IKC-ONE

NALCOR Energy
Lower Churchill Project

Request for Equitable Adjustment

Submitted Without Prejudice

August 27, 2013

TABLE OF CONTENTS

TABLE OF FIGURES

APPENDICES

EXECUTIVE SUMMARY

On November 8, 2012, NALCOR Energy Corporation ("Company"), and a partnership comprised of Innu-Kiewit Constructors, H.J. O'Connell, Nielsen and E.B.C. ("IKC-ONE") executed the Lower Churchill Project's Bulk Excavation Contract ("Contract") for the Construction of Bulk Excavation Works and Associated Works ("Project"). Time was of the essence for the Project and if Contract was delayed, an estimated $200 million in additional overall project costs could ultimately be passed on to island consumers in increased electricity rates[1].

Unfortunately, right from the start, IKC-ONE encountered a number of obstacles: Company did not perform a number of its duties and obligations under the Contract; IKC-ONE encountered subsoil conditions that were different from what the Contract represented; Company's labor agreements were not in place; and the Company's site access road was substandard, not complete and problematic.

Under the Contract, Company was obligated to provide IKC-ONE with initial, uninterrupted access via a site access road to a laydown area by November 30, 2012. Instead of a road on which IKC-ONE could maintain an average speed of 60 to 80 km/hr to and from the project, the incomplete, substandard and problematic access road that Company actually provided slowed travel to and from the site and halted IKC-ONE's work dozens of times, for months. Multiple operational starts, stops, and disruptions, over 15-hour days and over three-hour commutes on an incomplete and – at times – atrocious road resulted in a fatigued, frustrated, and demoralized workforce as well as delays to the Project and increased costs.

Similarly, Company failed to provide the on-site Accommodations Complex as it was obligated to provide under the Contract by January 1, 2013. This severely disrupted IKC-ONE's schedule, delayed the work, affected IKC-ONE's production, productivity, and increased costs.

The Contract further obligated Company to provide a Special Project Order ("SPO") Project Labor Agreement. The Company provided the SPO months late, not until March 19, 2013. The Contract also stated that Company would comply with and have in place, for IKC-ONE's mutual compliance, an Innu Impacts Benefits Agreement ("IBA"). Company has not provided IKC-ONE with a copy of the IBA and Company has not met its obligations under the IBA in a timely manner. Company's failure to perform these two duties directly contributed to on-site protests and workforce demoralization. These events significantly disrupted IKC-ONE's management, diverted its attention away from essential operational activities and eventually contributed to the loss of one of IKC-ONE's most essential production staff.

[1] Email from Mark Turpin to Leonard Knox, dated November 1, 2012, *Subject: Fw: Fwd: News Release – Further Site Preparation Work Starting at MuskratFalls*

The cumulative impact of these events has affected IKC-ONE's production, productivity, and schedule. As a result, on April 2, 2013, Company directed IKC-ONE to accelerate its schedule to meet the powerhouse excavation target completion date of October 25, 2013. Four primary factors contributed to IKC-ONE expending millions of dollars in acceleration costs:

1. Contractual terms and conditions that formed the basis for IKC-ONE's tender were significantly delayed or not provided at all;
2. Company did not perform essential contractual duties and obligations that IKC-ONE relied on in its plan to meet a fast-track schedule;
3. Subsoil conditions were different than what were represented in the Contract which significantly affected IKC-ONE`s planned means and methods for completing the work as well as its schedule; and,
4. Rock excavation technical issues and design changes significantly affected IKC-ONE`s means and methods for completing the work as well as its schedule.

The following four tables summarize the key issues for which Company is responsible. For more detail, please refer to the corresponding document sections noted in the first and third columns.

Contractual obligations were significantly delayed or not provided at all.

	Contract Requirement		Actual Conditions
2.1.1	IKC-ONE would have initial, uninterrupted access to Company's laydown area and the work site by November 30, 2012.	4.1.1	Company's incomplete, substandard, and problematic site access road interrupted, disrupted, and delayed IKC-ONE dozens of times, for months.
2.1.2	IKC-ONE would have an on-site Accommodations Complex for its workforce by January 1, 2013.	4.1.2	Company did not provide an on-site Accommodations Complex until April 14, 2013. IKC-ONE had to scramble to provide accommodations and board for its entire workforce for months.
2.1.3	IKC-ONE would have 20,000 m2 of laydown area available for its purposes by November 30, 2012.	4.1.3	Company provided IKC-ONE with an insufficient laydown area, much less than had been warranted, late on December 19, 2012.

2.1.4	IKC-ONE would have permanent electrical power on-site by February 1, 2013.	4.1.4	Company provided permanent electrical power months late. IKC-ONE had to run its operations on generators for months.
2.1.5	IKC-ONE would have on-site telecommunications and data that would be compatible with telecommunications and data provided for a five-year $7 Billion mega-project by February 2013.	4.1.5	Company's on-site telecommunications and data provided months late and incompatible with the requirements of a five-year $7 B mega-project.

Figure 1: Summary of Contractual Obligations and Company`s failure to provide them.

Company did not perform its duties.

	Contract Requirement		Actual Conditions
2.2.1	Company shall have a Special Provincial Order (SPO) Project Labour Agreement in place by Contract Award, November 8, 2012.	4.2.1	Company did not have a SPO in place until March 19, 2013. IKC-ONE had to leverage its union relationships to expedite a Temporary Labour Agreement and mitigate even worse schedule impacts.
2.2.2	Company shall comply with the terms and conditions of the Innu Impacts Benefits Agreement (IBA).	4.2.2	Numerous protests, civil disobediences, and labour unrest have occurred, in part, because of Company's lack of performance in terms of the IBA.
2.2.3	Company shall provide job-site security.	4.2.3	Protestors and locals have breached Company's job-site on numerous occasions and Company's job-site security did nothing to prevent or mitigate disruptions.
2.2.4	Company shall provide timely responses to issues and requests for information through a functional Document Control System.	4.2.4	Company's Document Control System is dysfunctional. Company has replied late, 76% of the time, to IKC-ONE's requests for information.

2.2.5	Company shall provide a full Notice to Proceed, at the latest, prior to November 30, 2012.	4.2.5	Company provided IKC-ONE with a full Notice To Proceed 19 days late, on December 19, 2012.

Figure 2: Summary of Company's Contractual Obligations and Company`s failure to perform them.

Subsoil conditions were different from what the Contract represented.

	Contract Requirement		Actual Conditions
2.3.1	That the Lower Churchill Project site would have good site soil conditions, with soil practically free of water.	4.3.1	The levels, quantity, and intensity of water in the soils were far beyond Contract Representations and all parties expectations.
2.3.2	That the rock grade profile would be relatively smooth with some jagged and rough surfaces.	4.3.2	The rock grade was significantly jagged and undulating and contained numerous deep pockets filled with saturated soil, silt, and water.

Figure 3: Summary of the contractually represented soil conditions and the actual conditions.

Rock Excavation Design Changed and Technical Issues Delayed IKC-ONE

	Contract Requirement		Actual Conditions
2.4.1	Company would expedite the change of its rock excavation method specification.	4.4.1	Company did not meet its commitment to change its rock excavation method specification in a timely manner.
2.4.2	Company's rock consolidation design and method specification was complete, final, and constructible.	4.4.2	Company's rock stabilization anchor bolt design failed.
2.4.3	Company would provide timely approval of excavated rock wall surfaces.	4.4.3	Company delayed and frustrated IKC-ONE by not providing timely approval of excavated rock walls.

2.4.4	Labourers in the local labor pool would have the expertise and qualifications required to perform rock wall scaling work.	4.4.4	IKC-ONE had to procure labourers outside of Newfoundland and Labrador to find qualified scalers.

Figure 4: Summary of the contractual representations regarding rock excavation and the actual conditions.

The cumulative impact of these issues caused disruptions, productivity losses, and increased costs.

At the most critical time, when all parties should have done their utmost to get this time sensitive project out of its starting blocks, Company failed to perform. The following is a graphical representation of Company's lack of performance.

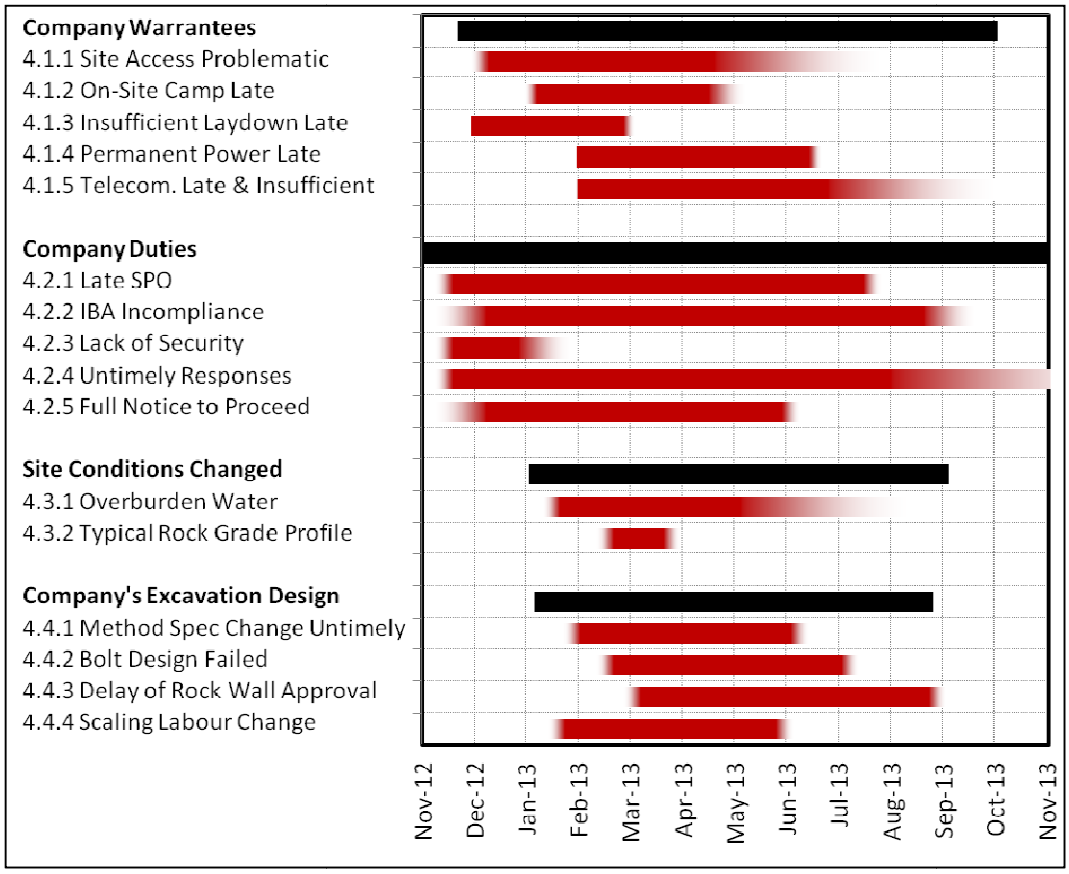


Figure 5: Summary of Company's Contractual Obligations and the subsequent delays in providing them. Note, for example, that the Company was three and a half months late providing an on-site Accommodations Complex.

Company provided an on-site Accommodations Complex three and a half months late; a Special Project Order Project Labour Agreement five months late; and as of early August, the Site Access Road is still not complete.

The effects of these issues led to numerous delays, fatigued, disrupted, and demoralized IKC-ONE's workforce, and caused production and productivity losses, all of which, in turn, increased the cost of performing the work. This also served to counteract the effectiveness of IKC-ONE's mitigation and acceleration measures. Below is a table summarizing IKC-ONE's plan, which IKC-ONE created based on the timely performance of the duties and obligations of Company as stated in the Contract, and how Company's lack of performance has affected this plan. Please refer to the corresponding document sections in columns 1 and 3 for more detail.

IKC-ONE's indirect plans (plans not directly identified with a single, final objective) changed.

	IKC-ONE's Plan		The Effect Of Actual Conditions On IKC-ONE's Plan
3.1.1	IKC-ONE's Staff plan was based on a well-rested staff, the Contract Schedule, and Company providing essential job-site warrantees.	5.1.1	IKC-ONE had to increase its staff considerably to manage Contract changes and an accelerated schedule.
3.1.2	IKC-ONE planned to accommodate its Staff and Craft at Company's on-site Accommodation complex by January 1, 2013.	5.1.2	IKC-ONE, alone, had to scramble to find accommodation elsewhere to provide board for its workforce until April 14, 2013.
3.1.3	IKC-ONE planned to shuttle its workforce only 6-kilometers and 15 minutes from an on-site accommodations complex to the work site and an on-site office complex in close proximity.	5.1.3	IKC-ONE had to travel its workforce to and from various locations in HVGB (56-kilometers each-way). The time required to travel, on at times atrocious roads, could take as much as three hours.
3.1.4	As required by Company, IKC-ONE's estimate was based on the terms of the Construction Labour Relations Agreement (CLRA) of Newfoundland and Labrador, which included a 28-day work and 9-day off (28/9) rotation.	5.1.4	Once Company secured a SPO, IKC-ONE was forced to change its 28/9 rotation to a 14/7 rotation, in part, to mitigate the effects of fatigue on its workforce and to attract and retain highly skilled workers to the Lower Churchill Project.

3.1.5	IKC-ONE planned to operate its entire management, supervisory, engineering, and project controls personnel from an on-site office complex by no later than January 1, 2013.	5.1.5	Company-caused issues forced IKC-ONE to retain an office in Happy Valley Goose Bay, which significantly affected project communication and cost.
3.1.6	IKC-ONE's fuel supply plan was based on uninterrupted access to the work site and the planned equipment fleet.	5.1.6	IKC-ONE had to procure an extra fuel truck to mitigate the risk of fuel shortages due to interrupted site access and to supply fuel to an accelerated expanded equipment fleet.
3.1.7	IKC-ONE's "garage support equipment" plan included levels of equipment necessary to support the planned quantity of equipment.	5.1.7	Due to Company's direction to accelerate, IKC-ONE had to increase its garage support equipment fleet.
3.1.8	IKC-ONE's planned to mobilize its planned equipment fleet according to the Contract Schedule.	5.1.8	IKC-ONE had to mobilize additional equipment to accelerate Company's schedule. IKC-ONE's mobilization costs increased and its demobilization costs will increase.

Figure 6: Summary of the effects of the actual conditions on IKC-ONE`s indirect plans.

IKC-ONE's means and methods for completing the work changed.

	IKC-ONE's Plan		The Effect Of Actual Conditions On IKC-ONE's Plan
3.2.1	IKC-ONE planned to perform overburden excavation in good soil, practically free of water, with few excavators.	5.2.1	IKC-ONE performed overburden excavation in excessively wet conditions using many excavators, including many unplanned small and mid-size excavators.

3.2.2	IKC-ONE planned to self-perform drilling and to perform rock excavation using few excavators.	5.2.2	IKC-ONE was forced to procure an additional drilling Subcontractor. IKC-ONE had to perform rock excavation with many excavators.

Figure 7: Summary of the effects of the actual conditions on IKC-ONE`s means and methods for completing the work.

IKC-ONE's productivity and production suffered.

	IKC-ONE's Plan		The Effect Of Actual Conditions On IKC-ONE's Plan
3.3.1	IKC-ONE planned to perform overburden excavation in a continuous efficient-manner with a well-rested workforce.	5.3.1	IKC-ONE performed overburden excavation in inefficient saturated soil conditions with a fatigued and demoralized workforce.
3.3.2	IKC-ONE planned to perform rock excavation in a continuous efficient manner with a well-rested workforce.	5.3.2	IKC-ONE was forced to perform rock excavation with an inefficient crew size and a fatigued and demoralized workforce.

Figure 8: Summary of the effects of the actual conditions on IKC-ONE`s productivity and production.

Company's delays prevented IKC-ONE from "getting out of the starting blocks" in a timely and efficient manner and the accumulated effect of Company's lack of performance significantly delayed the completion date for the work. Therefore, on April 2, 2013, Company instructed IKC-ONE to accelerate its schedule and "do whatever it takes" to meet the Contract's milestone to excavate the Powerhouse by October 25, 2013. Consequently, although IKC-ONE had already suffered (and continues to suffer) significant time and cost overruns, it developed and implemented an accelerated schedule, as directed by Company, and is on track to meet Company's directive to complete the powerhouse excavation by October 25, 2013.

However, although IKC-ONE immediately mobilized additional resources and accelerated the work at a high cost (and continues to accelerate) IKC-ONE is still waiting on Company to perform its duty in terms of the Contract. That is, to compensate IKC-ONE for the effects, loss of time, and additional costs it suffered and is enduring in order to meet Company's direction to meet the target completion date. It is unconscionable for Company to leave it to IKC-ONE to finance the effects and acceleration costs that are Company-caused.

In addition to **$6,258,409** in unpaid change requests to build the work, the cumulative effect of IKC-ONE's acceleration effort, in combination with other impacts, has cost IKC-ONE an additional **$24,766,250** in direct costs, acceleration costs, indirect and other impact costs. The following four tables summarize the cost components of IKC-ONE's request for equitable adjustment.

Summary of IKC-ONE's request for equitable adjustment.

Summary of IKC-ONE's Request For Equitable Adjustment	$
1. Total Direct and Acceleration Costs	$15,173,041
2. Total Indirect and Other Impact Costs	$9,593,209
Subtotal Request For Equitable Adjustment	$24,766,250
Total Unpaid Change Orders	$6,258,409
Total Request For Equitable Adjustment	**$31,024,659**

Figure 9: Summary of IKC-ONE`s total Request For Equitable Adjustment.

IKC-ONE had to accelerate its operations.

	1. Direct Cost and Acceleration Costs	$
6.2	Overburden Direct Costs and Acceleration Costs	4,732,652
6.3	Additional Subcontractor Required to Accelerate	1,276,639
6.4	Rock Excavation Direct Costs and Acceleration Costs	9,163,750
	1. Total Direct Costs and Acceleration Costs	15,173,041

Figure 10: Summary of the cost of the effects of the actual conditions on IKC-ONE`s direct operations.

IKC-ONE's indirect plans changed.

2. Indirect Plans Changed and Other Impact Costs	$
2. A. Indirect Plan Changes – Equipment And Labour Cost Component	
Additional Site Services Equipment	$341,991
Additional Fuel Truck Support	$705,720
Additional Bussing	$333,432
Additional Garage Support Equipment	$2,142,375
Additional Temporary Lighting	$378,000
Additional Janitorial, Waste, and Cleanup	$160,285
Additional Staff Vehicles	$412,720
Additional Runner	$201,360
Additional Orientation Labour	$97,083
Idle Equipment Costs	$524,082
Subtotal Indirect Plan Changes – Equipment And Labour Cost Component	$5,297,048
Credit 20% Overhead	$882,841
2. A. Total Indirect Plan Changes – Equipment And Labour Cost Component	$4,414,206

Figure 11: Summary of the cost of the effects of the actual conditions on IKC-ONE`s indirect operations.

IKC-ONE suffered other indirect cost increases and impact costs.

2. Indirect Plans Changed and Other Impact Costs	$
2. B. Indirect Plans Changed - Other Cost Components	
Additional Mobilization and Demobilization	$677,835
Additional Infrastructure and Setup	$257,516
Additional Cleaning	$44,625
Additional Services, Tools, Awards, and Supplies	$198,400

Additional Staff Labour	$2,264,817
Additional Staff Live Out Allowance	$451,500
Additional Airfares	$225,750
Additional Staff Travel Expenses	$64,500
Additional IT Equipment	$27,000
Additional Medicals	$26,100
Credit Staff Dorm	$500,000
Cancellation Fee Paid on Staff Dorm	$98,425
REA Preparation Costs	$145,415
Extended Bonds and Insurance and Fees	$352,012
Subtotal Indirect Plans Changed – Other Cost Components	$4,333,894
General, Administrative, and Overhead Expense (7.5%)	$325,042
Profit (12.0%)	$520,067
2. B. Subtotal Indirect Plans Changed – Other Cost Components	$5,179,003

Figure 12: Summary of IKC-ONE`s other impact costs.

IKC-ONE is committed to Company's instruction and will "do whatever it takes" to finish the powerhouse excavation as directed by Company on October 25, 2013. Barring further unanticipated delays, IKC-ONE is on track to do so. It is now the responsibility of Company to perform its duties with the same diligence and compensate IKC-ONE equitably for its efforts as the Contract requires. IKC-ONE took all the necessary measures in a timely manner and as directed by Company, to secure the schedule for this project, which is in the best interests of the consumers of Newfoundland and Labrador.

SECTION 1 INTRODUCTION

1.1 Important to Complete the Work on Time

On November 1, 2012, NALCOR Energy Corporation ("Company") issued a Canada wide news release*: Further Site Preparation Work Starting at Muskrat Falls*[2]. In its news release, Company stated:

> *"The decision to undertake these activities (Lower Churchill Project Bulk Excavation Contract) was based on an evaluation of the costs, the potential risks to the project schedule, and the long-term value of the work. A delay in the start of site excavation until spring 2013 would ultimately impact the overall project schedule and first power from Muskrat Falls could be over six months. This would result in additional carrying costs, including an estimated $200 million in additional costs…a cost that would ultimately be passed on to island consumers in increased electricity rate(s)."*

The news release further affirmed that on-going on-site road construction (the Site Access Road construction) had progressed over the summer and fall and that it would continue through November and December 2012. Company further asserted in the news release that to advance and maintain the overall Lower Churchill Project schedule, as well as to mitigate risks to project cost, Company was evaluating mobilizing the Bulk Excavation Contractor, and acquiring a temporary camp, **before** the end of 2012.

So, on November 5, 2012, Company and a Partnership comprised of Innu-Kiewit Constructors, H.J. O'Connell, Nielsen, E.B.C ("IKC-ONE") executed the Lower Churchill Project's Bulk Excavation Contract for the Construction of Bulk Excavation Works and Associated Works ("Project"). IKC-ONE relied on terms, conditions, duties, and obligations of the Company within the Contract in order to commit to and price the unique logistical, labor, and schedule-driven requirements of the Bulk Excavation Project.

Company failed to perform these Contractual obligations until well into the Project and in some instances not at all, thus delaying the work. Despite these setbacks, IKC-ONE has accelerated the work, mitigated the effects of the delays and as of August 23, 2013, is on track to complete the Project on schedule.

1.2 Fast-track Construction Projects in Remote, Northern, and Cold Climates

---

[2] Email from Mark Turpin to Leonard Knox, dated November 1, 2012, *Subject: Fw: Fwd: News Release – Further Site Preparation Work Starting at MuskratFalls*

In order to complete fast-track construction projects in remote, northern, and cold climates certain job-site conditions must be in place immediately at or following Contract award. Getting out of the starting blocks quickly, efficiently and without disruptions is vital for success.

To finish on time requires an immediate Notice to Proceed, a Project Labour Agreement in-place, and a fast-track mobilization. Initial, uninterrupted site access on access roads that allow for safe and fast mobilization of equipment and supplies is vital. In addition, in remote, northern and cold climates, logistics becomes a significant challenge. If not properly managed, logistics can cause substantial disruptions to the work.

Projects in northern regions force workers to work away from their homes and families. As such, it is essential that the Owner or Contractor provide workers with accommodations that allow workers some comfort away from home and the ability to gain the rest necessary to face the next day on a challenging project.

Availability of labor is a particular challenge in remote and northern construction projects, from both a quantity and quality perspective. It is essential to a Contractor's success to procure labor immediately following Contract execution to avoid delays due to labour shortages. A Contractor's labour challenges escalate if the Contractor performs work in First Nations, Inuit, or Metis inhabited territories. The Owner and Contractor must comply with the concerns of First Nations, Inuit and Metis for a project to have successful labor relations.

1.3 Local Contractor Vital to Mitigate Northern Construction Project Labor Risks

The Contract terms were clear in defining the Company as being responsible for executing a Special Project Order ("SPO") Project Labour Agreement for the Contract. The client asked H.J. O'Connell, as the lead partner within IKC-ONE, to make reasonable efforts to help secure a temporary labor agreement ("TLA") with its affiliated union partners after it could not deliver the SPO upon Contract Award. IKC-ONE committed itself to such a process but it did not assume any liabilities under the Contract in the event negotiations with H.J. O'Connell affiliated unions failed. All parties acknowledged at that time that the best and only chance to secure a TLA to mitigate significant project schedule slippage was to take advantage of the long term and secure relationship between H.J. O'Connell and the local unions.

In an effort to maintain good faith and trust, H.J. O'Connell's negotiating team structured the TLA language that had been agreed upon between Company and the Resource Development Council (RDC) and invited additional unions to join (in addition to H.J. O'Connell's Heavy Civil labor partners) who would have jurisdiction if the SPO was signed. H.J. O'Connell had existing agreements with Operating Engineers and the Carpenters unions. In addition to these unions, the advanced labor agreement included Ironworkers, Laborers, and Teamsters. The TLA considered labor laws in Newfoundland and Labrador that was in the best interest of Company

with respect to creating a cooperative atmosphere amongst the labor unions, as well as, to help cement a final SPO. However, the TLA posed an added risk to IKC-ONE since it exposed all of its partners to the risk of certification by all five unions for future business in the province. H.J. O'Connell's relationship with all five unions structured a deal based on good faith and trust to allow the project to start without jeopardizing schedule and ultimately the final 'in service' date of the Project for the people of Newfoundland and Labrador.

Company awarded the Contract to IKC-ONE on November 8, 2012, without a SPO in place. On November 14, 2012, IKC-ONE sent a letter to Company requesting the status of the SPO. In its letter, IKC-ONE outlined its concerns with acquiring labor to allow mobilization activities and follow-on production activities to proceed[3]. Upon receiving this letter, Company requested IKC-ONE begin negotiations with H.J. O'Connell affiliated unions in an effort to secure a TLA. IKC-ONE expedited the process immediately and on November 30, 2012 IKC-ONE had secured a TLA to allow the process to procure labor to begin – three and half weeks after Contract Award. Company did not provide a SPO until March 19, 2012, almost five months late. If H.J. O'Connell, through its local relationships with the affected unions, had not secured the TLA in such a short period, then the Contract schedule would have been at significant risk. No other organization competing for the Project could have delivered a TLA in the period and in the format delivered by IKC-ONE. In terms of labour relations, the TLA delivered by IKC-ONE laid the foundation for a successful project.

After securing the TLA, and upon the start of work, other issues developed that challenged the morale of IKC-ONE's workforce at site. These included a substandard access road, late delivery of an on-site Accommodations Complex and multiple security breaches at the site. Crews were required to travel by bus over a substandard road until mid-April 2013, which lead to labour unrest and poor morale. On multiple occasions, the relationship and trust developed between IKC-ONE and the unions who had signed the TLA (as a prerequisite to the SPO) ensured labour peace without strikes or slowdowns. There was reduced productivity but this was caused or related to the labour fatigue, and other productivity loss factors, resulting from workers being exposed to over 15 hour days and accommodations that were, in some cases, of poor quality and substandard. IKC-ONE did not anticipate these problems, as the Contract provided for an on-site Accommodations Complex as of January 1, 2013, which would have negated the requirement to use Company's late and problematic site access road.

In the end, IKC-ONE's unions committed to "stay with IKC-ONE" on the promise that improvements were coming. IKC-ONE did everything within its power to work in co-operation with Company to influence such improvements.

[3] Letter from IKC-ONE to Nalcor Energy dated November 14, 2012

1.4 A Changing Project Requires a Changing Plan

When IKC-ONE tendered the Project, it relied on terms and conditions in the Contract and it relied on Company performing its duties and obligations within the Contract. However, right from the start Contract obligations were delayed or did not occur and Company did not perform its Contractual obligations and duties. Thus, IKC-ONE had to react and change its plan on many occasions.

Since Contract Award, IKC-ONE has had to change its plan three times, with other minor changes occurring along the way, due to an ever-changing project.

IKC-ONE projects that if it continues to expend the additional cost to accelerate will, as of August 23, 2013, finish the Powerhouse Rock Excavation by October 25, 2013 as directed by Company and as targeted in its Recovery Plan.

To illustrate, identify, and quantify the additional time that Company is responsible for, IKC-ONE performed a schedule analysis using industry-accepted productivity loss factors.

IKC-ONE has based its request for equitable adjustment on IKC-ONE's Contract Plan and corresponding "Contract Schedule" for three reasons:

- IKC-ONE's industry-preferred schedule analysis requires use of the schedule closest in time to the start of schedule impacts;
- In fact, impacts on the schedule began immediately following Contract award;
- As IKC-ONE will explain in Section 3 of this document, IKC-ONE's schedule for the work was constructible.

A changing project has required IKC-ONE to change its plan. For the purpose of this request for equitable adjustment, IKC-ONE, when referring to its Plan, will always reference its Tender Plan and the corresponding "Contract Schedule".

1.5 Layout of this Document

To logically arrange and explain the facts, IKC-ONE structured this document to guide a reader through the steps to prove compensability. The organization is as follows:

<u>Executive Summary</u>

This section contains a summary of the major issues and the time and equitable adjustment to which IKC-ONE is entitled.

Section 1 – Introduction

This section contains an overview of the project, its issues, and an explanation of the organization of the document.

Section 2 – Contract Terms and Conditions That Formed the Basis For IKC-ONE's Tender

When IKC-ONE entered into the Contract, it relied on certain Contract provisions to determine the price for the work. In areas not addressed by the provisions in the Contract, IKC-ONE provided qualifications to its Tender. This section lists those key provisions to establish that IKC-ONE based its estimate on certain Contract provisions and the Company's obligations within the Contract.

