 3 Retirement

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

| Montrose 3 Retirement | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st 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 | Stack and Ductwork | 11 days | | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | | |
| 54 | Perform cleaning of the ductwork. | 10 days | | | | | | |
| 55 | Condensate and Feedwater Piping | 2 days | | | | | | |
| 56 | Drain water from the system. | 1 day | | | | | | |
| 57 | Leave open vents and drains. | 1 day | | | | | | |
| 58 | Feedwater heaters | 3 days | | | | | | |
| 59 | Drain feedwater heaters | 1 day | | | | | | |
| 60 | Leave open vents and drains. | 2 days | | | | | | |
| 61 | Deaerator and Deaerator Storage Tank | 2 days | | | | | | |
| 62 | Drain Deaerator and Storage | 1 day | | | | | | |
| 63 | Leave open vents and drains. | 1 day | | | | | | |
| 64 | Precipitator | 11 days | | | | | | |
| 65 | Multiple cleaning cycles for collection plates. | 3 days | | | | | | |
| 66 | Clear hoppers of all ash | 4 days | | | | | | |
| 67 | Disconnect transformers. | 2 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 | | | | | | |
| 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 | | | | | | |

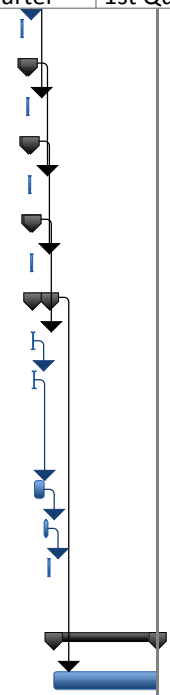


Montrose 3 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|--|---------------|-------------|-------------|-------------|-------------|-------------|
| 72 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 73 | Turbine(s) and Condenser | 6 days | | | | | |
| 74 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 75 | Open main turbine doors. | 1 day | | | | | |
| 76 | Open bfp turbine doors. | 1 day | | | | | |
| 77 | Remove lube oil. | 3 days | | | | | |
| 78 | Generator | 7 days | | | | | |
| 79 | 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 | | | | | |
| 80 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | |
| 81 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | |
| 82 | 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 | | | | | |
| 83 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | |
| 84 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | |
| 85 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | |
| 86 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | |
| 87 | Drain. | 2 days | | | | | |
| 88 | Open water box doors. | 1 day | | | | | |
| 89 | Drain any circulating water chemical feed tanks. | 1 day | | | | | |
| 90 | Compressed Air System | 1 day | | | | | |
| 91 | Open vents and drains. | 1 day | | | | | |
| 92 | Auxiliary Steam System | 2 days | | | | | |
| 93 | Drain water from system. | 1 day | | | | | |

Montrose 3 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|---|----------------|-------------|-------------|-------------|-------------|-------------|
| 94 | Remove aux boiler chemicals. | 1 day | | | | | |
| 95 | Auxiliary Cooling Water System | 1 day | | | | | |
| 96 | Drain water from system. | 1 day | | | | | |
| 97 | Condenser Air Extraction | 1 day | | | | | |
| 98 | Drain water from system. | 1 day | | | | | |
| 99 | Building Heating System | 1 day | | | | | |
| 100 | Drain water from system. | 1 day | | | | | |
| 101 | Battery System | 7 days | | | | | |
| 102 | De-energize all battery chargers from the source. | 0.5 days | | | | | |
| 103 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | |
| 104 | Remove and dispose of battery electrolyte. | 3 days | | | | | |
| 105 | Remove and dispose of battery cells. | 2 days | | | | | |
| 106 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | |
| 107 | Post Retirement Activities | 40 days | | | | | |
| 108 | Post Retirement Activities | 40 days | | | | | |



Montrose 3 Dismantlement

Owner Costs

| | |
|-------------------------------|-----------|
| Pre-Dismantlement Activities | \$395,164 |
| Overhead During Dismantlement | \$741,222 |
| Post-Dismantlement Activities | \$28,966 |

Owner Costs Total \$1,165,351

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$404,046 |
| Equipment Rental | \$687,979 |
| Consummables | \$686,382 |
| Scrap Crew(s) | \$681,074 |
| Dismantlement* | \$1,806,073 |

DGC Insurance 2.00% \$85,311

Contingency/Profit 15.00% \$652,630

Performance Bond 2.00% \$100,070

Contractor Costs Total: \$5,103,563

Total: \$6,268,914

Owner Internal Costs: 5.00% \$313,446

Owner Contingency: 25.00% \$1,645,590

Montrose Unit 3 Dismantlement Opinion of Probable Cost: \$8,227,950

COMMON

Montrose Common Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$52,448 |
| Retirement Activities | \$272,184 |
| Post-Retirement Activities | \$16,040 |

Owner Direct Total \$340,672

Owner Internal Costs 5.00% \$17,034

Owner Contingency: 25.00% \$89,426

Montrose Common Retirement Opinion of Probable Cost: \$447,132.00

Activities Required by Permit or Regulation

| | |
|------------------------------------|-------------|
| Montrose Fuel Oil Tank Removal | \$251,103 |
| Montrose Wastewater Lagoon Removal | \$127,520 |
| Montrose Landfill Retirement | \$2,218,646 |

Activities Required by Permit or Regulation: \$2,597,269

| Montrose Common Retirement | | |
|----------------------------|--|---------------------|
| ID | Task Name | Cost |
| 1 | Montrose Common Retirement | \$340,674.40 |
| 2 | Pre-Retirement Activities | \$52,448.80 |
| 3 | Permitting Review | \$26,224.40 |
| 4 | Develop Detailed Retirement Plan | \$26,224.40 |
| 5 | Overheads | \$98,822.64 |
| 6 | Common Retirement Overheads | \$86,437.36 |
| 7 | Added Overhead Staff for Common Retirement | \$86,437.36 |
| 8 | Common Retirement Equipment Rental | \$12,385.28 |
| 9 | Common Removal Equipment Rental | \$12,385.28 |
| 10 | Retirement Activities | \$173,362.56 |
| 11 | Administration Building | \$19,408.80 |
| 12 | Secure Administration Building | \$19,408.80 |
| 13 | Fuel Yard Office Building | \$11,645.28 |
| 14 | Secure Fuel Yard Office Building | \$11,645.28 |
| 15 | Training Building | \$11,645.28 |
| 16 | Secure Training Building | \$11,645.28 |
| 17 | Warehouse(s) | \$9,342.40 |
| 18 | Secure Unit Warehouse(s) | \$9,342.40 |
| 19 | Maintenance Shop | \$37,369.60 |
| 20 | Secure Maintenance Shop | \$37,369.60 |
| 21 | Fuel Yard | \$69,627.60 |
| 22 | Crusher Tower | \$19,173.20 |
| 23 | Clean Crusher Tower | \$6,306.80 |
| 24 | Conveyors | \$12,613.60 |
| 25 | Clean Conveyor 10,42,43,44, 51 | \$12,613.60 |
| 26 | Car Dumper | \$15,136.32 |
| 27 | Empty Car Dumper Hoppers | \$2,522.72 |
| 28 | Clean Car Dumper | \$6,306.80 |
| 29 | Secure Dumper Building | \$6,306.80 |
| 30 | Reclaim | \$22,704.48 |
| 31 | Clean Unit 1 Reclaim | \$3,784.08 |
| 32 | Secure Unit 1 Reclaim Building | \$6,306.80 |
| 33 | Clean Stock Out Conveyor Reclaim | \$12,613.60 |
| 34 | Sewage Treatment | \$4,202.72 |
| 35 | Clean Sewage Treatment and Transfer Points | \$4,202.72 |
| 36 | Fuel Oil Storage and Unloading | \$842.72 |
| 37 | Remove Fuel Oil from Fuel Oil Storage and Vent | \$842.72 |
| 38 | Water Treatment | \$5,469.52 |
| 39 | Drain All Tanks and Vessels | \$1,261.36 |
| 40 | Remove Membranes, Resin and Sand from Filters | \$2,522.72 |
| 41 | Remove Chemicals | \$842.72 |
| 42 | Open and Vent Vessels | \$842.72 |
| 43 | Compressed Air | \$1,685.44 |
| 44 | Vent Compressed Air | \$842.72 |

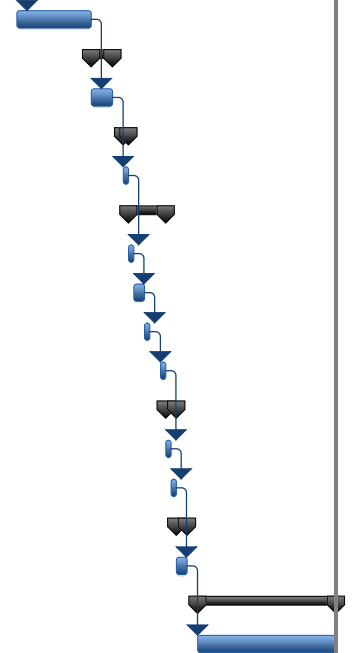
Montrose Common Retirement

| ID | Task Name | Cost |
|----|---|--------------------|
| 45 | Vent Compressed Air Vessels | \$842.72 |
| 46 | Yard Fire Water Systems | \$2,123.20 |
| 47 | Drain Yard Fire Water System | \$2,123.20 |
| 48 | Post Retirement Closure Activities | \$16,040.40 |
| 49 | Post Retirement Closure Activities | \$16,040.40 |

| Montrose Common Retirement | | | | 1st Quarter | | | 2nd Quarter | | |
|----------------------------|--|-----------------|--|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----|-----|
| ID | Task Name | Duration | | Jan | Feb | Mar | Apr | May | Jun |
| 1 | Montrose Common Retirement | 119 days | | [Gantt bar spanning Jan to Jun] | | | | | |
| 2 | Pre-Retirement Activities | 40 days | | [Gantt bar spanning Jan to Feb] | | | | | |
| 3 | Permitting Review | 20 days | | [Gantt bar spanning Jan to Feb] | | | | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | [Gantt bar spanning Feb to Mar] | | | | |
| 5 | Overheads | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 6 | Common Retirement Overheads | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 7 | Added Overhead Staff for Common Retirement | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 8 | Common Retirement Equipment Rental | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 9 | Common Removal Equipment Rental | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 10 | Retirement Activities | 59 days | | | [Gantt bar spanning Feb to May] | | | | |
| 11 | Administration Building | 15 days | | | [Gantt bar spanning Feb to Mar] | | | | |
| 12 | Secure Administration Building | 15 days | | | [Gantt bar spanning Feb to Mar] | | | | |
| 13 | Fuel Yard Office Building | 9 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 14 | Secure Fuel Yard Office Building | 9 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 15 | Training Building | 9 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 16 | Secure Training Building | 9 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 17 | Warehouse(s) | 5 days | | | | | [Gantt bar spanning Apr to May] | | |
| 18 | Secure Unit Warehouse(s) | 5 days | | | | | [Gantt bar spanning Apr to May] | | |
| 19 | Maintenance Shop | 20 days | | | | [Gantt bar spanning Apr to May] | | | |
| 20 | Secure Maintenance Shop | 20 days | | | | [Gantt bar spanning Apr to May] | | | |
| 21 | Fuel Yard | 45 days | | | [Gantt bar spanning Feb to May] | | | | |
| 22 | Crusher Tower | 5 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 23 | Clean Crusher Tower | 5 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 24 | Conveyors | 10 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 25 | Clean Conveyor 10,42,43,44, 51 | 10 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 26 | Car Dumper | 12 days | | | | [Gantt bar spanning Mar to Apr] | | | |
| 27 | Empty Car Dumper Hoppers | 2 days | | | | | [Gantt bar spanning Apr to May] | | |
| 28 | Clean Car Dumper | 5 days | | | | [Gantt bar spanning Apr to May] | | | |
| 29 | Secure Dumper Building | 5 days | | | | [Gantt bar spanning Apr to May] | | | |
| 30 | Reclaim | 18 days | | | | [Gantt bar spanning Apr to May] | | | |
| 31 | Clean Unit 1 Reclaim | 3 days | | | | | [Gantt bar spanning Apr to May] | | |
| 32 | Secure Unit 1 Reclaim Building | 5 days | | | | | [Gantt bar spanning Apr to May] | | |

Montrose Common Retirement

| ID | Task Name | Duration | 1st Quarter | | | 2nd Quarter | | |
|----|--|----------------|-------------|-----|-----|-------------|-----|-----|
| | | | Jan | Feb | Mar | Apr | May | Jun |
| 33 | Clean Stock Out Conveyor Reclaim | 10 days | | | | | | |
| 34 | Sewage Treatment | 4 days | | | | | | |
| 35 | Clean Sewage Treatment and Transfer Points | 4 days | | | | | | |
| 36 | Fuel Oil Storage and Unloading | 1 day | | | | | | |
| 37 | Remove Fuel Oil from Fuel Oil Storage and Vent | 1 day | | | | | | |
| 38 | Water Treatment | 5 days | | | | | | |
| 39 | Drain All Tanks and Vessels | 1 day | | | | | | |
| 40 | Remove Membranes, Resin and Sand from Filters | 2 days | | | | | | |
| 41 | Remove Chemicals | 1 day | | | | | | |
| 42 | Open and Vent Vessels | 1 day | | | | | | |
| 43 | Compressed Air | 2 days | | | | | | |
| 44 | Vent Compressed Air | 1 day | | | | | | |
| 45 | Vent Compressed Air Vessels | 1 day | | | | | | |
| 46 | Yard Fire Water Systems | 2 days | | | | | | |
| 47 | Drain Yard Fire Water System | 2 days | | | | | | |
| 48 | Post Retirement Closure Activities | 20 days | | | | | | |
| 49 | Post Retirement Closure Activities | 20 days | | | | | | |



Montrose 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 | \$791,822 |
| Equipment Rental | \$322,094 |
| Consummables | \$214,482 |
| Scrap Crew(s) | \$318,862 |
| Dismantlement | \$5,640,912 |

DGC Insurance 2.00% \$145,763

Contingency/Profit 15.00% \$1,115,090

Performance Bond 2.00% \$170,981

Contractor Costs Total: \$8,720,006

Total: \$8,720,006

Owner Internal Costs: 5.00% \$436,000

Owner Contingency: 25.00% \$2,289,002

Montrose Common Dismantlement Opinion of Probable Cost: \$11,445,008

| Montrose Common Dismantlement | | |
|-------------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 1 | Montrose Common Dismantlement | \$6,540,346.59 |
| 2 | Overheads | \$899,434.00 |
| 3 | Common Removal Overheads | \$43,994.48 |
| 4 | Added Overhead Staff for Common Removals | \$43,994.48 |
| 5 | Common Removal Equipment Rental | \$322,094.56 |
| 6 | Common Removal Equipment Rental | \$322,094.56 |
| 7 | Scrap Crew | \$318,862.08 |
| 8 | Crew(s) to Handle Scrap Material | \$318,862.08 |
| 9 | Demolition Contractor Consummables | \$214,482.88 |
| 10 | Consummables | \$214,482.88 |
| 11 | Dismantlement Activities | \$5,640,912.59 |
| 12 | Administration Building | \$35,827.20 |
| 13 | Remove Administration Building | \$35,827.20 |
| 14 | Fuel Yard Office Building | \$17,913.60 |
| 15 | Remove Fuel Yard Office Building | \$17,913.60 |
| 16 | Training Building | \$17,913.60 |
| 17 | Remove Training Building | \$17,913.60 |
| 18 | Parking Lots and Plant Roads | \$82,402.56 |
| 19 | Plant Roads and Parking Areas | \$71,654.40 |
| 20 | Guard Shack | \$10,748.16 |
| 21 | Warehouse(s) | \$17,913.60 |
| 22 | Remove Warehouse | \$17,913.60 |
| 23 | Maintenance Shop | \$23,215.20 |
| 24 | Remove Maintenance Shop | \$23,215.20 |
| 25 | Water Treatment | \$39,409.92 |
| 26 | Remove Water Treatment Equipment | \$17,913.60 |
| 27 | Remove Water Treatment Building | \$21,496.32 |
| 28 | Fuel Yard | \$390,516.48 |
| 29 | Crusher Tower | \$143,308.80 |
| 30 | Remove Crusher Building and Equipment | \$71,654.40 |
| 31 | Conveyors | \$89,568.00 |
| 32 | Remove Conveyor 10, 42, 43, 44, and 51 | \$89,568.00 |
| 33 | Car Dumper | \$93,150.72 |
| 34 | Remove Underground Equipment | \$14,330.88 |
| 35 | Remove Above Ground Equipment | \$35,827.20 |
| 36 | Remove Building | \$25,079.04 |
| 37 | Backfill Dumper Structure | \$17,913.60 |
| 38 | Reclaim | \$64,488.96 |
| 39 | Remove Underground Equipment | \$17,913.60 |
| 40 | Remove Above Ground Equipment | \$17,913.60 |
| 41 | Remove Building | \$14,330.88 |
| 42 | Backfill Structure | \$14,330.88 |
| 43 | Yard Fire Water Systems | \$35,827.20 |
| 44 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | \$35,827.20 |

| Montrose Common Dismantlement | | |
|-------------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 45 | Stacks | \$4,507,653.12 |
| 46 | Remove Unit 1 and Unit 2 Stack to Grade | \$2,681,749.63 |
| 47 | Remove Unit 3 Stack to Grade | \$1,825,903.49 |
| 48 | Final Site Grading and Drainage | \$472,320.11 |
| 49 | Final Site Grading and Drainage | \$472,320.11 |

Montrose Common Dismantlement

| ID | Task Name | Duration | 2nd Quarter | | | | | 3rd Quarter | |
|----|---|----------------|-------------|-----------------------------|--------------------|--------------------|-----|-------------|-----|
| | | | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 1 | Montrose Common Dismantlement | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 2 | Overheads | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 3 | Common Removal Overheads | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 4 | Added Overhead Staff for Common Removals | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 5 | Common Removal Equipment Rental | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 6 | Common Removal Equipment Rental | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 7 | Scrap Crew | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 8 | Crew(s) to Handle Scrap Material | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 9 | Demolition Contractor Consummables | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 10 | Consummables | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 11 | Dismantlement Activities | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 12 | Administration Building | 10 days | | [Gantt bar in Mar] | | | | | |
| 13 | Remove Administration Building | 10 days | | [Gantt bar in Mar] | | | | | |
| 14 | Fuel Yard Office Building | 5 days | | | [Gantt bar in Mar] | | | | |
| 15 | Remove Fuel Yard Office Building | 5 days | | | [Gantt bar in Mar] | | | | |
| 16 | Training Building | 5 days | | | [Gantt bar in Mar] | | | | |
| 17 | Remove Training Building | 5 days | | | [Gantt bar in Mar] | | | | |
| 18 | Parking Lots and Plant Roads | 23 days | | | [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 | Warehouse(s) | 5 days | | | | [Gantt bar in May] | | | |
| 22 | Remove Warehouse | 5 days | | | | [Gantt bar in May] | | | |
| 23 | Maintenance Shop | 10 days | | | | [Gantt bar in May] | | | |
| 24 | Remove Maintenance Shop | 10 days | | | | [Gantt bar in May] | | | |
| 25 | Water Treatment | 11 days | | | | [Gantt bar in May] | | | |
| 26 | Remove Water Treatment Equipment | 5 days | | | | [Gantt bar in May] | | | |
| 27 | Remove Water Treatment Building | 6 days | | | | [Gantt bar in May] | | | |
| 28 | Fuel Yard | 89 days | | [Gantt bar from Mar to Jul] | | | | | |
| 29 | Crusher Tower | 20 days | | [Gantt bar in Mar] | | | | | |
| 30 | Remove Crusher Building and Equipment | 20 days | | [Gantt bar in Mar] | | | | | |
| 31 | Conveyors | 25 days | | | [Gantt bar in Apr] | | | | |
| 32 | Remove Conveyor 10, 42, 43, 44, and 51 | 25 days | | | [Gantt bar in Apr] | | | | |

Montrose Common Dismantlement

| ID | Task Name | Duration | 2nd Quarter | | | | | 3rd Quarter | |
|----|---|----------------|-------------|-------------------|-----|---------------------------------|---------------------------------|-------------|-----|
| | | | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 33 | Car Dumper | 26 days | | | | [Task bar spanning May and Jun] | | | |
| 34 | Remove Underground Equipment | 4 days | | | | [Task bar in May] | | | |
| 35 | Remove Above Ground Equipment | 10 days | | | | [Task bar in May] | | | |
| 36 | Remove Building | 7 days | | | | [Task bar in May] | | | |
| 37 | Backfill Dumper Structure | 5 days | | | | [Task bar in May] | | | |
| 38 | Reclaim | 18 days | | | | | [Task bar spanning Jun and Jul] | | |
| 39 | Remove Underground Equipment | 5 days | | | | | [Task bar in Jun] | | |
| 40 | Remove Above Ground Equipment | 5 days | | | | | [Task bar in Jun] | | |
| 41 | Remove Building | 4 days | | | | | [Task bar in Jun] | | |
| 42 | Backfill Structure | 4 days | | | | | [Task bar in Jun] | | |
| 43 | Yard Fire Water Systems | 10 days | | | | | [Task bar spanning Jun and Jul] | | |
| 44 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | 10 days | | | | | [Task bar in Jun] | | |
| 45 | Stacks | 1 day | | [Task bar in Mar] | | | | | |
| 46 | Remove Unit 1 and Unit 2 Stack to Grade | 1 day | | [Task bar in Mar] | | | | | |
| 47 | Remove Unit 3 Stack to Grade | 1 day | | [Task bar in Mar] | | | | | |
| 48 | Final Site Grading and Drainage | 1 day | | [Task bar in Mar] | | | | | |
| 49 | Final Site Grading and Drainage | 1 day | | [Task bar in Mar] | | | | | |

HAWTHORN UNIT 5

HAWTHORN STATION

The Hawthorn Generating Station consists of one coal-fired power plant (Hawthorn Unit 5), two simple-cycle combustion turbines (Hawthorn Units 7 and 8), and a one-on-one combined-cycle plant (Hawthorn Units 6 and 9).

Note: This section of the report covers Hawthorn Unit 5 and the Hawthorn Common facilities.

Hawthorn Unit 5 has an SPP-accredited unit rating of 564 MW and was placed in service in 2001. Unit 5 has a sub-critical Babcock & Wilcox boiler and a General Electric turbine. Unit 5 has an SCR, dry scrubber with a dedicated reagent preparation system, and baghouse. River water is used for condenser cooling.

The Hawthorn fuel yard has a rotary car dumper to unload unit trains of coal. The coal is unloaded to the ground. Coal is transferred to Hawthorn Unit 5 via a reclaim pit and a series of conveyors.

Hawthorn Unit 5 has a fuel gas igniter system. The gas is supplied by a regional natural gas supplier via underground pipelines.

Hawthorn Unit 5 beneficially uses off site the majority of their coal combustion products. Coal combustion products that are not beneficially used off site are disposed in an off-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).

HAWTHORN UNIT 5

1. Boiler, SCR, and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Baghouse, dry scrubber, and dry scrubber auxiliaries.
4. Fuel handling equipment.

COMMON

1. Administration building.
2. Fuel yard office building.
3. Training building.
4. Warehouses.
5. Maintenance shops.
6. Water treatment.
7. Fire water systems.
8. Hawthorn Units 1 and 2 intake structure and circulating water piping.
9. Hawthorn Unit 5 intake structure and circulating water piping.
10. Hawthorn Unit 5 stack.

UNIT 5

Hawthorn 5 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,822 |
| Retirement Activities | \$617,464 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$744,850

Owner Internal Costs 5.00% \$37,242

Owner Contingency: 25.00% \$195,523

Hawthorn 5 Retirement Opinion of Probable Cost: \$977,615.10

| Hawthorn 5 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Hawthorn 5 Retirement | \$744,850.69 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$0.00 |
| 4 | KCL&L Overhead Costs | \$104,712.40 |
| 5 | KCP&L Retirement Manager | \$104,712.40 |
| 6 | Equipment Rentals | \$35,476.48 |
| 7 | Vacuum truck | \$35,476.48 |
| 8 | Retirement | \$477,276.21 |
| 9 | Electrical | \$15,375.52 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$4,228.00 |
| 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. | \$1,321.44 |
| 27 | Clean up and dispose of oil on surface areas around transformers and in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$4,001.28 |
| 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. | \$1,786.56 |

| Hawthorn 5 Retirement | | |
|-----------------------|--|---------------------|
| ID | Task Name | Cost |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | \$1,321.44 |
| 35 | Coal Handling | \$27,475.44 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Burn out coal silos. | \$1,685.44 |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | \$1,685.44 |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 40 | Gas and Igniter System | \$1,762.08 |
| 41 | Isolate fuel gas system in gas yard and vent gas piping | \$1,762.08 |
| 42 | Waste Oil System | \$1,685.44 |
| 43 | Drain all waste oil systems | \$1,685.44 |
| 44 | Boiler Chemical Feed | \$1,685.44 |
| 45 | Drain all chemical feed tanks. | \$1,685.44 |
| 46 | Boiler | \$27,484.77 |
| 47 | Open boiler doors. | \$880.96 |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 49 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 50 | Open drum doors. | \$880.96 |
| 51 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 52 | Stack and Ductwork | \$326,961.04 |
| 53 | Open ductwork doors. | \$880.96 |
| 54 | Perform extensive cleaning of the ductwork. | \$11,200.00 |
| 55 | Place cap over stack opening to keep moisture out. | \$314,880.08 |
| 56 | Condensate and Feedwater Piping | \$1,685.44 |
| 57 | Drain water from the system. | \$842.72 |
| 58 | Leave open vents and drains. | \$842.72 |
| 59 | Feedwater heaters | \$2,528.16 |
| 60 | Drain feedwater heaters | \$842.72 |
| 61 | Leave open vents and drains. | \$1,685.44 |
| 62 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 63 | Drain Deaerator and Storage | \$842.72 |
| 64 | Leave open vents and drains. | \$842.72 |
| 65 | Baghouse | \$17,351.92 |
| 66 | Multiple cleaning cycles for filter bags. | \$2,528.16 |
| 67 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | \$842.72 |
| 68 | Remove all filter bags and cages. | \$880.96 |
| 69 | Clear hoppers of all ash | \$2,805.44 |
| 70 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | \$880.96 |
| 71 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | \$1,421.84 |
| 72 | Install bird screens across hopper ash outlet and ash line flanges. | \$880.96 |

| Hawthorn 5 Retirement | | |
|-----------------------|---|--------------------|
| ID | Task Name | Cost |
| 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 | Spray Dryer Absorber FGD | \$4,806.40 |
| 79 | Clear SDA of all accumulated solids | \$3,925.44 |
| 80 | Padlock or tack weld SDA module access doors closed. | \$880.96 |
| 81 | Lime Slurry Preparation System | \$10,775.44 |
| 82 | Remove lime from day bins. | \$1,962.72 |
| 83 | Removed cartridges/bags from bin vent filters | \$701.36 |
| 84 | 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.) | \$880.96 |
| 85 | Remove bin discharge isolation valve and install bird screen. | \$880.96 |
| 86 | Thoroughly wash and drain slakers. | \$1,122.72 |
| 87 | Remove balls from any ball mills from ball mill slakers. | \$720.48 |
| 88 | Padlock or tack weld slaker access doors closed. | \$880.96 |
| 89 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | \$945.44 |
| 90 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 91 | SCR | \$10,054.00 |
| 92 | Vacuum fly ash from catalyst. | \$2,240.00 |
| 93 | Remove catalyst of salvage or disposal. | \$2,881.92 |
| 94 | Padlock or tack weld access doors shut. | \$880.96 |
| 95 | Remove ammonia from storage tank for resale. | \$701.36 |
| 96 | Wash out and drain storage tank and supply piping. | \$701.36 |
| 97 | Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens. | \$861.84 |
| 98 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$1,786.56 |
| 99 | Turbine(s) and Condenser | \$5,266.64 |
| 100 | Drain hotwell and leave doors open. | \$861.84 |
| 101 | Open main turbine doors. | \$880.96 |
| 102 | Open bfp turbine doors. | \$880.96 |
| 103 | Remove lube oil. | \$2,642.88 |
| 104 | Generator | \$6,095.76 |

| Hawthorn 5 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 105 | 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 |
| 106 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 107 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 108 | 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 |
| 109 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 110 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |
| 111 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 112 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
| 113 | Drain. | \$1,685.44 |
| 114 | Open water box doors. | \$880.96 |
| 115 | Drain any circulating water chemical feed tanks. | \$842.72 |
| 116 | Compressed Air System | \$2,721.28 |
| 117 | Open vents and drains. | \$842.72 |
| 118 | Remove desiccant from desiccant dryers. | \$1,878.56 |
| 119 | Auxiliary Steam System | \$1,685.44 |
| 120 | Drain water from system. | \$842.72 |
| 121 | Remove aux boiler chemicals. | \$842.72 |
| 122 | Auxiliary Cooling Water System | \$842.72 |
| 123 | Drain water from system. | \$842.72 |
| 124 | Condenser Air Extraction and Waterbox Priming System | \$842.72 |
| 125 | Drain water from system. | \$842.72 |
| 126 | Building Heating System | \$842.72 |
| 127 | Drain water from system. | \$842.72 |
| 128 | Battery System | \$4,253.28 |
| 129 | De-energize all battery chargers from the source. | \$446.64 |
| 130 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | \$446.64 |
| 131 | Remove and dispose of battery electrolyte. | \$1,680.00 |
| 132 | Remove and dispose of battery cells. | \$1,120.00 |
| 133 | Clean up and dispose of electrolyte on surface areas around batteries. | \$560.00 |
| 134 | Post Retirement Activities | \$26,564.00 |
| 135 | Post Retirement Activities | \$26,564.00 |

Hawthorn 5 Retirement

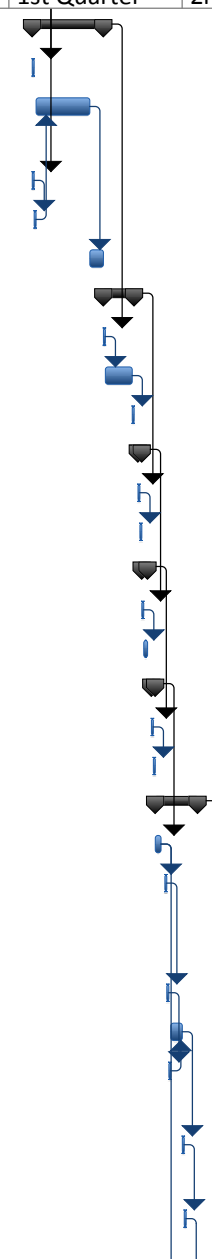
| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd Quarter |
|----|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Hawthorn 5 Retirement | 275 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to | 66 days | | | | | |
| 4 | KCL&L Overhead Costs | 169 days | | | | | |
| 5 | KCP&L Retirement Manager | 169 days | | | | | |
| 6 | Equipment Rentals | 169 days | | | | | |
| 7 | Vacuum truck | 169 days | | | | | |
| 8 | Retirement | 169 days | | | | | |
| 9 | Electrical | 18 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 5.5 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

Hawthorn 5 Retirement

| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd 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. | 1.5 days | | | | | |
| 27 | Clean up and dispose of oil on surface areas around transformers and in containment pits. | 2 days | | | | | |
| 28 | Dry-type Power Transformers | 2 days | | | | | |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | 1 day | | | | | |
| 31 | Motors | 4.5 days | | | | | |
| 32 | De-energize all primary power at the source. | 1 day | | | | | |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 2 days | | | | | |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | 1.5 days | | | | | |
| 35 | Coal Handling | 25 days | | | | | |
| 36 | Empty all transfer hoppers. | 1 day | | | | | |
| 37 | Burn out coal silos. | 2 days | | | | | |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | 2 days | | | | | |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | 20 days | | | | | |
| 40 | Gas and Igniter System | 4 days | | | | | |
| 41 | Isolate fuel gas system in gas yard and vent gas piping | 3 days | | | | | |
| 42 | Waste Oil System | 2 days | | | | | |
| 43 | Drain all waste oil systems | 2 days | | | | | |
| 44 | Boiler Chemical Feed | 2 days | | | | | |
| 45 | Drain all chemical feed tanks. | 2 days | | | | | |

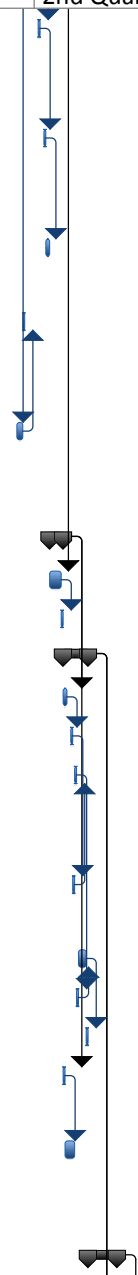
Hawthorn 5 Retirement

| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd Quarter |
|----|--|----------------|-------------|-------------|-------------|-------------|-------------|
| 46 | Boiler | 27 days | | | | | |
| 47 | Open boiler doors. | 1 day | | | | | |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | 20 days | | | | | |
| 49 | Drain boiler, drum, downcomers and headers. | 1 day | | | | | |
| 50 | Open drum doors. | 1 day | | | | | |
| 51 | Drain and clean the submerged flight conveyor system. | 5 days | | | | | |
| 52 | Stack and Ductwork | 12 days | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | |
| 54 | Perform extensive cleaning of the ductwork. | 10 days | | | | | |
| 55 | Place cap over stack opening to keep moisture out. | 1 day | | | | | |
| 56 | Condensate and Feedwater Piping | 2 days | | | | | |
| 57 | Drain water from the system. | 1 day | | | | | |
| 58 | Leave open vents and drains. | 1 day | | | | | |
| 59 | Feedwater heaters | 3 days | | | | | |
| 60 | Drain feedwater heaters | 1 day | | | | | |
| 61 | Leave open vents and drains. | 2 days | | | | | |
| 62 | Deaerator and Deaerator Storage Tank | 2 days | | | | | |
| 63 | Drain Deaerator and Storage | 1 day | | | | | |
| 64 | Leave open vents and drains. | 1 day | | | | | |
| 65 | Baghouse | 16 days | | | | | |
| 66 | Multiple cleaning cycles for filter bags. | 3 days | | | | | |
| 67 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | 1 day | | | | | |
| 68 | Remove all filter bags and cages. | 1 day | | | | | |
| 69 | Clear hoppers of all ash | 4 days | | | | | |
| 70 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | 1 day | | | | | |
| 71 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | 1 day | | | | | |
| 72 | Install bird screens across hopper ash outlet and ash line flanges. | 1 day | | | | | |



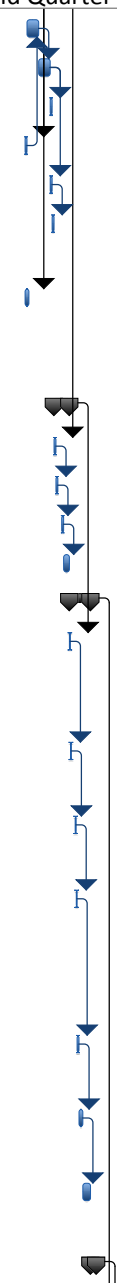
Hawthorn 5 Retirement

| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd 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 | Spray Dryer Absorber FGD | 5 days | | | | | |
| 79 | Clear SDA of all accumulated solids | 4 days | | | | | |
| 80 | Padlock or tack weld SDA module access doors closed. | 1 day | | | | | |
| 81 | Lime Slurry Preparation System | 9 days | | | | | |
| 82 | Remove lime from day bins. | 2 days | | | | | |
| 83 | Removed cartridges/bags from bin vent filters | 1 day | | | | | |
| 84 | 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 | | | | | |
| 85 | Remove bin discharge isolation valve and install bird screen. | 1 day | | | | | |
| 86 | Thoroughly wash and drain slakers. | 2 days | | | | | |
| 87 | Remove balls from any ball mills from ball mill slakers. | 1 day | | | | | |
| 88 | Padlock or tack weld slaker access doors closed. | 1 day | | | | | |
| 89 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | 1 day | | | | | |
| 90 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 91 | SCR | 11 days | | | | | |



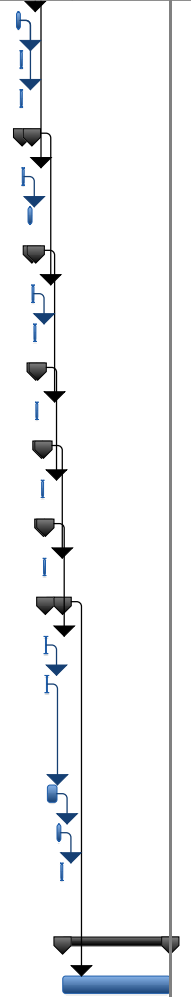
Hawthorn 5 Retirement

| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd Quarter |
|-----|--|---------------|-------------|-------------|-------------|-------------|-------------|
| 92 | Vacuum fly ash from catalyst. | 4 days | | | | | |
| 93 | Remove catalyst of salvage or disposal. | 4 days | | | | | |
| 94 | Padlock or tack weld access doors shut. | 1 day | | | | | |
| 95 | Remove ammonia from storage tank for resale. | 1 day | | | | | |
| 96 | Wash out and drain storage tank and supply piping. | 1 day | | | | | |
| 97 | Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens. | 1 day | | | | | |
| 98 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 2 days | | | | | |
| 99 | Turbine(s) and Condenser | 6 days | | | | | |
| 100 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 101 | Open main turbine doors. | 1 day | | | | | |
| 102 | Open bfp turbine doors. | 1 day | | | | | |
| 103 | Remove lube oil. | 3 days | | | | | |
| 104 | Generator | 7 days | | | | | |
| 105 | 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 | | | | | |
| 106 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | |
| 107 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | |
| 108 | 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 | | | | | |
| 109 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | |
| 110 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | |
| 111 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | |
| 112 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | |



Hawthorn 5 Retirement

| ID | Task Name | Duration | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | 3rd Quarter |
|-----|---|----------------|-------------|-------------|-------------|-------------|-------------|
| 113 | Drain. | 2 days | | | | | |
| 114 | Open water box doors. | 1 day | | | | | |
| 115 | Drain any circulating water chemical feed tanks. | 1 day | | | | | |
| 116 | Compressed Air System | 3 days | | | | | |
| 117 | Open vents and drains. | 1 day | | | | | |
| 118 | Remove desiccant from desiccant dryers. | 2 days | | | | | |
| 119 | Auxiliary Steam System | 2 days | | | | | |
| 120 | Drain water from system. | 1 day | | | | | |
| 121 | Remove aux boiler chemicals. | 1 day | | | | | |
| 122 | Auxiliary Cooling Water System | 1 day | | | | | |
| 123 | Drain water from system. | 1 day | | | | | |
| 124 | Condenser Air Extraction and Waterbox Priming System | 1 day | | | | | |
| 125 | Drain water from system. | 1 day | | | | | |
| 126 | Building Heating System | 1 day | | | | | |
| 127 | Drain water from system. | 1 day | | | | | |
| 128 | Battery System | 7 days | | | | | |
| 129 | De-energize all battery chargers from the source. | 0.5 days | | | | | |
| 130 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | |
| 131 | Remove and dispose of battery electrolyte. | 3 days | | | | | |
| 132 | Remove and dispose of battery cells. | 2 days | | | | | |
| 133 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | |
| 134 | Post Retirement Activities | 40 days | | | | | |
| 135 | Post Retirement Activities | 40 days | | | | | |



Hawthorn 5 Dismantlement

Owner Additional Costs

| | | | |
|-------------------------------|--|-------------|-------------|
| Pre-Dismantlement Activities | | \$780,888 | |
| Overhead During Dismantlement | | \$1,466,523 | |
| Post-Dismantlement Activities | | \$54,021 | |
| Owner Costs Total | | | \$2,301,432 |

Demolition General Contractor (DGC) Costs

| | | | |
|----------------------------|--|-------------|--|
| Additional Site Management | | \$1,097,854 | |
| Equipment Rental | | \$1,900,559 | |
| Consummables | | \$2,074,718 | |
| Scrap Crew(s) | | \$1,880,260 | |
| Dismantlement* | | \$4,498,857 | |

DGC Insurance 2.00% \$229,045

Contingency/Profit 15.00% \$1,752,194

Performance Bond 2.00% \$268,669.71

Contractor Costs Total: \$13,702,155

Total: \$16,003,587

Owner Internal Costs: 5.00% \$800,179

Owner Contingency: 25.00% \$4,200,942

Hawthorn Unit 5 Dismantlement Opinion of Probable Cost: \$21,004,708

COMMON

Hawthorn Common Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$26,224 |
| Retirement Activities | \$184,958 |
| Post-Retirement Activities | \$32,080 |

Owner Direct Total \$243,262

Owner Internal Costs 5.00% \$12,163

Owner Contingency: 25.00% \$63,856

Hawthorn Common Retirement Opinion of Probable Cost: \$319,281.38

Activities Required by Permit or Regulation

| | |
|-------------------------------|-----------|
| Hawthorn 1 & 2 Intake Removal | \$640,900 |
| Hawthorn 5 Intake Removal | \$557,846 |

Activities Required by Permit or Regulation: \$1,198,746

| Hawthorn Common Retirement | | | |
|----------------------------|--|---------------------|---------------------|
| ID | Task Name | Cost | Cost |
| 1 | Hawthorn Common Retirement | \$243,263.76 | \$243,263.76 |
| 2 | Pre-Retirement Activities | \$26,224.40 | \$26,224.40 |
| 3 | Permitting Review | \$13,112.20 | \$13,112.20 |
| 4 | Develop Detailed Retirement Plan | \$13,112.20 | \$13,112.20 |
| 5 | Overheads | \$103,847.52 | \$103,847.52 |
| 6 | Common Retirement Overheads | \$90,832.48 | \$90,832.48 |
| 7 | Added Overhead Staff for Common Retirement | \$90,832.48 | \$90,832.48 |
| 8 | Common Retirement Equipment Rental | \$13,015.04 | \$13,015.04 |
| 9 | Common Removal Equipment Rental | \$13,015.04 | \$13,015.04 |
| 10 | Retirement Activities | \$81,111.04 | \$81,111.04 |
| 11 | Administration Building | \$19,408.80 | \$19,408.80 |
| 12 | Secure Administration Building | \$19,408.80 | \$19,408.80 |
| 13 | Training Building | \$7,618.72 | \$7,618.72 |
| 14 | Secure Training Building | \$7,618.72 | \$7,618.72 |
| 15 | Warehouse(s) | \$9,342.40 | \$9,342.40 |
| 16 | Secure Unit Warehouse(s) | \$9,342.40 | \$9,342.40 |
| 17 | Maintenance Shops | \$37,369.60 | \$37,369.60 |
| 18 | Secure Maintenance Shops | \$37,369.60 | \$37,369.60 |
| 19 | Sewage Treatment | \$5,248.32 | \$5,248.32 |
| 20 | Isolate and Cap Sewage Lines | \$5,248.32 | \$5,248.32 |
| 21 | City Water | \$0.00 | \$0.00 |
| 22 | Isolate and Cap City Water Lines | \$0.00 | \$0.00 |
| 23 | Yard Fire Water Systems | \$2,123.20 | \$2,123.20 |
| 24 | Drain Yard Fire Water System | \$2,123.20 | \$2,123.20 |
| 25 | Post Retirement Closure Activities | \$32,080.80 | \$32,080.80 |
| 26 | Post Retirement Closure Activities | \$32,080.80 | \$32,080.80 |

Hawthorn Common Retirement

| ID | Task Name | Duration | 2nd Quarter | | | | | 3rd Quarter | | | |
|----|--|-----------------|-------------|-----------------------------|-----|-----|-----|-------------|-----|-----|--|
| | | | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | |
| 1 | Hawthorn Common Retirement | 118 days | | [Gantt bar from Mar to Aug] | | | | | | | |
| 2 | Pre-Retirement Activities | 20 days | | [Gantt bar from Mar to Apr] | | | | | | | |
| 3 | Permitting Review | 10 days | | [Blue bar from Mar to Mar] | | | | | | | |
| 4 | Develop Detailed Retirement Plan | 10 days | | [Blue bar from Mar to Apr] | | | | | | | |
| 5 | Overheads | 62 days | | [Gantt bar from Apr to Jun] | | | | | | | |
| 6 | Common Retirement Overheads | 62 days | | [Gantt bar from Apr to Jun] | | | | | | | |
| 7 | Added Overhead Staff for Common Retirement | 62 days | | [Blue bar from Apr to Jun] | | | | | | | |
| 8 | Common Retirement Equipment Rental | 62 days | | [Gantt bar from Apr to Jun] | | | | | | | |
| 9 | Common Removal Equipment Rental | 62 days | | [Blue bar from Apr to Jun] | | | | | | | |
| 10 | Retirement Activities | 58 days | | [Gantt bar from Apr to Aug] | | | | | | | |
| 11 | Administration Building | 15 days | | [Gantt bar from Apr to May] | | | | | | | |
| 12 | Secure Administration Building | 15 days | | [Blue bar from Apr to May] | | | | | | | |
| 13 | Training Building | 5 days | | [Gantt bar from May to May] | | | | | | | |
| 14 | Secure Training Building | 5 days | | [Blue bar from May to May] | | | | | | | |
| 15 | Warehouse(s) | 5 days | | [Gantt bar from May to May] | | | | | | | |
| 16 | Secure Unit Warehouse(s) | 5 days | | [Blue bar from May to May] | | | | | | | |
| 17 | Maintenance Shops | 20 days | | [Gantt bar from May to Jun] | | | | | | | |
| 18 | Secure Maintenance Shops | 20 days | | [Blue bar from May to Jun] | | | | | | | |
| 19 | Sewage Treatment | 7 days | | [Gantt bar from Jun to Jun] | | | | | | | |
| 20 | Isolate and Cap Sewage Lines | 5 days | | [Blue bar from Jun to Jun] | | | | | | | |
| 21 | City Water | 4 days | | [Gantt bar from Jun to Jun] | | | | | | | |
| 22 | Isolate and Cap City Water Lines | 4 days | | [Blue bar from Jun to Jun] | | | | | | | |
| 23 | Yard Fire Water Systems | 2 days | | [Gantt bar from Jun to Jun] | | | | | | | |
| 24 | Drain Yard Fire Water System | 2 days | | [Blue bar from Jun to Jun] | | | | | | | |
| 25 | Post Retirement Closure Activities | 40 days | | [Gantt bar from Jul to Aug] | | | | | | | |
| 26 | Post Retirement Closure Activities | 40 days | | [Blue bar from Jul to Aug] | | | | | | | |

