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Witness: Daniel F. Meyer
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KCP&L Greater Missouri Operations Company
Case No.: ER-2010-0355/ER-2010-0356
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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2010-0355/ER-2010-0356

REBUTTAL TESTIMONY

OF

DANIEL F. MEYER

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY
KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri
December 2010

"[redacted]**" Designates "Highly Confidential" Information Has Been Removed.**
Certain Schedules Attached To This Testimony Designated "(HC)" Have Been Removed.
Pursuant To 4 CSR 240-2.135.

REBUTTAL TESTIMONY

OF

DANIEL F. MEYER

Case No. ER-2010-0355/ER-2010-0356

Q: Please state your name and address.

A: My name is Daniel F. Meyer. My address is 30 Sequoia, Lake Forest, Illinois.

Q: Are you the same Daniel F. Meyer who submitted Direct Testimony in this proceeding?

A: Yes, I am.

Q: What is the purpose of your Rebuttal Testimony?

A: The purpose of my testimony is to rebut the direct testimony of the Missouri Public Commission Staff ("Staff") regarding its claim that Kansas City Power & Light Company's ("KCP&L") Cost Control System does not adequately identify or explain the variances from the Control Budget Estimates for the Iatan Unit 1 and Iatan Unit 2 construction projects (referred to collectively as the "Iatan Project"). In my testimony, I describe how the Cost Control System established for the Iatan Project provides all of the information necessary for Staff to consider as part of its construction audit.

Q: Please provide a summary of your Rebuttal Testimony.

A: In my testimony today, in my prior Direct Testimony in this case and my prior Direct and Rebuttal Testimony in Docket No. ER-2009-0089 ("0089 Docket"), I detailed my decades of experience in the construction industry. I have spent nearly half a century in the construction business and have managed and overseen from the executive-level business units for some of the most renowned contractors in the world. Over the last 15 years, I have served on about 75 Dispute Review Boards ("DRBs") on major infrastructure projects across North America wherein I decide disputes related to cost,

scheduling and efficacy of management based on information provided by some of the world's largest and most sophisticated contractors and savvy owners. This experience allows me to view on a day-to-day basis the best industry practices in cost and schedule management as related to large complex projects.

I use that experience as a template for my work with Schiff Hardin LLP ("Schiff Hardin") on the Iatan Project. In my testimony today, I explain how the Cost Control System that KCP&L established for the Iatan Project falls within the upper quartile of cost tracking systems that I have seen in my career. KCP&L's Cost Control System provides the necessary tools to both identify and explain any variances from the Iatan Project's initial Control Budget Estimates. In my review of the Iatan Project, I have had the opportunity to examine changes that have been necessary for each Unit's Control Budget Estimate. Along with others from Schiff Hardin, I provided oversight in regard to the development of the base cost estimate that ultimately became the Iatan Project's Control Budget Estimates. I have participated with Schiff Hardin in the oversight of each of the Iatan Project's cost reforecasts, and I have examined in reasonable detail all of the documents that identify and explain the cost overruns that have occurred on the Iatan Project. While the Iatan Project is very complex, identifying variances based on the cost system is not, and KCP&L's project documentation, which was readily available to Staff, explains the reasons for those variances.

In my testimony today, I show not only how I have reviewed costs on this Project but also how anyone, including Staff, could have performed the same kind of review as I have. The method that I have used is simple: 1) Identify from a side-by-side comparison of the Iatan Project's Control Budget Estimate and actual costs the largest cost overruns by line-item; and 2) Drill-down through KCP&L's well-organized back-up documentation on each line item so as to obtain a better understanding of the cause of

those overruns. In using this method, I was able to identify sixteen line items which have a total negative variance value of $59 million on Unit 1 and $181 million on Unit 2. These sixteen items constitute the majority of the total dollar overrun for both Units. I have evaluated all of the back-up documentation that explains these cost variances to confirm KCP&L's explanation as to their cause. This review has allowed me to conclude that these variances have not been caused by management imprudence and the aggregate size of these overruns was much lower than overall cost increases that were occurring in the industry at-large at the same time for similar projects.

KCP&L has either provided to Staff or made available to Staff all of the same documentation I have utilized for my review. As a result, if Staff had simply evaluated the documentation that it had been given, it could have made its own determination of KCP&L's prudence as to the $18 million on Unit 1 and the $93 million in cost overruns on Unit 2 that Staff now claims are "unexplained."

VARIANCES FROM THE IATAN UNIT 2 CONTROL BUDGET

Q: Are you familiar with KCP&L's Cost Control System (Schedule SJ2010-1)?

A: Yes. As I stated in my Direct Testimony, I assisted with portions of its preparation.

Q: What is the purpose of the Cost Control System?

A: Company witness Chris Giles testifies that the Stipulation and Agreement ("S&A") in Case No. EO-2005-0239 required KCP&L to have a system for tracking costs. I recall that the Cost Control System was created as a guidance document for the necessary processes that KCP&L's Comprehensive Energy Plan ("CEP") Projects would need for project management.

Q: Does KCP&L's Cost Control System conform to controls systems that are generally seen and used in the construction industry?

A: Yes.

Q: Does KCP&L track and report its costs for the Iatan Projects in accordance with the Cost Control System?

