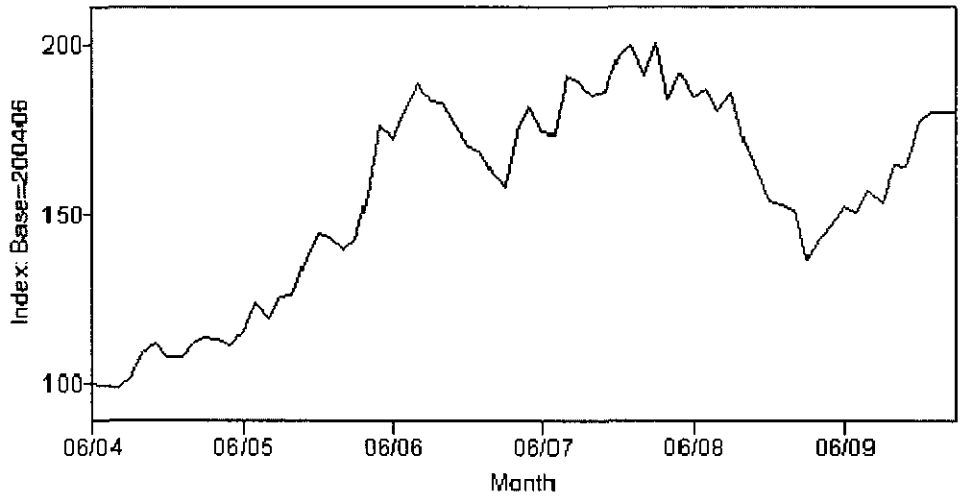
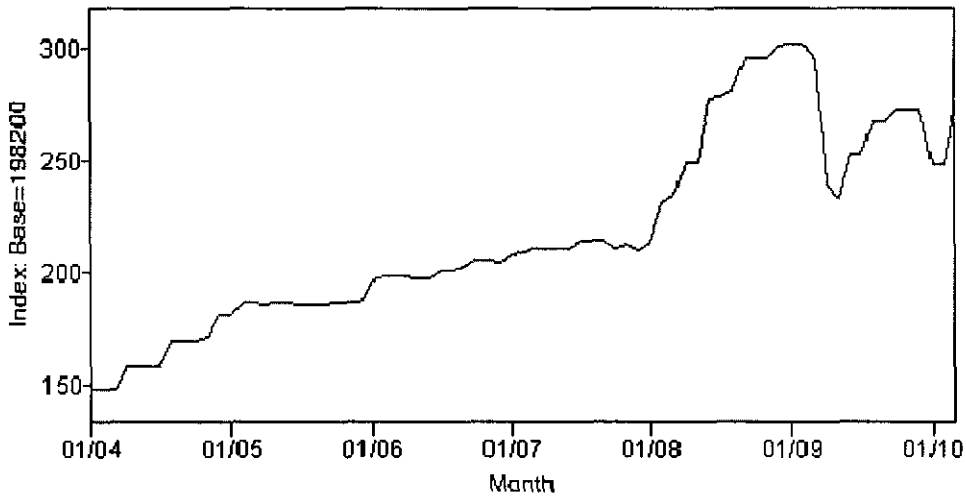
Exhibit WPD-22A
Group: Metals and Metal Products
Item: Power wire and cable
Series Id: WPU10260332
Not Seasonally Adjusted
Base Date: 200406



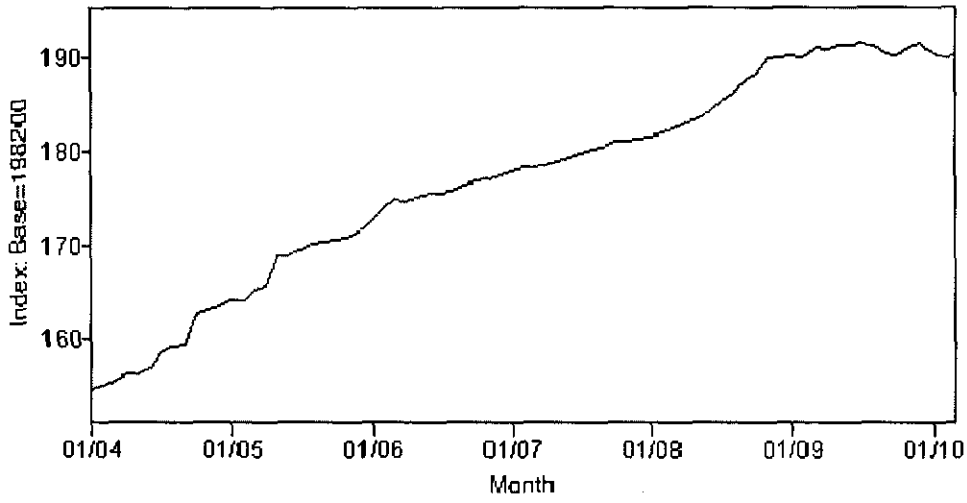
A review of this data, which encompasses power wire and cable, indicates that prices peaked in mid-2006, followed by a dip and another peak in mid-2007. This is significant as this was the timeframe in which Kiewit was preparing its bid for the balance of plant work on Iatan Unit 2. One would expect that Kiewit, using current prices, would not see significant increases in commodity costs for this category.

Exhibit WPD-22B
Group:Metals and metal products
Item: Pressure pipe and fittings, ductile iron
Series Id: WPU10150237
Not Seasonally Adjusted
Base Date: 198200



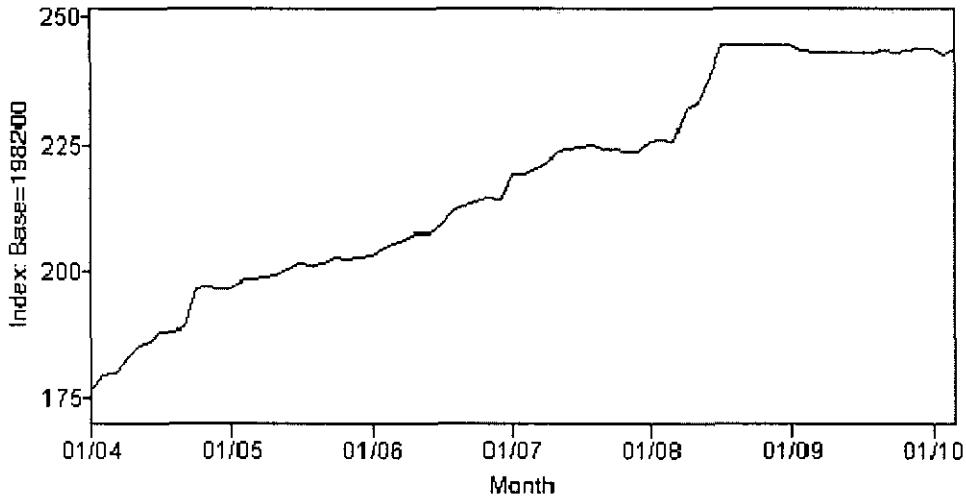
A review of this data, which encompasses pressure pipe and fittings, and ductile iron, indicates that prices were level until early in 2008. This is significant because Kiewit would have purchased almost its entire pipe for the balance of plant work on Iatan Unit 2 by that time. One would expect that Kiewit, using current prices at the time of its bid, would not have seen significant increases in commodity costs for this category prior to receipt of materials.

Exhibit WPD-22C
Series Id: WPS112
Seasonally Adjusted
Group: Machinery and equipment
Item: Construction machinery and equipment
Base Date: 198200



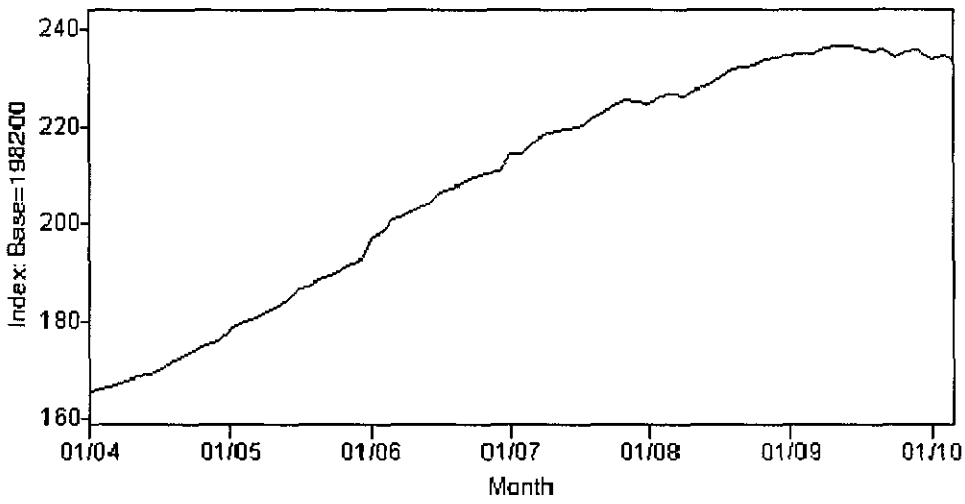
The data for construction machinery and equipment shows an approximately 5% increase in costs from January 2006 to January 2008.

Exhibit WPD-22D
Series Id: WPU1133
Not Seasonally Adjusted
Group: Machinery and equipment
Item: Welding machines and equipment
Base Date: 198200



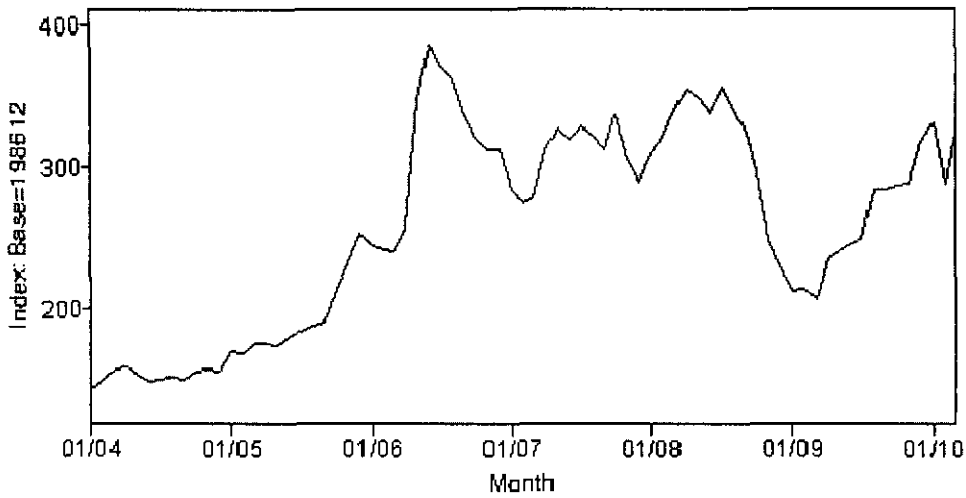
The data for welding machines and equipment shows an approximately 10% increase in costs from January 2006 to January 2008.

Exhibit WPD-22E
Series Id: WPS132
Seasonally Adjusted
Group: Nonmetallic mineral products
Item: Concrete ingredients and related products
Base Date: 198200



Concrete products rose steadily from early 2004 until mid-2008. One would expect that there would be some impact early in the project. However, KCP&L believes the use of a batch plant on-site, helped to mitigate prices somewhat.

Exhibit WPD-22F
Group: Metals and metal products
Item: Copper and copper alloy wire & cable, bare & tinned
Base Date: 198612



Prices for copper and copper alloy wire & cable, bare and tinned, was skyrocketing in early 2006, with a peak in mid-2006.

Our overall conclusion regarding commodities, is that while there was an increase, most large procurement packages such as the Alstom provided Boiler and AQCS and the turbine Generator were already purchased with fixed prices. Further, the BOP purchases by Kiewit should have reflected many of the escalated commodity costs at the time their bids were developed in late 2007.

CONTRACTOR CONSTRUCION PERFORMANCE

EARNED VALUE MANAGEMENT

Q. How is contract performance generally measured in the construction industry?

A To support the oversight and management of the Iatan Unit 1 and 2 projects, the KCP&L project management team selected the Earned Value Management technique. Earned Value Management (EVM) is an industry standard, integrated system of project management and control that enabled KCP&L and the various contractors to monitor the progress of a project in terms of integrated cost, schedule, and technical performance measures.[28]

Earned value project management involves planning work to a manageable level of detail such that it is feasible to allocate a portion of the budget to each planned work unit (work package), and then tracking progress by the accumulated "value" of completed work units. As work is performed, it is "earned" on the same basis as it was planned, in dollars or other quantifiable units. As the work units are completed, the project earns the budgeted value associated with those work units. This method associates a dollar value with work completed so that it can be compared with the actual spending (to determine cost variance – potential cost overruns), and the planned spending (to determine schedule variance – potential schedule slippage). In this manner, planned and actual spending is integrated with actual work performed. The integration provides greater visibility into the real project status for all stakeholders and thus creates a scenario for better management of risks, for early determination of whether a project is in trouble, and for estimating what will be needed to complete it.

[28]/ See Exhibit WPD-23 for additional detail and explanation regarding construction productivity.

Although tracking earned value occurs during project execution, it cannot be accomplished if appropriate project planning and budget allocation has not occurred up front.

Earned Value Activities

Define the Work: The Project Manager must decompose the project into distinct discrete manageable tasks or groups of tasks, (work packages), with decisive outputs and specific measurable entry and exit criteria. Each work package has a short duration, or can be divided into a series of milestones whose status can be objectively measured. Each work package can be assigned a start and finish date, a budget value, and can be integrated with higher-level schedules. This activity is often referred to as developing the Work Breakdown Structure (WBS). It is important to balance the level of detail in the WBS with the needs of the project, with the ultimate goal being the ability to realistically estimate the cost of accomplishing each task, (earned value). Providing too much detail creates an overload of data, creates a tracking nightmare, and stifles the creativity of developers. Lack of detail may mask vital information.

Schedule and Budget: Once the effort is identified through the WBS, the project manager must prepare a budget and resource-based schedule for accomplishing the work. What is critical to being able to track earned value is that a portion of the budget is allocated for each work package that comprises the WBS and that the WBS adequately defines all work necessary to meet the agreed-upon requirements for the project. The Primavera p3, resource-based scheduling tool was utilized for the Iatan Unit 1 and 2 projects.

Measure performance: This activity focuses on performance, not just planned vs. actual spending. It involves tracking a number of measures starting very early in the project, and analyzing the data to determine real project status. Important measures are listed below.

Primary Metrics

- Budget Cost of Work Scheduled (BCWS): The dollars (or hours) planned for the effort. The cumulative planned expenditures would equal the total dollars budgeted for the effort for the specified time period.
- Actual Cost of Work Performed (ACWP): The cumulative actual expenditures on the effort viewed at regular intervals within the project duration.
- Budgeted Cost of Work Performed (BCWP): The cumulative budgeted value (dollars or hours) of work actually completed.

Derived/Calculated Measures

From the above three primary measures it is possible to derive measures that can be used to accurately assess the status of the project and predict its future state.

- Cost Performance Index (CPI): The cost efficiency factor representing the relationship between the actual cost expended and the earned value. CPI = BCWP/ACWP. A CPI $\geq$ 1 suggests a relatively efficient cost factor, while a CPI <1 may be cause for concern.
- Schedule Performance Index (SPI): The planned schedule efficiency factor representing the relationship between the earned value and the initial

planned schedule. SPI = BCWP/BCWS. A SPI ≥ 1 is good. SPI < 1 suggests actual work is falling behind the planned schedule.

Earned value credit should be binary, with 0 percent being given before task completion and 100 percent given when completion of each work unit is validated. Establishing specific measurable exit criteria for each task makes it easier to track task completion, and thus credit the earned value of the task to the project so that the earned value of the project at any given point in time is obtained by "simple math" rather than by subjective assessment.

Communication of Performance Status

Tracking earned value is of little value if the estimating and analysis capability that it provides is not used to manage the project. Although originally required for reporting project status to the acquirer, in recent years there has been a migration of focus. EVM is now viewed as a project management technique, as well. Its usefulness is broader than simply reporting project status up the management chain. There are some important reasons to communicate the project status, (represented in terms of earned value), to all stakeholders.

- Promote Accountability: When developers understand how their individual work, or lack thereof, influences the project, they tend to be more focused on their specific work goals. They also better understand the significance of estimating the amount of work needed to complete specific tasks. There exists a mindset among some project managers that they should "protect" their developers from the distraction of project metrics. In reality, communicating project status to the development staff

tends to establish a sense of accountability for their assigned pieces of the project and often results in more realistic estimates for completion of future tasks.

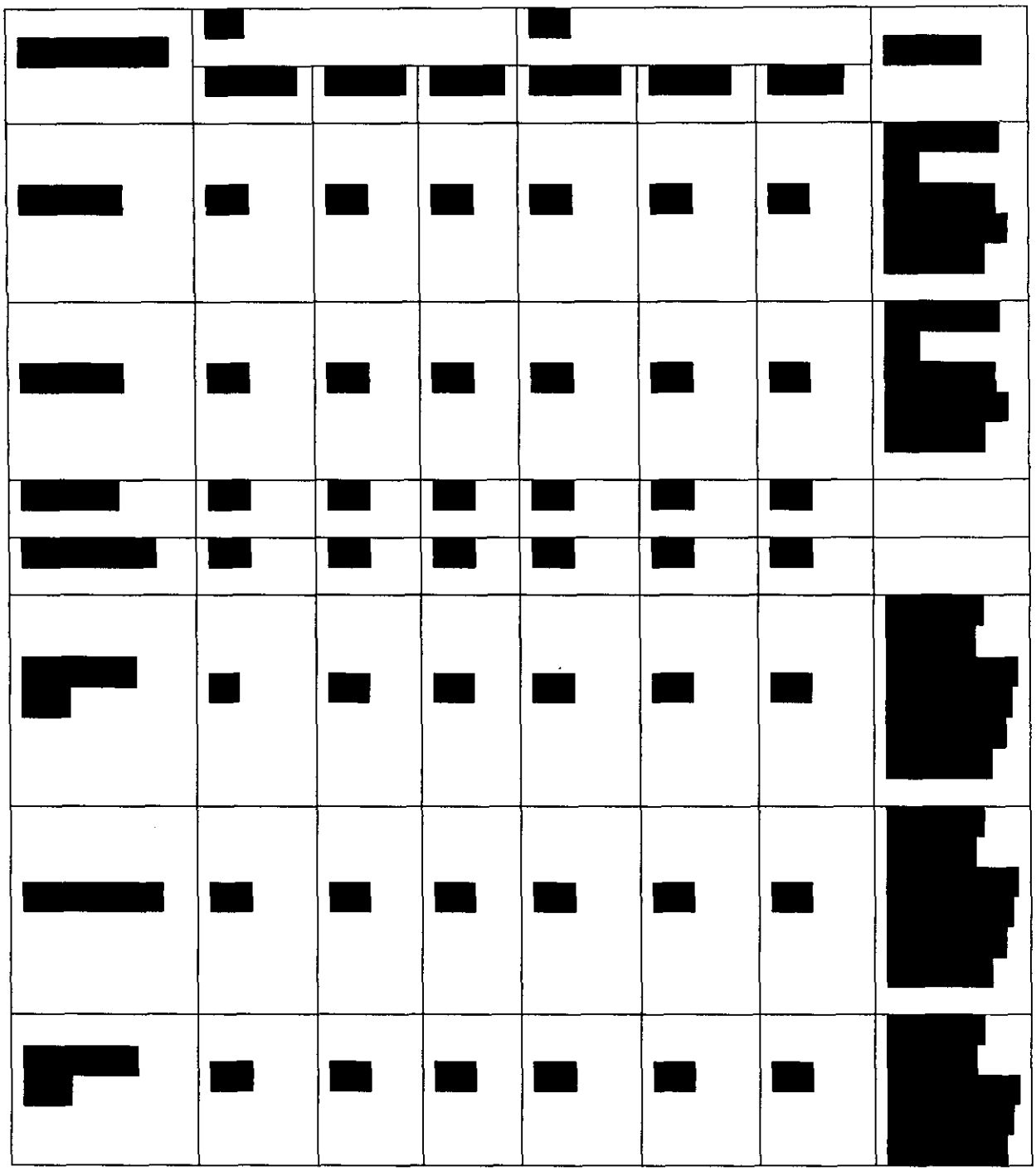
- Status Reporting: Reporting real project status, including earned value, at regular intervals provides an opportunity to address potential problems early in the project when it is still possible to resolve problems and avoid cost overruns and schedule slippage. The project team takes a proactive approach to prevent problems from occurring. The project management team uses the information to resolve issues that are beyond the control of the project team. The time interval should be at least monthly, regardless of the size and duration of a project, and more frequent for some projects. Many practitioners experienced with earned value management indicate that the project team should review project earned value weekly, because it can alert the team to specific problem areas before they develop into major problems.