Section 3 – IKC-ONE's Plan to Meet a Fast-Track Project Relied on Company And Contractual Representations

Based on the Contract's terms and conditions, IKC-ONE prepared its Tender, Schedule, and work plans for completing the Project prior to the onset of winter 2013. This section proves that IKC-ONE, were it to build the project it tendered based on the provisions of the Contract and obligations of the Company within the Contract, would have completed it successfully, in a timely manner, with the planned resources and within budget.

Section 4 – Contract Warrantees and Representations That Formed the Basis For IKC-ONE's Tender Did Not Materialize

Had the project proceeded exactly as expected from the original Contract, there would be no need for additional compensation. This section contains a recap of the events IKC-ONE experienced which differed from what Contract stated and that forced Company to instruct IKC-ONE to accelerate.

Section 5 - Company's Lack Of Performance and Failure to Meet its Duties and Obligations under the Contract Materially Effected IKC-ONE's Ability to Meet the Schedule-Driven Project's Milestones

The actual conditions discussed in Section 4 affected the plan described in Section 3. An explanation of how the actual conditions affected operations is included in this section.

Section 6 – Calculation of IKC-ONE's Request For Equitable Adjustment

This section contains the calculation of the additional cost to IKC-ONE for experiencing jobsite events, as well as substantiation for factors or numbers used.

Section 7 - Conclusion

This section considers all the evidence represented in Sections 1 through 6, and summarizes why and how much the Company owes IKC-ONE as compensation for the additional costs.

Appendices

Documentation of the facts and numbers presented in this Request, as well as other pertinent information.

SECTION 2 CONTRACT TERMS AND CONDITIONS THAT FORMED THE BASIS FOR IKC-ONE'S TENDER

2.1 Obligations Related to the Conditions and Facilities at the Jobsite

2.1.1 Initial, Uninterrupted Site Access Provided By November 30, 2012

Initial, Uninterrupted site access, on access roads that allow for safe worker travel and mobilization of equipment and supplies at an average speed between 60-80 km/hr, is vital for the success of remote, northern, schedule-driven projects.

IKC-ONE could only meet the Lower Churchill Project's aggressive construction schedule if it could employ an equally aggressive mobilization effort. Operations had to commence by November 19, 2012, as stated in the Contract schedule. IKC-ONE therefore needed uninterrupted access to the site by no later than the November 30, 2012, as IKC-ONE will show is stated in the tender documents, pre-award correspondence, and the Contract provided by Company.

<u>Site Access Road</u>

Section 2.1.1 of Exhibit 12 of the Contract states that Company will provide initial access and will thereafter use reasonable efforts to maintain all main access roads leading to the site. Such maintenance includes occasional grading of roads, snow removal, and sanding of snow and ice covered roads. IKC-ONE relied on this Company obligation and based their bid on availability of a site access road in reasonable condition, maintained throughout the project and available at Project start up.

According to the Contract, the Company shall provide approximately 20 kilometers of site roads from Trans-Labrador Highway (TLH) Route 520 to the main structures, laydown areas, and accommodation complex. Section 11 of Exhibit 12 states that the site is accessible as follows:

> "…**a gravel road** of approximately (20) km which leads to the Company's Lay down Area." (Emphasis added)

A reasonable expectation for a **gravel-topped** access road would allow IKC-ONE to mobilize its forces and subsequently travel safely, at an average speed of between 60-80 km/hr. Although IKC-ONE understood that Company might not have had all gravel toppings on the road by November 30, 2012, its knowledge and experience is that, typically, road contractors apply final gravel topping within one week of finishing the subgrade. As such, it would be reasonable to expect that once the final subgrade is complete, it would take Company no longer than one month to complete the final gravel topping.

Therefore, IKC-ONE expected Company to have all gravel topping complete by no later than the end of 2012. A gravel topped Site Access Road of standard width and conditions as depicted in Figure 13 below meets that description and illustrates IKC-ONE's expectation at time of tender.

Figure 13: July 27, 2013. Lower Churchill Site Access Road complete (except for the guardrails). The condition of the site access road depicted here allows for safe and comfortable travel at an average speed of 60-80 km/hr.

To meet its contractual obligation of site access beyond November 30, 2012, Company would have to provide a road maintenance program that would include routine and non-routine maintenance. Routine maintenance typically includes day-to-day activities to keep the road open, such as snow plowing, as well as regular work to counteract the wear and tear heavy traffic imposes on a gravel road such as grading, spreading of new gravel as required, and dust control. Non-routine maintenance would include significant spot repairs and restoration. Only through a routine road maintenance program could Company ensure that IKC-ONE would have uninterrupted site access.

In fact, in October 2012, pre-award, IKC-ONE observed a road topping material produced and in stockpile along the site access road. However, Company did not place that road topping on the site access road. Placing road topping material, such as the material stockpiled, would be necessary for Company to provide the site access road warranted per the Contract.

IKC-ONE relied on Company to complete the site access road work (including the full demobilization of Company's access road Contractor) shortly after IKC-ONE's Contract work began. IKC-ONE's tender did not include any provision for interruption of work by Other

Contractors at any time, except for coordination to allow other contractors to complete gravel topping and guard rails within no more than one month beyond November 30, 2012.

Tote Road

In Company's Bid Clarification #3, Company stated the following:

> "…For clarity the Southside Access Road includes that portion of the road commencing at the security gate on Route 510."[4]

Figure 14 shows the 20-km Lower Churchill Project Site Access Road Company asserted it would have completed by the start of the Bulk Excavation Contract. As stated by Company in its Bid Clarification, IKC-ONE expected the Southside Access Road to commence at the security gate adjacent to Route 510.

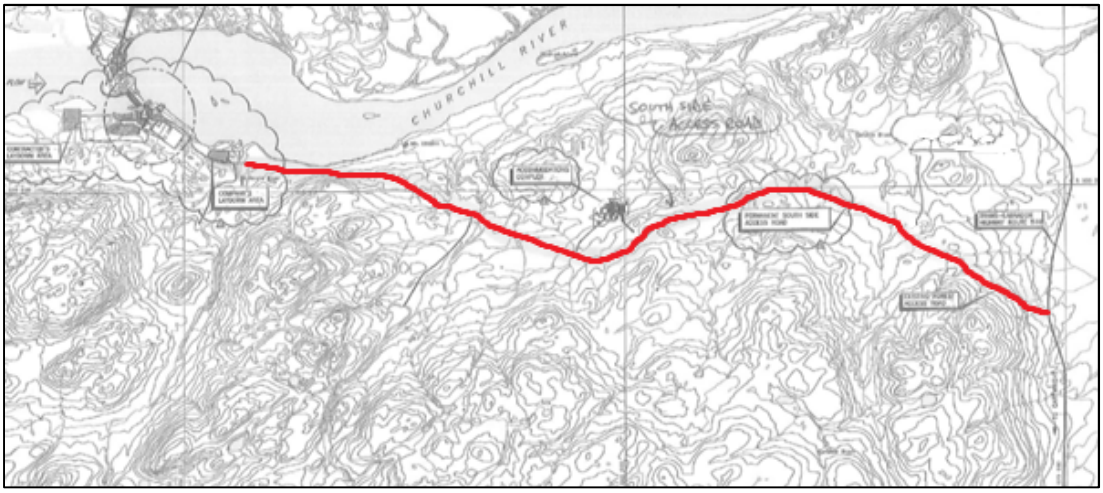


Figure 14: Site map showing the site access IKC-ONE expected.

Section 13.1 of Exhibit 12 states:

> *"For the purpose of this agreement, a Tote Road is defined as an unpaved road which shall allow the carriage of equipment and supplies. The Tote Road stage of the Site Access Road will be constructed to required grades…"*

[4] Company Bid Clarification #3, Package Number: CH0006, Package Name: Bulk Excavation And Associated Civil Works

Company further defined the Tote Road in the minutes of a pre-award meeting on June 20, 2012[5]. At that meeting, IKC-ONE asked Company if Company would have the Site Access Road complete prior to the start of the Bulk Excavation Contract. Company responded as follows:

> *"The majority (of the Site Access Road) will be complete; there is a possibility the last number of kilometers to the main construction site will be a tote road suitable for equipment to travel on. The (Bulk Excavation) contractor will not be required to do any road works outside their contract boundaries. They are responsible for roads within the (Bulk Excavation) contract boundaries."*

Therefore, IKC-ONE did not include any provision in its tender for any sections of the Site Access Road affecting IKC-ONE's mobilization efforts and made no special provision for the carriage of equipment and supplies to the work site by anything other than on-road trucks.

Access-Specific Clarifications and Exceptions in Tender

Company knew the importance of providing initial and uninterrupted access (on a reasonable access road) to the success of a fast-track mobilization effort to this remote, northern, schedule-driven project. Company also knew the importance of routine road maintenance to maintaining uninterrupted site access for the carriage of equipment and supplies.

To emphasize Company's contractual obligations for providing access, IKC-ONE submitted with its tender, in Part 1 Appendix 17 - Exceptions, the following qualifications:

> *"The Company, at its sole cost and expense, shall provide adequate and uninterrupted access to the Work Site."*
>
> *We have assumed the Owner is responsible for maintenance and snow clearing of the Main Road from TLH Route 510 to the Site (to the "End of Permanent Access Road by Others" identified in drawing plate G5). We have included costs for all maintenance and snow clearing for roads beyond this point."*
>
> *There is no contingency in our proposal for schedule delays by the Owner. The schedule assumes work may progress in all areas without restrictions, environmental or otherwise."*

IKC-ONE included no contingency in its proposal for the cost or potential schedule delays caused by an incomplete access road or an access road not provided on time, nor constructed

[5] Minutes of Meeting, SNC-Lavalin Minutes No. 505573-3000-40MC-I-0077

and maintained to industry standards. IKC-ONE plans relied on an access road provided by Company that would meet the Contract's specific obligations.

Pre-Award Correspondence

Company knew at the time of tender that an interrupted mobilization effort and an access road provided in poor and substandard condition would significantly affect IKC-ONE's plans to build the work and to meet project milestones. Hence, on October 19, 2012, understanding IKC-ONE's plans and concerns, Company confirmed that IKC-ONE would have uninterrupted access by November 30, 2012[6]:

> *"Please be advised Company will provide uninterrupted access to the Company laydown area on November 30, 2012 for commencement of mobilization activities. Please provide a mobilization schedule based on the above dated with a milestone activity "Shovel in Ground"."*

Company's confirmation email validated their previous representations and reassured IKC-ONE that the site access road would not affect any of its plans to meet project milestones. IKC-ONE relied on this warrantee in finalizing its plan and Contract Schedule.

In summary, IKC-ONE expected Company to have, **at a minimum**, all subgrade completed by November 30, 2012 and all gravel topping completed by no later than December 31, 2012.

2.1.2 On-Site Accommodations Complex Provided By January 1, 2013

Section 2.1.6 of Exhibit 2 Attachment 1 confirms that Company shall provide Board and Lodging for IKC-ONE's labour resources deployed at the site by January 1, 2013, or earlier. The Section further states that Company would first provide a Temporary Construction Camp and then later provide a Permanent Construction Camp. For the purpose of this document, IKC-ONE will refer to Board and Lodging (both Temporary and Permanent Camps) as the "Accommodations Complex".

Figure 15 is a site map showing the close proximity of the on-site Accommodations Complex relative to the work area. With such a proximal on-site Accommodations Complex, IKC-ONE would have only a short 6-kilometer travel to its work area. The proximal location of the on-site Accommodations Complex would mitigate the risk of disruption due to third party-caused events.

---

[6] Email from Mark Turpin to Leonard Knox dated October 19, 2012, Subject: CH-0006 Bulk Excavation And Associated Civil Works

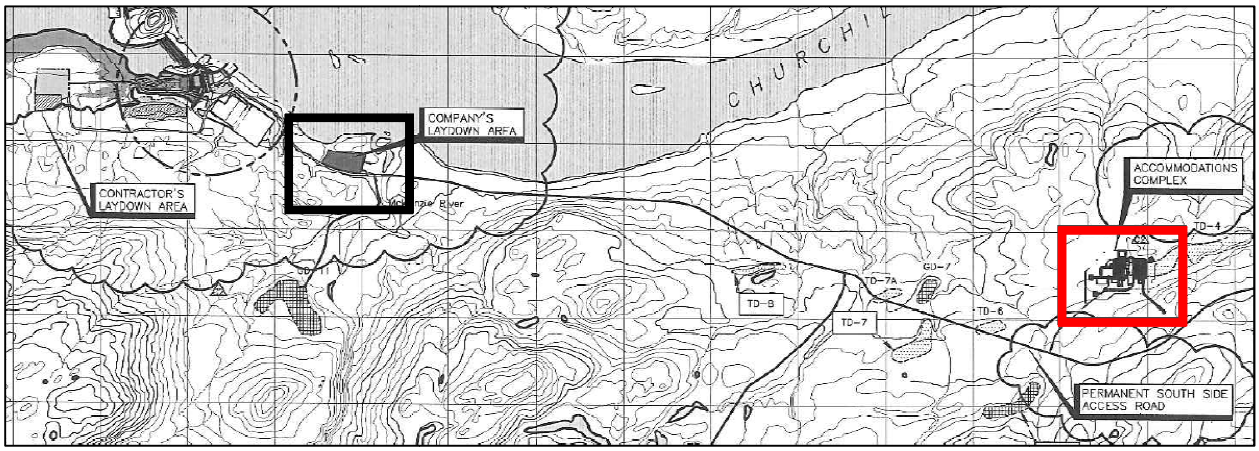


Figure 15: Site map showing the proximity of the Accommodation Complex (outlined in red) to the work site. IKC-ONE's workforce would have only a short 6-kilometer travel between the Accommodations complex and the work area, thus mitigating the risk of third party-caused events disrupting IKC-ONE's operations.

Section 2.1.6 of the Contract further clarifies that Company shall provide access to the Accommodation Complex by January 1, 2013, **or earlier**.

At time of tender, Company requested IKC-ONE to describe its plan for the movement of personnel within the site. IKC-ONE stated that it planned to have sufficient bussing, with spare units, to ensure IKC-ONE can move the workforce from the Accommodations Complex to the place of work, about 6-kilometers from the work area.

2.1.3 Area At Company's Laydown Available by January 1, 2013

Section 7.1 of Exhibit 12 states the Company shall provide the Contractor with a work area of approximately 20,000 m2 to install its temporary facilities and storage. The Contract further states that IKC-ONE could also install some of its trailers, containers, and other temporary buildings in close proximity to the work area.

Figure 16 shows the location of the Company's Laydown Area provided per the Contract. Just like the on-site Accommodations Complex, Company's Laydown Area is located in close proximity to the work area. The close proximity of the laydown area would serve as an effective location for an on-site office complex. The proximal location to the work area would allow for efficient communication between management, project controls, engineering, and field level supervision.

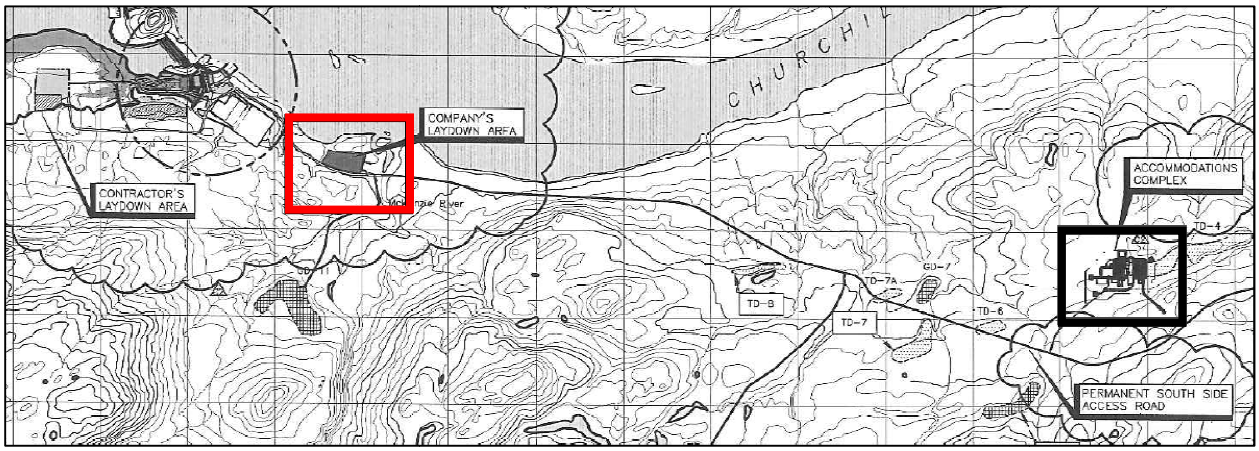


Figure 16: Site map showing the location of the Company Laydown area (outlined in red). The close proximity of the Company laydown (location of IKC-ONE's office complex) to the work area (+/- 1.5-kilometer travel) would allow IKC-ONE's staff to manage, efficiently, its operations and workforce.

Company confirmed in Part 1 of the *Bulk Excavation and Associated Civil Works tender package* that IKC-ONE would have access to 20,000 m2 of the Company's proposed Laydown Area. On October 19, 2012, Company advised IKC-ONE in an email that it would provide uninterrupted access to the Company Laydown area by November 30, 2012 for commencement of mobilization activities[7].

Therefore, IKC-ONE planned to have a designated section of the Company Laydown to install its trailers, assemble equipment, place its containers, and install other temporary facilities, such as an on-site office complex, by November 30, 2012. IKC-ONE also planned to install a satellite office setup in closer proximity to the work area as allowed by the Contract.

As described in Section 2.1.1 of this document, IKC-ONE relied on Company's assurance to have uninterrupted access to this laydown area by November 30, 2012.

2.1.4 Permanent Power Provided By February 1, 2013

The Contract represented that Company would provide permanent electrical power supply to IKC-ONE by February 1, 2013.

Section 3.1.2 of the Contract requires Company:

[7] Email from Mark Turpin to Leonard Knox dated October 19, 2012, Subject: CH-0006 Bulk Excavation And Associated Civil Works

"From February 1, 2013 onwards the Contractor will be provided free of cost with an electrical power supply at a rating of eight hundred (800) kVa, for the execution of the Work. Two power supply points will be made available to the Contractor:

1. *One in close proximity of the Company's Laydown Area…*

2. *One at close proximity of the Contractor's Laydown Area…"*

Electrical power supply was a necessary part of IKC-ONE's Infrastructure Setup Plan. Therefore, IKC-ONE qualified its tender as follows:

"We have not included any costs related to construction power requirements from February 1, 2013 onward. All power requirements after February 1, 2013 will be from Owner supplied distribution points at the Company Laydown, Contractors Laydown and Camp Site."

IKC-ONE's site infrastructure, including offices, would rely on Company providing permanent electrical power supply after February 1, 2013.

2.1.5 Telecommunications And Data Compatible With A $7 Billion Project Provided By February 2013

Functioning and adequate communications, both telecommunications and data, are critical for an efficient project. Communication is especially important for a fast-track, remote, and northern project.

It was reasonable to assume from the provisions in the Contract that IKC-ONE would have telecommunications and data on-site compatible with a 5-yr $7 Billion Mega-Project by February 2013.

<u>Telecommunications</u>

Exhibit 12 Site Conditions Section 6 – Telecommunications states:

"Company has partnered with such local telecommunication service provider to implement a long term telecommunication plan…The telecommunications services for the Contractor are summarized below:

Phase 1- (Up Until January 2013)

*Cellular coverage for voice **and data** (emphasis added)*

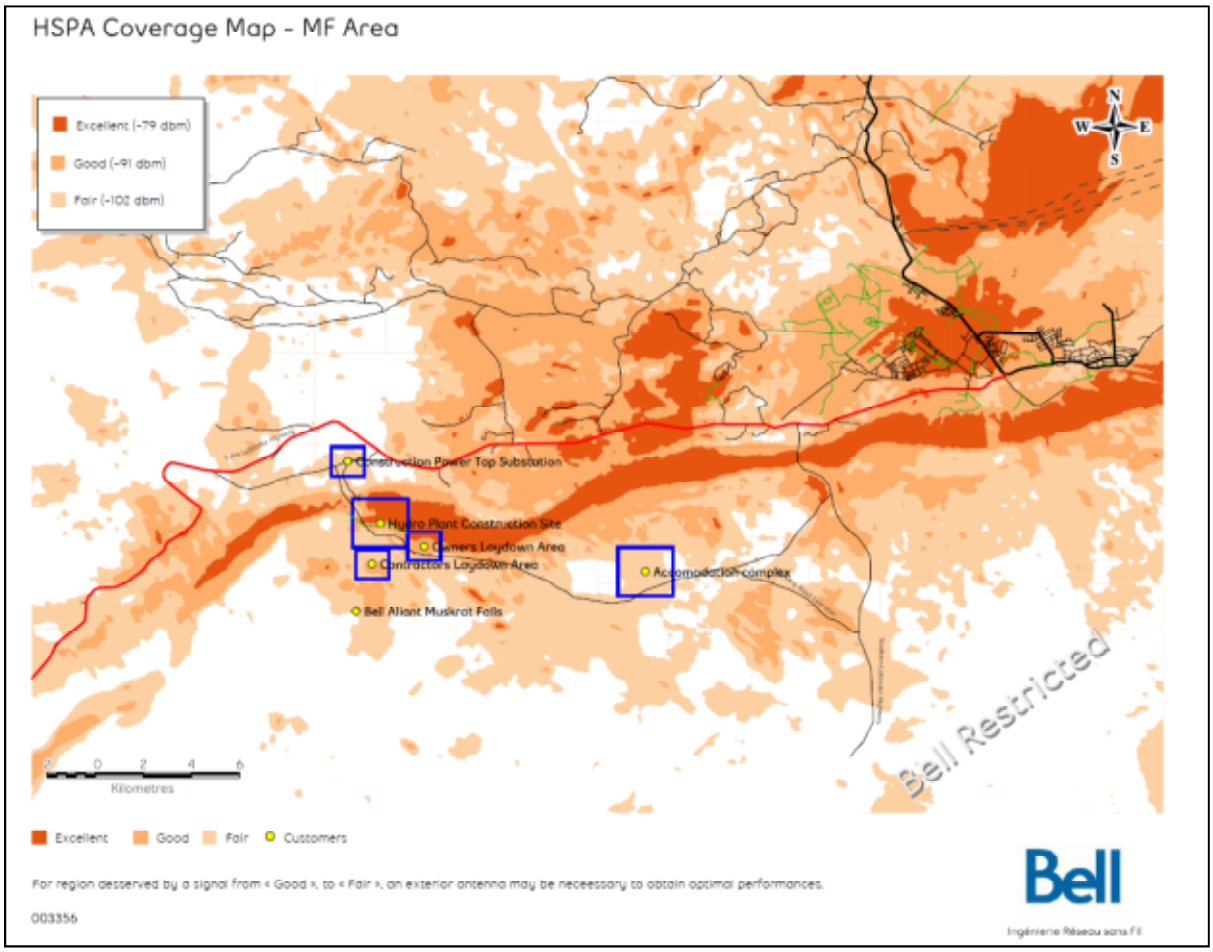


Figure 17: Coverage map showing Bell's existing coverage at time of Tender. Note that the coverage appears "good" at the work site and laydown areas.

The Cellular coverage map provided in the Contract (Figure 17 above) indicates that telecommunications (Bell's existing coverage) at the future site of IKC-ONE's Laydown Area, which would include IKC-ONE's jobsite offices, is "good" (-91 dbm).

Exhibit 12 Site Conditions Section 6 – Telecommunications further states:

> *Phase 2 – Construction Phase (February 2013 to June 2017 (end of construction phase)*
>
> *Main Construction Phase"*

The Contract states that Phase 2 will begin in February 2013 and continue to June 2017, through the end of the construction phase.

IKC-ONE relied on there being telecommunications **and data** available on-site that would be compatible with a $7 billion mega-project no later than February 2013, when developing its Contract plan.

2.2 Contractual Duties and Obligations of the Company

2.2.1 Company to have a Special Project Order Project Labour Agreement by November 9, 2012

Pre-Award

Company stated in a pre-tender meeting on June 27, 2012 that Company would have an SPO in place prior to the award of the Contract[8].

> *"Q: When will there by agreement on the SPO?*
>
> *A: The first week of September 2012."*

Therefore, IKC-ONE expected that Company would have successfully negotiated the SPO by Contract award. Hence, IKC-ONE did not expect to have to negotiate a temporary labour agreement, and so its bid did not include staffing the project with labour relations personnel or experienced negotiators who would be necessary should Company not provide an SPO.

Before Contract Award, on September 20, 2013, IKC-ONE confirmed in writing that, although IKC-ONE prepared its Proposal using the current CLRA terms, IKC-ONE was relying on Company to negotiate an SPO Project Labour Agreement by Contract award[9].

Contract

Company asserted in Exhibit 2 Compensation - Item 8 *Worksite Labour Agreement:*

> *"…the Contractor shall comply with all the requirements of any SPO and shall conduct its labour relations matters accordingly…*
>
> *Company recognizes that any project labour agreement, whether related to such SPO or any such supplementary or modified agreement(s), including their negotiation, may affect the schedule for performing the Work…"*

[8] Minutes of Meeting, SNC-Lavalin Minutes No. 505573-3000-40MC-I-0077
[9] Letter from IKC-ONE to Company dated September 20, 2012 Re: Project No. 505573

Company Knew That Not Having an SPO in Place Would Negatively Affect the Schedule

Under the SPO process, Company would have had a labour liaison manager in place, which would be responsible for coordinating the labour management at site under the SPO.

In Article 31 *Labour Relations* of the Contract, Company states that if no SPO is declared, then IKC-ONE shall make reasonable and commercial efforts to have written agreements with the unions representing the workers employed by them.

Company further states in Exhibit 2 *Compensation* that in the event that Company fails to provide such a SPO prior to the planned commencement of work on site, then IKC-ONE, with full cooperation of Company, shall take such steps necessary to enter into a supplementary or modified agreement as may be appropriate to start work as planned.

Company knew that without an SPO Agreement in place immediately following Contract Award, IKC-ONE would not be able to secure Craft resources necessary to begin executing IKC-ONE's plan and that it would be difficult for IKC-ONE to begin on November 30, 2012 as planned. IKC-ONE could not procure Craft resources until an SPO was in place. The small drillers and blasters labor pool made it even more important to procure drillers and blasters immediately following receipt of the SPO.

Company **knew** that the quantity of qualified drillers in Newfoundland and Labrador was a major project risk, and that if the major project risk materialized, IKC-ONE would have to go outside the province, and in particular Quebec, to find the necessary labour resources. IKC-ONE verbally explained the urgency of expediting an SPO. IKC-ONE verbally made it clear to Company that if IKC-ONE had to sign its own project labour agreement it would have to perform necessary "mark-up" meetings and go through the process of proving certain qualified critical skills were not available in sufficient quantities in the province. Once that was complete, IKC-ONE would then have to look outside of province to procure the same labour resources, prove that those labour resources were qualified, and ensure that those resources had sufficiently passed medical and drug testing requirements. IKC-ONE made it clear to Company that should IKC-ONE be required to carry out that process, delays to the work would be inevitable.

Company knew that time was of the essence and that a late SPO would cause significant and serious consequences to the project start-up including production delays.

2.2.2 Company to Comply With the Terms and Conditions Of The Innu Impacts Benefits Agreement

First Nations relations are vital to the success of projects constructed in First Nation territories from both a workforce moral and commercial perspective. As such, typically, IBAs contain information that has commercial implications.

Exhibit 13 (*Provincial Benefits)* of the tender directed IKC-ONE to review, accept, and comply with the Lower Churchill Construction Project Benefits Strategy ("LCPBA"). The LCPBA outlined Company's Contracts, Purchasing and Employment benefits objectives. The LCPBA also introduces the Lower Churchill Innu Impacts and Benefits Agreement ("IBA"). The IBA is an Agreement formed between the Company and The Innu Nation. Company required IKC-ONE to agree to the objectives and principles of the IBA and adhere to the applicable obligations contained therein.

Through these agreements, IKC-ONE relied on Company to have, prior to Contract award, a liaison officer, with a working committee, in place at Contract execution. These resources would be necessary for Company to meet its IBA obligations, which include (initial) culture awareness programs, Innu training for the work site, orientation programs, etc. It would be vital for Company and IKC-ONE to fully comply and exceed the terms and conditions of the IBA for all First Nations, Inuit, and Metis, leading workforce moral and attitude to start and remain high.

Typically, IBAs contain information that has commercial implications. Thus, knowledge of the LCP IBA, before closing, may have had commercial implications to IKC-ONE's tender. However, Company did not provide the LCP IBA. Therefore, IKC-ONE took the reasonable position that Company would absorb all commercial implications of its negotiated IBA.

Company knew the importance of the First Nations, Inuit, and Metis to the success of the LCP, and the effects that non-compliance with the IBA would have on the Project and on IKC-ONE. IKC-ONE was prepared to assist Company in any way possible to comply with the IBA.

2.2.3 Company To Provide Jobsite Security

IKC-ONE's individual experience includes many projects performed in political environments where the project itself was contentious. Certainly, the Project qualifies as a contentious project. Company was obligated to, and IKC-ONE relied on Company to, provide jobsite security thus allowing IKC-ONE to perform its operations uninterrupted in a continuous, safe and efficient manner.

In accordance with Section 8.4 of Exhibit 12 – *Site Conditions,* Company will maintain a security service for the protection of all facilities and property. The Contract further stated that

Company would perform regular security patrols within the camp boundaries to protect its facilities, equipment and residents.