A: Yes. KCP&L tracks, manages and reports the costs on the Iatan Project in conformance with the systems developed from the Cost Control System. Company witness Forrest Archibald describes in his Rebuttal Testimony the sections of KCP&L's Cost Control System that were used to develop the various integrated project-level systems that KCP&L uses to track costs on the Iatan Project. Specifically, the Cost Control System's most critical requirements include the following:

- Development of a "Definitive Estimate." For the Iatan Project, the Definitive Estimate is called the "Control Budget Estimate" or "CBE." The Control Budget Estimate consists of cost estimates for all of the work activities and procurements as required by the Cost Control System, including, but not limited to, labor, materials, equipment and services associated with the development, planning, design, construction, start-up and commissioning of the Projects. It also contains contingency and tracks AFUDC for each Project. *See* Schedule SJ2010-1, Cost Control System, at p. 8. The Control Budget Estimates for Iatan Unit 1 and Iatan Unit 2 were separately developed and actual cost changes to the budgets are also tracked for each unit so there is no confusion or co-mingling of dollars between the two.
- KCP&L continually monitors both actual and projected costs to ensure that its initial assumptions embedded in the Iatan Project's Control Budget Estimates are still valid. *See* Schedule SJ2010-1, Cost Control System, at p. 8. KCP&L performed one cost reforecast of both Iatan Unit 1 and Iatan Unit 2 that was completed in May 2008 (the "May 2008 Reforecast") and three other reforecasts

of Iatan Unit 2 in July 2009, March 2010 and November 2010. The need to reforecast the Iatan Project's estimate at completion ("EAC") was anticipated by the Cost Control System, and allowed KCP&L to make necessary budgetary adjustments based on a number of facts which I will discuss later in my testimony. These cost reforecasts were also performed in a manner consistent with widespread industry practice as they facilitated budget adjustments as necessary. In fact, following this prescribed methodology, KCP&L's May 2008 Reforecast provided an accurate projection of the final costs for both Iatan Unit 1 and Iatan Unit 2. This is even more remarkable in light of the fact that at time of the 2008 reforecast, KCP&L's actual costs for the Iatan Unit 2 Project were less than $730 million.

- When reporting the costs for the Projects, KCP&L issues a cost report, also called the "K Report" which is distributed on a monthly basis. Company witness Mr. Archibald describes the format and use of the K Report in his Rebuttal Testimony. In summary, the K Report breaks down the overall Iatan Project's budget into discrete line items of work; changes to the Control Budget Estimate and the Current Budget; actual costs to date; estimated costs at completion amounts based upon the reforecasts; costs committed to date; approved change orders; amount of remaining contingency. *See* Schedule SJ2010-1, Cost Control System, at p. 17. A copy of the K Report through June 2010 for the Iatan Project is attached to my testimony as Schedule DFM2010-7.
- KCP&L tracks and reports its cash flows for the same line items that were developed for the Control Budget Estimate so that actual cash flow can be compared at the line item level. *See* Schedule SJ2010-1, Cost Control System, at

p. 18.

- KCP&L has developed a change management system as required on Page 9 of the Cost Control System. Company witness Steven Jones explains the Change Management System in detail in his Direct Testimony. *See* Jones Direct Testimony at p. 4 ln. 18 to p. 9 ln. 6. Each change order goes through a series of reviews and sign-offs by various departments, and the change order documentation includes a description of the nature of the change and a "reason for change" that sets forth why the change was necessary.

Q: Do you know whether the Missouri Public Commission Staff ("Staff") received KCP&L's Cost Control System?

A: Company witness Chris Giles testifies that Staff received the document on July 10, 2006 and KCP&L conducted a meeting the following day with Staff to discuss its content. Nearly two years later, I attended a meeting with Staff in Jefferson City, Missouri to discuss the initial reforecast of the Iatan Project's Control Budget. In that meeting, there was a general discussion of the Cost Control System document and all aspects of KCP&L's cost tracking processes.

Q: Did Staff raise any issues or express any problems with KCP&L's cost tracking and projecting processes during your meeting?

A: Not that I can recall, no.

Q: Do you believe that the system KCP&L developed for cost tracking provided Senior Management with enough information upon which to make reasonable decisions relative to the Iatan Project?

A: Yes. As I stated in my Direct Testimony, with the types of decisions that KCP&L's senior management is making, the necessary information is readily available. In

particular, KCP&L's cost tracking system gives visibility to likely cost variances as well as the reasons for those cost variances thus providing senior management an opportunity to ask appropriate questions of the project management team and determine strategies for mitigating or reversing negative trends, as necessary and appropriate.

Q: Are you aware of the method that the project team has used for informing the Staff of the cost of the Iatan Projects?

A: Yes, as I stated in my Direct Testimony, I have a general understanding that on a quarterly basis, KCP&L provides a written report to the Staff including cost information. I have seen such reports which include an exhibit containing a summary version of the K Report. In addition, Company witness Mr. Archibald testifies that he has had multiple meetings with Staff at which he has explained the Iatan Project's cost status using this report and the more detailed K Report. These cost reports are an appropriate starting place for any analysis of the Iatan Project's costs because they provide the initial indicator of variances from the Control Budget. Additionally, Staff also receives summary-level reports from the Iatan Project's "Cost Portfolio" which Company witness Forrest Archibald describes in his Rebuttal Testimony, as well as logs and documents such as purchase orders and change orders, recommendation to award letters and memos, all of which provide descriptions of events that bear on the Iatan Project's costs. Staff also received the summary and back-up information associated with each of KCP&L's cost reforecasts, with the exception of the most recent reforecast of Iatan Unit 2. The most recent reforecast documentation has not been provided to Staff only because the reforecast was completed just a few weeks ago and the final documentation has not yet been fully compiled as of today's date. However, it is my understanding that KCP&L did provide Staff with a summary of the results of the reforecast at its last quarterly meeting on November 19, 2010. In addition to the reoccurring reports that KCP&L provides to

Staff, I also believe that Staff has had throughout the Iatan Project the ability to request specific documents related to the cost of the Projects including, but not limited to, documentation such as settlement agreements, change orders or other documentation that KCP&L has prepared in the normal course of business. These requests have been made both informally and formally through the use of Data Requests. For example, Staff has been provided with copies of all of the monthly cost reports and supporting documents that were generated for the Executive Oversight Committee and the Joint Owners through responses to specific Data Requests. It is my understanding that KCP&L has accommodated all such informal or formal data requests.