Hawthorn 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 | \$43,994 |
| Equipment Rental | \$161,574 |
| Consummables | \$214,482 |
| Scrap Crew(s) | \$318,862 |
| Dismantlement | \$5,592,756 |

DGC Insurance 2.00% \$126,633

Contingency/Profit 15.00% \$968,745

Performance Bond 2.00% \$148,541

Contractor Costs Total: \$7,575,587

Total: \$7,575,587

Owner Internal Costs: 5.00% \$378,779

Owner Contingency: 25.00% \$1,988,592

Hawthorn Common Dismantlement Opinion of Probable Cost: \$9,942,959

| Hawthorn Common Dismantlement | | |
|-------------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 1 | Hawthorn Common Dismantlement | \$6,331,670.53 |
| 2 | Overheads | \$738,913.60 |
| 3 | Common Removal Overheads | \$43,994.48 |
| 4 | Added Overhead Staff for Common Removals | \$43,994.48 |
| 5 | Common Removal Equipment Rental | \$161,574.16 |
| 6 | Common Removal Equipment Rental | \$161,574.16 |
| 7 | Scrap Crew | \$318,862.08 |
| 8 | Crew(s) to Handle Scrap Material | \$318,862.08 |
| 9 | Demolition Contractor Consummables | \$214,482.88 |
| 10 | Consummables | \$214,482.88 |
| 11 | Dismantlement Activities | \$5,592,756.93 |
| 12 | Administration Building | \$35,827.20 |
| 13 | Remove Administration Building | \$35,827.20 |
| 14 | Fuel Yard Office Building | \$17,913.60 |
| 15 | Remove Fuel Yard Office Building | \$17,913.60 |
| 16 | Training Building | \$17,913.60 |
| 17 | Remove Training Building | \$17,913.60 |
| 18 | Parking Lots and Plant Roads | \$82,402.56 |
| 19 | Plant Roads and Parking Areas | \$71,654.40 |
| 20 | Guard Shack | \$10,748.16 |
| 21 | Warehouse(s) | \$17,913.60 |
| 22 | Remove Warehouse | \$17,913.60 |
| 23 | Maintenance Shop | \$23,215.20 |
| 24 | Remove Maintenance Shop | \$23,215.20 |
| 25 | Water Treatment | \$39,409.92 |
| 26 | Remove Water Treatment Equipment | \$17,913.60 |
| 27 | Remove Water Treatment Building | \$21,496.32 |
| 28 | Fuel Yard | \$390,516.48 |
| 29 | Crusher Tower | \$143,308.80 |
| 30 | Remove Crusher Building and Equipment | \$71,654.40 |
| 31 | Conveyors | \$89,568.00 |
| 32 | Remove Conveyor 10, 42, 43, 44, and 51 | \$89,568.00 |
| 33 | Car Dumper | \$93,150.72 |
| 34 | Remove Underground Equipment | \$14,330.88 |
| 35 | Remove Above Ground Equipment | \$35,827.20 |
| 36 | Remove Building | \$25,079.04 |
| 37 | Backfill Dumper Structure | \$17,913.60 |
| 38 | Reclaim | \$64,488.96 |
| 39 | Remove Underground Equipment | \$17,913.60 |
| 40 | Remove Above Ground Equipment | \$17,913.60 |
| 41 | Remove Building | \$14,330.88 |
| 42 | Backfill Structure | \$14,330.88 |
| 43 | Yard Fire Water Systems | \$35,827.20 |
| 44 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | \$35,827.20 |

| Hawthorn Common Dismantlement | | |
|-------------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 45 | Stacks | \$3,672,297.27 |
| 46 | Remove Hawthorn 5 Stack to Grade | \$3,672,297.27 |
| 47 | Final Site Grading and Drainage | \$1,259,520.30 |
| 48 | Final Site Grading and Drainage | \$1,259,520.30 |

Hawthorn Common Dismantlement

| ID | Task Name | Duration | 2nd Quarter | | | | | 3rd Quarter | |
|----|---|----------------|-------------|------------|------------|------------|-----|-------------|-----|
| | | | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 1 | Hawthorn Common Dismantlement | 89 days | | [Task Bar] | | | | | |
| 2 | Overheads | 89 days | | [Task Bar] | | | | | |
| 3 | Common Removal Overheads | 89 days | | [Task Bar] | | | | | |
| 4 | Added Overhead Staff for Common Removals | 89 days | | [Task Bar] | | | | | |
| 5 | Common Removal Equipment Rental | 89 days | | [Task Bar] | | | | | |
| 6 | Common Removal Equipment Rental | 89 days | | [Task Bar] | | | | | |
| 7 | Scrap Crew | 89 days | | [Task Bar] | | | | | |
| 8 | Crew(s) to Handle Scrap Material | 89 days | | [Task Bar] | | | | | |
| 9 | Demolition Contractor Consummables | 89 days | | [Task Bar] | | | | | |
| 10 | Consummables | 89 days | | [Task Bar] | | | | | |
| 11 | Dismantlement Activities | 89 days | | [Task Bar] | | | | | |
| 12 | Administration Building | 10 days | | [Task Bar] | | | | | |
| 13 | Remove Administration Building | 10 days | | [Task Bar] | | | | | |
| 14 | Fuel Yard Office Building | 5 days | | | [Task Bar] | | | | |
| 15 | Remove Fuel Yard Office Building | 5 days | | | [Task Bar] | | | | |
| 16 | Training Building | 5 days | | | [Task Bar] | | | | |
| 17 | Remove Training Building | 5 days | | | [Task Bar] | | | | |
| 18 | Parking Lots and Plant Roads | 23 days | | | [Task Bar] | | | | |
| 19 | Plant Roads and Parking Areas | 20 days | | | [Task Bar] | | | | |
| 20 | Guard Shack | 3 days | | | | [Task Bar] | | | |
| 21 | Warehouse(s) | 5 days | | | | [Task Bar] | | | |
| 22 | Remove Warehouse | 5 days | | | | [Task Bar] | | | |
| 23 | Maintenance Shop | 10 days | | | | [Task Bar] | | | |
| 24 | Remove Maintenance Shop | 10 days | | | | [Task Bar] | | | |
| 25 | Water Treatment | 11 days | | | | [Task Bar] | | | |
| 26 | Remove Water Treatment Equipment | 5 days | | | | [Task Bar] | | | |
| 27 | Remove Water Treatment Building | 6 days | | | | [Task Bar] | | | |
| 28 | Fuel Yard | 89 days | | [Task Bar] | | | | | |
| 29 | Crusher Tower | 20 days | | [Task Bar] | | | | | |
| 30 | Remove Crusher Building and Equipment | 20 days | | [Task Bar] | | | | | |
| 31 | Conveyors | 25 days | | | [Task Bar] | | | | |
| 32 | Remove Conveyor 10, 42, 43, 44, and 51 | 25 days | | | [Task Bar] | | | | |

Hawthorn Common Dismantlement

| ID | Task Name | Duration | 2nd Quarter | | | | | 3rd Quarter | |
|----|---|----------------|-------------|-------------------|-----|---------------------------------|---------------------------------|-------------|-----|
| | | | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 33 | Car Dumper | 26 days | | | | [Task bar spanning May and Jun] | | | |
| 34 | Remove Underground Equipment | 4 days | | | | [Task bar in May] | | | |
| 35 | Remove Above Ground Equipment | 10 days | | | | [Task bar in May] | | | |
| 36 | Remove Building | 7 days | | | | [Task bar in May] | | | |
| 37 | Backfill Dumper Structure | 5 days | | | | [Task bar in May] | | | |
| 38 | Reclaim | 18 days | | | | | [Task bar spanning Jun and Jul] | | |
| 39 | Remove Underground Equipment | 5 days | | | | | [Task bar in Jun] | | |
| 40 | Remove Above Ground Equipment | 5 days | | | | | [Task bar in Jun] | | |
| 41 | Remove Building | 4 days | | | | | [Task bar in Jun] | | |
| 42 | Backfill Structure | 4 days | | | | | [Task bar in Jun] | | |
| 43 | Yard Fire Water Systems | 10 days | | | | | [Task bar spanning Jun and Jul] | | |
| 44 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | 10 days | | | | | [Task bar in Jun] | | |
| 45 | Stacks | 1 day | | [Task bar in Mar] | | | | | |
| 46 | Remove Hawthorn 5 Stack to Grade | 1 day | | [Task bar in Mar] | | | | | |
| 47 | Final Site Grading and Drainage | 1 day | | [Task bar in Mar] | | | | | |
| 48 | Final Site Grading and Drainage | 1 day | | [Task bar in Mar] | | | | | |

LA CYGNE

LA CYGNE STATION

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

La Cygne Unit 1 has an SPP-accredited rating of 735 MW and was placed in service in 1973. Unit 1 has a super-critical Babcock & Wilcox boiler and a Westinghouse turbine. Lake water is used for condenser cooling. La Cygne Unit 1 was originally commissioned with an eight-module wet scrubber with a dedicated limestone slurry preparation facility and a dedicated stack. In 2006, La Cygne Unit 1 was retrofitted with an SCR. In 2015, a baghouse, wet scrubber, and new dual flue chimney will be commissioned. The retirement and dismantlement of this new equipment is included in this study. Current plans are to dismantle the original stack in 2015 and dismantle the limestone slurry equipment, ID fans, and outlet flues in 2016. These costs are not included in this study. The original scrubber building and equipment inside the building will be abandoned in place. The retirement and dismantlement of this equipment is included in this study.

La Cygne Unit 2 has an SPP-accredited unit rating of 686 MW and was placed in service in 1977. Unit 2 has a sub-critical Babcock & Wilcox boiler and a General Electric turbine. Lake water is used for condenser cooling. La Cygne Unit 2 was originally commissioned with a dedicated chimney and an electrostatic precipitator for flue gas particulate removal. In 2014, La Cygne Unit 2 was retrofitted with an SCR, baghouse, wet scrubber, and a new dual flue chimney. Current plans are to abandon the electrostatic precipitator in place. The dismantlement of the electrostatic precipitator is included in this study. The original chimney will be dismantled in 2015. This cost is not included in this study.

Both La Cygne 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 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).

LA CYGNE UNIT 1

1. Boiler, SCR, and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Wet scrubber and baghouse.
4. Dedicated Unit 1 fuel handling equipment.
5. Dedicated Unit 1 fuel oil equipment.
6. Original eight-module wet scrubber building.

LA CYGNE UNIT 2

1. Boiler and boiler auxiliaries.
2. Turbine, heat balance equipment, and turbine auxiliaries.
3. Wet scrubber and baghouse original precipitator.
4. Dedicated Unit 2 fuel handling equipment.
5. Dedicated Unit 2 fuel oil equipment.

COMMON

1. Administration building.
2. Fuel yard office building.
3. Training building.
4. Warehouses.
5. Maintenance shops.
6. Welding shop.
7. Insulators shop.
8. Auxiliary boilers.
9. Circulating water intake structure and circulating water piping.
10. Common fuel handling equipment.
11. Sewage treatment and wastewater lagoon.
12. Fuel oil storage and unloading.
13. Fire water systems.
14. Dual fuel stack.
15. Reagent preparation and gypsum handling facility.
16. Landfill.

UNIT 1

La Cygne 1 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,821 |
| Retirement Activities | \$670,965 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$798,350

Owner Internal Costs 5.00% \$39,918

Owner Contingency: 25.00% \$209,567

La Cygne 1 Retirement Opinion of Probable Cost: \$1,047,834.38

| La Cygne 1 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | LaCygne 1 Retirement | \$798,351.57 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$0.00 |
| 4 | KCL&L Overhead Costs | \$123,300.40 |
| 5 | KCP&L Retirement Manager | \$123,300.40 |
| 6 | Equipment Rentals | \$41,774.08 |
| 7 | Vacuum truck | \$41,774.08 |
| 8 | Retirement | \$505,891.49 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |

| La Cygne 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 | Coal Handling | \$25,790.00 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Confirm all fuel lines and conveyors. | \$1,685.44 |
| 38 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 39 | Fuel Oil and Igniter System | \$2,528.16 |
| 40 | Drain fuel oil system | \$2,528.16 |
| 41 | Boiler Chemical Feed | \$1,685.44 |
| 42 | Drain all chemical feed tanks. | \$1,685.44 |
| 43 | Condensate Polisher | \$4,529.12 |
| 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 | Boiler | \$27,484.77 |
| 49 | Open boiler doors. | \$880.96 |
| 50 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 51 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 52 | Open drum doors. | \$880.96 |
| 53 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 54 | Stack and Ductwork | \$326,960.96 |
| 55 | Open ductwork doors. | \$880.96 |
| 56 | Perform extensive cleaning of the ductwork. | \$11,200.00 |
| 57 | Install Flue Cap on L1 Stack Flue | \$314,880.00 |
| 58 | Condensate and Feedwater Piping | \$1,685.44 |
| 59 | Drain water from the system. | \$842.72 |
| 60 | Leave open vents and drains. | \$842.72 |
| 61 | Feedwater heaters | \$2,528.16 |
| 62 | Drain feedwater heaters | \$842.72 |
| 63 | Leave open vents and drains. | \$1,685.44 |
| 64 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 65 | Drain Deaerator and Storage | \$842.72 |
| 66 | Leave open vents and drains. | \$842.72 |
| 67 | Baghouse | \$17,351.92 |
| 68 | Multiple cleaning cycles for filter bags. | \$2,528.16 |
| 69 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | \$842.72 |
| 70 | Remove all filter bags and cages. | \$880.96 |
| 71 | Clear hoppers of all ash | \$2,805.44 |
| 72 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | \$880.96 |

| La Cygne 1 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 73 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | \$1,421.84 |
| 74 | Install bird screens across hopper ash outlet and ash line flanges. | \$880.96 |
| 75 | 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 |
| 76 | If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut. | \$880.96 |
| 77 | If top-door plenum, close and secure top doors and remove/disable door lift hoist. | \$1,723.68 |
| 78 | If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure. | \$945.44 |
| 79 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 80 | Wet FGD system | \$23,908.00 |
| 81 | Multiple mist eliminator wash cycles. Remove ME's from absorber. | \$2,145.04 |
| 82 | 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 |
| 83 | Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc. | \$4,624.08 |
| 84 | Leave all tank drain valves open or remove. Install bird screens across openings. | \$1,761.92 |
| 85 | 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 |
| 86 | Mechanically secure all flue gas isolation dampers in open position or remove damper blades. | \$1,761.92 |
| 87 | Remove solids from all inlet and outlet ductwork as necessary | \$2,240.00 |
| 88 | Open all vent station air and control air lines. Leave in open position or remove vent valves | \$1,723.68 |
| 89 | Padlock or tack weld all access doors to modules and ductwork shut. | \$1,762.24 |
| 90 | Remove access doors to open-top tanks. | \$880.96 |
| 91 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 92 | FGD Reagent Preparation-Limestone wet Scrubber | \$10,262.88 |
| 93 | Remove limestone from day bins. | \$1,402.72 |
| 94 | Removed cartridges/bags from bin vent filters | \$1,402.72 |
| 95 | 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 |
| 96 | Remove bin discharge isolation valve and install bird screen. | \$440.48 |
| 97 | Thoroughly wash and drain mills | \$1,402.72 |
| 98 | Remove balls from any ball mills | \$1,120.00 |

| La Cygne 1 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 99 | Padlock or tack weld mill access doors closed. | \$881.12 |
| 100 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | \$945.44 |
| 101 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$1,786.56 |
| 102 | FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters | \$7,287.12 |
| 103 | Wash vacuum filter belt and remove all accumulated solids | \$2,240.00 |
| 104 | Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens. | \$1,421.84 |
| 105 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | \$945.44 |
| 106 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 107 | SCR | \$10,054.00 |
| 108 | Vacuum fly ash from catalyst. | \$2,240.00 |
| 109 | Remove catalyst of salvage or disposal. | \$2,881.92 |
| 110 | Padlock or tack weld access doors shut. | \$880.96 |
| 111 | Remove ammonia from storage tank for resale. | \$701.36 |
| 112 | Wash out and drain storage tank and supply piping. | \$701.36 |
| 113 | Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens. | \$861.84 |
| 114 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$1,786.56 |
| 115 | Turbine(s) and Condenser | \$5,266.64 |
| 116 | Drain hotwell and leave doors open. | \$861.84 |
| 117 | Open main turbine doors. | \$880.96 |
| 118 | Open bfp turbine doors. | \$880.96 |
| 119 | Remove lube oil. | \$2,642.88 |
| 120 | Generator | \$6,095.76 |
| 121 | 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 |
| 122 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 123 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 124 | 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 |
| 125 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 126 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |
| 127 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 128 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
























La Cygne 1 Retirement

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

La Cygne 1 Retirement

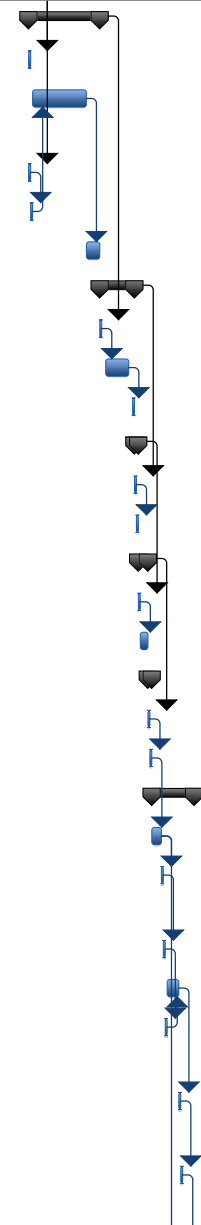
| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | LaCygne 1 Retirement | 265 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | 66 days | | | | | |
| 4 | KCL&L Overhead Costs | 199 days | | | | | |
| 5 | KCP&L Retirement Manager | 199 days | | | | | |
| 6 | Equipment Rentals | 199 days | | | | | |
| 7 | Vacuum truck | 199 days | | | | | |
| 8 | Retirement | 199 days | | | | | |
| 9 | Electrical | 22 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 7 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

La Cygne 1 Retirement

| ID | Task Name | Duration | 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 | Dry-type Power Transformers | 2 days | | |  | | |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | |  | | |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | 1 day | | |  | | |
| 31 | Motors | 7 days | | |  | | |
| 32 | De-energize all primary power at the source. | 2 days | | |  | | |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 2 days | | |  | | |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | 3 days | | |  | | |
| 35 | Coal Handling | 23 days | | |  | | |
| 36 | Empty all transfer hoppers. | 1 day | | |  | | |
| 37 | Confirm all fuel lines and conveyors. | 2 days | | |  | | |
| 38 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | 20 days | | |  | | |
| 39 | Fuel Oil and Igniter System | 3 days | | |  | | |
| 40 | Drain fuel oil system | 3 days | | |  | | |
| 41 | Boiler Chemical Feed | 2 days | | |  | | |
| 42 | Drain all chemical feed tanks. | 2 days | | |  | | |
| 43 | Condensate Polisher | 6 days | | |  | | |
| 44 | Drain water from system. | 1 day | | |  | | |
| 45 | Drain acid and caustic tanks. | 2 days | | |  | | |
| 46 | Open tanks and vessels. | 1 day | | |  | | |
| 47 | Remove resin. | 2 days | | |  | | |

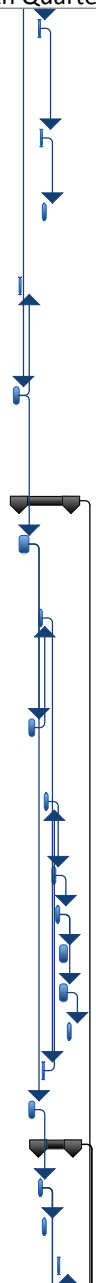
La Cygne 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|--|----------------|-------------|-------------|-------------|-------------|-------------|
| 48 | Boiler | 27 days | | | | | |
| 49 | Open boiler doors. | 1 day | | | | | |
| 50 | Gas side - perform cleaning of the boiler and bottom ash system. | 20 days | | | | | |
| 51 | Drain boiler, drum, downcomers and headers. | 1 day | | | | | |
| 52 | Open drum doors. | 1 day | | | | | |
| 53 | Drain and clean the submerged flight conveyor system. | 5 days | | | | | |
| 54 | Stack and Ductwork | 12 days | | | | | |
| 55 | Open ductwork doors. | 1 day | | | | | |
| 56 | Perform extensive cleaning of the ductwork. | 10 days | | | | | |
| 57 | Install Flue Cap on L1 Stack Flue | 1 day | | | | | |
| 58 | Condensate and Feedwater Piping | 2 days | | | | | |
| 59 | Drain water from the system. | 1 day | | | | | |
| 60 | Leave open vents and drains. | 1 day | | | | | |
| 61 | Feedwater heaters | 3 days | | | | | |
| 62 | Drain feedwater heaters | 1 day | | | | | |
| 63 | Leave open vents and drains. | 2 days | | | | | |
| 64 | Deaerator and Deaerator Storage Tank | 2 days | | | | | |
| 65 | Drain Deaerator and Storage | 1 day | | | | | |
| 66 | Leave open vents and drains. | 1 day | | | | | |
| 67 | Baghouse | 16 days | | | | | |
| 68 | Multiple cleaning cycles for filter bags. | 3 days | | | | | |
| 69 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent | 1 day | | | | | |
| 70 | Remove all filter bags and cages. | 1 day | | | | | |
| 71 | Clear hoppers of all ash | 4 days | | | | | |
| 72 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | 1 day | | | | | |
| 73 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | 1 day | | | | | |
| 74 | Install bird screens across hopper ash outlet and ash line flanges. | 1 day | | | | | |



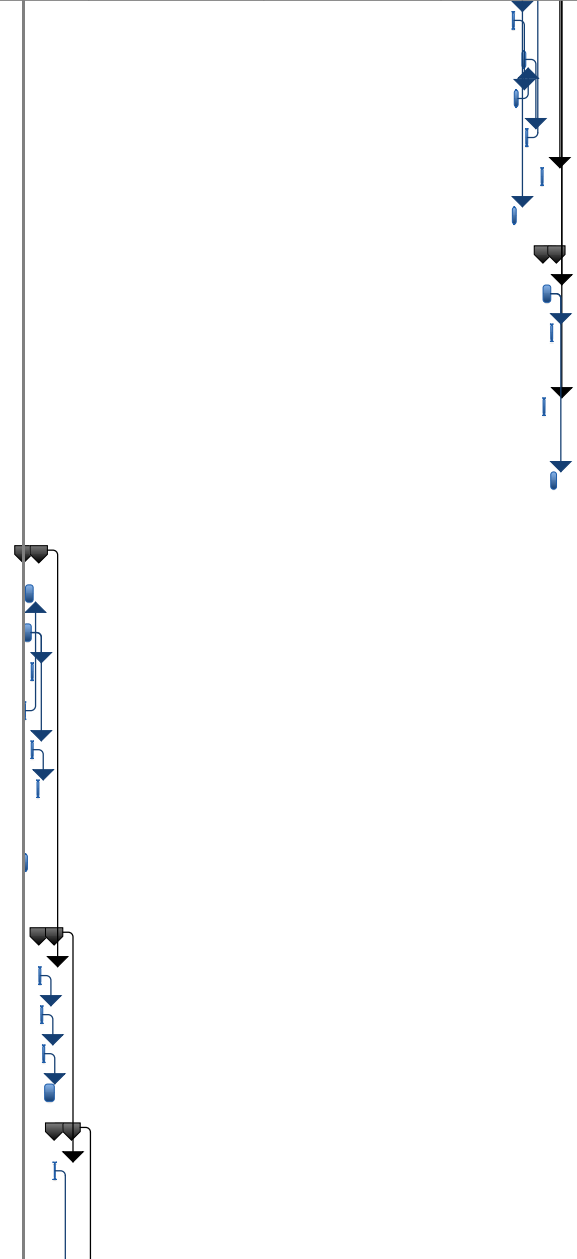
La Cygne 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|--|----------------|-------------|-------------|-------------|-------------|-------------|
| 75 | 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 | | | | | |
| 76 | If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut. | 1 day | | | | | |
| 77 | If top-door plenum, close and secure top doors and remove/disable door lift hoist. | 2 days | | | | | |
| 78 | If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure. | 1 day | | | | | |
| 79 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 80 | Wet FGD system | 19 days | | | | | |
| 81 | Multiple mist eliminator wash cycles. Remove ME's from absorber. | 3 days | | | | | |
| 82 | 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 | | | | | |
| 83 | Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc. | 3 days | | | | | |
| 84 | Leave all tank drain valves open or remove. Install bird screens across openings. | 2 days | | | | | |
| 85 | Drain all makeup and mist eliminator water pumps and piping | 2 days | | | | | |
| 86 | Mechanically secure all flue gas isolation dampers in open position | 2 days | | | | | |
| 87 | Remove solids from all inlet and outlet ductwork as necessary | 2 days | | | | | |
| 88 | Open all vent station air and control air lines. Leave in open position | 2 days | | | | | |
| 89 | Padlock or tack weld all access doors to modules and ductwork | 2 days | | | | | |
| 90 | Remove access doors to open-top tanks. | 1 day | | | | | |
| 91 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 3 days | | | | | |
| 92 | FGD Reagent Preparation-Limestone wet Scrubber | 14 days | | | | | |
| 93 | Remove limestone from day bins. | 2 days | | | | | |
| 94 | Removed cartridges/bags from bin vent filters | 2 days | | | | | |
| 95 | 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 | | | | | |


























La Cygne 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|---|---------------|-------------|-------------|-------------|-------------|-------------|
| 96 | Remove bin discharge isolation valve and install bird screen | 1 day | | | | | |
| 97 | Thoroughly wash and drain mills | 2 days | | | | | |
| 98 | Remove balls from any ball mills | 2 days | | | | | |
| 99 | Padlock or tack weld mill access doors closed. | 1 day | | | | | |
| 100 | Establish natural ventilation or maintain HVAC fan to provide | 1 day | | | | | |
| 101 | Pull electrical supply breakers on all electrical equipment except | 2 days | | | | | |
| 102 | FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filter | 5 days | | | | | |
| 103 | Wash vacuum filter belt and remove all accumulated solids | 2 days | | | | | |
| 104 | Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens. | 1 day | | | | | |
| 105 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | 1 day | | | | | |
| 106 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in | 3 days | | | | | |
| 107 | SCR | 6 days | | | | | |
| 108 | Vacuum fly ash from catalyst. | 4 days | | | | | |
| 109 | Remove catalyst of salvage or disposal. | 4 days | | | | | |
| 110 | Padlock or tack weld access doors shut. | 1 day | | | | | |
| 111 | Remove ammonia from storage tank for resale. | 1 day | | | | | |
| 112 | Wash out and drain storage tank and supply piping. | 1 day | | | | | |
| 113 | Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens. | 1 day | | | | | |
| 114 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in | 2 days | | | | | |
| 115 | Turbine(s) and Condenser | 6 days | | | | | |
| 116 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 117 | Open main turbine doors. | 1 day | | | | | |
| 118 | Open bfp turbine doors. | 1 day | | | | | |
| 119 | Remove lube oil. | 3 days | | | | | |
| 120 | Generator | 7 days | | | | | |
| 121 | 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 | | | | | |



La Cygne 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|--|---------------|-------------|---|-------------|-------------|-------------|
| 122 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | |  | | | |
| 123 | De-energize power supplies to generator excitation system at the source. | 0.5 days | |  | | | |
| 124 | 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 | |  | | | |
| 125 | Drain generator and exciter cooling water systems (if applicable). | 1 day | |  | | | |
| 126 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | |  | | | |
| 127 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | |  | | | |
| 128 | Circulation Water and Turbine Cooling Water System | 3 days | |  | | | |
| 129 | Drain. | 2 days | |  | | | |
| 130 | Open water box doors. | 1 day | |  | | | |
| 131 | Drain any circulating water chemical feed tanks. | 1 day | |  | | | |
| 132 | Compressed Air System | 1 day | |  | | | |
| 133 | Open vents and drains. | 1 day | |  | | | |
| 134 | Auxiliary Steam System | 1 day | |  | | | |
| 135 | Drain water from system. | 1 day | |  | | | |
| 136 | Auxiliary Cooling Water System | 1 day | |  | | | |
| 137 | Drain water from system. | 1 day | |  | | | |
| 138 | Condenser Air Extraction and Waterbox Priming System | 1 day | |  | | | |
| 139 | Drain water from system. | 1 day | |  | | | |
| 140 | Building Heating System | 1 day | |  | | | |
| 141 | Drain water from system. | 1 day | |  | | | |
| 142 | Battery System | 7 days | |  | | | |
| 143 | De-energize all battery chargers from the source. | 0.5 days | |  | | | |
| 144 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | |  | | | |
| 145 | Remove and dispose of battery electrolyte. | 3 days | | | | | |

La Cygne 1 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|--|----------------|-------------|-------------|-------------|-------------|-------------|
| 146 | Remove and dispose of battery cells. | 2 days | | | | | |
| 147 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | |
| 148 | Post Retirement Activities | 40 days | | | | | |
| 149 | Post Retirement Activities | 40 days | | | | | |

La Cygne 1 Dismantlement

Owner Additional Costs

| | | | |
|-------------------------------|--|-------------|-------------|
| Pre-Dismantlement Activities | | \$915,364 | |
| Overhead During Dismantlement | | \$1,719,071 | |
| Post-Dismantlement Activities | | \$63,324 | |
| Owner Costs Total | | | \$2,697,758 |

Demolition General Contractor (DGC) Costs

| | | | |
|------------------|--|-------------|--|
| Site Management | | \$1,297,925 | |
| Equipment Rental | | \$2,835,424 | |
| Consumables | | \$2,890,202 | |
| Scrap Crew(s) | | \$2,223,714 | |
| Dismantlement* | | \$5,347,634 | |

DGC Insurance 2.00% \$291,898

Contingency/Profit 15.00% \$2,233,020

Performance Bond 2.00% \$342,396.33

Contractor Costs Total: \$17,462,213

Total: \$20,159,971

Owner Internal Costs: 5.00% \$1,007,999

Owner Contingency: 25.00% \$5,291,992

La Cygne Unit 1 Dismantlement Opinion of Probable Cost: \$26,459,962

UNIT 2

La Cygne 2 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,821 |
| Retirement Activities | \$633,221 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$760,606

Owner Internal Costs 5.00% \$38,030

Owner Contingency: 25.00% \$199,659

La Cygne 2 Retirement Opinion of Probable Cost: \$998,295.38

| La Cygne 2 Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | LaCygne 2 Retirement | \$760,607.97 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$0.00 |
| 4 | KCL&L Overhead Costs | \$102,853.60 |
| 5 | KCP&L Retirement Manager | \$102,853.60 |
| 6 | Equipment Rentals | \$34,846.72 |
| 7 | Vacuum truck | \$34,846.72 |
| 8 | Retirement | \$495,522.05 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$1,786.56 |

La Cygne 2 Retirement

| ID | Task Name | Cost |
|----|--|---------------------|
| 34 | Drain lube oil system (if applicable) and dispose of oil. | \$2,642.88 |
| 35 | Coal Handling | \$27,475.44 |
| 36 | Empty all transfer hoppers. | \$1,704.56 |
| 37 | Burn out coal silos. | \$1,685.44 |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | \$1,685.44 |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | \$22,400.00 |
| 40 | Fuel Oil and Igniter System | \$2,528.16 |
| 41 | Drain fuel oil system | \$2,528.16 |
| 42 | Waste Oil System | \$1,685.44 |
| 43 | Drain all waste oil systems | \$1,685.44 |
| 44 | Boiler Chemical Feed | \$1,685.44 |
| 45 | Drain all chemical feed tanks. | \$1,685.44 |
| 46 | Boiler | \$27,484.77 |
| 47 | Open boiler doors. | \$880.96 |
| 48 | Gas side - perform cleaning of the boiler and bottom ash system. | \$22,400.00 |
| 49 | Drain boiler, drum, downcomers and headers. | \$842.72 |
| 50 | Open drum doors. | \$880.96 |
| 51 | Drain and clean the submerged flight conveyor system. | \$2,480.13 |
| 52 | Stack and Ductwork | \$326,961.04 |
| 53 | Open ductwork doors. | \$880.96 |
| 54 | Perform extensive cleaning of the ductwork. | \$11,200.00 |
| 55 | Install Flue Cap on L2 Flue | \$314,880.08 |
| 56 | Condensate and Feedwater Piping | \$1,685.44 |
| 57 | Drain water from the system. | \$842.72 |
| 58 | Leave open vents and drains. | \$842.72 |
| 59 | Feedwater heaters | \$2,528.16 |
| 60 | Drain feedwater heaters | \$842.72 |
| 61 | Leave open vents and drains. | \$1,685.44 |
| 62 | Deaerator and Deaerator Storage Tank | \$1,685.44 |
| 63 | Drain Deaerator and Storage | \$842.72 |
| 64 | Leave open vents and drains. | \$842.72 |
| 65 | Baghouse | \$17,351.92 |
| 66 | Multiple cleaning cycles for filter bags. | \$2,528.16 |
| 67 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | \$842.72 |
| 68 | Remove all filter bags and cages. | \$880.96 |
| 69 | Clear hoppers of all ash | \$2,805.44 |
| 70 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | \$880.96 |
| 71 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | \$1,421.84 |
| 72 | Install bird screens across hopper ash outlet and ash line flanges. | \$880.96 |

| La Cygne 2 Retirement | | |
|-----------------------|--|--------------------|
| ID | Task Name | Cost |
| 73 | Padlock or tack weld all hopper doors shut. (note: if ash hopper doors are indoors, they could be removed and the opening covered with bird screens.) | \$880.96 |
| 74 | If walk-in plenum, padlock or tack weld all outlet plenum doors and compartment ventilation dampers shut. | \$880.96 |
| 75 | If top-door plenum, close and secure top doors and remove/disable door lift hoist. | \$1,723.68 |
| 76 | If top-door plenum, establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in penthouse enclosure. | \$945.44 |
| 77 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 78 | Wet FGD system | \$23,908.00 |
| 79 | Multiple mist eliminator wash cycles. Remove ME's from absorber. | \$2,145.04 |
| 80 | Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | \$1,723.68 |
| 81 | Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc. | \$4,624.08 |
| 82 | Leave all tank drain valves open or remove. Install bird screens across openings. | \$1,761.92 |
| 83 | Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | \$2,604.64 |
| 84 | Mechanically secure all flue gas isolation dampers in open position or remove damper blades. | \$1,761.92 |
| 85 | Remove solids from all inlet and outlet ductwork as necessary | \$2,240.00 |
| 86 | Open all vent station air and control air lines. Leave in open position or remove vent valves | \$1,723.68 |
| 87 | Padlock or tack weld all access doors to modules and ductwork shut. | \$1,762.24 |
| 88 | Remove access doors to open-top tanks. | \$880.96 |
| 89 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 90 | FGD Reagent Preparation-Limestone wet Scrubber | \$10,262.88 |
| 91 | Remove limestone from day bins. | \$1,402.72 |
| 92 | Removed cartridges/bags from bin vent filters | \$1,402.72 |
| 93 | Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.) | \$881.12 |
| 94 | Remove bin discharge isolation valve and install bird screen. | \$440.48 |
| 95 | Thoroughly wash and drain mills | \$1,402.72 |
| 96 | Remove balls from any ball mills | \$1,120.00 |
| 97 | Padlock or tack weld mill access doors closed. | \$881.12 |
| 98 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | \$945.44 |
| Page 3 | | |

| La Cygne 2 Retirement | | |
|-----------------------|--|-------------------|
| ID | Task Name | Cost |
| 99 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$1,786.56 |
| 100 | FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filters | \$7,287.12 |
| 101 | Wash vacuum filter belt and remove all accumulated solids | \$2,240.00 |
| 102 | Wash out vacuum receiver, remove pressure relief valve and access door. Install bird screens. | \$1,421.84 |
| 103 | Establish natural ventilation or maintain HVAC fan to provide minimum air changes per hour in building. | \$945.44 |
| 104 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$2,679.84 |
| 105 | Turbine(s) and Condenser | \$5,266.64 |
| 106 | Drain hotwell and leave doors open. | \$861.84 |
| 107 | Open main turbine doors. | \$880.96 |
| 108 | Open bfp turbine doors. | \$880.96 |
| 109 | Remove lube oil. | \$2,642.88 |
| 110 | Generator | \$6,095.76 |
| 111 | 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 |
| 112 | Verify that generator field breaker or contactor (if applicable) is open. | \$446.64 |
| 113 | De-energize power supplies to generator excitation system at the source. | \$446.64 |
| 114 | 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 |
| 115 | Drain generator and exciter cooling water systems (if applicable). | \$861.84 |
| 116 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | \$1,685.44 |
| 117 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | \$1,761.92 |
| 118 | Circulation Water and Turbine Cooling Water System | \$3,409.12 |
| 119 | Drain. | \$1,685.44 |
| 120 | Open water box doors. | \$880.96 |
| 121 | Drain any circulating water chemical feed tanks. | \$842.72 |
| 122 | Compressed Air System | \$842.72 |
| 123 | Open vents and drains. | \$842.72 |
| 124 | Auxiliary Steam System | \$1,685.44 |
| 125 | Drain water from system. | \$842.72 |
| 126 | Remove aux boiler chemicals. | \$842.72 |
| 127 | Auxiliary Cooling Water System | \$842.72 |
| 128 | Drain water from system. | \$842.72 |
| 129 | Condenser Air Extraction and Waterbox Priming System | \$842.72 |
| 130 | Drain water from system. | \$842.72 |
| 131 | Building Heating System | \$842.72 |
| 132 | Drain water from system. | \$842.72 |





















La Cygne 2 Retirement

| ID | Task Name | Cost |
|-----|---|--------------------|
| 133 | Battery System | \$4,253.28 |
| 134 | De-energize all battery chargers from the source. | \$446.64 |
| 135 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | \$446.64 |
| 136 | Remove and dispose of battery electrolyte. | \$1,680.00 |
| 137 | Remove and dispose of battery cells. | \$1,120.00 |
| 138 | Clean up and dispose of electrolyte on surface areas around batteries. | \$560.00 |
| 139 | Post Retirement Activities | \$26,564.00 |
| 140 | Post Retirement Activities | \$26,564.00 |

La Cygne 2 Retirement

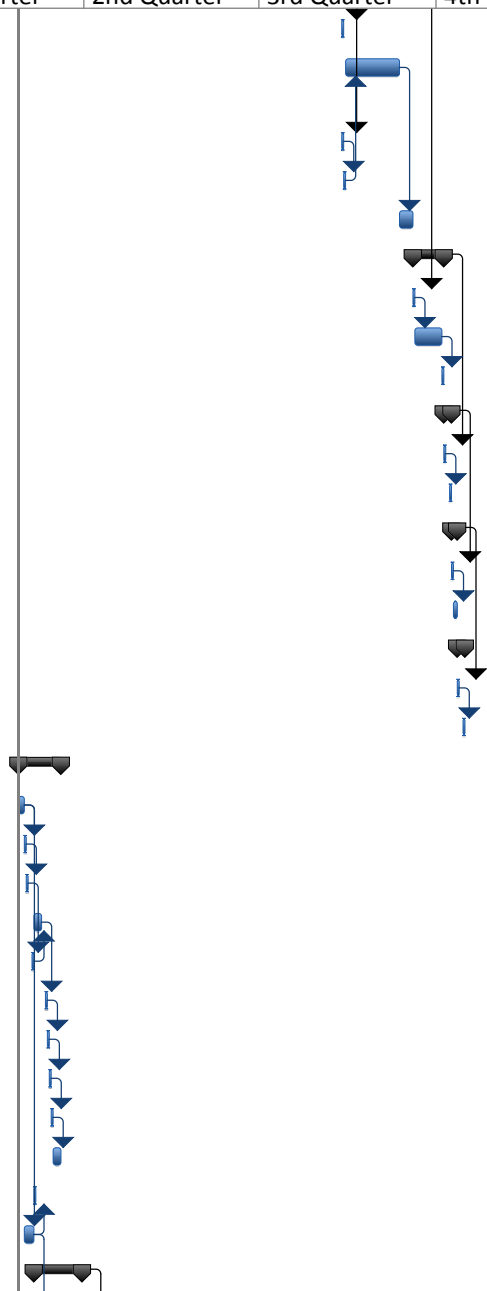
| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|----|---|-----------------|-------------|-------------|-------------|-------------|-------------|
| 1 | LaCygne 2 Retirement | 232 days | | | | | |
| 2 | Pre-Engineering | 66 days | | | | | |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | 66 days | | | | | |
| 4 | KCL&L Overhead Costs | 166 days | | | | | |
| 5 | KCP&L Retirement Manager | 166 days | | | | | |
| 6 | Equipment Rentals | 166 days | | | | | |
| 7 | Vacuum truck | 166 days | | | | | |
| 8 | Retirement | 166 days | | | | | |
| 9 | Electrical | 22 days | | | | | |
| 10 | Medium and Low Voltage Draw out Switchgear | 3 days | | | | | |
| 11 | De-energize all buses at the source. | 0.5 days | | | | | |
| 12 | Open all circuit breakers. | 0.5 days | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 0.5 days | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 0.5 days | | | | | |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | |
| 16 | Motor Control Centers | 2 days | | | | | |
| 17 | De-energize all buses at the source. | 0.5 days | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 1 day | | | | | |
| 21 | De-energize all buses at the source. | 0.5 days | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 0.5 days | | | | | |
| 23 | Oil-Filled Power Transformers | 7 days | | | | | |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | |

La Cygne 2 Retirement

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

La Cygne 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st 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 | Stack and Ductwork | 12 days | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | |
| 54 | Perform extensive cleaning of the ductwork. | 10 days | | | | | |
| 55 | Install Flue Cap on L2 Flue | 1 day | | | | | |
| 56 | Condensate and Feedwater Piping | 2 days | | | | | |
| 57 | Drain water from the system. | 1 day | | | | | |
| 58 | Leave open vents and drains. | 1 day | | | | | |
| 59 | Feedwater heaters | 3 days | | | | | |
| 60 | Drain feedwater heaters | 1 day | | | | | |
| 61 | Leave open vents and drains. | 2 days | | | | | |
| 62 | Deaerator and Deaerator Storage Tank | 2 days | | | | | |
| 63 | Drain Deaerator and Storage | 1 day | | | | | |
| 64 | Leave open vents and drains. | 1 day | | | | | |
| 65 | Baghouse | 16 days | | | | | |
| 66 | Multiple cleaning cycles for filter bags. | 3 days | | | | | |
| 67 | Open all vent and drain lines on bag cleaning air and control | 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 | 1 day | | | | | |
| 71 | Disconnect ash transport piping and washdown baghouse | 1 day | | | | | |
| 72 | Install bird screens across hopper ash outlet and ash line flue | 1 day | | | | | |
| 73 | Padlock or tack weld all hopper doors shut. (note: if ash hopper | 1 day | | | | | |
| 74 | If walk-in plenum, padlock or tack weld all outlet plenum doors | 1 day | | | | | |
| 75 | If top-door plenum, close and secure top doors and remove | 2 days | | | | | |
| 76 | If top-door plenum, establish natural ventilation or maintain | 1 day | | | | | |
| 77 | Pull electrical supply breakers on all electrical equipment | 3 days | | | | | |
| 78 | Wet FGD system | 19 days | | | | | |



La Cygne 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|--|----------------|-------------|-------------|-------------|-------------|-------------|
| 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 | 2 days | | | | | |
| 87 | Padlock or tack weld all access doors to modules and ductwork | 2 days | | | | | |
| 88 | Remove access doors to open-top tanks. | 1 day | | | | | |
| 89 | Pull electrical supply breakers on all electrical equipment except | 3 days | | | | | |
| 90 | FGD Reagent Preparation-Limestone wet Scrubber | 14 days | | | | | |
| 91 | Remove limestone from day bins. | 2 days | | | | | |
| 92 | Removed cartridges/bags from bin vent filters | 2 days | | | | | |
| 93 | Padlock or tack weld all bin access doors shut. (note: if doors are indoors, they could be removed and the opening covered with bird screens.) | 1 day | | | | | |
| 94 | Remove bin discharge isolation valve and install bird screen | 1 day | | | | | |
| 95 | Thoroughly wash and drain mills | 2 days | | | | | |
| 96 | Remove balls from any ball mills | 2 days | | | | | |
| 97 | Padlock or tack weld mill access doors closed. | 1 day | | | | | |
| 98 | Establish natural ventilation or maintain HVAC fan to provide | 1 day | | | | | |
| 99 | Pull electrical supply breakers on all electrical equipment except | 2 days | | | | | |
| 100 | FGD Byproduct Dewatering - Hydrocyclones and Vacuum Filt | 11 days | | | | | |
| 101 | Wash vacuum filter belt and remove all accumulated solids | 2 days | | | | | |