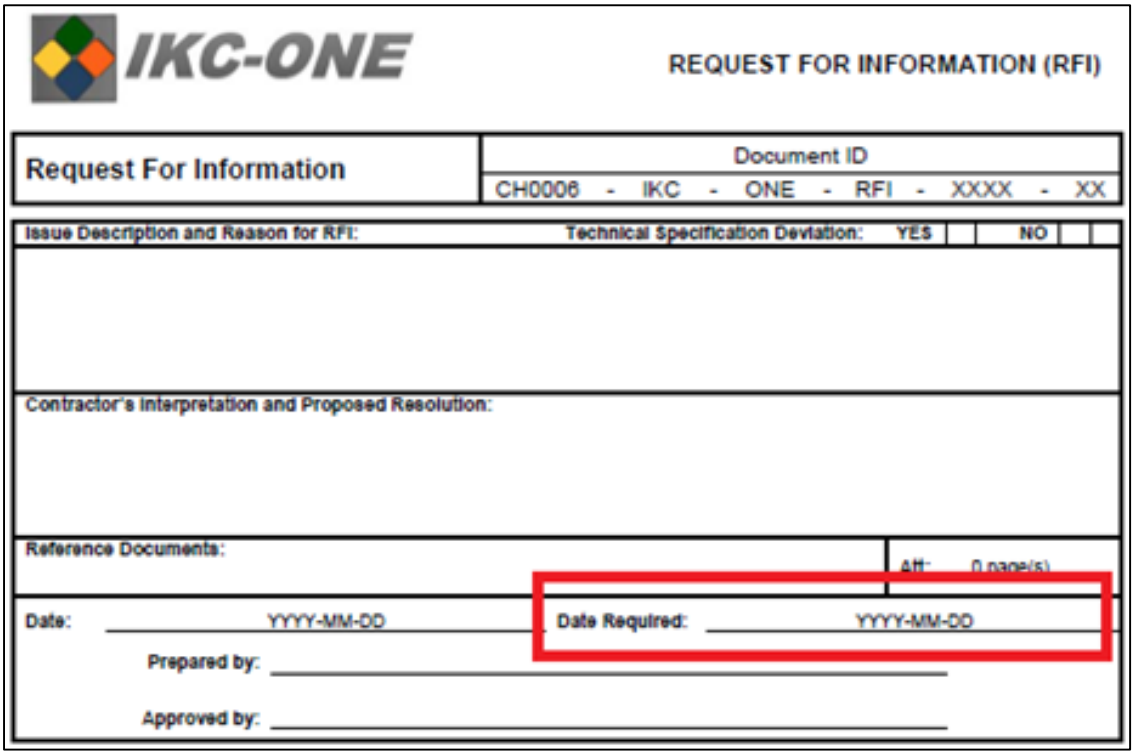
Therefore, IKC-ONE did not include any provisions in its tender to provide for security or for disruptions caused by trespassing, protests, civil disobediences, or other security consequences.

IKC-ONE planned to begin and maintain its operations in a continuous, safe and efficient manner, without jobsite security breaches disrupting its operations.

2.2.4 Company To Provide Timely Responses To Issues Through A Functional Document Control System

On mega-projects, it is essential that Contractors receive timely responses to requests for information, changes, approvals, and submittals from the Owner. This is especially critical for fast track, remote, and northern projects. Typically, Owner's manage project communication including Requests for Information ("RFI") through an Owner-managed document control system.

Figure 18 shows a typical RFI that IKC-ONE would normally utilize.



IKC-ONE

REQUEST FOR INFORMATION (RFI)

Request For Information	Document ID: CH0006 - IKC - ONE - RFI - XXXX - XX

Issue Description and Reason for RFI: Technical Specification Deviation: YES NO

Contractor's Interpretation and Proposed Resolution:

Reference Documents: Att: 0 page(s)

Date: YYYY-MM-DD Date Required: YYYY-MM-DD

Prepared by:

Approved by:

Figure 18: Shows a typical Request for Information (RFI). RFI issues are typically time sensitive. Thus, the Contractor informs the Owner the date that a response is required (outlined in red).

RFI issues are typically time sensitive. Thus, it is important that the Contractor inform the Owner the date that a response is required (outlined in red).

IKC-ONE assumed that Company would provide timely responses to issues through a functional and functioning Document Control Center starting at Contract award. IKC-ONE would require timely responses to issues for it to successfully and efficiently meet the project schedule.

2.2.5 Company to Provide Full Notice to Proceed on November 30, 2012 – At The Latest

Company knew that for the Contract to meet its milestones, time would be of the essence, and therefore getting a quick start would be vital.

Typically, when Owner's award a contract, the Owner provides the Contractor with a full Notice to Proceed for all contract works. The Contractor cannot start any work until the Owner has provided the Contractor with a Notice to Proceed. Therefore, the Notice to Proceed is essential, in allowing the Contractor to get out of the starting blocks quickly. Getting started quickly allows the Contractor to work through typical project start up challenges (like setting up new on-site office complexes, orientating local workforces, etc.), expedite the discovery of operational challenges, and expedite the 'learning curve' component of operations.

IKC-ONE reasonably assumed that Company would provide a full Notice to Proceed at Contract award in early November. Company stated that IKC-ONE would have uninterrupted access to the work site by November 30, 2012. Therefore, IKC-ONE reasonably assumed that Company would have issued a full (all operations) Notice to Proceed, **at the latest,** by November 30, 2012.

There is little time to spare in fast-track construction projects. Company knew that beginning the work quickly would be essential for IKC-ONE's success. Therefore, IKC-ONE would need a Notice to Proceed immediately following Contract award.

2.3 Subsoil Conditions

2.3.1 Contract Stated and Parties Reasonably Expected Good Site Soil Conditions Relatively Free of Water

Pre-award, IKC-ONE and Company performed a Site Visit. At that Site Visit, IKC-ONE saw no evidence to conclude that IKC-ONE should expect anything other than good and normal soil conditions. Company's Geotechnical Report supported IKC-ONE's observations.

Powerhouse

Company's Geotechnical Report issued to IKC-ONE at time of tender included 24 test pit reports: Nine test pits located in the Powerhouse area (six upstream and one downstream). A photograph illustrating the soil condition accompanied each test pit report.

Figure 19, as an example, illustrates test pit (TP-14) photograph. Note that the test pit (TP-14) report states "some water infiltration" observed. However, both the test pit and the spoil pile indicate dry conditions.

Figure 19: Sample test pit represented in the project Geotechnical Report. The test pit reports states "some water infiltration observed", however, note that the test pit and the test pit spoil pile is dry.

This same scenario exists throughout the Geotechnical Report. The Geotechnical Engineer observed "some water infiltration" in some of the test pits, however overall, the Geotechnical Report photographs represent that the overburden conditions at site were practically free of water. Nothing else in the Geotechnical Report indicated otherwise.

Switchyard and Converter Station

The Geotechnical Report included 16 test pits located at the Converter Station area: eight test pits indicated water infiltration between one and two meters of depth during the excavation of the test pits; the other eight showed no water present. The test pits in the Converter Station indicates that IKC-ONE should expect only "some" water infiltration.

The Geotechnical Report also included eight test pits just east of the Powerhouse area: four test pits indicating some water infiltration between one and two meters in depth during the excavation of the test pits. The other four showed no water present.

Just as the test pits at the Powerhouse, although the test pits at the Switchyard and Converter Station state "some water infiltration" observed, the test pit reports illustrate dry conditions.

Therefore, as IKC-ONE had no other evidence to suggest otherwise, IKC-ONE reasonably expected good soil conditions with a site relatively free of water. Company's Geotechnical Report supported this conclusion.

2.3.2 Contract Stated and Parties Reasonably Expected a Typical Rock Grade Profile

The rock grade profile can have a significant impact on both overburden excavation operations (soil between original ground and top of rock grade) and rock excavation operations. A Contractor can save significant time with a flat and smooth rock profile. At the pre-award Site Visit, IKC-ONE did not observe any extraordinary rock formations. Therefore, IKC-ONE assumed and expected a typical reasonably flat and smooth rock grade profile.

All Contract drawings have the following general note:

> *"The assumed bedrock profile is illustrated as a smooth surface. The actual rock profile may be jagged and irregular."*

Further Exhibit 2 Attachment 1 page 12 states:

> *"No separate Measurement and Payment will be made for cleaning asperities (roughness, harshness). The Contractor shall incorporate the cost thereof in the most appropriate Unit Price Items."*

With the absence of any additional information, IKC-ONE reasonably assumed, based on its collective experience working in conditions such as these, that the rock profile would be of a typical rock profile: A generally smooth surface with a few jagged and irregular sections throughout. IKC-ONE's observations at the pre-award Site Visit supported this conclusion.

2.4 Rock Excavation Design and Technical Requirements Complete, Final, and Constructible

2.4.1 Company Promised To Expedite The Change Of Its Method Specification

Rock excavation remains on the critical path of the Project's schedule. For rock excavation to achieve target production rates, IKC-ONE would need substantial production blasts.

Company's method specification directed IKC-ONE exactly how to perform the drilling and blasting, from "buffer hole void ratio" to vibration restrictions. IKC-ONE could not achieve production blasts necessary to ensure its rock excavation operation continued productively without a change to Company's specification because Company's method specification would limit the potential productivity of blasts.

Thus, in pre-award meetings, IKC-ONE made it clear to Company that its Contract schedule would be at significant risk unless Company relaxed its drill and blast specifications such as the eliminating an unnecessary "buffer row". Company acknowledged IKC-ONE's concerns with the method specification. However, Company stated that there would be no time to process the specification changes prior to Contract Award, but that it would work with IKC-ONE to change them post-award expeditiously.

Because of the importance of having the method specification changed, IKC-ONE insisted that Company write the proposed specification revisions into the Contract. IKC-ONE's proposed specification revisions are included in the Special Conditions of the Contract.

Company **knew** the importance of relaxing the drill and blast method specifications to IKC-ONE's tender and its plans to meet Company's schedule. It would be vital for these specification changes to occur in a timely manner in order to mitigate the risk of schedule delays.

2.4.2 Rock Consolidation Design Complete, Final, and Constructible

Rock Stabilization and Surface Protection is an activity that forms part of the rock excavation operation. The Rock Stabilization and Surface Protection activities occur in parallel with the actual excavation of rock.

There is no evidence in the Geotechnical Report available at the time of tender to imply that any adverse geological conditions in the Powerhouse or Spillway excavations were or could become present.

Company verified that Company would address any adverse geological conditions in the field, in a pre-tender meeting held on June 27, 2012 that included all Contractors bidding on the

Contract.[10] Company stated in this meeting that there is no evidence to suggest there are shear zones present in the powerhouse.

Company also stated in Bid Clarification #2, Question 54, the following in its response to a Contractor's concern of the Contract's "over-break" penalty:

> *"Excessive shear zone issues, if any, will be addressed and resolved as a field decision."*

Company's response supported IKC-ONE's conclusion that there would be no adverse geological conditions on-site.

Company's Rock Stabilization and Surface Protection method specifications are comprehensive and detailed over 14 pages. Because of this, IKC-ONE's plan for the installation of Rock Stabilization and Surface Protection to be comprehensive in order to mitigate the risk of IKC-ONE's rock excavation operations.

To avoid Rock Stabilization and Surface Protection activities affecting IKC-ONE's rock excavation operation it would be vital that Company's rock consolidation design be complete, final, and constructible.

2.4.3 Company To Provide Timely Final Rock Wall Approval

Company was responsible for approving the final excavated rock wall surfaces. Section 1.1.1 of the Scope of Work of Company's detailed Rock Stabilization and Surface Protection method specification states:

> *"the work described in this section includes the supply of all labour, equipment and materials as shown on the drawings and as specified herein or as required by the Engineer."*

Section 1.1.2 of the Scope of Work exhibit states:

> *"the objective of rock stabilization protection is to ensure the security of personnel and equipment as well as the stability of natural and excavated rock faces."*

Finally, Section 1.1.3 of the Scope of Work exhibit states:

> *"Rock Stabilization comprises materials and systems [that are] subject to approval of the Engineer".*

[10] Minutes of Meeting, SNC-Lavalin Minutes No. 505573-3000-40MC-I-0077

The powerhouse rock excavation program would be under the direction of Company's Geologist and Blasting Consultant. The method specifications for rock excavation and consolidation would govern these representatives. The strict adherence to the onerous specifications required timely decisions by Company's Geologist. Company was responsible for instructing IKC-ONE's consolidation crews on which rock blocks IKC-ONE had to remove, which rock blocks had to remain, and the location of required rock bolts.

Company would also have to advise IKC-ONE when no further consolidation effort would be required such that the consolidation crews could move to the next section and subsequent work such as line drilling in that area could proceed. For IKC-ONE's Rock Stabilization and Surface Protection activities to affect IKC-ONE's rock excavation operation, it would be essential that Company provide timely final rock wall approval.

2.4.4 Labourers Would Have The Qualifications Necessary To Perform Rock Scaling Work

Typically, labourers are the trade responsible for the execution of rock scaling and rock stabilization.

Section 31 33 00 Article 1.6.1 *Qualifications* of the Specifications states:

> *"the Contractor shall furnish personnel skilled in the installation of rock bolts, rock dowels and chain link wire material. Experience shall be relevant to anticipated rock conditions and size of rock bolts and rock dowels being installed."*

The Occupational Health and Safety Regulations do not specify that rock scalers have to be from the mining industry. Therefore, IKC-ONE assumed that the labourers in the local labour pool would have the qualifications necessary to perform rock scaling work.

SECTION 3 IKC-ONE'S PLAN TO MEET A FAST-TRACK PROJECT RELIED ON COMPANY AND CONTRACTUAL REPRESENTATIONS

3.1 IKC-ONE's Indirect Plans Relied on Company Performing its Duties and Essential Contract Warranties

3.1.1 Organizational Plan

IKC-ONE planned to staff the Project with a total of 46 key personnel: 3 Senior Managers, 19 Staff in its "Construction Department" and 24 Staff in its "General, Administrative, and Support" Department.

IKC-ONE's plan for its Construction Department included a total of 19 Staff as illustrated in Figure 20.

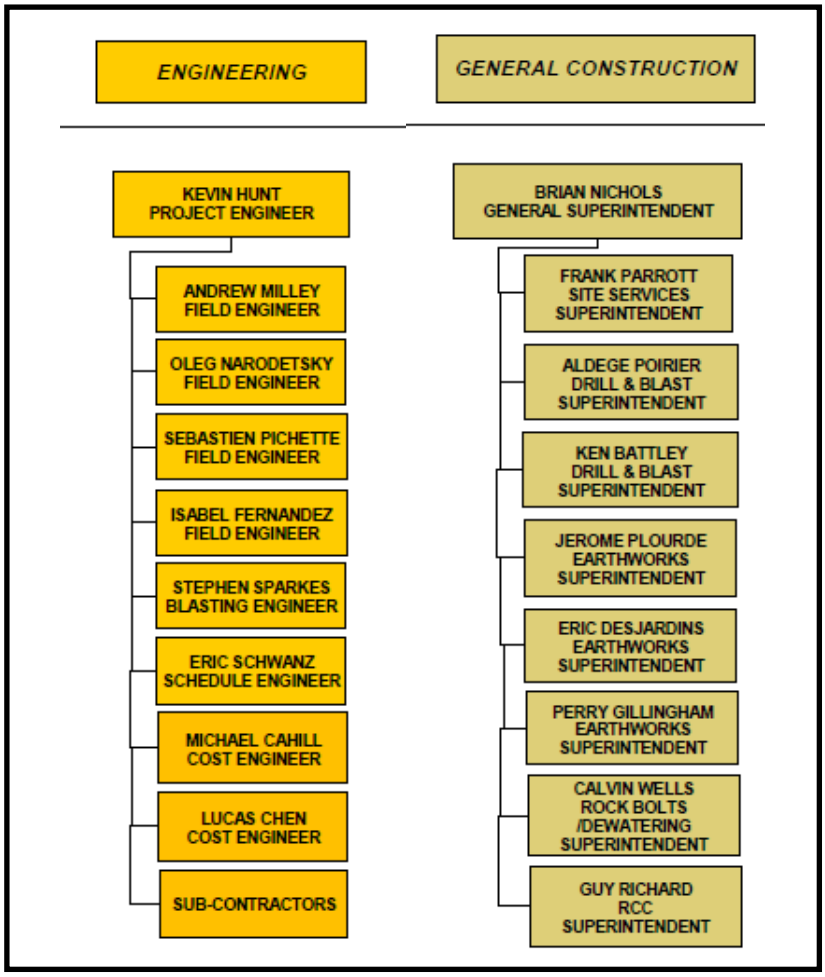


Figure 20: Construction Department's Organizational Chart included in IKC-ONE's estimate.

IKC-ONE's plan for its General, Administrative, and Support Department included a total of 24 Staff as illustrated in Figure 21.

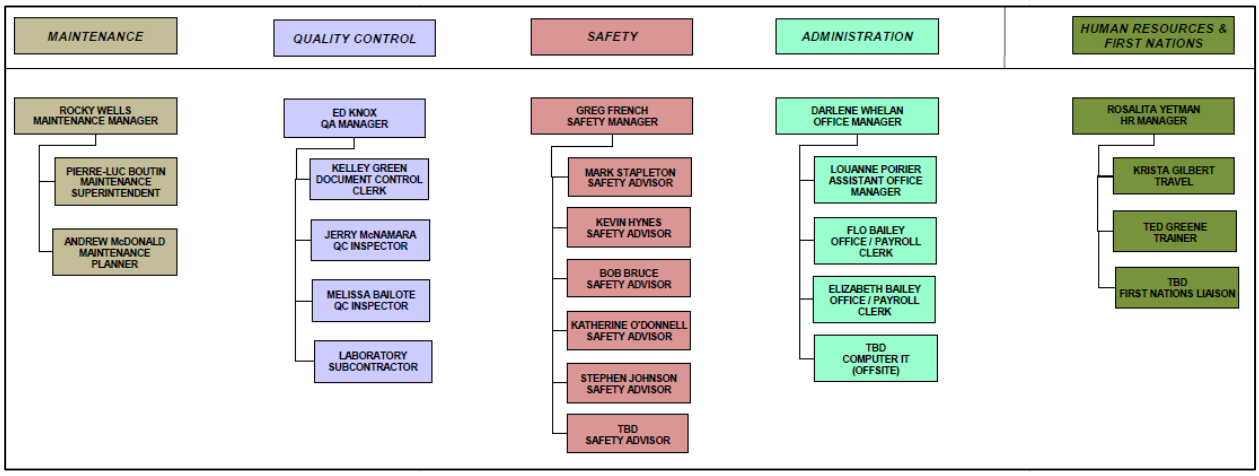


Figure 21: General and Administrative Department's Organizational Chart included in IKC-ONE's estimate.

IKC-ONE planned to have most of its Staff mobilized and settled in to Company's on-site Accommodations Complex by the time it opened, on January 1, 2013.

IKC-ONE's experience is that this level of staffing is optimal for meeting the challenges of a remote, northern, and fast-track project, as long as the Staff receives a sufficient amount of rest to maintain high energy, morale, and attitude.

3.1.2 Staff and Craft Accommodations Plan

IKC-ONE planned to transition all staff and craft to Company's on-site Accommodations Complex on January 1, 2013, just before the scheduled "shovel in ground" (operations start-up) date of January 17, 2013.

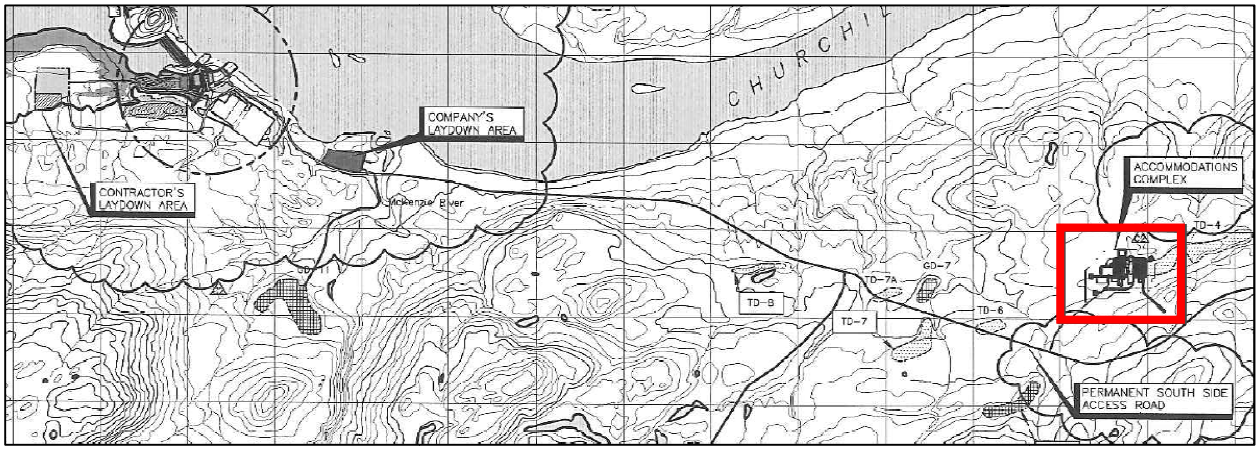


Figure 22: Site map showing the proximity of the on-site Accommodation Complex to the work site (6-kilometer travel between the two).

The close proximity of the Accommodations Complex to the work site (only 6-km one way) would minimize travel and enable all Staff and Craft to obtain needed rest. In addition, the close proximity would facilitate "cross-shift" meetings between production staff. Cross-shift meetings are vital for project communication and for managing and quickly resolving production related issues.

Once in camp, as per the Contract, Company would provide all board for IKC-ONE's Staff and Craft. The close proximity of the camp to the work site would be convenient for IKC-ONE's Staff and would facilitate their concentration on operations.

3.1.3 Staff and Craft to Travel 6-km from the On-Site Accommodations Complex to the Work Site

After January 1, 2013, IKC-ONE planned to shuttle its Staff and Craft using a combination of three busses (for Craft) and pickups (for Staff and field supervisors). Figure 22 shows the proximity of the Accommodations Complex to the planned office complex (at Company's Laydown Area) and the work area.

IKC-ONE's estimated workday consisted of a single 10-hour shift from 7:00 am to 5:30 pm (allowing for one half hour for lunch). Because of the close proximity of the Accommodations Complex to the work area, both Staff and Craft would be able to get a good night's rest. IKC-ONE planned a total of 15 minutes to transport the workforce from the Accommodations Complex to the site, and a total elapsed time of 30 minutes from travel to shift start-up.

Therefore, IKC-ONE planned for its busses to pick up Craft at 6:30 am. Accordingly, staff would be at the Accommodations Complex by 6:30 am.

IKC-ONE's travel plan ensured a well-rested staff and craft. It also mitigated the risks of external events, such as protests and road closures, affecting its operations. IKC-ONE required a well-rested and undisrupted workforce to meet required productivity and production expectations and project milestones.

3.1.4 IKC-ONE's Estimate Based on a 28-Day Work and 9-Day off Rotation

Company did not have a SPO in place at time of tender, therefore Company instructed IKC-ONE to bid the project using Newfoundland and Labrador's Construction Labour Relations Association ("CLRA") terms and conditions. The CLRA provides one "turnaround" or rotation option (28 days worked and 9 days off ("28/9")) to the Contractor. Therefore, IKC-ONE used a 28/9 rotation when preparing its rotation estimate. IKC-ONE planned for a typical crew to work seven days per week, at 10 hours per day for a 70-hour workweek.

3.1.5 On-Site Office Complex

IKC-ONE planned to establish two laydown areas at the work site. IKC-ONE's main office would utilize 20,000 m2 of Company's Laydown Area. IKC-ONE's satellite office would be adjacent to the work site to ensure supervisory Staff worked in close proximity to IKC-ONE's operations.

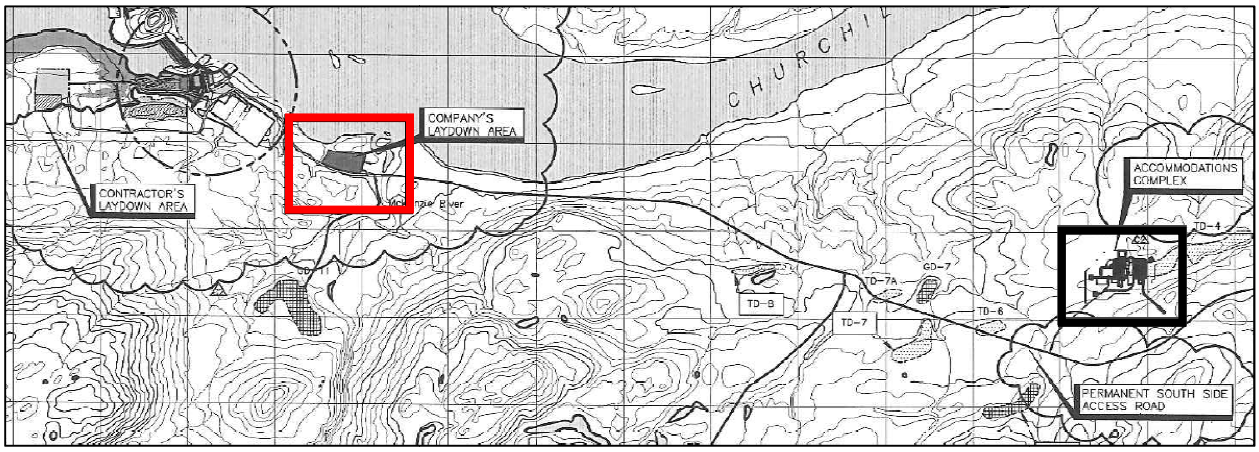


Figure 23: Shows the planned location of IKC-ONE's main office complex (outlined in red). Note the close proximity of the main office to the work area.

IKC-ONE planned to setup its office in the Company's Laydown Area with required storage and warehouse facilities before January 2013. In IKC-ONE's designated 20,000 m2 area in Company's Laydown Area, IKC-ONE planned to set up a six trailer main office, a maintenance

facility complete with tooling, containers for storage and warehouse requirements, a maintenance lunchroom, and washroom facilities.

Figure 24 illustrates the Temporary Infrastructure that IKC-ONE relied on in its plan.

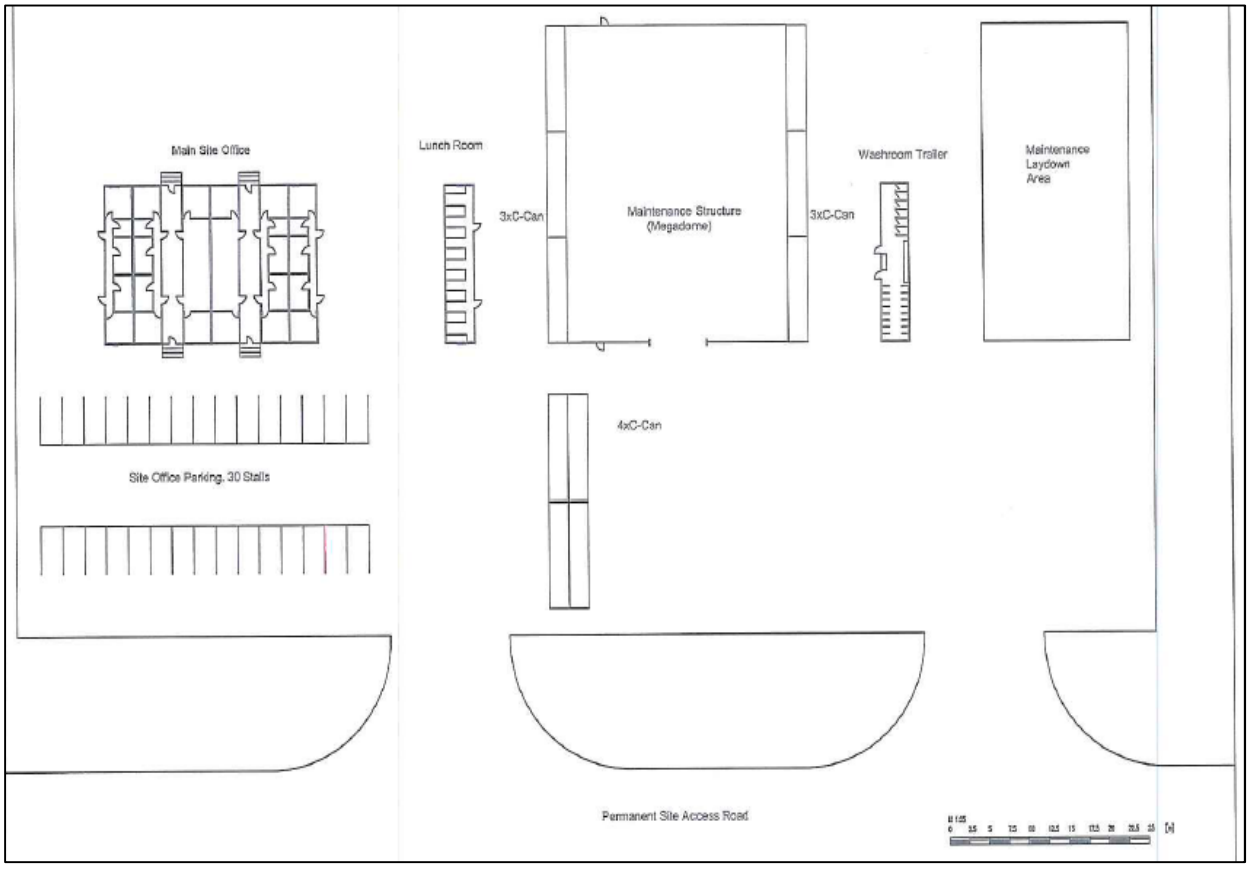


Figure 24: IKC-ONE's plan for its jobsite office in Company's Laydown Area. Note that IKC-ONE's supervisory staff would be adjacent to key operational departments such as IKC-ONE's maintenance group.