Q: Do you believe Staff been provided with adequate documentation that identifies and describes all of the variances, both positive and negative, from the Control Budget Estimate?

A: Absolutely. In fact, KCP&L's documentation relative to cost variances on the Iatan Projects conform to what I would consider to be "best practices" within the heavy construction industry. In my view, the systems that KCP&L has set-up for the Iatan Project so as to document and identify cost variances and related explanations and justifications fall within the top quartile of all power projects that I have seen in my career.

Q: Are you familiar with the Missouri Public Service Commission Staff Report, Construction Audit and Prudence Review Iatan Construction Project for costs reported as of June 30, 2010 ("Staff's Report")?

A: Yes, I have reviewed it.

Q: In Staff's Report, Staff recommends a disallowance of $18,361,835 for Iatan Unit 1 and $93,400,296 for Iatan Unit 2 for "Net Unidentified/Unexplained Cost Overrun Adjustment." What is your understanding of this recommendation?

A: Staff's position is that KCP&L should not be allowed to recoup any costs in excess of the Control Budget Estimate for either of the Iatan Projects. Based on the content in Staff's Report, these amounts are simply the difference between each of the Iatan Project's final costs and the Control Budget Estimates. Staff proposes certain specific adjustments in its report and sponsoring testimony. All other increases to the Control Budget Estimate are included in Staff's "Net Unidentified/Unexplained Cost Overrun Adjustment." To calculate its disallowance recommendation for the category of "Net Unidentified/Unexplained Cost Overrun Adjustment," Staff merely takes the aggregated actual costs of each Unit as of June 30, 2010 and subtracts two amounts: (1) the Unit's Control Budget Estimate Amount and (2) Staff's itemized proposed disallowances.

Q: What is your understanding of the basis of Staff's argument for this proposed disallowance?

A: Staff's reasoning for these proposed disallowances is lack of information. *See* Staff Report at p. 33 ln. 21-28 to p. 38 ln. 22. In essence, Staff states that it asked KCP&L by way of two data requests ("DRs") for "a listing and a description and explanation of all overruns," and Staff claims that KCP&L's response was insufficient. As a result, Staff does not believe KCP&L has adequately explained any of the costs in excess of the Control Budget Estimate.

Q: Do you agree with Staff's argument?

A: No. I have reviewed the information that KCP&L has provided to Staff, along with certain data request responses. KCP&L has provided Staff with reasonable, understandable, and well-organized documentation that identifies and explains all of the budget variances on the Iatan Project and also explains KCP&L's mitigation of identified risks which could have resulted in a further negative variance had KCP&L not taken its reasonable management actions. It appears that Staff for the most part has simply chosen

to ignore the information that KCP&L has provided over the last four-plus years on the Iatan Project. The information provided by KCP&L to Staff comprises the information that I or other experienced parties in the power industry would review on any project in order to confirm the cause of all such budget variances.

Q: Have you ever been retained to perform an analysis of the cause of cost overruns on a large and complex project such as Iatan?

A: Yes. I have done this type of budget analysis many times and, considering the duration of my career, most likely in excess of several hundred times. I performed my first such exercise as described above in 1960 while working in labor control and timekeeping on a large bridge in central Ohio: I was charged with identifying, analyzing, controlling and projecting end-costs associated with the performance of work and the cost of materials. That was about a half century ago and during the ensuing 50 years, I have been responsible for various aspects of construction projects including executive level, actual construction, scheduling, budget, change orders, disputes, cost tracking, financial reporting and oversight. My experience includes projects ranging in size up to approximately $6 billion and encompasses many power projects such as: Iatan; Brandon Shores; Ontario Power Generation – Pickering; Northeast Utilities – Seabrook; Greenfield Mountain; Vermont Yankee; Main Yankee; OK Tedi - Papua New Guinea; Basalt Waste Isolation project; Midwesco Energy wood fired power plants and others.

One such engagement occurred in the years immediately prior to my engagement at KCP&L. Ontario Power Generation ("OPG") retained Schiff Hardin to assist it in determining a budget for the second phase of its rehabilitation of a nuclear plant based on the costs and data gathered from the first phase. The OPG Board of Directors and members of the Ontario (Canada) provincial government asked Schiff Hardin to determine whether proceeding on the second phase of the project was beneficial to

OPG's customers and the Province, and at what cost. Schiff Hardin had to report to the Board of Directors whether the documentation supporting the cost estimate was sufficient to proceed with the project, and then we were requested by the government to assist in the project's later cost reforecasts to determine whether the money actually spent on the project was spent prudently. In order to perform this analysis, we had to determine the cause of any cost overruns. I joined the Schiff Hardin team to assist in this effort.