La Cygne 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|--|---------------|-------------|-------------|-------------|-------------|-------------|
| 102 | Wash out vacuum receiver, remove pressure relief valve and | 1 day | | | | | |
| 103 | Establish natural ventilation or maintain HVAC fan to provide | 1 day | | | | | |
| 104 | Pull electrical supply breakers on all electrical equipment except | 3 days | | | | | |
| 105 | Turbine(s) and Condenser | 6 days | | | | | |
| 106 | Drain hotwell and leave doors open. | 1 day | | | | | |
| 107 | Open main turbine doors. | 1 day | | | | | |
| 108 | Open bfp turbine doors. | 1 day | | | | | |
| 109 | Remove lube oil. | 3 days | | | | | |
| 110 | Generator | 7 days | | | | | |
| 111 | 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 | | | | | |
| 112 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | |
| 113 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | |
| 114 | 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 | | | | | |
| 115 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | |
| 116 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | |
| 117 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | |
| 118 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | |
| 119 | Drain. | 2 days | | | | | |
| 120 | Open water box doors. | 1 day | | | | | |
| 121 | Drain any circulating water chemical feed tanks. | 1 day | | | | | |
| 122 | Compressed Air System | 1 day | | | | | |
| 123 | Open vents and drains. | 1 day | | | | | |
| 124 | Auxiliary Steam System | 2 days | | | | | |
| 125 | Drain water from system. | 1 day | | | | | |

La Cygne 2 Retirement

| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter |
|-----|---|----------------|-------------|-------------|-------------|-------------|-------------|
| 126 | Remove aux boiler chemicals. | 1 day | | | | | |
| 127 | Auxiliary Cooling Water System | 1 day | | | | | |
| 128 | Drain water from system. | 1 day | | | | | |
| 129 | Condenser Air Extraction and Waterbox Priming System | 1 day | | | | | |
| 130 | Drain water from system. | 1 day | | | | | |
| 131 | Building Heating System | 1 day | | | | | |
| 132 | Drain water from system. | 1 day | | | | | |
| 133 | Battery System | 7 days | | | | | |
| 134 | De-energize all battery chargers from the source. | 0.5 days | | | | | |
| 135 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | |
| 136 | Remove and dispose of battery electrolyte. | 3 days | | | | | |
| 137 | Remove and dispose of battery cells. | 2 days | | | | | |
| 138 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | |
| 139 | Post Retirement Activities | 40 days | | | | | |
| 140 | Post Retirement Activities | 40 days | | | | | |

La Cygne 2 Dismantlement

Owner Costs

| | |
|-------------------------------|-------------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$1,676,622 |
| Post-Dismantlement Activities | \$65,520 |

Owner Costs Total \$2,634,902

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$1,260,153 |
| Equipment Rental | \$2,745,747 |
| Consummables | \$2,798,245 |
| Scrap Crew(s) | \$2,158,588 |
| Dismantlement | \$5,136,138 |

DGC Insurance 2.00% \$281,977

Contingency/Profit 15.00% \$2,157,127.26

Performance Bond 2.00% \$330,759.51

Contractor Costs Total: \$16,868,735

Total: \$19,503,637

Owner Internal Costs: 5.00% \$975,181.85

Owner Contingency: 25.00% \$5,119,704.73

La Cygne Unit 2 Dismantlement Opinion of Probable Cost: \$25,598,523.64

| La Cygne 2 Dismantlement | | |
|--------------------------|--|------------------------|
| ID | Task Name | Cost |
| 1 | La Cygne Unit 2 Dismantlement | \$12,283,455.35 |
| 2 | Pre-Dismantlement Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition General Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Site | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$1,676,621.54 |
| 9 | KCP&L Project Manager | \$266,427.98 |
| 10 | KCP&L Administrative Support | \$98,521.59 |
| 11 | KCP&L Engineer | \$437,911.97 |
| 12 | Owners Engineer Project Manager | \$130,720.00 |
| 13 | Owners Engineer - Engineer | \$743,040.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$913,939.13 |
| 15 | Demolition Contractor Project Manager | \$258,584.78 |
| 16 | Demolition Contractor Safety Manager | \$230,239.18 |
| 17 | Demolition Contractor Superintendent | \$425,115.17 |
| 18 | Demolition Contractor Equipment Rental Costs | \$1,556,187.08 |
| 19 | Equipment Rental | \$1,556,187.08 |
| 20 | Demolition Contractor Consumables | \$1,552,575.20 |
| 21 | Consumables | \$1,552,575.20 |
| 22 | Scrap Crew(s) | \$1,540,569.60 |
| 23 | Crew to Handle Scrap Material(s) | \$1,540,569.60 |
| 24 | Dismantlement Directs | \$4,085,282.48 |
| 25 | Phase 1 Demolition | \$948,948.64 |
| 26 | Phase 1 Electrical Demolition | \$342,149.76 |
| 27 | Electrical Demolition of Phase 1 Equipment | \$342,149.76 |
| 28 | Condensate System | \$105,690.24 |
| 29 | Condensate Pumps | \$3,582.72 |
| 30 | Condensate Transfer Pumps | \$1,791.36 |
| 31 | Cycle Make-Up Pump | \$1,791.36 |
| 32 | Steam Packing Exhauster and Blower | \$3,582.72 |
| 33 | Low Pressure Heaters (except the condenser neck heat exchangers) | \$53,740.80 |
| 34 | Deaerator | \$14,330.88 |
| 35 | Deaerator Storage Tank | \$8,956.80 |
| 36 | Condensate Piping | \$17,913.60 |
| 37 | Boiler Feed System | \$67,816.96 |
| 38 | Boiler Feed Pump Turbine and Exhaust | \$14,076.16 |
| 39 | Boiler Feed Pump | \$17,913.60 |
| 40 | High Pressure Heaters | \$35,827.20 |
| 41 | Critical Piping | \$80,611.20 |
| 42 | Main Steam Piping | \$26,870.40 |
| 43 | Cold Reheat Piping | \$26,870.40 |
| 44 | Hot Reheat Piping | \$26,870.40 |

| La Cygne 2 Dismantlement | | |
|--------------------------|---|--------------------|
| ID | Task Name | Cost |
| 45 | Extraction Steam System | \$17,913.60 |
| 46 | Piping | \$17,913.60 |
| 47 | Heater Drips | \$14,330.88 |
| 48 | Piping | \$14,330.88 |
| 49 | Auxiliary Steam | \$16,122.24 |
| 50 | Auxiliary Steam Piping | \$16,122.24 |
| 51 | Circulating Water (plant side) | \$8,956.80 |
| 52 | Waterboxes | \$8,956.80 |
| 53 | Bearing Cooling Water | \$30,453.12 |
| 54 | Bearing Cooling Water Pumps | \$3,582.72 |
| 55 | Bearing Cooling Water Heat Exchanger | \$8,956.80 |
| 56 | Bearing Cooling Water Piping | \$17,913.60 |
| 57 | Auxiliary Cooling Water | \$28,661.76 |
| 58 | Auxiliary Cooling Water Heat Exchanger | \$5,374.08 |
| 59 | Auxiliary Cooling Water Pumps | \$5,374.08 |
| 60 | Auxiliary Cooling Water Piping | \$17,913.60 |
| 61 | Service Water | \$8,956.80 |
| 62 | Service Water Piping | \$8,956.80 |
| 63 | Fuel Oil System (plant side) | \$41,201.28 |
| 64 | Igniter Fuel Oil Pumps | \$5,374.08 |
| 65 | Igniter Fuel Oil and Atomizing Air Piping | \$8,956.80 |
| 66 | Igniters | \$26,870.40 |
| 67 | Waste Oil System | \$12,539.52 |
| 68 | Waste Oil Tank | \$3,582.72 |
| 69 | Waste Oil Transfer Pump | \$3,582.72 |
| 70 | Waste Oil Piping | \$5,374.08 |
| 71 | Air Preheat System | \$10,236.64 |
| 72 | Air Preheat Pumps | \$3,582.72 |
| 73 | Air Preheat Piping | \$6,653.92 |
| 74 | Condenser Air Extraction System | \$10,748.16 |
| 75 | Vacuum Pumps | \$7,165.44 |
| 76 | Extraction Piping | \$3,582.72 |
| 77 | Turbine Seals and Drains | \$12,539.52 |
| 78 | Piping | \$12,539.52 |
| 79 | Turbine Lube Oil System | \$20,363.52 |
| 80 | Turbine Lube Oil Tank | \$11,406.72 |
| 81 | Turbine Lube Oil Pumps | \$7,165.44 |
| 82 | Turbine Oil Mist Eliminator | \$1,791.36 |
| 83 | Generator Auxiliary Systems | \$32,244.48 |
| 84 | Hydrogen Cooler Skid and Piping | \$8,956.80 |
| 85 | Stator Cooling Water Skid and Piping | \$8,956.80 |
| 86 | Isophase Bus Duct | \$7,165.44 |
| 87 | Exciter Heat Exchanger | \$3,582.72 |
| 88 | EHC Coolers | \$3,582.72 |

| La Cygne 2 Dismantlement | | |
|--------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 89 | Chemical Feed Systems | \$19,303.20 |
| 90 | Tanks | \$8,555.04 |
| 91 | Pumps | \$5,374.08 |
| 92 | Piping | \$5,374.08 |
| 93 | Sampling Systems | \$6,434.40 |
| 94 | Field Mounted Heat Exchangers | \$3,582.72 |
| 95 | Piping | \$2,851.68 |
| 96 | Building Heating Systems | \$13,307.84 |
| 97 | Steam Unit Heaters | \$9,505.60 |
| 98 | Steam Piping | \$3,802.24 |
| 99 | Compressed Air System | \$26,870.40 |
| 100 | Air Compressors | \$7,165.44 |
| 101 | Air Drying Equipment | \$5,374.08 |
| 102 | Air Reciever Tanks | \$5,374.08 |
| 103 | Compressed Air Piping | \$8,956.80 |
| 104 | Miscellaneous Equipment | \$21,496.32 |
| 105 | Miscellaneous Equipment (including Fire Protection) | \$21,496.32 |
| 106 | Phase 2 Demolition | \$2,907,661.04 |
| 107 | Precipitator | \$107,481.60 |
| 108 | Remove Precipitator | \$107,481.60 |
| 109 | Boiler Equipment | \$710,993.92 |
| 110 | Fans | \$63,246.40 |
| 111 | Pulverizers | \$71,654.40 |
| 112 | Bottom Ash | \$16,451.52 |
| 113 | Air Heater | \$200,632.32 |
| 114 | Steam Drum | \$89,568.00 |
| 115 | Coal Bunkers | \$71,654.40 |
| 116 | Coal Feeders | \$46,575.36 |
| 117 | Soot Blowers | \$50,895.36 |
| 118 | Ductwork | \$100,316.16 |
| 119 | Boiler Removal | \$401,264.64 |
| 120 | Furnace | \$229,294.08 |
| 121 | Back Pass | \$171,970.56 |
| 122 | Boiler Steel Framing | \$723,709.44 |
| 123 | Hanger Girders at Top | \$107,481.60 |
| 124 | All Other Framing | \$336,775.68 |
| 125 | Bracing and Girts | \$164,805.12 |
| 126 | Columns | \$114,647.04 |
| 127 | Boiler Foundations | \$128,977.92 |
| 128 | Equipment Foundation Demolition to Grade | \$128,977.92 |
| 129 | Remove Turbine | \$835,233.52 |
| 130 | Remove HP Turbine | \$26,321.60 |
| 131 | Remove IP Turbine | \$26,321.60 |
| 132 | Remove LP Turbine | \$26,321.60 |

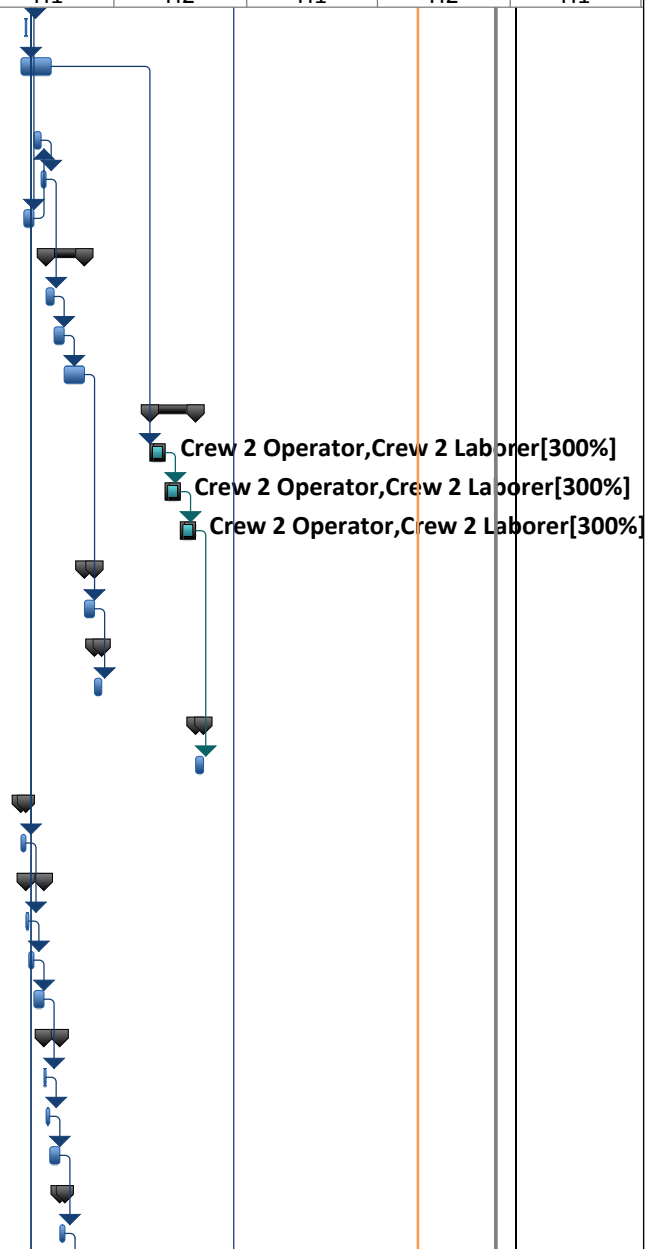
| La Cygne 2 Dismantlement | | |
|--------------------------|--|---------------------|
| ID | Task Name | Cost |
| 133 | Remove Generator | \$52,643.20 |
| 134 | Remove Condenser Neck Heat Exchanger | \$26,321.60 |
| 135 | Remove Condenser | \$26,321.60 |
| 136 | Remove Misc. Auxiliary Turbine Equipment | \$39,482.40 |
| 137 | Turbine Pedestal Demolition to Grade | \$268,480.32 |
| 138 | Top Slab and Beams | \$105,286.40 |
| 139 | Columns | \$163,193.92 |
| 140 | Remove Turbine Building | \$343,019.60 |
| 141 | Siding and Roofing | \$108,682.80 |
| 142 | All Framing Elevations | \$157,929.60 |
| 143 | Bracing and Girts | \$52,643.20 |
| 144 | Columns | \$23,764.00 |
| 145 | Phase 3 Demolition | \$228,672.80 |
| 146 | Yard Demolition | \$228,672.80 |
| 147 | Remove Circulating Water Pumps, Screens and Intake Auxiliaries | \$17,913.60 |
| 148 | Remove Ash Handling Equipment and Piping | \$44,784.00 |
| 149 | Remove Fly Ash Storage Silo 2A | \$17,913.60 |
| 150 | Remove Dewatering Bin 2A and 2B | \$8,956.80 |
| 151 | Remove Piping and Misc. Equipment | \$17,913.60 |
| 152 | Remove Fuel Yard Equipment | \$80,611.20 |
| 153 | Remove Crushers 2A, 2B and Surge Bin | \$26,870.40 |
| 154 | Remove Conveyor 206 | \$17,913.60 |
| 155 | Remove Conveyor 207 | \$17,913.60 |
| 156 | Remove Conveyor 2A | \$17,913.60 |
| 157 | Remove Laydown Equipment and Warehoused Equipment | \$17,913.60 |
| 158 | Remove Unit 2 Condensate Storage Tank and Pump | \$4,752.80 |
| 159 | Remove Unit 2 Make-Up Water Storage Tank | \$8,956.80 |
| 160 | Remove Unit 2 Water Pre-Treatment Equipment and Building | \$53,740.80 |
| 161 | Project Close-Out | \$65,520.00 |
| 162 | Project Close-Out Activities | \$65,520.00 |

La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|----|--|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H1 |
| 1 | La Cygne Unit 2 Dismantlement | 735 days | | | | | | | |
| 2 | Pre-Dismantlement Activities | 265 days | | | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | | | | |
| 5 | Hire Demolition General Contractor | 3 mons | | | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | | | |
| 7 | Demolition Contractor Mobilizes on Site | 5 days | | | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 430 days | | | | | | | |
| 9 | KCP&L Project Manager | 430 days | | | | | | | |
| 10 | KCP&L Administrative Support | 430 days | | | | | | | |
| 11 | KCP&L Engineer | 430 days | | | | | | | |
| 12 | Owners Engineer Project Manager | 430 days | | | | | | | |
| 13 | Owners Engineer - Engineer | 430 days | | | | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 430 days | | | | | | | |
| 15 | Demolition Contractor Project Manager | 430 days | | | | | | | |
| 16 | Demolition Contractor Safety Manager | 430 days | | | | | | | |
| 17 | Demolition Contractor Superintendent | 430 days | | | | | | | |
| 18 | Demolition Contractor Equipment Rental Costs | 430 days | | | | | | | |
| 19 | Equipment Rental | 430 days | | | | | | | |
| 20 | Demolition Contractor Consumables | 430 days | | | | | | | |
| 21 | Consumables | 430 days | | | | | | | |
| 22 | Scrap Crew(s) | 430 days | | | | | | | |
| 23 | Crew to Handle Scrap Material(s) | 430 days | | | | | | | |
| 24 | Dismantlement Directs | 430 days | | | | | | | |
| 25 | Phase 1 Demolition | 191 days | | | | | | | |
| 26 | Phase 1 Electrical Demolition | 191 days | | | | | | | |
| 27 | Electrical Demolition of Phase 1 Equipmer | 191 days | | | | | | | |
| 28 | Condensate System | 30 days | | | | | | | |
| 29 | Condensate Pumps | 2 days | | | | | | | |
| 30 | Condensate Transfer Pumps | 1 day | | | | | | | |
| 31 | Cycle Make-Up Pump | 1 day | | | | | | | |

La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|----|--|----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 32 | Steam Packing Exhauster and Blower | 2 days | | | | | | | |
| 33 | Low Pressure Heaters (except the condenser neck heat exchangers) | 30 days | | | | | | | |
| 34 | Deaerator | 8 days | | | | | | | |
| 35 | Deaerator Storage Tank | 5 days | | | | | | | |
| 36 | Condensate Piping | 10 days | | | | | | | |
| 37 | Boiler Feed System | 37 days | | | | | | | |
| 38 | Boiler Feed Pump Turbine and Exhaust | 7 days | | | | | | | |
| 39 | Boiler Feed Pump | 10 days | | | | | | | |
| 40 | High Pressure Heaters | 20 days | | | | | | | |
| 41 | Critical Piping | 45 days | | | | | | | |
| 42 | Main Steam Piping | 15 days | | | | | | | |
| 43 | Cold Reheat Piping | 15 days | | | | | | | |
| 44 | Hot Reheat Piping | 15 days | | | | | | | |
| 45 | Extraction Steam System | 10 days | | | | | | | |
| 46 | Piping | 10 days | | | | | | | |
| 47 | Heater Drips | 8 days | | | | | | | |
| 48 | Piping | 8 days | | | | | | | |
| 49 | Auxiliary Steam | 9 days | | | | | | | |
| 50 | Auxiliary Steam Piping | 9 days | | | | | | | |
| 51 | Circulating Water (plant side) | 5 days | | | | | | | |
| 52 | Waterboxes | 5 days | | | | | | | |
| 53 | Bearing Cooling Water | 17 days | | | | | | | |
| 54 | Bearing Cooling Water Pumps | 2 days | | | | | | | |
| 55 | Bearing Cooling Water Heat Exchanger | 5 days | | | | | | | |
| 56 | Bearing Cooling Water Piping | 10 days | | | | | | | |
| 57 | Auxiliary Cooling Water | 16 days | | | | | | | |
| 58 | Auxiliary Cooling Water Heat Exchanger | 3 days | | | | | | | |
| 59 | Auxiliary Cooling Water Pumps | 3 days | | | | | | | |
| 60 | Auxiliary Cooling Water Piping | 10 days | | | | | | | |
| 61 | Service Water | 5 days | | | | | | | |
| 62 | Service Water Piping | 5 days | | | | | | | |



La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|----|---|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 63 | Fuel Oil System (plant side) | 120 days | | | | | | | |
| 64 | Igniter Fuel Oil Pumps | 3 days | | | | | | | |
| 65 | Igniter Fuel Oil and Atomizing Air Piping | 5 days | | | | | | | |
| 66 | Igniters | 15 days | | | | | | | |
| 67 | Waste Oil System | 7 days | | | | | | | |
| 68 | Waste Oil Tank | 2 days | | | | | | | |
| 69 | Waste Oil Transfer Pump | 2 days | | | | | | | |
| 70 | Waste Oil Piping | 3 days | | | | | | | |
| 71 | Air Preheat System | 9 days | | | | | | | |
| 72 | Air Preheat Pumps | 2 days | | | | | | | |
| 73 | Air Preheat Piping | 7 days | | | | | | | |
| 74 | Condenser Air Extraction System | 6 days | | | | | | | |
| 75 | Vacuum Pumps | 4 days | | | | | | | |
| 76 | Extraction Piping | 2 days | | | | | | | |
| 77 | Turbine Seals and Drains | 7 days | | | | | | | |
| 78 | Piping | 7 days | | | | | | | |
| 79 | Turbine Lube Oil System | 17 days | | | | | | | |
| 80 | Turbine Lube Oil Tank | 12 days | | | | | | | |
| 81 | Turbine Lube Oil Pumps | 4 days | | | | | | | |
| 82 | Turbine Oil Mist Eliminator | 1 day | | | | | | | |
| 83 | Generator Auxiliary Systems | 18 days | | | | | | | |
| 84 | Hydrogen Cooler Skid and Piping | 5 days | | | | | | | |
| 85 | Stator Cooling Water Skid and Piping | 5 days | | | | | | | |
| 86 | Isophase Bus Duct | 4 days | | | | | | | |
| 87 | Exciter Heat Exchanger | 2 days | | | | | | | |
| 88 | EHC Coolers | 2 days | | | | | | | |
| 89 | Chemical Feed Systems | 15 days | | | | | | | |
| 90 | Tanks | 9 days | | | | | | | |
| 91 | Pumps | 3 days | | | | | | | |
| 92 | Piping | 3 days | | | | | | | |
| 93 | Sampling Systems | 5 days | | | | | | | |
| 94 | Field Mounted Heat Exchangers | 2 days | | | | | | | |

La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|-----|---|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 95 | Piping | 3 days | | | | | | | |
| 96 | Building Heating Systems | 14 days | | | | | | | |
| 97 | Steam Unit Heaters | 10 days | | | | | | | |
| 98 | Steam Piping | 4 days | | | | | | | |
| 99 | Compressed Air System | 15 days | | | | | | | |
| 100 | Air Compressors | 4 days | | | | | | | |
| 101 | Air Drying Equipment | 3 days | | | | | | | |
| 102 | Air Reciever Tanks | 3 days | | | | | | | |
| 103 | Compressed Air Piping | 5 days | | | | | | | |
| 104 | Miscellaneous Equipment | 12 days | | | | | | | |
| 105 | Miscellaneous Equipment (including Fire Protection) | 12 days | | | | | | | |
| 106 | Phase 2 Demolition | 333 days | | | | | | | |
| 107 | Precipitator | 30 days | | | | | | | |
| 108 | Remove Precipitator | 30 days | | | | | | | |
| 109 | Boiler Equipment | 134 days | | | | | | | |
| 110 | Fans | 20 days | | | | | | | |
| 111 | Pulverizers | 20 days | | | | | | | |
| 112 | Bottom Ash | 6 days | | | | | | | |
| 113 | Air Heater | 56 days | | | | | | | |
| 114 | Steam Drum | 25 days | | | | | | | |
| 115 | Coal Bunkers | 20 days | | | | | | | |
| 116 | Coal Feeders | 13 days | | | | | | | |
| 117 | Soot Blowers | 16 days | | | | | | | |
| 118 | Ductwork | 28 days | | | | | | | |
| 119 | Boiler Removal | 56 days | | | | | | | |
| 120 | Furnace | 32 days | | | | | | | |
| 121 | Back Pass | 24 days | | | | | | | |
| 122 | Boiler Steel Framing | 101 days | | | | | | | |
| 123 | Hanger Girders at Top | 15 days | | | | | | | |
| 124 | All Other Framing | 47 days | | | | | | | |
| 125 | Bracing and Girts | 23 days | | | | | | | |

La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|-----|--|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 126 | Columns | 16 days | | | | | | | |
| 127 | Boiler Foundations | 18 days | | | | | | | |
| 128 | Equipment Foundation Demolition to Grade | 18 days | | | | | | | |
| 129 | Remove Turbine | 333 days | | | | | | | |
| 130 | Remove HP Turbine | 10 days | | | | | | | |
| 131 | Remove IP Turbine | 10 days | | | | | | | |
| 132 | Remove LP Turbine | 10 days | | | | | | | |
| 133 | Remove Generator | 20 days | | | | | | | |
| 134 | Remove Condenser Neck Heat Exchanger | 10 days | | | | | | | |
| 135 | Remove Condenser | 10 days | | | | | | | |
| 136 | Remove Misc. Auxiliary Turbine Equipment | 15 days | | | | | | | |
| 137 | Turbine Pedestal Demolition to Grade | 102 days | | | | | | | |
| 138 | Top Slab and Beams | 40 days | | | | | | | |
| 139 | Columns | 62 days | | | | | | | |
| 140 | Remove Turbine Building | 146 days | | | | | | | |
| 141 | Siding and Roofing | 41 days | | | | | | | |
| 142 | All Framing Elevations | 60 days | | | | | | | |
| 143 | Bracing and Girts | 20 days | | | | | | | |
| 144 | Columns | 25 days | | | | | | | |
| 145 | Phase 3 Demolition | 130 days | | | | | | | |
| 146 | Yard Demolition | 130 days | | | | | | | |
| 147 | Remove Circulating Water Pumps, Screens and Intake Auxiliaries | 10 days | | | | | | | |
| 148 | Remove Ash Handling Equipment and Pip | 25 days | | | | | | | |
| 149 | Remove Fly Ash Storage Silo 2A | 10 days | | | | | | | |
| 150 | Remove Dewatering Bin 2A and 2B | 5 days | | | | | | | |
| 151 | Remove Piping and Misc. Equipment | 10 days | | | | | | | |
| 152 | Remove Fuel Yard Equipment | 45 days | | | | | | | |
| 153 | Remove Crushers 2A, 2B and Surge Bin | 15 days | | | | | | | |
| 154 | Remove Conveyor 206 | 10 days | | | | | | | |
| 155 | Remove Conveyor 207 | 10 days | | | | | | | |

La Cygne 2 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|-----|--|----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H1 |
| 156 | Remove Conveyor 2A | 10 days | | | | | | | |
| 157 | Remove Laydown Equipment and Warehoused Equipment | 10 days | | | | | | | |
| 158 | Remove Unit 2 Condensate Storage Tank and Pump | 5 days | | | | | | | |
| 159 | Remove Unit 2 Make-Up Water Storage Tank | 5 days | | | | | | | |
| 160 | Remove Unit 2 Water Pre-Treatment Equipment and Building | 30 days | | | | | | | |
| 161 | Project Close-Out | 40 days | | | | | | | |
| 162 | Project Close-Out Activities | 40 days | | | | | | | |

| La Cygne 2 AQCS Dismantlement | | |
|-------------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 1 | La Cygne Unit 2 AQCS Dismantlement | \$4,450,320.72 |
| 2 | Common Removal Overheads | \$346,214.40 |
| 3 | Added Overhead Staff for Common Removals | \$346,214.40 |
| 4 | Scrap Crew | \$618,019.20 |
| 5 | Crew(s) to Handle Scrap Material | \$618,019.20 |
| 6 | Demolition Contractor Consummables | \$1,245,670.80 |
| 7 | Consummables | \$1,245,670.80 |
| 8 | Demolition Contractor Equipment Rental Costs | \$1,189,560.00 |
| 9 | Equipment Rental | \$1,189,560.00 |
| 10 | Dismantlement | \$1,050,856.32 |
| 11 | Initial Structural | \$130,313.68 |
| 12 | Remove SCR box & ductwork lagging & insulation | \$17,913.60 |
| 13 | Remove SCR expansion joints | \$10,748.16 |
| 14 | Remove ductwork lagging & insulation | \$7,952.40 |
| 15 | Remove ductwork expansion joints | \$17,913.60 |
| 16 | Remove ductwork access platforms & ladders | \$17,913.60 |
| 17 | Remove FF lagging, insulation, wall panel, & roof panels | \$35,827.20 |
| 18 | Remove ID fan lagging & insulation | \$7,165.44 |
| 19 | Removal all HVAC equipment located on FGD Bldg roof | \$5,374.08 |
| 20 | Remove FGD Bldg lagging, insulation, wall panel, & roof | \$9,505.60 |
| 21 | General Electric | \$186,301.44 |
| 22 | Remove Unit 2 Air Quality Control Equipment Transformer | \$5,374.08 |
| 23 | Remove breakers serving all FF equipment | \$895.68 |
| 24 | Remove breakers serving all FGD equipment | \$1,791.36 |
| 25 | Remove breakers serving all ID fan equipment | \$895.68 |
| 26 | Remove breakers serving all SCR equipment | \$895.68 |
| 27 | Remove breakers serving all comp air equipment | \$895.68 |
| 28 | Remove all ductwork primary instrumentation, controls & assoc'd cables, and conduit | \$8,956.80 |
| 29 | Remove all FGD primary instrumentation, controls & assoc'd cables, and conduit | \$26,870.40 |
| 30 | Remove all FF primary instrumentation, controls & assoc'd cables, and conduit | \$17,913.60 |
| 31 | Remove SCR primary instrumentation, controls, & assoc'd cable & conduit | \$8,956.80 |
| 32 | Remove NH3 supply primary instrumentation, controls, & assoc'd cable & conduit | \$8,956.80 |
| 33 | Remove wiring and conduit serving FGD equipment, HVAC, lighting and convenience outlets | \$35,827.20 |
| 34 | Remove wiring and conduit serving FF equipment, HVAC, lighting and convenience outlets | \$17,913.60 |
| 35 | Remove wiring and conduit serving the ID fans and assoc'd equipment | \$21,496.32 |
| Page 1 | | |

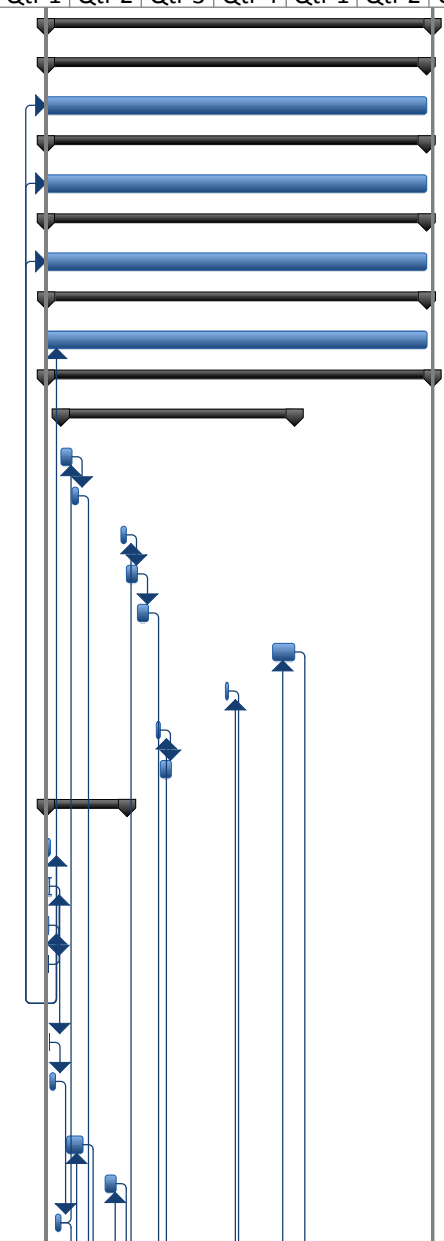
| La Cygne 2 AQCS Dismantlement | | |
|-------------------------------|---|---------------------|
| ID | Task Name | Cost |
| 36 | Remove wiring & conduit serving SCR vaporization & injection equipment | \$5,374.08 |
| 37 | Remove wiring & conduit serving compressed air equipment | \$5,374.08 |
| 38 | Remove electrical control cabinets & switchgear | \$17,913.60 |
| 39 | FGD System | \$272,070.32 |
| 40 | Remove ductwork between FGD module and chimney | \$7,952.40 |
| 41 | Remove support steel and access platforms between FGD and chimney | \$5,374.08 |
| 42 | Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg | \$35,827.20 |
| 43 | Remove oxi air blowers | \$895.68 |
| 44 | Remove all FGD piping & valves other than recirc piping | \$26,870.40 |
| 45 | Remove ox air lines | \$5,374.08 |
| 46 | Remove FGD MEs panels | \$9,542.88 |
| 47 | Remove FGD outlet duct and top cone | \$5,374.08 |
| 48 | Remove FGD internal wash ME piping and ME supports | \$5,374.08 |
| 49 | Remove FGD internal spray header piping | \$8,956.80 |
| 50 | Remove FGD support steel, access provisions, stair tower, and recirc piping from top down | \$35,827.20 |
| 51 | Remove FGD module walls | \$71,654.40 |
| 52 | Remove FGD inlet duct | \$5,374.08 |
| 53 | Remove FGD reaction tank walls and floor | \$17,913.60 |
| 54 | Remove FGD Bldg trench floor grating | \$3,582.72 |
| 55 | Remove Unit 2 Sorbent Injection System Silo | \$7,165.44 |
| 56 | Remove Unit 2 Sorbent Injection Equipment and Injection Blower Building | \$8,956.80 |
| 57 | Remove Unit 2 Mercury Reduction System Silo | \$10,054.40 |
| 58 | ID Fans | \$78,819.84 |
| 59 | Remove ductwork between ID fan outlets and FGD module | \$12,539.52 |
| 60 | Remove support steel and access platforms between ID fan outlets and FGD module | \$5,374.08 |
| 61 | Remove ductwork between FF outlet and ID fan inlets | \$12,539.52 |
| 62 | Remove support steel between FF outlet and ID fan inlets | \$5,374.08 |
| 63 | Removed ID fan isolation dampers | \$14,330.88 |
| 64 | Removed ID fan drive motor | \$7,165.44 |
| 65 | Remove ID fan seal air system | \$7,165.44 |
| 66 | Remove fan casing & rotor | \$14,330.88 |
| 67 | Fabric Filters | \$309,905.28 |
| 68 | Remove ductwork between air heater and FF | \$8,956.80 |
| 69 | Remove ductwork structural steel between AH and FF | \$5,374.08 |
| 70 | Remove FF penthouse hoists and trolleys | \$7,165.44 |
| 71 | Remove FF hopper heaters, HVAC, lighting and convenience outlets | \$17,913.60 |
| 72 | Remove FF ash handling piping | \$26,870.40 |

La Cygne 2 AQCS Dismantlement

| ID | Task Name | Cost |
|----|--|--------------------|
| 73 | Remove compress air blower, dryers, and receivers, piping & valves | \$17,913.60 |
| 74 | Remove FF penthouse roof panels supporting steel | \$17,913.60 |
| 75 | Remove FF compartment roof hatches | \$5,374.08 |
| 76 | Remove FF compartment pulse air piping | \$5,374.08 |
| 77 | Remove FF compartment pulse air and compressed air supply piping | \$10,748.16 |
| 78 | Remove FF outlet poppet damper operators | \$12,539.52 |
| 79 | Remove FF bags & cages | \$25,079.04 |
| 80 | Remove FF bag support sheets | \$25,079.04 |
| 81 | Remove remaining FF roof | \$7,165.44 |
| 82 | Remove FF outlet dampers | \$7,165.44 |
| 83 | Remove ductwork between air heater and FF | \$8,956.80 |
| 84 | Remove FF wall panels to hopper level | \$50,158.08 |
| 85 | Remove ductwork structural steel between AH and FF | \$5,374.08 |
| 86 | Remove FF stair tower(s) | \$17,913.60 |
| 87 | Remove FF inlet dampers | \$7,165.44 |
| 88 | Remove FF hoppers | \$12,539.52 |
| 89 | Remove FF support steel | \$7,165.44 |
| 90 | SCR and Ammonia Supply | \$73,445.76 |
| 91 | Vacuum SCR catalyst | \$3,582.72 |
| 92 | Remove SCR catalyst | \$16,122.24 |
| 93 | Remove ammonia injection grid | \$3,582.72 |
| 94 | Remove NH3 piping between storage & injection | \$3,582.72 |
| 95 | Remove air horn air receiver & supply piping | \$3,582.72 |
| 96 | Remove SCR guillotine dampers | \$7,165.44 |
| 97 | Remove SCR muliti-louver dampers | \$3,582.72 |
| 98 | Remove SCR box, internal supports, & assoc'd ductwork | \$26,870.40 |
| 99 | Remove NH3 piping between storage & vaporizers | \$5,374.08 |

La Cygne 2 AQCS Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | | |
|----|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | |
| 1 | La Cygne Unit 2 AQCS Dismantlement | 350.5 days | | | | | | | | | | |
| 2 | Common Removal Overheads | 345 days | | | | | | | | | | |
| 3 | Added Overhead Staff for Common Removals | 345 days | | | | | | | | | | |
| 4 | Scrap Crew | 345 days | | | | | | | | | | |
| 5 | Crew(s) to Handle Scrap Material | 345 days | | | | | | | | | | |
| 6 | Demolition Contractor Consummables | 345 days | | | | | | | | | | |
| 7 | Consummables | 345 days | | | | | | | | | | |
| 8 | Demolition Contractor Equipment Rental Costs | 345 days | | | | | | | | | | |
| 9 | Equipment Rental | 345 days | | | | | | | | | | |
| 10 | Dismantlement | 350.5 days | | | | | | | | | | |
| 11 | Initial Structural | 212.5 days | | | | | | | | | | |
| 12 | Remove SCR box & ductwork lagging & insulation | 10 days | | | | | | | | | | |
| 13 | Remove SCR expansion joints | 6 days | | | | | | | | | | |
| 14 | Remove ductwork lagging & insulation | 5 days | | | | | | | | | | |
| 15 | Remove ductwork expansion joints | 10 days | | | | | | | | | | |
| 16 | Remove ductwork access platforms & ladders | 10 days | | | | | | | | | | |
| 17 | Remove FF lagging, insulation, wall panel, & roof panels | 20 days | | | | | | | | | | |
| 18 | Remove ID fan lagging & insulation | 4 days | | | | | | | | | | |
| 19 | Removal all HVAC equipment located on FGD Bldg roof | 3 days | | | | | | | | | | |
| 20 | Remove FGD Bldg lagging, insulation, wall panel, & roof | 10 days | | | | | | | | | | |
| 21 | General Electric | 73 days | | | | | | | | | | |
| 22 | Remove Unit 2 Air Quality Control Equipment Transformer | 3 days | | | | | | | | | | |
| 23 | Remove breakers serving all FF equipment | 0.5 days | | | | | | | | | | |
| 24 | Remove breakers serving all FGD equipment | 1 day | | | | | | | | | | |
| 25 | Remove breakers serving all ID fan equipment | 0.5 days | | | | | | | | | | |
| 26 | Remove breakers serving all SCR equipment | 0.5 days | | | | | | | | | | |
| 27 | Remove breakers serving all comp air equipment | 0.5 days | | | | | | | | | | |
| 28 | Remove all ductwork primary instrumentation, controls & assoc'd cables, and conduit | 5 days | | | | | | | | | | |
| 29 | Remove all FGD primary instrumentation, controls & assoc'd cables, and conduit | 15 days | | | | | | | | | | |
| 30 | Remove all FF primary instrumentation, controls & assoc'd cables, and conduit | 10 days | | | | | | | | | | |
| 31 | Remove SCR primary instrumentation, controls, & assoc'd cable & conduit | 5 days | | | | | | | | | | |



La Cygne 2 AQCS Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | | | |
|----|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | | |
| 32 | Remove NH3 supply primary instrumentation, controls, & assoc'd cable & cond | 5 days | | | | | | | | | | | |
| 33 | Remove wiring and conduit serving FGD equipment, HVAC, lighting and convenience outlets | 20 days | | | | | | | | | | | |
| 34 | Remove wiring and conduit serving FF equipment, HVAC, lighting and convenience outlets | 10 days | | | | | | | | | | | |
| 35 | Remove wiring and conduit serving the ID fans and assoc'd equipment | 12 days | | | | | | | | | | | |
| 36 | Remove wiring & conduit serving SCR vaporization & injection equipment | 3 days | | | | | | | | | | | |
| 37 | Remove wiring & conduit serving compressed air equipment | 3 days | | | | | | | | | | | |
| 38 | Remove electrical control cabinets & switchgear | 10 days | | | | | | | | | | | |
| 39 | FGD System | 108.5 days | | | | | | | | | | | |
| 40 | Remove ductwork between FGD module and chimney | 5 days | | | | | | | | | | | |
| 41 | Remove support steel and access platforms between FGD and chimney | 3 days | | | | | | | | | | | |
| 42 | Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg | 20 days | | | | | | | | | | | |
| 43 | Remove oxi air blowers | 0.5 days | | | | | | | | | | | |
| 44 | Remove all FGD piping & valves other than recirc piping | 15 days | | | | | | | | | | | |
| 45 | Remove ox air lines | 3 days | | | | | | | | | | | |
| 46 | Remove FGD MEs panels | 6 days | | | | | | | | | | | |
| 47 | Remove FGD outlet duct and top cone | 3 days | | | | | | | | | | | |
| 48 | Remove FGD internal wash ME piping and ME supports | 3 days | | | | | | | | | | | |
| 49 | Remove FGD internal spray header piping | 5 days | | | | | | | | | | | |
| 50 | Remove FGD support steel, access provisions, stair tower, and recirc piping fr | 20 days | | | | | | | | | | | |
| 51 | Remove FGD module walls | 20 days | | | | | | | | | | | |
| 52 | Remove FGD inlet duct | 3 days | | | | | | | | | | | |
| 53 | Remove FGD reaction tank walls and floor | 10 days | | | | | | | | | | | |
| 54 | Remove FGD Bldg trench floor grating | 2 days | | | | | | | | | | | |
| 55 | Remove Unit 2 Sorbent Injection System Silo | 4 days | | | | | | | | | | | |
| 56 | Remove Unit 2 Sorbent Injection Equipment and Injection Blower Building | 5 days | | | | | | | | | | | |
| 57 | Remove Unit 2 Mercury Reduction System Silo | 5 days | | | | | | | | | | | |
| 58 | ID Fans | 75 days | | | | | | | | | | | |
| 59 | Remove ductwork between ID fan outlets and FGD module | 7 days | | | | | | | | | | | |
| 60 | Remove support steel and access platforms between ID fan outlets and FGD m | 3 days | | | | | | | | | | | |
| 61 | Remove ductwork between FF outlet and ID fan inlets | 7 days | | | | | | | | | | | |
| 62 | Remove support steel between FF outlet and ID fan inlets | 3 days | | | | | | | | | | | |

La Cygne 2 AQCS Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | | | | |
|----|--|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | | | |
| 63 | Removed ID fan isolation dampers | 8 days | | | | | | | | | | | | |
| 64 | Removed ID fan drive motor | 4 days | | | | | | | | | | | | |
| 65 | Remove ID fan seal air system | 4 days | | | | | | | | | | | | |
| 66 | Remove fan casing & rotor | 8 days | | | | | | | | | | | | |
| 67 | Fabric Filters | 350.5 days | | | | | | | | | | | | |
| 68 | Remove ductwork between air heater and FF | 5 days | | | | | | | | | | | | |
| 69 | Remove ductwork structural steel between AH and FF | 3 days | | | | | | | | | | | | |
| 70 | Remove FF penthouse hoists and trolleys | 4 days | | | | | | | | | | | | |
| 71 | Remove FF hopper heaters, HVAC, lighting and convenience outlets | 10 days | | | | | | | | | | | | |
| 72 | Remove FF ash handling piping | 15 days | | | | | | | | | | | | |
| 73 | Remove compress air blower, dryers, and receivers, piping & valves | 10 days | | | | | | | | | | | | |
| 74 | Remove FF penthouse roof panels supporting steel | 10 days | | | | | | | | | | | | |
| 75 | Remove FF compartment roof hatches | 3 days | | | | | | | | | | | | |
| 76 | Remove FF compartment pulse air piping | 3 days | | | | | | | | | | | | |
| 77 | Remove FF compartment pulse air and compressed air supply piping | 6 days | | | | | | | | | | | | |
| 78 | Remove FF outlet poppet damper operators | 7 days | | | | | | | | | | | | |
| 79 | Remove FF bags & cages | 14 days | | | | | | | | | | | | |
| 80 | Remove FF bag support sheets | 14 days | | | | | | | | | | | | |
| 81 | Remove remaining FF roof | 4 days | | | | | | | | | | | | |
| 82 | Remove FF outlet dampers | 4 days | | | | | | | | | | | | |
| 83 | Remove ductwork between air heater and FF | 5 days | | | | | | | | | | | | |
| 84 | Remove FF wall panels to hopper level | 28 days | | | | | | | | | | | | |
| 85 | Remove ductwork structural steel between AH and FF | 3 days | | | | | | | | | | | | |
| 86 | Remove FF stair tower(s) | 10 days | | | | | | | | | | | | |
| 87 | Remove FF inlet dampers | 4 days | | | | | | | | | | | | |
| 88 | Remove FF hoppers | 7 days | | | | | | | | | | | | |
| 89 | Remove FF support steel | 4 days | | | | | | | | | | | | |
| 90 | SCR and Ammonia Supply | 38 days | | | | | | | | | | | | |
| 91 | Vacuum SCR catalyst | 2 days | | | | | | | | | | | | |
| 92 | Remove SCR catalyst | 9 days | | | | | | | | | | | | |
| 93 | Remove ammonia injection grid | 2 days | | | | | | | | | | | | |
| 94 | Remove NH3 piping between storage & injection | 2 days | | | | | | | | | | | | |