Project Performance Profile

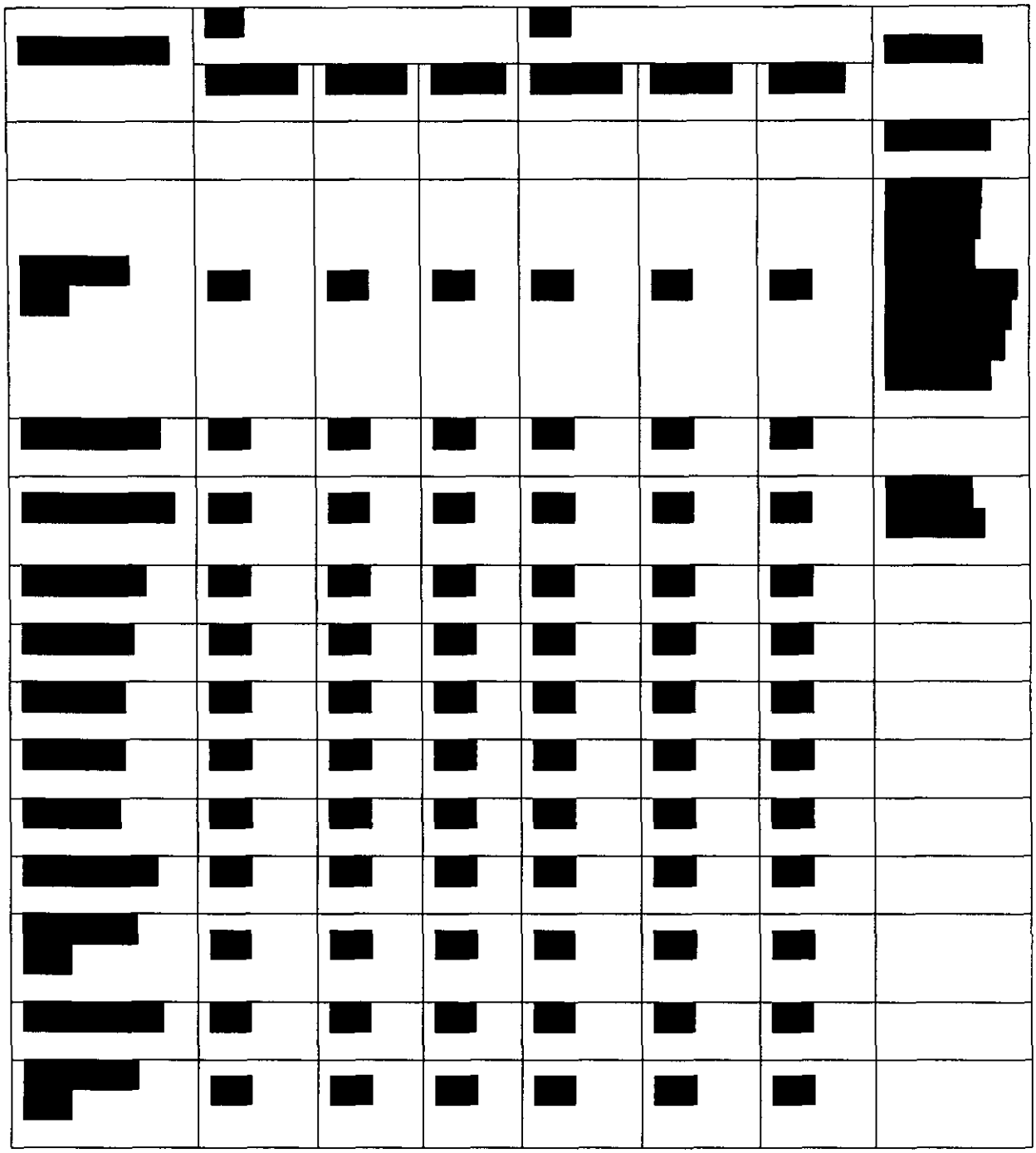
Q. What are the specific measures used on Iatan and what results were achieved?

The following is a summary of the key cumulative performance metrics, (SPI & CPI), for each of the major contractors - B&McD, Alstom and Kiewit - for the period of major construction, May 2008 through December 2009. The data was

taken from the monthly Iatan Unit 2 Status Report's Level 2 schedules and summaries. (Schedule WPD-24[29])"**



[29] / Only the pages with performance data from the Status Reports are included in the Exhibit.



**"

An analysis of the data clearly indicates that Alstom's and Kiewit's cost and schedule performance continually failed to meet expectations during the above critical phase of construction. "**

[redacted]**". This inefficiency resulted in additional compression costs for the remaining contractors, most specifically Kiewit. In addition, Alstom's poor schedule performance resulted in sequencing problems with the other dependent contractors, especially Kiewit.

As per the December 2009 Monthly Report, Kiewit's inefficiency resulted in a cumulative CPI of"** [redacted]**" This leads Vantage to conclude that performance fell far below the levels KCP&L needed for a successful project, resulting in imprudent costs and schedule delays as detailed throughout this testimony.

CONSTRUCTION TURNOVER PROCESS

A common pitfall in managing construction projects is the commencement of the qualification and validation process before all the necessary project installation activities are complete and the turnover documentation is in place. To prevent this from happening, it is necessary to formalize the process for turning projects over from the engineering and construction team to the start-up team.

The Construction Turn Over (CTO) process is utilized to confirm that the project installation and debugging phase is complete and that the turnover documentation, (e.g. functional/technical specifications, system descriptions, and O&M manuals), is complete.

In March 2009, the KCP&L Iatan 2 Project Management Team began scoping the activities required to support the CTO process. The Iatan 2 CTO process was utilized to manage the transfer of a given system from the construction team to the start-up team. The KCP&L team identified "**[redacted]**" The KCP&L Engineering Coordinator was responsible for coordinating the engineering support of each CTO package. Examples of typical CTO packages are as follows.

- Boiler Water Circuit.
- Feedwater System.
- Burners.
- Fans (PA, FD & ID).
- Turbine.
- Generator.
- Power Transformer.
- Distributed Control System.

While the CTO process did provide an effective method for transferring a given system from the construction phase to start-up, delays in the turnover of

various CTO packages, due to re-work and poor quality issues resulted in significant project schedule slippage.

PRODUCTIVITY SUMMARY

Q. What was the impact of this inefficient work?

A. In summary, the full value of the EVM system is derived from an up-front, comprehensive project management plan. KCP&L's delay in making critical project management staffing decisions to support the implementation a hybrid EPC/Multi-Prime project negatively impacted the initial project plan and limited the potential for completing the associated projects on schedule and within budget. The convoluted contract for the BOP work with Kiewit was a direct result of poor up-front planning that resulted in KCP&L taking on undue monetary risk for all compression, sequencing and project acceleration issues. All costs associated with unreasonable project inefficiencies should be excluded as imprudently incurred because such costs are due to actions that fell below the standards set by B&McD in its initial budget estimates and KCP&L's CM desire.

This inefficiency had a direct cost for each of the two major contractors. An estimate of these costs is shown below. We would note that even though Alstom had a fixed cost contract, this inefficiency let to numerous claims for additional funding and resulted in the settlements with Alstom. Kiewit, on the other hand, had a contract that provided them with reimbursement for their inefficiency."**

[redacted] **

Q. Did Alstom and Kiewit willingly provide CPI and SPI information to the CM team for tracking?

A. No. Both companies were reluctant to provide this information. "**[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**"

Q. What are the ramifications of poor productivity by a contractor?

A. Any project of this size has problems. KCP&L had overall responsibility for identifying the problems and responding to them. While Alstom, the AQCS and Unit 2 Boiler contractor and Kiewit, (the Balance of Plant contractor), were the largest contractors, there were many others as well. For example, Babcock & Wilcox had responsibility for the Unit 1 economizer project. This work is in the same small area that both Alstom and Kiewit have significant work as well during the Unit 1 outage. When contractors have low productivity or require

changes in the sequence of their activities, a number of problems can occur, such as those listed below.

Schedule Compression: occurs when a schedule slips and more work than was originally planned is required in a remaining work period. Schedule compression is the shortening of the project schedule without affecting the project scope. It alleviates bottlenecks without sacrificing the project schedule.

Congestion: is the result of needing to employ an increased number of workers, in a given area, than originally planned, either because of compression or low worker productivity. As of December 9, 2008, there were approximately "** [redacted] **"workers on-site in support of both the Unit 1 overhaul and the Unit 2 construction, which is significantly above the original worker estimate.

Re-sequencing: occurs when it is necessary to change the planned order of work in a given area. This can cause claims by other contractors who have to change their scheduled plans.

All of these problems occurred at Iatan due to unreasonably low productivity that failed to meet standards set by KCP&L, its owner engineer and its consultants for the project.

CONSTRUCTION AUDITS

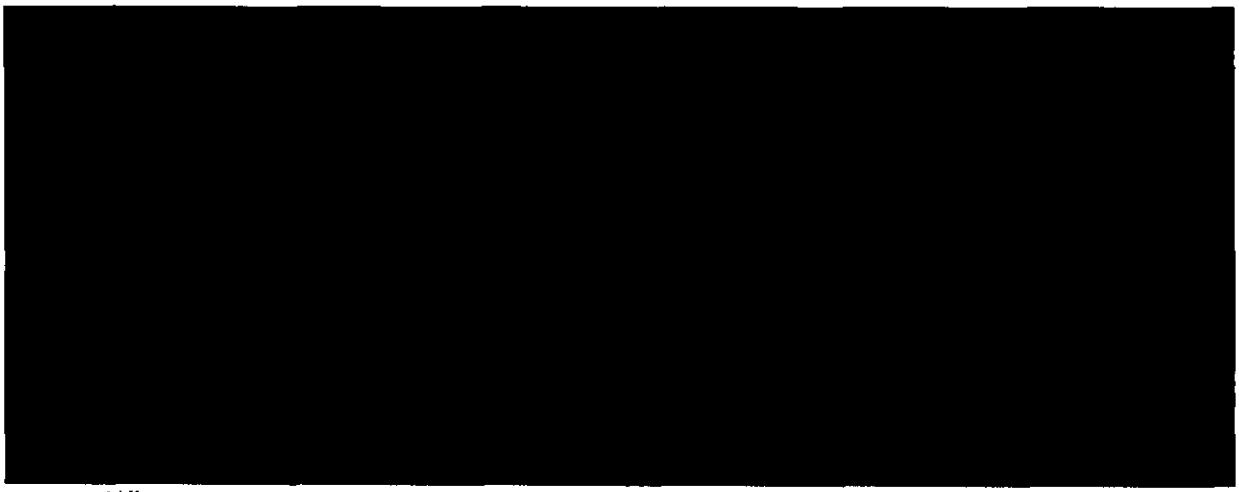
Q. What are construction audits and why are they necessary on a project such as Iatan?

A. Construction audits review a broad range of topics related to individual contractors or the construction management process as a whole. They provide

valuable feedback to the CM team and are used to both avoid and to address construction problems. One of the most important sources of information for KCP&L during the project was a series of construction audits. Most of these audits were performed to address growing problems. In addition to the information gleaned from audits conducted, it is interesting to note areas that were not audited because they are relevant to the problems experienced on this project. A summary of all audits is provided in Schedule WPD-21.

Q. Were these audits done early enough in the project to identify problems, deficiencies or failures in order to correct them?

A. Unfortunately, many of the audits were not performed until problems arose. While some audits needed to be performed later in the project, many clearly would have provided valuable feedback had they been performed much earlier. The table below provides a view of when audits were completed."**



**"

Q. Please summarize the results of some of the more important audits.

A. One key audit, the Strategic Talent Solutions Effectiveness Audit has already been discussed above. Other key audits that provide perspective are summarized below.

JULY 2007 CONSTRUCTION PROJECT AUDIT SUMMARY

"** [redacted]

[redacted]

In total, fifteen findings were presented for management attention in this audit.

IATAN CONSTRUCTION PROJECT – THIRD QUARTER 2007 COST AUDIT

This follow-up audit (Schedule WPD-27) found "** [redacted]

LABOR PRODUCTIVITY AUDITS

Labor productivity is a key to success on any large project. In order to get a sense of the cost of various work options and to help with decision making,

KCP&L commissioned a study. An outside consulting firm, Schumacher Consulting LLC., prepared two reports titled Area Labor Study for Iatan KCP&L Unit 2 Project, dated February 13, 2006, (Schedule WPD-25) and February 15, 2008 (Schedule WPD-29). Both of these Reports provide a great deal of insight, information and useful recommendations regarding issues related to labor supply, rates, efficiency, optimum scheduling and general management policies.

2006 Area Labor Study

The first Report highlighted the potential for "**[redacted]

[redacted]

**"

2008 Area Labor Study

The second Report was intended to provide information used to support management decisions on contracting strategy and techniques for attracting and retaining sufficient critical manpower.

The very first finding stated that "** [redacted]

[redacted]

CONTRACT MANAGEMENT

Ultimately the contracts between KCP&L and their contractors dictate how disputes are resolved.[30] Vantage reviewed many of the key contracts to identify the details on dispute and change order resolution. Many contracts KCP&L entered into with major contractors have "**[redacted]

[30]/ Contracts with Alstom, Kiewit, B&McD and Kissick were all reviewed.

[redacted][31]

[redacted]**"

As a result of the early root cause problems, the project is facing significant pressure to staff at unanticipated levels with higher costs associated with project compression, inefficiency and management stress. Based on Schiff Hardin's February 22, 2006, Status Report, B&McD estimated that"** [redacted]

[redacted]**". There were over "** [redacted]

[redacted]**". To accommodate these additional

31/ Major contracts, including the B&McD contract (attached as Schedule WPD-11), the Alstom contract (attached as Schedule WPD-31), and the Kiewit contract (attached as Schedule WPD-35), were reviewed for detail regarding dispute resolution.

32/ [redacted] 12/12/06 Status Report on Comprehensive Energy Plan Projects, page 3.

personnel, new parking lots, gates, support facilities, training, etc. were needed. Many work areas were very crowded resulting in inefficiency.

The cost of increased hours, days and multiple shifts is large. The labor productivity reports cited above calculated that the cost of 5-10's would be about "**[redacted]

[33]/ Labor study by Schumacher Company.

[redacted]

- [redacted]"**

The net result of substandard or unreasonably late action related to contractor productivity and disputes, as well as engineering issues, directly impact the ability to complete the project in a cost effective and timely manner.

IATAN 2 T-23 ISSUE REVIEW

ISSUE DESCRIPTION

Q. Please describe the issue related to welding concerns on boiler tubes that are made of a material referred to as T-23.

A. Modern supercritical boilers require the application of more exotic metal alloys that can operate for extended periods of high temperatures of 1080°F and at pressures in excess of 3,900 psi. Alstom has applied an American Society for Testing and Materials (ASTM) approved T-23 material for application in the high temperature zone of the Iatan Unit 2 boiler. This material was provided by the Alstom Bruno facility in the Czech Republic. It should also be noted that Alstom

has utilized the T-23 material at other projects in the U.S., China and Taiwan, including the Xcel Energy Comanche 3 boiler.

"**[redacted]

NP

[redacted]

34/ Churchman KCC Direct Testimony 12-17-09, page 24, Line 1.

NP

[redacted]

35/ Notes from KCP&L Presentation to KCC on 8/19/09.

36/ KCP&L and Alstom Settlement Agreement, dated January 13, 2010, Section F, page 11.

[redacted]

8. [redacted]**"

Q. Are there potential cost impacts to KCP&L that have not been addressed?

A. While the actions by Alstom, listed above, will "** [redacted] "**

NP

Q. Will there be any impact to the scheduled start-up of Iatan Unit 2 due to the T-23 issue?

A. It is not "**[redacted]37**"

Q. What action should the Commission take at this time?

A. We believe that KCP&L should be ordered to continue analyzing the issues as required, monitoring costs and schedule delays and preparing a regular report on both costs Alstom is responsible for and costs associated with schedule delays and additional effort by KCP&L and their experts.

37/ Schedule WPD-29 - Public Service Company of Colorado Semi-annual Progress Report for the Comanche Project to the Public Utilities Commission of Colorado, Docket No. 05M-511E, Dated December 14, 2009, Page 8.

G. IMPACTS OF MISMANAGEMENT

Q. What is the purpose of this section of your testimony?

A. This section of my testimony discusses the impacts to cost that result from the mismanagement discussed above. It also includes analysis of key contracts for which disallowances are proposed in Section D of my testimony.

OVERTIME PRODUCTIVITY IMPACT AND COSTS

Q. What is the impact on productivity due to working extensive levels of overtime?

A. The two studies commissioned by KCP&L and conducted by Schumacher Consulting, (Schedules 28 & 29), provide a detailed explanation of what happens when workers must work extensive hours. As per the Schumacher Consulting Report dated February 15, 2008, worker inefficiency increases by" **[redacted]

[redacted]

[redacted]**"

Q. What are typical hourly costs for employees of the major contractors?

A. Vantage utilized data from the Kiewit and Alstom contracts and from CM analysis to develop hourly rates for use in our cost calculations.

KIEWIT HOURLY RATES

The KCP&L CM team, in an analysis of potential compression claims, (Schedule WPD-14), used a rate of "**[redacted]**" for Kiewit claims. Vantage found this number to be high, so we analyzed the data ourselves to understand

the support for it. It appears that the CM team used the total costs of labor, materials, indirects and fees from the original contract and divided that by the original estimated number of hours to reach a cost of "**[redacted]**" per hour. Vantage believes that for calculating inefficiency, we should not include the cost of materials. Therefore, our analysis resulted in an hourly rate of "**[redacted]**". This constitutes a base labor rate of $83.54 per hour plus indirects and fees.