The analyses that I did with my colleagues from Schiff Hardin to determine the prudence of the project costs involved: (1) reviewing the assumptions embedded in the control budget to understand how the amounts were created; (2) reviewing documents created by the project team regarding the additions to scope, changes in pricing and schedule associated with the work; (3) reviewing of contracts with major vendors; (4) examining indirect staffing requirements; and (5) determining the appropriate level of contingency, among other issues. OPG's cost team prepared a control budget in much the same manner as KCP&L and with approximately the same number of detailed entries and line items as for the Iatan Project. The project team prepared individual packages of justification documents regarding the increases in scope and estimates of project cost for vetting. When it came time to revisit the project's costs for purposes of reforecasting the estimate at completion (EAC), OPG provided the same level of detail and updated cost records. These records allowed for review of the appropriate variances and their justification.

Q: What was the size of this project for OPG?

A. The final cost of the second phase of the OPG project was about $995.2 million, while the overall cost of the entire Pickering Nuclear project was comparable to the cost of the Iatan Project. Schiff Hardin was able to recommend to the OPG Board and to the Ontario Government that based on the information provided, OPG was making a prudent decision

to execute the project. The control budget for the project later increased by nearly 20% due to changes in scope and those changes were necessary for the safe operation of the plant. Ultimately, the project was viewed by the Ontario Government as a great success. This is just one career example in which I have performed detailed analyses of budgets, actual costs, variances and related justifications in connection with the issue of reasonable and prudent decision making.

Q: Staff's Report claims that it requested specific information regarding KCP&L's cost overruns in Data Requests 969 and 970 that KCP&L failed to answer. Have you reviewed KCP&L's response to Data Requests 969 and 970?

A: Yes, I have.

Q: Do you believe that KCP&L's response accurately provides Staff with reasonable direction on how to verify KCP&L's identification and explanation of the budget variances within KCP&L's Cost Portfolio?

A: Yes. KCP&L provides instruction to Staff on how to assimilate the K Report and also identifies the documentation that provides the explanations for each and every cost variance. Additionally, Company witnesses Forrest Archibald and Chris Giles have each testified regarding the number of times they personally, along with others from KCP&L's project and senior management teams, met with Staff to provide additional information and answer any questions that the Staff may have had. In addition, as I testified, I was present at a meeting with members of Staff and I do not recall any expressions of confusion from Staff regarding the manner and processes in which KCP&L prepared its Cost Portfolio and documented cost variances on the Iatan Project.

Q: In your opinion, is there anything that Staff needed so as to perform its audit of the Iatan Project other than the information that KCP&L provided?

A: No. Based upon the information that is provided in Staff's Report Schedule 3 (Data

Request Responses 969 and 970), Staff was shown how to verify the explanations behind each of the cost variances as well as make a judgment as to whether those variances were due to imprudence on the part of KCP&L. Staff has been provided, or would have been provided if it had asked, with all of the same information that I have reviewed regarding the Iatan Project's costs, and these data requests should have assisted Staff in how to access that documentation. Moreover, the documentation that KCP&L has prepared and provided is well-organized. As I will discuss later in my testimony, a "drill-down" on specific cost items is very doable for anyone charged with such a review.

What I do not understand about Staff's position is that Staff did identify $51.3 million in itemized disallowances related to Unit 1 and $36.5 million related to Unit 2 by utilizing all of the documents that I would expect them to have used—reforecast documents, change orders, settlement agreements, project correspondence and invoices and the like. It appears that Staff understands how to analyze the Iatan Project's documentation. Based on that result, I can only conclude that that Staff, after reviewing all of the Iatan Project's documentation was unable to identify any other alleged imprudent costs. Staff now hopes that the Commission will overlook the fact that Staff has not been able to identify any other imprudent costs and somehow disallow all of the other increases to Iatan Projects' Control Budget Estimate without any supporting evidence whatsoever.

Q: Can you please describe for the Commission how KCP&L identifies the cost variances that occurred on the Iatan Project in the documents that it prepared and provided to Staff?

A: Yes. First, as part of the Iatan Project's Monthly Reports which I believe were provided to Staff, KCP&L includes copies of the K Report (Schedule DFM2010-7) As stated, this report shows: (1) the original Control Budget Estimate amount for each line item; as well

as (2) the forecasted estimate at completion; and (3) the costs incurred to date. A simple comparison of the forecasted estimate at completion ("EAC") to the Control Budget Estimate amount would have provided Staff with a comprehensive list of those cost accounts on the Iatan Project that currently have or are projected to have a final cost variance. Comparing the actual costs to the Control Budget Estimate amount will establish the cost variances based upon the cost incurred as of the date of the K Report.

This analysis can be done regardless of whether you account for contingency. Project Contingency is related to the universe of cost line items and associate risks. In KCP&L's cost system, contingency amounts assigned or attributed to individual line items can be determined by either reviewing and comparing the supporting documentation for each monthly cost report or by reviewing the Iatan Project's summary contingency log that is updated and provided with each monthly K Report. While the summary contingency log does not establish detailed reasons for such variances, it nevertheless identifies the amount of contingency that is applied to a certain line item. Company witness Mr. Archibald describes in his testimony the process KCP&L uses for assigning contingency to specific budget line items. When KCP&L developed the Control Budget Estimate, the level of engineering was approximately 20-25%, and KCP&L set aside $220 million in contingency on Iatan Unit 2 and $25 million of contingency on Iatan Unit 1. As the Iatan Project progressed and contracts were executed, contingency was assigned to line items where the Control Budget Estimate amount was lower than the actual contract amount. (*See* Schedule DFM2010-8, the Iatan Project's Contingency Log). In addition, contingency was used to cover the Iatan Project's change orders and purchase orders that were not specifically anticipated by the Control Budget Estimate as the design continued to mature. With regard to the above treatment of contingency, KCP&L's method of distributing contingency on an as-needed

basis are in line with what is utilized in the industry for similar projects. Once the contingency is fully assigned to each line item, it is then possible to identify all variances from the "adjusted" Control Budget Estimate to either projected or actual costs.