La Cygne 2 AQCS Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | |
|----|---|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 |
| 95 | Remove air horn air receiver & supply piping | 2 days | | | ↓ | | | | | | |
| 96 | Remove SCR guillotine dampers | 4 days | | | ↓ | | | | | | |
| 97 | Remove SCR muliti-louver dampers | 2 days | | | ↓ | | | | | | |
| 98 | Remove SCR box, internal supports, & assoc'd ductwork | 15 days | | | ↓ | | | | | | |
| 99 | Remove NH3 piping between storage & vaporizors | 3 days | | | ↓ | | | | | | |

COMMON

La Cygne Common Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$52,449 |
| Retirement Activities | \$373,748 |
| Post-Retirement Activities | \$26,244 |

Owner Direct Total \$452,441

Owner Internal Costs 5.00% \$22,622

Owner Contingency: 25.00% \$118,766

La Cygne Common Retirement Opinion of Probable Cost: \$593,828.55

Activities Required by Permit or Regulation

| | |
|------------------------------------|--------------|
| La Cygne Wastewater Lagoon Removal | \$226,058 |
| La Cygne Landfill Retirement | \$45,525,804 |

Activities Required by Permit or Regulation: \$45,751,862

| La Cygne Common Retirement | | |
|----------------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | La Cygne Common Retirement | \$452,422.39 |
| 2 | Pre-Retirement Activities | \$52,448.80 |
| 3 | Permitting Review | \$26,224.40 |
| 4 | Develop Detailed Retirement Plan | \$26,224.40 |
| 5 | Overheads | \$169,170.95 |
| 6 | Retirement Overheads | \$147,969.03 |
| 7 | Added Overhead Staff for Common Retirement | \$147,969.03 |
| 8 | Common Removal Equipment Rental | \$21,201.92 |
| 9 | Common Removal Equipment Rental | \$21,201.92 |
| 10 | Retirement Activities | \$204,578.24 |
| 11 | Administration Building | \$9,342.40 |
| 12 | Secure Administration Building | \$9,342.40 |
| 13 | Fuel Yard Office Building | \$5,605.44 |
| 14 | Secure Fuel Yard Office Building | \$5,605.44 |
| 15 | Training Building | \$5,605.44 |
| 16 | Secure Training Building | \$5,605.44 |
| 17 | Warehouse(s) | \$7,473.92 |
| 18 | Secure Unit 1 Warehouse | \$3,736.96 |
| 19 | Secure Unit 2 Warehouse | \$3,736.96 |
| 20 | Welding Shop | \$11,575.60 |
| 21 | Secure Welding Shop | \$11,575.60 |
| 22 | Maintenance Shop | \$5,605.44 |
| 23 | Secure Maintenance Shop | \$5,605.44 |
| 24 | Insulators Shop | \$5,605.44 |
| 25 | Secure Insulators Shop | \$5,605.44 |
| 26 | Auxiliary Boilers and Building | \$4,213.60 |
| 27 | Remove Aux. Boiler Chemicals | \$842.72 |
| 28 | Drain Auxiliary Boilers | \$2,528.16 |
| 29 | Open and Vent Auxiliary Boilers | \$842.72 |
| 30 | Fuel Yard | \$109,605.28 |
| 31 | Empty and Clean Silo 2a | \$2,941.36 |
| 32 | Empty and Clean Silo E | \$2,941.36 |
| 33 | Empty and Clean Silo F | \$2,941.36 |
| 34 | Empty Transfer Hoppers and Clean Transfer Tower 201 | \$3,784.08 |
| 35 | Clean Truck Reclaim | \$3,784.08 |
| 36 | Car Dumper | \$8,829.52 |
| 37 | Empty Car Dumper Hoppers | \$1,261.36 |
| 38 | Clean Car Dumper | \$3,784.08 |
| 39 | Secure Dumper Building | \$3,784.08 |
| 40 | Stacker/Reclaimer | \$19,173.20 |
| 41 | Clean and Secure the Stacker/Reclaimer | \$6,306.80 |
| 42 | Unit 1 Reclaim | \$5,045.44 |
| 43 | Clean Unit 1 Reclaim | \$2,522.72 |
| 44 | Secure the Unit 1 Reclaim Building | \$2,522.72 |

| La Cygne Common Retirement | | |
|----------------------------|--|--------------------|
| ID | Task Name | Cost |
| 45 | Unit 2 Reclaim | \$5,045.44 |
| 46 | Clean Unit 2 Reclaim | \$2,522.72 |
| 47 | Secure the Unit 2 Reclaim Building | \$2,522.72 |
| 48 | Clean and Secure Transfer Tower 201 | \$6,306.80 |
| 49 | Clean and Secure Transfer Tower 3 | \$6,306.80 |
| 50 | Clean and Secure Primary Crusher Building | \$6,306.80 |
| 51 | Clean and Secure Old Truck Unloader | \$3,784.08 |
| 52 | Clean Conveyors - 300, 302, 301, 203, 202, 201, 3, 204 | \$20,181.76 |
| 53 | Remove Bags and Clean Dust Collectors | \$5,926.40 |
| 54 | Clean and Secure Miscellaneous Fuel Yard Equipment | \$6,306.80 |
| 55 | Reagent Prep and Gypsum Handling | \$29,365.20 |
| 56 | Clean and Secure Limestone Unloading Facility | \$3,784.08 |
| 57 | Clean and Secure Limestone Storage Facility | \$3,784.08 |
| 58 | Clean Limestone Conveyor | \$3,859.92 |
| 59 | Clean and Secure Limestone Prep Building | \$6,433.20 |
| 60 | Clean Gypsum Stackout Conveyor | \$2,573.28 |
| 61 | Clean and Secure PCM-1 | \$2,573.28 |
| 62 | Clean and Secure PCM-2 | \$2,573.28 |
| 63 | Clean and Secure the Vacuum Pump and Air Compressor Building | \$3,784.08 |
| 64 | Lake Intake Structure and Intake Chemical Feed System | \$842.72 |
| 65 | Remove Chemicals | \$842.72 |
| 66 | Underground Circulating Water Piping | \$3,849.60 |
| 67 | Drain the Underground Circulating Water Piping | \$3,849.60 |
| 68 | Sewage Treatment | \$4,202.72 |
| 69 | Clean the Sewage Treatment Tanks and Transfer Points | \$4,202.72 |
| 70 | Fuel Oil Storage and Unloading | \$1,685.44 |
| 71 | Remove Fuel from the Fuel Oil Storage Tank(s) and Vent | \$842.72 |
| 72 | Drain Fuel Oil Pipe and Vent | \$842.72 |
| 73 | Post Retirement Closure Activities | \$26,224.40 |
| 74 | Post Retirement Closure Activities | \$26,224.40 |

La Cygne Common Retirement

| ID | Task Name | Duration |
|----|---|-----------------|
| 1 | La Cygne Common Retirement | 161 days |
| 2 | Pre-Retirement Activities | 40 days |
| 3 | Permitting Review | 20 days |
| 4 | Develop Detailed Retirement Plan | 20 days |
| 5 | Overheads | 101 days |
| 6 | Retirement Overheads | 101 days |
| 7 | Added Overhead Staff for Common Retirement | 101 days |
| 8 | Common Removal Equipment Rental | 101 days |
| 9 | Common Removal Equipment Rental | 101 days |
| 10 | Retirement Activities | 101 days |
| 11 | Administration Building | 5 days |
| 12 | Secure Administration Building | 5 days |
| 13 | Fuel Yard Office Building | 3 days |
| 14 | Secure Fuel Yard Office Building | 3 days |
| 15 | Training Building | 3 days |
| 16 | Secure Training Building | 3 days |
| 17 | Warehouse(s) | 4 days |
| 18 | Secure Unit 1 Warehouse | 2 days |
| 19 | Secure Unit 2 Warehouse | 2 days |
| 20 | Welding Shop | 5 days |
| 21 | Secure Welding Shop | 5 days |
| 22 | Maintenance Shop | 3 days |
| 23 | Secure Maintenance Shop | 3 days |
| 24 | Insulators Shop | 3 days |
| 25 | Secure Insulators Shop | 3 days |
| 26 | Auxiliary Boilers and Building | 5 days |
| 27 | Remove Aux. Boiler Chemicals | 1 day |
| 28 | Drain Auxiliary Boilers | 3 days |
| 29 | Open and Vent Auxiliary Boilers | 1 day |
| 30 | Fuel Yard | 78 days |
| 31 | Empty and Clean Silo 2a | 3 days |
| 32 | Empty and Clean Silo E | 3 days |
| 33 | Empty and Clean Silo F | 3 days |
| 34 | Empty Transfer Hoppers and Clean Transfer Tower 201 | 3 days |
| 35 | Clean Truck Reclaim | 3 days |
| 36 | Car Dumper | 7 days |
| 37 | Empty Car Dumper Hoppers | 1 day |
| 38 | Clean Car Dumper | 3 days |
| 39 | Secure Dumper Building | 3 days |
| 40 | Stacker/Reclaimer | 5 days |
| 41 | Clean and Secure the Stacker/Reclaimer | 5 days |
| 42 | Unit 1 Reclaim | 4 days |
| 43 | Clean Unit 1 Reclaim | 2 days |
| 44 | Secure the Unit 1 Reclaim Building | 2 days |

La Cygne Common Retirement

| ID | Task Name | Duration |
|----|--|----------------|
| 45 | Unit 2 Reclaim | 4 days |
| 46 | Clean Unit 2 Reclaim | 2 days |
| 47 | Secure the Unit 2 Reclaim Building | 2 days |
| 48 | Clean and Secure Transfer Tower 201 | 5 days |
| 49 | Clean and Secure Transfer Tower 3 | 5 days |
| 50 | Clean and Secure Primary Crusher Building | 5 days |
| 51 | Clean and Secure Old Truck Unloader | 3 days |
| 52 | Clean Conveyors - 300, 302, 301, 203, 202, 201, 3, 204 | 16 days |
| 53 | Remove Bags and Clean Dust Collectors | 4 days |
| 54 | Clean and Secure Miscellaneous Fuel Yard Equipment | 5 days |
| 55 | Reagent Prep and Gypsum Handling | 23 days |
| 56 | Clean and Secure Limestone Unloading Facility | 3 days |
| 57 | Clean and Secure Limestone Storage Facility | 3 days |
| 58 | Clean Limestone Conveyor | 3 days |
| 59 | Clean and Secure Limestone Prep Building | 5 days |
| 60 | Clean Gypsum Stackout Conveyor | 2 days |
| 61 | Clean and Secure PCM-1 | 2 days |
| 62 | Clean and Secure PCM-2 | 2 days |
| 63 | Clean and Secure the Vacuum Pump and Air Compressor Building | 3 days |
| 64 | Lake Intake Structure and Intake Chemical Feed System | 1 day |
| 65 | Remove Chemicals | 1 day |
| 66 | Underground Circulating Water Piping | 3 days |
| 67 | Drain the Underground Circulating Water Piping | 3 days |
| 68 | Sewage Treatment | 4 days |
| 69 | Clean the Sewage Treatment Tanks and Transfer Points | 4 days |
| 70 | Fuel Oil Storage and Unloading | 2 days |
| 71 | Remove Fuel from the Fuel Oil Storage Tank(s) and Vent | 1 day |
| 72 | Drain Fuel Oil Pipe and Vent | 1 day |
| 73 | Post Retirement Closure Activities | 20 days |
| 74 | Post Retirement Closure Activities | 20 days |

La Cygne 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 | \$105,784 |
| Equipment Rental | \$515,722 |
| Consummables | \$772,676 |
| Scrap Crew(s) | \$766,702 |
| Dismantlement | \$8,589,162 |

DGC Insurance 2.00% \$215,001

Contingency/Profit 15.00% \$1,644,757

Performance Bond 2.00% \$252,196

Contractor Costs Total: \$12,862,001

Total: \$12,862,001

Owner Internal Costs: 5.00% \$643,100

Owner Contingency: 25.00% \$3,376,275

La Cygne Common Dismantlement Opinion of Probable Cost: \$16,881,376

| La Cygne Common Dismantlement | | |
|-------------------------------|---|------------------------|
| ID | Task Name | Cost |
| 1 | La Cygne Common Dismantlement | \$11,960,763.18 |
| 2 | Overheads | \$2,160,886.40 |
| 3 | Common Removal Overheads | \$105,784.48 |
| 4 | Added Overhead Staff for Common Removals | \$105,784.48 |
| 5 | Common Removal Equipment Rental | \$515,722.88 |
| 6 | Common Removal Equipment Rental | \$515,722.88 |
| 7 | Demolition Contractor Consummables | \$772,676.96 |
| 8 | Consummables | \$772,676.96 |
| 9 | Scrap Crew | \$766,702.08 |
| 10 | Crew(s) to Handle Scrap Material | \$766,702.08 |
| 11 | Dismantlement Activities | \$8,589,162.89 |
| 12 | Administration Building | \$35,827.20 |
| 13 | Remove Administration Building | \$35,827.20 |
| 14 | Fuel Yard Office Building | \$17,913.60 |
| 15 | Remove Fuel Yard Office Building | \$17,913.60 |
| 16 | Training Building | \$17,913.60 |
| 17 | Remove Training Building | \$17,913.60 |
| 18 | Parking Lots and Plant Roads | \$82,402.56 |
| 19 | Plant Roads and Parking Areas | \$71,654.40 |
| 20 | Guard Shack | \$10,748.16 |
| 21 | Warehouse(s) | \$53,740.80 |
| 22 | Remove Unit 1 Warehouse | \$17,913.60 |
| 23 | Remove Unit 2 Warehouse | \$17,913.60 |
| 24 | Remove 20,000 S.F. Warehouse | \$17,913.60 |
| 25 | Welding Shop | \$28,661.76 |
| 26 | Remove Welding Shop | \$28,661.76 |
| 27 | Maintenance Shop | \$23,215.20 |
| 28 | Remove Maintenance Shop | \$23,215.20 |
| 29 | Insulators Shop | \$17,913.60 |
| 30 | Remove Insulators Shop | \$17,913.60 |
| 31 | Auxiliary Boilers and Building | \$89,568.00 |
| 32 | Remove Auxiliary Boilers | \$53,740.80 |
| 33 | Remove Building | \$17,913.60 |
| 34 | Remove Piping and Tressell | \$17,913.60 |
| 35 | Fuel Yard | \$766,702.08 |
| 36 | Remove Silo 2A | \$3,582.72 |
| 37 | Remove Silo E | \$3,582.72 |
| 38 | Remove Silo F | \$3,582.72 |
| 39 | Remove Transfer Tower 201 | \$35,827.20 |
| 40 | Remove Truck Reclaim | \$17,913.60 |
| 41 | Remove Car Dumper | \$89,568.00 |
| 42 | Remove Underground Equipment | \$17,913.60 |
| 43 | Remove Above Ground Equipment | \$35,827.20 |
| 44 | Remove Building | \$17,913.60 |

| La Cygne Common Dismantlement | | |
|-------------------------------|--|---------------------|
| ID | Task Name | Cost |
| 45 | Backfill Dumper Structure | \$17,913.60 |
| 46 | Remove Stacker/Reclaimer | \$35,827.20 |
| 47 | Remove Unit 1 Reclaim | \$64,488.96 |
| 48 | Remove Underground Equipment | \$17,913.60 |
| 49 | Remove Above Ground Equipment | \$17,913.60 |
| 50 | Remove Building | \$14,330.88 |
| 51 | Backfill Structure | \$14,330.88 |
| 52 | Remove Unit 2 Reclaim | \$64,488.96 |
| 53 | Remove Underground Equipment | \$17,913.60 |
| 54 | Remove Above Ground Equipment | \$17,913.60 |
| 55 | Remove Building | \$14,330.88 |
| 56 | Backfill Structure | \$14,330.88 |
| 57 | Remove Transfer Tower 201 | \$53,740.80 |
| 58 | Remove Transfer Tower 3 | \$53,740.80 |
| 59 | Remove Primary Crusher Building | \$71,654.40 |
| 60 | Remove Old Truck Unloader | \$71,654.40 |
| 61 | Remove Conveyors - 300, 302, 301, 203, 202, 201, 3, 204 | \$143,308.80 |
| 62 | Remove Dust Collectors | \$17,913.60 |
| 63 | Remove Miscellaneous Fuel Yard Equipment | \$35,827.20 |
| 64 | AQCS Common | \$400,668.24 |
| 65 | Remove Limestone Unloading Facility | \$35,827.20 |
| 66 | Remove Limestone Storage Facility | \$17,913.60 |
| 67 | Remove Limestone Conveyor | \$17,913.60 |
| 68 | Remove Limestone Prep Building | \$143,308.80 |
| 69 | Remove Gypsum Stackout Conveyor | \$17,913.60 |
| 70 | Remove PCM-1 | \$7,165.44 |
| 71 | Remove PCM-2 | \$7,165.44 |
| 72 | Remove the Vacuum Pump and Air Compressor Building | \$71,654.40 |
| 73 | Remove Gypsum Dewatering Building | \$9,963.28 |
| 74 | Remove Service Water Tanks | \$5,722.00 |
| 75 | Remove Emergency Limestone Conveyor Tunnel | \$3,601.36 |
| 76 | Remove Limestone Slurry Tanks | \$8,902.96 |
| 77 | Remove AQCS Electrical Enclosure | \$2,211.76 |
| 78 | Remove FlyAsh Equipment Building | \$9,963.28 |
| 79 | Remove Limestone and Gypsum Handling Conveyors | \$11,023.60 |
| 80 | Remove Reclaim Water Tanks | \$5,722.00 |
| 81 | Remove Remaining Absorber Equipment Building | \$6,782.32 |
| 82 | Remove Miscellaneous Equipment | \$17,913.60 |
| 83 | Lake Intake Structure and Intake Chemical Feed System | \$114,647.04 |
| 84 | Remove Chemical Feed System and Misc. Equipment | \$7,165.44 |
| 85 | Remove Concrete Intake Structure | \$71,654.40 |
| 86 | Complete Intake Grading and Drainage | \$35,827.20 |
| 87 | Underground Circulating Water Piping | \$53,740.80 |
| 88 | Excavate Underground Circulating Water Piping | \$17,913.60 |

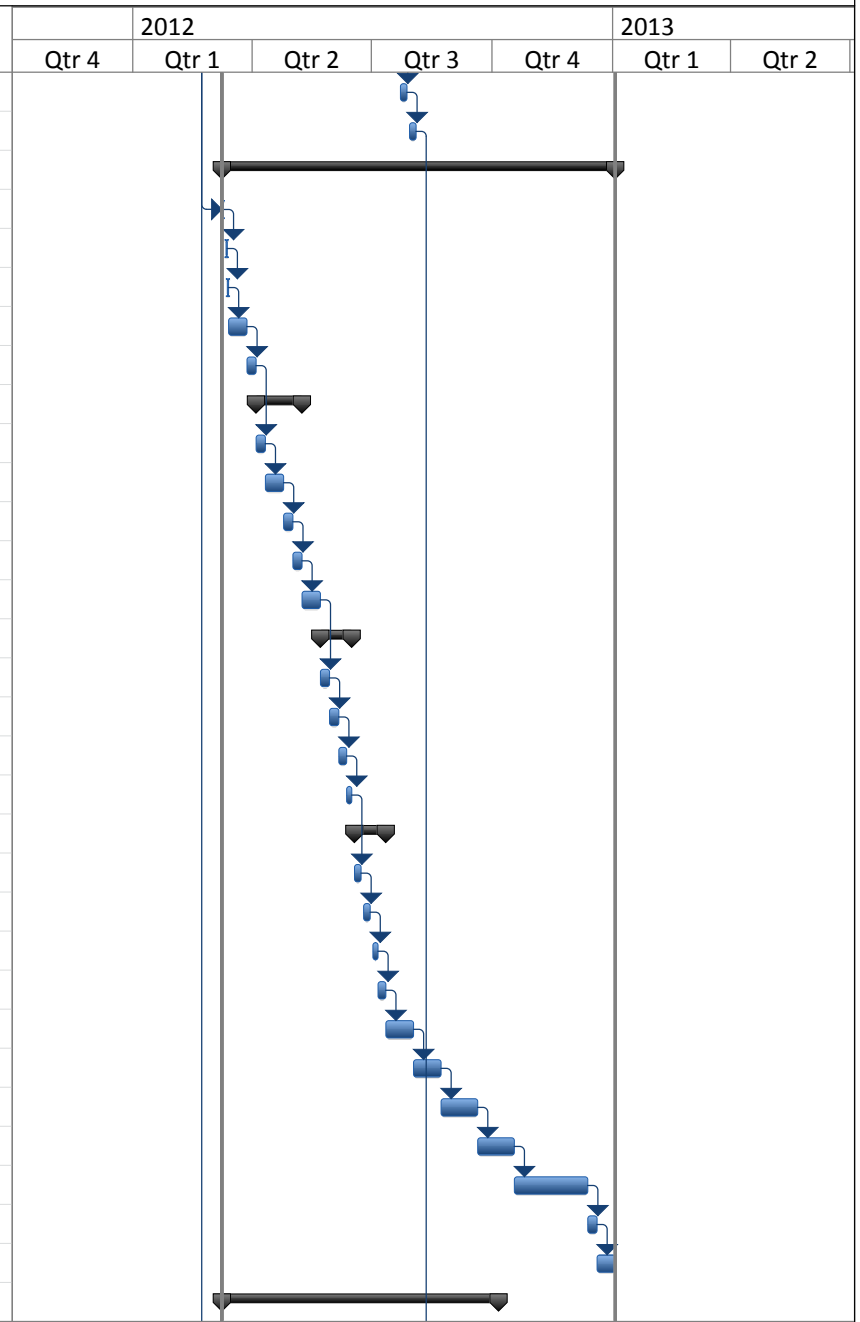
| La Cygne Common Dismantlement | | |
|-------------------------------|---|-----------------------|
| ID | Task Name | Cost |
| 89 | Collapse Underground Circulating Water Piping | \$10,748.16 |
| 90 | Backfill and Compact Over Circulating Water Piping | \$25,079.04 |
| 91 | Sewage Treatment | \$21,496.32 |
| 92 | Remove Sewage Treatment Pumps and Miscellaneous Equipment | \$7,165.44 |
| 93 | Remove Sewage Treatment Concrete Structures | \$14,330.88 |
| 94 | Yard Fire Water Systems | \$35,827.20 |
| 95 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | \$35,827.20 |
| 96 | Common Stack | \$6,828,924.89 |
| 97 | Remove Common Stack to Grade | \$6,828,924.89 |
| 98 | Final Site Grading and Drainage | \$1,210,713.89 |
| 99 | Final Site Grading and Drainage | \$1,210,713.89 |

La Cygne Common Dismantlement

| ID | Task Name | Duration | 2012 | | | | | 2013 | |
|----|---|-----------------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 |
| 1 | La Cygne Common Dismantlement | 214 days | | | | | | | |
| 2 | Overheads | 214 days | | | | | | | |
| 3 | Common Removal Overheads | 214 days | | | | | | | |
| 4 | Added Overhead Staff for Common Removals | 214 days | | | | | | | |
| 5 | Common Removal Equipment Rental | 214 days | | | | | | | |
| 6 | Common Removal Equipment Rental | 214 days | | | | | | | |
| 7 | Demolition Contractor Consummables | 214 days | | | | | | | |
| 8 | Consummables | 214 days | | | | | | | |
| 9 | Scrap Crew | 214 days | | | | | | | |
| 10 | Crew(s) to Handle Scrap Material | 214 days | | | | | | | |
| 11 | Dismantlement Activities | 214 days | | | | | | | |
| 12 | Administration Building | 10 days | | | | | | | |
| 13 | Remove Administration Building | 10 days | | | | | | | |
| 14 | Fuel Yard Office Building | 5 days | | | | | | | |
| 15 | Remove Fuel Yard Office Building | 5 days | | | | | | | |
| 16 | Training Building | 5 days | | | | | | | |
| 17 | Remove Training Building | 5 days | | | | | | | |
| 18 | Parking Lots and Plant Roads | 23 days | | | | | | | |
| 19 | Plant Roads and Parking Areas | 20 days | | | | | | | |
| 20 | Guard Shack | 3 days | | | | | | | |
| 21 | Warehouse(s) | 15 days | | | | | | | |
| 22 | Remove Unit 1 Warehouse | 5 days | | | | | | | |
| 23 | Remove Unit 2 Warehouse | 5 days | | | | | | | |
| 24 | Remove 20,000 S.F. Warehouse | 5 days | | | | | | | |
| 25 | Welding Shop | 8 days | | | | | | | |
| 26 | Remove Welding Shop | 8 days | | | | | | | |
| 27 | Maintenance Shop | 10 days | | | | | | | |
| 28 | Remove Maintenance Shop | 10 days | | | | | | | |
| 29 | Insulators Shop | 5 days | | | | | | | |
| 30 | Remove Insulators Shop | 5 days | | | | | | | |
| 31 | Auxiliary Boilers and Building | 25 days | | | | | | | |
| 32 | Remove Auxiliary Boilers | 15 days | | | | | | | |

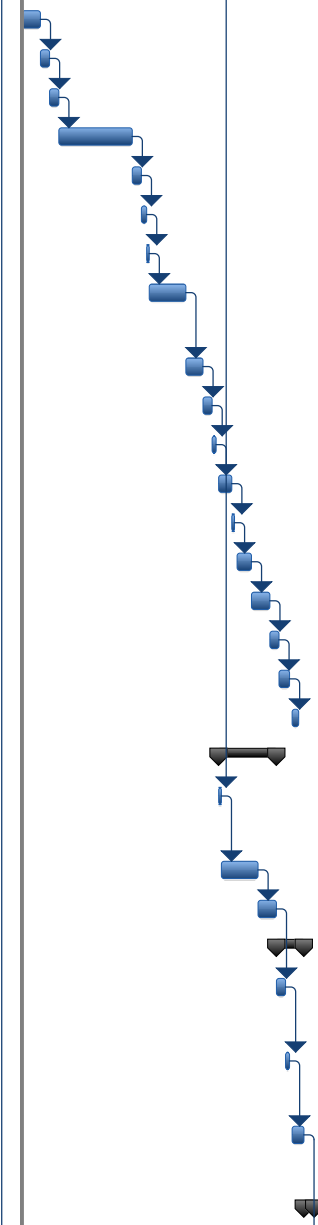
La Cygne Common Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | |
|----|---|-----------------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 |
| 33 | Remove Building | 5 days | | | | | | | |
| 34 | Remove Piping and Tressell | 5 days | | | | | | | |
| 35 | Fuel Yard | 214 days | | | | | | | |
| 36 | Remove Silo 2A | 1 day | | | | | | | |
| 37 | Remove Silo E | 1 day | | | | | | | |
| 38 | Remove Silo F | 1 day | | | | | | | |
| 39 | Remove Transfer Tower 201 | 10 days | | | | | | | |
| 40 | Remove Truck Reclaim | 5 days | | | | | | | |
| 41 | Remove Car Dumper | 25 days | | | | | | | |
| 42 | Remove Underground Equipment | 5 days | | | | | | | |
| 43 | Remove Above Ground Equipment | 10 days | | | | | | | |
| 44 | Remove Building | 5 days | | | | | | | |
| 45 | Backfill Dumper Structure | 5 days | | | | | | | |
| 46 | Remove Stacker/Reclaimer | 10 days | | | | | | | |
| 47 | Remove Unit 1 Reclaim | 18 days | | | | | | | |
| 48 | Remove Underground Equipment | 5 days | | | | | | | |
| 49 | Remove Above Ground Equipment | 5 days | | | | | | | |
| 50 | Remove Building | 4 days | | | | | | | |
| 51 | Backfill Structure | 4 days | | | | | | | |
| 52 | Remove Unit 2 Reclaim | 18 days | | | | | | | |
| 53 | Remove Underground Equipment | 5 days | | | | | | | |
| 54 | Remove Above Ground Equipment | 5 days | | | | | | | |
| 55 | Remove Building | 4 days | | | | | | | |
| 56 | Backfill Structure | 4 days | | | | | | | |
| 57 | Remove Transfer Tower 201 | 15 days | | | | | | | |
| 58 | Remove Transfer Tower 3 | 15 days | | | | | | | |
| 59 | Remove Primary Crusher Building | 20 days | | | | | | | |
| 60 | Remove Old Truck Unloader | 20 days | | | | | | | |
| 61 | Remove Conveyors - 300, 302, 301, 203, 202, 201, 3, 204 | 40 days | | | | | | | |
| 62 | Remove Dust Collectors | 5 days | | | | | | | |
| 63 | Remove Miscellaneous Fuel Yard Equipment | 10 days | | | | | | | |
| 64 | AQCS Common | 151 days | | | | | | | |



La Cygne Common Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | |
|----|--|----------------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 |
| 65 | Remove Limestone Unloading Facility | 10 days | | | | | | | |
| 66 | Remove Limestone Storage Facility | 5 days | | | | | | | |
| 67 | Remove Limestone Conveyor | 5 days | | | | | | | |
| 68 | Remove Limestone Prep Building | 40 days | | | | | | | |
| 69 | Remove Gypsum Stackout Conveyor | 5 days | | | | | | | |
| 70 | Remove PCM-1 | 2 days | | | | | | | |
| 71 | Remove PCM-2 | 2 days | | | | | | | |
| 72 | Remove the Vacuum Pump and Air Compressor Building | 20 days | | | | | | | |
| 73 | Remove Gypsum Dewatering Building | 9 days | | | | | | | |
| 74 | Remove Service Water Tanks | 5 days | | | | | | | |
| 75 | Remove Emergency Limestone Conveyor Tunnel | 3 days | | | | | | | |
| 76 | Remove Limestone Slurry Tanks | 8 days | | | | | | | |
| 77 | Remove AQCS Electrical Enclosure | 2 days | | | | | | | |
| 78 | Remove FlyAsh Equipment Building | 9 days | | | | | | | |
| 79 | Remove Limestone and Gypsum Handling Conveyors | 10 days | | | | | | | |
| 80 | Remove Reclaim Water Tanks | 5 days | | | | | | | |
| 81 | Remove Remaining Absorber Equipment Building | 6 days | | | | | | | |
| 82 | Remove Miscellaneous Equipment | 5 days | | | | | | | |
| 83 | Lake Intake Structure and Intake Chemical Feed System | 32 days | | | | | | | |
| 84 | Remove Chemical Feed System and Misc. Equipment | 2 days | | | | | | | |
| 85 | Remove Concrete Intake Structure | 20 days | | | | | | | |
| 86 | Complete Intake Grading and Drainage | 10 days | | | | | | | |
| 87 | Underground Circulating Water Piping | 15 days | | | | | | | |
| 88 | Excavate Underground Circulating Water Piping | 5 days | | | | | | | |
| 89 | Collapse Underground Circulating Water Piping | 3 days | | | | | | | |
| 90 | Backfill and Compact Over Circulating Water Piping | 7 days | | | | | | | |
| 91 | Sewage Treatment | 6 days | | | | | | | |



La Cygne Common Dismantlement

| ID | Task Name | Duration | 2012 | | | | | 2013 | |
|----|---|----------------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 |
| 92 | Remove Sewage Treatment Pumps and Miscellaneous Equipment | 2 days | | | | | | | |
| 93 | Remove Sewage Treatment Concrete Structures | 4 days | | | | | | | |
| 94 | Yard Fire Water Systems | 10 days | | | | | | | |
| 95 | Remove Hydrants and Fire Water System Piping Down to 3' Below Grade | 10 days | | | | | | | |
| 96 | Common Stack | 1 day | | | | | | | |
| 97 | Remove Common Stack to Grade | 1 day | | | | | | | |
| 98 | Final Site Grading and Drainage | 1 day | | | | | | | |
| 99 | Final Site Grading and Drainage | 1 day | | | | | | | |

IATAN

IATAN STATION

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

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

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

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

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

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

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

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

IATAN UNIT 1

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

IATAN UNIT 2

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

COMMON

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

UNIT 1

Iatan 1 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$100,822 |
| Retirement Activities | \$661,769 |
| Post-Retirement Activities | \$26,564 |

Owner Direct Total \$789,155

Owner Internal Costs 5.00% \$39,458

Owner Contingency: 25.00% \$207,153

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

Activities Required by Permit or Regulation

Iatan 1 Intake Removal \$595,211

Activities Required by Permit or Regulation: \$595,211

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

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

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

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

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

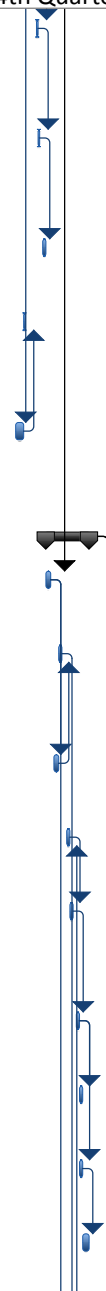
| Iatan 1 Retirement | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter |
|--------------------|---|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1 | Iatan 1 Retirement | 292 days | | | | | | |
| 2 | Pre-Engineering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

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

| Iatan 1 Retirement | | | | 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 | Stack and Ductwork | 12 days | | | | | | | |
| 53 | Open ductwork doors. | 1 day | | | | | | | |
| 54 | Perform extensive cleaning of the ductwork. | 10 days | | | | | | | |
| 55 | Place cap over stack opening to keep moisture out. | 1 day | | | | | | | |
| 56 | Condensate and Feedwater Piping | 2 days | | | | | | | |
| 57 | Drain water from the system. | 1 day | | | | | | | |
| 58 | Leave open vents and drains. | 1 day | | | | | | | |
| 59 | Feedwater heaters | 3 days | | | | | | | |
| 60 | Drain feedwater heaters | 1 day | | | | | | | |
| 61 | Leave open vents and drains. | 2 days | | | | | | | |
| 62 | Deaerator and Deaerator Storage Tank | 2 days | | | | | | | |
| 63 | Drain Deaerator and Storage | 1 day | | | | | | | |
| 64 | Leave open vents and drains. | 1 day | | | | | | | |
| 65 | Baghouse | 16 days | | | | | | | |
| 66 | Multiple cleaning cycles for filter bags. | 3 days | | | | | | | |
| 67 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | 1 day | | | | | | | |
| 68 | Remove all filter bags and cages. | 1 day | | | | | | | |
| 69 | Clear hoppers of all ash | 4 days | | | | | | | |
| 70 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | 1 day | | | | | | | |
| 71 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | 1 day | | | | | | | |
| 72 | Install bird screens across hopper ash outlet and ash line flanges. | 1 day | | | | | | | |

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 | Wet FGD system | 19 days | | | | | | |
| 79 | Multiple mist eliminator wash cycles. Remove ME's from absorber. | 3 days | | | | | | |
| 80 | Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | 2 days | | | | | | |
| 81 | Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc. | 3 days | | | | | | |
| 82 | Leave all tank drain valves open or remove. Install bird screens across openings. | 2 days | | | | | | |
| 83 | Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | 2 days | | | | | | |
| 84 | Mechanically secure all flue gas isolation dampers in open position or remove damper blades. | 2 days | | | | | | |
| 85 | Remove solids from all inlet and outlet ductwork as necessary | 2 days | | | | | | |
| 86 | Open all vent station air and control air lines. Leave in open position or remove vent valves | 2 days | | | | | | |
| 87 | Padlock or tack weld all access doors to modules and ductwork shut. | 2 days | | | | | | |

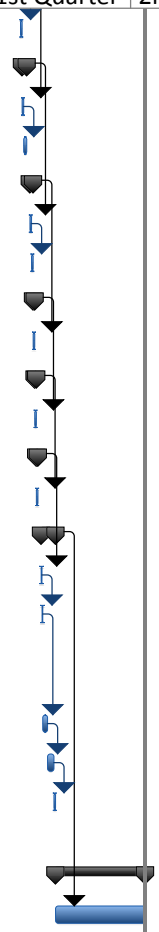


Iatan 1 Retirement

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

| Iatan 1 Retirement | | | | | | | | | |
|--------------------|--|---------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| ID | Task Name | Duration | 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 | Turbine(s) and Condenser | 6 days | | | | | | | |
| 114 | Drain hotwell and leave doors open. | 1 day | | | | | | | |
| 115 | Open main turbine doors. | 1 day | | | | | | | |
| 116 | Open bfp turbine doors. | 1 day | | | | | | | |
| 117 | Remove lube oil. | 3 days | | | | | | | |
| 118 | Generator | 7 days | | | | | | | |
| 119 | Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position. | 0.5 days | | | | | | | |
| 120 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | | | |
| 121 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | | | |
| 122 | De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter. | 0.5 days | | | | | | | |
| 123 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | | | |
| 124 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | | | |
| 125 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | | | |
| 126 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | | | |
| 127 | Drain. | 2 days | | | | | | | |
| 128 | Open water box doors. | 1 day | | | | | | | |

| Iatan 1 Retirement | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter |
|--------------------|---|----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|
| 129 | Drain any circulating water chemical feed tanks. | 1 day | | | | | | | |
| 130 | Compressed Air System | 3 days | | | | | | | |
| 131 | Open vents and drains. | 1 day | | | | | | | |
| 132 | Remove desiccant from desiccant dryers. | 2 days | | | | | | | |
| 133 | Auxiliary Steam System | 2 days | | | | | | | |
| 134 | Drain water from system. | 1 day | | | | | | | |
| 135 | Remove aux boiler chemicals. | 1 day | | | | | | | |
| 136 | Auxiliary Cooling Water System | 1 day | | | | | | | |
| 137 | Drain water from system. | 1 day | | | | | | | |
| 138 | Condenser Air Extraction and Waterbox Priming System | 1 day | | | | | | | |
| 139 | Drain water from system. | 1 day | | | | | | | |
| 140 | Building Heating System | 1 day | | | | | | | |
| 141 | Drain water from system. | 1 day | | | | | | | |
| 142 | Battery System | 7 days | | | | | | | |
| 143 | De-energize all battery chargers from the source. | 0.5 days | | | | | | | |
| 144 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | | | |
| 145 | Remove and dispose of battery electrolyte. | 3 days | | | | | | | |
| 146 | Remove and dispose of battery cells. | 2 days | | | | | | | |
| 147 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | | | |
| 148 | Post Retirement Activities | 40 days | | | | | | | |
| 149 | Post Retirement Activities | 40 days | | | | | | | |



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 | |

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

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

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

| Iatan 1 Dismantlement | | |
|-----------------------|---|-----------------------|
| ID | Task Name | Cost |
| 88 | Exciter Heat Exchanger | \$3,582.72 |
| 89 | EHC Coolers | \$3,582.72 |
| 90 | Chemical Feed Systems | \$19,303.20 |
| 91 | Tanks | \$8,555.04 |
| 92 | Pumps | \$5,374.08 |
| 93 | Piping | \$5,374.08 |
| 94 | Sampling Systems | \$6,434.40 |
| 95 | Field Mounted Heat Exchangers | \$3,582.72 |
| 96 | Piping | \$2,851.68 |
| 97 | Building Heating Systems | \$13,307.84 |
| 98 | Steam Unit Heaters | \$9,505.60 |
| 99 | Steam Piping | \$3,802.24 |
| 100 | Compressed Air System | \$26,870.40 |
| 101 | Air Compressors | \$7,165.44 |
| 102 | Air Drying Equipment | \$5,374.08 |
| 103 | Air Reciever Tanks | \$5,374.08 |
| 104 | Compressed Air Piping | \$8,956.80 |
| 105 | Miscellaneous Equipment | \$21,496.32 |
| 106 | Miscellaneous Equipment (including Fire Protection) | \$21,496.32 |
| 107 | Phase 2 Demolition | \$2,929,157.36 |
| 108 | Precipitator | \$107,481.60 |
| 109 | Remove Precipitator | \$107,481.60 |
| 110 | Boiler Equipment | \$732,490.24 |
| 111 | Fans | \$63,246.40 |
| 112 | Pulverizers | \$71,654.40 |
| 113 | Bottom Ash | \$16,451.52 |
| 114 | Air Heater | \$200,632.32 |
| 115 | Steam Drum | \$89,568.00 |
| 116 | Coal Bunkers | \$71,654.40 |
| 117 | Coal Feeders | \$46,575.36 |
| 118 | Soot Blowers | \$50,895.36 |
| 119 | Ductwork | \$100,316.16 |
| 120 | Miscellaneous Other | \$21,496.32 |
| 121 | Boiler Removal | \$401,264.64 |
| 122 | Furnace | \$229,294.08 |
| 123 | Back Pass | \$171,970.56 |
| 124 | Boiler Steel Framing | \$723,709.44 |
| 125 | Hanger Girders at Top | \$107,481.60 |
| 126 | All Other Framing | \$336,775.68 |
| 127 | Bracing and Girts | \$164,805.12 |
| 128 | Columns | \$114,647.04 |
| 129 | Boiler Foundations | \$128,977.92 |
| 130 | Equipment Foundation Demolition to Grade | \$128,977.92 |
| 131 | Remove Turbine | \$835,233.52 |

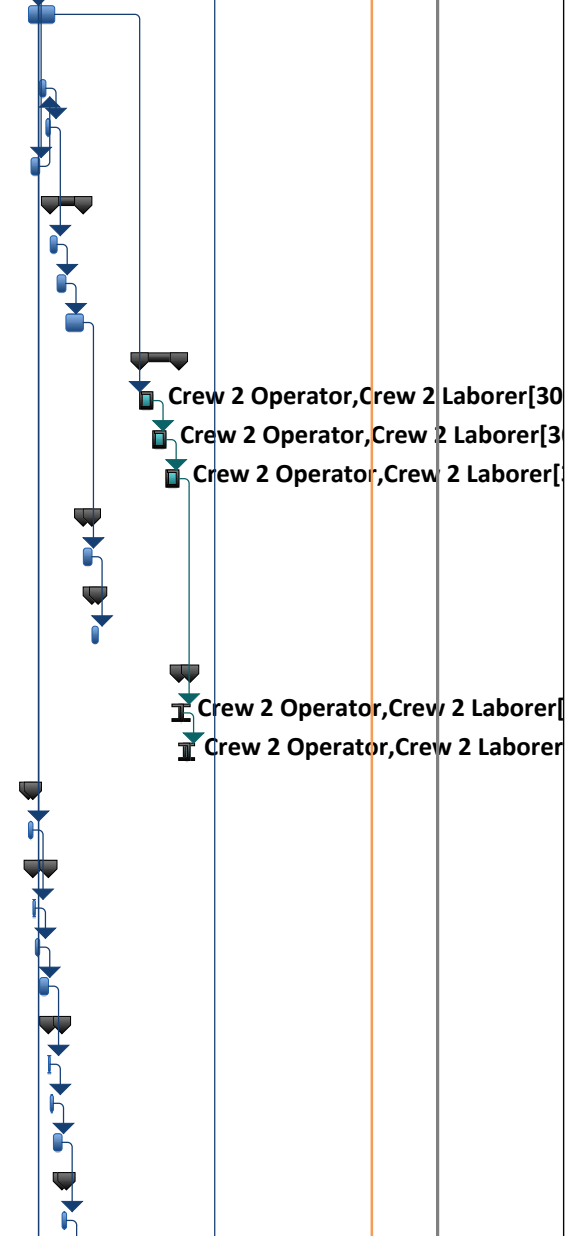
| Iatan 1 Dismantlement | | |
|-----------------------|--|---------------------|
| ID | Task Name | Cost |
| 132 | Remove HP Turbine | \$26,321.60 |
| 133 | Remove IP Turbine | \$26,321.60 |
| 134 | Remove LP Turbine | \$26,321.60 |
| 135 | Remove Generator | \$52,643.20 |
| 136 | Remove Condenser Neck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

Iatan 1 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|----|--|------------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 1 | Iatan Unit 1 Dismantlement | | | | | | | | |
| 2 | Pre-Demolition Activities | 265 days | | | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | | | | |
| 5 | Hire Demolition General Contractor | 3 mons | | | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | | | |
| 7 | Demolition Contractor Mobilizes on Site | 5 days | | | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 430 days | | | | | | | |
| 9 | KCP&L Project Manager | 430 days | | | | | | | |
| 10 | KCP&L Administrative Support | 430 days | | | | | | | |
| 11 | KCP&L Engineer | 430 days | | | | | | | |
| 12 | Owners Engineer Project Manager | 430 days | | | | | | | |
| 13 | Owners Engineer - Engineer | 430 days | | | | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 430 days | | | | | | | |
| 15 | Demolition Contractor Project Manager | 430 days | | | | | | | |
| 16 | Demolition Contractor Safety Manager | 430 days | | | | | | | |
| 17 | Demolition Contractor Superintendent | 430 days | | | | | | | |
| 18 | Demolition Contractor Equipment Rental Costs | 430 days | | | | | | | |
| 19 | Equipment Rental | 430 days | | | | | | | |
| 20 | Demolition Contractor Consumables | 430 days | | | | | | | |
| 21 | Consumables | 430 days | | | | | | | |
| 22 | Scrap Crew | 430 days | | | | | | | |
| 23 | Crew to Handle Scrap Material(s) | 430 days | | | | | | | |
| 24 | Dismantlement | 430 days? | | | | | | | |
| 25 | Phase 1 Demolition | 191 days? | | | | | | | |
| 26 | Phase 1 Electrical Demolition | 191 days | | | | | | | |
| 27 | Electrical Demolition of Phase 1 Equipment | 191 days | | | | | | | |
| 28 | Condensate System | 30 days | | | | | | | |
| 29 | Condensate Pumps | 2 days | | | | | | | |
| 30 | Condensate Transfer Pumps | 1 day | | | | | | | |
| 31 | Cycle Make-Up Pump | 1 day | | | | | | | |
| 32 | Steam Packing Exhauster and Blower | 2 days | | | | | | | |