ALSTOM HOURLY RATES

The Alstom rates were calculated using the rate schedule on pages V-1 and 2 and Article 13.6 of the contract. (Schedule WPD-31[38])"**

[redacted]**"

TURBINE/GENERATOR BUILDING BUST

Q. In the Schiff Harden December 12, 2006 status report[39] on page 6 thru 8, "**[redacted]

[redacted]

[redacted]**"

[38] /Only Opening sections and sections that refer to the analysis in the testimony are included in the Exhibit.

[39] See Schedule WPD-20 which includes the 10/17/06, pg 1, 11/1/06 pg.11, 12/7/06 pg. 6-8, and 12/12/06 p8-8, and pg. 16 Schiff Harden Reports as well as pictures of de-aerator.

What was the reason for the large, unanticipated increase in turbine building structural steel?

A. During development of the scaled up project between the 2004 PDR and the Scale-up estimate in January 2006, KCP&L decided to add a de-aerator in order to improve operability of the unit. The estimated cost for this enhancement was approximately $12M[40]. However, unlike Iatan Unit 1 which has a boiler drum upon which the de-aerator is mounted, once the decision was made to build Unit 2 as a supercritical unit, there was no boiler drum. B&McD, Alstom and or Toshiba ultimately decided to locate the de-aerator between the turbine generator and the boiler building. This had the effect of increasing the size of the turbine building significantly resulting in the increase in structural steel and other commodities. It was first realized when original estimates, upon which Scale-up budget as based, called for 2,700 tons of structural steel. Instead the bids came in with a requirement of 5,100 tons of steel. It is not clear why no one from B&McD, KCP&L, or Schiff Hardin realized that there would be a significant increase in cost beyond that of the de-aerator itself. Instead, in late-2006, at a time when the Control Budget Estimate (Schedule was August 1, 2006) was scheduled for completion, the project discovered it had what they referred to as "the turbine building bust."

Q. Did KCP&L and its project team attempt to find out what the cost of the bust was?

---

[40] / See Scale-up PDR, for details.

A. Schiff Hardin requested an estimate from B&McD. Originally, B&McD provided an estimate of $106 million. Later, B&McD provided a set of "buckets" totaling to $106 million that did not provide a useful answer to the question.

Q. Does Vantage have any estimate of all costs associated with the larger turbine/generator building?

A. No, while the $106 M is provided with various breakdowns, there are a number of associated costs that do not appear to have been included. Based on a review of the Schiff Hardin reports, the total additional costs for the larger turbine/ generator building does not include incremental costs associated with the following.

Concrete foundations.

Concrete slab.

Roofing.

Siding.

Insulation.

Painting

Floor grading.

High energy piping extensions due to further distance from the boiler.

Small bore piping increases.

Electrical raceway.

Electrical power cables.

Electrical control cables.

Electrical instrument cables.

Lighting.

HVAC.

What we can conclude is the following. Someone from KCP&L approved adding a $12 million de-aerator, but did not anticipate the other associated costs as detailed above. B&McD apparently had its engineers increase the size of the building, but did not notify its budget group of the major change. KCP&L appeared to be ignorant of the entire issue until Schiff Hardin reported the problem. Then B&McD tried to obfuscate the total costs and never did provide an estimate that detailed the real cost of this bust. The $106 million they did initially provide to Schiff Hardin is likely very low. This issue was responsible, to some degree for the large increase project cost between early 2006 and the final CBE cost.

Q. Do you believe this issue was managed appropriately and that the costs were prudently incurred?

A. No. Apparently an unidentified KCP&L employee made a decision to add the de-aerator without knowing the unintended consequences. Neither KCP&L or B&McD were even aware of the change in scope caused by this project until the steel fabricators began to develop quotes for the required steel. These costs

would be deemed imprudent under any definition used. Later in my testimony, I isolate these costs and include them in my disallowance estimate.

Q. Can you estimate the likely cost of the entire turbine building bust?

A. I certainly cannot, and it appears KCP&L and Schiff Hardin were unable to get a believable answer from B&McD. However, given the list of areas not quantified and the increase in balance of plant expenditure on this project, I would not hesitate to suggest that the total cost was over $200 million.

WORKFORCE CONGESTION SITE COSTS

Q. What are the impacts, to a project like Iatan, of the poor decisions and mismanagement identified above?

A. The delays of critical path work on the project resulted in a bow wave of required work hours that result in compression of work, congestion in work locations, increased requirements for infrastructure, and the need to hire employees with marginal skills. Had work activities been performed as originally planned, staffing levels on the project would have been significantly lower than they ultimately were resulting in lower costs and more efficient scheduling. The following graph portrays the number of construction employees on the project from 2007 to the end of 2009. The result of the increased work force has many ramifications."**

[redacted]

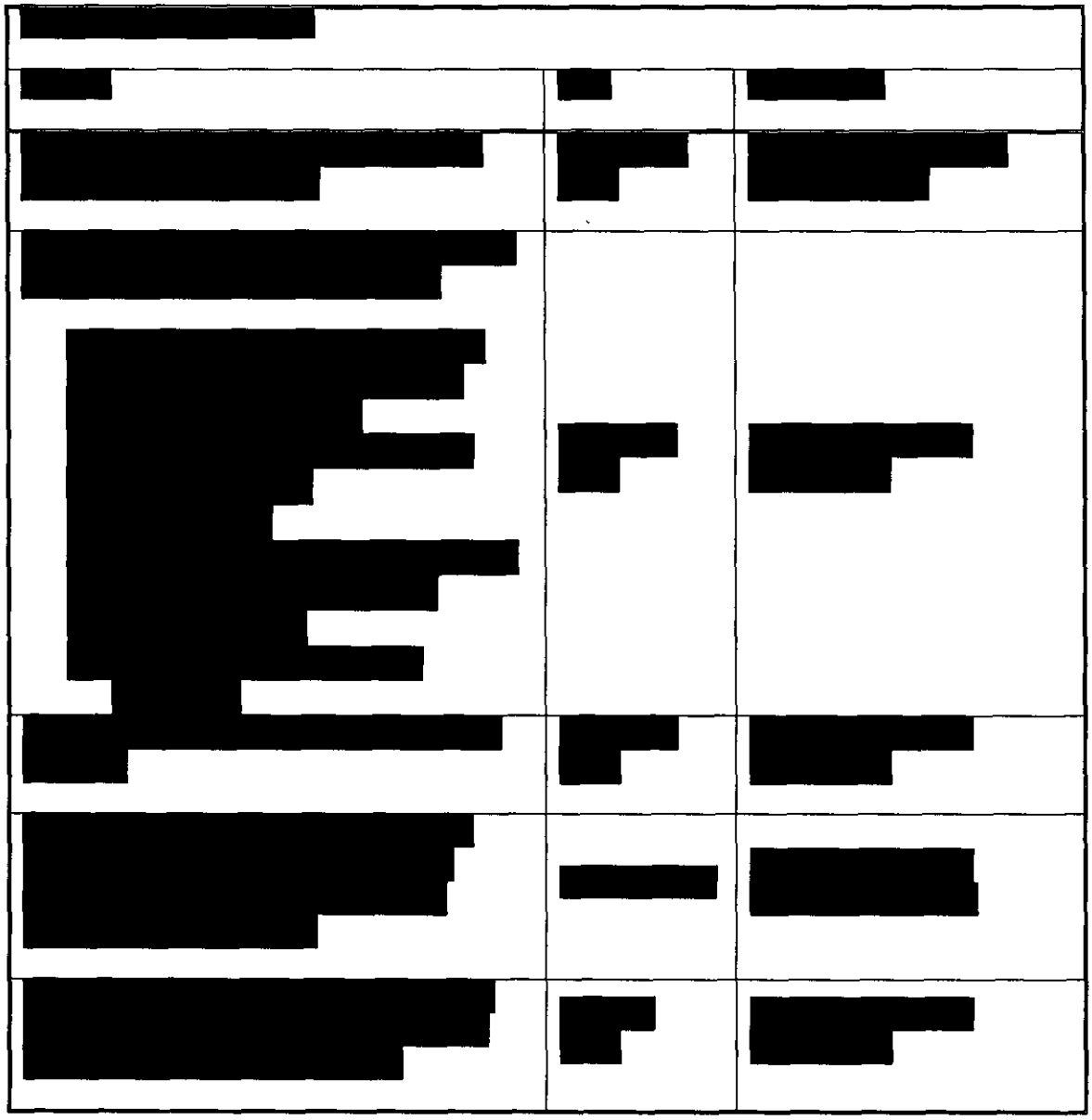
**"

ALSTOM CONTRACT ANALYSIS

Q. Please explain the basis for the Alstom contract and indicate whether all of the costs associated with it should be included in the allowed rate base.

A. "**[redacted]

[redacted]



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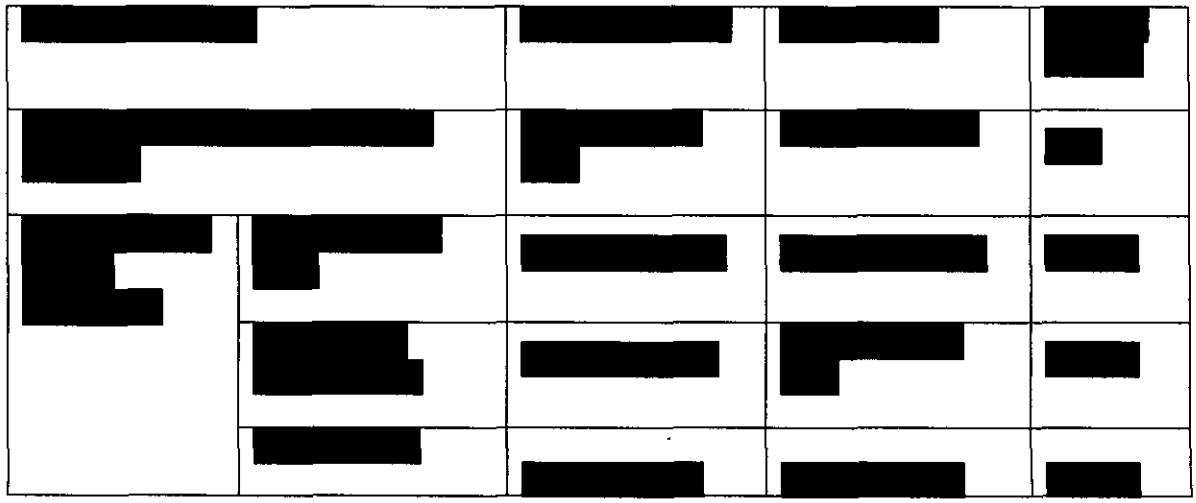

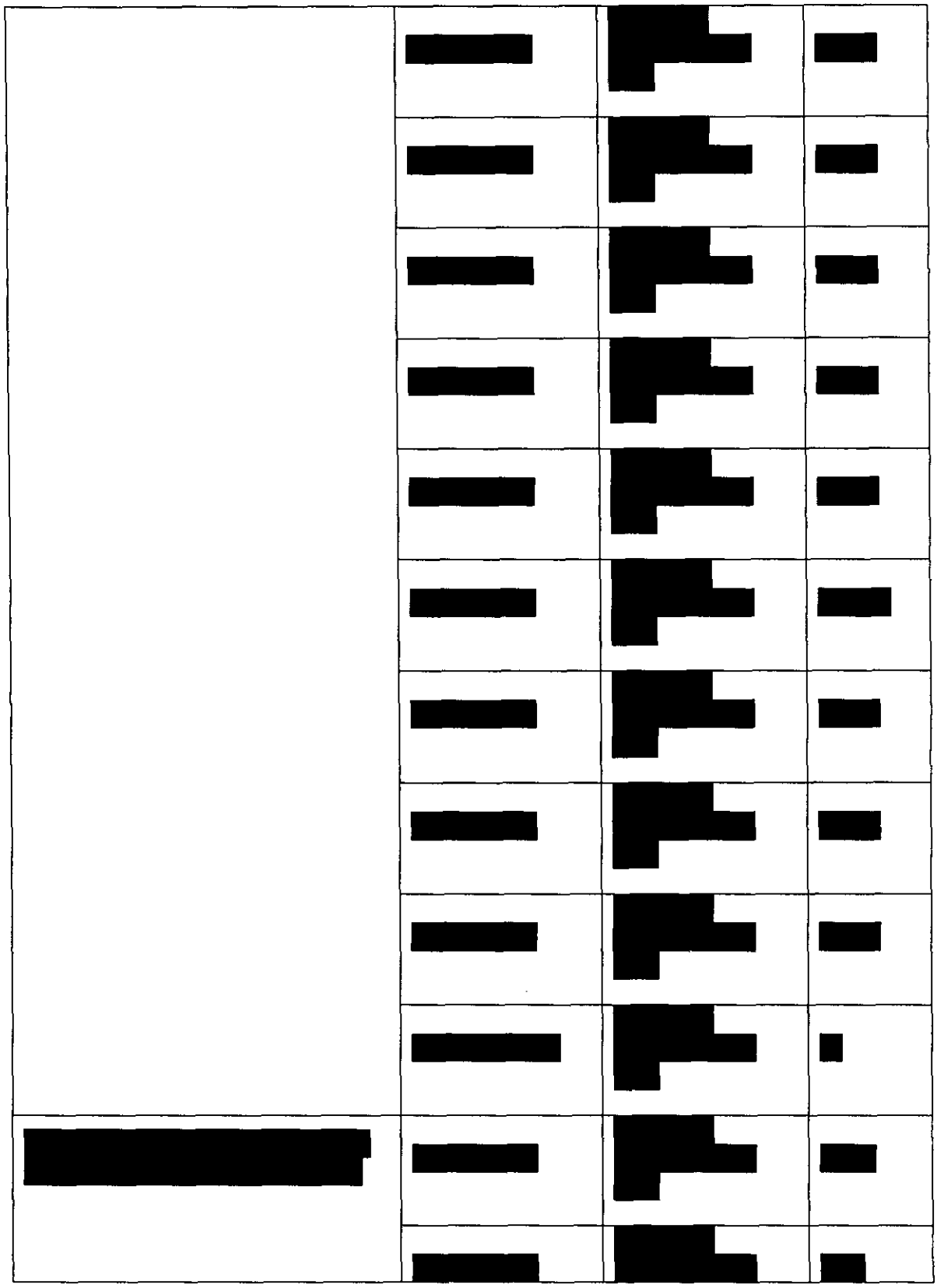

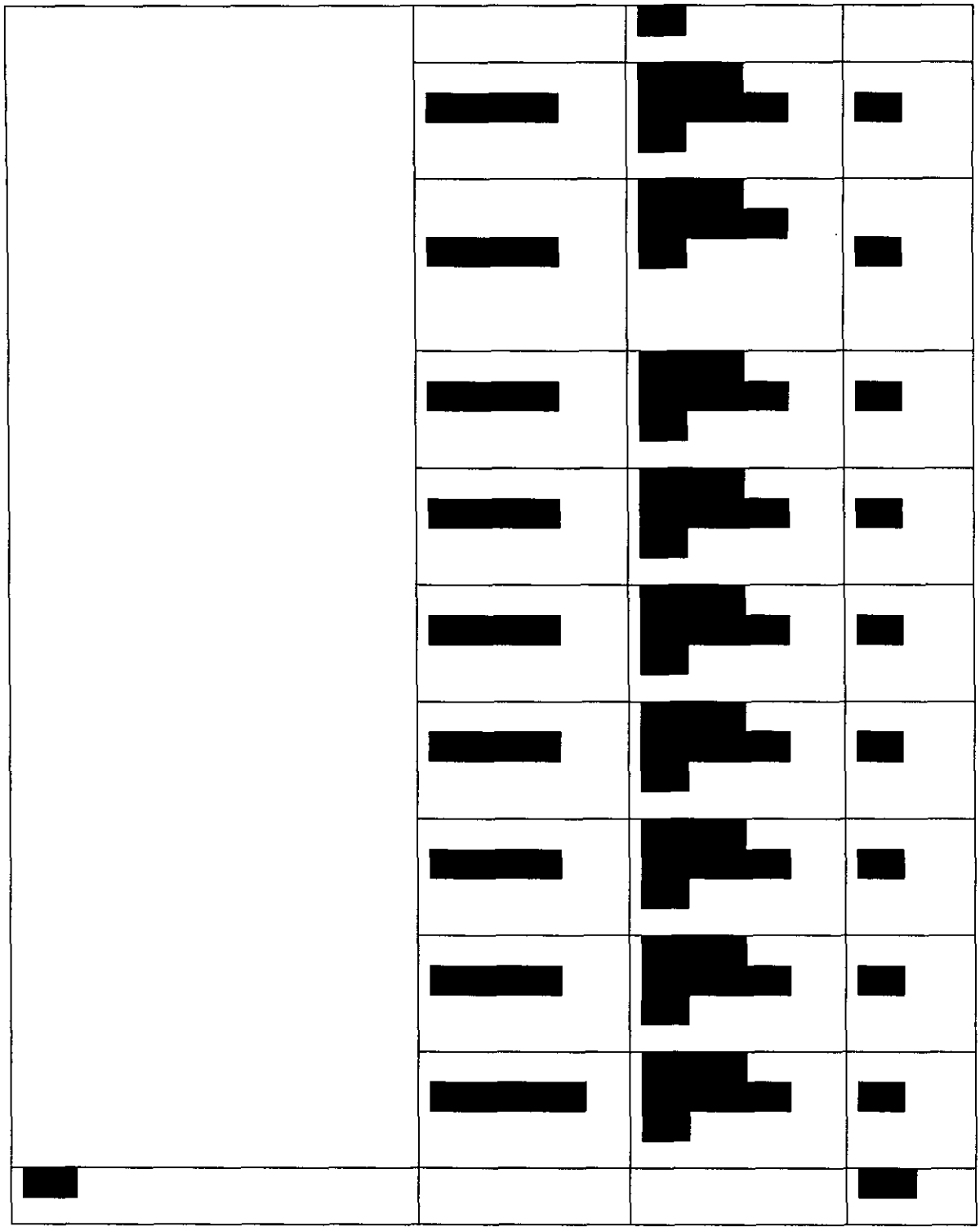

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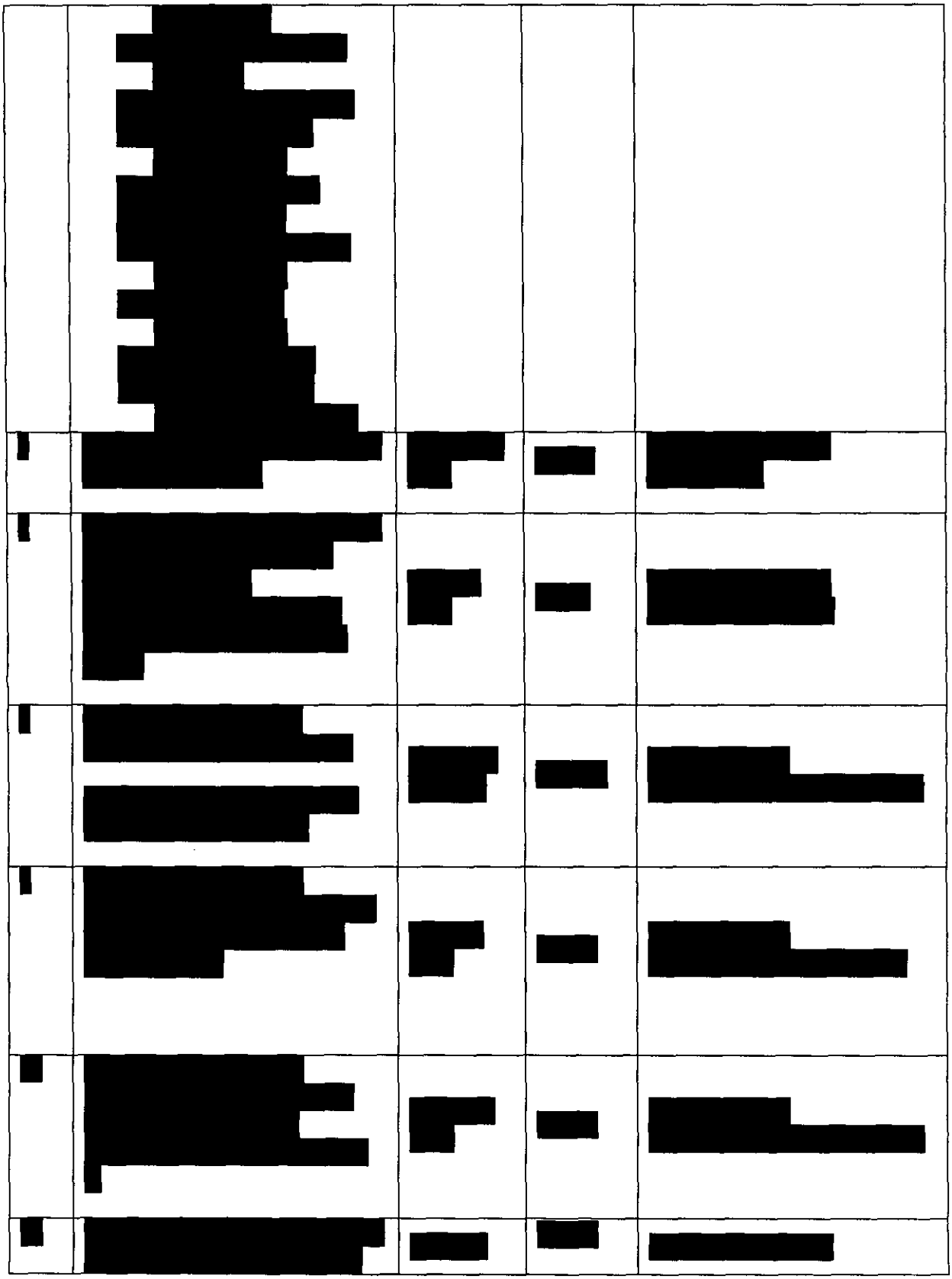
41/ Exhibit WPD-32, Alstom Settlement Agreement.