Q: How does KCP&L document and explain the reasons for cost variances from the Control Budget Estimate?

A: Company witness Mr. Archibald identifies three primary sources of documents that provide the explanation for variances to the Control Budget Estimate: (1) an initial "Recommendation to Award" letter, particularly when the amount of the award exceeds the Control Budget line item amount; (2) the supporting documentation for KCP&L's EAC including R&Os and CPs; and/or (3) executed change orders and purchase orders. (Archibald Rebuttal Testimony at pp. 4-5) Based upon this documentation, Staff could have targeted specific items that Staff believed needed further explanation by KCP&L. There are no undocumented reasons associated with KCP&L's Control Budget Estimate variances.

Q: In your Direct Testimony, did you discuss the development of the Control Budget Estimate?

A: Yes. On pages 6 to 15 of my Direct Testimony, I discuss how the Control Budget Estimate for each of Iatan Unit 1 and Iatan Unit 2 was developed and finalized in December 2006.

Q: Was it appropriate for KCP&L to set its Control Budget as of that time?

A: Based upon my experience in the industry, yes.

Q: Was the contingency amount in the Control Budget Estimate also appropriate?

A: Yes, because contingency is based on evaluating what is known at the time. I also testified in my Direct Testimony regarding the industry norms for range of accuracy around various types of estimates, and I believe that the Control Budget Estimates for the

Iatan Project have proven to be accurate within that range. *See* Meyer Direct Testimony at pp. 3-5, 7-9, 12-15.

Q: Have you performed your own review of the Iatan Project's documentation to verify KCP&L's identification and explanation of the Projects' budget variances and the reasons for those variances?

A: Yes, I have. In fact, I have performed this analysis once for Iatan Unit 1 and four times over the life of the Iatan Unit 2 project in parallel with each of KCP&L's reforecasts. I have also performed a final review for purposes of my testimony here in order to provide my opinion to the Commission.

Q: Please explain your methodology of reviewing the documentation from KCP&L's Cost Control System to verify the causes of the Iatan Project's budget variances.

A: The most effective manner for examining cost variances on a large, complex project such as Iatan is to begin by narrowing the scope of the review to those items that on their face appear to be overruns or underruns. I will describe how I continued to narrow my analysis to focus on those elements of the Iatan Project that experienced the largest negative variances from the Control Budget Estimate.

I began by reviewing the K Reports for Unit 1 and Unit 2 that are issued by KCP&L's cost department on a monthly basis. I paid particular attention to the K Reports covering the period through June 30, 2010, because that is the cut-off date used by Staff in its Report. *See* Schedule DFM2010-7. Company witness Forrest Archibald has provided a detailed summary of this report and its workings and describes the column headings and the information contained therein. I agree with his testimony and believe that it is an accurate depiction of this report and its workings.

Q: Please describe the subtotals for certain cost categories as you scan down the K Report.

A: The K Report aggregates budget line items into three large categories: (1) Procurement; (2) Construction and; (3) Indirect Costs. As used in the K Report, "Procurement" line items are those related to engineered materials and commodities used in the construction, "Construction" are related to the construction contractors' work, and "Indirect Costs" encompass owner's costs including design engineering, construction management, facilities, trailers, start-up support and other such costs. These subtotals provide a quick insight into the Iatan Project's overall cost trends.

Q: What was your next step after reviewing the K Report?

A: I compared the columns titled "Control Budget" and "Actuals Including ACCRUALS." Such a comparison provides a preliminary indication as to which scopes of work and line items of work have a to-date cost variance when compared to the original Control Budget. However, it is important to note that the above comparison does not yield final information with respect to net end-of-day cost variances as compared to the Control Budget Estimate because the Iatan Unit 2 is not yet complete. A copy of the comparison described above for both units is attached as Schedule DFM2010-9.

Q: What were the results of this comparison?

A: This comparison provided me with an initial indication as to where there were to-date budget variances on a line-item basis, without contingency allocations or the effect of other internal budget transfers that may have been made during the course of each Project. On Iatan Unit 1, the Control Budget's Procurement subtotal shows a positive variance, or underrun, of approximately $6 million and on Iatan Unit 2 this category shows nearly a $10 million positive (underrun) variance. The summary lines for Construction show a Unit 1 negative variance, or overrun, of almost $77 million and a $329 million negative variance for Iatan Unit 2. Finally, the Indirect Costs subtotal shows a negative variance of $24 million on Unit 1 and $30 million on Unit 2. On a

summary level, the positive variance (underrun) in the Procurement Costs indicates to me that KCP&L's Control Budget Estimates for procurement of engineered equipment on both units was sufficiently mature at the time of its preparation and approval and the passage of time has not increased the budgeted costs beyond KCP&L's original projection indicating prudent management of these cost line items. As a result, there is no need to examine these costs any further. The negative variances (overruns) for Construction and Indirect Cost subtotals serve as potential "red flags" meaning that it is appropriate to take a closer look at the reasons for the negative variances in these cost categories.

Q: Simply because there is a negative variance, does that necessarily indicate imprudent management on the part of KCP&L?

A: No, not at all. A negative variance in and of itself is not reflective of imprudent management. Rather, it is just a fact on these types of projects. A negative variance only provides an indication that further investigation is necessary in orders to determine its root cause or causes. In many instances, a negative variance could not reasonably be avoided, and thus it is important to understand the causes and trends related to each such negative variance.