IKC-ONE also planned to install a smaller satellite office complex adjacent to the work area complete with lunchrooms, washrooms, and dry room facilities. Figure 25 shows IKC-ONE's satellite office plan.

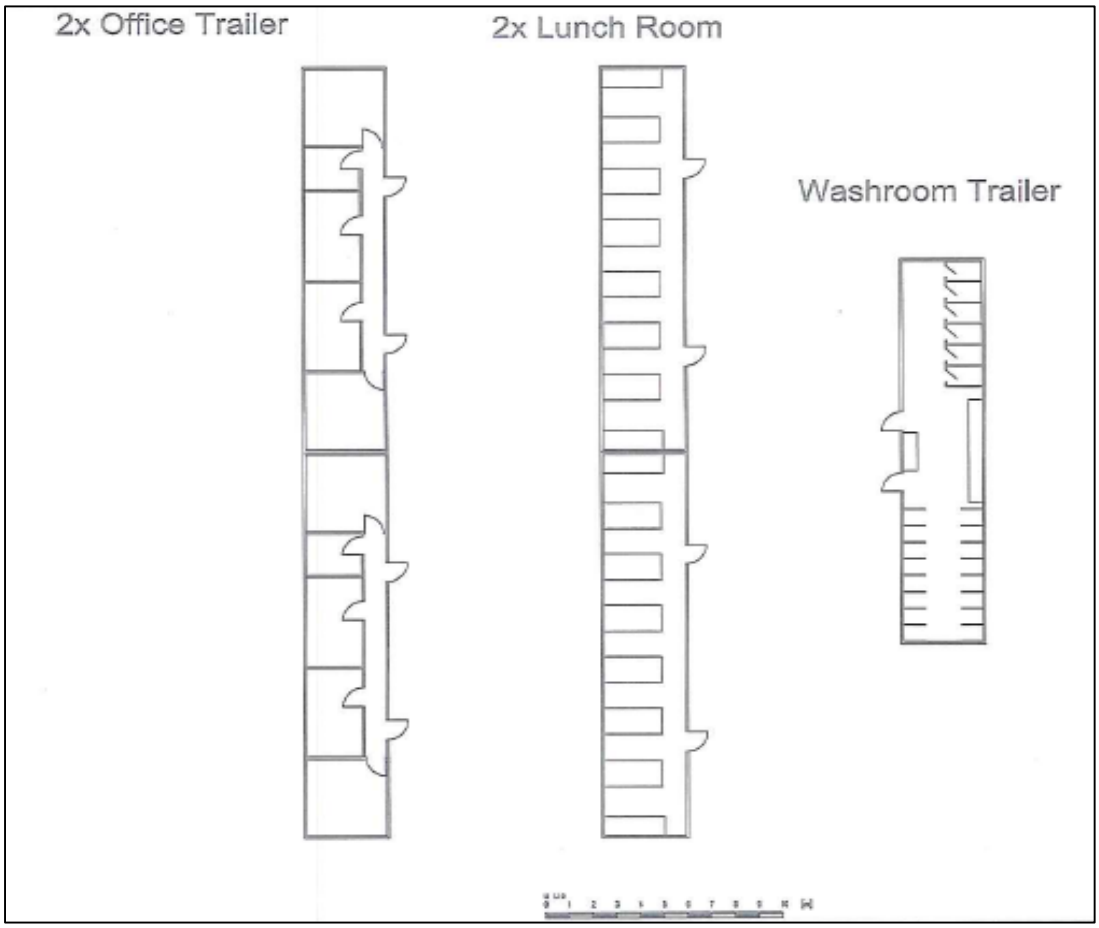


Figure 25: IKC-ONE's plan for its jobsite satellite office in Contractor's Laydown Area. The smaller satellite office would complement IKC-ONE's main office complex.

IKC-ONE's planned main office and satellite office complexes would ensure IKC-ONE's operational staff were close to their respective operations. To efficiently complete a fast-track schedule, IKC-ONE would need, at minimum, an established office complex, maintenance facility and equipment laydown, no later than just before IKC-ONE's "shovel in the ground" date of January 17, 2103.

3.1.6 Fuel Depot Set-Up In Company's Laydown

IKC-ONE planned to have a third party fuel supplier establish an on-site fuel depot in the Company's Laydown Area.

The fuel supplier would make regular bulk fuel deliveries to the on-site depot. From the depot, IKC-ONE planned to have one fuel-truck deliver fuel to all equipment on a unit delivery basis.

IKC-ONE planned to mobilize one extra fuel truck as a backup in the event the main fuel truck went down.

3.1.7 Garage Support Equipment Plan

IKC-ONE planned to set up a fully tooled Maintenance Facility in the Company's Laydown Area as depicted in Figure 24.

This facility would include a "Megadome" structure complete with material and supply containers that would serve as a warehouse and storage facility. IKC-ONE would perform major equipment repairs at its Maintenance Facility. IKC-ONE would perform routine maintenance and unplanned maintenance by field mechanics.

Field mechanics would perform on-site mechanical servicing using two mechanics service trucks, one welding truck, and one lube truck.

3.1.8 Mobilization and Demobilization

Mobilization

On October 25, 2012, IKC-ONE submitted an updated Tender Schedule that represented the final estimate plan (what would eventually become the Contract Schedule). IKC-ONE based its estimate plan on Company providing initial, uninterrupted access to the Company Laydown by November 30, 2012. IKC-ONE planned to begin initial mobilization to Happy Valley Goose Bay ("HVGB") by mid-November 2012 and planned to commence on site mobilization by November 30, 2012.

IKC-ONE planned to complete the following mobilization and infrastructure set-up activities in November and December 2012:

- set up the main on-site office with six trailers;
- set up a Maintenance Facility;
- set up lunchroom and washroom facilities;
- prepare a satellite laydown area for storage;
- mobilize and assemble some of its production equipment;
- mobilize and set up magazines for the storage of explosives;
- set up site offices complete with lunchroom, washroom, and dry room facilities;
- set up a fuel depot; and,

- begin mobilizing Staff.

IKC-ONE relied on an uninterrupted fast-track mobilization to the Company's Laydown Area in order to meet the Bulk Excavation's fast-track schedule.

Demobilization

IKC-ONE's planned to 'substantially complete' its operations, including demobilization, by December 31, 2013.

3.2 IKC-ONE Planned Its Operations Using Established And Proven Means And Methods

IKC-ONE relied on Contract representations in developing its estimate and corresponding plan and schedule. The terms and conditions in the Contract allowed IKC-ONE to plan its operations using well-established means and methods that yield predictable productivity and production levels.

3.2.1 Overburden Excavation Performed In Good Soil with Few Excavators

IKC-ONE planned to start overburden excavation on January 17, 2013 – its "Shovel in the Ground" date. As described in Section 3.1 of this document, by that time, IKC-ONE had planned to have site offices well established, equipment mobilized to Company's Laydown, an SPO, and Staff and Craft personnel settled into Company's Accommodations Complex.

In its estimate, IKC-ONE split the overburden excavation into two categories: 'bulk' overburden excavation and 'remainder' overburden excavation. IKC-ONE planned to perform the 'bulk' overburden excavation using a large-size excavator. IKC-ONE planned to perform the 'remainder' overburden excavation with a mid-size excavator. IKC-ONE based its equipment selection on the Contractual representation that the site rock grade would be reasonably flat, and groundwater would be minimal. Figure 26 shown below, presented at IKC-ONE`s Proposal Explanation Meeting on August 30, 2012, depicts the soil conditions that IKC-ONE expected for its overburden excavation operation.

Figure 26: Overburden excavation planned equipment hours as a percent of total hours.

With this type of overburden material, IKC-ONE's planned to perform the majority of this operation with a Hitachi EX1200, as shown in the Photo. Figure 27 shows the total respective hours each planned excavator would contribute to the total overburden excavation effort.

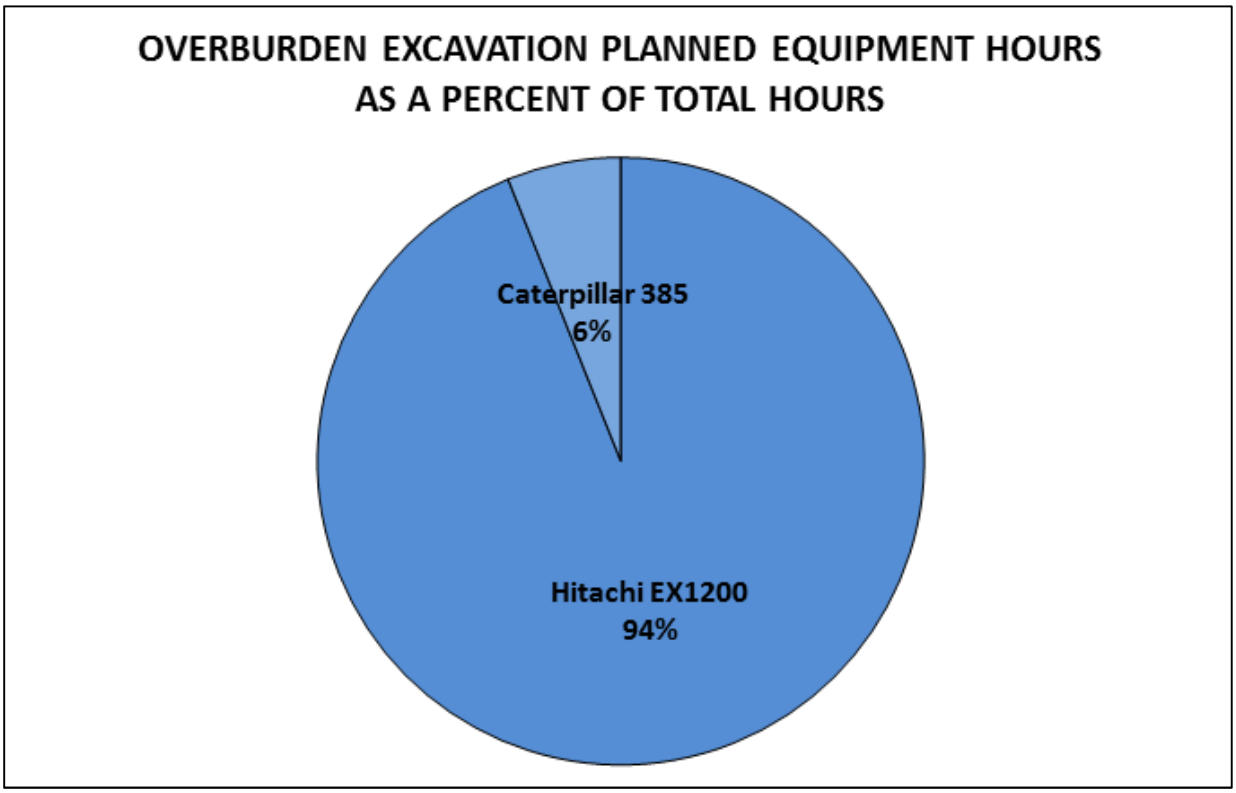


Figure 27: Overburden excavation planned equipment hours as a percent of total hours.

IKC-ONE planned to start overburden excavation on January 17, 2013. However, with a successful mobilization of its equipment in November 2012 and December 2012, IKC-ONE could have begun overburden excavation earlier. An early start date and fast-track mobilization depended on Company providing an SPO on time (so that IKC-ONE could procure labour), a Laydown Area (so IKC-ONE could park and assemble its equipment) on schedule, and uninterrupted access to the work site by November 30, 2012.

IKC-ONE's partners assembled to perform a rigorous and detailed review of the estimate plan, prior to submitting the estimate. **All partners agreed**, based on their respective experiences from prior projects that based on the Contract terms and conditions, IKC-ONE's estimate plan to excavate the overburden using a mid-size excavator and a large-size excavator was sound and would yield the necessary production to meet the schedule.

IKC-ONE planned to have the initial "bulk" overburden excavation complete by mid-February 2013 to allow commencement with the drill, blast, and rock excavation operations for the Powerhouse excavation. IKC-ONE planned to complete the 'bulk' overburden excavation by March 17, 2013.

IKC-ONE did not expect to encounter any water issues during overburden excavation operations, especially because IKC-ONE planned to perform the operations in winter in Labrador. IKC-ONE's experience is that winter conditions in Labrador mitigate the effects of any water encountered in soils. However, to deal with the minor water infiltration indicated in the Geotechnical Report, IKC-ONE planned to have a couple of small submersible pumps on hand. IKC-ONE did not expect to use them extensively during the overburden excavation operations. In fact, IKC-ONE's later published an "Overburden Excavation Work-plan", which included dewatering only as a contingency activity, should it be necessary.

Overburden excavation at the Powerhouse was vital for an on-time completion of the Powerhouse excavation. Once complete, IKC-ONE would utilize its excavators for the follow-on rock excavation operation.

In summary, IKC-ONE planned to start its overburden excavation on January 17, 2013 (**or earlier**), with site offices well established, equipment mobilized to Company's Laydown, and Staff and Craft personnel well-rested and settled into Company's Accommodations Complex. Upon completion of the initial "bulk" overburden excavation, to the point where sufficient bedrock was exposed, IKC-ONE would then begin with the drill, blast, and rock excavation operations for the Powerhouse excavation.

3.2.2 IKC-ONE To Self-Perform Drilling And Efficiently Perform Rock Excavation

IKC-ONE's rock excavation operation consisted of drilling, stemming, blasting, excavating, and rock stabilizing.

Drilling

Driller availability was a major project risk. IKC-ONE would need a SPO immediately at Contract Award, in order to procure the necessary driller labor resources, and mitigate the major project labor risk.

Stemming

The OH&S Regulations, 2012, Part XIX, General Blasting, section 417 (o) defines "stemming" as clean, crushed, angular shaped stone, 12.5% of the borehole diameter in size. The purpose of stemming is to provide confinement for explosive energy in drilling blasting operations.

Section 434 of OHS defines the following restriction:

> *"Drill cuttings shall not be used for stemming material."*

This restriction in the use of drill cuttings and the specification that stemming material must be clean, crushed, angular shaped stone, 12.5% of borehole diameter in size, is a new OH&S Regulation and not in the Company's specification.

At the time IKC-ONE prepared its tender, to the best of IKC-ONE's knowledge, OH&S Officers had not yet begun enforcing the new Regulation. Therefore, IKC-ONE did not reasonably expect that these new Regulations would be in effect.

Blasting

For IKC-ONE to achieve its target, IKC-ONE would need to perform many large production blasts. For IKC-ONE to perform large production blasts, IKC-ONE would need Company to change its drill and blast method specifications, as agreed at time of tender. IKC-ONE could not achieve the required rock excavation production unless Company relaxed its method specification.

Rock Excavation

IKC-ONE planned to complete rock excavation using two equipment spreads, each including one excavator. The limited space of the powerhouse and spillway excavations governed the choice of equipment and the corresponding fleet size.

In order to maintain an efficient crew size within the scheduled production timeframe, IKC-ONE could only utilize two equipment fleets.

Rock Consolidation

Company's Rock Stabilization method specification required IKC-ONE to perform rock consolidation in a systematic approach, culminating with Company "approving" final rock walls. IKC-ONE could not advance with its rock consolidation program until Company approved IKC-ONE's rock consolidation work.

IKC-ONE planned to perform rock consolidation concurrently with its rock excavation operations. IKC-ONE would rely on Company's timely rock wall approval for rock consolidation to mitigate the risk of rock consolidation affecting IKC-ONE's rock excavation critical path.

3.3 IKC-ONE's Productivity and Production Expectations Based on Proven Results

As discussed in Section 3.2.1, IKC-ONE planned its operations using well-established means and methods relying on the terms and conditions in the Contract.

IKC-ONE's partners assembled to perform a rigorous and detailed review of the estimate plan, prior to submitting the Tender. **All partners agreed**, based on their respective experiences from prior projects, that based on the terms and conditions of the Contract – IKC-ONE's well-established means and methods would result in productivity and production levels that would ensure IKC-ONE would achieve project milestones.

IKC-ONE had three key activities on the critical path of its schedule. The following table summarizes IKC-ONE's planned productivity and production expectations for its three key operations: overburden excavation, drilling, and rock excavation, at the powerhouse.

IKC-ONE's on-site management planned its operations through a detailed planning exercise where they "built-up" crews, selected appropriate equipment, and sequenced operations in a logical manner. IKC-ONE's operational team then checked its plan versus IKC-ONE's estimate plan.

IKC-ONE's estimate team validated its estimated production rates against comparable past projects. IKC-ONE based its plan on proven production and productivity rates. Of course, for IKC-ONE to achieve these production rates it would need all conditions represented in the Contract to occur. IKC-ONE could only achieve the estimated production and productivity rates if its work could proceed as planned, on schedule, and without delays and disruptions.

3.3.1 IKC-ONE to Perform Overburden Excavation in a Continuous Manner with a Well-Rested Workforce

Rested Workforce

IKC-ONE would need an efficient, well-rested and undisrupted workforce to meet expected productivity and production expectations and project milestones. Therefore, IKC-ONE's productivity and production expectations relied on the following:

- Well rested workforce with a high moral and attitude;
- Uninterrupted and continuous work flow; and,
- Low supervision to craft ratios.

For the above to occur, and for IKC-ONE to execute its plans, IKC-ONE would need access conditions as represented in the Contract.

The following table details IKC-ONE's planned craft daily itinerary.

Planned Craft Daily Itinerary		
No.	Event	Time
1	Wake-up	5:45 am
2	Bus Leaves Accommodations	6:30 am
3	Bus Arrives at Site	6:45 am
4	Shift Start	7:00 am
5	Shift Finish	5:30 pm
6	Bus Leaves Site	5:45 pm
7	Bus Arrives at Accommodations	6:00 pm
8	Shutdown: Meal/Downtime/Leisure	9:00 pm
9	Lights Out	9:30 pm or earlier

Figure 28: Planned craft daily itinerary. Note that the planned craft itinerary provided more than enough time for craft to obtain a typical eight-hour sleep necessary to rejuvenate.

IKC-ONE planned an 11.5-hour workday (from pick-up to drop-off at the Accommodations Complex). For IKC-ONE to meet the milestones of a remote, northern, schedule-driven project, it would need to provide the workforce, on a daily basis, with an opportunity for both leisure time and an eight-hour window for sleep.

Undisrupted Operations

IKC-ONE planned its operations based on proven productivity and production rates. IKC-ONE planned to perform its operations uninterrupted and in a continuous manner.

3.3.2 IKC-ONE to Perform Rock Excavation with an Efficient Crew Size

Similar to the Overburden Excavation operations, IKC-ONE would require a well-rested work force with uninterrupted operations to meet its optimal productivity.

The limited space of the excavation governed the choice of equipment and fleet size. In order to maintain an efficient crew size within the scheduled production timeframe, IKC-ONE could only utilize two equipment fleets.

SECTION 4 CONTRACT WARRANTEES AND REPRESENTATIONS THAT FORMED THE BASIS FOR IKC-ONE'S TENDER DID NOT MATERIALIZE

4.1 The Conditions and Facilities at the Jobsite were not as per the Contract

4.1.1 Access to Site Frequently Interrupted, Substandard, and Problematic

Before Contract execution, Company asserted that IKC-ONE would have initial, uninterrupted access to the site by November 30, 2012. Yet, after Contract execution, an incomplete, substandard and problematic access road frequently interrupted IKC-ONE's logistical needs that affected the mobilization of equipment, material and other resources and the workers' ability to productively perform their work in a timely manner. IKC-ONE's transportation plan, equipment maintenance plan, escorting plan and mobilization operation were all negatively impacted as each of these plans required alterations that increased costs, delayed the schedule and diverted IKC-ONE's resources from the performance of the work. Through loss of worker moral and fatigue, it had a negative effect on IKC-ONE's productivity and production. IKC-ONE has notified Company on numerous occasions that Company did not provide the required access to the site as per Exhibit 12, Clause 2.1.1 of the Contract.

On January 7, 2013, IKC-ONE notified Company that the Site Access Road was not in a reasonable condition (it did not allow IKC-ONE to mobilize its equipment and supplies at a reasonable speed without interruptions. IKC-ONE further asserted that the Forestry Access Road portion of the Site Access Road is in poor condition, the Site Access Road remains incomplete, and the whole access was inadequate for heavy traffic. It did not have sufficient drainage, had no gravel topping, had no guardrails, and had only one speed sign stating the maximum allowable speed is 30 km/hr. In the same letter, IKC-ONE requested a change order for all impact costs associated with the insufficient Site Access Road. IKC-ONE also requested the road be improved and made safer to drive on so that Company could increase the speed to acceptable limits.

On January 14, 2013, Company, without making any improvements or consideration of the actual condition of the road, increased the speed limit to 50 km/hr from station 6+000 to Company Laydown. However, as there were no improvements to the road, making a change to the speed limit on the speed sign did not have any effect on IKC-ONE's problem. It was the condition of the road, and not the speed limit on the traffic sign, that delayed IKC-ONE's work and caused unsafe road conditions.

IKC-ONE continued to mitigate the impacts and accelerated the work by increasing the workday from IKC-ONE's planned 11.5-hour day to an effective 15-hour day. IKC-ONE's increased workday mitigated the effects of the Company's failure to provide adequate and reasonable

site access, but the increased working hours increased the personnel's fatigue and decreased productivity.

On February 4, 2013, **twenty days** after receiving IKC-ONE's letter, Company directed IKC-ONE to submit a Change Request in the event IKC-ONE experienced a cost impact associated with the Site Access Road. As directed, IKC-ONE has submitted numerous change requests (refer to Appendix 6) that summarize some of the cost impacts IKC-ONE has experienced.

IKC-ONE's Construction Manager ("CM") notified Company in the February 6, 2013 'Client Meeting' that the site access road was in "poor condition" and was a safety issue. The CM reiterated in a 'Progress Meeting' that the site access road construction was a major issue on the project. Company did not take immediate actions to remedy the issue. Despite the disruptions, IKC-ONE continued to mitigate, through re-sequencing its operations and acceleration in an effort to meet project milestones, but at a cost.

On February 17, 2013, in a response letter to Company's own letter dated February 4, 2013, IKC-ONE put Company on notice of a potential delay due to the overall condition of site access. IKC-ONE asserted in its letter that the Site Access Road continued to be in a substandard and problematic condition (would not allow IKC-ONE to mobilize its equipment and supplies or the transport of personnel without interruptions). IKC-ONE repeated to Company that Company's Other Contractors had not completed **any** additional work since December 2012. IKC-ONE advised Company that unless Company's Other Contractors began work immediately, the spring break-up might result in continued delays, as access may not be possible at that time:

- *"We recommend that all work begin immediately on the road so that the risk of this delay may be reduced."*

IKC-ONE further stated that it would request a Change Order for all cost and schedule impacts associated with the delay.

Company's Other Contractors did not resume working on the Site Access Road until late March 2013, **after the spring break-up**. As IKC-ONE had warned, during the spring break-up, which happened between March 14, 2013 and March 23, 2013, the Site Access Road degraded considerably, and disrupted and delayed IKC-ONE's operations even worse.

In fact, during spring break up the frequency of safety incidents increased significantly. Company's site access road was directly or indirectly responsible for most of them. The spike in safety incidents negatively affected workforce morale and led to supervision disruption.

Despite IKC-ONE's notice to Company about the impending impact of the spring break-up on the Site Access Road, Company took no action. The following entries from the daily diary of

IKC-ONE's Construction Manager recall the actual conditions experienced during this timeframe:

- *March 14*

  - *"Average [safe travelling] speed on [the Site Access] road was 10-15 km [per hour] and rocks and tree stumps [were] coming up through the road (…)*
  - *The current road condition [of the Site Access Road] is causing a lot of damage on the equipment (…)*
  - *The remaining 20-kms of road is not covered with mud, but very rough driving conditions. Average driving conditions are 20-30 km/hr and with no topping on road grading the road will not work (…)*
  - *We are receiving many complaints from craft and staff for sore backs and the ride is rough on their bodies (…)*
  - *At the end of dayshift, one of our busses basically disintegrated with a broken radiator and the exhaust pipe fell off on the Forestry Access Road. I had 25 craft workers standing on the road and had to send back an extra bus to pick them up (…)*
  - *Nightshift operation started late (1-2 hours) due to the road conditions and they had a bad shift productivity wise."*

- *March 15*

  - *"As with March 14 the road conditions are very poor (…)*
  - *Day shift started 0.5-1 hr late due to the roads (…)*
  - *I refused to bring in a fuel truck over the road and we will be out of fuel by the end of the shift (…)*
  - *Company/SNC requested I bring the fuel truck and I refused. I told Company/SNC that they could take the risk and bring the fuel to site for us,*
  - *We refused to bring the explosives truck over the road (…)*
  - *I received a call from Company/SNC stating the Forestry Access Road was better. I went out to inspect the Road and its condition did not improve (…)*
  - *Company/SNC were informed that we were shutting down night shift and tomorrows day shift."*

On March 15, 2013, IKC-ONE issued Company a Notice of Delay[11,12]. IKC-ONE informed Company that their Other Contractor had not worked on or maintained the Site Access Road

[11] IKC-ONE to Company Letter 35 Dated March 15, 2013.

since December 2012, and the road was rapidly disintegrating, with the Forestry Access Road practically impassible. IKC-ONE warned Company of IKC-ONE's safety concerns, in particular the safety of craft and staff while driving in these conditions, and the safe access to and from site for emergency vehicles. For these reasons, IKC-ONE suspended the March 15, 2013 night shift and the March 16, 2013 day shift until the Site Access Road allowed for the safe passage of emergency vehicles and operational explosive and fuel supplies.

IKC-ONE's CM noted the following on March 16, 2013 concerning the Site Access Road:

- *March 16*

  - *The road from 5.2 km to [Company] laydown is still extremely rough (…)*
  - *I went to [the] gate at 12:45 pm and it took 1.5 hrs to get through the Forestry Access Road due to waiting for transports to pass (…)*
  - *Had call from Teamster Shop Steward and he was telling me the craft are unhappy with the shutdown (…)*
  - *Still getting lots of complaints from craft, staff, concerning how the road conditions are wearing them out."*

On March 17, 2013, IKC-ONE issued Company another Notice of Delay[13]. IKC-ONE noted the Forestry Access Road required capping, proper ditches, increased width, and a road topping in order for it to meet reasonable standards and for it not to interrupt IKC-ONE's site access. IKC-ONE urged Company to accelerate its repair efforts in order to help minimize the effects of the interrupted site access on IKC-ONE's work. IKC-ONE emphasized again to Company that the problematic condition of the Site Access Road was causing soreness, fatigue, risks of injury, and general labor unrest amongst the staff and craft, and was resulting in inefficient operations, delays and extra costs.

The disintegration of the Site Access Road prevented the safe delivery of explosives to site between March 14, 2013 and March 17, 2013, which resulted in a 2.5 day blasting delay. IKC-ONE offered all of its resources (staff, craft, equipment, materials, etc.) to Company in an effort to assist Company repair its Site Access Road thereby mitigating the impacts of interrupted site access on IKC-ONE's plans.

Company did not accept IKC-ONE's proposal to provide staff, craft, equipment, and materials to help mitigate the issues. Over that period, IKC-ONE's CM noted:

---

[12] IKC-ONE to Company Letter 36 Dated March 15, 2013.
[13] IKC-ONE to Company Letter 37 Dated March 15, 2013.

- *March 17*

  - *"Road from 5.2 km to Company Laydown still very rough and getting worse (…)*
  - *Still receiving lots of complaints from craft and staff on road (…)*
  - *I took about 1.5 hrs (to get) from gate to Company Laydown."*

- *March 18*

  - *"I waited two times going in and out and it took 36 minutes of waiting the first trip and 20 minutes of waiting the second trip (…)*
  - *Held JV call concerning access road…all members very concerned (…)*
  - *We had our first First Aid due to bussing on [the] rough road, [it was a] back injury and he was sent to [the] doctor for check-up (…)*
  - *I was [taking him] to Charlie McDonald and he told me the road is wearing him out (…)*
  - *We are getting our first indications of labor unrest. The Teamsters are slowing to a crawl on the road and trying to stop work early."*

IKC-ONE's field supervision observed that the Teamsters were slowing down and threatening to stop work early because of the poor conditions of the Site Access Road. At this time, Company had not yet negotiated a SPO. IKC-ONE's CM met with the Operating Engineer's Shop Steward the next day to discuss what IKC-ONE observed as impending labor unrest:

- *March 19*

  - *Met with [Operating Engineers] Shop Steward Walter Roberts concerning Labor concerns. Walter told us the men are having a hard time with the rough road and are going to use their right to refuse work tomorrow. I asked Walter to have the men to write their concerns on paper and we would discuss it with Company tomorrow. He agreed and told us he would try [to] stop the men from refusing to work (…)*
  - *Day shift started an hour late the morning (…)*
  - *Held a Risk Assessment meeting with SNC. We showed them that IKC-ONE identified the road as a huge risk to the job."*

- *March 20*

  - *"Forestry Access Road still in poor condition with one half hour or more delays due to improvement efforts (…)*
  - *Road from 5.2 km to Company Laydown still very rough(…)*

- *Field Engineer hurt his back riding the road tonight, First Aid, gone back to work (…)*
- *Local supplier for stemming material refused to come past 5.2 km – we had to go out to get the material (…)*
- *Talked with Union concerning road condition, the men are still upset, but waiting for Company's response (…)*
- *We have had three union issues concerning HR [Human Resources] and threats between workers today, poor morale may be the reason."*

In the March 20, 2013, on-site 'Client Meeting' IKC-ONE informed Company that the labor environment was creating a threat of a strike due to 'morale and attitude' issues.