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BURNS & MCDONNELL CONTRACT ANALYSIS

The time line and analysis of the of the B&McD contract portray the major cost issues associated with the contract. "**

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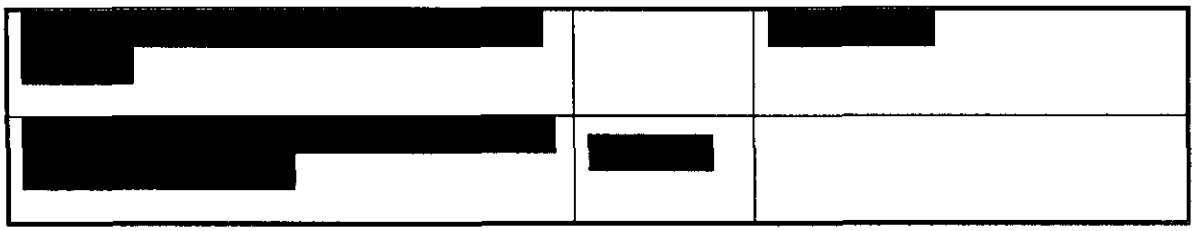

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B&MCD INCENTIVE PLAN

The formal B&McD contract, signed in January 2007, included a compensation plan which included "**[redacted]

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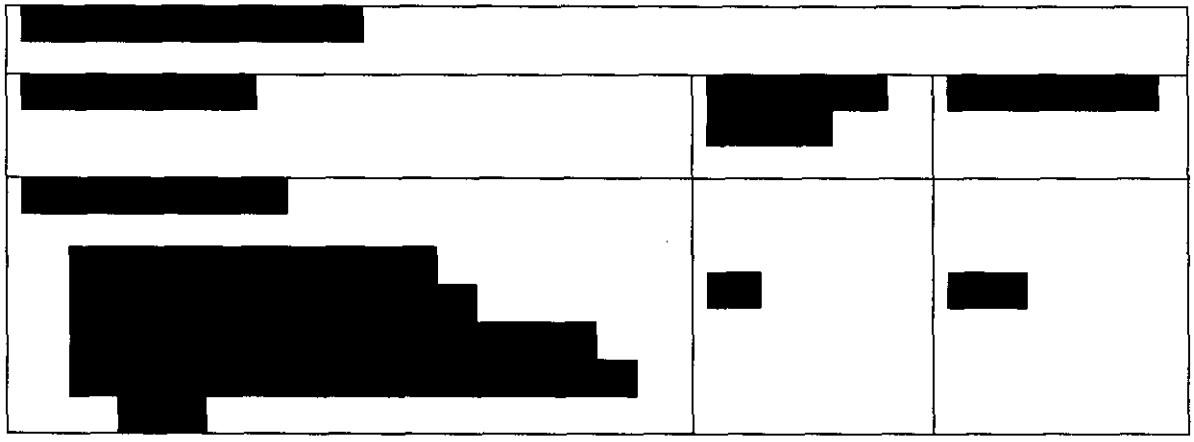

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42/ Schiff Harden January 10, 2007 Status Report, page 16.

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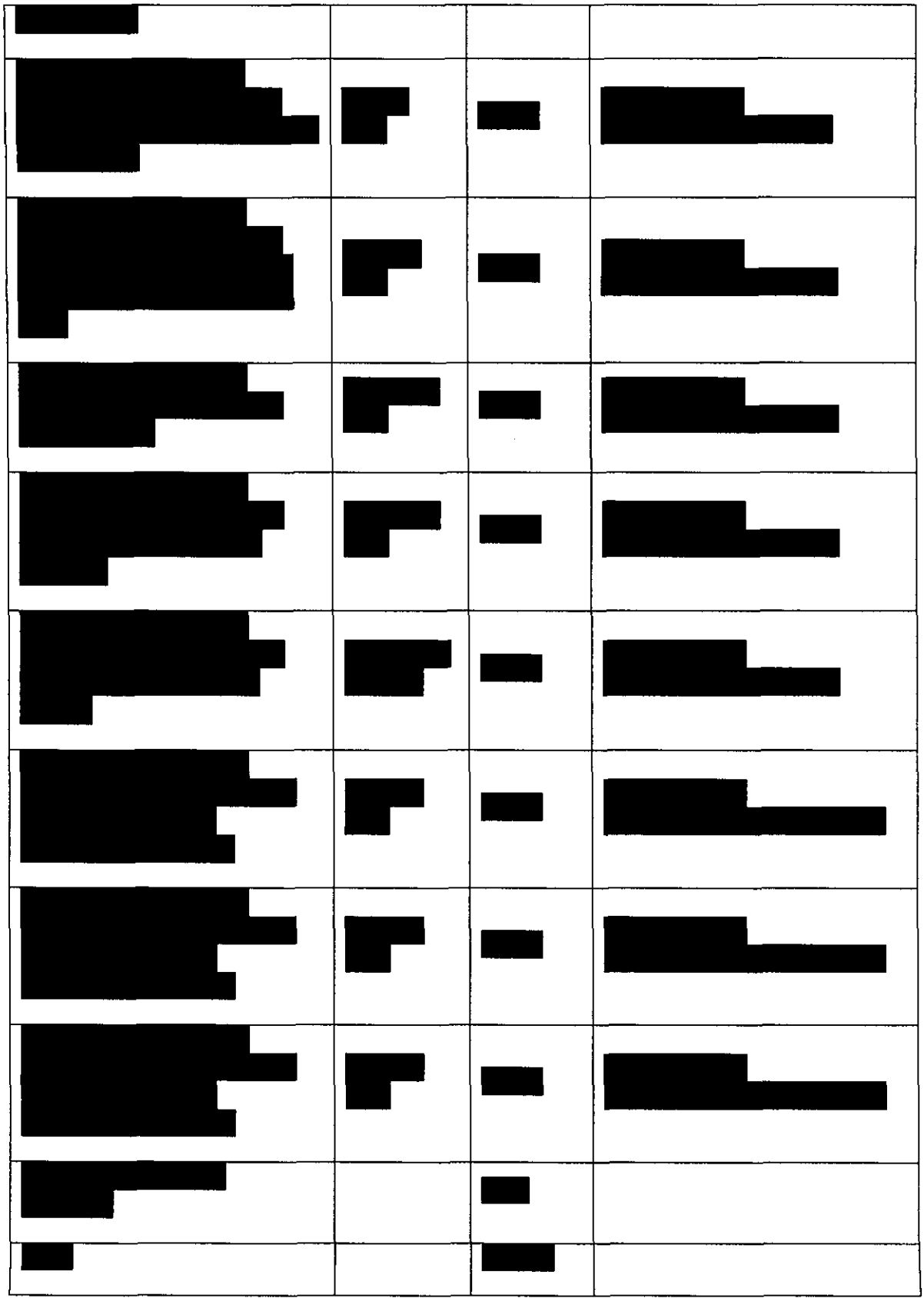

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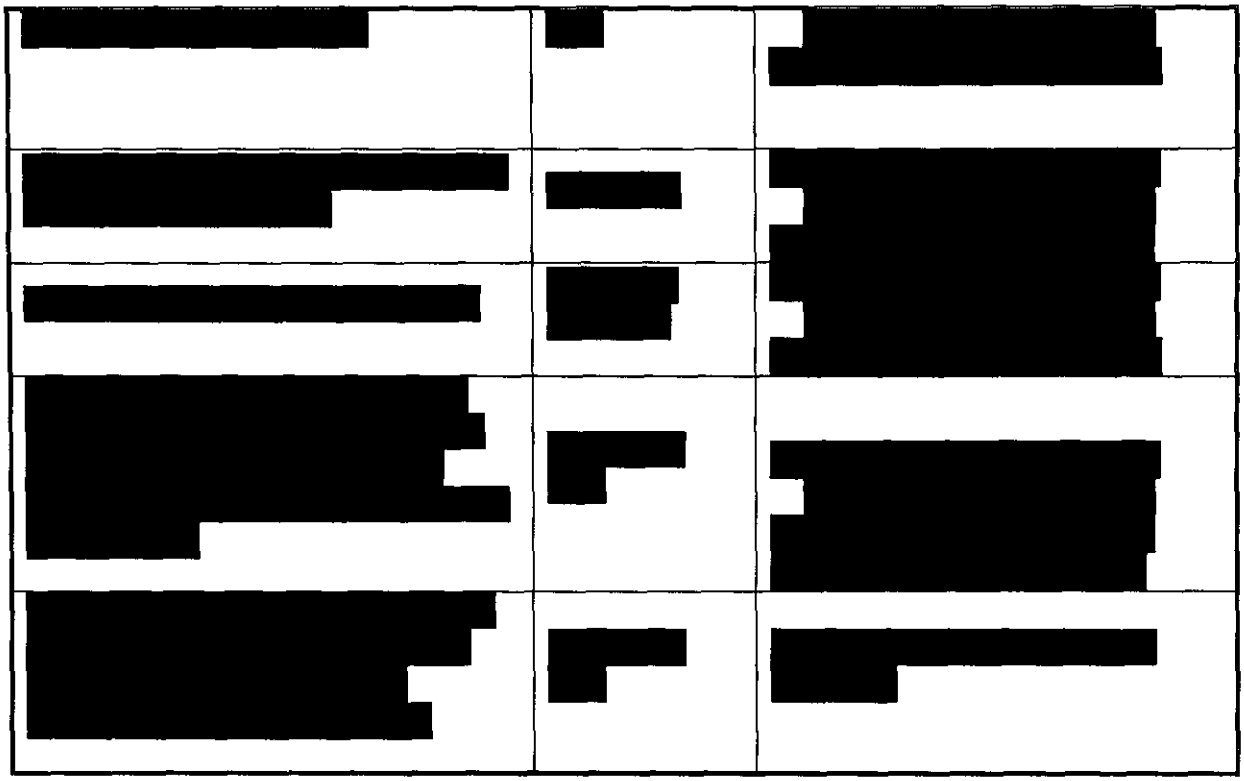
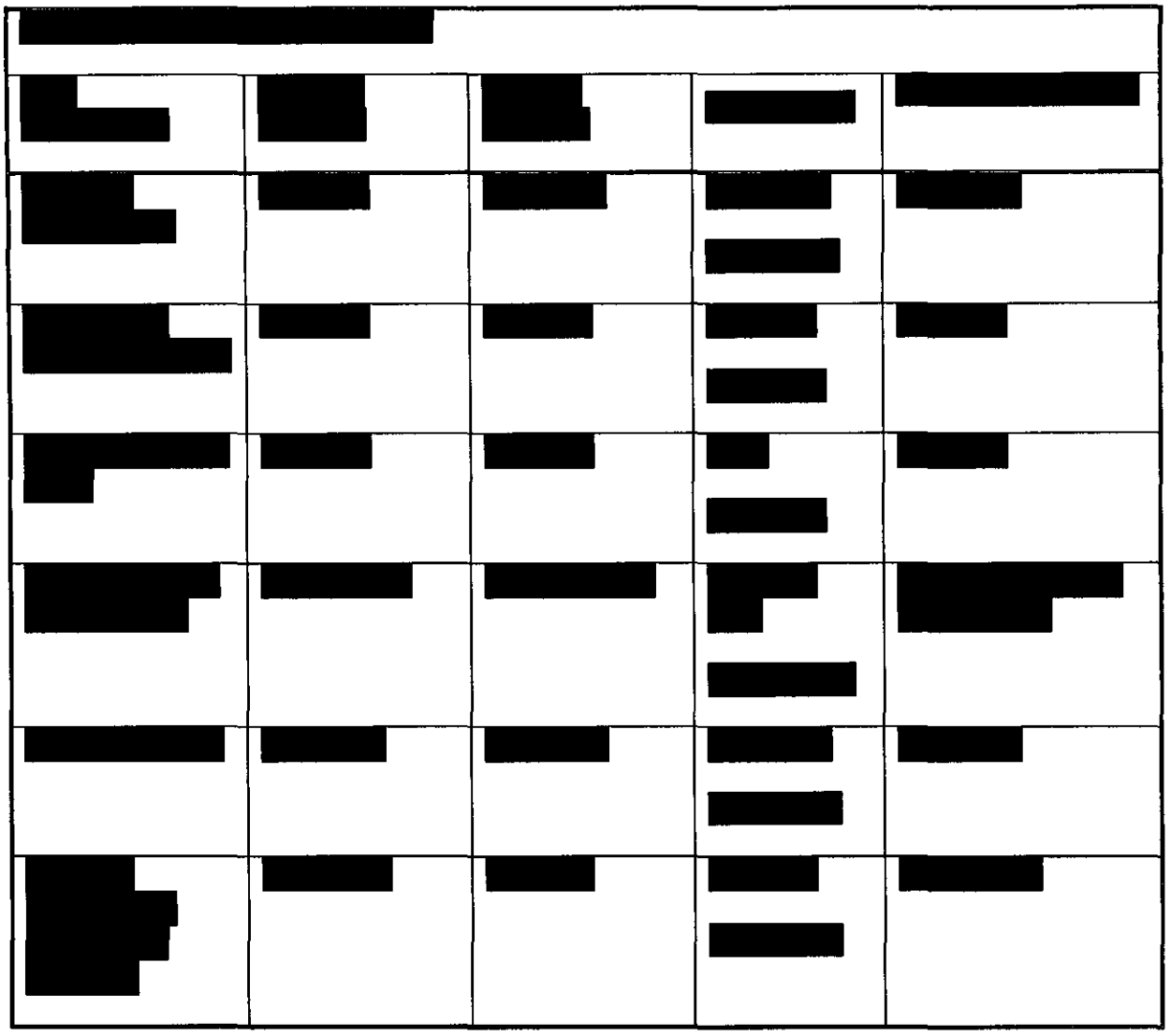
[43] /Only portions of the contract relevant to this testimony are included in the Exhibit.





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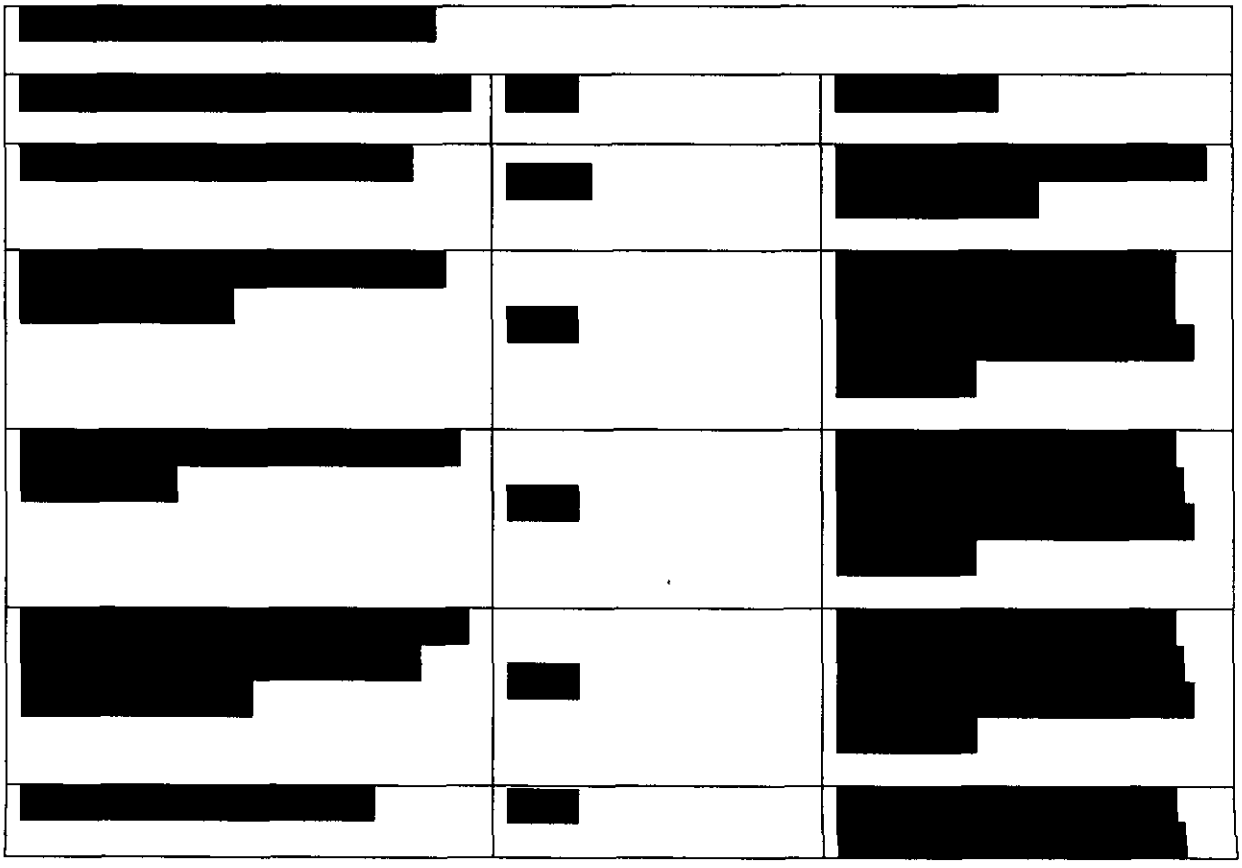

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[redacted]		[redacted]
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Q. Should KCP&L be responsible for a portion of this cost overrun due to the poor quality of the contract and its mismanagement?