Q: After you determined the variances from the Control Budget Estimate by line item, what did you do next as related to your analysis?

A: The next step was to review KCP&L's contingency log so as to determine how KCP&L actually applied the contingency amounts to the Control Budget Estimates' line items prior to the May 2008 Reforecast. Allocating the contingency in this manner provides a more comprehensive view of the Control Budget Estimate established for each line item.

Q: Why did you use the May 2008 Reforecast as the cut-off point?

A: Prior to the May 2008 Reforecast, KCP&L had allocated all of Unit 1's $25 million

original contingency and almost **[redacted]** of Unit 2's original $220 million contingency. The **[redacted]** in remaining Unit 2 contingency was merely subsumed in the reforecasted Iatan Unit 2 total of $1,901 million. However, it is reasonable to allocate the remaining **[redacted]** in contingency based upon the known risks and likely budget variances, all as identified in the May 2008 Reforecast. The two largest risk areas at that time as defined by the KCP&L project team were the Kiewit Power Constructors Co. ("Kiewit") Balance of Plant Contract and the Indirect Costs because the engineering plans for Balance of Plant construction and the corresponding scope of indirect costs were the least mature at that time. As a result, for purposes of my analysis I have split the remaining **[redacted]** in contingency that was not specifically allocated as of the May 2008 Reforecast between these two cost lines. With respect to allocation of the contingency for the Indirects, I spread the contingency generally in accordance with the risks identified in R&O item No. 9. A copy of this R&O Item is attached as Schedule DFM2010-10.

Q: Once you spread the Control Budget Estimate Contingency to the various line items, what was the next step in your analysis?

A: My next step was to identify the total budgeted cost for what became the Kiewit work. Originally, KCP&L had anticipated performing the Balance of Plant work on a multi-prime basis, using several different contractors. As a result, the Control Budget Estimate for the Balance of Plant work was originally spread over several different line items. As a result of the change in contracting strategy, and the award of a large portion of the Balance of Plant work to Kiewit, KCP&L created a Balance of Plant section in the K Report that was intended to aggregate the costs of the Kiewit Balance of Plant work for tracking purposes. As a result, portions of the Control Budget Estimate were removed from certain line items and put into the Kiewit Balance of Plant budget. In order to

determine these amounts, I looked at KCP&L's internal budget transfer logs. These internal budget transfers establishing the Control Budget Estimate for the Kiewit Contract were created after the contract was signed in November 2007 and made visible in that month's K Report. Attached to KCP&L's monthly K Report is also an updated contingency log and internal budget transfer log that clearly shows how KCP&L "funded" the original Kiewit Contract amount in the Control Budget Estimate. A copy of the K Report and internal budget transfer log from November 2007 is attached as Schedule DFM2010-11. Because the records are transparent, I was also able to obtain a log from KCP&L's cost team that traces these internal budget transfers with an explanation of the scope of work associated with each transfer. *See* Schedule DFM2010-12. It is my understanding that the cost team created this document in November of 2007 at the time of the execution of the Kiewit Contract. Finally, there are scopes of work, such as the insulation and lagging that were not included in the base Kiewit contract. After the contract award to Kiewit, the insulation and lagging scope of work was assigned to Kiewit, and as a result, the Control Budget Estimate for those scopes of work were transferred into the Balance of Plant category.

Q. Do you have a document that shows your analysis of the budget variances that includes the allocation of Control Budget Estimate Dollars to the Kiewit Contract and contingency draws?

A. Yes. My full contingency and internal budget transfer analysis for Units 1 and 2 are attached as DFM2010-13. This is the document I have used to identify all of the budget variances for both Iatan Units 1 and 2.

Q: What did you do next in your analysis?

A: The next thing I did was to analyze line items of cost in which the negative variances were over $250,000. I selected this threshold amount because this is a large project and

any amount less than that would not significantly impact the Project's costs. $250,000 is approximately .01 percent of the total Project cost. Line items with negative variances above this threshold amount are shaded either red or blue within Schedule DFM2010-13. The red highlighting are items which I have tagged for requiring further investigation as to the causes of those variances. I have provided the results of my investigation below. The blue highlight indicates items that were either omitted from the Control Budget Estimate or the amount carried in the Control Budget Estimate was so low that it was tantamount to an "omission."

Within the construction cost estimating industry, the above line items highlighted in blue would not be considered inappropriate or "imprudent" expenditures because they represent work that was always needed in order to complete the Iatan Project. In other words, the work represented by the blue highlighted items was necessary and could not have reasonably been characterized as avoidable costs due to any action or inaction on the part of KCP&L's management. For the purposes of this analysis, the total amount of the budget variance associated with "Omitted" items is approximately **[redacted]** for Unit 1 and **[redacted]** for Unit 2. I have included a list of only these items in Schedule DFM2010-14.

Q: If there was no budget for these omitted items, how do you know that KCP&L didn't pay more than it should have?

A: The absence of budget does not resolve the question of whether the amount paid was reasonable. In this case, a Mr. Jones has testified, KCP&L used a robust procurement and contract management system and the Iatan Project's documentation allows for checking of costs such as expediting fees, premiums and others. I reviewed a sample of the above omitted items and have determined that there were no unreasonable charges.

Q: Based on your analysis, what were the line items that showed the largest variances,

excluding omitted items?

