



February 23, 2009

Corporate Chron 090012

Subject: Examples of Advent Value-Added and Cost Saving Engineering for an Architect Engineering Firm

Dear Jim:

In these difficult economic times, we believe it is important to apprise you of value-added engineering and significant cost saving recommendations provided by Advent staff members at NEF during the past year. Here are a few examples:

- On our own initiative, we researched and prepared DCR 2008-101, which allowed hundreds of required fire and diverse criticality notification alarms and fire pull sets to be replaced with wireless notification devices. Estimated savings for the architect engineering firm as documented in the DCR was \$1.6 million per cascade hall or over \$30 million for all 20 cascade halls not including the cost of required maintenance and testing. Primary contributor: Dave Horvath.
- On our own initiative, we justified a downgrade in the Quality Level of the CAB CTF exhaust special filter system and provided a basis for deletion of complex time consuming DOP testing of the associated HEPA filters. Although controversial to some, we were able to prepare a calculation that withstood heavy scrutiny by the NRC and resulted in regulatory acceptance. Although not formally estimated, it is expected that cost savings to the architect engineering firm (ignoring the many schedule delays that were prevented) were on the order of \$100,000 from the filter system differential cost, pre-op testing, and later periodic testing. Primary contributors: Dave Horvath, Rachel Gunnett, and Sara Seamans.
- When procurement of electric cables was indefinitely delayed because of questions on which or how many industry standards needed to be invoked, we identified critical errors and inconsistencies between the SAR, ISA and cable specifications that were causing overly conservative and restrictive requirements requiring the purchase of very expensive cables. This was in turn holding up the purchase of cable for the site and affecting the construction schedule. Our specification revision and LBDCR provided significantly relaxed cable purchase requirements by adding flexibility to meet different standards and eliminating unnecessary requirements while maintaining state and industry standards for fire protection. This resolution resulted in several hundreds of \$1,000 of savings for plant cable purchases. Primary contributor: Mike Wylie.
- When everyone else had given up on an approach for fixing a problem caused by VESDA smoke detection holes being in ineffective locations of the SBM thermal enclosure ceiling



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and the project team was willing to accept a two day delay in turning over the thermal enclosure to ETC. we put pressure on to provide advance analytical results on the same day and in spite of subsequent mail server problems, were still able to get an emergency field release ECR issued in time to put construction schedule back on track. This effort saved at least two days on the schedule for First Cascade on line, which is estimated to save at least \$1 million in what would have been lost uranium enrichment time. Primary contributor: Kirk Spradley.

- We were instrumental in getting the type of conduit requirement changed in many locations from difficult-to-install rigid threaded pipe conduit to EMT thin wall conduit. Estimated savings is at least \$100,000. Primary contributor: Kirk Spradley.
- On our own initiative, we interceded and pushed to get the NTS specified welded connections for the fire standpipe in the SBM changed to grooved mechanical fit connections. The vendor was not able to weld in the field and construction was going to be significantly held up. This change saved this firm at least \$100,000 in construction costs alone. Primary contributor: Phil Klintworth.
- As the procurement package went out for the CAB doors and hardware at risk, we offered to perform an independent review of the package in parallel to make sure we were ordering the proper items. Our review identified 20% of the doors were security doors that incorrectly had windows, 12% had an improper fire rating, 70% of the doors had hardware issues. NC Sturgeon did not want to deal with the changes to the purchase requisition so we contacted the vendor and provided the necessary information to change the order. This effort saved the architect engineering firm over \$100,000. Primary contributor: Janet Lawrence. Janet performed a similar effort for the SBM doors resulting in an even greater additional level of savings.
- The site utilities project direction has continued to evolve and change while maintaining an impossibly aggressive schedule. Our Design Management Lead (Jackie Aeto) has continued to stay on top of construction needs to meet schedule requirements. The value of Jackie's efforts is inestimable. She is additionally doing the work of two because her other full-time job is as CUB Design Management Lead.

There are many other day-to-day examples. All of our staff are quality-oriented, project loyal, value-added engineering consultants who continue to look for ways to save money while supporting an almost impossible schedule.

Sincerely,

A handwritten signature in black ink that reads "David A. Horvath".

David A. Horvath, PE
President and Principal Consultant



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