A. Yes. Vantage believes that KCP&L and B&McD should have understood the market prices of materials at the time of Kiewit's proposal submission. Such metrics were available to the industry at the time. "** [redacted]

**"

H. COST IATAN 2 RELATED IMPRUDENT ACTIONS

Q. Please explain how you approach the task of calculating costs associated with imprudent actions?

A. As summarized is Section D previously, Vantage developed a standard for prudence to be applied on this project that is consistent with our previous definitions and those used in previous cases in Missouri. Vantage did four separate calculations of imprudence disallowance.

Analysis of Similar Power Plants

After months of analysis and normalizing costs, Vantage developed a group of sixteen power plants, including Iatan 2, that are similar technology, size and built in the same timeframe.

Analysis of Trimble County 2 versus Iatan 2

The Trimble County 2 project is very similar in many respects to Iatan and provides a real example of two units built under similar circumstances with remarkable different results.

Analysis of Project Cost Estimates

Vantage spent considerable effort analyzing and understanding the various project cost estimates. Starting with the 2004 Project Definition Report, the December 2006 PDR update, the May 2008 Reforecast and the March 2010 Reforecast, Vantage analyzed the reasons given for each forecast and assessed whether they were valid.

Analysis of Major Contracts and Subsequent Change Orders

Vantage consultants reviewed initial contracts, as well as all change orders during the life of the project. (Note our cutoff was late 2009) Contracts and change orders that were suspect were analyzed in detail. Based on decisions regarding costs that were unwarranted, Vantage consultants then calculated the amounts from each contract or change order that were not justified.

COMPARISONS WITH SIMILAR POWER PLANTS

Vantage Peer Group Analysis

Q. What was the basis for this analysis?

A. In this analysis, Vantage uses our own list of comparable and a modified list from the testimony of Mr. Robert's of Schiff Hardin on the KCC Iatan 2 case. In addition to our own research, Vantage worked with Department of Energy (DOE) representatives who attempt to maintain a data base of power plants under construction. (See Schedule WPD-37). We believe comparing Iatan 2 with a group of similar power plants provides perspective and gives the Commission a good understanding of exactly how Iatan compares with its peers. We do caution however, that it is difficult to get timely and accurate information and therefore all numbers must be looked at with some reservation.

Q. Please summarize the conclusions Vantage reached through its analysis.

A. Vantage compared Iatan 2 to a peer group of sixteen power plants.[44] All completed or scheduled for completion between 2008 and 2011. All are coal or lignite and all but one are supercritical units. Every unit except for Iatan and Weston Unit 4 was built using an EPC project approach. Weston Unit 4, was built with a multi-prime approach, but used the Washington Group as Construction Manager. Eight of the EPC units were started after Iatan.

While Iatan 2 is currently estimated to cost $1,988 million or $2,339/kW, the peer group average is $1,967/kW. This is a 16% difference in cost. Were Iatan 2 to be constructed for the average cost of the other units, it would cost $316 million less than currently projected.

[44] / See Schedule 37 for details on analysis, open shop adjustment and common adjustments.

Adjustment of Drabinski and Roberts Plant Costs based on Latest Data and Adjustments for Open Shop and Common Costs													
Selected Power Plants	Capacity (MW)	Constr. Duration	Analysis	Owner	Location	Constr Type	Regulatory Makeup	Labor Force	Adjusted Cost Basis ($ Mil)	Adjusted Calculation ($/KW)	Unadjusted Cost Basis ($Mil.)	Unadjsuted Calculation ($/KW)	Source of Cost
Iatan 2	850	December 2005 to Late 2010	Based on the most recent cost reforecast of $1.99B.	KCP&L	Weston, MO	Hybrid EPC/Multi-prime	Rate Based	Union	$1,988	$2,339	$1,988	$2,339	March 2010 Reforecast
Cliffside Unit 6	825	January 2008 to 2012	Costs correlate. Adjust for Open shop	Duke Energy	Cleveland County, NC	EPC Shaw	Rate Based	Open shop	$1,908	$2,313	$1,800	$2,182	Duke Newsletter and Trade Publication; 6/09 Cover story in Southeast construction
Comanche 3 Power Station Expansion	750	Fall 2005 to Fall 2009	Costs correlate	Xcel Energy	Comanche Station, CO	EPC Shaw	Rate Based	Union	$1,300	$1,733	$1,300	$1,733	DOE Data and article from Power Technologies.com web site;
Elm Road Generating Station Unit 2	615	June 2005 to February 2010	Vantage cost data based on the $1.15B construction cost estimate from the WPPI Energy press release dated March 2010.	WPPI Energy, Madison Gas and Electric, Wisconsin Electric Power	Oak Creek, WI	EPC Bechtel	Rate Based	Union	$1,150	$1,870	$1,150	$1,870	Vantage cost data based on the $1.15B construction cost estimate from the WPPI Energy press release dated March 2010.
Elm Road Generating Station Unit 1	615	June 2005 to February 2010	Vantage cost data based on the $1.15B construction cost estimate from the WPPI Energy press release dated March 2010.	WPPI Energy, Madison Gas and Electric, Wisconsin Electric Power	Oak Creek, WI	EPC Bechtel	Rate Based	Union	$1,150	$1,870	$1,150	$1,870	Vantage cost data based on the $1.15B construction cost estimate from the WPPI Energy press release dated March 2010.
J K Spruce	750	September 2007 to 2010	Vantage cost data based on the $1B construction cost estimate from the San Antonio Express news article dated Feb. 6, 2009. SNL states $1,838 Bil , however$600 mil is being spent on other units accountig for the difference between Drabinski and Roberts cost	CPS Energy	San Antonio, TX	EPC Calaveras Power Partners	Rate Based - Texas	Union	$1,238	$1,651	$1,238	$1,651	Vantage cost data based on the $1B construction cost estimate from the San Antonio Express news article dated Feb. 6, 2009.
Longview Power	700	June 2007 to March 2011	The $2B cost estimated from the GenPower news letter date May 5, 2010.	Siemens Financial Services, GenPower Holdings	Morgantown. WV	EPC Siemens Aker	Merchant Asset	Union	$2,000	$2,857	$2,000	$2,857	The $2B cost estimated from the GenPower news letter date May 5, 2010.
Nebraska City Unit 2	682	Mid 2005 to July 2009	Use Roberts number of $710 Mil with Open shop adjustment	Omaha Power Public District	Nebraska City, NE	EPC Kiewit	Rate Based	Open shop	$753	$1,104	$710	$1,041	$630M construction cost estimate from the Omaha Public Power District press release.

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Selected Power Plants	Capacity (MW)	Constr. Duration	Analysis	Owner	Location	Constr Type	Regulatory Makeup	Labor Force	Adjusted Cost Basis ($ Mil)	Adjusted Calculation ($/KW)	Unadjusted Cost Basis ($Mil.)	Unadjsuted Calculation ($/KW)	Source of Cost
Oak Grove - Unit 2	800	Summer 2007 to June 2010	Use Roberts revise with split of common costs. Adjust for Open Shop. $3.25 Bil for three units minus $890 Mil for Sandow 5 leaves $1.180 Bil for each unit.	Illuminant	Franklin, TX	EPC Fluor	Merchant Asset	Open shop	$1,251	$1,564	$1,180	$1,475	Vantage cost data based on the $900M construction cost estimate from the Fluor press release dated June 2007. SH included both unit cost in their estimate.
Oak Grove Unit 1	800	Summer 2007 to December 2009	Use Roberts revise with split of common costs. Adjust for Open Shop	Illuminant	Franklin, Tx	EPC Fluor	Merchant Asset	Open shop	$1,251	$1,564	$1,180	$1,475	Vantage cost data based on the $900M construction cost estimate from the Fluor press release dated June 2007. SH included both unit cost in their estimate.
Plum Point Energy	665	March 2006 to August 2010	Adjsut for Open Shop	EIF Plum Point LLC, Empire District Electric Co., East Texas Electric Coop, MJMEUC, Municipal Energy Agency of MS., John Hancock Life Ins., Dynegy	Osceola, AR	EPC Black & Veatch	Merchant Asset	Open shop	$1,111	$1,670	$1,048	$1,576	DOE
Prairie State Energy Campus Unit 1	800	October 2007 to Mid 2010	Vantage cost data based on the $2.0B construction cost estimate from the Prairie State Energy Campus press release dated May 10, 2010. Roberts clims recent increase to $4.4 Bil for both units. Use Roberts number.	American Mun. Power, Southern Illinois Power Corp., Peabody Energy, Illinois Mun. Power, MJMEUC, Kentucky Muni. Power, Prairie Power, Northern Illinois Mun.	Washington County, IL	EPC Bechtel	Municipal	Union	$2,200	$2,750	$2,000	$2,500	Vantage cost data based on the $2.0B construction cost estimate from the Prairie State Energy Campus press release dated July 23, 2010.
Prairie State Energy Campus Unit 2	800	October 2007 to Mid 2010	Vantage cost data based on the $2.0B construction cost estimate from the Prairie State Energy Campus press release dated May 10, 2010. Roberts clims recent increase to $4.4 Bil for both units. Use Roberts number.	Same as above	Washington County, IL	EPC Bechtel	Municipal	Union	$2,200	$2,750	$2,000	$2,500	Vantage cost data based on the $2.0B construction cost estimate from the Prairie State Energy Campus press release dated July 23, 2010.
Sandy Creek	900	August 2007 to 2012	Based on construction estimate, project will not be complete until 2012. Adjsut for Open Shop	L S Power Associates and dynergy	Riesel, Tx	EPC B&V	Merchant Asset	Open shop	$2,247	$2,497	$1,754	$1,949	Based on the Standards and Poors Sandy Creek Energy Associates benchmarrking and analysis report updated Sept. 28, 2009, Table 4.
Trimble County Unit 2	760	July 2006 to Mid 2010	Vantage cost data based on the $1.2B construction cost estimate in current rate case..	EON, IMEA, IMPA	Trimble County, KY	EPC Bechtel	Indiana and Illinois 25% merchant. Remaining 75% Eon merchant	Open shop	$1,332	$1,753	$1,161	$1,528	2010 Rate Case, Interview with witness
Weston Power Plant, Unit 4	525	October 2004 to June 2008	DOE, Trade Publication. Add to analysis per Roberts strong support	Wisconsin Public Service Corp	Wausau, Marathon County, WI	Multi Prime - Constr. Mgr. Washington Group	Rate Based	Open shop	$820	$1,563	$774	$1,474	DOE, Trade Publication

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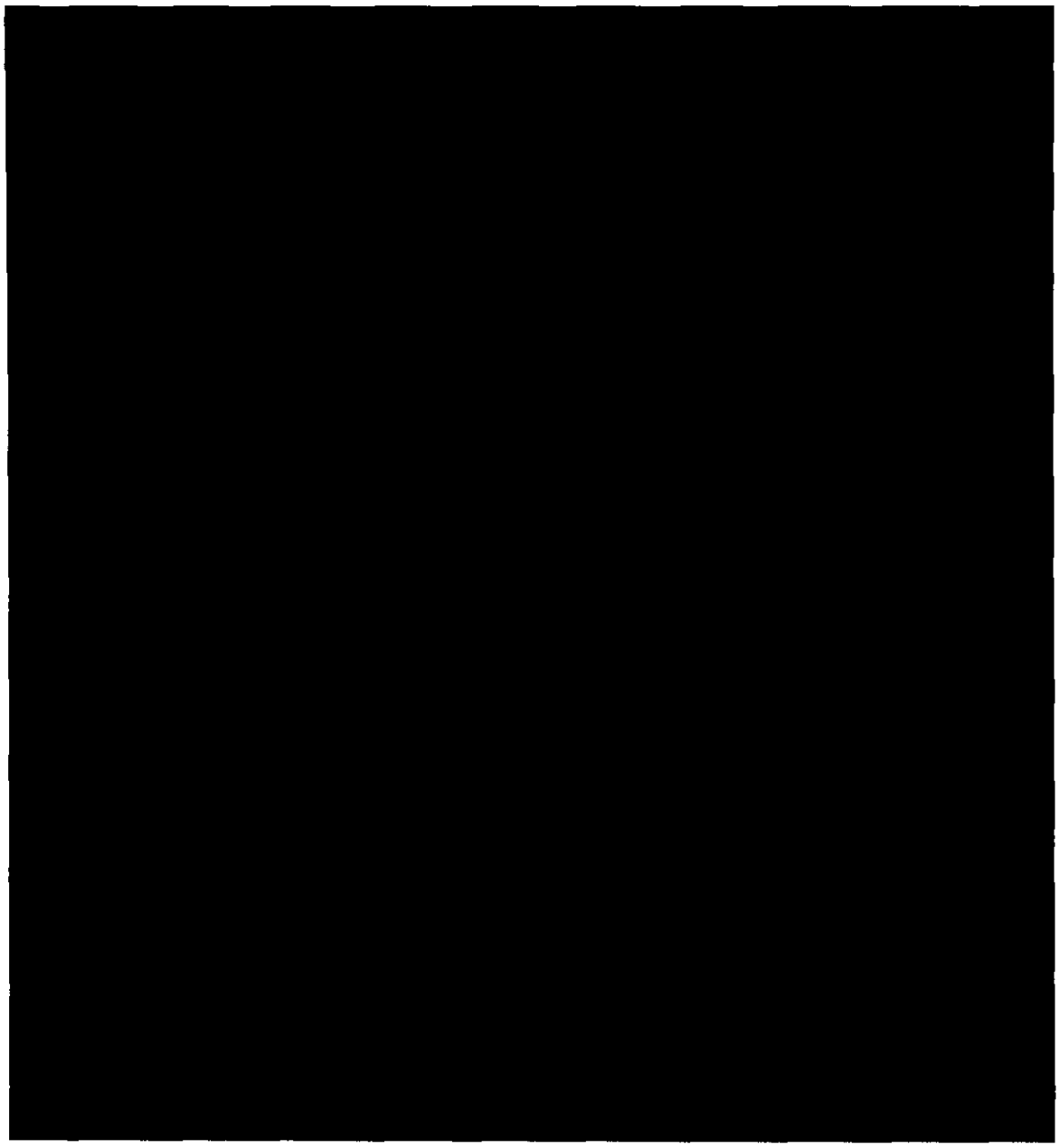
COMPARISON TO TRIMBLE COUNTY 2

Q. Why are you presenting a comparison of Iatan 2 with Trimble County 2?

A. We believe the comparison to the Trimble County Unit 2 (TC2) has value and presents some details to illustrate how two projects in the same region, with similar project time frames and schedules, could have such different results. A preliminary cost estimate for Trimble County 2 was prepared by B&McD in 2002. After a formal selection process, the Owners Engineer contract was awarded to Cummins and Barnard Engineering from Michigan, a detailed cost estimate and schedule was prepared in 2004, the same time as the Iatan 2 PDR. TC2 will be completed in mid-2010, just as Iatan 2 was scheduled for completion.[45] However, the final estimated cost of TC2, based on filings in the recently completed rate case and confirmation with company officials, indicates that this 760MW unit will cost $1,528/kW, versus $2,339/kW for the 850 MW Iatan 2. According to recent testimony in Kentucky Case No. 2009-00548, Trimble County 2 increased in cost by 9% over its six-year period, mostly due to labor increases. This compares with Iatan 2 which increased over 50% during the same period. Key details of the project, including the project schedule, follows.

[45]/ On May 24, 2010 Mr. Paul Thompson of EOB was interviewed regarding the costs and status of TTC2. He indicated that they had recently achieved 200MW of load during test firing.

**  **

Q. Can you provide some insight on how these two projects differed so much in price?

A. The simple answer is that TC2 was built under an EPC contract with Bechtel Corporation as the engineer and constructor. Even though the TC2 project did not receive approval to proceed until November 2005, management of EON, the

owner, decided in January 2005 to proceed with the selection of an EPC contractor. KCP&L management, on the other hand, took no action on a decision as to project management methodology until December 2005. By that time, KCP&L management concluded that there was inadequate time available to go through the lengthy EPC contract negotiation process and instead opted for the Multi-Prime approach which led to additional cost and schedule risks taken by KCP&L, the failure to meet industry standards as detailed throughout this testimony, and the resulting incurring of imprudent costs due to KCP&L's substandard performance.

ANALYSIS OF BUDGETS AND COST REFORECASTS

Q. Before providing your own analysis on budgets and forecasts, can you provide your opinion on the testimony of KCP&L witness Mr. Meyer in this case regarding budgets?

A. Certainly. One of the issues on which Mr. Meyer testifies is how KCP&L's cost estimation process conforms to industry standards. He refers to a cost estimate classification system supported by the Association for the Advancement of Cost Engineers ("AACE"). The cost estimate classification system classifies a cost estimate as Class 1, Class 2, ... Class 5. A Class 1 cost estimate is based on fully developed engineering and cost data. At the other end of the spectrum is a Class 5 cost estimate that is based on preliminary and limited data. The higher the class number is the greater is the range of the reasonable cost estimate. For instance, Mr. Meyer refers to the Jan/Feb 2006 cost estimate as indicative and based on preliminary data and is therefore categorized as a Class 4 cost estimate.

Similarly, he categorizes the April/May 2008 cost reforecast as Class 2 as it is based on more detailed information. Mr. Meyer then shows the range of KCP&L's cost estimates using the variations specified by AACE with the implication that KCP&L's cost estimates are consistent with industry best practices. However, Mr. Meyer seems to lose sight of the fact that it is not the level or change in the cost estimate that implies imprudence but it is the cause of the cost changes that determines whether there is any imprudence.

Q. During the duration of your assignment for the Kansas Commission did you ever hear any mention of the cost estimate classification system that Mr. Meyer describes?

A. No. The first time I heard mention of this cost estimate classification system for the Iatan 2 construction was in Mr. Meyer's testimony in this case. In fact, on page 6 of his testimony, Mr. Meyer states that the classification system was not formally used during the construction and cost re-estimation phases.

Q. Do you agree with Mr. Meyer's assessment of the 2004 PDR and January 2006 Scale-up as being without significant engineering completed?

A. I have a fundamental difference of opinion on the validity and accuracy of the initial estimates B&McD made. He claims there was no engineering complete at that time and therefore cost estimates are crude and inaccurate. However, he is referring to the engineering that integrates all of the major systems and support infrastructure. In fact, the Boiler and AQCS systems, Turbine/Generator, Cooling Towers, Stack and other systems are already engineered by the

manufacturer and only need to be placed at the site and integrated with the other systems. B&McD, owner engineer had this responsibility and the cost was about 2% of the total project cost. The proof of this is demonstrated by the fact that the Boiler/AQCS and Turbine/Generator were completed for amounts close to the original estimates.