A: For Iatan Unit 1, the items that had the largest negative variances (excluding the omitted items) were as follows:

**

[redacted]

**

I will provide more detailed explanations of these variances below. With respect to Iatan Unit 2, the largest variances (excluding omitted items) are as follows:

**

[redacted]

**

I have included a list of all the negative variances over $250,000, including those identified above at Schedule DFM2010-15. Also included in this list are line items of

cost which do not show a negative variance but where Staff nevertheless proposes a disallowance. This is not reasonable because the cost data does not indicate an overrun commensurate to Staff's proposed adjustment. For example, with respect to Unit 1, Staff has requested a disallowance related to ALSTOM Power Inc. ("ALSTOM") of over **[redacted]** where the total actual negative variance is only **[redacted]** This is perhaps the most notable example of Staff overreaching in its Report, but it is not the only one.

Q: Do you believe that the analysis you have done is of sufficient size and breadth to constitute a thorough review of the Iatan Project's cost variances?

A: Yes. As I have stated, I have monitored costs from the start of the Iatan Project and have provided analysis of each of the cost reforecasts KCP&L has performed. I note that in my testimony today, the supporting analysis that I provide actually exceeds the amount of the Iatan Project's overruns. My analysis includes items analyzes $16 million in omitted items and $59 million in negative variances for Unit 1. These two amounts together are more than the total $69 million negative cost variance for Unit 1. With respect to Unit 2, may analysis covers $22 million in omitted items plus $181 million for items with a negative variance. This is because when the negative variances are reviewed on a line-item basis, items that have a positive variance (underrun) are not considered. As a result, this type of analysis actually requires KCP&L to explain negative variances even when the aggregate amount, when added to positive variances, does not constitute an overrun.

Q: Earlier you identified how KCP&L documents its justifications for overruns based on the Recommendation to Award Letters, the back-up to the Project's cost reforecasts and the Iatan Project's change orders and purchase orders. Please

describe in general which of these would be most applicable to explaining the reasons for variances from the Control Budget Estimate for Unit 1 and Unit 2 you described above.

A: The explanation for Direct Cost variances could be described in any of the three above-mentioned document categories but ultimately, justification for all actual cost changes to these contracts would be evidenced in the change order and purchase order documents. I have included an example of change order documentation at Schedule DFM2010-16. This ALSTOM-related document identifies that the reason for the change was a scope addition to ALSTOM's original contract and why ALSTOM was the appropriate contractor to perform the work. The change order also includes the back-up justifying the specific additional costs.

Q: You stated that the explanations for variances in the Direct Costs are contained in the purchase orders and the change order documentation. Where in the Iatan Project's documentation is the explanation for the variances in the indirect costs?

A: With respect to the cost variances for the Indirect costs, some of the variances can be explained through purchase order and change order documentation where costs are associated with a specific vendor and identified scope of work. A good example of this is the work performed by KCP&L's engineer, Burns & McDonnell. For indirect costs that cannot be explained using this methodology (e.g., the costs associated with project management or KCP&L internal staff). The most meaningful explanation for these variances would be found in the backup to the 2008, 2009, and 2010 cost reforecasts. I will explain this further later in my testimony today.

Q: Have you been able to determine the reasons for the cost variances identified in your chart?

A: Yes. I have reviewed all of the Iatan Project's cost reforecast back-up documentation, recommendation to award letters, change orders and purchase orders. I have provided a listing of all of the purchase orders and change orders in various attached Schedules which include a description of the reason for the cost variance (increase or decrease) that was pulled directly from the face of the change order itself. As any questions arose about a particular item, I worked with KCP&L's Project Controls team to ensure I had a good understanding of the detailed facts and circumstances surrounding a particular change order or purchase order. As I reviewed the purchase orders and the change orders, I coded each one based upon five different categories. Categorization of relevant costs by root cause "reason codes" allows me to summarize my findings here. It is important to note that Staff has had access to all of the relevant information that I have described and could have prepared similar codings and summaries and understandings.

Q: Please describe these reason codes you utilized in your analysis of the cost variances.

A: I have provided the following chart to explain the reason code regime:

Reason Code	Definition
1	**DESIGN MATURATION**: This category captures work that is related to the original scope of work, and is necessary for the design or construction of the Unit. This could include field changes or necessary design changes based upon information that became known after the original contract.
2	**PRICING ESCALATION/CHANGES**: This category captures increase in material costs or rates from the original contracted amounts.
3	**NEW SCOPE**: This category captures the cost increases associated with work scope that was never anticipated to be a part of a particular contractor's scope.
4	**DESIGN AND/OR FABRICATION ERRORS**: This category captures scope and costs associated with engineering which caused rework in the field by the affected contractor.
5	**COST INCREASES DUE TO SCHEDULE**: This category captures additional costs paid to the contractor due to delays, compression, acceleration or lost productivity.

Q: Can you discuss how you would apply these root cause reason code categories in a prudence analysis?

A: Reason Codes numbers 1 and 3 identify cost increases to the Iatan Project for work that was required for the construction, start-up, operation and maintenance of the Units. Typically, these type of cost variances are reflective of an omission or design assumption that was embedded within the Control Budget Estimate that was later proven to be not workable. Company witness Kenneth Roberts testifies regarding the concepts of "betterment" or "added value." These concepts apply to the variances that fall into categories 1 (Design Maturation) and 3 (New Scope). From my cost engineering perspective, the costs in these categories represent costs that the Owner would have incurred on the project regardless of any act or omission on the part of the Owner. A "perfect" estimate would be an estimate that included all the variances attributable to Design Maturation and New Scope. While the "perfect" estimate may be an industry goal, it rarely, if ever, exists in reality. It is not uncommon within the industry to see cost increases resulting from these causes. In other words, even if KCP&L had a "perfect" estimate back on day-one of the Project, KCP&L would still have incurred these costs but the Control Budget Estimate would have been higher. As a result, I do not consider negative budget variances in these two categories to have been caused by the imprudence of KCP&L, nor would they be seen as such within the industry at large.