Company and IKC-ONE conducted a separate meeting on March 20, 2013 in HVGB concerning the Site Access Road. IKC-ONE's letter dated March 21, 2013 summarized IKC-ONE's proposed set of actions. IKC-ONE also reiterated its offer to provide its own resources to assist Company in mitigating the effects of the poor site access.[14]

Again, Company did not accept IKC-ONE's proposal. IKC-ONE's CM's noted the following in their Daily Diaries:

- *March 21*
  - *"Road in very hard shape."*
- *March 23*
  - *"…Last half [of Access Road] in poor condition (…)*
  - *Met with Bob Horton [Contracts Administrator] and he told me that SNC would not action or sign the Delay LEMs [Labor, Equipment, and Materials] for lost time due to the road conditions.*
- *March 24*
  - *"I had to wait 45 minutes for construction activities on the Forestry Access Road."*

Company did not respond for twelve days to IKC-ONE's proposal to assist Company in minimizing and mitigating the effects of a problematic site access road. On April 2, 2013,

[14] IKC-ONE to Company Letter 40 Dated March 21, 2013.

Company responded by categorically rejecting IKC-ONE's proposals and not accepting IKC-ONE's assistance. In its response, Company stated:

- *"We have considered the application of a road topping to temporarily improve the Road condition. As you are aware, this is not normally done on this type of road, however as noted in your letter with spring thaw expected within two or three weeks any benefits of this material will be lost in spring breakup. Based on the above, we have determined this is of little value."*

It is undisputable, Company was wrong. An application of road topping would have had significant value.

The Contract states that IKC-ONE shall have initial access to the site and that the Company will use reasonable efforts to maintain all main access roads leading to the Site. The following schedule summarizes issues experienced by IKC-ONE, showing that Company failed to provide the required access:

Activity Name	Start	Finish
LCP - Warrantees and Representations that Formed the Basis for IKC-ONE's Tender Did Not ...		
Causing Production Losses		
1. Warrantees Related to the Conditions and Facilities at the Jobsite Were Not Met		
Delay Due to Snow Accumulations	05-Feb-13 A	07-Feb-13 A
Delay Due to Local Hockey Tournament	13-Feb-13 A	18-Feb-13 A
Delay Due to the 5-Wing Barracks Accommodations Protest	23-Feb-13 A	24-Feb-13 A
Delay Due to Access Road Deterioration / Mild Conditions	14-Mar-13 A	15-Mar-13 A
Delay Due to Access Road Deterioration / Mild Conditions (Explosives Truck Could Not /	16-Mar-13 A	17-Mar-13 A
Delay Getting Explosive Truck to Site	16-Mar-13 A	17-Mar-13 A
Delay Due to Access Road Deterioration / Mild Conditions	27-Mar-13 A	28-Mar-13 A
Delay Getting Safe Access to Excavation	30-Mar-13 A	31-Mar-13 A
2. Company Did Not Perform its Duties		
Company's "Aconex" Document Control System Dysfunctional	09-Nov-12 A	01-May-13 A
Company Did Not Provide Full Notice to Proceed until December 20, 2012	09-Nov-12 A	21-Dec-12 A
Delay Due to Onsite Medical Services and Emergency Vehicles	30-Nov-12 A	11-Jan-13 A
Delay due to Permits in Place	01-Jan-13 A	15-Feb-13 A
Delay Due to Protest "Idle No More" (IBA)	12-Jan-13 A	12-Jan-13 A
Delayed Miner's Medical	24-Jan-13 A	25-Jan-13 A
Delayed Trial Blast	25-Jan-13 A	25-Jan-13 A
Delayed SLI Orientation	25-Jan-13 A	25-Jan-13 A
Delay Due to Protest (IBA)	05-Apr-13 A	06-Apr-13 A
Delay Due to Protest (IBA)	18-Apr-13 A	19-Apr-13 A
3. Site Conditions Changed		
Delay Variance Vertical Wall Profile - OH&S	13-Feb-13 A	14-Feb-13 A
4. Labour Conditions and Construction Design Not Final or Constructible		
Company's Rock Stabilization Design Did Not Work	21-Mar-13 A	31-Mar-13 A
Stemming Material Requirements Unreasonable	21-Mar-13 A	24-Mar-13 A

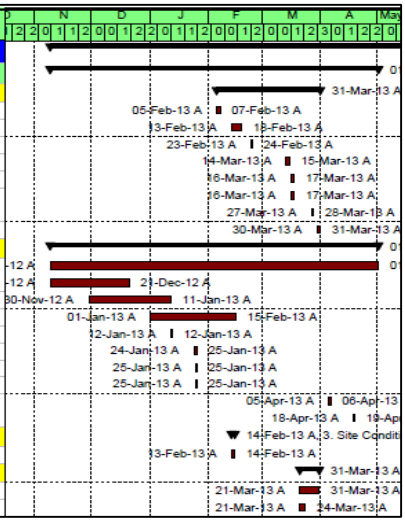


Figure 29: The Figure shows the major physical interruptions or delays that physically prevented IKC-ONE from performing its work that day. Note that all of the above listed delays occurred during the time that IKC-ONE did not have an on-site Accommodations Complex.

IKC-ONE would experience many more delays and disruptions, than these major disruptions highlighted in Figure 29.

The access road was unsuitable for productive travel. The top image in Figure 30 shows the actual condition of the Site Access Road on June 16, 2013, a typical condition. The lower image in Figure 30 shows the condition that the Site Access Road should have been in by no later than December 31, 2012.

Figure 30: Top image shows condition of the Site Access Road on June 16, 2013. Bottom image shows the condition of Site Access Road on July 9, 2013. The bottom image depicts what Company promised and what the Contract warranted.

Consequently, on April 16, 2013 IKC-ONE issued Company a Notice of Dispute[15]. In the notice, IKC-ONE stated that Company's incomplete, substandard, and problematic Site Access Road has interrupted IKC-ONE and has had a material effect on IKC-ONE's plans and subsequent ability to meet project milestones.

4.1.2 Accommodation Complex Not Provided Until April 14, 2013

The Contract required Company to provide IKC-ONE an on-site Accommodations Complex by January 1, 2013. Company did not provide an on-site Accommodations Complex to IKC-ONE until April 15, 2013 – 104 days late.

On December 3, 2013, Company informed IKC-ONE that Company would not provide its Accommodations Complex until February 28, 2013. The late supply of the on-site Accommodations Complex significantly disrupted IKC-ONE's management as it diverted its attention to accommodations planning and management and away from operations.

By December 17, 2012, IKC-ONE's workforce occupied approximately 100 rooms between Hotel North 1, Hotel North 2, the Labrador City Inn, and the Royal Inn. With no other rooms to spare in HVGB, and in preparation for the start of construction, IKC-ONE applied to the Royal Canadian Air Force ("RCAF") 5-Wing Air Force Base ("5-Wing") for an additional 100 rooms.

In addition to the efforts IKC-ONE had to expend to accommodate its staff, IKC-ONE's management had to make efforts to provide room and board for its workforce. On December 17, 2012 and December 19, 2012, IKC-ONE requested permission from 5-Wing to use Sodexo, their catering contractor, to cater to crews who would be staying at the 5-Wing "barracks."

The Contract obligated Company to provide all board and lodging for IKC-ONE's workforce. However, IKC-ONE had to make arrangements in the absence of Company providing alternate accommodations. These extra efforts and the poor accommodation conditions fatigued, frustrated, and demoralized IKC-ONE's staff and craft.

On December 24, 2012, 5-Wing responded to IKC-ONE requests for 100 rooms. Unfortunately, 5-Wing could not accommodate IKC-ONE's request.

On January 7, 2013, IKC-ONE sent a notification to Company that, because Company had not provided on-site accommodations as it was obligated to do, IKC-ONE was making alternate arrangements for accommodations[16]. IKC-ONE advised Company that IKC-ONE could not find

[15] IKC-ONE to Company Letter 45 Dated April 16, 2013.
[16] IKC-ONE to Company Letter 7 Dated January 7, 2013.

the accommodations necessary for the planned additional workforce beyond January 25, 2013, and that it would need Company's assistance. On January 13, 2013, IKC-ONE restated to Company that IKC-ONE had incurred additional costs and impacts because of Company's failure to provide on-site accommodations[17].

On February 4, 2013, Company acknowledged the delay in the provision of on-site accommodations and stated its appreciation for the efforts that IKC-ONE had undertaken to secure sufficient Room and Board for its forces in absence of its on-site accommodations[18]. Company further stated it had discovered 62 spaces available in the HVGB region and encouraged IKC-ONE to take all steps necessary to secure those spaces and whatever other spaces that would be required to accommodate its workforce. IKC-ONE later found that only 36 of the 62 spaces were actually available, and IKC-ONE was already utilizing all of them. In effect, no additional spaces were available as stated by Company.

<u>February 5-6, 2013 Delay Due to Snow Accumulation</u>

On February 5-6, 2013, snow accumulation on the Trans Labrador Highway and the site access road prevented IKC-ONE's workforce from gaining access to the work site. However, had the workforce been accommodated in Company's on-site Accommodations Complex, IKC-ONE could have gained access to the work area. The actual weather conditions at the site were not severe enough to prevent IKC-ONE from working. This event resulted in a 2.5 shift (1.25 days) delay.

On February 8, 2013, Company again acknowledged the delay in the provision of on-site accommodations[19]. By this time, IKC-ONE had borne significant additional costs and the effects were evident in production and productivity losses.

On February 13, 2013, IKC-ONE received confirmation from RCAF 5-Wing that 95 rooms were available between February 14, 2013 and April 14, 2013[20]. IKC-ONE immediately began moving its staff to the 5-Wing "barracks". However, 5-Wing could not provide meals. IKC-ONE had to make alternate arrangements to provide meals to the crews rooming at the 5-Wing barracks.

[17] IKC-ONE to Company Letter 11 Dated January 13, 2013.
[18] Company to IKC-ONE Letter Dated February 4, 2013
[19] Company to IKC-ONE Letter Dated February 8, 2013
[20] Email from 5-Wing to IKC-ONE Dated February 13, 2013

February 13, 2013 Delay Due to Local Hockey Tournament

The Hotels in HVGB had made a commitment to host a minor hockey tournament between February 13, 2013 and February 18, 2013. This commitment required the majority of hotel rooms in town for visiting hockey teams. Because of this event, IKC-ONE had to move out of the hotel rooms where its workforce had been staying. All of the Hotels in HVGB had booked its rooms, leaving IKC-ONE with no accommodations alternatives.

This event resulted in IKC-ONE performing a significant rescheduling and reorganization exercise: Craft on-site had to accelerate their planned turnarounds, and craft off-site had to delay their return to site until hotel rooms would again become available, IKC-ONE had to delay chartered airline flights and reschedule them. The exercise proved a serious challenge to IKC-ONE's management and travel staff. This interruption resulted in IKC-ONE cancelling five straight night shifts (yielding a 2.5-day delay in the construction schedule). Had Company provided accommodations on site as of January 1, 2013, this event would not have affected IKC-ONE, and the construction schedule delay would not have occurred.

On February 17, 2013, IKC-ONE issued Company a Notice of Potential Delay as the impacts began to accumulate and become more obvious. In its Notice, IKC-ONE reiterated that it had incurred additional costs and impacts because of Company's failure to provide on-site accommodations by January 1, 2013[21].

February 23, 2013 Delay Due to the 5-Wing Barracks Accommodations

On February 23, 2013, several craft set up a protest on the roadway to site, to bring attention to management of the crafts displeasure with the accommodations at 5-Wing barracks. The protest lasted two hours and caused a delay to shift start up. IKC-ONE had to reason with the craft that conditions would eventually improve when Company finished the on-site Accommodations Complex. Unfortunately, one of IKC-ONE's craft quit over this issue. This issue caused further demoralization of IKC-ONE's workforce.

IKC-ONE submitted a Change Request to Company on March 1, 2013 that summarized the disruptions that IKC-ONE had experienced[22]. IKC-ONE procured a property manager to manage all of the accommodations between the hotel, the barracks, and various rooms around HVGB. IKC-ONE also procured additional vans, pickups, busses, and additional support staff to shuttle its workforce to and from site.

[21] IKC-ONE to Company Letter 23 Dated February 23, 2013.
[22] IKC-ONE to Company Letter 31 Dated March 1, 2013

On March 18, 2013, Company issued IKC-ONE a change order for the provision for craft Room and Board. Company described the impact on the schedule and revised finished date as "undetermined at this time."[23]

On April 12, 2013, IKC-ONE heard verbally that Company would open its Camp within the next several days. 5-Wing obligated IKC-ONE to notify them whether or not they intended to stay beyond April 14, 2013 (the expiry of IKC-ONE's 3-month agreement). If IKC-ONE had intended to stay beyond April 14, 2013, IKC-ONE would have to apply for an extension. The request would likely have to go to the Minister of Defence of the Federal Government, which required a minimum of two days. As such, IKC-ONE had to decide immediately and hence pressed Company for a decision.

Company knew that time was of the essence, and therefore, on April 13, 2013, notified IKC-ONE that it planned to open its on-site Accommodations Complex on April 14, 2013. IKC-ONE immediately started transitioning its workforce into the Accommodations Complex. By April 17, 2013, IKC-ONE had moved all non-local craft into the work camp.

Company Directed IKC-ONE to Move its Staff to the Accommodations Complex

On May 3, 2013, Company notified IKC-ONE to move its staff into the on-site Accommodations Complex[24]. IKC-ONE requested Company reconsider its decision to move IKC-ONE staff into the camp as the costs associated with the cancellation of leases would result in a net loss to the Company. IKC-ONE further expressed its concern to Company; with IKC-ONE's projected accelerated workforce, the camp would not have the capacity that would be required by July 2013. Company would eventually have to direct IKC-ONE's staff to leave the camp. At that time, Company would risk that accommodations in HVGB would become difficult, if not impossible to find. In addition, moving Staff for a third time would be expensive and would further disrupt, frustrate and fatigue an already stressed staff. However, Company insisted that IKC-ONE relocate its staff from HVGB into the Accommodation Complex.

Therefore, as directed by Company, on May 6, 2013 IKC-ONE notified its staff presently living in apartments in HVGB to vacate their apartments and move into the on-site Accommodations Complex by May 30, 2013[25].

[23] Company to IKC-ONE Letter Dated March 18, 2013
[24] IKC-ONE to Company Letter Dated May 3, 2013
[25] IKC-ONE Interoffice Memorandum Dated May 6, 2013

Not Enough Spaces to Accommodate IKC-ONE's Workforce

Unfortunately, at several times prior to receiving the on-site Accommodations Complex, HVGB (Hotel North 1, Hotel North 2, Labrador Inn, Royal Inn, the 5-Wing barracks, and numerous apartments) did not have enough accommodations to meet IKC-ONE's planned labour resource loading.

The lack of accommodations and events resulting from a lack of Company providing the on-site Accommodations Complex resulted in a significant disruption and delays to IKC-ONE's plans and schedule. It also contributed greatly to workforce unrest, fatigue, demoralization, and supervision dilution.

4.1.3 Insufficient Laydown Area Provided Late, on December 19, 2012

On October 19, 2012, Company directed IKC-ONE to compress its mobilization schedule due to an impending late Contract Award. IKC-ONE's compressed mobilization plan included the following: assembly of facilities and equipment in winter conditions; mobilization of additional equipment resources; and temporarily staging equipment and facilities in HVGB.

On November 30, 2012, IKC-ONE did not have access to Company's Laydown Area. Company did not make its Laydown Area available to IKC-ONE until December 19, 2012. In addition, at that time, Company only made 10,000 m2 of the contractually obligated 20,000 m2 available to IKC-ONE.

As a result, IKC-ONE had to share office space with Company, which reduced management and supervision efficiencies. In order for IKC-ONE to maintain its planned total office space, IKC-ONE had to retain an office in HVGB. Had Company provided IKC-ONE with the area it represented in the Contract, and had the terms, conditions and obligations in the Contract been provided and adhered to as required (such as "good" functioning telecommunications **and data**), IKC-ONE could have established its planned on-site office complex. Without an on-site office complex, IKC-ONE's management, project controls team, engineers, and senior field supervisors had to travel from HVGB to site to perform their planning and office related functions.

4.1.4 Company Did Not Provide Permanent Electrical Power Supply

The Contract stated that Company would provide IKC-ONE permanent power to its on-site facilities including its main office complex and its satellite office complex by February 1, 2013.

IKC-ONE did not have its facilities setup (due to the insufficient and late delivery of area at Company's Laydown Area). Nevertheless, Company was not ready to deliver permanent power to IKC-ONE until May 14, 2013. In other words, even if IKC-ONE had its planned facilities set-up

IKC-ONE would have had to run its entire facilities on generators – not only impractical but also uneconomical.

Lack of permanent power has significantly inconvenienced IKC-ONE. Company has compensated IKC-ONE through a Change Order for some of these increased costs. However, other costs remain without compensation. One reason (of several) IKC-ONE retained most of its General and Administrative staff, as well as its Engineering and Project Controls Staff, in offices in HVGB is because of the lack of permanent power.

It is vital that General and Administrative staff, Engineering, and Project Controls staff have an office complex proximal to the work area. IKC-ONE experienced significant logistical issues because of having to retain its HVGB office complex.

4.1.5 Insufficient Telecommunications And Data On-Site

The Contract asserted that Company would have telecommunications and data setup that would be compatible with the main construction phase (a 5-year $7 Billion mega-project) by February 2013. Company did not provide a telecommunications network necessary to satisfy the main construction phase as obligated by the Contract. Company did not provide these services until May 1, 2013.

While the Company finally installed its telecommunications system by May 1, 2013, the system did not function effectively until July 23, 2013. As a result, IKC-ONE has been working under reduced telecommunication system capacity since February 2013, which has adversely affected operational efficiency and has frustrated IKC-ONE's supervision leading to supervision dilution.

IKC-ONE has incurred significant extra cost because of reduced telecommunications and insufficient data capabilities. The lack of telecommunications and data on-site is another reason IKC-ONE retained most of its General and Administrative staff, as well as its Engineering and Project Controls Staff in offices in HVGB. It is vital that IKC-ONE's General and Administrative staff, Engineering, and Project Controls staff have functioning telecommunications and data for both operations support and safety purposes.

4.2 Company Did Not Perform its Duties and Obligations

4.2.1 Company Did Not Have A Special Project Order Project Labour Agreement Until March 19, 2013

Without an SPO in place at Project start up, it would be difficult for IKC-ONE to begin on November 30, 2012 as planned. Therefore, pre-award, IKC-ONE verbally explained to Company the urgency of expediting an SPO. Company **knew** that without an SPO Agreement in place

immediately following Contract execution, IKC-ONE would have a problem securing Craft resources necessary to begin executing IKC-ONE's plan.

At Contract award, Company did not have an SPO in place. Following the negotiation of an SPO, IKC-ONE would need a minimum of three weeks to procure Craft resources 'ready for work'. As such, IKC-ONE had to pay close attention to the status of Company's SPO. IKC-ONE would need to procure, immediately, labour resources once Company had a SPO established.

As stated in Section 2.1 and Section 2.3 of this document, IKC-ONE relied on having initial access to the Company Laydown and thus, planned to mobilize on November 30, 2012. Mobilization required the use of Craft resources and thus further demonstrates that it was vital that the SPO be in place at the time of Contract execution.

Immediately following Contract execution, IKC-ONE initiated detailed planning, mobilization, and procurement activities. All was on track except for the SPO. By November 14, 2012, two weeks prior to IKC-ONE needing Craft resources at the site, Company had not provided IKC-ONE with an SPO, so IKC-ONE issued Company a letter urging Company to negotiate the SPO immediately[26].

Without any time to spare, Company informed IKC-ONE to make all reasonable efforts to secure a TLA (in advance of the SPO) in an effort to prevent any further schedule slippage. IKC-ONE began negotiations for the TLA in mid-November 2012, immediately following IKC-ONE's realization that Company would not have an SPO in place for work performed in 2012. IKC-ONE brought in additional resources in order to assist in managing the TLA. Despite the additional resources, the TLA diverted a considerable amount of senior Project leaders' attention away from the more vital planning and procurement activities. IKC-ONE alone successfully negotiated a labour agreement to allow the project to start.

IKC-ONE scheduled its first "mark-up" meeting under the terms of the TLA on November 27, 2012 and held it on November 30, 2012. IKC-ONE performed the mark-up meeting in advance of the signed TLA only because of the good faith relations between IKC-ONE and the unions. Otherwise, the markup meetings could not have happened until after the execution of the TLA. On December 4, 2012, with the "mark-up" meeting complete, IKC-ONE issued its first labour request on December 4, 2012. Had Company had the SPO in place at Contract Award, IKC-ONE could have begun procuring labour resources immediately.

[26] IKC-ONE to Company Letter 1 Dated November 14, 2013

By December 13, 2012, IKC-ONE had its first craft resources on site ready for site work, including mobilization and follow-on overburden excavation. Although IKC-ONE hired some craft before Christmas, it was too close to Christmas for any meaningful hiring to be done, because labour unions were not open, and Craft reluctance to report to HVGB during Christmas. On January 2, 2013, IKC-ONE began substantially procuring Craft resources. Even after IKC-ONE's extraordinary measure of negotiating a Temporary agreement, the lack of an SPO delayed its mobilization and initial infrastructure set-up by one month. This effective two-month impact was yet another way in which Company significantly delayed IKC-ONE right from the start, the most critical time in a fast-track construction project.

In its Contract schedule, which depended on Craft on-site by November 30, 2012, IKC-ONE had planned to start drilling operations on February 11, 2013. IKC-ONE began procuring drillers immediately following the negotiation and implementation of the craft assignment under the markup process of the TLA. By January 23, 2013, however, the Local 904 *Operating Engineers* (OEs) had only five drillers available, and IKC-ONE's plan required a quick ramp up to over 20 drillers. IKC-ONE's only hope of preserving the schedule was to start immediate procurement of additional drillers from outside of the province. The procurement of these drillers added three weeks delay to the effective start of IKC-ONE's drilling operation. Overall, it took IKC-ONE several weeks to get its full contingent of drillers.

Company did not have the first revision of the SPO in place until March 19, 2013 and the final revision in place until May 30, 2013. In the midst of project hardships, the transition from the TLA to the SPO caused considerable disruption and frustration to management and the workforce as this again diverted management's attention to labour issues and away from essential operational planning. These disruptions adversely affected staff energy, morale, and attitude.

Had Company provided an SPO immediately following Contract execution, IKC-ONE would have had an additional month to find the necessary drillers. IKC-ONE had warned Company on numerous occasions of the significant "driller's risk".

4.2.2 Company has hot Complied with the Terms and Conditions of the Innu Impacts Benefits Agreement

IKC-ONE's collective experience has shown that the success of a remote and northern project in Newfoundland and Labrador relies on a strong relationship with First Nations, Inuit, and Metis peoples. It was vital that Company and IKC-ONE fully comply with the terms and conditions of the IBA for all First Nations (other than Inuit or Metis), and consequently, overall workforce morale and attitude to start and remain high.

Company provided a Provincial Benefits Questionnaire in its tender packages, showing Company's knowledge of the importance of the IBA. IKC-ONE, also understanding the importance of First Nations, Inuit, and Metis to the success of northern construction in general and the Lower Churchill Project (LCP) in particular, committed to Company's stated strategy.

Part C of IKC-ONE's proposal submission includes an extensive summary of IKC-ONE's position on the LCP's Aboriginal Training Initiative. As part of that position, IKC-ONE committed to complying with the terms of the IBA. Obviously, receipt of a copy of the IBA would be a vital part of that compliance. As of August 2013, however, Company has still not provided IKC-ONE with the LCP IBA.

Company has failed to provide and cement the aboriginal liaison process in a timely manner. It has failed to implement a proper and timely cultural awareness program to ensure that it meets its commitments under the IBA. Company has not provided proper training opportunities for aboriginal workers as is typical to most IBAs. Company has not followed through on its obligations and initiatives in a timely manner as required by a typical IBA.

Aboriginal leaders have noticed.

<u>January 11, 2013 – Locals "Idle No More" Protest</u>

Protesters closed the site access road on January 11, 2013 from 7:00 am to 12:00 pm when local protesters had an issue with the Lower Churchill Project development[27]. The protest resulted in a closure of the site access road for half of a shift. If Company's Accommodations Complex had been in operation on January 1, 2013 as planned, the protest would have had little to no effect on the day's production at site.

Company recognized that the delay had occurred and that the protest had affected IKC-ONE. However, Company denied responsibility stating that the protest event was a Force Majeure event in accordance with Article 29 of the Contract.

Although IKC-ONE does not agree with the contention that this event is a Force Majeure event, Company, by way of their suggestion that the event was a force majeure event, did accept the fact that IKC-ONE is entitled to an extension of time for the period of the delay. Therefore, Company assumes responsibility for the additional acceleration costs IKC-ONE incurred in order to try to meet the original completion date as Company directed.

[27] IKC-ONE to Company Letter 10 Dated January 13, 2013

April 5-6, 2013 – Metis Protest

Protestors closed the site access road again on April 5, 2013 when local protestors expressed their opposition to the Lower Churchill Project development. This protest resulted in a closure of the site access road for a period of four shifts (two full production days).

Again, like the previous protest, had Company's camp been in operation on January 1, 2013 as planned or had Company provided effective jobsite security, the protest would have had little to no effect on IKC-ONE's production at site.

Although IKC-ONE does not agree, Company, by way of their suggestion that the event was a force majeure event, did accept the fact that IKC-ONE is entitled to an extension of schedule by the period of the delay and, therefore, will compensate IKC-ONE for the cost to accelerate its work to meet the target date as Company directed.

April 13, 2013 and April 15, 2013 – Local Protest

Two subsequent First Nations protests occurred on April 13, 2013 and April 15, 2013. At that time, Company's lack of performance under the IBA had severely affected workforce morale.

By this time, IKC-ONE's workforce had travelled many hours for months on an atrocious site access road, had slept in numerous temporary accommodations with varying quality, including the poor conditions of the 5-Wing barracks and the Labrador Inn and had faced numerous protests and operational delays. In fact, some of IKC-ONE's Craft quit because of having to stay at the Labrador Inn and others would not even go to site if they had to stay at the Labrador Inn.

To appease Craft, IKC-ONE had to rotate Craft out of the Labrador Inn as soon as a room became available at any other Hotel (other than the 5-Wing Barracks). The cumulative impact of these issues and delays fatigued and exasperated IKC-ONE's Staff and workforce.

April 18-20, 2013 – Innu Protest

On April 18, 2013, Innu Protestors barred entrance to the site access road, entered the site and protested both in the on-site Accommodations Complex and on the work site. Company directed IKC-ONE to evacuate the Accommodations Complex and the work site immediately.

As directed by Company, IKC-ONE immediately arranged with various hotels in HVGB to accommodate its workforce. However, Company directed IKC-ONE to move all craft into the 5-Wing barracks for April 18, 2013.

On April 19, 2013, as the Innu protest continued, Company directed IKC-ONE to now exit the 5-Wing barracks immediately. Therefore, as it had done the previous day, IKC-ONE arranged to

accommodate its workforce in various hotels in HVGB. However, due to a lack of accommodations by then, in some instances IKC-ONE had to assign two workers per room. This uncomfortable arrangement upset and fatigued IKC-ONE's workforce even more. On April 19, 2013 at 6:00 PM Company advised IKC-ONE that the Innu protest had ended and thus directed IKC-ONE to return to work. By April 20, 2013 6:00 PM IKC-ONE had returned its entire workforce to camp. This was disruptive and expensive; IKC-ONE lost both time and efficiency.

As a measure to appease and mitigate First Nations labour unrest, on April 19, 2013, Company directed IKC-ONE to remove its General Superintendent from site. Company's unfounded decision had a **massive negative impact** on IKC-ONE's workforce morale, production, and management of the work.

Had Company had its IBA in place and been performing its duties, including collaborating with IKC-ONE, many of the protests would not have happened and IKC-ONE would still have its General Superintendent, a vital production person, in place. The loss of one of IKC-ONE's most important production staff created a significant disruption in IKC-ONE's project leaders, diverting their attention away from operations and into finding a suitable replacement and managing a shock to the crew morale. It took IKC-ONE over three weeks to find a suitable replacement. Although IKC-ONE cooperated with Company by removing its General Superintendent, IKC-ONE did not then and continues not to agree with the basis for his removal. Company promised to provide a letter justifying the reasons for his removal. Company has yet to provide such a letter.

By late April 2013, First Nations absenteeism had been significant. In addition to morale issues, Innu workers began raising concerns about fatigue. The absenteeism disrupted and diverted IKC-ONE management's attention. IKC-ONE did not know and had not contemplated the unacceptable travel arrangements for the First Nations on the project. IKC-ONE later found out that Company had agreed to shuttle Innu workers from Sheshatshiu to site on a daily basis. In order to arrive in time for shift start up, Innu workers had to leave Sheshatshiu as early as 4:30 am and return as late as 7:15 pm. Had Company provided IKC-ONE with the IBA and collaborated with IKC-ONE, IKC-ONE could have planned alternatives to mitigate the effects of fatigue, absenteeism, and resulting demoralization of the Innu workers from Sheshatshiu.

The cumulative effects of these protests affected IKC-ONE's staff and craft morale and attitude.

For the sake of the project, something had to change.

<u>April 23, 2013 – First Nations Project Summit Meeting</u>

On April 23, 2013 IKC-ONE, and its First Nations subject matter expert, met with Company to discuss Company's First Nations and IBA project struggles. At that meeting, Company

acknowledged its failure to successfully manage the IBA process. Company further agreed to take immediate action on, and complete within two weeks, the following nine actions:

1. Implementation of an On-site Innu Liaison;
2. Better Integrate Company's Off Site Innu Human Relations Manager;
3. Company to set up a Cultural Awareness Presentation/Orientation Program;
4. Company to initiate a multi-Scope training program;
5. Company to set up a disciplinary review board committee with IKC-ONE;
6. Company to initiate an Innu Engagement Team sub-committee including IKC-ONE;
7. Company to set up an Innu Targeted Orientation and implement with all Contractors on site;
8. Company planned to host a series of "town halls" to discuss the above initiatives;
9. Company to set up an IBA Commitment Presentation and distribute to all Contractors to ensure that Company is meeting all commitments made.