Q. Why do you think Mr. Meyer refers to this cost estimate classification system?

A. It appears to me that Mr. Meyer has introduced this classification system at this time as an after-the-fact justification for the increasing cost estimates. As I stated previously, the focus needs to be on the cause of the cost increases not the amount of the increase.

Q. Does Mr. Meyer provide testimony on other matters?

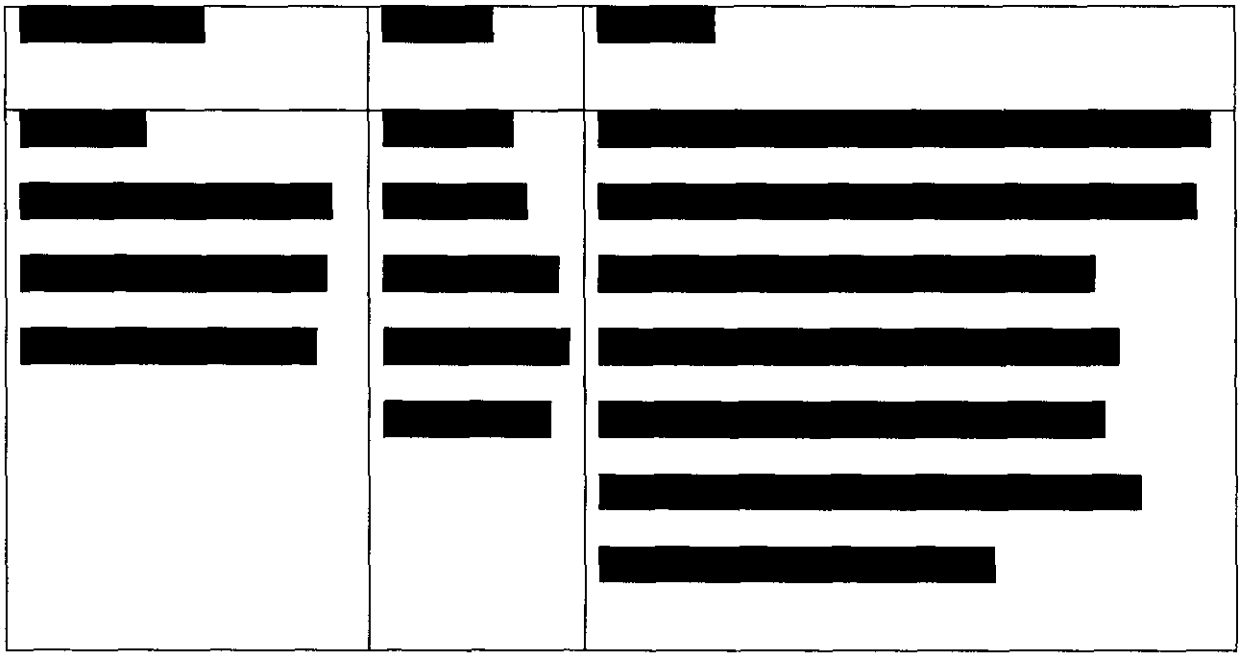
A. Yes. He describes the changes in the cost estimates and opines that KCP&L was prudent in incurring the increased costs. Elsewhere in my testimony, I review the causes of the cost increases and conclude that some of these cost increases could have been avoided with improved cost management and timely decisions.

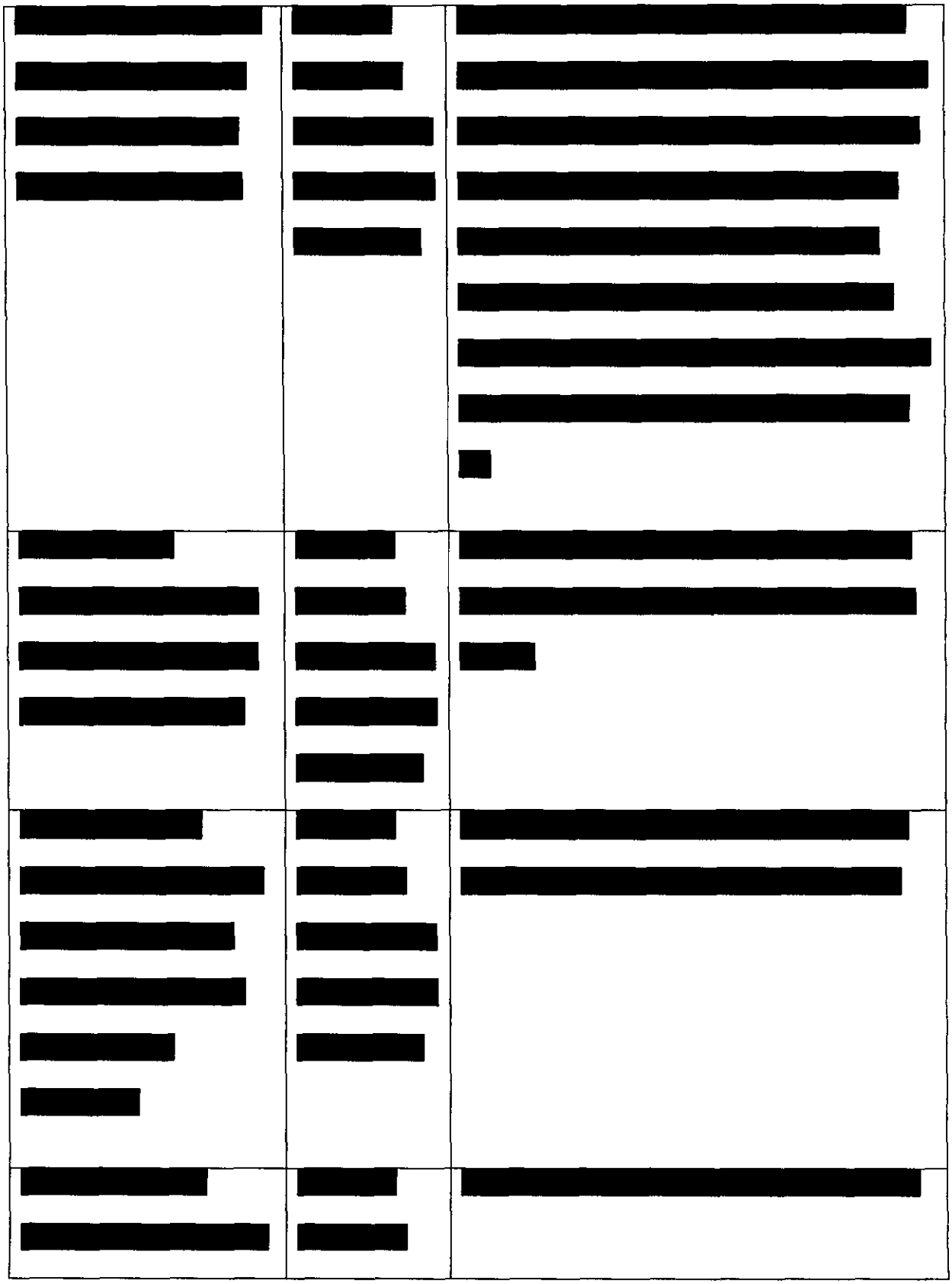
Q. Are there any other matters that Mr. Meyer discusses in his testimony?

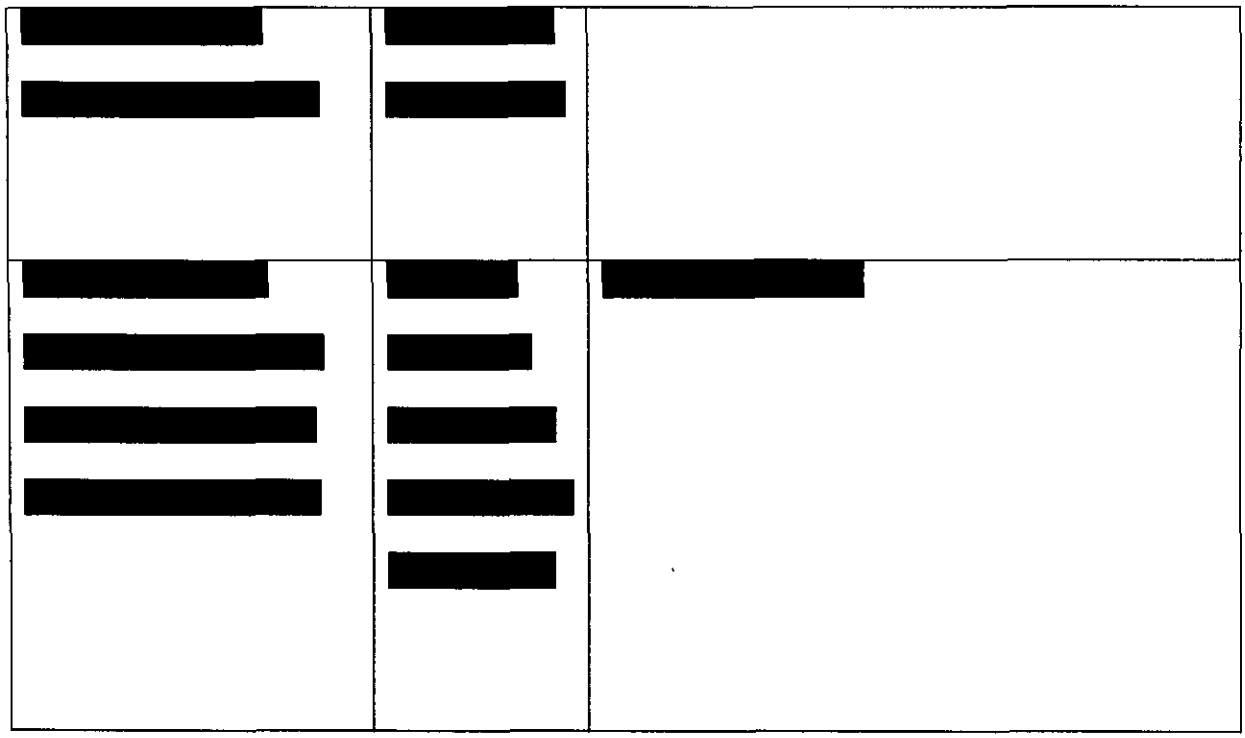
A. Yes, he reviews in considerable detail the negotiations with Kiewit for the Balance of Plant contract. I offer my understanding of this contract and its impact on construction cost elsewhere in my testimony.

Q. Please describe your efforts to reconcile the various budgets and cost reforecasts prepared during the course of the Iatan project.

A. Vantage believes it is important to understand how the cost estimates changed over time from the original PDR amount, for an 800 MW unit, of $1.165 Billion to the current estimate for an 850 MW unit of" **[redacted]**" Billion. This effort involved reviewing the detail for each of the reforecasts, with use of interim forecasts and budget revisions and backup information. The table below summarizes the specific estimates we evaluated. We should note, that while we often refer to certain reforecast dates and budget amounts, the data we review does not always match. Cost and schedule analysis is an on-going process and often the results will change within a given document from the time it is prepared to when it is issued. A good example was the updated PDR which was completed in late 2006 but not issued until mid-2007. This however, has no real bearing on our analysis or conclusions. The following table describes each of the cost estimates we analyzed. **







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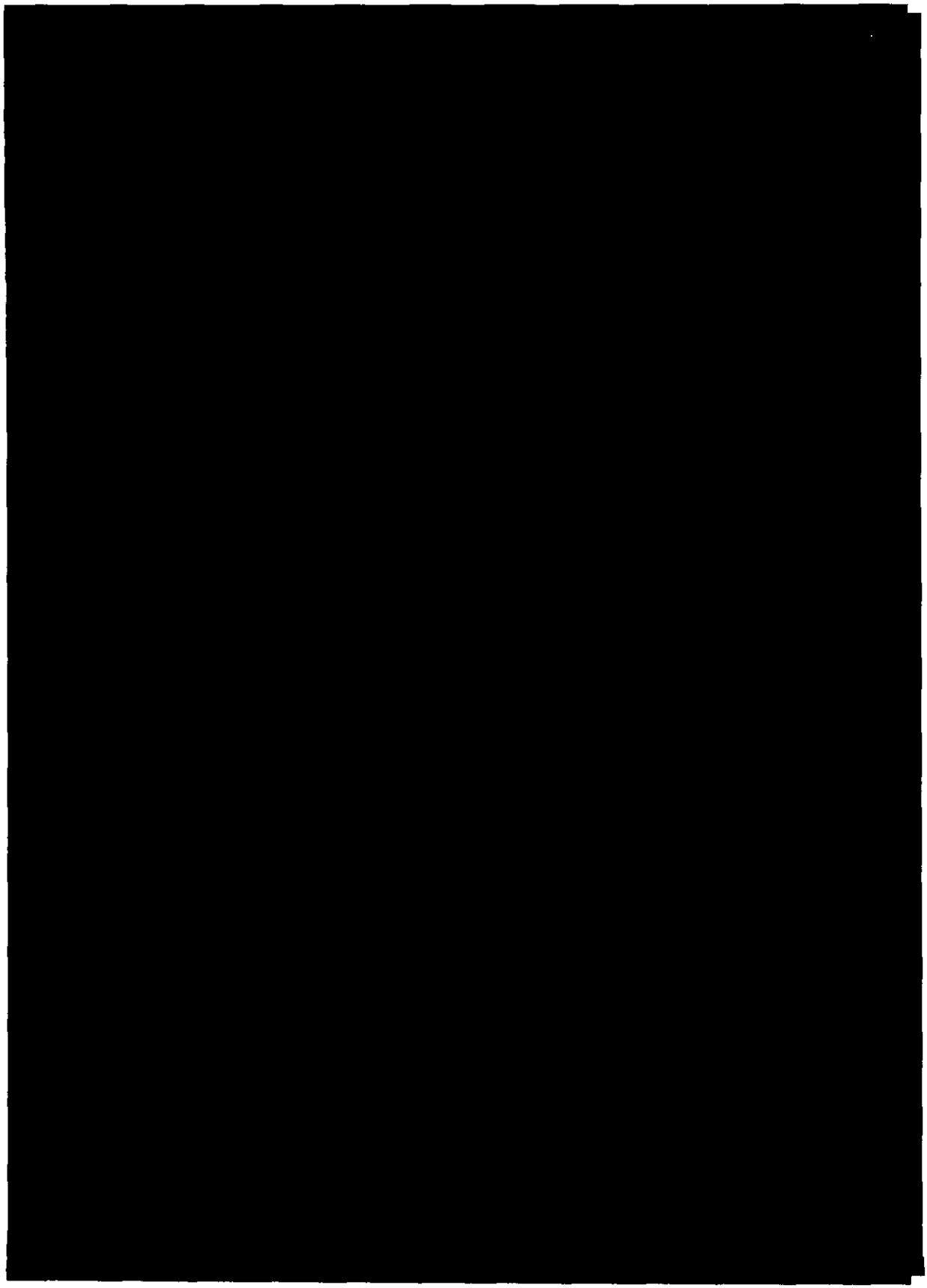
Q. Please describe the cost spreadsheets you have provided below.

A. These spreadsheets provide a summary of costs by category for each budget estimate and reforecast. The first table provides details from the original PDR to the December 2006 Control Budget Estimate. These budgets were done on a functional basis. From that point on, the project changed its tracking, summarizing by procurement, construction and indirect costs. Therefore, we must transition our analysis from one tracking method to the other.**"



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A. Vantage started with the original PDR from 2004 and compared it to the January 2006 PDR. In this Scale-up, the price was adjusted by"**[redacted]**" to account for the size increase from 800 MW to 850 MW and other cost increases were accounted for. This estimate totaled "**[redacted]**"

Vantage then performed a detailed analysis of the 2007 PDR. The difference in the amount between the Stipulation estimate and the amount proposed in the 2007 PDR was then reduced to account for reasonable changes that appear to be justified, based upon a detailed review of "**[redacted]**"

Q. KCP&L witnesses[46] have stated that the 2004 PDR was a just a rough estimate of the project cost without support or engineering detail. Do contemporary documents support this argument?

A. Absolutely not. KCP&L and B&McD performed extensive analysis on plant costs and conducted comparisons with other projects under construction. In addition to the analysis of the 2004 PDR that we discuss below, there were other documents[47] that support KCP&L's belief that this was an accurate estimate.

[46] / KCP&L witnesses Meyer at page 7, line 5 – describes as "high level estimate"; Davis at page 38, lines 20-21 – a PDR is a "pre-cursor to even conceptual design work and is only highly representative of the broad outlines of the project"; Giles at page 15, lines 18-19 – describes the 2004 PDR number as a "very preliminary estimate"; Giles at page 16, line 13 says that the 2004 PDR was "never intended to be a budget for the Project".

[47] / See Schedule 39 for complete documents.

- 4/29/2004 e-mail exchange between B&McD personnel, Steve Easley and other KCP&L personnel discussed the basis for cost Contingency analysis. Included a graph showing project cost probability analysis.
- June 7, 2004 e-mail exchange between Easley, Grimwade and other re. Large Coal Plan Logistics which discusses labor requirements and costs.
- 2/10/2005 e-mail exchange re. comparison of Iatan capital costs to OPPD Nebraska City #2. E-mail indicates costs are estimated to be within 1%. (Please note the final adjusted cost for Nebraska City 2 was $1,104/kW versus Iatan 2 cost of $2,339kW.)
- In an undated document titled Labor Rate Evaluation, (source: Q1R1_Labor Rate Evaluation_HC-P.pdf) provides an estimate of the cost of union labor for Iatan versus Nebraska city 2 non-union labor. "**[redacted]**"

Q. Please indicate what you concluded about the reasonableness of the cost increases from the original PDR, to the Scale-Up, to the 2006 CBE, to the 2008 Reforecast and finally the 2010 Reforecast.

A. The section below provides a summary of our analysis.

Change from the August 2004 to January 2006 Scale-Up and Stipulation

The change from the initial PDR to the Scale-up makes sense. The stipulation adds "**[redacted]

[redacted]

August 2004 and December 2006 PDR

Q. Please discuss the August 2004 Project Definition Report (PDR) and the two updates and indicate their value and accuracy.

A. Two supplemental reports, one in November 2004 and one in June 2006 were also prepared. In the interim, a Stipulation cost estimate was prepared in January 2006 to address the increase in size to 850 MW and other associated costs. The first

PDR was sent to KCP&L's [redacted]

The Original PDR was prepared at a cost of "**[redacted]**" [48].

The depth and confidence that KCP&L placed in B&McD is communicated in the PDRs. Vantage provides key excerpts, and has highlighted key portions of the cover letter.[49] This Project Definition Report summarizes the project definition and presents the project feasibility inputs for use in KCP&L production cost modeling and other evaluations. The report basis is expansion of the existing 670 MW (net) Iatan generating station with an 800 MW (net) addition. The schedule basis of the report is start of construction in May 2006 with commercial operation by November 2009.

[48]/ KCC Data Request 472.

[49]/ From Original, November 2004 PDR.

This report evaluates key technology alternatives for the proposed expansion and outlines the main aspects of the project including estimates of project schedule, capital cost, plant performance, and operating and maintenance costs. The attached report includes an overall definition of project scope and commercial considerations upon which these feasibility aspects are based.

The purpose of this report is to provide adequate information to support the following KCP&L activities.

- Permitting.
- Evaluation of economics of major technology components.
- Integration of the project into the KCP&L Integrated Resource Plan.
- Internal Budget Appropriations.