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



Iatan 1 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|----|---|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 64 | Fuel Oil System (plant side) | 120 days | | | | | | | |
| 65 | Igniter Fuel Oil Pumps | 3 days | | | | | | | |
| 66 | Igniter Fuel Oil and Atomizing Air Piping | 5 days | | | | | | | |
| 67 | Igniters | 15 days | | | | | | | |
| 68 | Waste Oil System | 7 days | | | | | | | |
| 69 | Waste Oil Tank | 2 days | | | | | | | |
| 70 | Waste Oil Transfer Pump | 2 days | | | | | | | |
| 71 | Waste Oil Piping | 3 days | | | | | | | |
| 72 | Air Preheat System | 9 days | | | | | | | |
| 73 | Air Preheat Pumps | 2 days | | | | | | | |
| 74 | Air Preheat Piping | 7 days | | | | | | | |
| 75 | Condenser Air Extraction System | 6 days | | | | | | | |
| 76 | Vacuum Pumps | 4 days | | | | | | | |
| 77 | Extraction Piping | 2 days | | | | | | | |
| 78 | Turbine Seals and Drains | 7 days | | | | | | | |
| 79 | Piping | 7 days | | | | | | | |
| 80 | Turbine Lube Oil System | 17 days? | | | | | | | |
| 81 | Turbine Lube Oil Tank | 12 days | | | | | | | |
| 82 | Turbine Lube Oil Pumps | 4 days | | | | | | | |
| 83 | Turbine Oil Mist Eliminator | 1 day? | | | | | | | |
| 84 | Generator Auxiliary Systems | 18 days | | | | | | | |
| 85 | Hydrogen Cooler Skid and Piping | 5 days | | | | | | | |
| 86 | Stator Cooling Water Skid and Piping | 5 days | | | | | | | |
| 87 | Isophase Bus Duct | 4 days | | | | | | | |
| 88 | Exciter Heat Exchanger | 2 days | | | | | | | |
| 89 | EHC Coolers | 2 days | | | | | | | |
| 90 | Chemical Feed Systems | 15 days | | | | | | | |
| 91 | Tanks | 9 days | | | | | | | |
| 92 | Pumps | 3 days | | | | | | | |
| 93 | Piping | 3 days | | | | | | | |
| 94 | Sampling Systems | 5 days | | | | | | | |
| 95 | Field Mounted Heat Exchangers | 2 days | | | | | | | |

Iatan 1 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|-----|---|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 96 | Piping | 3 days | | | | | | | |
| 97 | Building Heating Systems | 14 days | | | | | | | |
| 98 | Steam Unit Heaters | 10 days | | | | | | | |
| 99 | Steam Piping | 4 days | | | | | | | |
| 100 | Compressed Air System | 15 days | | | | | | | |
| 101 | Air Compressors | 4 days | | | | | | | |
| 102 | Air Drying Equipment | 3 days | | | | | | | |
| 103 | Air Reciever Tanks | 3 days | | | | | | | |
| 104 | Compressed Air Piping | 5 days | | | | | | | |
| 105 | Miscellaneous Equipment | 12 days | | | | | | | |
| 106 | Miscellaneous Equipment (including Fire Protection) | 12 days | | | | | | | |
| 107 | Phase 2 Demolition | 333 days | | | | | | | |
| 108 | Precipitator | 30 days | | | | | | | |
| 109 | Remove Precipitator | 30 days | | | | | | | |
| 110 | Boiler Equipment | 134 days | | | | | | | |
| 111 | Fans | 20 days | | | | | | | |
| 112 | Pulverizers | 20 days | | | | | | | |
| 113 | Bottom Ash | 6 days | | | | | | | |
| 114 | Air Heater | 56 days | | | | | | | |
| 115 | Steam Drum | 25 days | | | | | | | |
| 116 | Coal Bunkers | 20 days | | | | | | | |
| 117 | Coal Feeders | 13 days | | | | | | | |
| 118 | Soot Blowers | 16 days | | | | | | | |
| 119 | Ductwork | 28 days | | | | | | | |
| 120 | Miscellaneous Other | 6 days | | | | | | | |
| 121 | Boiler Removal | 56 days | | | | | | | |
| 122 | Furnace | 32 days | | | | | | | |
| 123 | Back Pass | 24 days | | | | | | | |
| 124 | Boiler Steel Framing | 101 days | | | | | | | |
| 125 | Hanger Girders at Top | 15 days | | | | | | | |
| 126 | All Other Framing | 47 days | | | | | | | |
| 127 | Bracing and Girts | 23 days | | | | | | | |

Iatan 1 Dismantlement

| ID | Task Name | Duration | 2012 | | 2013 | | 2014 | | 2015 |
|-----|---|-----------------|------|----|------|----|------|----|------|
| | | | H2 | H1 | H2 | H1 | H2 | H1 | H2 |
| 128 | Columns | 16 days | | | | | | | |
| 129 | Boiler Foundations | 18 days | | | | | | | |
| 130 | Equipment Foundation Demolition to Grade | 18 days | | | | | | | |
| 131 | Remove Turbine | 333 days | | | | | | | |
| 132 | Remove HP Turbine | 10 days | | | | | | | |
| 133 | Remove IP Turbine | 10 days | | | | | | | |
| 134 | Remove LP Turbine | 10 days | | | | | | | |
| 135 | Remove Generator | 20 days | | | | | | | |
| 136 | Remove Condenser Neck Heat Exchanger | 10 days | | | | | | | |
| 137 | Remove Condenser | 10 days | | | | | | | |
| 138 | Remove Misc. Auxiliary Turbine Equipment | 15 days | | | | | | | |
| 139 | Turbine Pedestal Demolition to Grade | 102 days | | | | | | | |
| 140 | Top Slab and Beams | 40 days | | | | | | | |
| 141 | Columns | 62 days | | | | | | | |
| 142 | Remove Turbine Building | 146 days | | | | | | | |
| 143 | Siding and Roofing | 41 days | | | | | | | |
| 144 | All Framing Elevations | 60 days | | | | | | | |
| 145 | Bracing and Girts | 20 days | | | | | | | |
| 146 | Columns | 25 days | | | | | | | |
| 147 | Phase 3 Yard Demolition | 150 days | | | | | | | |
| 148 | Circulating Water Pipe (yard) | 40 days | | | | | | | |
| 149 | Excavate Circulating Water Pipe | 10 days | | | | | | | |
| 150 | Collapse Circulating Water Pipe | 20 days | | | | | | | |
| 151 | Backfill Circulating Water Pipe | 10 days | | | | | | | |
| 152 | Remove Ash Handling Equipment and Piping | 20 days | | | | | | | |
| 153 | Remove Fly-Ash Silo and Scale | 15 days | | | | | | | |
| 154 | Remove Ash Piping and Misc. Equipment | 5 days | | | | | | | |
| 155 | Remove Laydown Equipment and Warehoused Equipment | 40 days | | | | | | | |
| 156 | Remove Unit 1 Condensate Storage Tank and Pump | 10 days | | | | | | | |
| 157 | Remove Unit 1 Make-Up Water Storage Tank | 10 days | | | | | | | |

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 | Post Dismantlement Activities | 40 days | | | | | | | | | | | |
| 160 | Post Dismantlement Activities | 40 days | | | | | | | | | | | |

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

| Iatan 1 AQCS | | |
|--------------|---|---------------------|
| ID | Task Name | Cost |
| 36 | Remove wiring & conduit serving compressed air equipment | \$5,374.08 |
| 37 | Remove wiring & conduit serving comp air equipment | \$3,582.72 |
| 38 | Remove electrical control cabinets & switchgear | \$17,913.60 |
| 39 | Demolish electrical control room | \$17,913.60 |
| 40 | FGD System | \$201,109.68 |
| 41 | Remove ductwork between FGD module and chimney | \$7,952.40 |
| 42 | Remove support steel and access platforms between FGD and chimney | \$5,374.08 |
| 43 | Remove FGD elevator | \$8,956.80 |
| 44 | Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg | \$35,827.20 |
| 45 | Remove oxi air blowers | \$895.68 |
| 46 | Remove all FGD piping & valves other than recirc piping | \$26,870.40 |
| 47 | Remove ox air lines | \$5,374.08 |
| 48 | Remove FGD MEs panels | \$9,542.88 |
| 49 | Remove FGD outlet duct and top cone | \$5,374.08 |
| 50 | Remove FGD internal wash ME piping and ME supports | \$5,374.08 |
| 51 | Remove FGD internal spray header piping | \$8,956.80 |
| 52 | Remove FGD support steel, access provisions, stair tower, and recirc piping from top down | \$35,827.20 |
| 53 | Remove FGD module walls | \$17,913.60 |
| 54 | Remove FGD inlet duct | \$5,374.08 |
| 55 | Remove FGD reaction tank walls and floor | \$17,913.60 |
| 56 | Remove FGD Bldg trench floor grating | \$3,582.72 |
| 57 | ID Fans | \$78,819.84 |
| 58 | Remove ductwork between ID fan outlets and FGD module | \$12,539.52 |
| 59 | Remove support steel and access platforms between ID fan outlets and FGD module | \$5,374.08 |
| 60 | Remove ductwork between FF outlet and ID fan inlets | \$12,539.52 |
| 61 | Remove support steel between FF outlet and ID fan inlets | \$5,374.08 |
| 62 | Removed ID fan isolation dampers | \$14,330.88 |
| 63 | Removed ID fan drive motor | \$7,165.44 |
| 64 | Remove ID fan seal air system | \$7,165.44 |
| 65 | Remove fan casing & rotor | \$14,330.88 |
| 66 | Fabric Filters | \$309,905.28 |
| 67 | Remove ductwork between air heater and FF | \$8,956.80 |
| 68 | Remove ductwork structural steel between AH and FF | \$5,374.08 |
| 69 | Remove FF penthouse hoists and trolleys | \$7,165.44 |
| 70 | Remove FF hopper heaters, HVAC, lighting and convenience outlets | \$17,913.60 |
| 71 | Remove FF ash handling piping | \$26,870.40 |
| 72 | Remove compress air blower, dryers, and receivers, piping & valves | \$17,913.60 |
| 73 | Remove FF penthouse roof panels supporting steel | \$17,913.60 |
| 74 | Remove FF compartment roof hatches | \$5,374.08 |

| Iatan 1 AQCS | | |
|--------------|--|--------------------|
| ID | Task Name | Cost |
| 75 | Remove FF compartment pulse air piping | \$5,374.08 |
| 76 | Remove FF compartment pulse air and compressed air supply piping | \$10,748.16 |
| 77 | Remove FF outlet poppet damper operators | \$12,539.52 |
| 78 | Remove FF bags & cages | \$25,079.04 |
| 79 | Remove FF bag support sheets | \$25,079.04 |
| 80 | Remove remaining FF roof | \$7,165.44 |
| 81 | Remove FF outlet dampers | \$7,165.44 |
| 82 | Remove ductwork between air heater and FF | \$8,956.80 |
| 83 | Remove FF wall panels to hopper level | \$50,158.08 |
| 84 | Remove ductwork structural steel between AH and FF | \$5,374.08 |
| 85 | Remove FF stair tower(s) | \$17,913.60 |
| 86 | Remove FF inlet dampers | \$7,165.44 |
| 87 | Remove FF hoppers | \$12,539.52 |
| 88 | Remove FF support steel | \$7,165.44 |
| 89 | SCR and Ammonia Supply | \$73,445.76 |
| 90 | Vacuum SCR catalyst | \$3,582.72 |
| 91 | Remove SCR catalyst | \$16,122.24 |
| 92 | Remove ammonia injection grid | \$3,582.72 |
| 93 | Remove NH3 piping between storage & injection | \$3,582.72 |
| 94 | Remove air horn air receiver & supply piping | \$3,582.72 |
| 95 | Remove SCR guillotine dampers | \$7,165.44 |
| 96 | Remove SCR muliti-louver dampers | \$3,582.72 |
| 97 | Remove SCR box, internal supports, & assoc'd ductwork | \$26,870.40 |
| 98 | Remove NH3 piping between storage & vaporizers | \$5,374.08 |
| 99 | Site Preperation Work | \$0.00 |
| 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 | Iatan Unit 1 AQCS Dismantlement | 594.5 days | [Gantt bar spanning from Qtr 2 2013 to Qtr 2 2014] | | | | | | | | | |
| 2 | Common Removal Overheads | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 3 | Added Overhead Staff for Common Removals | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 4 | Scrap Crew | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 5 | Crew(s) to Handle Scrap Material | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 6 | Demolition Contractor Consummables | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 7 | Consummables | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 8 | Demolition Contractor Equipment Rental Costs | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 9 | Equipment Rental | 340 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 10 | Dismantlement | 340.5 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 11 | Initial Structural | 202.5 days | [Gantt bar from Qtr 1 2013 to Qtr 4 2013] | | | | | | | | | |
| 12 | Remove SCR box & ductwork lagging & insulation | 10 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 13 | Remove SCR expansion joints | 6 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 14 | Remove ductwork lagging & insulation | 5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 15 | Remove ductwork expansion joints | 10 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 16 | Remove ductwork access platforms & ladders | 10 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 17 | Remove FF lagging, insulation, wall panel, & roof panels | 20 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 18 | Remove ID fan lagging & insulation | 4 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 19 | Removal all HVAC equipment located on FGD Bldg roof | 3 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 20 | Remove FGD Bldg lagging, insulation, wall panel, & roof | 10 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 21 | General Electric | 108 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 22 | Remove breakers serving all FF equipment | 0.5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 23 | Remove breakers serving all FGD equipment | 1 day | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 24 | Remove breakers serving all ID fan equipment | 0.5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 25 | Remove breakers serving all SCR equipment | 0.5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 26 | Remove breakers serving all comp air equipment | 0.5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 27 | Remove all ductwork primary instrumentation, controls & assoc'd cables, and c | 5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 28 | Remove all FGD primary instrumentation, controls & assoc'd cables, and condu | 15 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 29 | Remove all FF primary instrumentation, controls & assoc'd cables, and conduit | 10 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 30 | Remove SCR primary instrumentation, controls, & assoc'd cable & conduit | 5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |
| 31 | Remove NH3 supply primary instrumentation, controls, & assoc'd cable & cond | 5 days | [Gantt bar from Qtr 1 2013 to Qtr 1 2013] | | | | | | | | | |

Electrical Crew - Operator, Electrician

Iatan 1 AQCS Dismantlement

| ID | Task Name | Duration | 2013 | | | | 2014 | | | |
|----|---|------------------|-------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | 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 | FGD System | 98.5 days | | | | | | | | |
| 41 | Remove ductwork between FGD module and chimney | 5 days | | | | | | | | |
| 42 | Remove support steel and access platforms between FGD and chimney | 3 days | | | | | | | | |
| 43 | Remove FGD elevator | 5 days | | | | | | | | |
| 44 | Remove all mechanical equipment, pumps, and motors and tanks in FGD Bldg | 20 days | | | | | | | | |
| 45 | Remove oxi air blowers | 0.5 days | | | | | | | | |
| 46 | Remove all FGD piping & valves other than recirc piping | 15 days | | | | | | | | |
| 47 | Remove ox air lines | 3 days | | | | | | | | |
| 48 | Remove FGD MEs panels | 6 days | | | | | | | | |
| 49 | Remove FGD outlet duct and top cone | 3 days | | | | | | | | |
| 50 | Remove FGD internal wash ME piping and ME supports | 3 days | | | | | | | | |
| 51 | Remove FGD internal spray header piping | 5 days | | | | | | | | |
| 52 | Remove FGD support steel, access provisions, stair tower, and recirc piping 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 | ID Fans | 65 days | | | | | | | | |
| 58 | Remove ductwork between ID fan outlets and FGD module | 7 days | | | | | | | | |
| 59 | Remove support steel and access platforms between ID fan outlets and FGD m | 3 days | | | | | | | | |
| 60 | Remove ductwork between FF outlet and ID fan inlets | 7 days | | | | | | | | |
| 61 | Remove support steel between FF outlet and ID fan inlets | 3 days | | | | | | | | |
| 62 | Removed ID fan isolation dampers | 8 days | | | | | | | | |

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

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 & vaporizors | 3 days | | | | | | | | | | | |
| 99 | Site Preperation Work | 1 day | | | | | | | | | | | |
| 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 | Iatan 2 Retirement | \$785,786.45 |
| 2 | Pre-Engineering | \$100,821.60 |
| 3 | Permit review and engineering analysis, establish isolation points, and confirm fuel yard inventory has been reduced to zero tons. | \$0.00 |
| 4 | KCL&L Overhead Costs | \$114,006.40 |
| 5 | KCP&L Retirement Manager | \$114,006.40 |
| 6 | Equipment Rentals | \$38,625.28 |
| 7 | Vacuum truck | \$38,625.28 |
| 8 | Retirement | \$505,769.17 |
| 9 | Electrical | \$18,911.68 |
| 10 | Medium and Low Voltage Draw out Switchgear | \$2,679.84 |
| 11 | De-energize all buses at the source. | \$446.64 |
| 12 | Open all circuit breakers. | \$446.64 |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$446.64 |
| 14 | Verify that the closing/tripping springs are discharged. | \$446.64 |
| 15 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 16 | Motor Control Centers | \$1,786.56 |
| 17 | De-energize all buses at the source. | \$446.64 |
| 18 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 19 | Remove all fuses in control circuits. | \$893.28 |
| 20 | Low-voltage Switchboards and Panelboards | \$893.28 |
| 21 | De-energize all buses at the source. | \$446.64 |
| 22 | Open all circuit breakers and disconnect switches. | \$446.64 |
| 23 | Oil-Filled Power Transformers | \$5,549.44 |
| 24 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 25 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 26 | Drain and dispose of oil. | \$2,642.88 |
| 27 | Clean up and dispose of oil on surface areas around the transformers on in containment pits. | \$1,120.00 |
| 28 | Dry-type Power Transformers | \$1,786.56 |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$893.28 |
| 31 | Motors | \$6,216.00 |
| 32 | De-energize all primary power at the source. | \$1,786.56 |

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

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

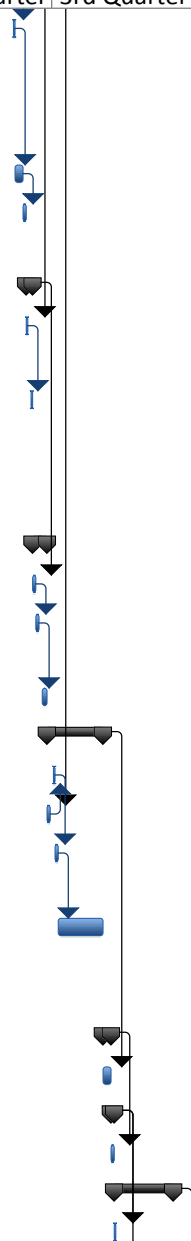
| Iatan 2 Retirement | | |
|--------------------|--|--------------------|
| ID | Task Name | Cost |
| 97 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | \$1,786.56 |
| 98 | FGD Byproduct Dewatering - Hydrocyclones and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

Iatan 2 Retirement

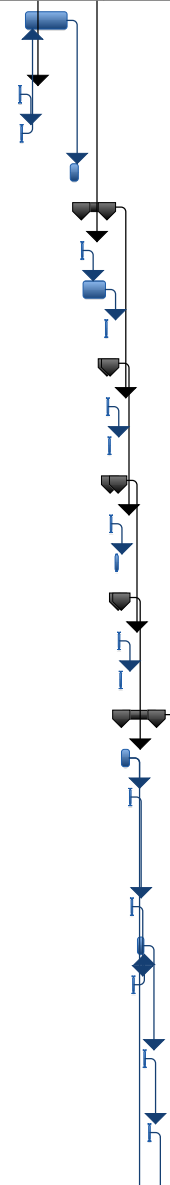
| ID | Task Name | Cost |
|-----|---|--------------------|
| 128 | Compressed Air System | \$2,721.28 |
| 129 | Open vents and drains. | \$842.72 |
| 130 | Remove desiccant from desiccant dryers. | \$1,878.56 |
| 131 | Auxiliary Steam System | \$1,685.44 |
| 132 | Drain water from system. | \$842.72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

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

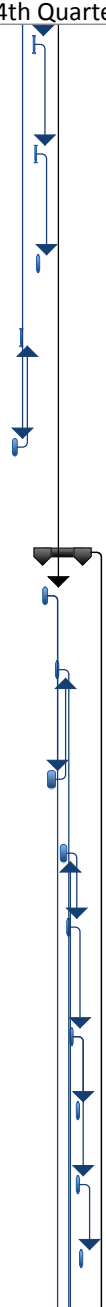
| Iatan 2 Retirement | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter |
|--------------------|---|----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|
| 25 | De-energize all low-voltage AC or DC power sources 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 | Dry-type Power Transformers | 2 days | | | | | | | |
| 29 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | | | |
| 30 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | 1 day | | | | | | | |
| 31 | Motors | 7 days | | | | | | | |
| 32 | De-energize all primary power at the source. | 2 days | | | | | | | |
| 33 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 2 days | | | | | | | |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | 3 days | | | | | | | |
| 35 | Coal Handling | 25 days | | | | | | | |
| 36 | Empty all transfer hoppers. | 1 day | | | | | | | |
| 37 | Burn out coal silos. | 2 days | | | | | | | |
| 38 | Confirm all fuel lines, conveyors and trippers are clear of fuel. | 2 days | | | | | | | |
| 39 | Perform cleaning of the coal handling equipment to assure that all coal and coal dust has been removed from site. | 20 days | | | | | | | |
| 40 | Fuel Oil and Igniter System | 3 days | | | | | | | |
| 41 | Drain fuel oil system | 3 days | | | | | | | |
| 42 | Boiler Chemical Feed | 2 days | | | | | | | |
| 43 | Drain all chemical feed tanks. | 2 days | | | | | | | |
| 44 | Boiler | 27 days | | | | | | | |
| 45 | Open boiler doors. | 1 day | | | | | | | |



| Iatan 2 Retirement | | | | 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 | Stack and Ductwork | 12 days | | | | | | | |
| 51 | Open ductwork doors. | 1 day | | | | | | | |
| 52 | Perform extensive cleaning of the ductwork. | 10 days | | | | | | | |
| 53 | Place cap over stack opening to keep moisture out. | 1 day | | | | | | | |
| 54 | Condensate and Feedwater Piping | 2 days | | | | | | | |
| 55 | Drain water from the system. | 1 day | | | | | | | |
| 56 | Leave open vents and drains. | 1 day | | | | | | | |
| 57 | Feedwater heaters | 3 days | | | | | | | |
| 58 | Drain feedwater heaters | 1 day | | | | | | | |
| 59 | Leave open vents and drains. | 2 days | | | | | | | |
| 60 | Deaerator and Deaerator Storage Tank | 2 days | | | | | | | |
| 61 | Drain Deaerator and Storage | 1 day | | | | | | | |
| 62 | Leave open vents and drains. | 1 day | | | | | | | |
| 63 | Baghouse | 16 days | | | | | | | |
| 64 | Multiple cleaning cycles for filter bags. | 3 days | | | | | | | |
| 65 | Open all vent and drain lines on bag cleaning air and control air lines. Leave in open position or remove vent valves. | 1 day | | | | | | | |
| 66 | Remove all filter bags and cages. | 1 day | | | | | | | |
| 67 | Clear hoppers of all ash | 4 days | | | | | | | |
| 68 | Mechanically secure all compartment dampers and hopper outlet valves in open position. | 1 day | | | | | | | |
| 69 | Disconnect ash transport piping and washdown baghouse hoppers and interior of casing. | 1 day | | | | | | | |
| 70 | Install bird screens across hopper ash outlet and ash line flanges. | 1 day | | | | | | | |

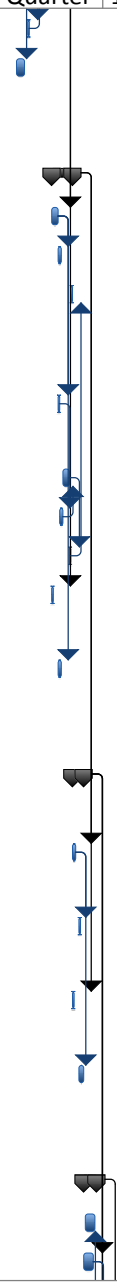


| Iatan 2 Retirement | | | | | | | | | |
|--------------------|--|----------------|-------------|-------------|-------------|-------------|-------------|-------------|--|
| ID | Task Name | Duration | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter | |
| 71 | Padlock 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 | Wet FGD system | 19 days | | | | | | | |
| 77 | Multiple mist eliminator wash cycles. Remove ME's from absorber. | 3 days | | | | | | | |
| 78 | Drain and flush all slurry and reclaim water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | 2 days | | | | | | | |
| 79 | Drain and wash out the reaction tank, reagent storage tank, recycle water tank, absorber blowdown tank, etc. | 3 days | | | | | | | |
| 80 | Leave all tank drain valves open or remove. Install bird screens across openings. | 2 days | | | | | | | |
| 81 | Drain all makeup and mist eliminator water pumps and piping. Leave vent and drain valves open or remove. Install bird screens across drain openings. | 2 days | | | | | | | |
| 82 | Mechanically secure all flue gas isolation dampers in open position or remove damper blades. | 2 days | | | | | | | |
| 83 | Remove solids from all inlet and outlet ductwork as necessary | 2 days | | | | | | | |
| 84 | Open all vent station air and control air lines. Leave in open position or remove vent valves | 2 days | | | | | | | |
| 85 | Padlock or tack weld all access doors to modules and ductwork shut. | 2 days | | | | | | | |



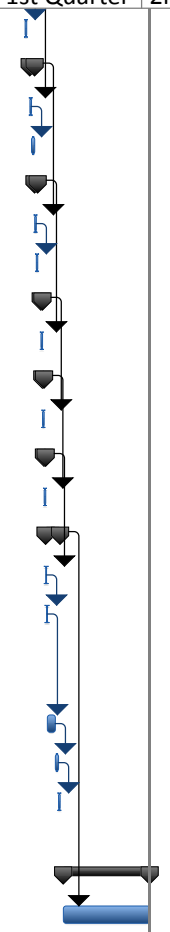
Iatan 2 Retirement

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



| 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 | Turbine(s) and Condenser | 6 days | | | | | | |
| 112 | Drain hotwell and leave doors open. | 1 day | | | | | | |
| 113 | Open main turbine doors. | 1 day | | | | | | |
| 114 | Open bfp turbine doors. | 1 day | | | | | | |
| 115 | Remove lube oil. | 3 days | | | | | | |
| 116 | Generator | 7 days | | | | | | |
| 117 | Verify that generator circuit breaker is open and racked out or that high-voltage disconnect switch on substation side of GSU transformer is locked in the open position. | 0.5 days | | | | | | |
| 118 | Verify that generator field breaker or contactor (if applicable) is open. | 0.5 days | | | | | | |
| 119 | De-energize power supplies to generator excitation system at the source. | 0.5 days | | | | | | |
| 120 | De-energize AC and DC power supplies to generator and exciter space heaters, cooling equipment, controls, lighting, etc. at the source and open circuit breakers or remove fuses at the generator and exciter. | 0.5 days | | | | | | |
| 121 | Drain generator and exciter cooling water systems (if applicable). | 1 day | | | | | | |
| 122 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 2 days | | | | | | |
| 123 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | | |
| 124 | Circulation Water and Turbine Cooling Water System | 3 days | | | | | | |
| 125 | Drain. | 2 days | | | | | | |
| 126 | Open water box doors. | 1 day | | | | | | |

| Iatan 2 Retirement | | | | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | 1st Quarter | 2nd Quarter |
|--------------------|---|----------------|--|-------------|-------------|-------------|-------------|-------------|-------------|
| 127 | Drain any circulating water chemical feed tanks. | 1 day | | | | | | | |
| 128 | Compressed Air System | 3 days | | | | | | | |
| 129 | Open vents and drains. | 1 day | | | | | | | |
| 130 | Remove desiccant from desiccant dryers. | 2 days | | | | | | | |
| 131 | Auxiliary Steam System | 2 days | | | | | | | |
| 132 | Drain water from system. | 1 day | | | | | | | |
| 133 | Remove aux boiler chemicals. | 1 day | | | | | | | |
| 134 | Auxiliary Cooling Water System | 1 day | | | | | | | |
| 135 | Drain water from system. | 1 day | | | | | | | |
| 136 | Condenser Air Extraction and Waterbox Priming System | 1 day | | | | | | | |
| 137 | Drain water from system. | 1 day | | | | | | | |
| 138 | Building Heating System | 1 day | | | | | | | |
| 139 | Drain water from system. | 1 day | | | | | | | |
| 140 | Battery System | 7 days | | | | | | | |
| 141 | De-energize all battery chargers from the source. | 0.5 days | | | | | | | |
| 142 | Open all AC and DC circuit breakers and/or fused switches on battery chargers and disconnect cables from batteries. | 0.5 days | | | | | | | |
| 143 | Remove and dispose of battery electrolyte. | 3 days | | | | | | | |
| 144 | Remove and dispose of battery cells. | 2 days | | | | | | | |
| 145 | Clean up and dispose of electrolyte on surface areas around batteries. | 1 day | | | | | | | |
| 146 | Post Retirement Activities | 40 days | | | | | | | |
| 147 | Post Retirement Activities | 40 days | | | | | | | |



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 | |

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

COMMON

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 | \$233,845 |
| Iatan Landfill Retirement | \$3,510,641 |

Activities Required by Permit or Regulation: \$3,744,486

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

Iatan Common Retirement

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

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

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

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 |
| 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

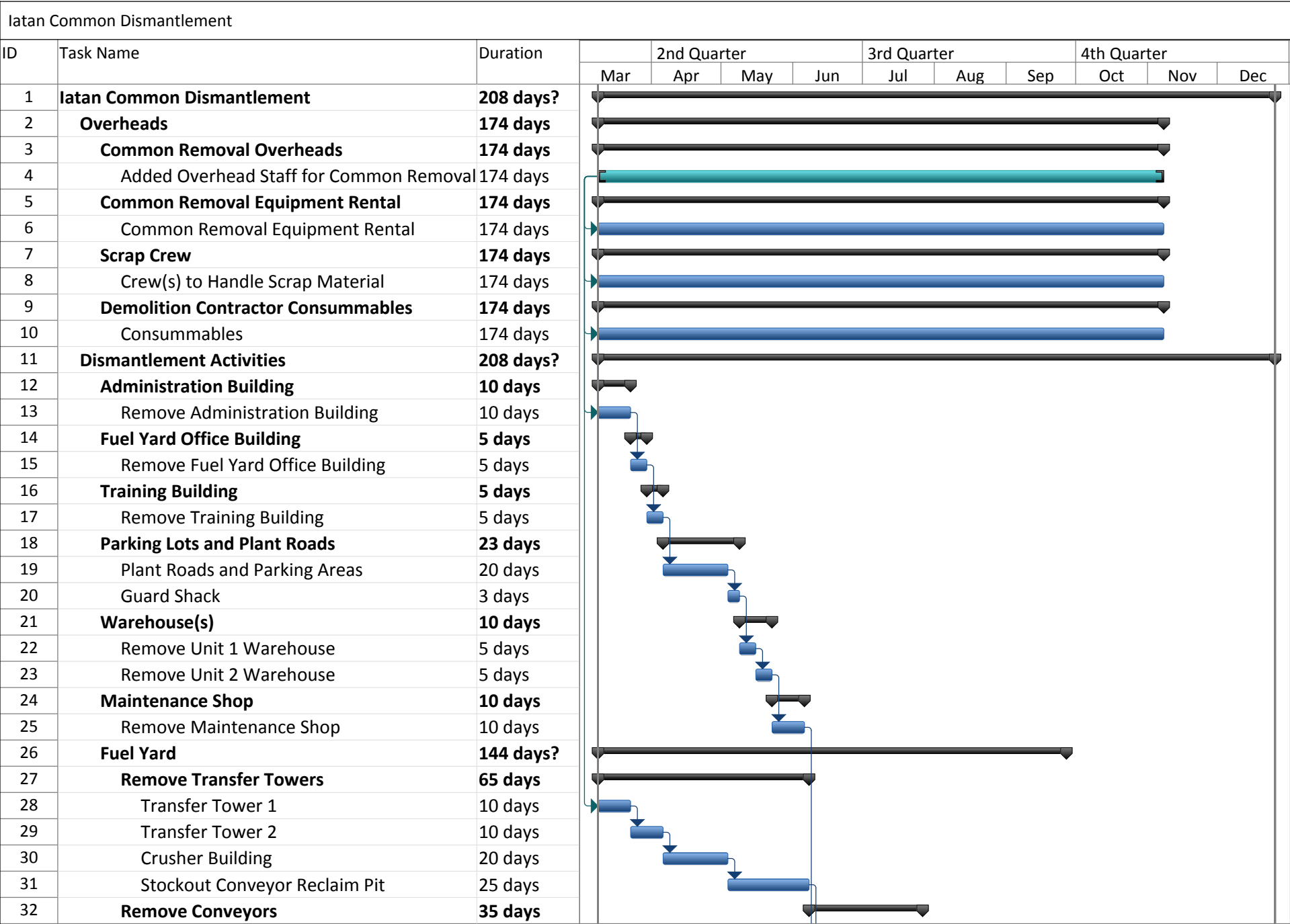
Owner Internal Costs: 5.00% \$947,602

Owner Contingency: 25.00% \$4,974,909

Iatan Common Dismantlement Opinion of Probable Cost: \$24,874,543

| Iatan Common Dismantlement | | |
|----------------------------|---|------------------------|
| ID | Task Name | Cost |
| 1 | Iatan Common Dismantlement | \$15,631,165.71 |
| 2 | Overheads | \$1,548,057.20 |
| 3 | Common Removal Overheads | \$86,011.67 |
| 4 | Added Overhead Staff for Common Removals | \$86,011.67 |
| 5 | Common Removal Equipment Rental | \$419,326.08 |
| 6 | Common Removal Equipment Rental | \$419,326.08 |
| 7 | Scrap Crew | \$623,393.36 |
| 8 | Crew(s) to Handle Scrap Material | \$623,393.36 |
| 9 | Demolition Contractor Consummables | \$419,326.08 |
| 10 | Consummables | \$419,326.08 |
| 11 | Dismantlement Activities | \$14,083,108.51 |
| 12 | Administration Building | \$35,827.20 |
| 13 | Remove Administration Building | \$35,827.20 |
| 14 | Fuel Yard Office Building | \$17,913.60 |
| 15 | Remove Fuel Yard Office Building | \$17,913.60 |
| 16 | Training Building | \$17,913.60 |
| 17 | Remove Training Building | \$17,913.60 |
| 18 | Parking Lots and Plant Roads | \$82,402.56 |
| 19 | Plant Roads and Parking Areas | \$71,654.40 |
| 20 | Guard Shack | \$10,748.16 |
| 21 | Warehouse(s) | \$35,827.20 |
| 22 | Remove Unit 1 Warehouse | \$17,913.60 |
| 23 | Remove Unit 2 Warehouse | \$17,913.60 |
| 24 | Maintenance Shop | \$23,215.20 |
| 25 | Remove Maintenance Shop | \$23,215.20 |
| 26 | Fuel Yard | \$752,371.20 |
| 27 | Remove Transfer Towers | \$465,753.60 |
| 28 | Transfer Tower 1 | \$35,827.20 |
| 29 | Transfer Tower 2 | \$35,827.20 |
| 30 | Crusher Building | \$71,654.40 |
| 31 | Stockout Conveyor Reclaim Pit | \$89,568.00 |
| 32 | Remove Conveyors | \$125,395.20 |
| 33 | Conveyor 2A, 4, 5B 6A, 6B, 7A and 7B | \$125,395.20 |
| 34 | Remove Car Dumper | \$89,568.00 |
| 35 | Remove Underground Equipment | \$17,913.60 |
| 36 | Remove Above Ground Equipment | \$35,827.20 |
| 37 | Remove Building | \$17,913.60 |
| 38 | Backfill Dumper Structure | \$17,913.60 |
| 39 | Remove Stacker/Reclaimer | \$7,165.44 |
| 40 | Remove Stacker/Reclaimer | \$3,582.72 |
| 41 | Remove Unit 1 Reclaim | \$64,488.96 |
| 42 | Remove Underground Equipment | \$17,913.60 |
| 43 | Remove Above Ground Equipment | \$17,913.60 |
| 44 | Remove Building | \$14,330.88 |

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



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

Iatan Common Dismantlement

| ID | Task Name | Duration | 2nd Quarter | | | | 3rd Quarter | | | 4th Quarter | | |
|----|--|----------------|-------------|-----|-----|-----|-------------|-----|-----|-------------|-----|-----|
| | | | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| 63 | Reagent Prep and Gypsum Handling | 94 days | | | | | | | | | | |
| 64 | Remove Limestone Unloading Facility | 10 days | | | | | | | | | | |
| 65 | Remove Limestone Storage Facility | 5 days | | | | | | | | | | |
| 66 | Remove Limestone Conveyor | 5 days | | | | | | | | | | |
| 67 | Remove Limestone Prep Building | 40 days | | | | | | | | | | |
| 68 | Remove Gypsum Stackout Conveyor | 5 days | | | | | | | | | | |
| 69 | Remove PCM-1 | 2 days | | | | | | | | | | |
| 70 | Remove PCM-2 | 2 days | | | | | | | | | | |
| 71 | Remove the Vacuum Pump and Air Compressor Building | 20 days | | | | | | | | | | |
| 72 | Remove Miscellaneous Equipment | 5 days | | | | | | | | | | |
| 73 | Final Site Grading and Drainage | 1 day? | | | | | | | | | | |
| 74 | Final Site Grading and Drainage | 1 day? | | | | | | | | | | |

NORTHEAST

NORTHEAST

The Northeast Generating Station consists of eight fuel oil-fired combustion turbine generator sets.

Together these Combustion turbines have a total SPP-accredited unit rating of 408 MW. The units are designated numbers 11 through 18, and were added to an existing steam electric generating plant site during the 1970s. Units 11 and 12 began service in 1972; Units 13 and 14 in 1975; Units 15 and 16 in 1976; and Units 17 and 18 in 1977. Each unit is comprised of a General Electric Model 7B combustion turbine and each pair of units is connected to a three-winding generator step-up transformer and is provided with auxiliary power through a common bus. Each combustion turbine employs standard annular combustor technology and burns only distillate or ultra-low sulfur fuel oil. Diesel starting means is provided and Northeast is a designated black-start facility.

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).

NORTHEAST UNITS 11 THROUGH 18

1. Combustion turbine generator sets and auxiliaries (eight).
2. Generator step-up and auxiliary transformers (four).
3. Exhaust stacks (eight).