Clearly, the nine actions would have (and will have) an extremely positive impact on workforce morale and will be necessary to mitigate the risk of further disruptions and protests from now until project completion. Most of the above initiatives are typical of an IBA. Company should have been implementing these actions **before** awarding the Contract, not six months after its start.

Company's failure to perform under the terms and conditions of the IBA has led to disruptions, protests, and has fatigued IKC-ONE's staff and has severely affected IKC-ONE's workforce morale.

4.2.3 Company's Jobsite Security was Insufficient to Mitigate Security Breaches

If Company had provided the on-site Accommodations Complex by January 1, 2013 as required by Contract, and/or had Company met the terms and conditions of the IBA it is likely that numerous protests and other delays would not have affected IKC-ONE's workforce and operations.

Without an on-site Accommodations Complex, IKC-ONE's workforce and operations were vulnerable to any event that might materialize between HVGB and the site. Unfortunately, a number of events **did** materialize. IKC-ONE had to suspend or delay work numerous times because of these events.

However, Company is responsible for jobsite security. So not only would IKC-ONE not have been vulnerable to protests had Company provided on-site accommodations, and complied with the IBA, but also, IKC-ONE would not have been vulnerable had Company provided jobsite security as obligated by the Contract.

4.2.4 Company Has Not Provided Timely Responses to Requests for Information

Timely responses to project issues through a functioning document control system are essential for the success of fast-track construction mega-projects.

Document Control System

The Contract implies that Company would have a functioning and functional Document Control System by November 5, 2012.

On December 20, 2012, seven weeks after Contract execution, Company directed IKC-ONE to use Company's "Aconex Project Mail" Document Control system. Since that time, Company's document control system has been dysfunctional and inefficient. Information flow has been very poor for a variety of reasons (including documents being sent but not received) related to Company's "Aconex" document control system.

In several instances, IKC-ONE had submitted documents to Company; however, Company site personnel were not receiving these submissions, unbeknownst to anyone. In one particular instance, Company site personnel shut one of IKC-ONE's critical operations down for one full day because they had not received IKC-ONE's required submittals. In fact, IKC-ONE had made the submissions weeks earlier, as required.

IKC-ONE did not receive several documents that Company submitted to IKC-ONE, again, unbeknownst to anyone. In addition, "running logs" of correspondence to and from were not functioning as intended. As a result, for a period, IKC-ONE hand delivered its submittals and notices to Company.

Company demanded that all correspondence go through "Aconex". However, because the system was dysfunctional, it caused confusion and misconceptions between parties and affected the coordination and mutual respect of project personnel. Often, IKC-ONE had to alter the sequence of its operations while waiting for Company to respond to correspondence.

In fact, because of Company's dysfunctional document control center, Company requested IKC-ONE supply a document transmittal log that tracks IKC-ONE's submittals. Typically, the Owner manages the document transmittal log.

The following table summarizes some of Company's delayed response times:

Days Later Than Required		
As Requested	29	26%
1 to 5 Days Late	47	43%
6 to 10 Days Late	12	11%
11 to 15 Days Late	5	5%
Over 15 Days Late	17	15%
Total	110	100%

Figure 31: Breakdown of Company's Request for Information (RFI) response time. Company responded over 25 days late in 15% of the cases.

Figure 32 shows the total percentage of RFIs that IKC-ONE received back from Company late.

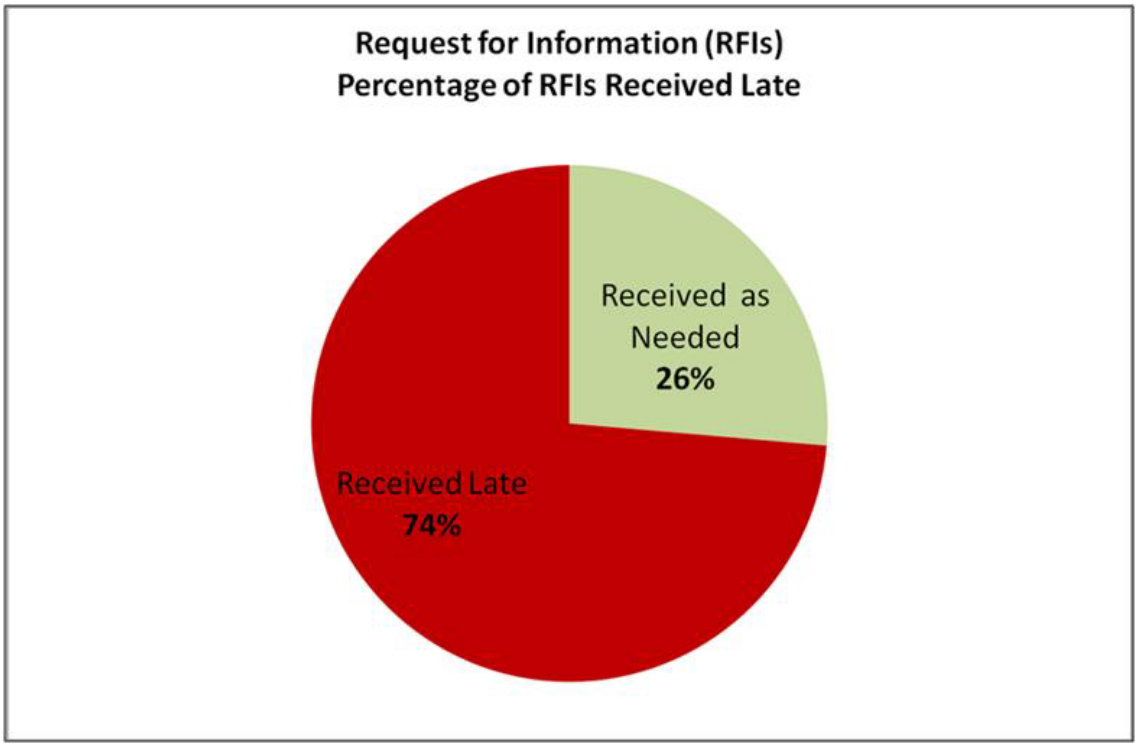


Figure 32: Company returned 74% of IKC-ONEs Requests For Information's (RFI's) late

Company's RFI process required IKC-ONE to provide a date that it required a response to the RFI. In most cases, IKC-ONE issued RFIs when it **needed** information essential to its activities and operations. In a fast-track project, timely responses to RFIs are essential. Company responded late in 74% of IKC-ONE's RFI submittals (including revisions)[28]. In 15% of cases, Company responded over 15 days late. In some instances, IKC-ONE had to re-sequence its activities while waiting for Company to respond.

For example, on January 24, 2013, Company directed IKC-ONE to stop its drilling activities in part due to a lack of an approved Inspection and Testing Plan ("ITP"). On January 27, 2013, IKC-ONE responded to Company's letter. In its response, IKC-ONE summarized the total time taken by Company to review the ITP:

- December 1, 2012 – IKC-ONE submitted the ITP;
- December 19, 2012 – Company returned the ITP directing IKC-ONE to revise the ITP;
- January 8, 2013 – IKC-ONE resubmitted the revised ITP;
- January 16, 2013 – Company returned the ITP directing IKC-ONE to revise the ITP;
- January 24, 2013 – IKC-ONE resubmitted the revised ITP;
- January 25, 2013 – Company returned the ITP as a "Status 02" (Work may proceed).

It took Company a cumulative total of 27 days to review the drilling ITP, and overall, it took Company 56 total days to **approve** IKC-ONE's drilling ITP. Company's stop work order had a direct effect on IKC-ONE's drilling operation.

This document control, and timely response issue, and other like it, have delayed IKC-ONE, have aggravated, and frustrated IKC-ONE's Staff and did not meet contractual expectations.

4.2.5 Company did Not Provide a Full Notice to Proceed Until December 19, 2012

Company knew that for the Contract to meet its milestones, time would be of the essence, and therefore getting a quick and clean start would be vital. IKC-ONE could not start its operations until Company provided IKC-ONE with a full Notice to Proceed.

Company was obligated to provide IKC-ONE with access to the work site by November 30, 2012. Therefore, IKC-ONE reasonably assumed that Company would have issued a full (all operations)

[28] RFI Log

Notice to Proceed by November 30, 2012 at the latest. Company did not provide a full Notice to Proceed until December 19, 2012.

On November 8, 2012, Company issued IKC-ONE with a Notice to Proceed with mobilization activities. By early December 2012, IKC-ONE had production equipment mobilized to site. By December 3, 2012, IKC-ONE was ready to perform work. However, IKC-ONE could not get an early start to production, because Company had not provided IKC-ONE with a full Notice to Proceed, even though a signed Contract was in place on November 9, 2012. Company's failure to provide IKC-ONE with a Notice to Proceed effectively delayed IKC-ONE's production operations by 18 days.

IKC-ONE immediately started operations ("other than mobilization") following the receipt of Company's full Notice to Proceed. In fact, IKC-ONE worked through Christmas to accelerate time lost. Had Company provided IKC-ONE with a full Notice to Proceed, IKC-ONE could have had an earlier start to overburden operations.

There was no time to spare in IKC-ONE's fast-track construction schedule. IKC-ONE needed a Notice to Proceed immediately following Contract award to allow it to get a quick start and complete the work on time. Because Company issued the full Notice to Proceed so close to the Christmas shutdown, IKC-ONE could not effectively start production operations until January 2013. Therefore, Company's delay in providing a full Notice to Proceed effectively delayed IKC-ONE by more than a month.

4.3 Site Conditions Differed from what was Reasonably Expected

4.3.1 Levels, Quantity, and Intensity of Water in the Soils Are Different From Contract Representations

At the time of tender, IKC-ONE reasonably expected that the site soil conditions would be good and relatively free of water. The Geotechnical Report supported IKC-ONE's conclusions.

The Geotechnical Report indicated that the geotechnical investigation program had observed "some water infiltration" in some of the test pits performed in the area of the Powerhouse and the test pits were practically dry. However, as soon as overburden excavation began, IKC-ONE discovered significant water infiltration. The levels, quantity, and intensity of water in the soils were far beyond what IKC-ONE could have concluded from the information provided.

IKC-ONE relied on the Geotechnical Report in preparing its tender. For instance, the test pit photo shown in Figure 33 is a test pit, which the Geotechnical Report asserts, contains "some water infiltration".

Figure 33: Sample test pit represented in the project Geotechnical Report. The test-pit spoil pile is dry, yet the test pit report notes "some water observed".

However, the test pit photo shows a dry test pit with a corresponding dry sandy spoil pile.

In contrast, the following photo illustrates the actual condition IKC-ONE experienced while performing overburden excavation operations. IKC-ONE could not reasonably expect to perform overburden excavation in wet conditions such as was discovered.

Figure 34: February 15, 2013 overburden excavation operations. As shown above, IKC-ONE had to utilize extra small size excavators, mid-size excavators, pumps, and pumping crews to perform the work.

The significant and unexpected amount of water forced IKC-ONE to change its means and methods for excavation of the overburden from using few large excavators to using many small size and mid-size excavators. The change to the means and methods resulted in a subsequent loss of production and productivity; it delayed the work and increased costs.

4.3.2 Rock Grade Significantly Jagged and Undulating and with Deep Pockets of Silt and Water

The Contract drawings indicated a smooth rock-grade condition at site. However, in a failed attempt to avoid responsibility, a note on those same drawings states:

> "The rock grade may appear smooth in the drawings, however may actually be rough and jagged."

The fact is, based on the evidence and information Company provided, IKC-ONE could reasonably assume and plan for a typical (next to a river) rock surface, which usually contains

relatively smooth surfaces with small undulations and periodic jagged surfaces as Company generally noted in its drawings. However, the actual rock surface proved to be extremely undulating with a majority of rough surfaces and numerous deep pockets.

These site conditions forced IKC-ONE to change its means and methods to excavate the overburden. IKC-ONE had to excavate the deep pockets filled with **saturated** soil using unplanned small size excavators.

In addition to its effect on IKC-ONE's overburden excavation operations, the rough, jagged, and undulating surface had an effect on the start of IKC-ONE's drill and blast operations. IKC-ONE had to spend considerably more time "pioneering" and preparing the rock surface for drilling. It took IKC-ONE almost three months to complete "Bench 1". IKC-ONE expected to have had Bench 1 and Bench 2 complete in that timeframe.

The deep pockets and extreme jagged surfaces also caused IKC-ONE to change its planned drill and blast sequence (in addition to slowing it down as described above), as IKC-ONE's drillers had to scramble to any open smooth area available for drilling.

4.4 Company's Rock Excavation Design Did Not Work and Technical Issues Disrupted IKC-ONE

4.4.1 Rock Method Specification Did Not Change in a Timely Manner as Promised

Pre-award, Company agreed to change its rock excavation method specification in a timely manner. Company knew how vital changing its rock excavation method specification was to achieve IKC-ONE's Contract schedule.

Pre-award, Company agreed that its representatives would work with IKC-ONE to expand the specified drill-hole sizes, the blast patterns, the depth of blast, etc. Unfortunately, Company did not provide a change to the rock method specification in a timely manner as promised.

Despite IKC-ONE doing its due diligence in proving that a revised specification would work, Company's representative refused to increase the diameter of the drill-holes and insisted that IKC-ONE use two "buffer rows", an activity that significantly slowed down IKC-ONE's drilling production.

Six months after it had promised to do so, in late April 2013, Company finally accepted the principles of the revised intent of the specifications.

IKC-ONE has since proved that the revised rock excavation specification successfully produced the results IKC-ONE had expected and as it had relied on in its tender. Unfortunately, IKC-ONE's production and productivity suffered while Company delayed changing its specification.

4.4.2 Rock Stabilization Anchor Bolts Design Did Not Work

IKC-ONE procured the rock bolts specified in the Contract. Between the start of IKC-ONE's rock stabilization effort and March 21, 2013, IKC-ONE performed numerous pull tests using Company's specified rock-bolt assembly. IKC-ONE, as verified by Company, had installed the rock-bolts in accordance with the drawings and specifications.

Unfortunately, Company's rock-bolt specification failed to provide the loading capacity necessary to function as intended. In order to assist Company in finding a solution, and mitigating the effect of the failed specification, IKC-ONE had manufacturer's representatives visit the site to perform a number of reviews as well as recommend alternatives. The manufacturer's representatives recommended using a different anchor-cone than what Company specified. The replacement anchor-cone provided the desired result. IKC-ONE thus had to replace all rock-bolts from D-20 anchors (specified) to an AR shell anchor (recommended by Manufacturer) which caused a minimum of seven-day delay to IKC-ONE's rock stabilization activities.

4.4.3 Final Rock Wall Approval Process Not Executed in an Organized and Timely Manner

IKC-ONE mobilized the equipment required to comply with Company's rock stabilization method-specification and supplied qualified personnel to supervise and implement the rock stabilization program.

The rock stabilization program is dependent on a "step-by-step" approach, especially in the implementation of the first part of the program. IKC-ONE's supervision is involved continuously as the excavation work proceeds. From the removal of the overburden to expose the rock surface, IKC-ONE worked with Company geologist to aid in mapping the bedrock surface. The cooperation between IKC-ONE and Company continued as each blast progressively exposed the wall area. Following the initial machine scaling part of the program, IKC-ONE is required to hand check the walls to remove any remaining loose rock. Once the scaling phase of the operation is complete, Company geologists map the exposed rock face, and determine if rock stabilization is a requirement. Company then directs IKC-ONE to implement the Company determined rock stabilization program. IKC-ONE follows this procedure after each blast as the work proceeds.

Company was contractually required to accept all rock walls, and thus the quality of IKC-ONE's rock stabilization efforts. Because rock stabilization is on IKC-ONE's critical path, it was vital that Company provide timely acceptance of the rock walls. Unfortunately, Company, on numerous times, has not provided timely acceptance of the rock walls which has led to operational delays.

4.4.4 Labour Requirements For Scalers Changed

In Newfoundland and Labrador, prior to the Lower Churchill project, having a rock scaler from the mining industry was not a requirement. Such a requirement was not in the specifications. Nevertheless, the OH&S inspectors responsible for the Project insisted on this as a requirement.

IKC-ONE immediately began to recruit a rock scaler from the mining industry. Unfortunately, the Local Labourers Union did not have any rock scalers from the mining industry. It took IKC-ONE three weeks to procure two scalers from the mining industry. This effort caused significant disruption to IKC-ONE's management, staff, and operations.

SECTION 5 COMPANY'S LACK OF PERFORMANCE AND FAILURE TO MEET ITS DUTIES AND OBLIGATIONS UNDER THE CONTRACT MATERIALLY EFFECTED IKC-ONE'S ABILITY TO MEET THE SCHEDULE-DRIVEN PROJECT'S MILESTONES

The actual conditions experienced by IKC-ONE discussed in Section 4 led to production and productivity losses, delays, and caused Company to direct IKC-ONE to accelerate the work. On April 2, 2013, IKC-ONE and Company met in St. John's to discuss the delays to the project schedule. At that meeting, Company directed IKC-ONE to provide a recovery program and schedule using whatever means and methods and resources necessary to achieve Company's powerhouse excavation completion date of October 25, 2013.

5.1 IKC-ONE's Indirect Plan Had To Be Reinforced Due to Disruptions, Delays, Changes, and Acceleration

5.1.1 Staff Increased Substantially

IKC-ONE required additional staff as part of its acceleration effort. The extra staff performed both increased administrative duties and increased field supervision duties.

Figure 35 shows the (as of August 2013) organizational structure of IKC-ONE's Construction Department.

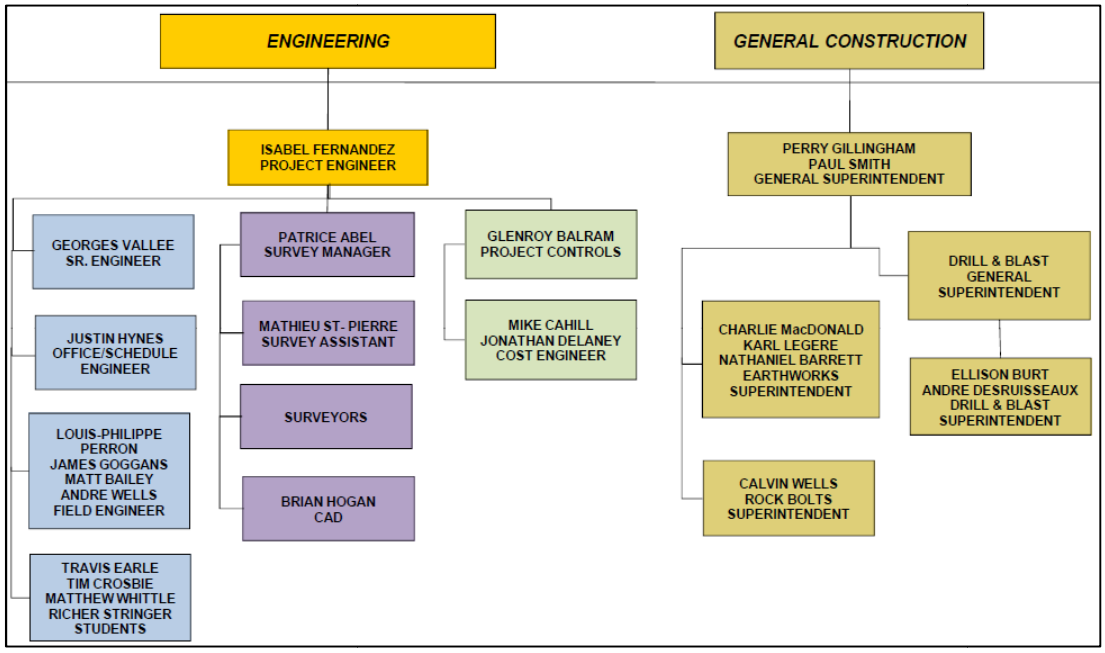


Figure 35: IKC-ONE's Jul. 17, 2013 Construction Department.

As of August 2013, IKC-ONE had 26 staff in its Construction Department. The extra staff in the Construction Department is necessary for IKC-ONE to accelerate the work.

Figure 36 shows the latest (August 2013) organizational structure of IKC-ONE's General, Administrative, and Support Department.

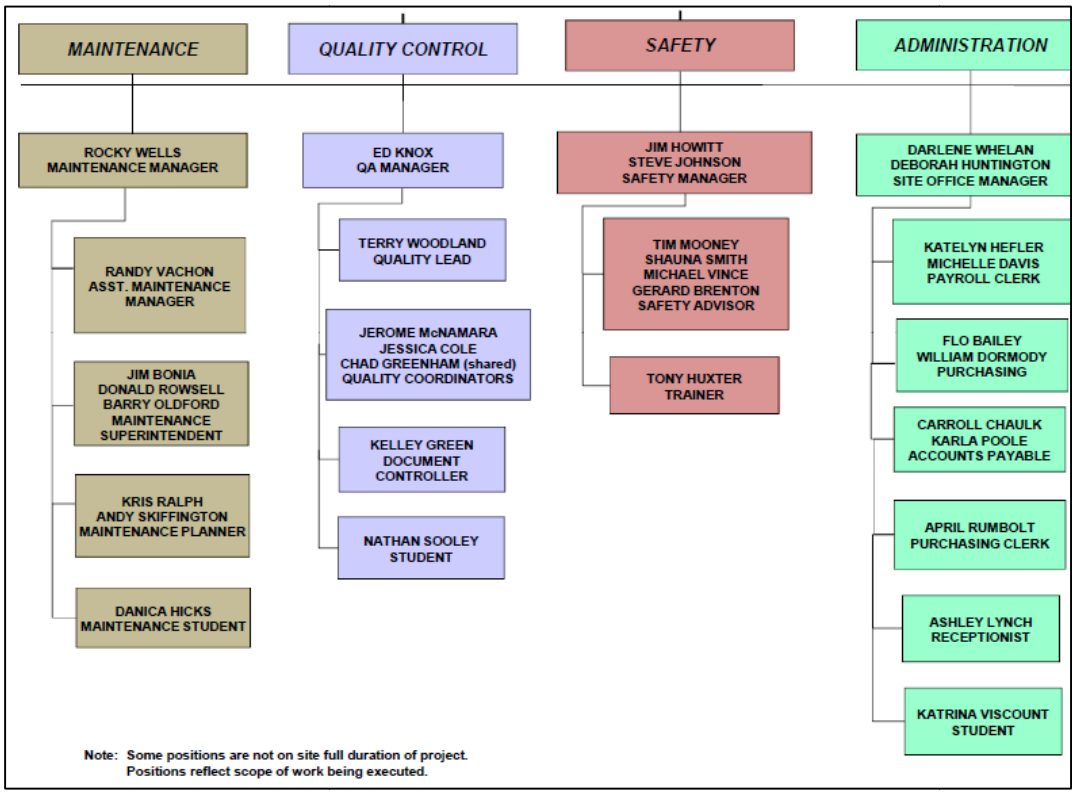


Figure 36: IKC-ONE's Jul. 17, 2013 General, Administrative, and Support Staff.

IKC-ONE had to mobilize 33 General, Administrative, and Support staff because of the actual conditions. To name just a few of their functions, the additional personnel: managed temporary labour agreement issues, settled First Nations issues, arranged for increased travel requirements, arranged for the accommodations of staff and craft and performed additional engineering and supervisory functions needed to accelerate the schedule.

IKC-ONE had to increase its staff substantially in order for it to accelerate the work and ensure that it met Company's requested powerhouse excavation milestone date of October 25, 2013.

5.1.2 Staff and Craft Required to Arrange Accommodation Off-site

The Contract obligated Company to provide an on-site Accommodations Complex by January 1, 2013. Company did not provide the Accommodations Complex to IKC-ONE until April 14, 2013.

The 104-day delay in providing these accommodations has had an enormous impact on IKC-ONE's plan and schedule and resulted in significant productivity and production losses and extra costs.

During the Accommodations Complex delay period, IKC-ONE had to accommodate its workforce in various hotels and apartments scattered throughout HVGB (as shown in Figure 37). In addition, IKC-ONE had to secure accommodations at the 5-Wing barracks on the local RCAF 5-Wing Air Force Base. The management of hotel, barracks, and room arrangements required IKC-ONE to staff a full time property manager and increase its General and Administrative department to manage these important accommodations related issues.

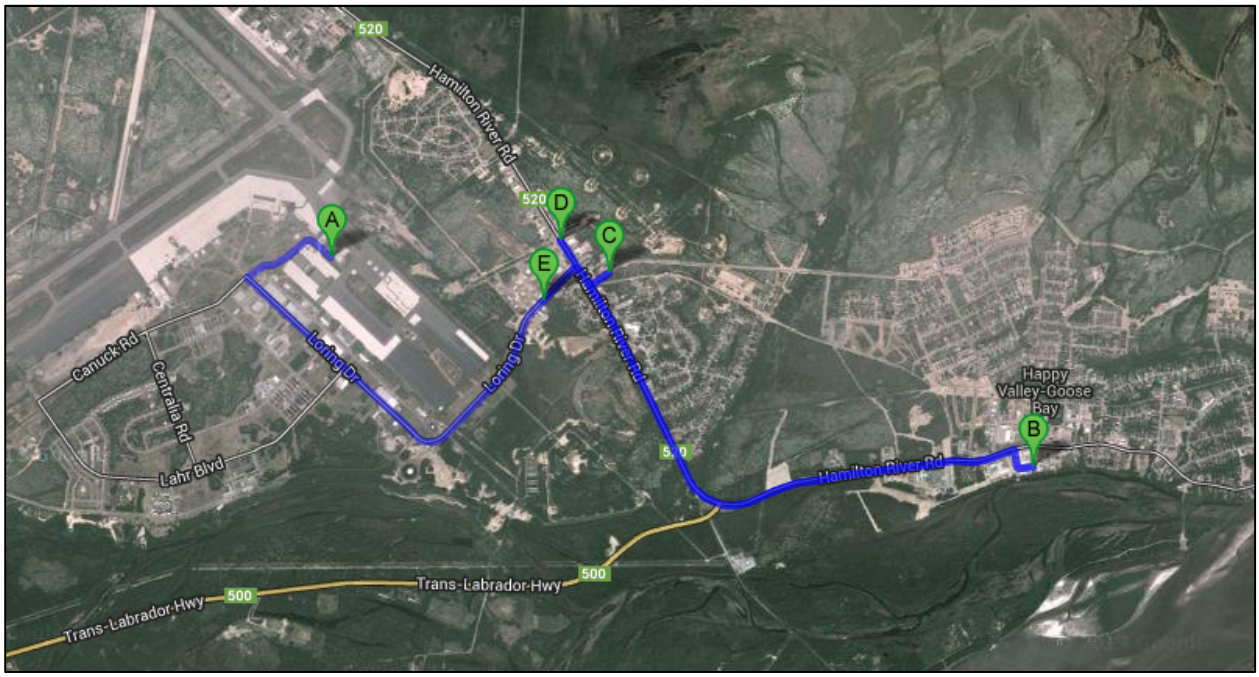


Figure 37: Showing (some of) the locations of the accommodations of IKC-ONE's workforce in HVGB. IKC-ONE's workforce was scattered throughout HVGB: A – 5-Wing Barracks; B – IKC-ONE's HVGB Office; C – Labrador Inn; D – Hotel North 2; E – Hotel North 1. IKC-ONE expended a massive amount of time and effort managing and organizing this accommodations scenario.

IKC-ONE also had to procure additional pickups and a van to pick up and shuttle the workforce throughout HVGB - as well as to and from the work site. In order to minimize the risk of late shift starts, IKC-ONE had to procure an additional bus and craft bus driver to transport the workforce from HVGB to site. Because Company's access road remained incomplete, and because its condition varied so much, despite the additional bus and the provision for picking up Craft one and half hours earlier than originally planned, dozens of shifts started late due to the bad roads and other interfacing events.

Because the busses were travelling on a public road, IKC-ONE had to have its busses painted and seat belts installed in order to comply with governmental regulations. This would not have been the case had the busses only been travelling within the project site. This extra inconvenience, and others like it, frustrated an already fatigued workforce.

As described in Section 3.1.2, "cross-shift" meetings are vital for project communication – especially for production staff. IKC-ONE's shift plans dictate that key staff, including field supervisors, must be at site prior to shift start up in order to coordinate with their "cross-shift" to maintain continuity. IKC-ONE could not effectively utilize day shift pickups for night shift, because of the long and unpredictable travel distance and time. Therefore, IKC-ONE had to procure additional pickups to facilitate "cross-shift" meetings. It was essential to IKC-ONE's operations that IKC-ONE maintained effective cross-shift meetings.

The lack of on-site accommodations also affected IKC-ONE's mechanics. IKC-ONE's mechanics had to start their shift at 5:00 am to ensure all busses were functional. Following that, the mechanics had to travel to site with the workforce. IKC-ONE paid its mechanics from shift start at 5:00 am.

The cumulative impact of IKC-ONE travelling to and from site led to IKC-ONE incurring numerous additional overhead and unplanned direct costs. In addition to these extra costs, IKC-ONE's productivity and production suffered because of a fatigued and demoralized workforce.