Burns & McDonnell recommends that KCP&L evaluate the economics of the proposed facility as quickly as possible. Should this project continue to be economically attractive to KCP&L to fulfill its generation needs, Burns & McDonnell recommends that KCP&L progress as quickly as possible to implement this project in an effort to mitigate the uncertainty in future construction and labor market conditions. An increased interest in international solid fuel generation caused by the high costs of alternative fuels and the increasing need for emissions controls retrofits on existing domestic facilities could have a significant impact on the availability of construction labor and materials. This increase in demand could result in significant increases in the construction costs and durations for the proposed expansion. As

delays in project execution increase, the uncertainty of market conditions at the time of execution increases.

This report, with appendices, was approximately 170 pages in length. Although the premise of the 2004 PDR was a second unit at the existing Iatan site, the supplemental PDR in November 2006 considered alternate sites as well before finally concluding that the Iatan site was the best overall location after all.

Q. Was the detail in the report superficial and preliminary?

A. No. The report stated that the purpose of this study is to define the preferred design parameters of major components of the project and provide adequate information to support the following activities.

- Development of adequate detail to support permitting requirements.
- Evaluation of the economics of the major technology components.
- Integration of the project performance and financial data into the KCP&L Integrated Resource Plan.
- Internal budget appropriations.

This report includes evaluation of the following major issues.

1) Supercritical/Subcritical Technology.
2) Scrubber Technology.
3) Number of Feedwater Heaters.
4) Boiler Feed Pump Drive Alternatives.

5) Project Emissions Estimate.

6) Feasibility Grade Capital Cost Estimate.

7) Preliminary Plant Performance Estimate.

8) Project Operating and Maintenance Cost Estimate.

9) Permitting, Engineering and Construction Schedule Timeline.

The report then provides the general design criteria, including 800 MW size, supercritical, with fundamental design considerations, except for size, similar to the final plant. A later update suggests that the capital cost increase for an upgrade from 800 MW to 850 MW would cost 6.25% more.[50] The contracting approach was assumed to be "a combination of EPC contracts and multiple contracts. A single EPC contract was assumed for the boiler and air pollution control equipment. Multiple contracts for the balance of plant work were assumed in an effort to minimize costs associated with subcontracting."

Q. What was the projected cost of this project and how confident was B&McD in this estimate?

A. In Section "** [redacted]

[redacted]

[50]/ Per handwritten note by J. Fleer on original PDR cost estimate.

[redacted]

Q. Were there specific details on the proposed schedule?

A. Section "** [redacted]

[redacted]

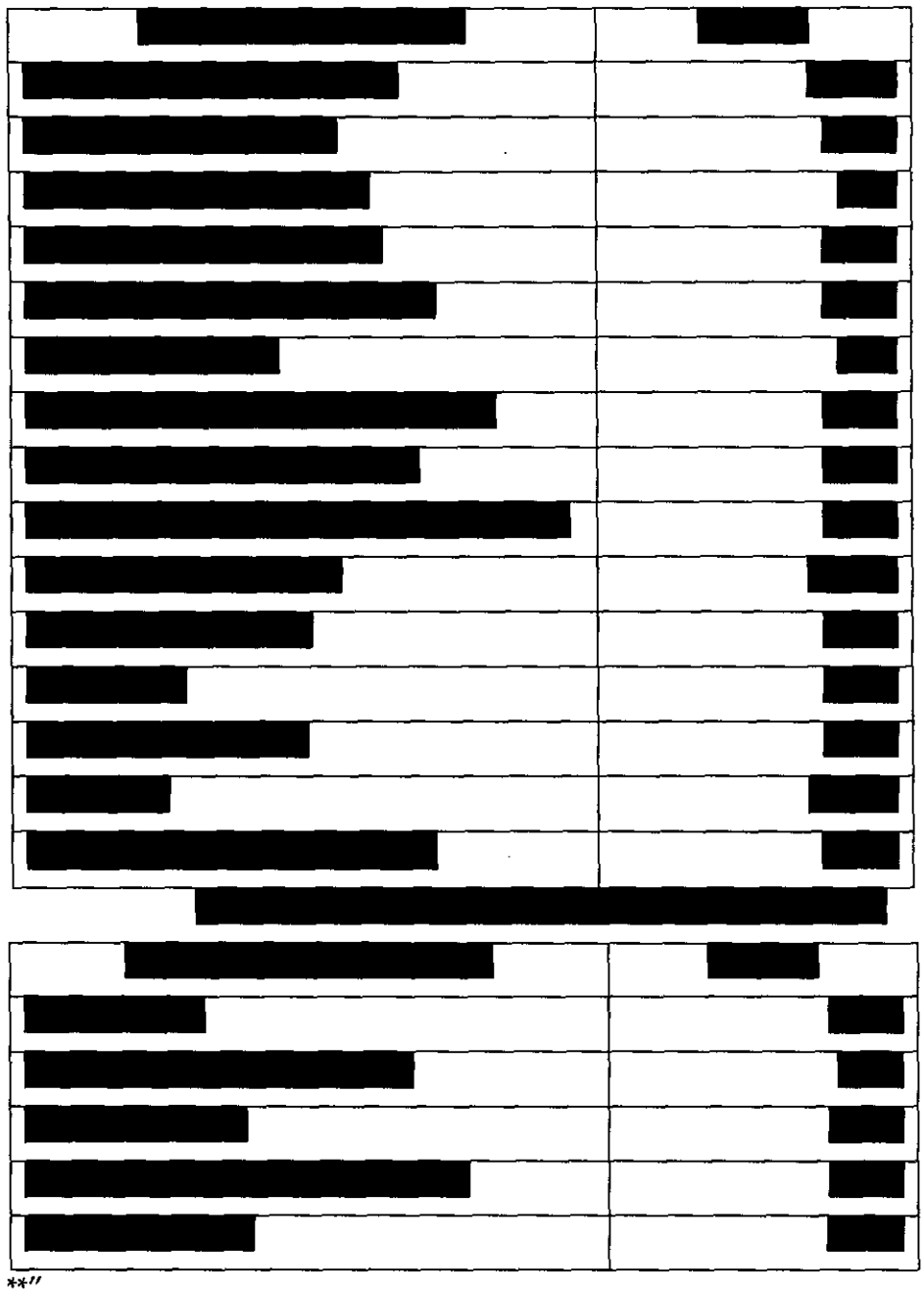
[redacted]**"

Q. Were there specific details on the estimated cost?

A. Section 7 provided an extensive analysis of cost estimates, with additional detail on contingency, capital costs and O&M costs in Appendices L. M and N. The Estimated Capital cost Summary is in Table 7-1.

Table 7-1

Estimated "**



**"

Q. Please describe how the cost estimate was developed.

A. The following describes the methodology used in the development of the Iatan 2 cost estimate.

- Estimates are based on the assumptions and scope of supply contained in this report.
- Major Engineered Equipment: Burns & McDonnell solicited and received Vendor quotations for the following major equipment:
- Boiler and SCR;
- Air Pollution Control Equipment;
- Stack;
- Steam Turbine Generator;
- Surface Condensers;
- Cooling Tower;
- Boiler Feed Pumps;
- Condensate Pumps;
- Circulating Water Pumps;
- Boiler Feedwater Heaters.
- Balance of Plant Equipment: Burns & McDonnell utilized in-house information from similar projects.
- Construction Estimates: Construction commodities and indirect costs were estimated using recent pricing and quantity take-offs from other similar projects in Burns & McDonnell's in-house data base.
- Labor rates: Labor rates and productivity factors were developed based on discussions with construction contractors and local unions familiar with the area.

- Project Indirects: These estimates are based on Burns & McDonnell's experience as an Owner's Engineer and EPC contractor.

Q. Was a detailed contingency analysis included in the PDR?

A. Section 7.4 provided the basis for contingency and stated:

"**[redacted]

NP

[redacted]**"

As indicated, there is a relatively high probability that the final project cost will exceed the estimate if no contingency is included. To minimize the risk of budget overruns, Burns & McDonnell recommends that a contingency be added to achieve a confidence level of 95%. The actual level used depends upon KCP&L's appetite for cost risk. "**[redacted].**" On top of this, an additional contingency should be added to cover unanticipated project general scope changes. Based upon the amount of preliminary design and confirmation done to date, Burns & McDonnell recommends a "**[redacted]**" scope contingency to cover such potential changes. As such, Burns & McDonnell recommends an overall project contingency of "**[redacted]**". An "**[redacted]**" contingency is included in the cost estimate.

This level of contingency is adequate to cover normal deviations in pricing and normal deviations in the assumptions used to develop the project costs. However, it is not adequate to cover significant deviations from the project

assumptions or major changes in market conditions. Deviations that may cause the project costs to exceed the estimated costs inclusive of contingency include excessive inflation (>8%), shortage of qualified labor, shortage of qualified construction contractors, change in contracting approach, and other similar changes. Such changes may be reflective of a moderate to high amount of new power plant or industrial plant construction or air pollution control retrofits. Such a scenario is becoming increasingly more likely as we approach the 2010 to 2012 time frame."

Q. What were the major recommendations of the 2004 PDR?

A. A summary of the primary recommendations follow.

- Burns & McDonnell recommends that KCP&L evaluate the contingency included in the project costs and its impact on mitigating some of the risks and adjust the contingency as necessary to reflect its appetite for such risks.
- Burns & McDonnell also recommends that KCP&L progress as quickly as possible on this Project. Quick action serves to mitigate the potential impact of changes in market conditions as they affect both cost and schedule. Market changes become increasingly likely as time progresses. Burns & McDonnell recommends that KCP&L utilize the information presented in this report as inputs into its integrated resource planning model for comparison to other generation alternatives due to an increased interest in solid fuel generation and the increasing need for emissions control retrofits on existing facilities.

- It is recommended that a project organizational plan and contracting strategy for engineering, procurement, and construction be finalized first. The organization plan and contracting strategy should:
  - identify resources, roles, and responsibilities to be provided by the various Owner organizations, contractors, and consultants;
  - discuss lines of communication and decision making authority;
  - identify number of contracts and types including use of alliances and incentives where appropriate.

A design management plan should be finalized to include:

- division of responsibility between the Owner and the various contractors and consultants;
- requirements for design reviews;
- discussion of design philosophy, methods, standards and criteria.

Q. What was the purpose of the November 2004 PDR?

A. This PDR provided an updated Siting Study to supplement the environmental assessments. It concluded that the Iatan site was the best alternative.

Q. What was the purpose of the June 2007 PDR?

A. This PDR provides an update to the original August 2004 report and it's supporting Appendices. It was presented to" **[redacted]**

NP

[redacted]

NP

[redacted]

[redacted] **

Q. How did the schedule change at this point?

A. The schedule reflected the fact that the regulatory approval was almost one year later than anticipated in the original PDR. The revised schedule was provided in Table S1-1.

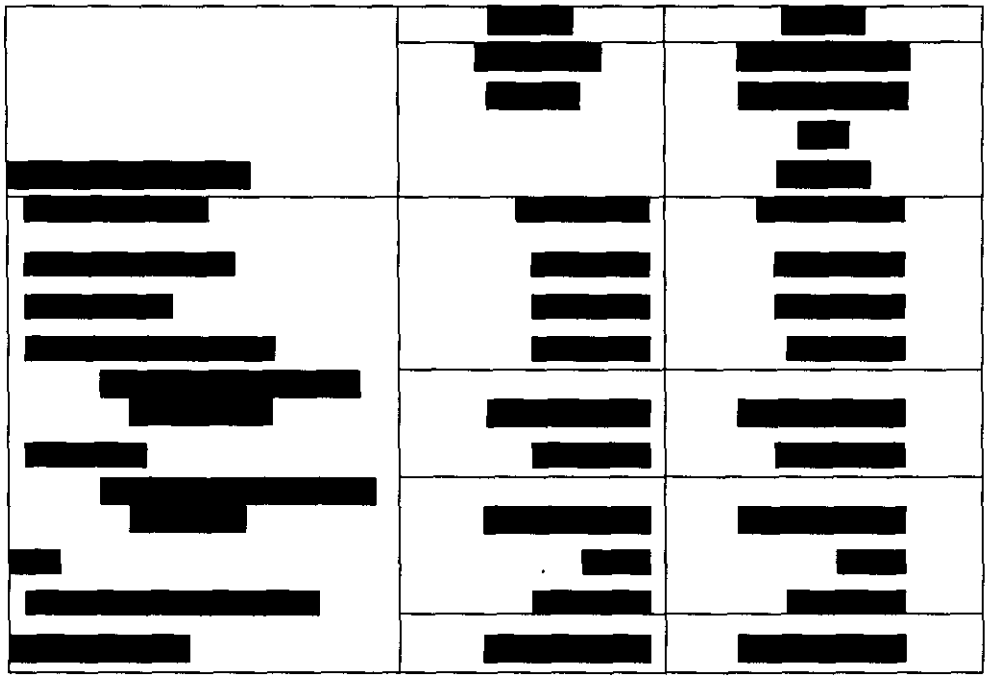
Table S1-1 Key Milestone Date Comparison - Current vs. Original

Milestone	Original(2004 PDR)	Current (June 2006)	Variance Months
Start Design Engineering	11-1-2004	12-1-2005	13
Award Major Procurement – Boiler Island	5-1-2005	LNTP 2/28/06A NTP 4/27/06A	10 12
Award Major Procurement –Turbine-Generator	5-1-2005	4-12-2006A	11.5
Start Construction	5-1-2006	8-29-2006A	4
Start Boiler Island Steel Erection	11-1-2006	8-15-2007	9.5
Energize Startup Power	5-1-2008	2-1-2009	9
Synchronize	5-1-2009	2-1-2010	9
Provisional Acceptance	NA	6-1-2010	
Commercial Operation	11-1-2009	10-1-2010	11

Q. What were the changes in cost from 2004 to 2006?

A. In addition to our review of the technical issues identified that impacted cost; we reviewed the detailed cost summary in Appendix S1-M. The major increases in estimated costs were in the following area. **"

[redacted]



[redacted]

Q. Provide some insight into the major changes from 2004 to 2006.

A. In addition to our review of technical issues that impacted cost, we reviewed the detailed cost summary in "**[redacted]

[redacted]

[redacted]

- [redacted]

[redacted]**

Q. What is your overall conclusion regarding the development of the 2004 PDR and the revisions made in the December 2006 PDR Supplement?

A. The total increase of "**[redacted]

[redacted]

NP

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

**

Q. Do you believe all of the increase from the 2004 PDR and the 2006 CBE should be considered as prudent by the Commission?

A. After adjusting the cost of the project for the increased size from "**[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]**

Now, the question is who should be responsible for this underestimation, KCP&L or the ratepayers? Should KCP&L's excuse that the original PDR was just an early estimate justify a $211 million unexplained cost increase? Vantage believes that the Commission should seriously consider whether some portion of this amount be denied. Our opinion, based on our overall analysis and understanding of the project and its early planning is that 50% of this amount, or $106 million) should be deemed imprudent because the increases are not justified by the facts provided in the project documentation.

ANALYSIS OF MAY 2008 AND MARCH 2010 REFORECAST

Q. Please describe the basis for each of these two forecasts and indicate the position Vantage has on how reasonable these cost increases are.

A. These two reforecasts, (Schedules WPD 3 & 4), were necessitated by the recognition that project costs were rising at a rate that could not be constrained within the existing budget requirements. In each case, KCP&L had to face the fact that contingency budget amounts had dissipated and that project productivity had not improved sufficiently enough to recover cost and schedule problems. While some of the cost increases were justified by commodity cost increases, this would have accounted for only a small portion of the total cost overruns. The following table provides a summary of causal factor that result in

negative project impacts and imprudent costs. This list is not all inclusive, but provides a view of how costs were driven higher due to mismanagement.

Causal Factor	Areas Impacted
Lack of an effective Project Management during the critical early phase of the project	The lack of effective and adequate management during 2006 and early 2007 resulted in many of the other problems listed below.
Unrealistic schedule at the start of the project (185 days).[51]	The initial schedule was immediately recognized as tight. This drove decisions on EPC versus Multi Prime, signing of key contracts without defined details, and significant rework and engineering miscues.
Inaccurate initial estimate in initial and updated PDRs.	The initial PDR had significant underestimates of both commodity costs and total scope. The lack of knowledge regarding the required size of the turbine building resulted in significant re-engineering and increased commodity amounts.
Conflicts with major contractor as a result of compression.	Details in change orders indicate that many contracts were claiming additional costs due to

[51]/ 01/04/2007 Weekly Leadership Team minutes page 5.

	compression.
Poorly written contracts that do not give access to performance data.	Both the Alstom and Kiewit contracts did not provide adequate language to assure that KCP&L could get performance data needed to track performance and address necessary changes.
Lack of project controls during the early portion of the project.	The delay in instituting project controls led to a lack of clarity and transparency in project costs and progress.
Inadequate CM staff early in the project.	KCP&L completely misunderstood the scope of this project and the assets needed. When they did recognize the issue, they were faced with hiring outside support during a constrained market.
Poor performance by B&McD.	Poor quality and timeliness led to conflicts with contractors and other team members. This resulted in schedule slip, compression and related cost increases.
Conflict of interest on the part of B&McD.	B&McD had a number of conflicts on the project that are problematic. First, they made a recommendation to utilize the Multi Prime method, in the face of industry trends ensuring

	themselves higher revenues as the Owner Engineer. Second, B&McD provided a significant portion of the CM staff. In many cases B&McD employees were responsible for producing reports that evaluated B&McD performance.
Lack of oversight and contractual constraints on B&McD.	Prior to the signing of the contract with B&McD in early 2007 there were no specific performance criteria with which to measure their performance. [52]
Sequencing issues that add inefficiencies to various contractors.	Schedule delays often required contracts to demobilize and then resequence work later when access was available.
Commodity price increases.	Delays in completing design and subsequent delays in awarding contracts and procuring materials could result in major impact on project costs. However, the major equipment purchases including the boiler, turbine generator and AQCS were ordered as scheduled in the PDR. Commodity price increases should therefore not be

[52]/ Schiff Hardin Status Report dated May 8, 2006, page 6.

	a major factor.
Schedule delays resulted additional costs to major contractors who were required to remain on-site longer than contracts called for.	The weekly cost of maintaining a craftsman is "**[redacted]**", including the cost of supervision. The cost for maintaining a staff of**[redacted]** for the additional **[redacted]** as associated with the schedule delay is **[redacted]**
Weather delays that could have been avoided had key activities been performed when initially planned.	Had the project schedule been maintained the anticipated schedule, major weather related issue KCP&L claims during boiler flushing in December 2009 could have been avoided.