COMMON

1. Service building.
2. Fuel oil unloading, storage, and forwarding equipment.
3. Service/Instrument air compressors.

Northeast Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$43,834 |
| Retirement Activities | \$304,742 |
| Post Retirement Activities | \$45,152 |

Owner Direct Total \$393,728

Owner Internal Costs 5.00% \$19,686

Owner Contingency: 25.00% \$103,354

Northeast Retirement Opinion of Probable Cost: \$516,768.00

Activities Required by Permit or Regulation

Northeast Fuel Oil Tank Removal \$525,034

Activities Required by Permit or Regulation: \$525,034

| Northeast Retirement | | |
|----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Northeast Retirement | \$393,773.80 |
| 2 | Pre-Retirement Activities | \$43,834.00 |
| 3 | Permitting Review | \$23,466.00 |
| 4 | Develop Detailed Retirement Plan | \$20,368.00 |
| 5 | Retirement Activities | \$304,787.80 |
| 6 | Project Management During Retirement | \$136,343.40 |
| 7 | Project Management During Retirement | \$136,343.40 |
| 8 | Electrical | \$85,754.88 |
| 9 | Medium and Low Voltage Drawout Switchgear | \$24,118.56 |
| 10 | De-energize all buses at the source. | \$5,359.68 |
| 11 | Open all circuit breakers. | \$5,359.68 |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$5,359.68 |
| 13 | Verify that the closing/tripping springs are discharged. | \$5,359.68 |
| 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. | \$2,679.84 |
| 15 | Motor Control Centers | \$11,612.64 |
| 16 | De-energize all buses at the source. | \$2,679.84 |
| 17 | Open all circuit breakers and disconnect switches. | \$4,466.40 |
| 18 | Remove all fuses in control circuits. | \$4,466.40 |
| 19 | Low-voltage Switchboards and Panelboards | \$10,719.36 |
| 20 | De-energize all buses at the source. | \$5,359.68 |
| 21 | Open all circuit breakers and disconnect switches. | \$5,359.68 |
| 22 | Oil-Filled Power Transformers | \$17,865.60 |
| 23 | De-energize all buses at the source. | \$4,466.40 |
| 24 | Open all circuit breakers and disconnect switches. | \$4,466.40 |
| 25 | De-energize all buses at the source. | \$4,466.40 |
| 26 | Open all circuit breakers and disconnect switches. | \$4,466.40 |
| 27 | Dry-type Power Transformers | \$8,039.52 |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$4,466.40 |
| 29 | 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 |
| 30 | Motors | \$13,399.20 |
| 31 | De-energize all primary power at the source. | \$4,466.40 |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$4,466.40 |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | \$4,466.40 |
| 34 | Fuel Oil System | \$5,631.12 |
| 35 | Isolate Fuel Oil System | \$3,907.44 |
| 36 | Drain and Vent Fuel Oil Piping | \$1,723.68 |
| 37 | Lube Oil Cooling Water System | \$9,480.24 |

| Northeast Retirement | | |
|----------------------|---|--------------------|
| ID | Task Name | Cost |
| 38 | Open and Drain the Water Side of the Lube Oil Coolers | \$6,894.72 |
| 39 | Open and Vent the Coolers and Expansion Tank | \$2,585.52 |
| 40 | Oily Drain Tank | \$3,954.00 |
| 41 | Open and Pump Out the Oily Drain Tank | \$3,954.00 |
| 42 | Compressed Air | \$3,447.36 |
| 43 | Empty Dessiccant Air Dryers and Vent | \$1,723.68 |
| 44 | Open and Vent the Air Reciever | \$1,723.68 |
| 45 | Miscelleaneous Piping | \$14,651.28 |
| 46 | Open and Vent the Exhaust Frame Cooling Piping | \$2,585.52 |
| 47 | Open and Vent the Inlet Air Heating Piping | \$2,585.52 |
| 48 | Open & Vent the CT Air Process Piping | \$6,894.72 |
| 49 | Open and Vent the CT Air Processing Piping | \$2,585.52 |
| 50 | Fire Protection Piping | \$6,856.48 |
| 51 | Empty the CO2 Storage Tank | \$5,132.80 |
| 52 | Open and Vent the Fire Protection Piping | \$1,723.68 |
| 53 | Lube Oil System | \$29,590.08 |
| 54 | Empty and Remove from Site the Lubricating Oil | \$19,248.00 |
| 55 | Drain Lubricating Oil Piping | \$8,618.40 |
| 56 | Open and Vent Lubricating Oil Piping | \$1,723.68 |
| 57 | Potable Water | \$2,643.36 |
| 58 | Disconnect Potable Water at Property Boundary | \$2,643.36 |
| 59 | Waste Water | \$3,907.44 |
| 60 | Disconnect Waste Water at Property Boundary | \$3,907.44 |
| 61 | Unleaded Gasoline Fueling Station | \$2,528.16 |
| 62 | Drain the Unleaded Gasoline Fueling Station | \$2,528.16 |
| 63 | Post Retirement Closure Activity | \$45,152.00 |
| 64 | Post Retirement Closure Activity | \$45,152.00 |

| Northeast Retirement | | | Quarter | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | |
|----------------------|---|-----------------|---------|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|--|
| ID | Task Name | Duration | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| 1 | Northeast Retirement | 250 days | | | | | | | | | | | | | | | | | | | | | |
| 2 | Pre-Retirement Activities | 40 days | | | | | | | | | | | | | | | | | | | | | |
| 3 | Permitting Review | 20 days | | | | | | | | | | | | | | | | | | | | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | | | | | | | | | | | | | | | | | | | |
| 5 | Retirement Activities | 170 days | | | | | | | | | | | | | | | | | | | | | |
| 6 | Project Management During Retirement | 170 days | | | | | | | | | | | | | | | | | | | | | |
| 7 | Project Management During Retirement | 170 days | | | | | | | | | | | | | | | | | | | | | |
| 8 | Electrical | 96 days | | | | | | | | | | | | | | | | | | | | | |
| 9 | Medium and Low Voltage Drawout Switchgear | 27 days | | | | | | | | | | | | | | | | | | | | | |
| 10 | De-energize all buses at the source. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 11 | Open all circuit breakers. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 13 | Verify that the closing/tripping springs are discharged. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 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. | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 15 | Motor Control Centers | 13 days | | | | | | | | | | | | | | | | | | | | | |
| 16 | De-energize all buses at the source. | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 17 | Open all circuit breakers and disconnect switches. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 18 | Remove all fuses in control circuits. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 19 | Low-voltage Switchboards and Panelboards | 12 days | | | | | | | | | | | | | | | | | | | | | |
| 20 | De-energize all buses at the source. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 21 | Open all circuit breakers and disconnect switches. | 6 days | | | | | | | | | | | | | | | | | | | | | |
| 22 | Oil-Filled Power Transformers | 20 days | | | | | | | | | | | | | | | | | | | | | |
| 23 | De-energize all buses at the source. | 5 days | | | | | | | | | | | | | | | | | | | | | |

| Northeast Retirement | | | Quarter | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | | |
|----------------------|---|----------------|---------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-----|--|
| ID | Task Name | Duration | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| 24 | Open all circuit breakers and disconnect switches. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 25 | De-energize all buses at the source. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 26 | Open all circuit breakers and disconnect switches. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 27 | Dry-type Power Transformers | 9 days | | | | | | | | | | | | | | | | | | | | | |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 29 | 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 | | | | | | | | | | | | | | | | | | | | | |
| 30 | Motors | 15 days | | | | | | | | | | | | | | | | | | | | | |
| 31 | De-energize all primary power at the source. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 34 | Fuel Oil System | 5 days | | | | | | | | | | | | | | | | | | | | | |
| 35 | Isolate Fuel Oil System | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 36 | Drain and Vent Fuel Oil Piping | 2 days | | | | | | | | | | | | | | | | | | | | | |
| 37 | Lube Oil Cooling Water System | 11 days | | | | | | | | | | | | | | | | | | | | | |
| 38 | Open and Drain the Water Side of the Lube Oil Coolers | 8 days | | | | | | | | | | | | | | | | | | | | | |
| 39 | Open and Vent the Coolers and Expansion Tank | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 40 | Oily Drain Tank | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 41 | Open and Pump Out the Oily Drain Tank | 3 days | | | | | | | | | | | | | | | | | | | | | |
| 42 | Compressed Air | 4 days | | | | | | | | | | | | | | | | | | | | | |

Northeast Dismantlement

Owner Costs

| | |
|-------------------------------|-------------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$1,286,709 |
| Post-Dismantlement Activities | \$65,520 |

Owner Costs Total \$2,244,989

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$701,395 |
| Equipment Rental | \$1,194,283 |
| Consummables | \$1,191,511 |
| Scrap Crew(s) | \$313,684 |
| Dismantlement | \$1,095,024 |

DGC Insurance 2.00% \$89,918

Contingency/Profit 15.00% \$687,872

Performance Bond 2.00% \$105,474

Contractor Costs Total: \$5,379,161

Total: \$7,624,150

Owner Internal Costs: 5.00% \$381,208

Owner Contingency: 25.00% \$2,001,339

Northeast Dismantlement Opinion of Probable Cost: \$10,006,697

| Northeast Dismantlement | | |
|-------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | Northeast CT Dismantlement | \$6,740,888.68 |
| 2 | Pre-Demolition Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$1,286,709.60 |
| 9 | KCP&L Project Manager | \$204,468.00 |
| 10 | KCP&L Administrative Support | \$75,609.60 |
| 11 | KCP&L Engineer | \$336,072.00 |
| 12 | Owners Engineer Project Manager | \$100,320.00 |
| 13 | Owners Engineer - Engineer | \$570,240.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$701,395.20 |
| 15 | Demolition Contractor Project Manager | \$198,448.80 |
| 16 | Demolition Contractor Safety Manager | \$176,695.20 |
| 17 | Demolition Contractor Superintendent | \$326,251.20 |
| 18 | Demolition Contractor Equipment Rental Cost | \$1,194,283.20 |
| 19 | Equipment Rental | \$1,194,283.20 |
| 20 | Demolition Contractor Consumables | \$1,191,511.20 |
| 21 | Consumables | \$1,191,511.20 |
| 22 | Scrap Crews | \$313,684.80 |
| 23 | Crew to Handle Scrap Material(s) | \$313,684.80 |
| 24 | Dismantlement | \$1,095,024.36 |
| 25 | Electrical | \$232,876.80 |
| 26 | Electrical Demolition of Equipment | \$232,876.80 |
| 27 | Fuel Oil System | \$26,286.40 |
| 28 | Remove Above Ground Fuel Oil Piping | \$8,372.80 |
| 29 | Fuel Skids | \$17,913.60 |
| 30 | Lube Oil System | \$62,697.60 |
| 31 | Lube Oil Piping | \$26,870.40 |
| 32 | Lube Oil Pumps | \$17,913.60 |
| 33 | Lube Oil Tanks | \$17,913.60 |
| 34 | Fire Protection | \$59,114.88 |
| 35 | Fire Protection Piping | \$28,661.76 |
| 36 | Firewater Tank | \$16,122.24 |
| 37 | CO2 Storage Tank | \$14,330.88 |
| 38 | Miscellaneous Piping | \$84,193.92 |
| 39 | Exhaust Frame Cooling Piping | \$26,870.40 |
| 40 | CT Air Processing Piping | \$30,453.12 |
| 41 | Inlet Air Heating Piping | \$26,870.40 |
| 42 | Generator | \$89,568.00 |
| 43 | Generator | \$89,568.00 |
| 44 | Combustion Turbine | \$254,373.12 |

| Northeast Dismantlement | | |
|-------------------------|--------------------------------------|---------------------|
| ID | Task Name | Cost |
| 45 | Inlet Heater | \$17,913.60 |
| 46 | Inlet duct | \$30,453.12 |
| 47 | Exhaust duct | \$35,827.20 |
| 48 | Combustion Turbine | \$107,481.60 |
| 49 | Combustion Turbine Foundation | \$26,870.40 |
| 50 | Enclosure | \$35,827.20 |
| 51 | CEMS | \$17,913.60 |
| 52 | CEMS Building | \$8,956.80 |
| 53 | CEMS Building Foundation | \$8,956.80 |
| 54 | Stack | \$71,654.40 |
| 55 | Stacks | \$71,654.40 |
| 56 | Site Buildings | \$17,913.60 |
| 57 | Remove Site Buildings | \$17,913.60 |
| 58 | Site Prep | \$178,432.04 |
| 59 | Final Grading and Drainage | \$178,432.04 |
| 60 | Post Dismantlement Activities | \$65,520.00 |
| 61 | Post Dismantlement Activities | \$65,520.00 |

| Northeast Dismantlement | | | | 1st Quarter | | 1st Quarter | |
|-------------------------|--|-----------------|-----|-------------|-----|-------------|--|
| ID | Task Name | Duration | Jan | Jan | Jan | Jan | |
| 1 | Northeast CT Dismantlement | 944 days | | | | | |
| 2 | Pre-Demolition Activities | 130 days | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 330 days | | | | | |
| 9 | KCP&L Project Manager | 330 days | | | | | |
| 10 | KCP&L Administrative Support | 330 days | | | | | |
| 11 | KCP&L Engineer | 330 days | | | | | |
| 12 | Owners Engineer Project Manager | 330 days | | | | | |
| 13 | Owners Engineer - Engineer | 330 days | | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 330 days | | | | | |
| 15 | Demolition Contractor Project Manager | 330 days | | | | | |
| 16 | Demolition Contractor Safety Manager | 330 days | | | | | |
| 17 | Demolition Contractor Superintendent | 330 days | | | | | |
| 18 | Demolition Contractor Equipment Rental Cost | 330 days | | | | | |
| 19 | Equipment Rental | 330 days | | | | | |
| 20 | Demolition Contractor Consumables | 330 days | | | | | |
| 21 | Consumables | 330 days | | | | | |
| 22 | Scrap Crews | 330 days | | | | | |
| 23 | Crew to Handle Scrap Material(s) | 330 days | | | | | |
| 24 | Dismantlement | 330 days | | | | | |
| 25 | Electrical | 130 days | | | | | |
| 26 | Electrical Demolition of Equipment | 130 days | | | | | |
| 27 | Fuel Oil System | 25 days | | | | | |
| 28 | Remove Above Ground Fuel Oil Piping | 15 days | | | | | |
| 29 | Fuel Skids | 10 days | | | | | |
| 30 | Lube Oil System | 35 days | | | | | |
| 31 | Lube Oil Piping | 15 days | | | | | |

| Northeast Dismantlement | | | | 1st Quarter | | 1st Quarter | |
|-------------------------|--------------------------------------|-----------------|--|-------------|-----|-------------|-----|
| ID | Task Name | Duration | | Jan | Jan | Jan | Jan |
| 32 | Lube Oil Pumps | 10 days | | | | | |
| 33 | Lube Oil Tanks | 10 days | | | | | |
| 34 | Fire Protection | 33 days | | | | | |
| 35 | Fire Protection Piping | 16 days | | | | | |
| 36 | Firewater Tank | 9 days | | | | | |
| 37 | CO2 Storage Tank | 8 days | | | | | |
| 38 | Miscellaneous Piping | 47 days | | | | | |
| 39 | Exhaust Frame Cooling Piping | 15 days | | | | | |
| 40 | CT Air Processing Piping | 17 days | | | | | |
| 41 | Inlet Air Heating Piping | 15 days | | | | | |
| 42 | Generator | 50 days | | | | | |
| 43 | Generator | 50 days | | | | | |
| 44 | Combustion Turbine | 142 days | | | | | |
| 45 | Inlet Heater | 10 days | | | | | |
| 46 | Inlet duct | 17 days | | | | | |
| 47 | Exhaust duct | 20 days | | | | | |
| 48 | Combustion Turbine | 60 days | | | | | |
| 49 | Combustion Turbine Foundation | 15 days | | | | | |
| 50 | Enclosure | 20 days | | | | | |
| 51 | CEMS | 10 days | | | | | |
| 52 | CEMS Building | 5 days | | | | | |
| 53 | CEMS Building Foundation | 5 days | | | | | |
| 54 | Stack | 40 days | | | | | |
| 55 | Stacks | 40 days | | | | | |
| 56 | Site Buildings | 10 days | | | | | |
| 57 | Remove Site Buildings | 10 days | | | | | |
| 58 | Site Prep | 65 days | | | | | |
| 59 | Final Grading and Drainage | 65 days | | | | | |
| 60 | Post Dismantlement Activities | 40 days | | | | | |
| 61 | Post Dismantlement Activities | 40 days | | | | | |

HAWTHORN UNITS 7 AND 8

HAWTHORN UNITS 7 AND 8

Hawthorn Units 7 and 8 are twin natural gas-fired combustion turbine generator sets that were added to the existing Hawthorn Generating Station in 2000.

Each of these combustion turbines has an SPP-accredited unit rating of 77 MW and is comprised of a General Electric Model 7EA combustion turbine. The pair is interconnected to the grid through a single, three-winding generator step-up transformer arrangement. Each combustion turbine employs dry low NO_x burner technology and burns only natural gas fuel.

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).

HAWTHORN UNITS 7 AND 8

1. Combustion turbine generator sets and auxiliaries (two).
2. Generator step-up and auxiliary transformers (one).
3. Freestanding outdoor switchgear.
4. Exhaust stacks.

COMMON

1. Natural gas filtering skid.
2. Service/Instrument air compressors.

Hawthorn 7 & 8 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$43,834 |
| Retirement Activities | \$173,455 |
| Post-Retirement Activities | \$45,152 |

Owner Direct Total \$262,441

Owner Internal Costs 5.00% \$13,122

Owner Contingency: 25.00% \$68,891

Hawthorn 7 & 8 Retirement Opinion of Probable Cost: \$344,453.81

| Hawthorn 7 & 8 Retirement | | |
|---------------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Hawthorn 7&8 Retirement | \$262,441.02 |
| 2 | Pre-Retirement Activities | \$43,834.00 |
| 3 | Permitting Review | \$23,466.00 |
| 4 | Develop Detailed Retirement Plan | \$20,368.00 |
| 5 | Retirement Activities | \$173,455.02 |
| 6 | Project Management During Retirement | \$98,648.46 |
| 7 | Project Management During Retirement | \$98,648.46 |
| 8 | Electrical | \$74,806.56 |
| 9 | Medium and Low Voltage Drawout Switchgear | \$8,039.52 |
| 10 | De-energize all buses at the source. | \$893.28 |
| 11 | Open all circuit breakers. | \$1,786.56 |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$1,786.56 |
| 13 | Verify that the closing/tripping springs are discharged. | \$1,786.56 |
| 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. | \$1,786.56 |
| 15 | Motor Control Centers | \$4,466.40 |
| 16 | De-energize all buses at the source. | \$893.28 |
| 17 | Open all circuit breakers and disconnect switches. | \$1,786.56 |
| 18 | Remove all fuses in control circuits. | \$1,786.56 |
| 19 | Low-voltage Switchboards and Panelboards | \$2,679.84 |
| 20 | De-energize all buses at the source. | \$893.28 |
| 21 | Open all circuit breakers and disconnect switches. | \$1,786.56 |
| 22 | Oil-Filled Power Transformers | \$6,252.96 |
| 23 | De-energize all buses at the source. | \$893.28 |
| 24 | Open all circuit breakers and disconnect switches. | \$1,786.56 |
| 25 | De-energize all buses at the source. | \$1,786.56 |
| 26 | Open all circuit breakers and disconnect switches. | \$1,786.56 |
| 27 | Dry-type Power Transformers | \$3,573.12 |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$1,786.56 |
| 29 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$1,786.56 |
| 30 | Motors | \$6,252.96 |
| 31 | De-energize all primary power at the source. | \$893.28 |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$1,786.56 |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | \$3,573.12 |
| 34 | Fuel Gas System | \$10,783.04 |
| 35 | Isolate Fuel Gas System | \$3,907.44 |
| 36 | Vent Fuel Gas Piping and Equipment | \$2,528.16 |

Hawthorn 7 & 8 Retirement

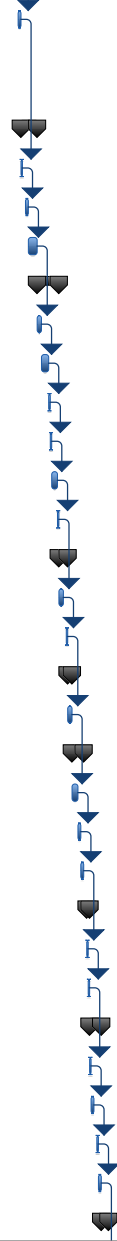
| ID | Task Name | Cost |
|----|---|--------------------|
| 37 | Open and Vent Knock-Out Drum | \$861.84 |
| 38 | Drain, Open and Vent the Drain Tank | \$861.84 |
| 39 | Empty the Coalescing Filter | \$1,761.92 |
| 40 | Open and Vent Equipment on the CT Gas Valve Module | \$861.84 |
| 41 | Lube Oil Cooling Water System | \$3,447.36 |
| 42 | Open and Drain the Water Side of the Lube Oil Coolers | \$2,585.52 |
| 43 | Open and Vent the Coolers and Expansion Tank | \$861.84 |
| 44 | Oily Drain Tank | \$3,954.00 |
| 45 | Open and Pump Out the Oily Drain Tank | \$3,954.00 |
| 46 | Wash Water Skid | \$5,171.04 |
| 47 | Open and Drain the Detergent Tank | \$1,723.68 |
| 48 | Open and Drain the Demineralized Water Tank | \$1,723.68 |
| 49 | Empty the Demineralized Water Tank | \$1,723.68 |
| 50 | Compressed Air | \$1,723.68 |
| 51 | Empty Dessiccant Air Dryers and Vent | \$861.84 |
| 52 | Open and Vent the Air Reciever | \$861.84 |
| 53 | Miscelleaneous Piping | \$5,171.04 |
| 54 | Open and Vent the Exhaust Frame Cooling Piping | \$861.84 |
| 55 | Open and Vent the CT Air Processing Piping | \$1,723.68 |
| 56 | Open and Vent the Inlet Air Heating Piping | \$861.84 |
| 57 | Open and Vent the CT Air Processing Piping | \$1,723.68 |
| 58 | Fire Protection Piping | \$3,428.24 |
| 59 | Empty the CO2 Storage Tank | \$2,566.40 |
| 60 | Open and Vent the Fire Protection Piping | \$861.84 |
| 61 | Lube Oil System | \$9,863.36 |
| 62 | Empty and Remove from Site the Lubricating Oil | \$6,416.00 |
| 63 | Drain Lubricating Oil Piping | \$2,585.52 |
| 64 | Open and Vent Lubricating Oil Piping | \$861.84 |
| 65 | Post Retirement Closure Activity | \$45,152.00 |
| 66 | Post Retirement Closure Activity | \$45,152.00 |

Hawthorn 7 & 8 Retirement

| ID | Task Name | Duration | 2013 | | | | | |
|----|---|-----------------|-------|-------|-------|---------------------------------|-------|-------|
| | | | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 |
| 1 | Hawthorn 7&8 Retirement | 163 days | | | | [Gantt bar spanning Q1, Q2, Q3] | | |
| 2 | Pre-Retirement Activities | 40 days | | | | [Gantt bar in Q1] | | |
| 3 | Permitting Review | 20 days | | | | [Gantt bar in Q1] | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | | [Gantt bar in Q1] | | |
| 5 | Retirement Activities | 123 days | | | | [Gantt bar in Q1, Q2, Q3] | | |
| 6 | Project Management During Retirement | 123 days | | | | [Gantt bar in Q1, Q2, Q3] | | |
| 7 | Project Management During Retirement | 123 days | | | | [Gantt bar in Q1, Q2, Q3] | | |
| 8 | Electrical | 79 days | | | | [Gantt bar in Q1, Q2, Q3] | | |
| 9 | Medium and Low Voltage Drawout Switchgear | 9 days | | | | [Gantt bar in Q1] | | |
| 10 | De-energize all buses at the source. | 1 day | | | | [Gantt bar in Q1] | | |
| 11 | Open all circuit breakers. | 2 days | | | | [Gantt bar in Q1] | | |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 2 days | | | | [Gantt bar in Q1] | | |
| 13 | Verify that the closing/tripping springs are discharged. | 2 days | | | | [Gantt bar in Q1] | | |
| 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. | 2 days | | | | [Gantt bar in Q1] | | |
| 15 | Motor Control Centers | 5 days | | | | [Gantt bar in Q1] | | |
| 16 | De-energize all buses at the source. | 1 day | | | | [Gantt bar in Q1] | | |
| 17 | Open all circuit breakers and disconnect switches. | 2 days | | | | [Gantt bar in Q1] | | |
| 18 | Remove all fuses in control circuits. | 2 days | | | | [Gantt bar in Q1] | | |
| 19 | Low-voltage Switchboards and Panelboards | 3 days | | | | [Gantt bar in Q1] | | |
| 20 | De-energize all buses at the source. | 1 day | | | | [Gantt bar in Q1] | | |
| 21 | Open all circuit breakers and disconnect switches. | 2 days | | | | [Gantt bar in Q1] | | |
| 22 | Oil-Filled Power Transformers | 7 days | | | | [Gantt bar in Q1] | | |
| 23 | De-energize all buses at the source. | 1 day | | | | [Gantt bar in Q1] | | |
| 24 | Open all circuit breakers and disconnect switches. | 2 days | | | | [Gantt bar in Q1] | | |
| 25 | De-energize all buses at the source. | 2 days | | | | [Gantt bar in Q1] | | |
| 26 | Open all circuit breakers and disconnect switches. | 2 days | | | | [Gantt bar in Q1] | | |
| 27 | Dry-type Power Transformers | 4 days | | | | [Gantt bar in Q1] | | |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | 2 days | | | | [Gantt bar in Q1] | | |

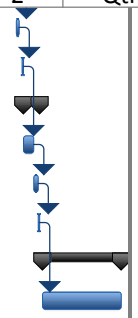
Hawthorn 7 & 8 Retirement

| ID | Task Name | Duration | 2013 | | | | | | |
|----|---|----------------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | |
| 29 | 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. | 2 days | | | | | | | |
| 30 | Motors | 7 days | | | | | | | |
| 31 | De-energize all primary power at the source. | 1 day | | | | | | | |
| 32 | De-energize all low-voltage power sources for space heaters or | 2 days | | | | | | | |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | 4 days | | | | | | | |
| 34 | Fuel Gas System | 11 days | | | | | | | |
| 35 | Isolate Fuel Gas System | 3 days | | | | | | | |
| 36 | Vent Fuel Gas Piping and Equipment | 3 days | | | | | | | |
| 37 | Open and Vent Knock-Out Drum | 1 day | | | | | | | |
| 38 | Drain, Open and Vent the Drain Tank | 1 day | | | | | | | |
| 39 | Empty the Coalescing Filter | 2 days | | | | | | | |
| 40 | Open and Vent Equipment on the CT Gas Valve Module | 1 day | | | | | | | |
| 41 | Lube Oil Cooling Water System | 4 days | | | | | | | |
| 42 | Open and Drain the Water Side of the Lube Oil Coolers | 3 days | | | | | | | |
| 43 | Open and Vent the Coolers and Expansion Tank | 1 day | | | | | | | |
| 44 | Oily Drain Tank | 3 days | | | | | | | |
| 45 | Open and Pump Out the Oily Drain Tank | 3 days | | | | | | | |
| 46 | Wash Water Skid | 6 days | | | | | | | |
| 47 | Open and Drain the Detergent Tank | 2 days | | | | | | | |
| 48 | Open and Drain the Demineralized Water Tank | 2 days | | | | | | | |
| 49 | Empty the Demineralized Water Tank | 2 days | | | | | | | |
| 50 | Compressed Air | 2 days | | | | | | | |
| 51 | Empty Dessiccant Air Dryers and Vent | 1 day | | | | | | | |
| 52 | Open and Vent the Air Reciever | 1 day | | | | | | | |
| 53 | Miscelleaneous Piping | 6 days | | | | | | | |
| 54 | Open and Vent the Exhaust Frame Cooling Piping | 1 day | | | | | | | |
| 55 | Open and Vent the CT Air Processing Piping | 2 days | | | | | | | |
| 56 | Open and Vent the Inlet Air Heating Piping | 1 day | | | | | | | |
| 57 | Open and Vent the CT Air Processing Piping | 2 days | | | | | | | |
| 58 | Fire Protection Piping | 3 days | | | | | | | |



Hawthorn 7 & 8 Retirement

| ID | Task Name | Duration | 2013 | | | | | | |
|----|--|----------------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | |
| 59 | Empty the CO2 Storage Tank | 2 days | | | | | | | |
| 60 | Open and Vent the Fire Protection Piping | 1 day | | | | | | | |
| 61 | Lube Oil System | 9 days | | | | | | | |
| 62 | Empty and Remove from Site the Lubricating Oil | 5 days | | | | | | | |
| 63 | Drain Lubricating Oil Piping | 3 days | | | | | | | |
| 64 | Open and Vent Lubricating Oil Piping | 1 day | | | | | | | |
| 65 | Post Retirement Closure Activity | 40 days | | | | | | | |
| 66 | Post Retirement Closure Activity | 40 days | | | | | | | |



Hawthorn 7 & 8 Dismantlement

Owner Costs

| | |
|-------------------------------|-----------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$916,293 |
| Post-Dismantlement Activities | \$32,760 |

Owner Costs Total \$1,841,814

Demolition General Contractor (DGC) Costs

| | |
|------------------|-----------|
| Site Management | \$499,478 |
| Equipment Rental | \$850,474 |
| Consumables | \$848,500 |
| Scrap Crew(s) | \$223,381 |
| Dismantlement | \$558,191 |

DGC Insurance 2.00% \$59,600

Contingency/Profit 15.00% \$455,944

Performance Bond 2.00% \$69,911

Contractor Costs Total: \$3,565,480

Total: \$5,407,293

Owner Internal Costs: 5.00% \$270,365

Owner Contingency: 25.00% \$1,419,414

Hawthorn 7 & 8 Dismantlement Opinion of Probable Cost: \$7,097,072

| Hawthorn 7 & 8 Dismantlement | | |
|------------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | Hawthorn 7&8 Dismantlement | \$4,821,840.52 |
| 2 | Pre-Demolition Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$916,293.24 |
| 9 | KCP&L Project Manager | \$145,606.01 |
| 10 | KCP&L Administrative Support | \$53,843.21 |
| 11 | KCP&L Engineer | \$239,324.02 |
| 12 | Owners Engineer Project Manager | \$71,440.00 |
| 13 | Owners Engineer - Engineer | \$406,080.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$499,478.45 |
| 15 | Demolition Contractor Project Manager | \$141,319.61 |
| 16 | Demolition Contractor Safety Manager | \$125,828.41 |
| 17 | Demolition Contractor Superintendent | \$232,330.42 |
| 18 | Demolition Contractor Equipment Rental Cost | \$850,474.48 |
| 19 | Equipment Rental | \$850,474.48 |
| 20 | Demolition Contractor Consumables | \$848,500.48 |
| 21 | Consumables | \$848,500.48 |
| 22 | Scrap Crews | \$223,381.62 |
| 23 | Crew to Handle Scrap Material(s) | \$223,381.62 |
| 24 | Dismantlement | \$558,191.92 |
| 25 | Electrical | \$161,222.40 |
| 26 | Electrical Demolition of Equipment | \$161,222.40 |
| 27 | Fuel Gas System | \$15,409.84 |
| 28 | Remove all above grade fuel gas piping. | \$4,661.68 |
| 29 | Gas Filter Skid | \$10,748.16 |
| 30 | Lube Oil System | \$35,827.20 |
| 31 | Lube Oil Piping | \$8,956.80 |
| 32 | Lube Oil Pumps | \$8,956.80 |
| 33 | Lube Oil Tanks | \$17,913.60 |
| 34 | Fire Protection | \$39,409.92 |
| 35 | Fire Protection Piping | \$17,913.60 |
| 36 | Firewater Tank | \$14,330.88 |
| 37 | CO2 Storage Tank | \$7,165.44 |
| 38 | Wash Water Skid | \$14,330.88 |
| 39 | Detergent Tank | \$7,165.44 |
| 40 | Demineralized Water Tank | \$7,165.44 |
| 41 | Miscellaneous Piping | \$50,158.08 |
| 42 | Exhaust Frame Cooling Piping | \$14,330.88 |
| 43 | CT Air Processing Piping | \$17,913.60 |
| 44 | Inlet Air Heating Piping | \$17,913.60 |

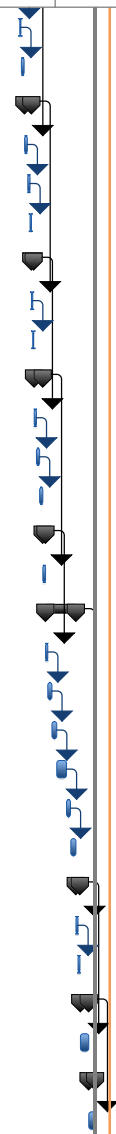
| Hawthorn 7 & 8 Dismantlement | | |
|------------------------------|--------------------------------------|---------------------|
| ID | Task Name | Cost |
| 45 | Generator | \$0.00 |
| 46 | Generator | \$0.00 |
| 47 | Combustion Turbine | \$170,179.20 |
| 48 | Inlet Heater | \$14,330.88 |
| 49 | Inlet duct | \$21,496.32 |
| 50 | Exhaust duct | \$26,870.40 |
| 51 | Combustion Turbine | \$55,532.16 |
| 52 | Combustion Turbine Foundation | \$23,287.68 |
| 53 | Enclosure | \$28,661.76 |
| 54 | CEMS | \$25,079.04 |
| 55 | CEMS Building | \$12,539.52 |
| 56 | CEMS Building Foundation | \$12,539.52 |
| 57 | Stack | \$46,575.36 |
| 58 | Stack | \$46,575.36 |
| 59 | Post Dismantlement Activities | \$32,760.00 |
| 60 | Post Dismantlement Activities | \$32,760.00 |

Hawthorn 7 & 8 Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|--|-----------------|-------------|-----|-------------|-----|
| | | | Jan | Jan | Jan | Jan |
| 1 | Hawthorn 7&8 Dismantlement | 385 days | | | | |
| 2 | Pre-Demolition Activities | 130 days | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | |
| 8 | KCP&L Overhead during Dismantlement | 235 days | | | | |
| 9 | KCP&L Project Manager | 235 days | | | | |
| 10 | KCP&L Administrative Support | 235 days | | | | |
| 11 | KCP&L Engineer | 235 days | | | | |
| 12 | Owners Engineer Project Manager | 235 days | | | | |
| 13 | Owners Engineer - Engineer | 235 days | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 235 days | | | | |
| 15 | Demolition Contractor Project Manager | 235 days | | | | |
| 16 | Demolition Contractor Safety Manager | 235 days | | | | |
| 17 | Demolition Contractor Superintendent | 235 days | | | | |
| 18 | Demolition Contractor Equipment Rental Cost | 235 days | | | | |
| 19 | Equipment Rental | 235 days | | | | |
| 20 | Demolition Contractor Consumables | 235 days | | | | |
| 21 | Consumables | 235 days | | | | |
| 22 | Scrap Crews | 235 days | | | | |
| 23 | Crew to Handle Scrap Material(s) | 235 days | | | | |
| 24 | Dismantlement | 235 days | | | | |
| 25 | Electrical | 90 days | | | | |
| 26 | Electrical Demolition of Equipment | 90 days | | | | |
| 27 | Fuel Gas System | 14 days | | | | |
| 28 | Remove all above grade fuel gas piping. | 8 days | | | | |
| 29 | Gas Filter Skid | 6 days | | | | |
| 30 | Lube Oil System | 20 days | | | | |
| 31 | Lube Oil Piping | 5 days | | | | |

Hawthorn 7 & 8 Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|--------------------------------------|----------------|-------------|-----|-------------|-----|
| | | | Jan | Jan | Jan | Jan |
| 32 | Lube Oil Pumps | 5 days | | | | |
| 33 | Lube Oil Tanks | 10 days | | | | |
| 34 | Fire Protection | 22 days | | | | |
| 35 | Fire Protection Piping | 10 days | | | | |
| 36 | Firewater Tank | 8 days | | | | |
| 37 | CO2 Storage Tank | 4 days | | | | |
| 38 | Wash Water Skid | 8 days | | | | |
| 39 | Detergent Tank | 4 days | | | | |
| 40 | Demineralized Water Tank | 4 days | | | | |
| 41 | Miscellaneous Piping | 28 days | | | | |
| 42 | Exhaust Frame Cooling Piping | 8 days | | | | |
| 43 | CT Air Processing Piping | 10 days | | | | |
| 44 | Inlet Air Heating Piping | 10 days | | | | |
| 45 | Generator | 8 days | | | | |
| 46 | Generator | 8 days | | | | |
| 47 | Combustion Turbine | 95 days | | | | |
| 48 | Inlet Heater | 8 days | | | | |
| 49 | Inlet duct | 12 days | | | | |
| 50 | Exhaust duct | 15 days | | | | |
| 51 | Combustion Turbine | 31 days | | | | |
| 52 | Combustion Turbine Foundation | 13 days | | | | |
| 53 | Enclosure | 16 days | | | | |
| 54 | CEMS | 14 days | | | | |
| 55 | CEMS Building | 7 days | | | | |
| 56 | CEMS Building Foundation | 7 days | | | | |
| 57 | Stack | 26 days | | | | |
| 58 | Stack | 26 days | | | | |
| 59 | Post Dismantlement Activities | 20 days | | | | |
| 60 | Post Dismantlement Activities | 20 days | | | | |



WEST GARDNER

WEST GARDNER

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

Combined these combustion turbines have an SPP-accredited unit rating of 310 MW. West Gardner was placed in service in 2003. Each unit is comprised of a General Electric Model 7EA CT, with a generator step-up transformer and auxiliary power transformer. Each combustion turbine employs dry low NO_x burner technology and burns only natural gas fuel.

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).

WEST GARDNER UNITS 1 THROUGH 4

1. Combustion turbine generator sets and auxiliaries.
2. Generator step-up and auxiliary transformers.
3. Freestanding outdoor switchgear.
4. Exhaust stacks.

COMMON

1. Service building.
2. Natural gas filtering skid.
3. Service/Instrument air compressors.

West Gardner Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$43,834 |
| Retirement Activities | \$215,500 |
| Post-Retirement Activities | \$45,152 |

Owner Direct Total \$304,486

Owner Internal Costs: 5.00% \$15,224

Owner Contingency: 25.00% \$79,928

West Gardner Retirement Opinion of Probable Cost: \$399,637.88

| West Gardner Retirement | | |
|-------------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | West Gardner Retirement | \$304,486.04 |
| 2 | Pre-Retirement Activities | \$43,834.00 |
| 3 | Permitting Review | \$23,466.00 |
| 4 | Develop Detailed Retirement Plan | \$20,368.00 |
| 5 | Retirement Activities | \$215,500.04 |
| 6 | Project Management During Retirement | \$101,054.52 |
| 7 | Project Management During Retirement | \$101,054.52 |
| 8 | Electrical | \$54,490.08 |
| 9 | Medium and Low Voltage Drawout Switchgear | \$16,079.04 |
| 10 | De-energize all buses at the source. | \$3,573.12 |
| 11 | Open all circuit breakers. | \$3,573.12 |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | \$3,573.12 |
| 13 | Verify that the closing/tripping springs are discharged. | \$3,573.12 |
| 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. | \$1,786.56 |
| 15 | Motor Control Centers | \$7,146.24 |
| 16 | De-energize all buses at the source. | \$1,786.56 |
| 17 | Open all circuit breakers and disconnect switches. | \$2,679.84 |
| 18 | Remove all fuses in control circuits. | \$2,679.84 |
| 19 | Low-voltage Switchboards and Panelboards | \$7,146.24 |
| 20 | De-energize all buses at the source. | \$3,573.12 |
| 21 | Open all circuit breakers and disconnect switches. | \$3,573.12 |
| 22 | Oil-Filled Power Transformers | \$10,719.36 |
| 23 | De-energize all buses at the source. | \$2,679.84 |
| 24 | Open all circuit breakers and disconnect switches. | \$2,679.84 |
| 25 | De-energize all buses at the source. | \$2,679.84 |
| 26 | Open all circuit breakers and disconnect switches. | \$2,679.84 |
| 27 | Dry-type Power Transformers | \$4,466.40 |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$2,679.84 |
| 29 | De-energize all low-voltage AC or DC power sources for space heaters, cooling equipment, controls, etc. at the source and open circuit breakers or remove fuses at transformer end. | \$1,786.56 |
| 30 | Motors | \$8,932.80 |
| 31 | De-energize all primary power at the source. | \$2,679.84 |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$2,679.84 |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | \$3,573.12 |
| 34 | Fuel Gas System | \$10,783.04 |
| 35 | Isolate Fuel Gas System | \$3,907.44 |
| 36 | Vent Fuel Gas Piping and Equipment | \$2,528.16 |

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

West Gardner Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Q |
|----|---|-----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
| 1 | West Gardner Retirement | 206 days | | | | | | | | | | | | | | | | | | | |
| 2 | Pre-Retirement Activities | 40 days | | | | | | | | | | | | | | | | | | | |
| 3 | Permitting Review | 20 days | | | | | | | | | | | | | | | | | | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | | | | | | | | | | | | | | | | | |
| 5 | Retirement Activities | 126 days | | | | | | | | | | | | | | | | | | | |
| 6 | Project Management During Retirement | 126 days | | | | | | | | | | | | | | | | | | | |
| 7 | Project Management During Retirement | 126 days | | | | | | | | | | | | | | | | | | | |
| 8 | Electrical | 61 days | | | | | | | | | | | | | | | | | | | |
| 9 | Medium and Low Voltage Drawout Switchgear | 18 days | | | | | | | | | | | | | | | | | | | |
| 10 | De-energize all buses at the source. | 4 days | | | | | | | | | | | | | | | | | | | |
| 11 | Open all circuit breakers. | 4 days | | | | | | | | | | | | | | | | | | | |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 4 days | | | | | | | | | | | | | | | | | | | |
| 13 | Verify that the closing/tripping springs are discharged. | 4 days | | | | | | | | | | | | | | | | | | | |
| 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. | 2 days | | | | | | | | | | | | | | | | | | | |
| 15 | Motor Control Centers | 8 days | | | | | | | | | | | | | | | | | | | |
| 16 | De-energize all buses at the source. | 2 days | | | | | | | | | | | | | | | | | | | |
| 17 | Open all circuit breakers and disconnect switches. | 3 days | | | | | | | | | | | | | | | | | | | |
| 18 | Remove all fuses in control circuits. | 3 days | | | | | | | | | | | | | | | | | | | |
| 19 | Low-voltage Switchboards and Panelboards | 8 days | | | | | | | | | | | | | | | | | | | |
| 20 | De-energize all buses at the source. | 4 days | | | | | | | | | | | | | | | | | | | |
| 21 | Open all circuit breakers and disconnect switches. | 4 days | | | | | | | | | | | | | | | | | | | |
| 22 | Oil-Filled Power Transformers | 12 days | | | | | | | | | | | | | | | | | | | |
| 23 | De-energize all buses at the source. | 3 days | | | | | | | | | | | | | | | | | | | |

West Gardner Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Q |
|----|---|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
| 24 | Open all circuit breakers and disconnect switches. | 3 days | | | | | | | | | | | | | | | | | | | |
| 25 | De-energize all buses at the source. | 3 days | | | | | | | | | | | | | | | | | | | |
| 26 | Open all circuit breakers and disconnect switches. | 3 days | | | | | | | | | | | | | | | | | | | |
| 27 | Dry-type Power Transformers | 5 days | | | | | | | | | | | | | | | | | | | |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | 3 days | | | | | | | | | | | | | | | | | | | |
| 29 | 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. | 2 days | | | | | | | | | | | | | | | | | | | |
| 30 | Motors | 10 days | | | | | | | | | | | | | | | | | | | |
| 31 | De-energize all primary power at the source. | 3 days | | | | | | | | | | | | | | | | | | | |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 3 days | | | | | | | | | | | | | | | | | | | |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | 4 days | | | | | | | | | | | | | | | | | | | |
| 34 | Fuel Gas System | 11 days | | | | | | | | | | | | | | | | | | | |
| 35 | Isolate Fuel Gas System | 3 days | | | | | | | | | | | | | | | | | | | |
| 36 | Vent Fuel Gas Piping and Equipment | 3 days | | | | | | | | | | | | | | | | | | | |
| 37 | Open and Vent Knock-Out Drum | 1 day | | | | | | | | | | | | | | | | | | | |
| 38 | Drain, Open and Vent the Drain Tank | 1 day | | | | | | | | | | | | | | | | | | | |
| 39 | Empty the Coalescing Filter | 2 days | | | | | | | | | | | | | | | | | | | |
| 40 | Open and Vent Equipment on the CT Gas Valve Module | 1 day | | | | | | | | | | | | | | | | | | | |
| 41 | Lube Oil Cooling Water System | 9 days | | | | | | | | | | | | | | | | | | | |
| 42 | Open and Drain the Water Side of the Lube Oil Coolers | 6 days | | | | | | | | | | | | | | | | | | | |

West Gardner Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | | 4th Q |
|----|----------------------------------|----------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
| 68 | Post Retirement Closure Activity | 40 days | | | | | | | | | | | | | | | | | | | |

West Gardner Dismantlement

Owner Costs

| | |
|-------------------------------|-------------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$1,633,731 |
| Post-Dismantlement Activities | \$49,140 |

Owner Costs Total \$2,575,631

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$890,559 |
| Equipment Rental | \$1,516,377 |
| Consumables | \$1,512,858 |
| Scrap Crew(s) | \$398,284 |
| Dismantlement | \$930,015 |

DGC Insurance 2.00% \$104,962

Contingency/Profit 15.00% \$802,958

Performance Bond 2.00% \$123,120

Contractor Costs Total: \$6,279,133

Total: \$8,854,765

Owner Internal Costs: 5.00% \$442,738

Owner Contingency: 25.00% \$2,324,376

West Gardner Dismantlement Opinion of Probable Cost: \$11,621,879

| West Gardner Dismantlement | | |
|----------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | West Gardner CT Dismantlement | \$7,823,727.15 |
| 2 | Pre-Demolition Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$1,633,731.28 |
| 9 | KCP&L Project Manager | \$259,612.40 |
| 10 | KCP&L Administrative Support | \$96,001.28 |
| 11 | KCP&L Engineer | \$426,709.60 |
| 12 | Owners Engineer Project Manager | \$127,376.00 |
| 13 | Owners Engineer - Engineer | \$724,032.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$890,559.36 |
| 15 | Demolition Contractor Project Manager | \$251,969.84 |
| 16 | Demolition Contractor Safety Manager | \$224,349.36 |
| 17 | Demolition Contractor Superintendent | \$414,240.16 |
| 18 | Demolition Contractor Equipment Rental Cost | \$1,516,377.76 |
| 19 | Equipment Rental | \$1,516,377.76 |
| 20 | Demolition Contractor Consumables | \$1,512,858.16 |
| 21 | Consumables | \$1,512,858.16 |
| 22 | Scrap Crews | \$398,284.64 |
| 23 | Crew to Handle Scrap Material(s) | \$398,284.64 |
| 24 | Dismantlement | \$930,015.63 |
| 25 | Electrical | \$197,049.60 |
| 26 | Electrical Demolition of Equipment | \$197,049.60 |
| 27 | Fuel Gas System | \$21,113.20 |
| 28 | Remove all above grade fuel gas piping. | \$6,782.32 |
| 29 | Gas Filter Skid | \$14,330.88 |
| 30 | Lube Oil System | \$53,740.80 |
| 31 | Lube Oil Piping | \$14,330.88 |
| 32 | Lube Oil Pumps | \$17,913.60 |
| 33 | Lube Oil Tanks | \$21,496.32 |
| 34 | Compressed Air System | \$21,496.32 |
| 35 | Compressed Air Piping | \$10,748.16 |
| 36 | Compressors | \$5,374.08 |
| 37 | Air Receiver | \$3,582.72 |
| 38 | Dryer | \$1,791.36 |
| 39 | Fire Protection | \$41,201.28 |
| 40 | Fire Protection Piping | \$19,704.96 |
| 41 | Firewater Tank | \$14,330.88 |
| 42 | CO2 Storage Tank | \$7,165.44 |
| 43 | Wash Water Skid | \$25,079.04 |
| 44 | Detergent Tank | \$10,748.16 |

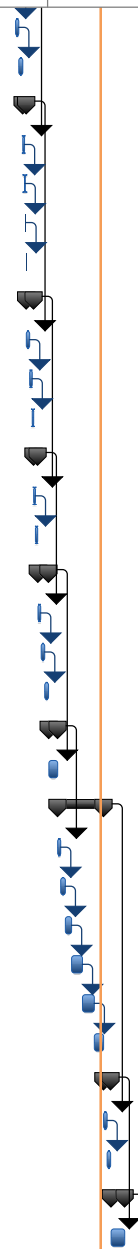
| West Gardner Dismantlement | | |
|----------------------------|--------------------------------------|---------------------|
| ID | Task Name | Cost |
| 45 | Demineralized Water Tank | \$14,330.88 |
| 46 | Miscellaneous Piping | \$62,697.60 |
| 47 | Exhaust Frame Cooling Piping | \$17,913.60 |
| 48 | CT Air Processing Piping | \$21,496.32 |
| 49 | Inlet Air Heating Piping | \$23,287.68 |
| 50 | Generator | \$0.00 |
| 51 | Generator | \$0.00 |
| 52 | Combustion Turbine | \$263,329.92 |
| 53 | Inlet Heater | \$17,913.60 |
| 54 | Inlet duct | \$26,870.40 |
| 55 | Exhaust duct | \$35,827.20 |
| 56 | Combustion Turbine | \$62,697.60 |
| 57 | Combustion Turbine Foundation | \$66,280.32 |
| 58 | Enclosure | \$53,740.80 |
| 59 | CEMS | \$42,992.64 |
| 60 | CEMS Building | \$21,496.32 |
| 61 | CEMS Building Foundation | \$21,496.32 |
| 62 | Stack | \$80,611.20 |
| 63 | Stack | \$80,611.20 |
| 64 | Site Prep | \$120,704.03 |
| 65 | Final Grading and Drainage | \$120,704.03 |
| 66 | Post Dismantlement Activities | \$49,140.00 |
| 67 | Post Dismantlement Activities | \$49,140.00 |

West Gardner Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|--|-----------------|-------------|-----|-------------|-----|
| | | | Jan | Jan | Jan | Jan |
| 1 | West Gardner CT Dismantlement | 633 days | | | | |
| 2 | Pre-Demolition Activities | 130 days | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | |
| 8 | KCP&L Overhead during Dismantlement | 419 days | | | | |
| 9 | KCP&L Project Manager | 419 days | | | | |
| 10 | KCP&L Administrative Support | 419 days | | | | |
| 11 | KCP&L Engineer | 419 days | | | | |
| 12 | Owners Engineer Project Manager | 419 days | | | | |
| 13 | Owners Engineer - Engineer | 419 days | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 419 days | | | | |
| 15 | Demolition Contractor Project Manager | 419 days | | | | |
| 16 | Demolition Contractor Safety Manager | 419 days | | | | |
| 17 | Demolition Contractor Superintendent | 419 days | | | | |
| 18 | Demolition Contractor Equipment Rental Cost | 419 days | | | | |
| 19 | Equipment Rental | 419 days | | | | |
| 20 | Demolition Contractor Consumables | 419 days | | | | |
| 21 | Consumables | 419 days | | | | |
| 22 | Scrap Crews | 419 days | | | | |
| 23 | Crew to Handle Scrap Material(s) | 419 days | | | | |
| 24 | Dismantlement | 419 days | | | | |
| 25 | Electrical | 110 days | | | | |
| 26 | Electrical Demolition of Equipment | 110 days | | | | |
| 27 | Fuel Gas System | 20 days | | | | |
| 28 | Remove all above grade fuel gas piping. | 12 days | | | | |
| 29 | Gas Filter Skid | 8 days | | | | |
| 30 | Lube Oil System | 30 days | | | | |
| 31 | Lube Oil Piping | 8 days | | | | |

West Gardner Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|-------------------------------|-----------------|-------------|-----|-------------|-----|
| | | | Jan | Jan | Jan | Jan |
| 32 | Lube Oil Pumps | 10 days | | | | |
| 33 | Lube Oil Tanks | 12 days | | | | |
| 34 | Compressed Air System | 12 days | | | | |
| 35 | Compressed Air Piping | 6 days | | | | |
| 36 | Compressors | 3 days | | | | |
| 37 | Air Receiver | 2 days | | | | |
| 38 | Dryer | 1 day | | | | |
| 39 | Fire Protection | 23 days | | | | |
| 40 | Fire Protection Piping | 11 days | | | | |
| 41 | Firewater Tank | 8 days | | | | |
| 42 | CO2 Storage Tank | 4 days | | | | |
| 43 | Wash Water Skid | 14 days | | | | |
| 44 | Detergent Tank | 6 days | | | | |
| 45 | Demineralized Water Tank | 8 days | | | | |
| 46 | Miscellaneous Piping | 35 days | | | | |
| 47 | Exhaust Frame Cooling Piping | 10 days | | | | |
| 48 | CT Air Processing Piping | 12 days | | | | |
| 49 | Inlet Air Heating Piping | 13 days | | | | |
| 50 | Generator | 29 days | | | | |
| 51 | Generator | 29 days | | | | |
| 52 | Combustion Turbine | 147 days | | | | |
| 53 | Inlet Heater | 10 days | | | | |
| 54 | Inlet duct | 15 days | | | | |
| 55 | Exhaust duct | 20 days | | | | |
| 56 | Combustion Turbine | 35 days | | | | |
| 57 | Combustion Turbine Foundation | 37 days | | | | |
| 58 | Enclosure | 30 days | | | | |
| 59 | CEMS | 24 days | | | | |
| 60 | CEMS Building | 12 days | | | | |
| 61 | CEMS Building Foundation | 12 days | | | | |
| 62 | Stack | 45 days | | | | |
| 63 | Stack | 45 days | | | | |



West Gardner Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|--------------------------------------|----------------|-------------|-----|-------------|-----|
| | | | Jan | Jan | Jan | Jan |
| 64 | Site Prep | 40 days | | | | |
| 65 | Final Grading and Drainage | 40 days | | | | |
| 66 | Post Dismantlement Activities | 30 days | | | | |
| 67 | Post Dismantlement Activities | 30 days | | | | |

OSAWATOMIE

OSAWATOMIE

The Osawatomie Generating Station is a single natural gas-fired combustion turbine generator set.