5.1.3 Time to Travel To and From Site Increased Each Way

IKC-ONE had planned to shuttle staff and craft from the on-site Accommodations Complex located six kilometers from the work site as shown in Figure 15. Because Company did not provide an Accommodations Complex by January 1, 2013, IKC-ONE had to shuttle its workforce from HVGB to site. Instead of a short undisrupted 6-kilometer travel, IKC-ONE had to shuttle its Staff and Craft 56 kilometers on, at times, atrocious roads.

Figure 38 shows the 56-kilometer route that IKC-ONE had to travel to site each shift from November 9, 2012 to April 15, 2013. This travel distance resulted in IKC-ONE being vulnerable to unplanned risks such as weather events, protests, and third parties. Unfortunately, all of these risks have become reality.

Figure 38: Showing the actual travel distance IKC-ONE had to perform. Weather events, protestors, and third parties often disrupted IKC-ONE along the 56-kilometer route. Had Company provided an Accommodation Complex as warranted by the Contract, IKC-ONE would not have been vulnerable to these events.

However, the 56-kilometer travel was not the only negative effect of not having an on-site Accommodations Complex. Due to limited availability of accommodations in HVGB, IKC-ONE had to accommodate its workforce wherever it could make arrangements. Figure 38 shows some of the locations that IKC-ONE had to accommodate its workforce. Most of IKC-ONE's staff had to find accommodations (apartments, houses, etc.) in various locations throughout HVGB.

The scattered accommodations of IKC-ONE's workforce required an earlier morning departure time (5:00 am vs. 6:30 am planned) and increased travel time to site (1 hour and 30 minutes versus only 15 minutes planned).

The cumulative impact of over three months of travelling in these conditions had a material effect on logistics, supervision, workforce fatigue, and morale and resulted in lost productivity.

5.1.4 Number of Rotations Doubled to Mitigate Fatigue

IKC-ONE planned to work its Craft workforce seven days per week and 10 hours per day. IKC-ONE tendered the project using a 28-day work and 9-day out rotation schedule for its workforce in keeping with the labour terms provided by the Company at time of tender.

However, the SPO did not have a corresponding workforce rotation schedule. Because IKC-ONE would have to convert its workforce to Company's SPO, when IKC-ONE negotiated its

Temporary Labour Agreement (TLA) it had to ensure that the rotation schedule in its TLA was compatible with Company's SPO.

To mitigate fatigue, caused by longer workdays resulting from Company's failure to provide an on-site accommodations complex, IKC-ONE was forced to reduce the probability of worker turnover, and minimize safety issues resulting from fatigue, by changing its workforce rotation plan to a shorter rotation plan. To achieve these goals, IKC-ONE selected the best option offered under the SPO, which was the 14-day work and 7-day off rotation schedule.

5.1.5 Forced To Retain an Office In Happy Valley Goose Bay (HVGB)

Company first delayed IKC-ONE's mobilization effort by an incomplete site access road and an incomplete Company Laydown Area.

IKC-ONE had planned to establish an on-site office complex in the 20,000-m2 laydown area as obligated to in the Contract. Company, by not completing Company's Laydown on time, delayed IKC-ONE's plan for establishing an on-site office complex and maintenance facility setup. Instead of IKC-ONE establishing its planned on-site office complex, Company directed IKC-ONE to set up Company's office complex (extra work) in conjunction with IKC-ONE's (reduced size) office complex. At that time, Company had not established permanent power, telecommunications or data on-site.

Without permanent power, functional telecommunications, proximal accommodations for staff, and especially without access to an area in Company's Laydown, IKC-ONE had to establish and maintain a permanent jobsite office in HVGB. For greater efficiency, staff accommodations are proximal to the project office complex. Given that IKC-ONE's staff had to find accommodations in HVGB, establishing a project office in HVGB was the most logical and efficient solution. Figure 39 shows the planned and actual office complex locations and shows the proximity of the planned and actual accommodations to the project office complexes.

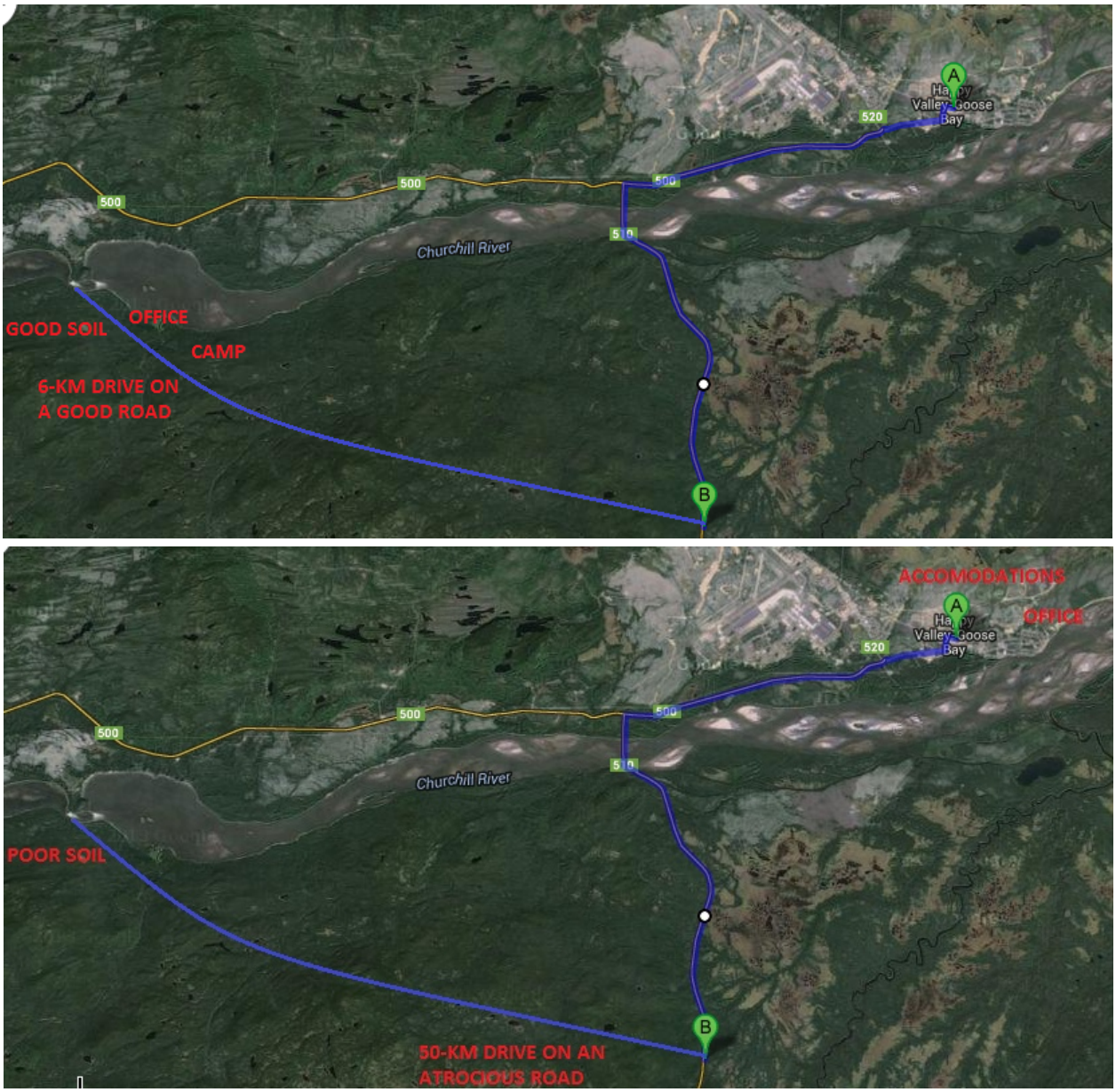


Figure 39: Shows the planned versus the actual office and accommodations complexes. Note the proximity of the office and accommodations complexes to the work area in the planned scenario (image above). On a remote project, it is advantageous to accommodate staff close to the job office complex. Moreover, even more advantageous if the job office and accommodations are adjacent to the work area.

IKC-ONE's HVGB office disrupted IKC-ONE's operations by causing supervision dilution and fatigue. The fact that the project office was located in HVGB often disconnected IKC-ONE's management from its workforce. It also often disconnected IKC-ONE's General and

Administrative, Engineering, and Project Controls departments from its Construction department, reducing communication and resulting in inefficiencies.

By the time the Company Laydown Area was ready for IKC-ONE's planned office complex, the acceleration effort was underway which required additional office space for additional supervisory staff. IKC-ONE would have to set up additional office space or, alternatively, maintain the administrative Staff in HVGB.

Therefore, by the time the Company Laydown Area was ready for IKC-ONE's planned office complex, it no longer made economic or practical sense, to disrupt a now set up, normalized operation, and move the entire office setup from HVGB to site (especially given the lack of telecommunications and data on site).

5.1.6 Fuel Supply Plan Changed

Company did not provide uninterrupted site access and did not initially satisfy lay down requirements in order to allow the sufficient delivery of fuel and the setup of IKC-ONE's planned fuel depot. The interrupted site access often delayed the supply of fuel to IKC-ONE's operations.

Because of Company's poor access road, IKC-ONE had to procure an additional fuel truck. The additional fuel truck would mitigate the risk Company's poor access road would lead to a fuel supply shortage.

Once Company had established its Laydown Area and the onsite Fuel Depot was setup, the additional fuel truck was required in order to provide the additional accelerated equipment with the fuel required.

5.1.7 Garage Support Equipment Plan Changed

The substantial increase in the equipment fleet, caused by Company's direction to accelerate and site condition changes, necessitated a proportional increase in the maintenance department.

This included several mechanics and welding trucks that IKC-ONE would need to operate on a regular basis.

5.1.8 Mobilization and Demobilization Costs Increased to Satisfy the Acceleration Effort

Mobilization

In accordance with IKC-ONE's Contract Schedule, IKC-ONE planned to mobilize its forces by November 19, 2012 in order to begin setting up temporary site infrastructure by November 30, 2012. IKC-ONE planned to substantially complete its mobilization operation by December 2012. The Project's fast-track Contract required a fast-track mobilization effort. A successful fast-track mobilization effort would allow IKC-ONE to start operations in 2012. IKC-ONE relied on a SPO in place at Contract Award, a full Notice to Proceed shortly thereafter and uninterrupted site access to an established laydown area in order to meet the Bulk Excavation's fast-track mobilization plan.

Unfortunately, Company did not provide a Notice to Proceed with mobilization until November 8, 2012, did not provide a SPO until March 19, 2013, and provided an insufficient quantity of laydown area, late, on December 19, 2012. Because of the late delivery of a laydown, IKC-ONE had to mobilize its equipment first to HVGB.

On April 2, 2013, IKC-ONE and Company met to discuss the project schedule. At that meeting, Company directed IKC-ONE to accelerate its schedule, which included mobilizing whatever equipment would be necessary to complete the powerhouse excavation by October 25, 2013.

IKC-ONE experienced increased mobilization costs due to Company's failure to provide uninterrupted access and a finished Laydown Area, and due to Company's direction to accelerate the schedule.

Demobilization

Because of Company's direction to accelerate IKC-ONE has to demobilize significantly more equipment than had been planned.

Because of Company's direction to accelerate, IKC-ONE's costs to demobilize will increase because it will have more equipment to demobilize.

5.2 IKC-ONE Required to Modify its Operations Using Less Productive Means and Methods

IKC-ONE's baseline schedule defined the sequence and the timing of the work. IKC-ONE sequenced its work to meet the Contract requirements defined in Exhibit 1 *Scope of Work*, and Exhibit 9 *Work and Milestone Schedule*.

Exhibit 12 defines the Site Conditions and Company's deliverables. It defines when Company will provide the SPO Agreement; the Laydown areas; the Accommodations Camp; as well as the provision and condition of the access road; the delivery for telecommunication and power infrastructure; to name just a few.

IKC-ONE's baseline schedule had no float due to Company's fast-track project schedule. Therefore, IKC-ONE planned for the optimum amount of equipment, working two full crews (day shift and night shift), and seven days a week. A third full crew would cover the rotational leave of the first two.

Due to the changed actual conditions described in Section 4 of this document, IKC-ONE could not execute the Contract as per its original plan.

The October 25, 2013 completion milestone would have been possible to achieve, without acceleration efforts, if IKC-ONE had been able to work its originally planned sequence without delays and impacts of the many changes to the Contract.

5.2.1 Overburden Excavation Performed In Excessively Wet Conditions With Many Excavators

The Geotechnical Report incorporated into the Contract allowed IKC-ONE to reasonably infer that the site would have a reasonably flat rock grade and be reasonably free of water. As such, IKC-ONE planned to perform its excavation using only two excavators.

The presence of a significant amount of water and an extremely undulating rock grade, including numerous deep pockets filled with saturated soil, required IKC-ONE to change its overburden excavation means and methods. In addition, because Company affected IKC-ONE's mobilization (through the late delivery of an SPO, not providing a laydown area and when provided in an insufficient amount, no Accommodations Complex, etc.), IKC-ONE could not procure the mechanics necessary to assemble the larger equipment in a compressed timeframe, which further necessitated a means and methods change.

Instead of performing excavation using only two large excavators (see Figure 27, page 35), which used buckets too large to fit between the outcrops of bedrock and deep pockets, IKC-ONE had to perform the excavation using a combination of many excavators, including numerous small-size excavators. IKC-ONE immediately mobilized midsize and smaller excavators to deal with the changed conditions. IKC-ONE's contingent excavators included three Cat 336-type excavators, and two Cat 374-type excavators, to name a few; these midsize excavators were required to excavate the deep and small pockets of undulating rock.

Figure 40 shows all of the excavation equipment IKC-ONE had to use to complete the overburden excavation. The Figure measures the percentage (in terms of total hours) that each

excavator contributed to the overburden excavation effort. In other words, the Cat 345 (model 65-11-01) performed 26% of the total overburden excavation effort in terms of hours. The Cat 345 did not produce as much volume as the larger pieces of equipment, however, the Cat 345 had to work significant hours excavating around jagged, undulating surfaces, and deep pockets.

Figure 40 shows the total overburden excavation effected equipment hours as a percent of total hours.

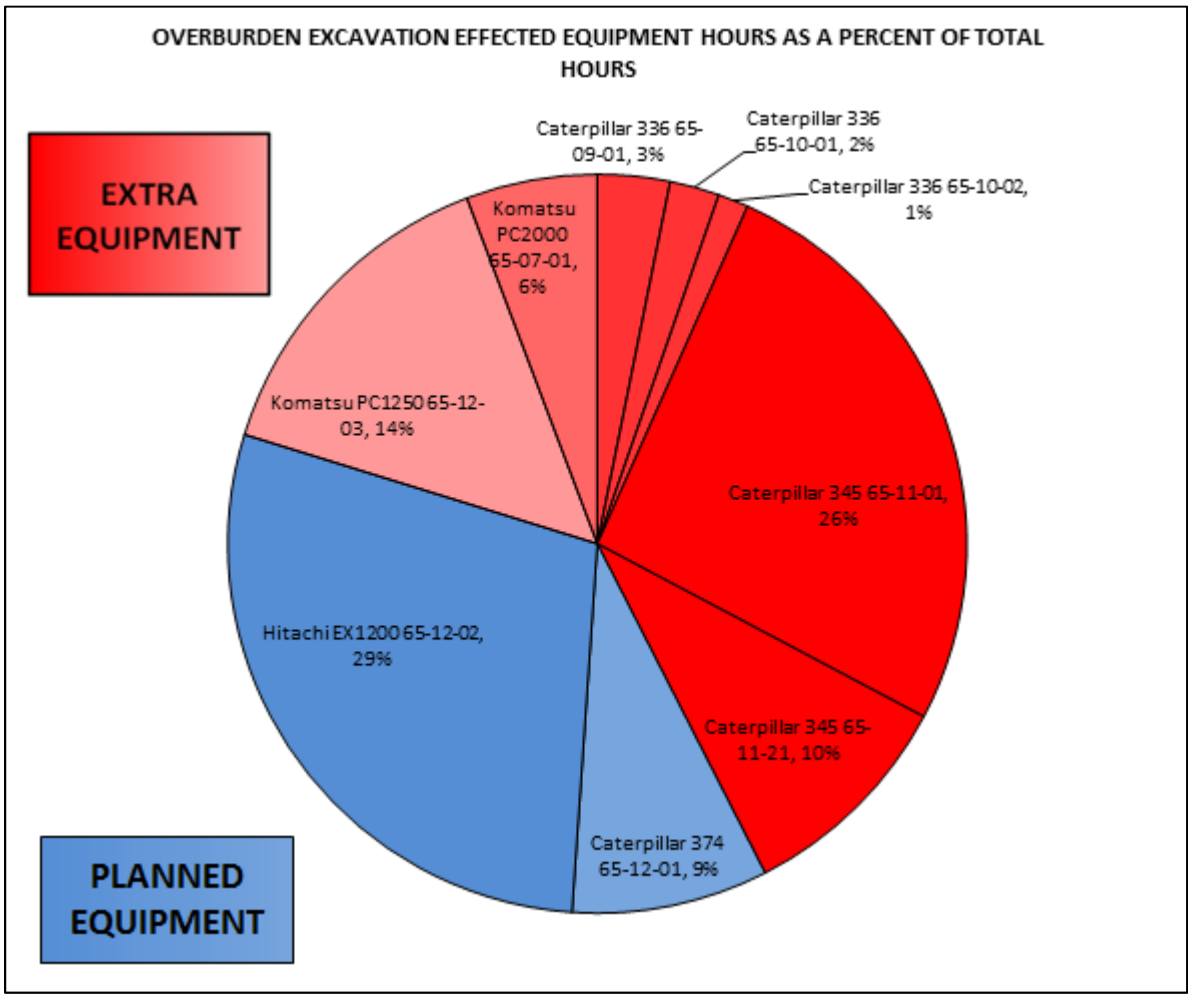


Figure 40: Shows the percent of hours each excavator performed in terms of the total excavator hours IKC-ONE performed in its overburden excavation operation. In other words, the Caterpillar 345 (65-11-01) performed 26% of the total number of excavator hours. IKC-ONE did not plan to use a Caterpillar 345 for its overburden excavation operation.

IKC-ONE's effected overburden production fleet included an extra seven pieces of equipment. Not only did the acceleration require more excavators, but the changed site conditions also

required the smaller sized excavators to perform many hours of work. The increased production hours with smaller and mid-size excavators resulted in increased costs.

Unexpected groundwater also significantly affected IKC-ONE's overburden excavation operations. IKC-ONE had to procure additional pumps and assemble a site services crew to maintain and move the pumps and generators. The presence of water and the associated site services crew frequently disrupted IKC-ONE's overburden excavation operation leading to inefficiencies.

Figure 41: February 15, 2013 overburden excavation operations. The Contract and Company's Geotechnical Report did not represent swampy conditions such as these. Conditions such as these significantly affected IKC-ONE's overburden excavation means and methods.

These two differing conditions combined to form an undulating rock grade containing many pockets of saturated soil. IKC-ONE had to first dewater the pockets and then use small excavators to remove the silt-laden material from the pockets. IKC-ONE could only haul the wet, silt-laden material in partially loaded trucks; an excavator can heap drier material in a

truck bed while with wet material the truck load factor is significantly reduced. Only after IKC-ONE had cleaned the pockets could follow-on drilling operations begin.

Figure 42 shows a typical general condition of IKC-ONE's overburden excavation operation.

Figure 42: IKC-ONE's February 15, 2013 overburden excavation operations (representing a typical condition). IKC-ONE performed most of its overburden excavation operations in wet conditions such as these. Note that IKC-ONE is using an unplanned Cat 336 and an unplanned Cat 345 to cast wet material to the Komatsu PC 2000 in order to load trucks effectively.

IKC-ONE originally matched its large-excavator spreads with compatible 50-75-ton trucks. However, these large trucks were too large to be loaded, efficiently, by IKC-ONE's smaller 300-series excavators that were required to excavate the rock pockets. IKC-ONE thus had to expedite the mobilization of 40-ton articulated trucks. While IKC-ONE mobilized these articulated trucks to site, IKC-ONE experienced productivity losses due to truck incompatibility and limited truck availability.

As described above, the nature of the wet silt meant that IKC-ONE could only partially load its trucks resulting in more trips. In addition, the material stuck to the truck beds (as shown in Figure 43), forcing IKC-ONE to scrape it out with an additional excavator at the dumpsites – this extra activity increased productivity losses and added the cost of an additional excavator. In addition, the "box scraping" activity resulted in damage to truck boxes that contributed to truck down time and truck underutilization.

Figure 43: IKC-ONE's February 14, 2013 overburden excavation operation. Note that IKC-ONE's haul trucks are returning from a dump with mud frozen and stuck in their boxes. This typical condition resulted in lower "load factors" (less material could be loaded per each haul), and consequently reduced productivity.

In addition to the productivity losses due to changes to IKC-ONE's planned means and methods, the inefficient excavation operation frustrated an already exhausted and demoralized workforce.

Company's problematic Site Access Road, failure to provide an on-site Accommodations Complex, and failure to provide an SPO complicated and slowed down the "hire-on" process and affected IKC-ONE's ability to start overburden earlier than its actual January 13, 2013 start date.

The timely completion of overburden excavation was critical to the Powerhouse excavation schedule. Its delayed completion meant that some of IKC-ONE's drill and blast operation had to wait on standby. Note that Company concurrently delayed IKC-ONE's drill and blast operation by not providing IKC-ONE with a SPO, which resulted in IKC-ONE not having enough time to locate drillers.

Numerous other disruptions aggravated IKC-ONE's overburden excavation efforts. Company's issues, such as its poor site access road, interrupted IKC-ONE's overburden excavation operations many times causing late starts, production delays (physically could not get to site), late delivery of fuel and other essential supplies, to name just a few.

The cumulative impact of these disruptions led to an exhausted and demoralized workforce. On March 18, 2013, IKC-ONE's Daily Diary noted the following:

- *March 18*

  - *"I waited two times going in and out and it took 36 minutes of waiting the first trip and 20 minutes of waiting the second trip (…)*
  - *Held JV call concerning access road…all members very concerned (…)*
  - *We had our first First Aid due to bussing on rough road, Back injury and he was sent to doctor for check-up (…)*
  - *I was taking him [injured craft worker] to Charlie McDonald and he told me* ***the road is wearing him out*** *[Emphasis Added]*
  - *We are getting our first indications of labor unrest. The Teamsters are slowing to a crawl on the road and trying to stop work early."*

Despite an exhausted staff and craft, IKC-ONE did their utmost to mitigate these Company-caused delays, and, in the absence of an extension of time from Company, employed acceleration measures such as more resources and extending work hours.

5.2.2 Subcontractor Assisted Drilling and Rock Excavation Executed With A Larger Equipment Spread

The critical path for the Project included:

1. Mobilization (until overburden resources mobilized and haul roads constructed); then,

2. Powerhouse Overburden Excavation (until sufficient rock had been exposed to drill); then,
3. Powerhouse Rock Excavation (including drilling, stemming, blasting, excavation, and rock stabilization until completion).

As IKC-ONE demonstrated in Section 5.1.8 *Mobilization and Demobilization*, Company-caused issues materially affected and delayed IKC-ONE's mobilization effort. As IKC-ONE demonstrated in Section 5.2.1 *Overburden Excavation Performed In Excessively Wet Conditions With Many Excavators,* differing site conditions materially affected IKC-ONE's overburden excavation operation.

In fact, had none of Company's issues occurred, IKC-ONE could have started rock excavation even earlier than it did.

Driller Labour Risk Materialized

Excavator production is on the critical path of rock excavation. Drilling, however, is a concurrent operation that, if not performed expeditiously, can affect the critical path of rock excavation.

Company **knew** that procuring the quantity and quality of drillers necessary was a major project risk. Company did not provide an SPO by November 9, 2012. IKC-ONE immediately took action and leveraged all of its union relationships to secure a Temporary Labour Agreement by late November. Unfortunately, by that time, the driller labour risk became reality and IKC-ONE struggled at the start of its operations to secure the necessary drillers. IKC-ONE mitigated the effect of Company not providing an SPO, and other disruptions and delays, and began its drilling operation on January 24, 2013.

However, in order to mitigate the possibility of drilling affecting IKC-ONE's rock excavation operation, IKC-ONE procured a drilling subcontractor. IKC-ONE's drilling subcontractor has ensured that the concurrent drilling operation has not delayed IKC-ONE's rock excavation operation.

Without the extra subcontractor, IKC-ONE could not achieve Company's October 25, 2013 directed finish date.

Stemming Aggravated IKC-ONE's Drill and Blast Operations

The Contract does not define stemming requirements. Therefore, as is usually done, IKC-ONE assumed it could use the sand gravel material on-site as its stemming material. However, OH&S and Company would not allow the use of on-site material (sands and gravel) as stemming material.

OH&S regulations require IKC-ONE to procure stemming material that had to be 12.5% of the diameter of the drill hole. The supply of one such uniform diameter size material is impractical, the supply of three such uniform diameter size material proved impossible. Despite its efforts, IKC-ONE could not find a supplier for such material. In fact, IKC-ONE could not get a supplier even to consider the supply of these three products to satisfy the large quantity demanded.

Even if the project were not on a fast-track schedule, the price of such material would have been expensive and beyond what one would reasonably expect.

IKC-ONE requested OH&S representatives visit the site for a meeting to discuss the interpretation of the specification for stemming material. On March 21, 2013, OH&S representatives visited site and met IKC-ONE as requested. At that meeting, OH&S stated that the specification for stemming material was new (January 2012) to OH&S Regulations. This same specification does not exist in any other provincial regulation in Canada. OH&S further stated that the specification for stemming material came from advice from the explosive industry.

Following the on-site meeting, OH&S agreed to accept a 0.75-inch maintenance grade material for the stemming used at the site.

This issue affected communication between Company and IKC-ONE and contributed to many supervision disruptions, including the unwarranted contemplated removal of one of IKC-ONE's most essential field supervisors.

Blasting

At Contract Award, Company **knew** the importance of changing its blasting method specifications. Unfortunately, Company did not change its method specification in a timely manner, which significantly affected IKC-ONE's drilling and blasting operation, such as restricting the size of production blasts.

Rock Excavation

On February 14, 2013, IKC-ONE began its Rock Excavation operation.

From February 14, 2013 to April 2, 2013 Company delayed IKC-ONE through a myriad of disruptions, including protests, security breaches, and site access road closures due to spring break-up. In addition, Company-caused issues, such as the failure to provide an on-site accommodation complex, fatigued IKC-ONE's workforce.

By April 2, 2013, Company-caused issues had delayed IKC-ONE's schedule (refer to Section 6.1 Time Added By Delays, Disruptions, And Changes for detailed calculations). In a special schedule review meeting held on April 2, 2013, Company directed IKC-ONE to accelerate the

work to regain the lost schedule. IKC-ONE immediately took action and mobilized even more equipment, craft, subcontractors, and supervision to site.

Because of the lost days of production, acknowledged by Company at the April 2, 2013 schedule review meeting, IKC-ONE had to mobilize and utilize extra earth moving equipment and corresponding haul trucks in order to accelerate the rock excavation operation.

However, the extra equipment resulted in crew size inefficiencies, stacking, etc. that lowered productivity and increased IKC-ONE's costs.

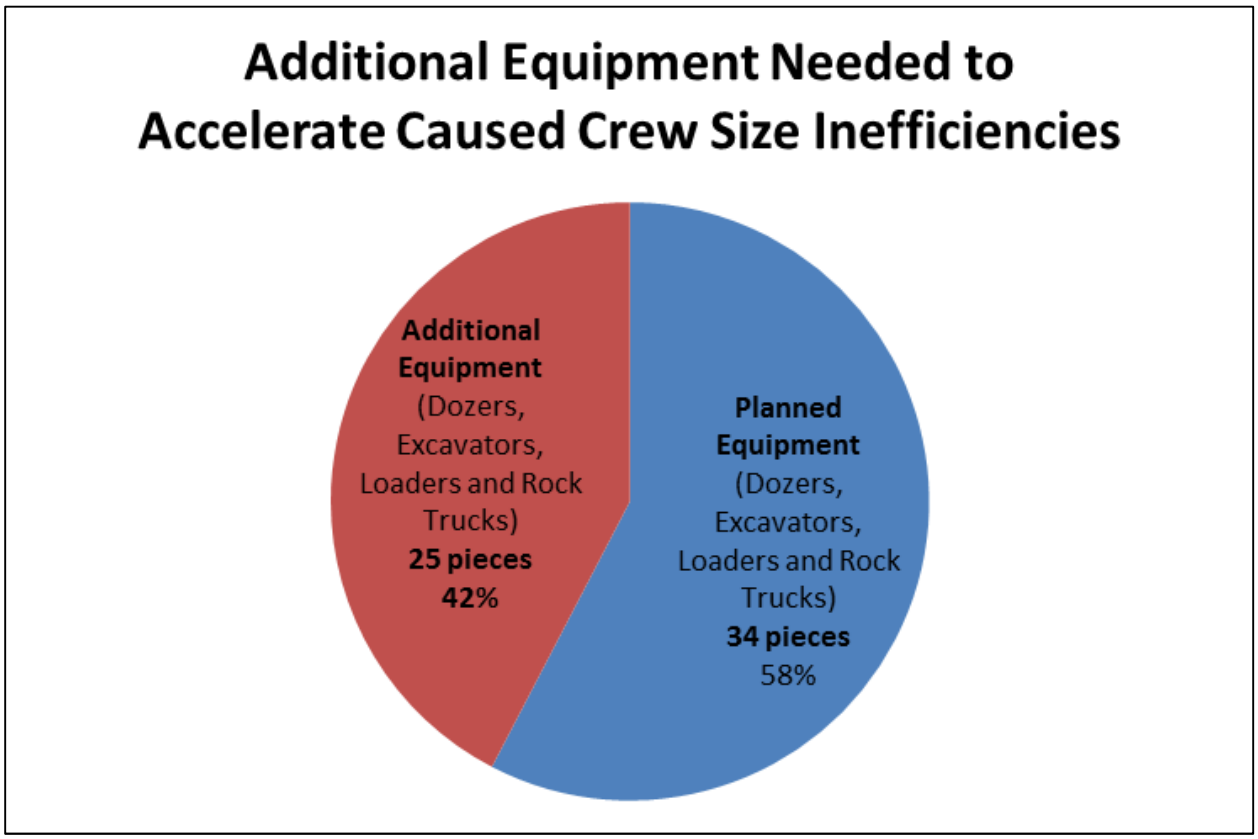


Figure 44: Shows the total amount of additional equipment needed to accelerate Company's schedule. In other words 42% of the total pieces of equipment required to complete the rock excavation operation were unplanned.