Q. How did the causal factors described above impact specific cost categories?

A. We have selected some key data from the spreadsheet above that describes the 2008 and 2010 budget reforecasts versus the December 2006 CBE. We provide it below, followed by discussions of each category, along with proposed adjustments."**

[redacted]

**"

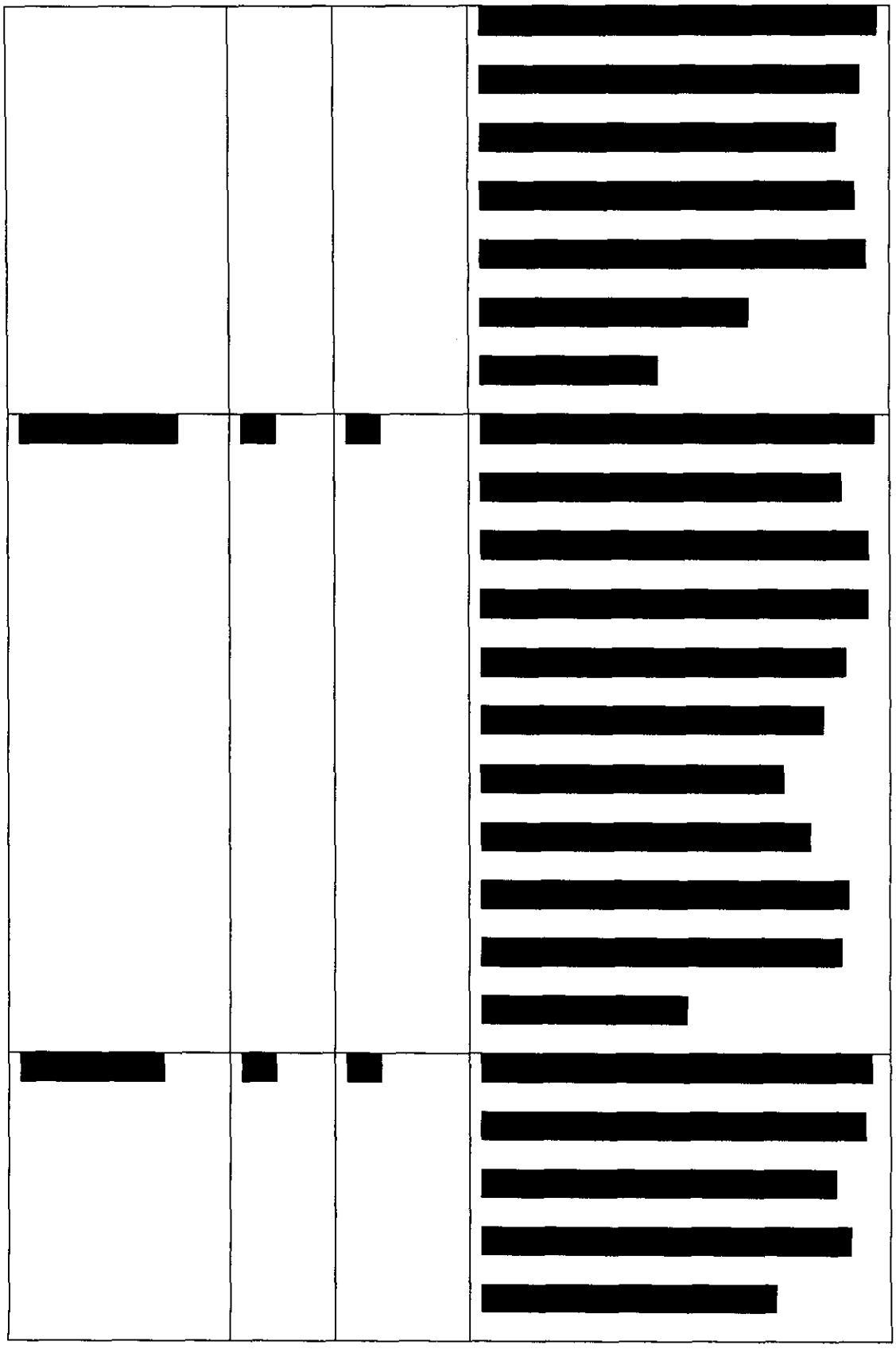
Q. What are your observations and proposed adjustments?

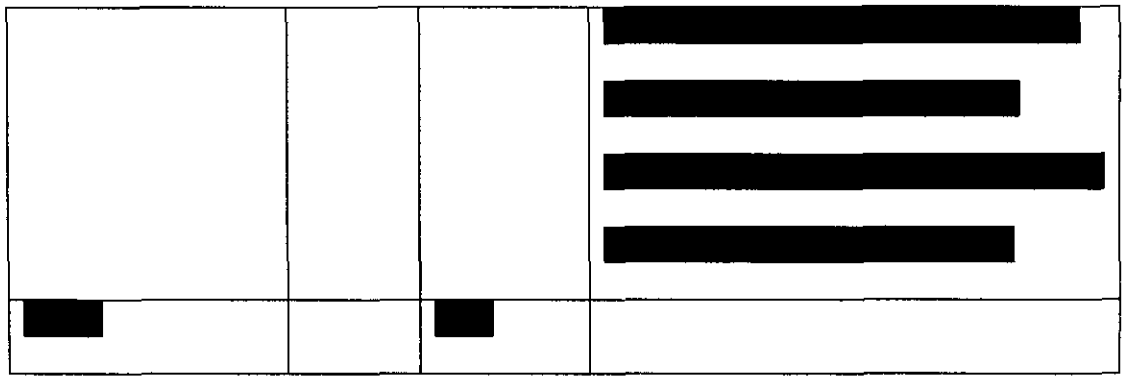
A. Note that total construction costs went up by "**[redacted]**" between December 2006 and March 2010. This increase correlates closely with the substandard productivity major contractors experienced. Please recall that Kiewit had a"**[redacted]**" overall loss in efficiency and Alstom had a "**[redacted]**"loss. The category for Construction Management, Project Management and Engineering increased by "**[redacted]**" These cost increases were recognized as necessary when KCP&L instituted efforts to properly manage the project and attempt to recover lost schedule in 2008. The final category of Field & Office and Miscellaneous increased by $53.8 million or 285%. Again, these costs were required to support the increased workforces, Construction Management personnel and facilities at the site.

Q. In your professional opinion, what amounts would you consider being unreasonable and therefore considered imprudent?

A. We have prepared the following table with our adjustments and rationale. It is important to recognize that there is no way, using data supplied by KCP&L, to develop an exact rate, but this is a reasonable analysis based upon accepted industry practice. **

Category	Change in Cost	Imprudent Amount ($ Million)	Rationale
[redacted]	[redacted]	[redacted]	[redacted]





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Q. Based on your total analysis of changes in cost from the adjusted initial PDR to the current 2010 reforecast, what amount do you believe is imprudently incurred and should be disallowed?

A. When we total the amount we consider unreasonable in the initial analysis (2004 PDR to 2006 CBE) and the amount identified above, we reach a total disallowance of "**[redacted]**"

REVIEW OF INITIAL PURCHASE ORDERS AND CHANGE ORDERS

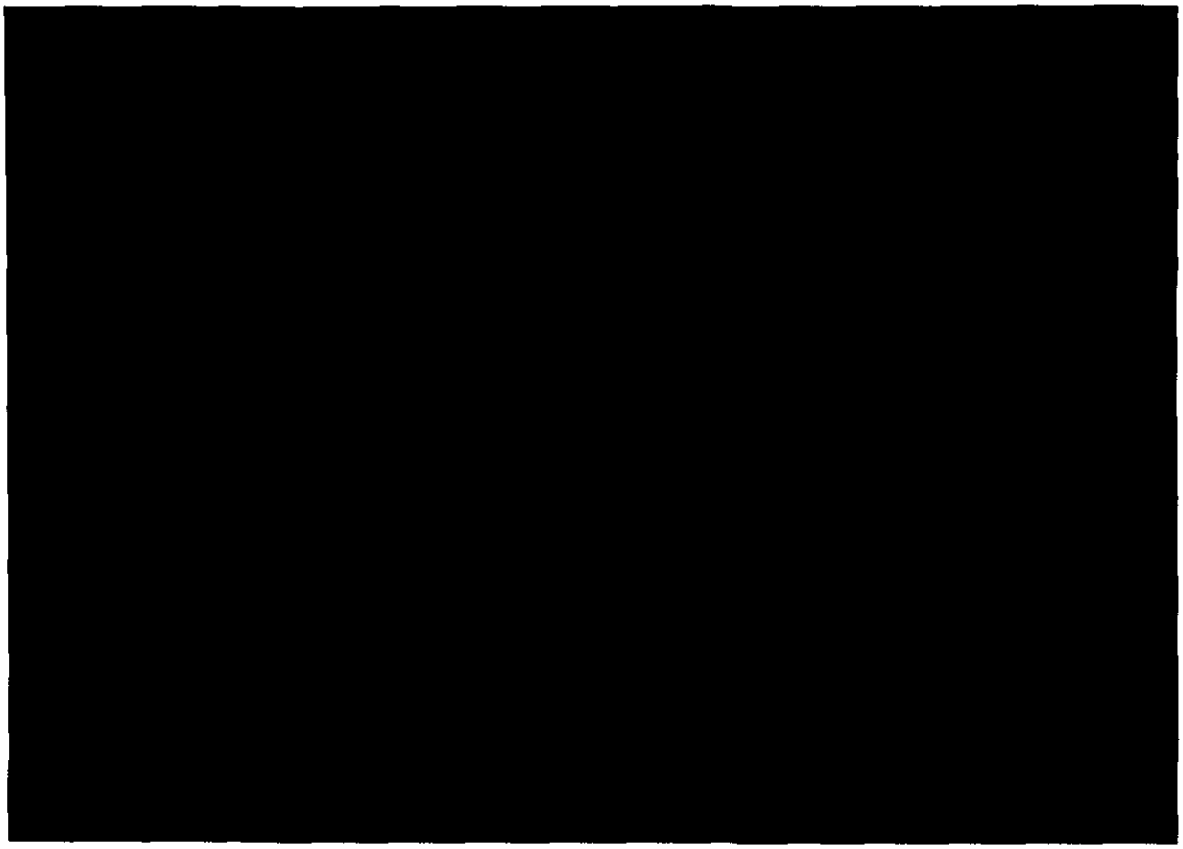
Q. Describe how you evaluated initial purchase orders, change orders and other cost areas to identify costs that might be deemed imprudent?

A. This analysis was in-depth and extremely data intensive, as detailed in Schedule WPD-37. Vantage requested and reviewed summaries of all initial purchase orders and all change orders. This included "**[redacted]**" A summary of the initial POs and COs and all associated analysis is provided in Schedule WPD-2. Vantage then selected all purchase orders over $10 million, almost three hundred selected change orders for further review. Our consultants read support documentation used by KCP&L to support each purchase order or change order. After reviewing the support

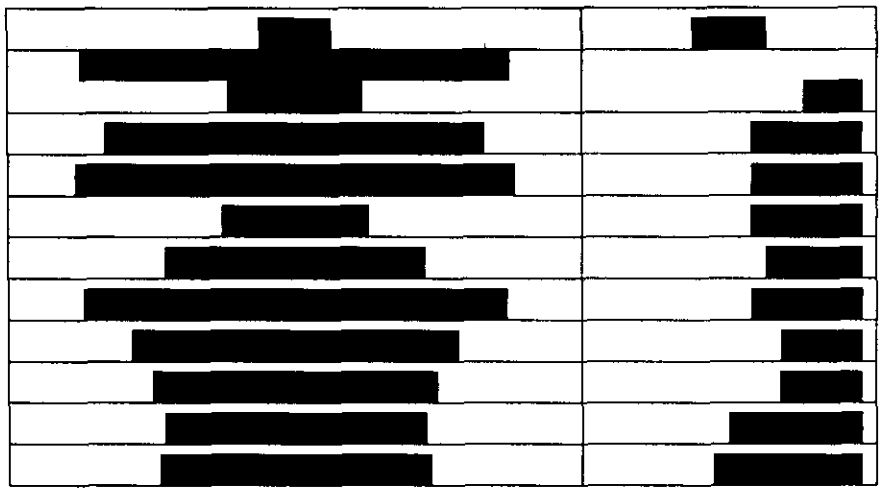
documentation, Vantage determined if all or part of the cost should not be permitted into rate base. This involved looking for details related to overtime, schedule compression, contract extensions, schedule extensions, work deferrals or restacking, or other work that would not have been required if the project was on schedule and all work was sequenced as planned. We also looked for instances in which additional payments were made for services or supplies that should have been included in the original contract.

Q. What was the breakdown by major company of expenditures on Iatan 2?

A. The following table provides this detail. Please note that the line titled "Miscellaneous POs from Data" is a collection of purchase orders, including additional work by Schiff Hardin, Ernst & Young, various law firms and other KCP&L related expenditures. We have also summarized this below. " **



[redacted]



**"

Q. What was the total of your analysis that you believe warrants exclusion form rate base?

A. The following table summarizes the results of our analysis. "**

**"

Q. Provide a rationale or reference supporting each amount in the table above.

A. The Alstom amount of $37.2M is largely based upon our analysis earlier in the report. All 14 items in the cost profile, except 3, 4 and 7, are deemed imprudent. The $37.2 M is a conservative amount, because the lack of productivity by Alstom drove costs up for many smaller contractors that were not specifically identified and quantified.

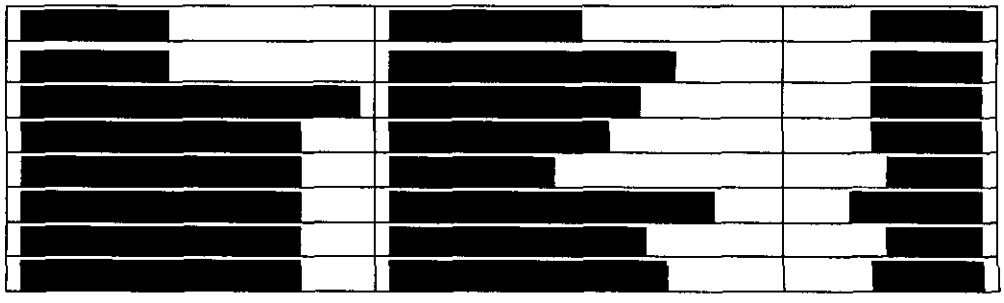
Q. How do you justify the Kiewit Contract disallowances?.

A. The Kiewit cost increases are well documented. The turbine building bust drove much of these costs. Please recall that Kiewit expressed interest at about the time that the bust was first discovered. The ultimate amounts of materials would not be known until all engineering was completed. Increased quantities for commodities and increased hours drove the level of these imprudent costs. Vantage is of the opinion that the $20M of the $43M first group of change orders, the $39M, and $29M and $24 Million of the last $44M change to the contract, totaling $112 million should not be included in rate base.

Q. What are the cost drivers behind the Kissick imprudent cost reduction.

A. Vantage analyzed purchase orders and change orders, identifying seven that we believe should not be included in the approved costs. These are listed below.

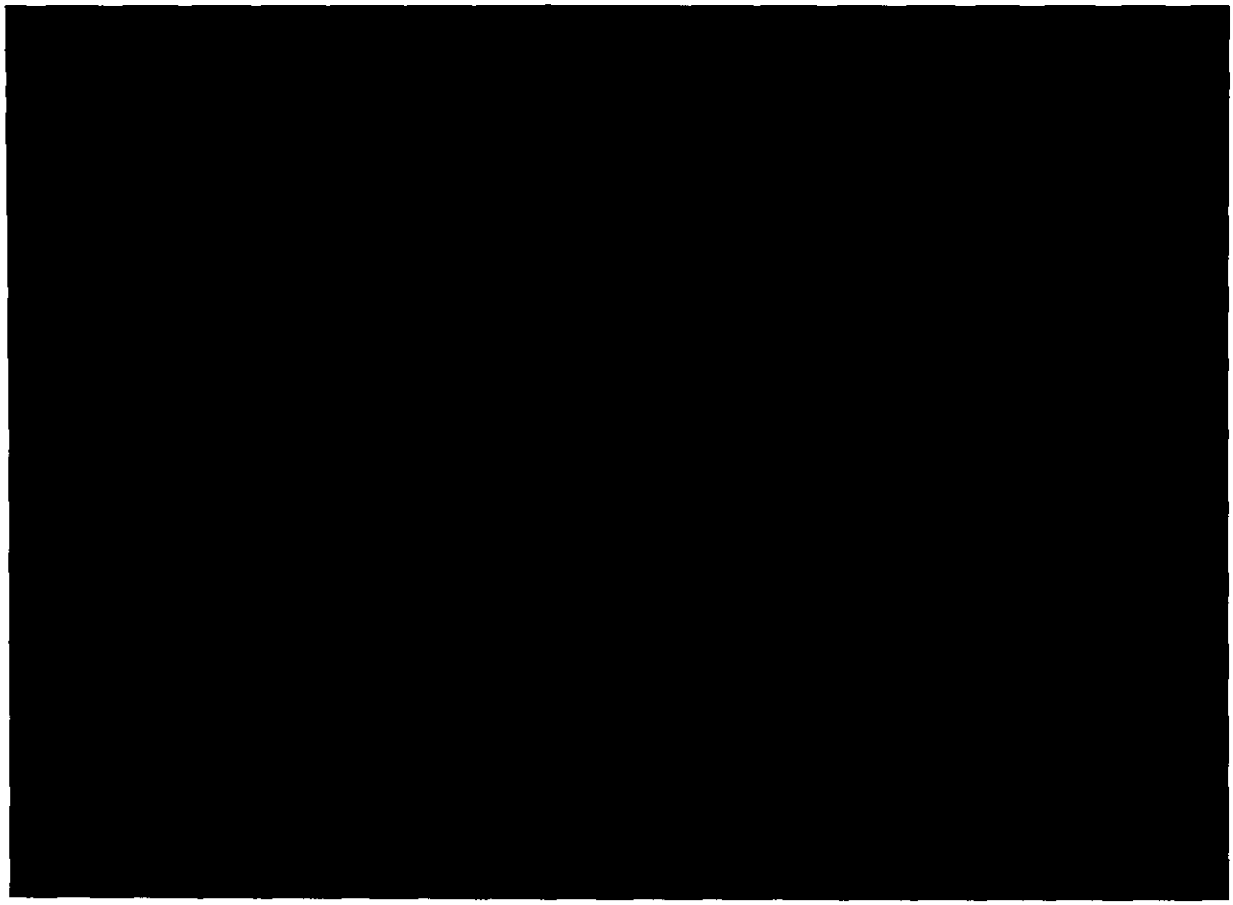
"**



**'

Q. How did you determine the amount to declare imprudent from the B&McD contract?

A. "**



[redacted]

**"

Q. Based on the four separate imprudence quantification approaches you present in Section G of your testimony, what amount do you recommend be removed from the proposed rate base increase?

A. We would recommend that the comparison of Iatan 2 costs to other power plants be considered a boundary that supports the overall conclusion of imprudent costs. Finally, our analysis of purchase orders and change orders imputes to **[redacted]** in imprudent costs. Vantage recommends, based on our testimony alone, that the **[redacted]** amount be considered a conservative estimate of imprudent costs.

Q. Does this conclude your testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of	)	
Kansas City Power & Light Company	)	File No. ER-2010-0355
for Approval to Make Certain Changes in	)	ER-2010-0356
its Charges for Electric Service to Continue	)	
the Implementation of its Regulatory Plan	)	

AFFIDAVIT OF WALTER DRABINSKI

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Walter Drabinski, of lawful age, on his oath states: that he has prepared the attached Direct Testimony in question and answer form, consisting of 213 pages of Direct Testimony and 39 schedules to be presented in the above case and that the answers in the following Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

Walter Drabinski

Subscribed and sworn to before me this 24th day of January, 2011.

Notary Public

My Commission Expires: 7-19-11

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

KIMBERLY R. WILLIAMS
My Commission Expires
July 19, 2011
Cole County
Commission #07507473