This combustion turbine has an SPP-accredited unit rating of 75 MW and was placed in service in 2003. This unit is comprised of a General Electric Model 7EA CT, with a generator step-up transformer and auxiliary power transformer. The combustion turbine employs dry low NO_x burner technology and burns only natural gas fuel.

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

OSAWATOMIE

1. Combustion turbine generator set with auxiliaries.
2. Generator step-up and auxiliary transformers.
3. Freestanding outdoor switchgear.
4. Exhaust stack.
5. Natural gas filtering skid.
6. Service/Instrument air compressors.

Osawatomie Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$43,834 |
| Retirement Activities | \$120,039 |
| Post-Retirement Activities | \$45,152 |

Owner Direct Total: \$209,025

Owner Internal Costs: 5.00% \$10,451

Owner Contingency: 25.00% \$54,869

Osawatomie Retirement Opinion of Probable Cost: \$274,345.31

| Osawatomie Retirement | | |
|-----------------------|---|---------------------|
| ID | Task Name | Cost |
| 1 | Osawatomie Retirement | \$209,025.44 |
| 2 | Pre-Retirement Activities | \$43,834.00 |
| 3 | Permitting Review | \$23,466.00 |
| 4 | Develop Detailed Retirement Plan | \$20,368.00 |
| 5 | Retirement Activities | \$120,039.44 |
| 6 | Project Management During Retirement | \$64,161.60 |
| 7 | Project Management During Retirement | \$64,161.60 |
| 8 | Electrical | \$19,652.16 |
| 9 | Medium and Low Voltage Drawout Switchgear | \$5,359.68 |
| 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. | \$1,786.56 |
| 14 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | \$893.28 |
| 15 | Motor Control Centers | \$2,679.84 |
| 16 | De-energize all buses at the source. | \$893.28 |
| 17 | Open all circuit breakers and disconnect switches. | \$893.28 |
| 18 | Remove all fuses in control circuits. | \$893.28 |
| 19 | Low-voltage Switchboards and Panelboards | \$1,786.56 |
| 20 | De-energize all buses at the source. | \$893.28 |
| 21 | Open all circuit breakers and disconnect switches. | \$893.28 |
| 22 | Oil-Filled Power Transformers | \$3,573.12 |
| 23 | De-energize all buses at the source. | \$893.28 |
| 24 | Open all circuit breakers and disconnect switches. | \$893.28 |
| 25 | De-energize all buses at the source. | \$893.28 |
| 26 | Open all circuit breakers and disconnect switches. | \$893.28 |
| 27 | Dry-type Power Transformers | \$1,786.56 |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | \$893.28 |
| 29 | 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 |
| 30 | Motors | \$4,466.40 |
| 31 | De-energize all primary power at the source. | \$893.28 |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | \$893.28 |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | \$2,679.84 |
| 34 | Fuel Gas System | \$10,783.04 |
| 35 | Isolate Fuel Gas System | \$3,907.44 |
| 36 | Vent Fuel Gas Piping and Equipment | \$2,528.16 |
| 37 | Open and Vent Knock-Out Drum | \$861.84 |

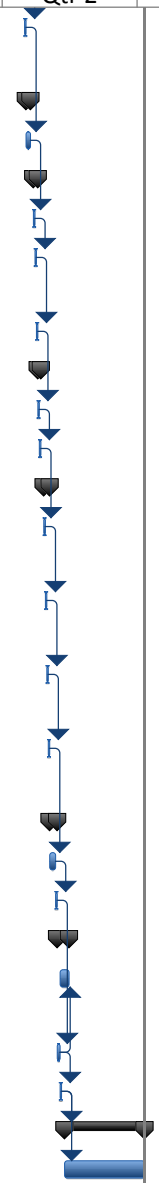
| Osawatomie Retirement | | |
|-----------------------|---|--------------------|
| ID | Task Name | Cost |
| 38 | Drain, Open and Vent the Drain Tank | \$861.84 |
| 39 | Empty the Coalescing Filter | \$1,761.92 |
| 40 | Open and Vent Equipment on the CT Gas Valve Module | \$861.84 |
| 41 | Lube Oil Cooling Water System | \$2,585.52 |
| 42 | Open and Drain the Water Side of the Lube Oil Coolers | \$1,723.68 |
| 43 | Open and Vent the Coolers and Expansion Tank | \$861.84 |
| 44 | Oily Drain Tank | \$3,954.00 |
| 45 | Open and Pump Out the Oily Drain Tank | \$3,954.00 |
| 46 | Wash Water Skid | \$2,585.52 |
| 47 | Open and Drain the Detergent Tank | \$861.84 |
| 48 | Open and Drain the Demineralized Water Tank | \$861.84 |
| 49 | Empty the Demineralized Water Tank | \$861.84 |
| 50 | Compressed Air | \$1,723.68 |
| 51 | Empty Dessiccant Air Dryers and Vent | \$861.84 |
| 52 | Open and Vent the Air Reciever | \$861.84 |
| 53 | Miscelleaneous Piping | \$3,447.36 |
| 54 | Open and Vent the Exhaust Frame Cooling Piping | \$861.84 |
| 55 | Open and Vent the CT Air Processing Piping | \$861.84 |
| 56 | Open and Vent the Inlet Air Heating Piping | \$861.84 |
| 57 | Open and Vent the CT Air Processing Piping | \$861.84 |
| 58 | Fire Protection Piping | \$3,428.24 |
| 59 | Empty the CO2 Storage Tank | \$2,566.40 |
| 60 | Open and Vent the Fire Protection Piping | \$861.84 |
| 61 | Lube Oil System | \$7,718.32 |
| 62 | Empty and Remove from Site the Lubricating Oil | \$5,132.80 |
| 63 | Drain Lubricating Oil Piping | \$1,723.68 |
| 64 | Open and Vent Lubricating Oil Piping | \$861.84 |
| 65 | Post Retirement Closure Activity | \$45,152.00 |
| 66 | Post Retirement Closure Activity | \$45,152.00 |

| Osawatomie Retirement | | | 2012 | | | | 2013 | | | |
|-----------------------|---|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ID | Task Name | Duration | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 |
| 1 | Osawatomie Retirement | 134 days | | | | | | | | |
| 2 | Pre-Retirement Activities | 40 days | | | | | | | | |
| 3 | Permitting Review | 20 days | | | | | | | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | | | | | | |
| 5 | Retirement Activities | 80 days | | | | | | | | |
| 6 | Project Management During Retirement | 80 days | | | | | | | | |
| 7 | Project Management During Retirement | 80 days | | | | | | | | |
| 8 | Electrical | 22 days | | | | | | | | |
| 9 | Medium and Low Voltage Drawout Switchgear | 6 days | | | | | | | | |
| 10 | De-energize all buses at the source. | 1 day | | | | | | | | |
| 11 | Open all circuit breakers. | 1 day | | | | | | | | |
| 12 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 1 day | | | | | | | | |
| 13 | Verify that the closing/tripping springs are discharged. | 2 days | | | | | | | | |
| 14 | De-energize control power and auxiliary power circuits of each circuit breaker at the source and by opening control power circuit breakers or removing fuses in each breaker cubicle. | 1 day | | | | | | | | |
| 15 | Motor Control Centers | 3 days | | | | | | | | |
| 16 | De-energize all buses at the source. | 1 day | | | | | | | | |
| 17 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | |
| 18 | Remove all fuses in control circuits. | 1 day | | | | | | | | |
| 19 | Low-voltage Switchboards and Panelboards | 2 days | | | | | | | | |
| 20 | De-energize all buses at the source. | 1 day | | | | | | | | |
| 21 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | |
| 22 | Oil-Filled Power Transformers | 4 days | | | | | | | | |
| 23 | De-energize all buses at the source. | 1 day | | | | | | | | |

| Osawatomie Retirement | | | | | | | | | | | |
|-----------------------|---|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| ID | Task Name | Duration | 2012 | | | | 2013 | | | | |
| | | | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | |
| 24 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | |
| 25 | De-energize all buses at the source. | 1 day | | | | | | | | | |
| 26 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | |
| 27 | Dry-type Power Transformers | 2 days | | | | | | | | | |
| 28 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | | | | | |
| 29 | 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 | | | | | | | | | |
| 30 | Motors | 5 days | | | | | | | | | |
| 31 | De-energize all primary power at the source. | 1 day | | | | | | | | | |
| 32 | De-energize all low-voltage power sources for space heaters or other auxiliary equipment at the source. | 1 day | | | | | | | | | |
| 33 | Drain lube oil system (if applicable) and dispose of oil. | 3 days | | | | | | | | | |
| 34 | Fuel Gas System | 11 days | | | | | | | | | |
| 35 | Isolate Fuel Gas System | 3 days | | | | | | | | | |
| 36 | Vent Fuel Gas Piping and Equipment | 3 days | | | | | | | | | |
| 37 | Open and Vent Knock-Out Drum | 1 day | | | | | | | | | |
| 38 | Drain, Open and Vent the Drain Tank | 1 day | | | | | | | | | |
| 39 | Empty the Coalescing Filter | 2 days | | | | | | | | | |
| 40 | Open and Vent Equipment on the CT Gas Valve Module | 1 day | | | | | | | | | |
| 41 | Lube Oil Cooling Water System | 3 days | | | | | | | | | |
| 42 | Open and Drain the Water Side of the Lube Oil Coolers | 2 days | | | | | | | | | |

Osawatomie Retirement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | |
|----|--|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | |
| 43 | Open and Vent the Coolers and Expansion Tank | 1 day | | | | | | | | | |
| 44 | Oily Drain Tank | 3 days | | | | | | | | | |
| 45 | Open and Pump Out the Oily Drain Tank | 3 days | | | | | | | | | |
| 46 | Wash Water Skid | 3 days | | | | | | | | | |
| 47 | Open and Drain the Detergent Tank | 1 day | | | | | | | | | |
| 48 | Open and Drain the Demineralized Water Tank | 1 day | | | | | | | | | |
| 49 | Empty the Demineralized Water Tank | 1 day | | | | | | | | | |
| 50 | Compressed Air | 2 days | | | | | | | | | |
| 51 | Empty Dessiccant Air Dryers and Vent | 1 day | | | | | | | | | |
| 52 | Open and Vent the Air Reciever | 1 day | | | | | | | | | |
| 53 | Miscelleaneous Piping | 4 days | | | | | | | | | |
| 54 | Open and Vent the Exhaust Frame Cooling Piping | 1 day | | | | | | | | | |
| 55 | Open and Vent the CT Air Processing Piping | 1 day | | | | | | | | | |
| 56 | Open and Vent the Inlet Air Heating Piping | 1 day | | | | | | | | | |
| 57 | Open and Vent the CT Air Processing Piping | 1 day | | | | | | | | | |
| 58 | Fire Protection Piping | 3 days | | | | | | | | | |
| 59 | Empty the CO2 Storage Tank | 2 days | | | | | | | | | |
| 60 | Open and Vent the Fire Protection Piping | 1 day | | | | | | | | | |
| 61 | Lube Oil System | 6 days | | | | | | | | | |
| 62 | Empty and Remove from Site the Lubricating Oil | 4 days | | | | | | | | | |
| 63 | Drain Lubricating Oil Piping | 2 days | | | | | | | | | |
| 64 | Open and Vent Lubricating Oil Piping | 1 day | | | | | | | | | |
| 65 | Post Retirement Closure Activity | 40 days | | | | | | | | | |
| 66 | Post Retirement Closure Activity | 40 days | | | | | | | | | |



Osawatomie Dismantlement

Owner Costs

| | |
|-------------------------------|-----------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$658,951 |
| Post-Dismantlement Activities | \$32,760 |

Owner Costs Total \$1,584,472

Demolition General Contractor (DGC) Costs

| | |
|------------------|-----------|
| Site Management | \$359,199 |
| Equipment Rental | \$611,617 |
| Consummables | \$610,198 |
| Scrap Crew(s) | \$160,644 |
| Dismantlement | \$425,984 |

DGC Insurance 2.00% \$43,353

Contingency/Profit 15.00% \$331,649

Performance Bond 2.00% \$50,853

Contractor Costs Total: \$2,593,497

Total: \$4,177,969

Owner Internal Costs: 5.00% \$208,898

Owner Contingency: 25.00% \$1,096,717

Osawatomie Dismantlement Opinion of Probable Cost: \$5,483,584





| Osawatomie Dismantlement | | |
|--------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | Osawatomie Dismantlement | \$3,752,116.02 |
| 2 | Pre-Demolition Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$658,951.28 |
| 9 | KCP&L Project Manager | \$104,712.40 |
| 10 | KCP&L Administrative Support | \$38,721.28 |
| 11 | KCP&L Engineer | \$172,109.60 |
| 12 | Owners Engineer Project Manager | \$51,376.00 |
| 13 | Owners Engineer - Engineer | \$292,032.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$359,199.36 |
| 15 | Demolition Contractor Project Manager | \$101,629.84 |
| 16 | Demolition Contractor Safety Manager | \$90,489.36 |
| 17 | Demolition Contractor Superintendent | \$167,080.16 |
| 18 | Demolition Contractor Equipment Rental Cost | \$611,617.76 |
| 19 | Equipment Rental | \$611,617.76 |
| 20 | Demolition Contractor Consumables | \$610,198.16 |
| 21 | Consumables | \$610,198.16 |
| 22 | Scrap Crews | \$160,644.64 |
| 23 | Crew to Handle Scrap Material(s) | \$160,644.64 |
| 24 | Dismantlement | \$425,984.50 |
| 25 | Electrical | \$107,481.60 |
| 26 | Electrical Demolition of Equipment | \$107,481.60 |
| 27 | Fuel Gas System | \$8,445.28 |
| 28 | Remove all above grade fuel gas piping. | \$3,071.20 |
| 29 | Gas Filter Skid | \$5,374.08 |
| 30 | Lube Oil System | \$17,913.60 |
| 31 | Lube Oil Piping | \$5,374.08 |
| 32 | Lube Oil Pumps | \$5,374.08 |
| 33 | Lube Oil Tanks | \$7,165.44 |
| 34 | Compressed Air System | \$23,287.68 |
| 35 | Compressed Air Piping | \$5,374.08 |
| 36 | Compressors | \$8,956.80 |
| 37 | Air Receiver | \$3,582.72 |
| 38 | Dryer | \$5,374.08 |
| 39 | Fire Protection | \$26,870.40 |
| 40 | Fire Protection Piping | \$10,748.16 |
| 41 | Firewater Tank | \$8,956.80 |
| 42 | CO2 Storage Tank | \$7,165.44 |
| 43 | Wash Water Skid | \$14,330.88 |
| 44 | Detergent Tank | \$7,165.44 |

| Osawatomie Dismantlement | | |
|--------------------------|--------------------------------------|--------------------|
| ID | Task Name | Cost |
| 45 | Demineralized Water Tank | \$7,165.44 |
| 46 | Miscellaneous Piping | \$25,079.04 |
| 47 | Exhaust Frame Cooling Piping | \$7,165.44 |
| 48 | CT Air Processing Piping | \$8,956.80 |
| 49 | Inlet Air Heating Piping | \$8,956.80 |
| 50 | Generator | \$0.00 |
| 51 | Generator | \$0.00 |
| 52 | Combustion Turbine | \$93,150.72 |
| 53 | Inlet Heater | \$5,374.08 |
| 54 | Inlet duct | \$10,748.16 |
| 55 | Exhaust duct | \$14,330.88 |
| 56 | Combustion Turbine | \$28,661.76 |
| 57 | Combustion Turbine Foundation | \$16,122.24 |
| 58 | Enclosure | \$17,913.60 |
| 59 | CEMS | \$14,330.88 |
| 60 | CEMS Building | \$7,165.44 |
| 61 | CEMS Building Foundation | \$7,165.44 |
| 62 | Stack | \$26,870.40 |
| 63 | Stack | \$26,870.40 |
| 64 | Site Prep | \$68,224.02 |
| 65 | Final Grading and Drainage | \$68,224.02 |
| 66 | Post Dismantlement Activities | \$32,760.00 |
| 67 | Post Dismantlement Activities | \$32,760.00 |

| Osawatomie Dismantlement | | | | 1st Quarter | | 1st Quarter | |
|--------------------------|--|-----------------|-----|-------------|-----|-------------|--|
| ID | Task Name | Duration | Jan | Jan | Jan | Jan | |
| 1 | Osawatomie Dismantlement | 319 days | | | | | |
| 2 | Pre-Demolition Activities | 130 days | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 169 days | | | | | |
| 9 | KCP&L Project Manager | 169 days | | | | | |
| 10 | KCP&L Administrative Support | 169 days | | | | | |
| 11 | KCP&L Engineer | 169 days | | | | | |
| 12 | Owners Engineer Project Manager | 169 days | | | | | |
| 13 | Owners Engineer - Engineer | 169 days | | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 169 days | | | | | |
| 15 | Demolition Contractor Project Manager | 169 days | | | | | |
| 16 | Demolition Contractor Safety Manager | 169 days | | | | | |
| 17 | Demolition Contractor Superintendent | 169 days | | | | | |
| 18 | Demolition Contractor Equipment Rental Cost | 169 days | | | | | |
| 19 | Equipment Rental | 169 days | | | | | |
| 20 | Demolition Contractor Consumables | 169 days | | | | | |
| 21 | Consumables | 169 days | | | | | |
| 22 | Scrap Crews | 169 days | | | | | |
| 23 | Crew to Handle Scrap Material(s) | 169 days | | | | | |
| 24 | Dismantlement | 169 days | | | | | |
| 25 | Electrical | 60 days | | | | | |
| 26 | Electrical Demolition of Equipment | 60 days | | | | | |
| 27 | Fuel Gas System | 8 days | | | | | |
| 28 | Remove all above grade fuel gas piping. | 5 days | | | | | |
| 29 | Gas Filter Skid | 3 days | | | | | |
| 30 | Lube Oil System | 10 days | | | | | |
| 31 | Lube Oil Piping | 3 days | | | | | |

| Osawatomie Dismantlement | | | | 1st Quarter | | 1st Quarter | |
|--------------------------|-------------------------------|----------------|--|-------------|-----|-------------|-----|
| ID | Task Name | Duration | | Jan | Jan | Jan | Jan |
| 32 | Lube Oil Pumps | 3 days | | | | | |
| 33 | Lube Oil Tanks | 4 days | | | | | |
| 34 | Compressed Air System | 13 days | | | | | |
| 35 | Compressed Air Piping | 3 days | | | | | |
| 36 | Compressors | 5 days | | | | | |
| 37 | Air Receiver | 2 days | | | | | |
| 38 | Dryer | 3 days | | | | | |
| 39 | Fire Protection | 15 days | | | | | |
| 40 | Fire Protection Piping | 6 days | | | | | |
| 41 | Firewater Tank | 5 days | | | | | |
| 42 | CO2 Storage Tank | 4 days | | | | | |
| 43 | Wash Water Skid | 8 days | | | | | |
| 44 | Detergent Tank | 4 days | | | | | |
| 45 | Demineralized Water Tank | 4 days | | | | | |
| 46 | Miscellaneous Piping | 14 days | | | | | |
| 47 | Exhaust Frame Cooling Piping | 4 days | | | | | |
| 48 | CT Air Processing Piping | 5 days | | | | | |
| 49 | Inlet Air Heating Piping | 5 days | | | | | |
| 50 | Generator | 6 days | | | | | |
| 51 | Generator | 6 days | | | | | |
| 52 | Combustion Turbine | 52 days | | | | | |
| 53 | Inlet Heater | 3 days | | | | | |
| 54 | Inlet duct | 6 days | | | | | |
| 55 | Exhaust duct | 8 days | | | | | |
| 56 | Combustion Turbine | 16 days | | | | | |
| 57 | Combustion Turbine Foundation | 9 days | | | | | |
| 58 | Enclosure | 10 days | | | | | |
| 59 | CEMS | 8 days | | | | | |
| 60 | CEMS Building | 4 days | | | | | |
| 61 | CEMS Building Foundation | 4 days | | | | | |
| 62 | Stack | 15 days | | | | | |
| 63 | Stack | 15 days | | | | | |

Osawatomie Dismantlement

| ID | Task Name | Duration | 1st Quarter | | 1st Quarter | |
|----|--------------------------------------|----------------|-------------|-----|---|-----|
| | | | Jan | Jan | Jan | Jan |
| 64 | Site Prep | 20 days | | |  | |
| 65 | Final Grading and Drainage | 20 days | | |  | |
| 66 | Post Dismantlement Activities | 20 days | | |  | |
| 67 | Post Dismantlement Activities | 20 days | | |  | |

HAWTHORN UNITS 6 AND 9

HAWTHORN UNITS 6 AND 9

Hawthorn Units 6 and 9 are a combined-cycle plant that utilizes a combustion turbine generator set equipped with a heat recovery steam generator (HRSG) that utilizes waste heat to produce steam to repower the existing steam turbine generator from the former Unit 4 (re-designated Unit 9) at the Hawthorn Generating Station.

Unit 6 is a Siemens Model V84.3A combustion turbine set that has an SPP-accredited unit rating of 151 MW in simple-cycle configuration when utilizing a bypass damper and stack arrangement. Unit 6 began service in 1997. When Unit 6 is operated in combined-cycle configuration exhausting through the HRSG to produce steam to power the Unit 9 steam turbine generator, the combined SPP-accredited plant rating increases to 232 MW, net. Unit 9 began service in 2000. Each unit is interconnected to the grid through its own generator step-up transformer arrangement. The combustion turbine employs dry low NO_x burner technology and burns only natural gas fuel. The HRSG has an ammonia SCR arrangement to further reduce NO_x emissions.

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).

HAWTHORN UNITS 6 AND 9

1. Combustion turbine generator set and auxiliaries (one)
2. Steam turbine generator set and auxiliaries (one).
2. Generator step-up and auxiliary transformers (two).
3. HRSG and auxiliaries (one).
4. Selective catalytic reduction system, including catalyst and reagent systems (one).

5. Combustion turbine bypass damper and exhaust stack (one).
6. HRSG exhaust stack (one).
7. Circulating water intake structure, circulating water piping, and circulating water equipment (formerly Unit 4).
8. Natural gas filtering skid.
9. Service/Instrument air compressors.

Hawthorn 6 & 9 Retirement

Owner Costs

| | |
|----------------------------|-----------|
| Pre-Retirement Activities | \$43,834 |
| Retirement Activities | \$215,451 |
| Post-Retirement Activities | \$46,932 |

Owner Direct Total \$306,217

Owner Internal Costs 5.00% \$15,311

Owner Contingency: 25.00% \$80,382

Hawthorn 6 & 9 Retirement Opinion of Probable Cost: \$401,909.81

Activities Required by Permit or Regulation

Hawthorn 9 Intake Removal \$640,900

Activities Required by Permit or Regulation: \$640,900

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration |
|----|---|-----------------|
| 1 | Hawthorn 6 & 9 Retirement | 160 days |
| 2 | Pre-Retirement Activities | 40 days |
| 3 | Permitting Review | 20 days |
| 4 | Develop Detailed Retirement Plan | 20 days |
| 5 | Retirement Activities | 120 days |
| 6 | Project Management During Retirement | 120 days |
| 7 | Project Management During Retirement | 120 days |
| 8 | CT-6 Retirement Activities | 53 days |
| 9 | Electrical | 22 days |
| 10 | Medium and Low Voltage Drawout Switchgear | 6 days |
| 11 | De-energize all buses at the source. | 1 day |
| 12 | Open all circuit breakers. | 1 day |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnected po | 1 day |
| 14 | Verify that the closing/tripping springs are discharged. | 2 days |
| 15 | De-energize control power and auxiliary power circuits of each cir | 1 day |
| 16 | Motor Control Centers | 3 days |
| 17 | De-energize all buses at the source. | 1 day |
| 18 | Open all circuit breakers and disconnect switches. | 1 day |
| 19 | Remove all fuses in control circuits. | 1 day |
| 20 | Low-voltage Switchboards and Panelboards | 2 days |
| 21 | De-energize all buses at the source. | 1 day |
| 22 | Open all circuit breakers and disconnect switches. | 1 day |
| 23 | Oil-Filled Power Transformers | 4 days |
| 24 | De-energize all buses at the source. | 1 day |
| 25 | Open all circuit breakers and disconnect switches. | 1 day |
| 26 | De-energize all buses at the source. | 1 day |
| 27 | Open all circuit breakers and disconnect switches. | 1 day |
| 28 | Dry-type Power Transformers | 2 days |
| 29 | De-energize all transformer primaries and verify that the seconda | 1 day |
| 30 | De-energize all low-voltage AC or DC power sources for space hea | 1 day |
| 31 | Motors | 5 days |
| 32 | De-energize all primary power at the source. | 1 day |
| 33 | De-energize all low-voltage power sources for space heaters or ot | 1 day |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | 3 days |
| 35 | Fuel Gas System | 11 days |
| 36 | Isolate Fuel Gas System | 3 days |
| 37 | Vent Fuel Gas Piping and Equipment | 3 days |
| 38 | Open and Vent Knock-Out Drum | 1 day |
| 39 | Drain, Open and Vent the Drain Tank | 1 day |
| 40 | Empty the Coalescing Filter | 2 days |
| 41 | Open and Vent Equipment on the CT Gas Valve Module | 1 day |
| 42 | Lube Oil Cooling Water System | 3 days |
| 43 | Open and Drain the Water Side of the Lube Oil Coolers | 2 days |
| 44 | Open and Vent the Coolers and Expansion Tank | 1 day |

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration |
|----|--|----------------|
| 45 | Wash Water Skid | 3 days |
| 46 | Open and Drain the Detergent Tank | 1 day |
| 47 | Open and Drain the Demineralized Water Tank | 1 day |
| 48 | Empty the Demineralized Water Tank | 1 day |
| 49 | Miscellaneous Piping | 4 days |
| 50 | Open and Vent the Exhaust Frame Cooling Piping | 1 day |
| 51 | Open and Vent the CT Air Processing Piping | 1 day |
| 52 | Open and Vent the Inlet Air Heating Piping | 1 day |
| 53 | Open and Vent the CT Air Processing Piping | 1 day |
| 54 | Fire Protection Piping | 3 days |
| 55 | Empty the CO2 Storage Tank | 2 days |
| 56 | Open and Vent the Fire Protection Piping | 1 day |
| 57 | Lube Oil System | 7 days |
| 58 | Empty and Remove from Site the Lubricating Oil | 4 days |
| 59 | Drain Lubricating Oil Piping | 2 days |
| 60 | Open and Vent Lubricating Oil Piping | 1 day |
| 61 | Hawthorn 9 Retirement Activities | 80 days |
| 62 | Electrical | 22 days |
| 63 | Medium and Low Voltage Drawout Switchgear | 6 days |
| 64 | De-energize all buses at the source. | 1 day |
| 65 | Open all circuit breakers. | 1 day |
| 66 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 1 day |
| 67 | Verify that the closing/tripping springs are discharged. | 2 days |
| 68 | De-energize control power and auxiliary power circuits of each circuit breaker. | 1 day |
| 69 | Motor Control Centers | 3 days |
| 70 | De-energize all buses at the source. | 1 day |
| 71 | Open all circuit breakers and disconnect switches. | 1 day |
| 72 | Remove all fuses in control circuits. | 1 day |
| 73 | Low-voltage Switchboards and Panelboards | 2 days |
| 74 | De-energize all buses at the source. | 1 day |
| 75 | Open all circuit breakers and disconnect switches. | 1 day |
| 76 | Oil-Filled Power Transformers | 4 days |
| 77 | De-energize all buses at the source. | 1 day |
| 78 | Open all circuit breakers and disconnect switches. | 1 day |
| 79 | De-energize all buses at the source. | 1 day |
| 80 | Open all circuit breakers and disconnect switches. | 1 day |
| 81 | Dry-type Power Transformers | 2 days |
| 82 | De-energize all transformer primaries and verify that the secondary windings are discharged. | 1 day |
| 83 | De-energize all low-voltage AC or DC power sources for space heaters or other loads. | 1 day |
| 84 | Motors | 5 days |
| 85 | De-energize all primary power at the source. | 1 day |
| 86 | De-energize all low-voltage power sources for space heaters or other loads. | 1 day |
| 87 | Drain lube oil system (if applicable) and dispose of oil. | 3 days |
| 88 | Boiler Chemical Feed | 2 days |

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration |
|-----|--|----------------|
| 89 | Drain all chemical feed tanks. | 2 days |
| 90 | HRSG | 3 days |
| 91 | Open HRSG doors. | 1 day |
| 92 | Drain boiler, drums, downcomers and headers. | 1 day |
| 93 | Open drum doors. | 1 day |
| 94 | Stack and Ductwork | 2 days |
| 95 | Open ductwork doors. | 1 day |
| 96 | Place cap over stack opening to keep moisture out. | 1 day |
| 97 | Condensate and Feedwater Piping | 2 days |
| 98 | Drain water from the system. | 1 day |
| 99 | Leave open vents and drains. | 1 day |
| 100 | SCR | 9 days |
| 101 | Remove catalyst of salvage or disposal. | 4 days |
| 102 | Padlock or tack weld access doors shut. | 1 day |
| 103 | Remove ammonia from storage tank for resale. | 1 day |
| 104 | Wash out and drain storage tank and supply piping. | 1 day |
| 105 | Vent storage tank and all piping. Leave vent and drain valves open o | 1 day |
| 106 | Pull electrical supply breakers on all electrical equipment except ligh | 1 day |
| 107 | Turbine(s) and Condenser | 6 days |
| 108 | Drain hotwell and leave doors open. | 1 day |
| 109 | Open main turbine doors. | 1 day |
| 110 | Open bfp turbine doors. | 1 day |
| 111 | Remove lube oil. | 3 days |
| 112 | Generator | 13 days |
| 113 | Verify that generator circuit breaker is open and racked out or that r | 1 day |
| 114 | Verify that generator field breaker or contactor (if applicable) is open | 1 day |
| 115 | De-energize power supplies to generator excitation system at the so | 1 day |
| 116 | De-energize AC and DC power supplies to generator and exciter spac | 2 days |
| 117 | Drain lubricating oil system and dispose of oil. | 3 days |
| 118 | Drain generator and exciter cooling water systems (if applicable). | 2 days |
| 119 | Disconnect and remove hydrogen gas tanks and purge generator hyc | 1 day |
| 120 | Disconnect and remove fire protection system gas/foam tanks and p | 2 days |
| 121 | Circulating Water and Turbine Cooling Water System | 4 days |
| 122 | Drain. | 2 days |
| 123 | Open water box doors. | 1 day |
| 124 | Drain any circulating water chemical feed tanks. | 1 day |
| 125 | Compressed Air System | 3 days |
| 126 | Open vents and drains. | 1 day |
| 127 | Remove desiccant from desiccant dryers. | 2 days |
| 128 | Auxiliary Steam System | 2 days |
| 129 | Drain water from system. | 1 day |
| 130 | Remove aux boiler chemicals. | 1 day |
| 131 | Auxiliary Cooling Water System | 1 day |
| 132 | Drain water from system. | 1 day |

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration |
|-----|--|----------------|
| 133 | Condenser Air Extraction and Waterbox Priming System | 1 day |
| 134 | Drain water from system. | 1 day |
| 135 | Battery System | 10 days |
| 136 | Turn off battery charger and disconnect cables from batteries. | 2 days |
| 137 | De-energize all battery chargers from the source. | 1 day |
| 138 | Open all AC and DC circuit breakers and/or fused switches on batter | 1 day |
| 139 | Remove and dispose of battery electrolyte. | 3 days |
| 140 | Remove and dispose of battery cells. | 2 days |
| 141 | Clean up and dispose of electrolyte on surface areas around batterie | 1 day |
| 142 | Post Retirement Activities | 40 days |
| 143 | Post Retirement Activities | 40 days |

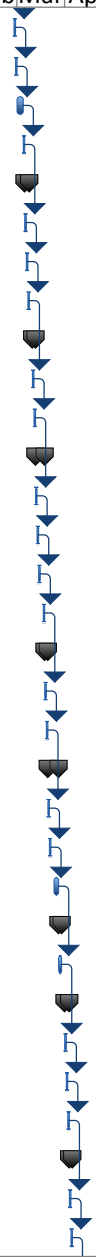
Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | |
|----|--|-----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 1 | Hawthorn 6 & 9 Retirement | 160 days | | | | | | | | | | | | | | | | | |
| 2 | Pre-Retirement Activities | 40 days | | | | | | | | | | | | | | | | | |
| 3 | Permitting Review | 20 days | | | | | | | | | | | | | | | | | |
| 4 | Develop Detailed Retirement Plan | 20 days | | | | | | | | | | | | | | | | | |
| 5 | Retirement Activities | 120 days | | | | | | | | | | | | | | | | | |
| 6 | Project Management During Retirement | 120 days | | | | | | | | | | | | | | | | | |
| 7 | Project Management During Retirement | 120 days | | | | | | | | | | | | | | | | | |
| 8 | CT-6 Retirement Activities | 53 days | | | | | | | | | | | | | | | | | |
| 9 | Electrical | 22 days | | | | | | | | | | | | | | | | | |
| 10 | Medium and Low Voltage Drawout Switchgear | 6 days | | | | | | | | | | | | | | | | | |
| 11 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 12 | Open all circuit breakers. | 1 day | | | | | | | | | | | | | | | | | |
| 13 | Rack all circuit breakers into the fully withdrawn, disconnect | 1 day | | | | | | | | | | | | | | | | | |
| 14 | Verify that the closing/tripping springs are discharged. | 2 days | | | | | | | | | | | | | | | | | |
| 15 | De-energize control power and auxiliary power circuits of | 1 day | | | | | | | | | | | | | | | | | |
| 16 | Motor Control Centers | 3 days | | | | | | | | | | | | | | | | | |
| 17 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 18 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 19 | Remove all fuses in control circuits. | 1 day | | | | | | | | | | | | | | | | | |
| 20 | Low-voltage Switchboards and Panelboards | 2 days | | | | | | | | | | | | | | | | | |
| 21 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 22 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 23 | Oil-Filled Power Transformers | 4 days | | | | | | | | | | | | | | | | | |
| 24 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 25 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 26 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 27 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 28 | Dry-type Power Transformers | 2 days | | | | | | | | | | | | | | | | | |
| 29 | De-energize all transformer primaries and verify that the s | 1 day | | | | | | | | | | | | | | | | | |
| 30 | De-energize all low-voltage AC or DC power sources for sp | 1 day | | | | | | | | | | | | | | | | | |
| 31 | Motors | 5 days | | | | | | | | | | | | | | | | | |
| 32 | De-energize all primary power at the source. | 1 day | | | | | | | | | | | | | | | | | |

| Hawthorn 6 & 9 Retirement | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | |
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| 33 | De-energize all low-voltage power sources for space heat | 1 day | | | | | | | | | | | | | | | | | | |
| 34 | Drain lube oil system (if applicable) and dispose of oil. | 3 days | | | | | | | | | | | | | | | | | | |
| 35 | Fuel Gas System | 11 days | | | | | | | | | | | | | | | | | | |
| 36 | Isolate Fuel Gas System | 3 days | | | | | | | | | | | | | | | | | | |
| 37 | Vent Fuel Gas Piping and Equipment | 3 days | | | | | | | | | | | | | | | | | | |
| 38 | Open and Vent Knock-Out Drum | 1 day | | | | | | | | | | | | | | | | | | |
| 39 | Drain, Open and Vent the Drain Tank | 1 day | | | | | | | | | | | | | | | | | | |
| 40 | Empty the Coalescing Filter | 2 days | | | | | | | | | | | | | | | | | | |
| 41 | Open and Vent Equipment on the CT Gas Valve Module | 1 day | | | | | | | | | | | | | | | | | | |
| 42 | Lube Oil Cooling Water System | 3 days | | | | | | | | | | | | | | | | | | |
| 43 | Open and Drain the Water Side of the Lube Oil Coolers | 2 days | | | | | | | | | | | | | | | | | | |
| 44 | Open and Vent the Coolers and Expansion Tank | 1 day | | | | | | | | | | | | | | | | | | |
| 45 | Wash Water Skid | 3 days | | | | | | | | | | | | | | | | | | |
| 46 | Open and Drain the Detergent Tank | 1 day | | | | | | | | | | | | | | | | | | |
| 47 | Open and Drain the Demineralized Water Tank | 1 day | | | | | | | | | | | | | | | | | | |
| 48 | Empty the Demineralized Water Tank | 1 day | | | | | | | | | | | | | | | | | | |
| 49 | Miscellaneous Piping | 4 days | | | | | | | | | | | | | | | | | | |
| 50 | Open and Vent the Exhaust Frame Cooling Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 51 | Open and Vent the CT Air Processing Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 52 | Open and Vent the Inlet Air Heating Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 53 | Open and Vent the CT Air Processing Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 54 | Fire Protection Piping | 3 days | | | | | | | | | | | | | | | | | | |
| 55 | Empty the CO2 Storage Tank | 2 days | | | | | | | | | | | | | | | | | | |
| 56 | Open and Vent the Fire Protection Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 57 | Lube Oil System | 7 days | | | | | | | | | | | | | | | | | | |
| 58 | Empty and Remove from Site the Lubricating Oil | 4 days | | | | | | | | | | | | | | | | | | |
| 59 | Drain Lubricating Oil Piping | 2 days | | | | | | | | | | | | | | | | | | |
| 60 | Open and Vent Lubricating Oil Piping | 1 day | | | | | | | | | | | | | | | | | | |
| 61 | Hawthorn 9 Retirement Activities | 80 days | | | | | | | | | | | | | | | | | | |
| 62 | Electrical | 22 days | | | | | | | | | | | | | | | | | | |
| 63 | Medium and Low Voltage Drawout Switchgear | 6 days | | | | | | | | | | | | | | | | | | |
| 64 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | | |

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | |
|----|--|---------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 65 | Open all circuit breakers. | 1 day | | | | | | | | | | | | | | | | | |
| 66 | Rack all circuit breakers into the fully withdrawn, disconnected position. | 1 day | | | | | | | | | | | | | | | | | |
| 67 | Verify that the closing/tripping springs are discharged. | 2 days | | | | | | | | | | | | | | | | | |
| 68 | De-energize control power and auxiliary power circuits of all breakers. | 1 day | | | | | | | | | | | | | | | | | |
| 69 | Motor Control Centers | 3 days | | | | | | | | | | | | | | | | | |
| 70 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 71 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 72 | Remove all fuses in control circuits. | 1 day | | | | | | | | | | | | | | | | | |
| 73 | Low-voltage Switchboards and Panelboards | 2 days | | | | | | | | | | | | | | | | | |
| 74 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 75 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 76 | Oil-Filled Power Transformers | 4 days | | | | | | | | | | | | | | | | | |
| 77 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 78 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 79 | De-energize all buses at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 80 | Open all circuit breakers and disconnect switches. | 1 day | | | | | | | | | | | | | | | | | |
| 81 | Dry-type Power Transformers | 2 days | | | | | | | | | | | | | | | | | |
| 82 | De-energize all transformer primaries and verify that the secondary is de-energized. | 1 day | | | | | | | | | | | | | | | | | |
| 83 | De-energize all low-voltage AC or DC power sources for space heaters. | 1 day | | | | | | | | | | | | | | | | | |
| 84 | Motors | 5 days | | | | | | | | | | | | | | | | | |
| 85 | De-energize all primary power at the source. | 1 day | | | | | | | | | | | | | | | | | |
| 86 | De-energize all low-voltage power sources for space heaters. | 1 day | | | | | | | | | | | | | | | | | |
| 87 | Drain lube oil system (if applicable) and dispose of oil. | 3 days | | | | | | | | | | | | | | | | | |
| 88 | Boiler Chemical Feed | 2 days | | | | | | | | | | | | | | | | | |
| 89 | Drain all chemical feed tanks. | 2 days | | | | | | | | | | | | | | | | | |
| 90 | HRS | 3 days | | | | | | | | | | | | | | | | | |
| 91 | Open HRS doors. | 1 day | | | | | | | | | | | | | | | | | |
| 92 | Drain boiler, drums, downcomers and headers. | 1 day | | | | | | | | | | | | | | | | | |
| 93 | Open drum doors. | 1 day | | | | | | | | | | | | | | | | | |
| 94 | Stack and Ductwork | 2 days | | | | | | | | | | | | | | | | | |
| 95 | Open ductwork doors. | 1 day | | | | | | | | | | | | | | | | | |
| 96 | Place cap over stack opening to keep moisture out. | 1 day | | | | | | | | | | | | | | | | | |

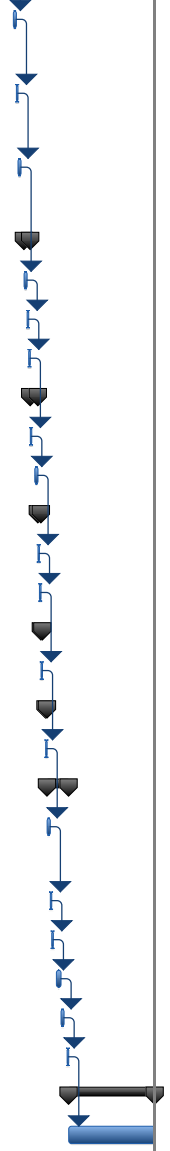


Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | | |
|-----|--|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
| 97 | Condensate and Feedwater Piping | 2 days | | | | | | | | | | | | | | | | | | |
| 98 | Drain water from the system. | 1 day | | | | | | | | | | | | | | | | | | |
| 99 | Leave open vents and drains. | 1 day | | | | | | | | | | | | | | | | | | |
| 100 | SCR | 9 days | | | | | | | | | | | | | | | | | | |
| 101 | Remove catalyst of salvage or disposal. | 4 days | | | | | | | | | | | | | | | | | | |
| 102 | Padlock or tack weld access doors shut. | 1 day | | | | | | | | | | | | | | | | | | |
| 103 | Remove ammonia from storage tank for resale. | 1 day | | | | | | | | | | | | | | | | | | |
| 104 | Wash out and drain storage tank and supply piping. | 1 day | | | | | | | | | | | | | | | | | | |
| 105 | Vent storage tank and all piping. Leave vent and drain valves open or remove. Install bird screens. | 1 day | | | | | | | | | | | | | | | | | | |
| 106 | Pull electrical supply breakers on all electrical equipment except lighting and HVAC components that are to remain in service. | 1 day | | | | | | | | | | | | | | | | | | |
| 107 | Turbine(s) and Condenser | 6 days | | | | | | | | | | | | | | | | | | |
| 108 | Drain hotwell and leave doors open. | 1 day | | | | | | | | | | | | | | | | | | |
| 109 | Open main turbine doors. | 1 day | | | | | | | | | | | | | | | | | | |
| 110 | Open bfp turbine doors. | 1 day | | | | | | | | | | | | | | | | | | |
| 111 | Remove lube oil. | 3 days | | | | | | | | | | | | | | | | | | |
| 112 | Generator | 13 days | | | | | | | | | | | | | | | | | | |
| 113 | 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. | 1 day | | | | | | | | | | | | | | | | | | |
| 114 | Verify that generator field breaker or contactor (if applicable) is open. | 1 day | | | | | | | | | | | | | | | | | | |
| 115 | De-energize power supplies to generator excitation system at the source. | 1 day | | | | | | | | | | | | | | | | | | |
| 116 | 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. | 2 days | | | | | | | | | | | | | | | | | | |
| 117 | Drain lubricating oil system and dispose of oil. | 3 days | | | | | | | | | | | | | | | | | | |