With respect to Pricing Escalation, reason code number 2, this category includes typical and reasonable cost adjustments that are expected on large and complex projects such as Iatan that span multiple years. It is frequently difficult to anticipate the actual impact that pricing escalation can have on an extended-term project since many factors come into play. Additionally, there can be wild market-wide pricing swings that are

difficult if not impossible to fully understand ahead of time and sometimes, even in retrospect. Therefore, there are certain categories of cost that contractors are loathe to agree to fix in their pricing such as wage rates for craft workers. Because is it normal for the owner to take on the risk for such cost increases, the relevant question with respect to evaluating the prudence of any observed pricing increases is whether such increases are allowed under the specific terms of the contract and whether KCP&L agreed to reasonable escalation or rate increases based upon the market at the time of contracting.

Reason code 4, changes due to Design or Fabrication Errors, are items that could either be reasonable or imprudent depending on the circumstances. For example, the circumstances could indicate imprudence on the part of KCP&L if the level of cost increase exceeds the notion of reasonableness and industry norms and the facts support poor workmanship. As seen within the industry as a whole, on a project of this size and complexity, an expected and accepted level of design errors would be somewhere within a range of 2-4% of the total costs. Design engineers are not frequently responsible for the payment of such additional costs, as long as they provided engineering services of the nature and quality consistent with the applicable standards of care. Engineers do not nor can they warrant perfection. It is accepted within the industry that design and installation errors will occur on almost every project. Based on my 50 years of industry experience, a rather typical backcharge recovery rate (i.e. an Owner's ability to recoup costs for an error from the contractor) for a project of this size is probably no more than 15-20%, net after collection expenses are considered. The reason for this low rate of recovery is that there are many obstacles to collecting backcharges from contractors. For example, it is often difficult to discern who caused the damage or re-work, especially in work spaces where more than one contractor was working. Additionally, it is administratively burdensome and impractical to document, evaluate, and attempt to recover all additional

costs of fit-up and installation issues. Recovery is also often diminished through administrative costs, legal fees or other litigation expenses.

Finally, for a prudence analysis, it is important to pay particular attention to Reason Code no. 5, which is schedule-related. Imprudent management of contractors will often manifest itself in cost increases derivative of schedule delays, re-sequencing and related impacts. However, I want to be very clear that simply because a contractor makes a claim for delay or a delay on a project occurs, it is not axiomatic that the Owner has acted imprudently. Such events would merely constitute red flags regarding items that should be more fully examined including the circumstances leading to those delays so as to determine if all or any portion of the delay was indeed caused by imprudence. Cost increases due to schedule delays are very common, especially where there is more than one contractor who has to work in a designated area.

Design maturation can also negatively impact the project's schedule if the design changes result in greater quantity, change in work sequence or increased complexity of work. The goal of the owner or construction manager is to do what is reasonable to mitigate these costs. Here, I want to underscore one important reality of large, complex and coordination-intensive projects such as Iatan. From time-to-time, an owner finds it in its best economic interest to make contractual peace with a contractor even if a strict reading of a contract would indicate action to the contrary. Experienced industry managers know well that under certain circumstances it can be less costly to pay a contractor's claim or some portion thereof rather than engage in protracted contract dispute resolution processes and end up losing more time and money than was initially at stake. Schedule wobbles by dissatisfied contractors are relatively common-place and with a 3,000 man project payroll, daily costs can exceed $3 million.

Q: Do you believe KCP&L adequately mitigated the impacts due to schedule concerns?

A: Yes. Although I will not discuss KCP&L's mitigation strategies in detail since those topics are thoroughly discussed by Company witnesses Roberts, Nielsen, Downey and Davis, the fact remains that the cost variance for both projects has been held to a projected 16% over the Control Budget Estimate. That fact alone would indicate to experienced and reasonable industry parties that KCP&L successfully mitigated the Iatan Project's schedule risks.

Q: Do you have an example of KCP&L's ability to mitigate schedule risks that could have led to larger negative cost variances had KCP&L not taken positive and prudent management actions?

A: A good example of the effectiveness of KCP&L's management actions to mitigate cost variance is the avoidance of a significant portion of the additional costs anticipated for Iatan Unit 2's start-up in the April 2010 Reforecast. KCP&L performed such analyses that enabled it to identify, understand, quantify and managerially target certain risks subsumed in the reforecast and ensure that it had a solid plan in place to mitigate the risks. As a result of this risk mitigation planning and management attention, the Unit 2 start-up effort went exceedingly well. This allowed KCP&L to decrease its EAC forecast in the fall 2010 by about $40 million.

Q: For both Iatan Unit 1 and Iatan Unit 2, the two largest cost variances are Cost Codes 1210 (Air Quality Control Systems - Steam Generator and SCR) and X001 (Balance of Plant). Can you describe these work accounts and related contracts?

A: Yes. Cost Code 1210 is the Steam Generator work performed by ALSTOM, while Cost Code X001 relates to Kiewit's BOP work.

Q: Based upon your review of the purchase orders and change orders, can you please explain and summarize the reasons for the cost variances as compared to the Control Budget Estimate for the above work accounts on the Iatan Project? Please