Hawthorn 6 & 9 Retirement

| ID | Task Name | Duration | 2nd Quarter | | | 3rd Quarter | | | 4th Quarter | | | 1st Quarter | | | 2nd Quarter | | | 3rd Quarter | |
|-----|---|----------------|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|-----|-------------|-----|
| | | | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
| 118 | Drain generator and exciter cooling water systems (if applicable). | 2 days | | | | | | | | | | | | | | | | | |
| 119 | Disconnect and remove hydrogen gas tanks and purge generator hydrogen system. | 1 day | | | | | | | | | | | | | | | | | |
| 120 | Disconnect and remove fire protection system gas/foam tanks and purge fire protection system. | 2 days | | | | | | | | | | | | | | | | | |
| 121 | Circulating Water and Turbine Cooling Water System | 4 days | | | | | | | | | | | | | | | | | |
| 122 | Drain. | 2 days | | | | | | | | | | | | | | | | | |
| 123 | Open water box doors. | 1 day | | | | | | | | | | | | | | | | | |
| 124 | Drain any circulating water chemical feed tanks. | 1 day | | | | | | | | | | | | | | | | | |
| 125 | Compressed Air System | 3 days | | | | | | | | | | | | | | | | | |
| 126 | Open vents and drains. | 1 day | | | | | | | | | | | | | | | | | |
| 127 | Remove desiccant from desiccant dryers. | 2 days | | | | | | | | | | | | | | | | | |
| 128 | Auxiliary Steam System | 2 days | | | | | | | | | | | | | | | | | |
| 129 | Drain water from system. | 1 day | | | | | | | | | | | | | | | | | |
| 130 | Remove aux boiler chemicals. | 1 day | | | | | | | | | | | | | | | | | |
| 131 | Auxiliary Cooling Water System | 1 day | | | | | | | | | | | | | | | | | |
| 132 | Drain water from system. | 1 day | | | | | | | | | | | | | | | | | |
| 133 | Condenser Air Extraction and Waterbox Priming System | 1 day | | | | | | | | | | | | | | | | | |
| 134 | Drain water from system. | 1 day | | | | | | | | | | | | | | | | | |
| 135 | Battery System | 10 days | | | | | | | | | | | | | | | | | |
| 136 | Turn off battery charger and disconnect cables from batteries. | 2 days | | | | | | | | | | | | | | | | | |
| 137 | De-energize all battery chargers from the source. | 1 day | | | | | | | | | | | | | | | | | |
| 138 | Open all AC and DC circuit breakers and/or fused switches | 1 day | | | | | | | | | | | | | | | | | |
| 139 | Remove and dispose of battery electrolyte. | 3 days | | | | | | | | | | | | | | | | | |
| 140 | Remove and dispose of battery cells. | 2 days | | | | | | | | | | | | | | | | | |
| 141 | Clean up and dispose of electrolyte on surface areas around | 1 day | | | | | | | | | | | | | | | | | |
| 142 | Post Retirement Activities | 40 days | | | | | | | | | | | | | | | | | |
| 143 | Post Retirement Activities | 40 days | | | | | | | | | | | | | | | | | |



Hawthorn 6 & 9 Dismantlement

Owner Costs

| | |
|-------------------------------|-------------|
| Pre-Dismantlement Activities | \$892,760 |
| Overhead During Dismantlement | \$1,216,525 |
| Post-Dismantlement Activities | \$32,760 |

Owner Costs Total \$2,142,045

Demolition General Contractor (DGC) Costs

| | |
|------------------|-------------|
| Site Management | \$663,137 |
| Equipment Rental | \$1,129,140 |
| Consummables | \$1,126,519 |
| Scrap Crew(s) | \$296,574 |
| Dismantlement | \$966,243 |

DGC Insurance 2.00% \$83,632

Contingency/Profit 15.00% \$639,787

Performance Bond 2.00% \$98,101

Contractor Costs Total: \$5,003,133

Total: \$7,145,178

Owner Internal Costs: 5.00% \$357,259

Owner Contingency: 25.00% \$1,875,609

Hawthorn 6 & 9 Dismantlement Opinion of Probable Cost: \$9,378,046

| Hawthorn 6 & 9 Dismantlement | | |
|------------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | Hawthorn 6 & 9 Dismantlement | \$6,323,660.96 |
| 2 | Pre-Demolition Activities | \$892,760.32 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$104,441.28 |
| 4 | Detailed Site Characterization Study | \$610,335.44 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$1,216,525.44 |
| 9 | KCP&L Project Manager | \$193,315.20 |
| 10 | KCP&L Administrative Support | \$71,485.44 |
| 11 | KCP&L Engineer | \$317,740.80 |
| 12 | Owners Engineer Project Manager | \$94,848.00 |
| 13 | Owners Engineer - Engineer | \$539,136.00 |
| 14 | Demolition Contractor Overhead during Dismantlement | \$663,137.28 |
| 15 | Demolition Contractor Project Manager | \$187,624.32 |
| 16 | Demolition Contractor Safety Manager | \$167,057.28 |
| 17 | Demolition Contractor Superintendent | \$308,455.68 |
| 18 | Demolition Contractor Equipment Rental Cost | \$1,129,140.48 |
| 19 | Equipment Rental | \$1,129,140.48 |
| 20 | Demolition Contractor Consumables | \$1,126,519.68 |
| 21 | Consumables | \$1,126,519.68 |
| 22 | Scrap Crews | \$296,574.72 |
| 23 | Crew to Handle Scrap Material(s) | \$296,574.72 |
| 24 | Dismantlement | \$966,243.04 |
| 25 | Electrical | \$107,481.60 |
| 26 | Electrical Demolition of Equipment | \$107,481.60 |
| 27 | Fuel Gas System | \$8,445.28 |
| 28 | Remove all above grade fuel gas piping. | \$3,071.20 |
| 29 | Gas Filter Skid | \$5,374.08 |
| 30 | Lube Oil System | \$19,704.96 |
| 31 | Lube Oil Piping | \$5,374.08 |
| 32 | Lube Oil Pumps | \$5,374.08 |
| 33 | Lube Oil Tanks | \$8,956.80 |
| 34 | Compressed Air System | \$23,287.68 |
| 35 | Compressed Air Piping | \$5,374.08 |
| 36 | Compressors | \$8,956.80 |
| 37 | Air Receiver | \$3,582.72 |
| 38 | Dryer | \$5,374.08 |
| 39 | Fire Protection | \$32,244.48 |
| 40 | Fire Protection Piping | \$10,748.16 |
| 41 | Firewater Tank | \$14,330.88 |
| 42 | CO2 Storage Tank | \$7,165.44 |
| 43 | Wash Water Skid | \$14,330.88 |
| 44 | Detergent Tank | \$7,165.44 |

| Hawthorn 6 & 9 Dismantlement | | |
|------------------------------|---|---------------------|
| ID | Task Name | Cost |
| 45 | Demineralized Water Tank | \$7,165.44 |
| 46 | Miscellaneous Piping | \$91,359.36 |
| 47 | Exhaust Frame Cooling Piping | \$7,165.44 |
| 48 | CT Air Processing Piping | \$8,956.80 |
| 49 | Inlet Air Heating Piping | \$8,956.80 |
| 50 | Auxiliary Steam Piping | \$8,956.80 |
| 51 | Auxiliary Cooling Piping | \$8,956.80 |
| 52 | Feedwater Piping | \$12,539.52 |
| 53 | Condensate Piping | \$14,330.88 |
| 54 | High Pressure Steam Piping | \$21,496.32 |
| 55 | Generators | \$14,330.88 |
| 56 | CT Generator | \$7,165.44 |
| 57 | ST Generator | \$7,165.44 |
| 58 | Steam Turbine and Condenser | \$26,870.40 |
| 59 | Remove Steam Turbine | \$17,913.60 |
| 60 | Remove Condenser Internals | \$8,956.80 |
| 61 | General Service Pumps | \$25,079.04 |
| 62 | Boiler Feed Pumps | \$8,956.80 |
| 63 | Condensate Pumps | \$5,374.08 |
| 64 | Turbine Cooling Water Pumps | \$3,582.72 |
| 65 | General Service Pumps - Misc. | \$7,165.44 |
| 66 | Combustion Turbine | \$93,150.72 |
| 67 | Inlet Heater | \$5,374.08 |
| 68 | Inlet duct | \$10,748.16 |
| 69 | Exhaust duct | \$14,330.88 |
| 70 | Combustion Turbine | \$28,661.76 |
| 71 | Combustion Turbine Foundation | \$16,122.24 |
| 72 | Enclosure | \$17,913.60 |
| 73 | Boiler Chemical Feed | \$7,165.44 |
| 74 | Chemical Feed tanks | \$7,165.44 |
| 75 | Condenser | \$30,453.12 |
| 76 | Condenser Air Extraction and Waterbox Priming System | \$7,165.44 |
| 77 | Condenser External Parts | \$23,287.68 |
| 78 | HRSG | \$340,358.40 |
| 79 | Remove Boiler Tubes | \$107,481.60 |
| 80 | Remove Boiler Ductwork Casing | \$71,654.40 |
| 81 | Remove Boiler Steel | \$161,222.40 |
| 82 | Turbine Building | \$60,326.40 |
| 83 | Remove the Turbine Building | \$60,326.40 |
| 84 | Circulating Water and Turbine Cooling Water System | \$21,496.32 |
| 85 | Chemical Feed tanks | \$3,582.72 |
| 86 | Excavate Collapse and Back Fill Circulation Water Piping | \$17,913.60 |
| 87 | CEMS | \$14,330.88 |
| 88 | CEMS Building | \$7,165.44 |

Hawthorn 6 & 9 Dismantlement

| ID | Task Name | Cost |
|----|--------------------------------------|--------------------|
| 89 | CEMS Building Foundation | \$7,165.44 |
| 90 | Stack | \$35,827.20 |
| 91 | Stacks and By-Pass Damper | \$35,827.20 |
| 92 | Post Dismantlement Activities | \$32,760.00 |
| 93 | Post Dismantlement Activities | \$32,760.00 |

Hawthorn 6 & 9 Dismantlement

| ID | Task Name | Duration | 2013 | | | | 2014 | | | | |
|----|--|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | |
| 1 | Hawthorn 6 & 9 Dismantlement | 321 days | | | | | | | | | |
| 2 | Pre-Demolition Activities | 130 days | | | | | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 3 mons | | | | | | | | | |
| 4 | Detailed Site Characterization Study | 130 days | | | | | | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 312 days | | | | | | | | | |
| 9 | KCP&L Project Manager | 312 days | | | | | | | | | |
| 10 | KCP&L Administrative Support | 312 days | | | | | | | | | |
| 11 | KCP&L Engineer | 312 days | | | | | | | | | |
| 12 | Owners Engineer Project Manager | 312 days | | | | | | | | | |
| 13 | Owners Engineer - Engineer | 312 days | | | | | | | | | |
| 14 | Demolition Contractor Overhead during Dismantlement | 312 days | | | | | | | | | |
| 15 | Demolition Contractor Project Manager | 312 days | | | | | | | | | |
| 16 | Demolition Contractor Safety Manager | 312 days | | | | | | | | | |
| 17 | Demolition Contractor Superintendent | 312 days | | | | | | | | | |
| 18 | Demolition Contractor Equipment Rental Cost | 312 days | | | | | | | | | |
| 19 | Equipment Rental | 312 days | | | | | | | | | |
| 20 | Demolition Contractor Consumables | 312 days | | | | | | | | | |
| 21 | Consumables | 312 days | | | | | | | | | |
| 22 | Scrap Crews | 312 days | | | | | | | | | |
| 23 | Crew to Handle Scrap Material(s) | 312 days | | | | | | | | | |
| 24 | Dismantlement | 312 days | | | | | | | | | |
| 25 | Electrical | 60 days | | | | | | | | | |
| 26 | Electrical Demolition of Equipment | 60 days | | | | | | | | | |
| 27 | Fuel Gas System | 8 days | | | | | | | | | |
| 28 | Remove all above grade fuel gas piping. | 5 days | | | | | | | | | |
| 29 | Gas Filter Skid | 3 days | | | | | | | | | |
| 30 | Lube Oil System | 11 days | | | | | | | | | |
| 31 | Lube Oil Piping | 3 days | | | | | | | | | |

Hawthorn 6 & 9 Dismantlement

| ID | Task Name | Duration | 2013 | | | | 2014 | | | | | |
|----|------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | | |
| 32 | Lube Oil Pumps | 3 days | | | | | | | | | | |
| 33 | Lube Oil Tanks | 5 days | | | | | | | | | | |
| 34 | Compressed Air System | 13 days | | | | | | | | | | |
| 35 | Compressed Air Piping | 3 days | | | | | | | | | | |
| 36 | Compressors | 5 days | | | | | | | | | | |
| 37 | Air Receiver | 2 days | | | | | | | | | | |
| 38 | Dryer | 3 days | | | | | | | | | | |
| 39 | Fire Protection | 18 days | | | | | | | | | | |
| 40 | Fire Protection Piping | 6 days | | | | | | | | | | |
| 41 | Firewater Tank | 8 days | | | | | | | | | | |
| 42 | CO2 Storage Tank | 4 days | | | | | | | | | | |
| 43 | Wash Water Skid | 8 days | | | | | | | | | | |
| 44 | Detergent Tank | 4 days | | | | | | | | | | |
| 45 | Demineralized Water Tank | 4 days | | | | | | | | | | |
| 46 | Miscellaneous Piping | 51 days | | | | | | | | | | |
| 47 | Exhaust Frame Cooling Piping | 4 days | | | | | | | | | | |
| 48 | CT Air Processing Piping | 5 days | | | | | | | | | | |
| 49 | Inlet Air Heating Piping | 5 days | | | | | | | | | | |
| 50 | Auxiliary Steam Piping | 5 days | | | | | | | | | | |
| 51 | Auxiliary Cooling Piping | 5 days | | | | | | | | | | |
| 52 | Feedwater Piping | 7 days | | | | | | | | | | |
| 53 | Condensate Piping | 8 days | | | | | | | | | | |
| 54 | High Pressure Steam Piping | 12 days | | | | | | | | | | |
| 55 | Generators | 8 days | | | | | | | | | | |
| 56 | CT Generator | 4 days | | | | | | | | | | |
| 57 | ST Generator | 4 days | | | | | | | | | | |
| 58 | Steam Turbine and Condenser | 15 days | | | | | | | | | | |
| 59 | Remove Steam Turbine | 10 days | | | | | | | | | | |
| 60 | Remove Condenser Internals | 5 days | | | | | | | | | | |
| 61 | General Service Pumps | 14 days | | | | | | | | | | |
| 62 | Boiler Feed Pumps | 5 days | | | | | | | | | | |
| 63 | Condensate Pumps | 3 days | | | | | | | | | | |

Hawthorn 6 & 9 Dismantlement

| ID | Task Name | Duration | 2013 | | | | | 2014 | | | | |
|----|---|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | | |
| 64 | Turbine Cooling Water Pumps | 2 days | | | | | | | | | | |
| 65 | General Service Pumps - Misc. | 4 days | | | | | | | | | | |
| 66 | Combustion Turbine | 52 days | | | | | | | | | | |
| 67 | Inlet Heater | 3 days | | | | | | | | | | |
| 68 | Inlet duct | 6 days | | | | | | | | | | |
| 69 | Exhaust duct | 8 days | | | | | | | | | | |
| 70 | Combustion Turbine | 16 days | | | | | | | | | | |
| 71 | Combustion Turbine Foundation | 9 days | | | | | | | | | | |
| 72 | Enclosure | 10 days | | | | | | | | | | |
| 73 | Boiler Chemical Feed | 4 days | | | | | | | | | | |
| 74 | Chemical Feed tanks | 4 days | | | | | | | | | | |
| 75 | Condenser | 17 days | | | | | | | | | | |
| 76 | Condenser Air Extraction and Waterbox Priming System | 4 days | | | | | | | | | | |
| 77 | Condenser External Parts | 13 days | | | | | | | | | | |
| 78 | HRS | 95 days | | | | | | | | | | |
| 79 | Remove Boiler Tubes | 30 days | | | | | | | | | | |
| 80 | Remove Boiler Ductwork Casing | 20 days | | | | | | | | | | |
| 81 | Remove Boiler Steel | 45 days | | | | | | | | | | |
| 82 | Turbine Building | 15 days | | | | | | | | | | |
| 83 | Remove the Turbine Building | 15 days | | | | | | | | | | |
| 84 | Circulating Water and Turbine Cooling Water System | 12 days | | | | | | | | | | |
| 85 | Chemical Feed tanks | 2 days | | | | | | | | | | |
| 86 | Excavate Collapse and Back Fill Circulation Water Piping | 10 days | | | | | | | | | | |
| 87 | CEMS | 8 days | | | | | | | | | | |
| 88 | CEMS Building | 4 days | | | | | | | | | | |
| 89 | CEMS Building Foundation | 4 days | | | | | | | | | | |
| 90 | Stack | 20 days | | | | | | | | | | |
| 91 | Stacks and By-Pass Damper | 20 days | | | | | | | | | | |

Hawthorn 6 & 9 Dismantlement

| ID | Task Name | Duration | 2013 | | | | | 2014 | | | | | |
|----|--------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|--|
| | | | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | | | |
| 92 | Post Dismantlement Activities | 20 days | | | | | | | | | | | |
| 93 | Post Dismantlement Activities | 20 days | | | | | | | | | | | |



SPEARVILLE

SPEARVILLE

The Spearville Wind Generating Station consists of 99 wind turbine generators.

Spearville Unit 1 has 67 wind turbines and an SPP-accredited rating of 100.5 MW. Spearville Unit 1 was placed in service in 2006. Spearville Unit 2 has 32 wind turbines and an SPP-accredited rating of 48 MW. Spearville Unit 2 was placed in service in 2010. The turbines are General Electric SLE rated at 1.5 MW each.

The following are the major systems and equipment that were included in the dismantlement of the units.

SPEARVILLE

1. Wind turbine generators.
2. Concrete foundations.
3. Roads.
4. Tower transformers.
5. Underground collection cables.

UNIT 1

Spearville 1 Dismantlement

Owner Costs

| | | |
|-------------------------------|--|-----------|
| Pre-Dismantlement Activities | | \$322,878 |
| Overhead During Dismantlement | | \$152,513 |
| Post-Dismantlement Activities | | \$32,760 |

Owner Costs Total \$508,151

Demolition General Contractor (DGC) Costs
Dismantlement

\$16,795,997

DGC Insurance 2.00% \$335,920

Contingency/Profit 15.00% \$2,569,788

Performance Bond 2.00% \$394,034

Contractor Costs Total: \$20,095,739

Total: \$20,603,890

Owner Internal Costs: 5.00% \$1,030,194

Owner Contingency: 25.00% \$5,408,521

Spearville 1 Dismantlement Opinion of Probable Cost: \$27,042,605

| Spearville 1 Dismantlement | | |
|----------------------------|--|------------------------|
| ID | Task Name | Cost |
| 1 | Spearville 1 Dismantlement | \$17,304,149.52 |
| 2 | Pre-Demolition Activities | \$322,878.64 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$49,259.52 |
| 4 | Detailed Site Characterization Study | \$95,635.52 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Site | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$152,513.28 |
| 9 | KCP&L Project Manager | \$14,870.40 |
| 10 | KCP&L Administrative Support | \$5,498.88 |
| 11 | KCP&L Engineer | \$61,104.00 |
| 12 | Owners Engineer Project Manager | \$36,480.00 |
| 13 | Owners Engineer - Engineer | \$34,560.00 |
| 14 | Dismantlement Activities | \$16,795,997.60 |
| 15 | Dismantlement Minus Freight | \$5,333,042.00 |
| 16 | Dismantlement Freight | \$8,356,410.00 |
| 17 | Cut Turbine Blades for Scrap Shipment | \$493,545.60 |
| 18 | Blade Landfill Cost | \$2,613,000.00 |
| 19 | Post Dismantlement Activities | \$32,760.00 |
| 20 | Post Dismantlement Activities | \$32,760.00 |

Spearville 1 Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | 2014 | | | |
|----|--|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | | | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | | |
| 1 | Spearville 1 Dismantlement | 321 days | | | | | | | | | | | | |
| 2 | Pre-Demolition Activities | 165 days | | | | | | | | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 2 mons | | | | | | | | | | | | |
| 4 | Detailed Site Characterization Study | 2 mons | | | | | | | | | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | | | | | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | | | | | | | | |
| 7 | Demolition Contractor Mobilizes on Site | 5 days | | | | | | | | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 120 days | | | | | | | | | | | | |
| 9 | KCP&L Project Manager | 120 days | | | | | | | | | | | | |
| 10 | KCP&L Administrative Support | 120 days | | | | | | | | | | | | |
| 11 | KCP&L Engineer | 120 days | | | | | | | | | | | | |
| 12 | Owners Engineer Project Manager | 120 days | | | | | | | | | | | | |
| 13 | Owners Engineer - Engineer | 120 days | | | | | | | | | | | | |
| 14 | Dismantlement Activities | 120 days | | | | | | | | | | | | |
| 15 | Dismantlement Minus Freight | 120 days | | | | | | | | | | | | |
| 16 | Dismantlement Freight | 120 days | | | | | | | | | | | | |
| 17 | Cut Turbine Blades for Scrap Shipment | 120 days | | | | | | | | | | | | |
| 18 | Blade Landfill Cost | 120 days | | | | | | | | | | | | |
| 19 | Post Dismantlement Activities | 20 days | | | | | | | | | | | | |
| 20 | Post Dismantlement Activities | 20 days | | | | | | | | | | | | |

UNIT 2

Spearville 2 Dismantlement

Owner Costs

| | | |
|-------------------------------|--|-----------|
| Pre-Dismantlement Activities | | \$322,878 |
| Overhead During Dismantlement | | \$76,256 |
| Post-Dismantlement Activities | | \$32,760 |

Owner Costs Total \$431,894

Demolition General Contractor (DGC) Costs
Dismantlement

\$7,799,694

DGC Insurance 2.00% \$155,994

Contingency/Profit 15.00% \$1,193,353

Performance Bond 2.00% \$182,981

Contractor Costs Total: \$9,332,022

Total: \$9,763,916

Owner Internal Costs: 5.00% \$488,196

Owner Contingency: 25.00% \$2,563,028

Spearville 2 Dismantlement Opinion of Probable Cost: \$12,815,140

| Spearville 2 Dismantlement | | |
|----------------------------|--|-----------------------|
| ID | Task Name | Cost |
| 1 | Spearville 2 Dismantlement | \$8,231,590.08 |
| 2 | Pre-Demolition Activities | \$322,878.64 |
| 3 | Detailed Planning & Hire Owner's Engineer | \$49,259.52 |
| 4 | Detailed Site Characterization Study | \$95,635.52 |
| 5 | Hire Demolition general Contractor | \$167,184.00 |
| 6 | KCP&L Prepares Unit for Dismantlement | \$10,799.60 |
| 7 | Demolition Contractor Mobilizes on Sit | \$0.00 |
| 8 | KCP&L Overhead during Dismantlement | \$76,256.64 |
| 9 | KCP&L Project Manager | \$7,435.20 |
| 10 | KCP&L Administrative Support | \$2,749.44 |
| 11 | KCP&L Engineer | \$30,552.00 |
| 12 | Owners Engineer Project Manager | \$18,240.00 |
| 13 | Owners Engineer - Engineer | \$17,280.00 |
| 14 | Dismantlement | \$7,799,694.80 |
| 15 | Dismantlement Minus Freight | \$4,141,237.00 |
| 16 | Dismantlement Freight | \$2,163,685.00 |
| 17 | Cut Turbine Blades for Scrap Shipment | \$246,772.80 |
| 18 | Blade Landfill Cost | \$1,248,000.00 |
| 19 | Post Dismantlement Activities | \$32,760.00 |
| 20 | Post Dismantlement Activities | \$32,760.00 |

Spearville 2 Dismantlement

| ID | Task Name | Duration | 2012 | | | | 2013 | | | | 2014 |
|----|--|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 | Qtr 1 |
| 1 | Spearville 2 Dismantlement | 321 days | | | | | | | | | |
| 2 | Pre-Demolition Activities | 165 days | | | | | | | | | |
| 3 | Detailed Planning & Hire Owner's Engineer | 2 mons | | | | | | | | | |
| 4 | Detailed Site Characterization Study | 2 mons | | | | | | | | | |
| 5 | Hire Demolition general Contractor | 3 mons | | | | | | | | | |
| 6 | KCP&L Prepares Unit for Dismantlement | 2 wks | | | | | | | | | |
| 7 | Demolition Contractor Mobilizes on Sit | 5 days | | | | | | | | | |
| 8 | KCP&L Overhead during Dismantlement | 60 days | | | | | | | | | |
| 9 | KCP&L Project Manager | 60 days | | | | | | | | | |
| 10 | KCP&L Administrative Support | 60 days | | | | | | | | | |
| 11 | KCP&L Engineer | 60 days | | | | | | | | | |
| 12 | Owners Engineer Project Manager | 60 days | | | | | | | | | |
| 13 | Owners Engineer - Engineer | 60 days | | | | | | | | | |
| 14 | Dismantlement | 60 days | | | | | | | | | |
| 15 | Dismantlement Minus Freight | 60 days | | | | | | | | | |
| 16 | Dismantlement Freight | 60 days | | | | | | | | | |
| 17 | Cut Turbine Blades for Scrap Shipment | 60 days | | | | | | | | | |
| 18 | Blade Landfill Cost | 60 days | | | | | | | | | |
| 19 | Post Dismantlement Activities | 20 days | | | | | | | | | |
| 20 | Post Dismantlement Activities | 20 days | | | | | | | | | |

APPENDIX B

OPINIONS OF COSTS FOR SCRAP

OPINIONS OF SCRAP VALUES

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

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

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

Attached is a spreadsheet that was developed from the quantities used to build Iatan Unit 1 to calculate the current scrap value of Iatan Unit 1 value rates. Per the attached spreadsheet:

1. Iatan Unit 1 Scrap Value: \$10,000,000.

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

$$\text{UnitA(scrap value)} = \text{Iatan1(scrap value)} * (\text{CapacityUnitA} / \text{CapacityIatan1})^e$$

Where:

1. UnitA(scrap value) = Unit A Scrap Value.
2. Iatan1(scrap value) = Iatan Unit 1 Scrap Value: \$10,000,000.
3. CapacityUnitA = Capacity of Unit A.
4. CapacityIatan1 = Capacity of Iatan Unit 1: 705 MW.
5. e = Proration Factor: 0.6 per the AACE guidelines.

Therefore, the scrap value of the other coal-fired power plants are as follows:

MONTROSE UNIT 1

1. Capacity A = 170 MW.
2. Scrap Value = \$4,260,000.

MONTROSE UNIT 2

1. Capacity A = 164 MW.
2. Scrap Value = \$4,170,000.

MONTROSE UNIT 3

1. Capacity A = 176 MW.
2. Scrap Value = 4,350,000.

HAWTHORN UNIT 5

1. Capacity A = 564 MW.
2. Scrap Value = \$8,750,000.

LA CYGNE UNIT 1

1. Capacity A = 735 MW.
2. Scrap Value = \$10,250,000.

LA CYGNE UNIT 2

1. Capacity A = 686 MW.
2. Scrap Value = \$9,840,000.

IATAN UNIT 2

1. Capacity A = 881 MW.
2. Scrap Value = \$11,430,000.

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. Montrose Common: Scrap Value = \$2,170,000.
2. Hawthorn Common: Scrap Value = \$1,120,000.
3. La Cygne Common: Scrap Value = \$1,920,000.
4. Iatan Common: Scrap Value = \$6,850,000.

The scrap value of the combustion turbines 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 (for One Combustion Turbine):
 $(530,000 \text{ lbs}/2000 \text{ lbs/ton}) * \$370/\text{GT} = \$98,000$

Therefore:

NORTHEAST

1. (Eight combustion turbines)*\$98,000/CT: Scrap Value = \$784,000.

HAWTHORN UNITS 7 AND 8

1. (Two combustion turbines)*\$98,000/CT: Scrap Value = \$196,000.

WEST GARDNER

1. (Four combustion turbines)*\$98,000/CT: Scrap Value = \$392,000.

OSAWATOMIE

1. (One combustion turbine)*\$98,000/CT Scrap Value = \$98,000.

The scrap value of Hawthorn Units 6 and 9 was calculated in two parts: the scrap value of the CT (Hawthorn Unit 6) and the scrap value of the steam turbine plant (Hawthorn Unit 9):

HAWTHORN UNIT 6

1. (One combustion turbine)*\$98,000/CT: Scrap Value=\$98,000.

HAWTHORN UNIT 9

1. Capacity A = 62 MW: Scrap Value = \$2,325,528.

Total Hawthorn Units 6 and 9 Scrap Value: \$2,423,000.

SPEARVILLE

Scrap Value Per Turbine

Tower - 281,275 lbs. steel

Gearbox - 40,000 lbs. steel

Total Steel - 321,275 lbs.

Scrap Value: $(321,275\text{lb.}/2,000\text{lbs.ton}) * 370/\text{GT} =$ \$ 59,435

Generator - 18,000 lbs.

Scrap Value: $(18,000\text{ lb.})(0.37/\text{lb}) =$ \$ 6,660

Total Scrap Value Per Turbine = \$ 66,095

Scrap Value of Units 1 and 2 Collection Cable = \$ 890,180

Spearville 1 Scrap Value

$(67\text{ turbines})(66,095/\text{turbine}) + (890,180)(67/99) =$ \$ 5,030,810

Spearville 2 Scrap Value

$(32\text{ turbines})(66,095/\text{turbine}) + (890,180)(32/99) =$ \$ 2,402,775

| Iatan Unit 1 Materials from the Final Construction Report | | | | | | |
|---|---------------------------|--------|-----|--------------------|-------------|-----------------|
| Mixed Scrap Steel - | | | | | | |
| Structural Steel - | | | | 11085 Tons | | 11085 tons |
| Handrail - | | | | 32647 linear feet | 3.65 lbs/ft | 60 tons |
| Grating - | | | | 168244 square feet | 10 lbs/ft^2 | 841 tons |
| Coal Silos | | | | 285 Tons | | 285 tons |
| Fabricated Pipe 2.5" and Larger | | | | | | |
| | Pipe (linear feet) | | | | | |
| Main Steam | 911 | | 28" | 424 lbs/ft | | 193.132 tons |
| Hot Reheat | 1412 | | 36" | 552 lbs/ft | | 389.712 tons |
| Cold Reheat | 1173 | | 36" | 552 lbs/ft | | 323.748 tons |
| High Pressure Extraction | 1400 | Assume | 6" | 28.57 lbs/ft | | 19.999 tons |
| Boiler Safety Valve Vents | 1022 | Assume | 6" | 28.57 lbs/ft | | 14.59927 tons |
| Auxiliary Steam | 2269 | Assume | 6" | 28.57 lbs/ft | | 32.412665 tons |
| Boiler Vents and Drains | 1019 | Assume | 6" | 28.57 lbs/ft | | 14.556415 tons |
| Soot Blower Piping | 1729 | Assume | 6" | 28.57 lbs/ft | | 24.698765 tons |
| Temporary Blowout | 796 | Assume | 6" | 28.57 lbs/ft | | 11.37086 tons |
| Low Pressure Extraction | 902 | Assume | 6" | 28.57 lbs/ft | | 12.88507 tons |
| Turbine Seal and Drains | 1085 | Assume | 6" | 28.57 lbs/ft | | 15.499225 tons |
| BFPT Exhaust | 25 | Assume | 6" | 28.57 lbs/ft | | 0.357125 tons |
| Boiler Feed Discharge | 615 | Assume | 6" | 28.57 lbs/ft | | 8.785275 tons |
| BFP Recirc and Desuper Heat | 2556 | Assume | 6" | 28.57 lbs/ft | | 36.51246 tons |
| Boiler Feed Suction | 414 | Assume | 6" | 28.57 lbs/ft | | 5.91399 tons |
| Condensate | 3901 | Assume | 6" | 28.57 lbs/ft | | 55.725785 tons |
| Air Preheater Piping | 5634 | Assume | 6" | 28.57 lbs/ft | | 80.48169 tons |
| Heater Vents and Drains | 2013 | Assume | 6" | 28.57 lbs/ft | | 28.755705 tons |
| Heater Drips | 2717 | Assume | 6" | 28.57 lbs/ft | | 38.812345 tons |
| Water Pretreatment Piping | 221 | Assume | 6" | 28.57 lbs/ft | | 3.156985 tons |
| Chemical Feed | 85 | Assume | 6" | 28.57 lbs/ft | | 1.214225 tons |
| Make-Up Water | 3924 | Assume | 6" | 28.57 lbs/ft | | 56.05434 tons |
| Ash Sluice Water | 6510 | Assume | 6" | 28.57 lbs/ft | | 92.99535 tons |
| Chemical Clean | 4892 | Assume | 6" | 28.57 lbs/ft | | 69.88222 tons |
| Nitrogen | 918 | Assume | 6" | 28.57 lbs/ft | | 13.11363 tons |
| Auxiliary Cooling Water | 6462 | Assume | 6" | 28.57 lbs/ft | | 92.30967 tons |
| Extraction Traps and Drains | 1279 | Assume | 6" | 28.57 lbs/ft | | 18.270515 tons |
| Condenser Air Extraction | 276 | Assume | 6" | 28.57 lbs/ft | | 3.94266 tons |
| Fuel Oil System | 804 | Assume | 6" | 28.57 lbs/ft | | 11.48514 tons |
| Fire Protection System | 4017 | Assume | 6" | 28.57 lbs/ft | | 57.382845 tons |
| Service Water | 5022 | Assume | 6" | 28.57 lbs/ft | | 71.73927 tons |
| Generator Auxiliaries | 196 | Assume | 6" | 28.57 lbs/ft | | 2.79986 tons |
| Turbine Lube Oil | 925 | Assume | 6" | 28.57 lbs/ft | | 13.213625 tons |
| Waste Water | | Assume | 6" | 28.57 lbs/ft | | 0 tons |
| Compressed Air System | 12255 | Assume | 6" | 28.57 lbs/ft | | 175.062675 tons |
| Building Heating | 5438 | Assume | 6" | 28.57 lbs/ft | | 77.68183 tons |
| Screen Wash | 98 | Assume | 6" | 28.57 lbs/ft | | 1.39993 tons |
| Bottom Ash Overflow | 1032 | Assume | 6" | 28.57 lbs/ft | | 14.74212 tons |
| Fly Ash Disposal | 4099 | Assume | 6" | 28.57 lbs/ft | | 58.554215 tons |
| Ash Storage | 1313 | Assume | 6" | 28.57 lbs/ft | | 18.756205 tons |
| BFP Seal | | Assume | 6" | 28.57 lbs/ft | | 0 tons |
| Equipment Drains | 447 | Assume | 6" | 28.57 lbs/ft | | 6.385395 tons |
| Piping Provided With Equipment | | | | | | |
| | Linear Feet | | | | | |
| Turbine Generator | | | | | | |
| Stator Cooling Water | 1072 | Assume | 8" | 43.4 lbs/ft | | 23.2624 tons |
| Lube and Seal Oil | 1293 | Assume | 8" | 43.4 lbs/ft | | 28.0561 tons |
| Steam Seal | 1700 | Assume | 8" | 43.4 lbs/ft | | 36.89 tons |
| ECH | 2000 | Assume | 8" | 43.4 lbs/ft | | 43.4 tons |
| Hydrogen | 1735 | Assume | 8" | 43.4 lbs/ft | | 37.6495 tons |
| Main Steam Leads | 322 | Assume | 8" | 43.4 lbs/ft | | 6.9874 tons |
| Crossover Pipe | 90 | Assume | 8" | 43.4 lbs/ft | | 1.953 tons |

| | | | | | | | |
|--|--------------------|--------|----|------|----------|----------|------|
| Control Valve Leakoff | 237 | Assume | 8" | 43.4 | lbs/ft | 5.1429 | tons |
| Steam- Generator | | Assume | 8" | 43.4 | lbs/ft | 0 | tons |
| Coal Bumer | 10937 | Assume | 8" | 43.4 | lbs/ft | 237.3329 | tons |
| Soot Blower | 8402 | Assume | 8" | 43.4 | lbs/ft | 182.3234 | tons |
| Boiler Vents and Drains | 4870 | Assume | 8" | 43.4 | lbs/ft | 105.679 | tons |
| Seal Air | 5150 | Assume | 8" | 43.4 | lbs/ft | 111.755 | tons |
| Start-up Bypass | 0 | Assume | 8" | 43.4 | lbs/ft | 0 | tons |
| Igniter Oil | 3702 | Assume | 8" | 43.4 | lbs/ft | 80.3334 | tons |
| Economizer Connection Pipe | 481 | Assume | 8" | 43.4 | lbs/ft | 10.4377 | tons |
| Ash Handling System | | Assume | 8" | 43.4 | lbs/ft | 0 | tons |
| Bottom Ash Disposal | 3095 | Assume | 8" | 43.4 | lbs/ft | 67.1615 | tons |
| Pyrites Discharge | 939 | Assume | 8" | 43.4 | lbs/ft | 20.3763 | tons |
| Economizer and Gas Recirc Fly Ash | 474 | Assume | 8" | 43.4 | lbs/ft | 10.2858 | tons |
| Precipitator Fly Ash | 4442 | Assume | 8" | 43.4 | lbs/ft | 96.3914 | tons |
| 2' and Under Piping | | | | | | | |
| | Linear Feet | | | | | | |
| High Pressure Extraction | 120 | Assume | 1" | 2.17 | lbs/ft | 0.1302 | tons |
| Boiler Safety Valve Vents | 648 | Assume | 1" | 2.17 | lbs/ft | 0.70308 | tons |
| Auxiliary Steam | 1966 | Assume | 1" | 2.17 | lbs/ft | 2.13311 | tons |
| Boiler Vents and Drains | 2616 | Assume | 1" | 2.17 | lbs/ft | 2.83836 | tons |
| Soot Blower | 545 | Assume | 1" | 2.17 | lbs/ft | 0.591325 | tons |
| Low Pressure Extraction | 105 | Assume | 1" | 2.17 | lbs/ft | 0.113925 | tons |
| Turbine Seals and Drains | 1741 | Assume | 1" | 2.17 | lbs/ft | 1.888985 | tons |
| Condensate | 481 | Assume | 1" | 2.17 | lbs/ft | 0.521885 | tons |
| Air Preheater | 1011 | Assume | 1" | 2.17 | lbs/ft | 1.096935 | tons |
| Heater Vents and Drains | 1845 | Assume | 1" | 2.17 | lbs/ft | 2.001825 | tons |
| Heater Drips | 412 | Assume | 1" | 2.17 | lbs/ft | 0.44702 | tons |
| Water Pretreatment | 895 | Assume | 1" | 2.17 | lbs/ft | 0.971075 | tons |
| Chemical Feed | 3518 | Assume | 1" | 2.17 | lbs/ft | 3.81703 | tons |
| Make-up Water | 2410 | Assume | 1" | 2.17 | lbs/ft | 2.61485 | tons |
| Ash Sluice Water | 324 | Assume | 1" | 2.17 | lbs/ft | 0.35154 | tons |
| Nitrogen | 1340 | Assume | 1" | 2.17 | lbs/ft | 1.4539 | tons |
| Auxiliary Steam | 4500 | Assume | 1" | 2.17 | lbs/ft | 4.8825 | tons |
| Cooling Water | 1398 | Assume | 1" | 2.17 | lbs/ft | 1.51683 | tons |
| Extraction Traps and Drains | 309 | Assume | 1" | 2.17 | lbs/ft | 0.335265 | tons |
| Fuel oil System | 200 | Assume | 1" | 2.17 | lbs/ft | 0.217 | tons |
| Service Water | 778 | Assume | 1" | 2.17 | lbs/ft | 0.84413 | tons |
| Generator Auxiliaries | 4595 | Assume | 1" | 2.17 | lbs/ft | 4.985575 | tons |
| Turbine Lube Oil | 765 | Assume | 1" | 2.17 | lbs/ft | 0.830025 | tons |
| Coal Handling Equipment Hydraulic Oil System | 492 | Assume | 1" | 2.17 | lbs/ft | 0.53382 | tons |
| Compressed Air | 400 | Assume | 1" | 2.17 | lbs/ft | 0.434 | tons |
| Building Heating | 24000 | Assume | 1" | 2.17 | lbs/ft | 26.04 | tons |
| Screen Wash | 7149 | Assume | 1" | 2.17 | lbs/ft | 7.756665 | tons |
| Miscellaneous Boiler Feedwater | | Assume | 1" | 2.17 | lbs/ft | 0 | tons |
| Sampling System | 439 | Assume | 1" | 2.17 | lbs/ft | 0.476315 | tons |
| Equipment Drains | 426 | Assume | 1" | 2.17 | lbs/ft | 0.46221 | tons |
| Fly Ash Disposal | 6125 | Assume | 1" | 2.17 | lbs/ft | 6.645625 | tons |
| Sump Pump | 62 | Assume | 1" | 2.17 | lbs/ft | 0.06727 | tons |
| Chemical Clean | 68 | Assume | 1" | 2.17 | lbs/ft | 0.07378 | tons |
| Precipitator | | | | | | | |
| Precipitator | tons | 2,635 | | | | 2,635 | tons |
| Inlet Duct | tons | 741 | | | | 741 | tons |
| Outlet Duct | tons | 615 | | | | 615 | tons |
| Breeching Duct | tons | 225 | | | | 225 | tons |
| Fly Ash Silo Steel Plat | square feet | 12,409 | | 10.2 | lbs/ft^2 | 63.2859 | tons |
| Boiler | | | | | | | |
| Duct | tons | 1,750 | | | | 1750 | tons |
| Casing | square feet | 62,000 | | 10.2 | lbs/ft^2 | 316.2 | tons |
| steam drum | tons | 400 | | | | 400 | tons |
| Boiler | tons | 9,800 | | | | 9800 | tons |

| | | | | | | | | | | | | |
|---|-------------|---------|--|--|----------------|--|--|--------------------|-------------|----------|-------------------|---------------------|
| Air preheaters | | | | | | | | | | | | |
| Primary | tons | 536 | | | | | | 536 | tons | | | |
| Secondary | tons | 832 | | | | | | 832 | tons | | | |
| Mixed Scrap Steel Total | | | | | | | | 33536 | tons | @ | 324 \$/GT | \$10,865,529 |
| Motors | | | | | | | | | | | | |
| | lbs | | | | | | | 91943 | lbs | @ | 0.41 \$/lb | \$37,696.63 |
| Cable | | | | | | | | | | | | |
| 6.9 KV | Linear Feet | 115,300 | | | 795 lb/1000 ft | | | 91663.5 | lbs | | | |
| 480V, 120V AC and 125V DC | Linear Feet | 333,000 | | | 548 lb/1000 ft | | | 182484 | lbs | | | |
| Control | Linear Feet | 200,200 | | | 141 lb/1000 ft | | | 28228.2 | lbs | | | |
| Thermocouple and Instrument | Linear Feet | 557,000 | | | 102 lb/1000 ft | | | 56814 | lbs | | | |
| Communication | Linear Feet | 40,000 | | | 102 lb/1000 ft | | | 4080 | lbs | | | |
| Cable Totals | | | | | | | | 363270 | lbs | @ | 1.65 \$/lb | \$599,395 |
| Total Opinion of Scrap Value for Iatan 1 and Iatan 1 Common* | | | | | | | | | | | \$11,502,620 | |
| *Common at the time that Iatan Unit 1 was built. | | | | | | | | | | | | |
| Assume that 25% of the quantities above are "common facilities"; therefore, the scrap value of Iatan Unit 1 is: | | | | | | | | \$8,500,000 | | | | |

APPENDIX C

REFERENCES

REFERENCE DOCUMENTS

1. *Decommissioning Handbook for Coal-Fired Power Plants*, EPRI, Palo Alto, CA: 2004. (1011220)
2. *Decommissioning Process for Fossil-Fueled Power Plants*, EPRI, Palo Alto, CA: 2010. (1020652)
3. Association for the Advancement of Cost Estimating (ACE) 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

| Station | Equipment | Source of Requirement |
|----------------|------------------------------------|---|
| Montrose | Montrose Fuel Oil Tank Removal | Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures |
| | Montrose Wastewater Lagoon Removal | 10 CSR 20-6.010(12) Closure of Treatment Facilities and 10 CSR 20-6.015 No-Discharge Permits (5) Closure of Waste Storage Structures. |
| | Montrose Landfill Retirement | Solid Waste Operating Permit No. 708305 |
| Hawthorn | Hawthorn 1 & 2 Intake Removal | US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899 |
| | Hawthorn 5 Intake Removal | US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899 |
| La Cygne | La Cygne Wastewater Lagoon Removal | 28-16-173. Municipal, commercial and industrial wastewater lagoons: closure requirements. |
| | La Cygne Landfill Retirement | Kansas Solid Waste Permit No. 337 |
| Iatan | Iatan 1 Intake Removal | US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899 |
| | Iatan Fuel Oil Tank Removal | Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures |
| | Iatan Landfill Retirement | Solid Waste Operating Permit No. 0916501 |
| Northeast | Northeast Fuel Oil Tank Removal | Missouri Regulation 10 CSR 26-5.020 Release Reporting and Initial Release Response Measures |
| Hawthorn | Hawthorn 9 Intake Removal | US Army Corps of Engineers Section 10 Permit - Rivers & Harbor Act of March 3, 1899 |
| Spearville | Unit 1 | Spearville Wind Project Decommissioning Agreement dated June 21, 2006 |
| | Unit 2 | Spearville 2 Wind Project Decommissioning Agreement dated August 24, 2010 |