Figure 45 illustrates an example of two additional pieces of equipment required to accelerate (shown as "E2 and T2").

Figure 45: Rock excavation operations on August 14, 2013. IKC-ONE continues to accelerate to complete the project on October 25, 2013. IKC-ONE did not plan to have three mid-size/large-size excavators and one bulldozer in its rock excavation equipment spread. Additional equipment is designated as E2 and T2.

Conditions similar to the one depicted in Figure 45 have been occurring since Company directed IKC-ONE to accelerate leading to crew size inefficiencies.

5.3 Productivity and Production Decreased and Cost to Maintain Schedule Increased

Starting on January 1, 2013, IKC-ONE planned to transport its workforce from the Company-provided on-site Accommodation Complex to the worksite at 6:30 am and to return the workforce to the Accommodation Complex by 6:00 pm.

Company did not provide an on-site Accommodation Complex until April 14, 2013. As a result, IKC-ONE's workforce had to travel from HVGB to site. Due to Company's incomplete, substandard, and problematic Site Access Road, IKC-ONE had to build one additional one-hour and fifteen minutes, each way, into its travel plan to account for not only slow and unforgiving travel but also delays caused by other contractors and other potential delay events. Thus, IKC-ONE picked up its workforce in HVGB at 5:00 am to ensure IKC-ONE could maintain its 7:00 am shift start up.

Figure 46 summarizes the typical 'planned' and 'affected' itinerary before and after Company opened the on-site Accommodation Complex.

		Planned	Effected
No.	Event	Time	Time
1	Wake-up	5:45 am	4:15 am
2	Bus Leaves Accommodations	6:30 am	5:00 am
3	Bus Arrives at Site	6:45 am	6:45 am
4	Shift Start	7:00 am	7:00 am
5	Shift Finish	5:30 pm	5:30 pm
6	Bus Leaves Site	5:45 pm	5:45 pm
7	Bus Arrives at Accommodations	6:00 pm	7:15 pm
8	Shutdown: Meal/Downtime/Leisure	9:00 pm	10:15 pm
9	Lights Out	9:30 pm	10:45 pm

Figure 46: Shows the average craft daily itinerary during the time that IKC-ONE accommodated craft in HVGB (Jan. 1, 2013 to Apr. 14, 2013). Note that when IKC-ONE accommodated its workforce in HVGB, the average workday was three hours longer.

The cumulative impact of over 15-hour days and long travel on a harsh incomplete site access road yielded a fatigued workforce. The accommodation scenario between January 2013 and April 2013 materially decreased IKC-ONE`s workforces energy levels.

In July 1979, the US Army Corps of Engineers (Corps) became one of the first major governmental Owner organizations to apply quantitative analysis to cost and time increases on construction projects. Their Publication EP-415-1-3, Modification Impact Evaluation Guide defined impact cost calculation methods that have since been accepted and adopted industry-wide.

In Section 4.4.b of this document, the Corps states:

> *"Although construction does not lend itself to definitive measurement of labor productivity, there are methods a contractor can use to quantify anticipated labor costs…"*

Later in the publication, the Corps includes graphs and charts compiled from their prior experience, which Contractors can use to determine appropriate productivity losses and the resultant additional costs.

Figure 47 of the publication shows the cumulative impact of overtime on productivity. A typical person working seven ten hour days for two weeks is +/- 76% efficient in comparison to one working a five day, eight hour week. The trend shown on the Figure clearly indicates that working seven 15-hour days for two weeks would lead to even further productivity loss.

Therefore, according to the US Army Corps, Company-caused issues materially affected IKC-ONE's productivity.

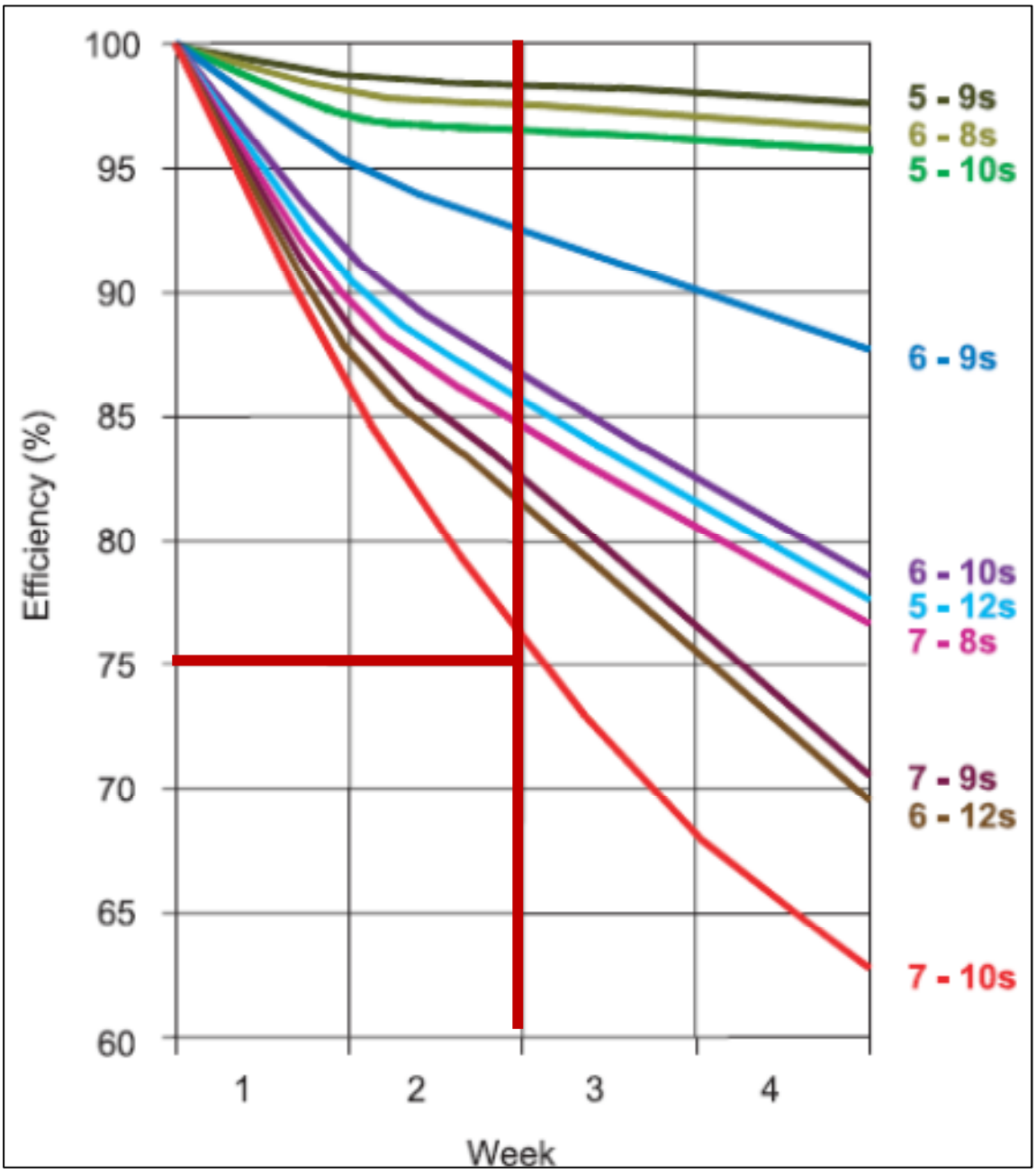


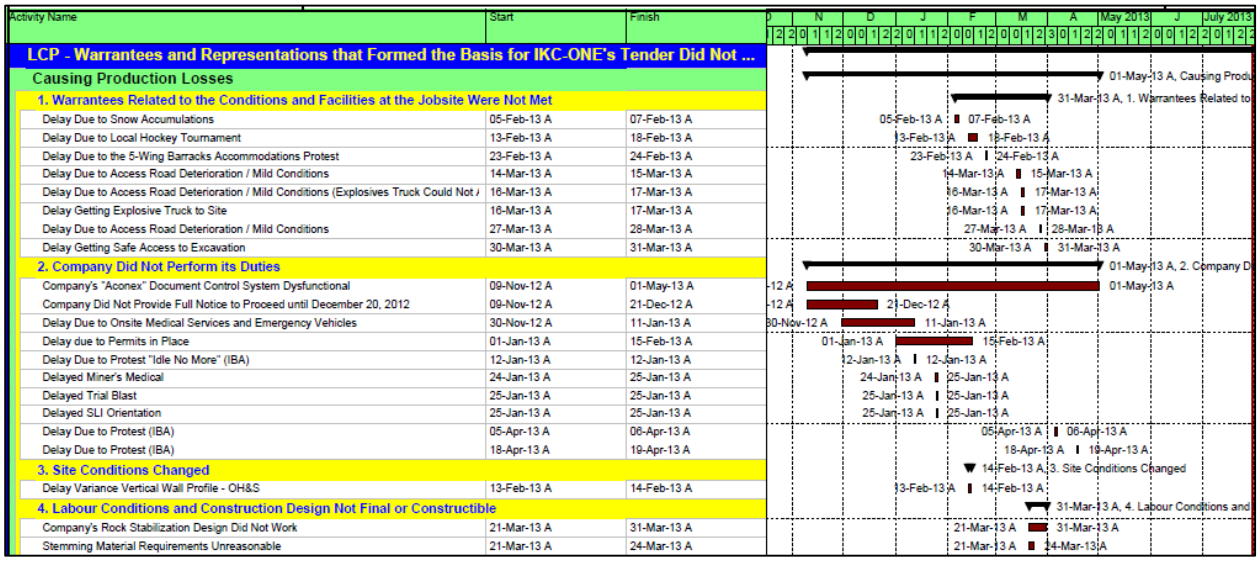
Figure 47: US Army Corps published study of efficiency versus workforce rotation schedule.

The increase to, and harsher conditions of, IKC-ONE's workday resulted in a fatigued and demoralized workforce.

Disruptions, Delays, and Changes Frequently Disrupted IKC-ONE's Operations

The Contract states that the Company shall provide IKC-ONE access to Company's complete Laydown Area by November 30, 2012. IKC-ONE relied on the Contract and planned to perform its operations productively, in an uninterrupted, continuous manner.

Below is a summary of the disruptions and delays IKC-ONE experienced.



Activity Name	Start	Finish
LCP - Warrantees and Representations that Formed the Basis for IKC-ONE's Tender Did Not ...		
Causing Production Losses		
1. Warrantees Related to the Conditions and Facilities at the Jobsite Were Not Met		
Delay Due to Snow Accumulations	05-Feb-13 A	07-Feb-13 A
Delay Due to Local Hockey Tournament	13-Feb-13 A	18-Feb-13 A
Delay Due to the 5-Wing Barracks Accommodations Protest	23-Feb-13 A	24-Feb-13 A
Delay Due to Access Road Deterioration / Mild Conditions	14-Mar-13 A	15-Mar-13 A
Delay Due to Access Road Deterioration / Mild Conditions (Explosives Truck Could Not /	16-Mar-13 A	17-Mar-13 A
Delay Getting Explosive Truck to Site	16-Mar-13 A	17-Mar-13 A
Delay Due to Access Road Deterioration / Mild Conditions	27-Mar-13 A	28-Mar-13 A
Delay Getting Safe Access to Excavation	30-Mar-13 A	31-Mar-13 A
2. Company Did Not Perform its Duties		
Company's "Aconex" Document Control System Dysfunctional	09-Nov-12 A	01-May-13 A
Company Did Not Provide Full Notice to Proceed until December 20, 2012	09-Nov-12 A	21-Dec-12 A
Delay Due to Onsite Medical Services and Emergency Vehicles	30-Nov-12 A	11-Jan-13 A
Delay due to Permits in Place	01-Jan-13 A	15-Feb-13 A
Delay Due to Protest "Idle No More" (IBA)	12-Jan-13 A	12-Jan-13 A
Delayed Miner's Medical	24-Jan-13 A	25-Jan-13 A
Delayed Trial Blast	25-Jan-13 A	25-Jan-13 A
Delayed SLI Orientation	25-Jan-13 A	25-Jan-13 A
Delay Due to Protest (IBA)	05-Apr-13 A	06-Apr-13 A
Delay Due to Protest (IBA)	18-Apr-13 A	19-Apr-13 A
3. Site Conditions Changed		
Delay Variance Vertical Wall Profile - OH&S	13-Feb-13 A	14-Feb-13 A
4. Labour Conditions and Construction Design Not Final or Constructible		
Company's Rock Stabilization Design Did Not Work	21-Mar-13 A	31-Mar-13 A
Stemming Material Requirements Unreasonable	21-Mar-13 A	24-Mar-13 A

Figure 48: Table showing a summary of disruptions and delays IKC-ONE experienced. IKC-ONE planned to perform its operations in a continuous manner. The delays and disruptions contributed to a number of productivity loss factors.

IKC-ONE's operations were often stopped mid-stream as summarized in **Error! Reference source not found.** (which shows only major disruptions) and as described in Section 5 of this document.

The cumulative impact of these delays materially affected IKC-ONE's productivity through fatigue, overtime, poor morale and attitude, dilution of supervision, logistics, learning curves, crew size inefficiency, and stacking of operations, to name a few.

Figure 49 shows the duration of each 'Company caused event' contributed to productivity and production losses. Refer to the respective section in the document for further discussion. For example, 1.1 refers to Section 4.1.1 – *Access to Site Frequently Interrupted, Substandard, and Problematic*. In other words, the substandard and problematic site access road affected IKC-ONE's productivity and production, from mid-December to early August.

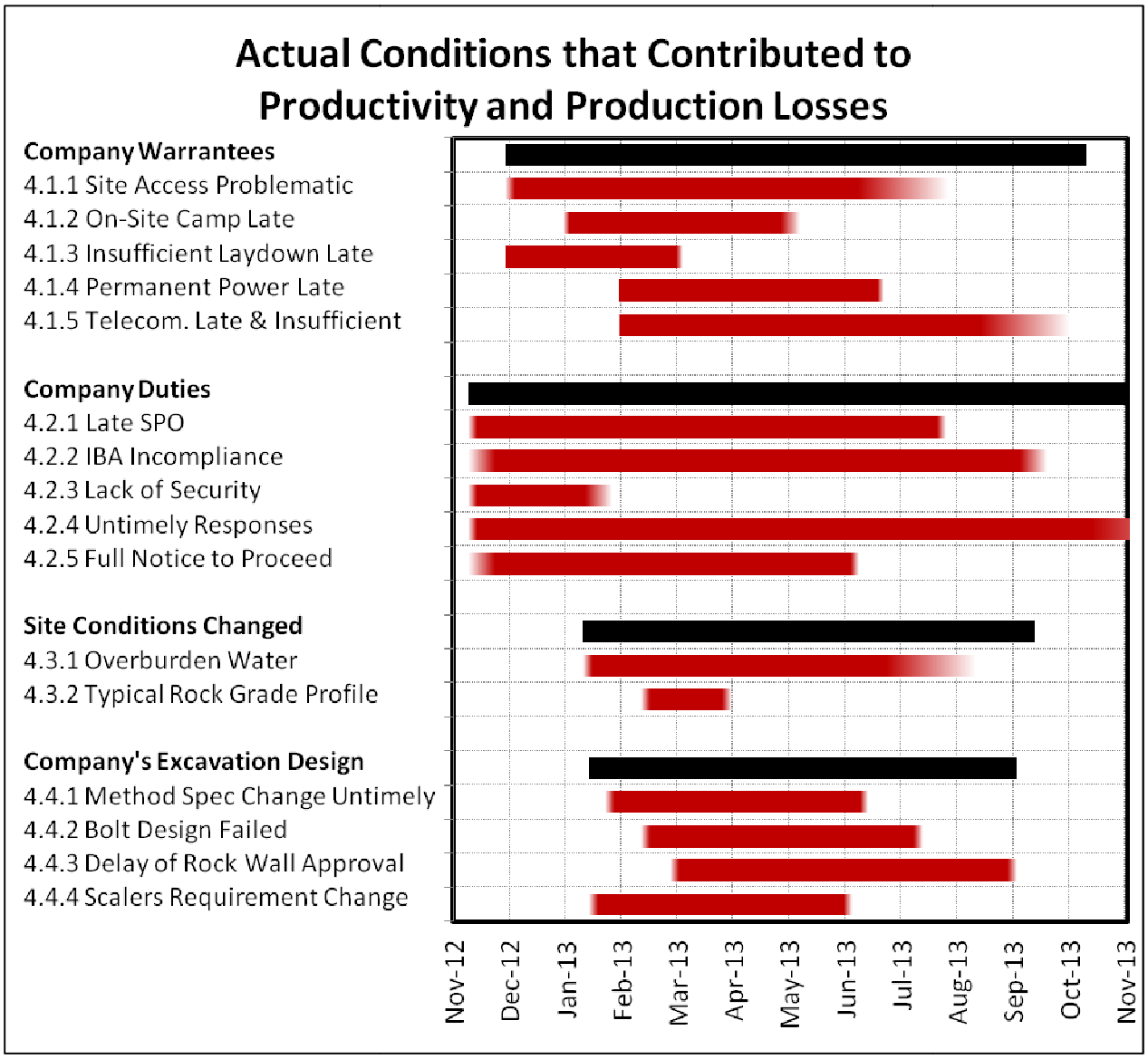


Figure 49: Each horizontal bar shows the period that the particular actual condition contributed to productivity and production losses.

Figure 50 shows how the Company-caused events illustrated in Figure 49 contributed to productivity and production losses.

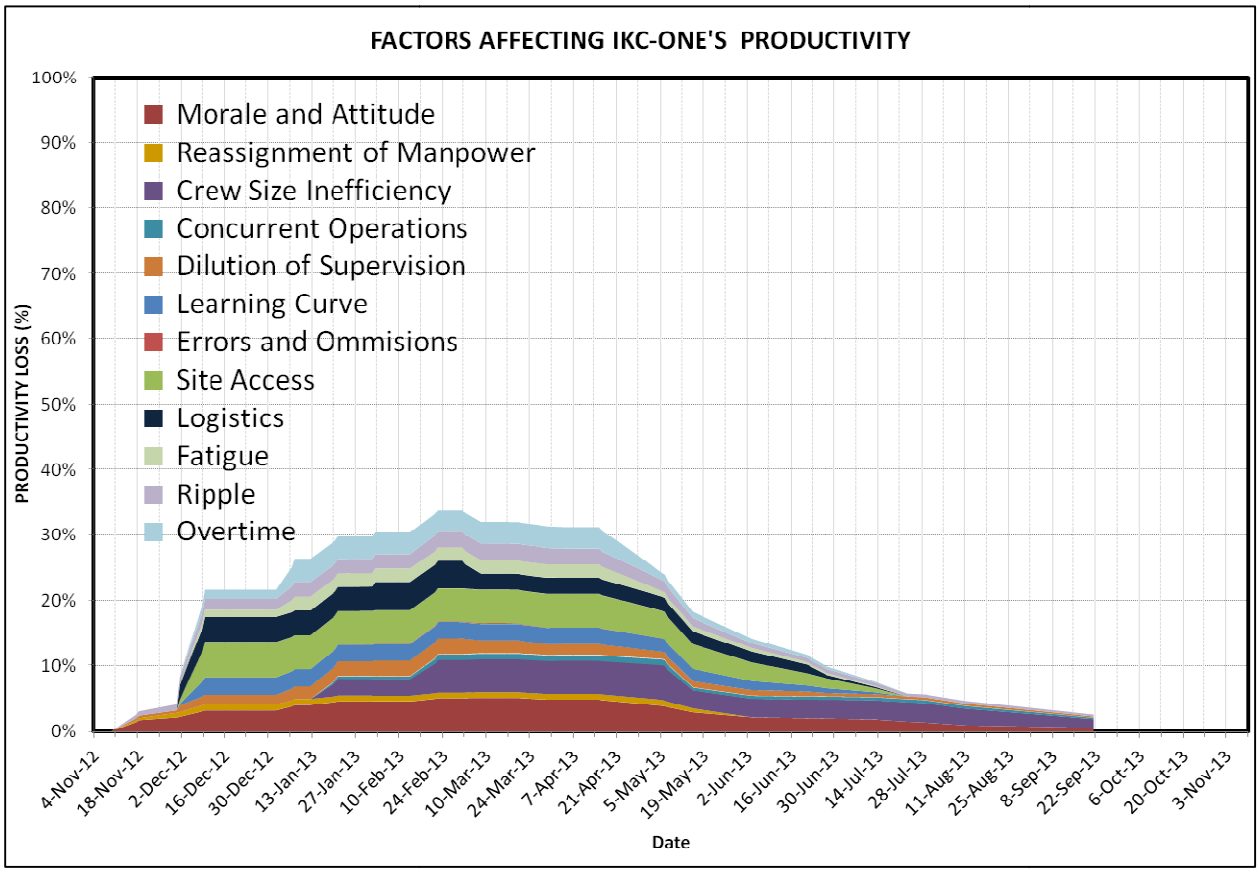


Figure 50: The actual conditions described in Section 4 of this document caused IKC-ONE to have to work longer hours, fatigue, logistical issues, poor morale and attitude, and crew size inefficiency, to name a few. The cumulative effect of these issues effected IKC`s production and productivity.

Section 5.3.1 describes the effects of the above productivity and production loss factors on IKC-ONE`s overburden excavation operations. Section 5.3.2 describes the effects of the above factors on IKC-ONE`s rock excavation operations.

5.3.1 Overburden Excavation Productivity and Production Affected By Productivity Loss Factors

Numerous disruptions, delays, and changes aggravated IKC-ONE's overburden excavation efforts. Company's issues interrupted IKC-ONE's overburden excavation operations many times through late starts, "hard" delays (physically could not get to site), delayed delivery of fuel and other essential supplies, to name just a few.

The cumulative impact of these disruptions, delays, and changes led to logistical issues, supervision dilution, ripple effects, the necessity of overtime, and an exhausted and demoralized workforce. On March 18, 2013, IKC-ONE's Daily Diary noted the following:

- *March 18*

  - *"I waited two times going in and out and it took 36 minutes of waiting the first trip and 20 minutes of waiting the second trip (…)*
  - *Held JV call concerning access road…all members very concerned (…)*
  - *We had our first First Aid due to bussing on rough road, Back injury and he was sent to doctor for check-up (…)*
  - *I was taking him [injured craft worker] to Charlie McDonald and he told me* ***the road is wearing him out*** *[Emphasis Added]*
  - *We are getting our first indications of labor unrest. The Teamsters are slowing to a crawl on the road and trying to stop work early."*

Despite an exhausted Staff and Craft, IKC-ONE did their utmost to mitigate these Company-responsible delays, and, in the absence of an extension of time from Company, employed acceleration measures such as extended work hours to return the progress of its overburden excavation operation to as close to the as-planned performance as possible.

IKC-ONE had planned to start overburden excavation following mobilization and haul road construction as early as possible. A myriad of Company-caused issues delayed IKC-ONE's mobilization effort and delayed the possibility of IKC-ONE starting ahead of its planned January 17, 2013 "shovel in the ground" date. It is unfortunate because had IKC-ONE started early, IKC-ONE could have further mitigated the effects of changed site conditions.

The preceding sections discussed how delays, disruptions and changes resulted in longer days, overtime, protests, logistical issues, morale issues, and supervision dilution. Figure 51 illustrates the period that the factors affecting productivity occurred versus the as built and projected overburden excavation periods.

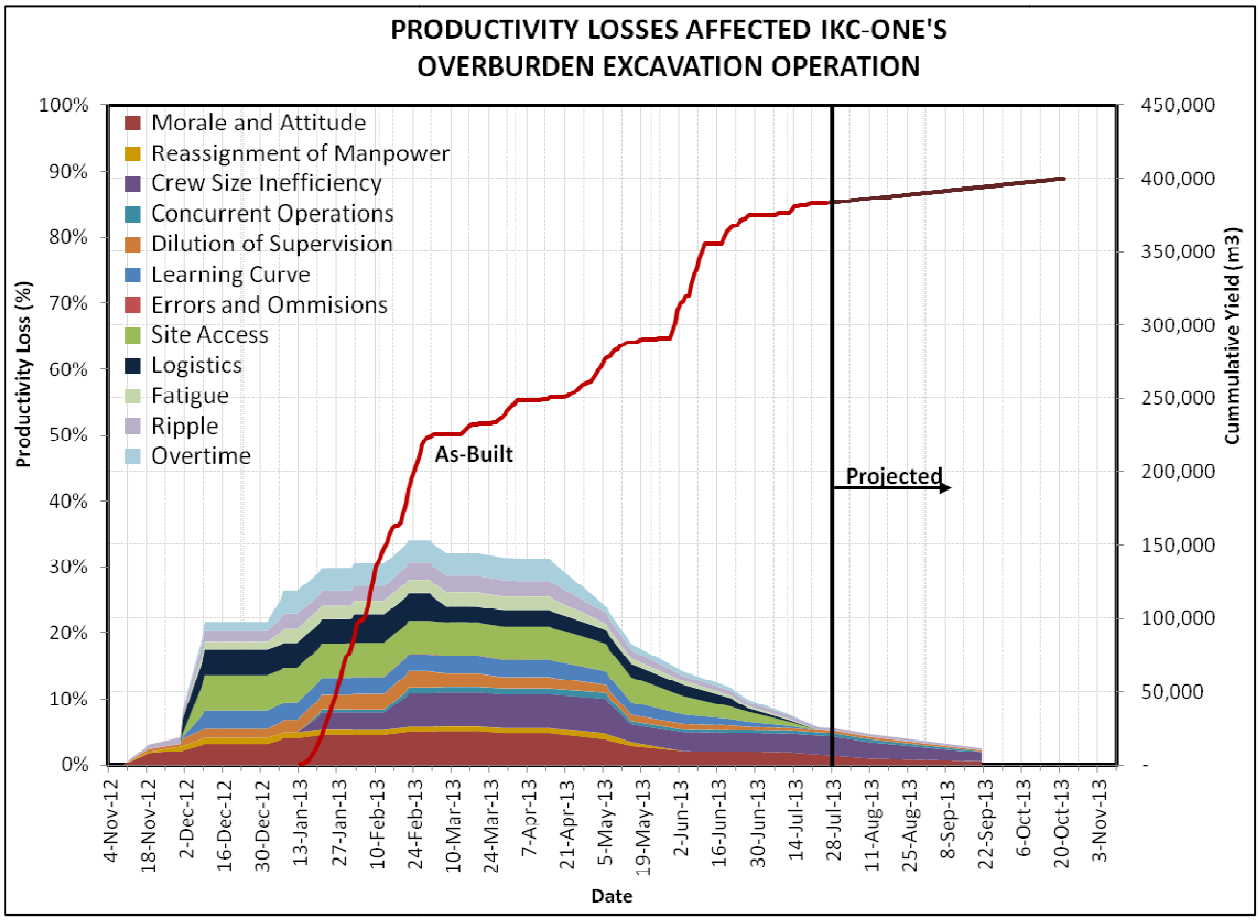


Figure 51: IKC-ONE`s overburden excavation operation versus time. IKC-ONE`s productivity and production was affected by a number of factors, such as fatigue.

IKC-ONE`s overburden excavation operation was affected by overtime work, fatigue, logistics issues, lowered morale, worsened attitude, and crew size inefficiency. The cumulative effect of these issues affected IKC-ONE`s overburden excavation production and productivity.

5.3.2 Rock Excavation Affected By Numerous Productivity And Production Loss Factors

On April 2, 2013, Company directed IKC-ONE to accelerate. In order to accelerate, IKC-ONE had to mobilize additional equipment to site. The excavator depicted as E2 in Figure 52 is an excavator that IKC-ONE mobilized to accelerate the schedule. While the additional excavator increased overall production, it caused productivity losses through crew size inefficiency and stacking.

Figure 52: IKC-ONE`s rock excavation productivity and production has been effected by acceleration. The above figure depicts a scenario where two pieces of equipment are ready to produce (E2 and T2), but must wait for two other pieces of equipment (E1 and T1) to produce. Company`s direction to accelerate has forced IKC-ONE to execute many operations similar to these, which have resulted in inefficiencies.

Figure 52 depicts an example of an unavoidable operational inefficiency from the added equipment. In this typical example, both excavator E1 and excavator E2 are ready to load trucks. However, truck T2 must wait until truck T1 drives around the horseshoe and backs up for excavator E1 to load it. Then truck T2 can move into position and get loaded by excavator E2. Using the Mechanical Contractors Association of Canada's (MCAC) productivity loss factors as its guide, IKC-ONE has estimated that situations similar to these have caused a 12% efficiency loss. Had Company not directed IKC-ONE to accelerate, IKC-ONE would have avoided crew size inefficiencies such as these.

The preceding sections described how delays, disruptions, and changes resulted in longer days, overtime, protests, logistical issues, morale issues and supervision dilution. Figure 53 illustrates

the period that the productivity and production loss factors occurred versus the as built and project rock excavation periods.

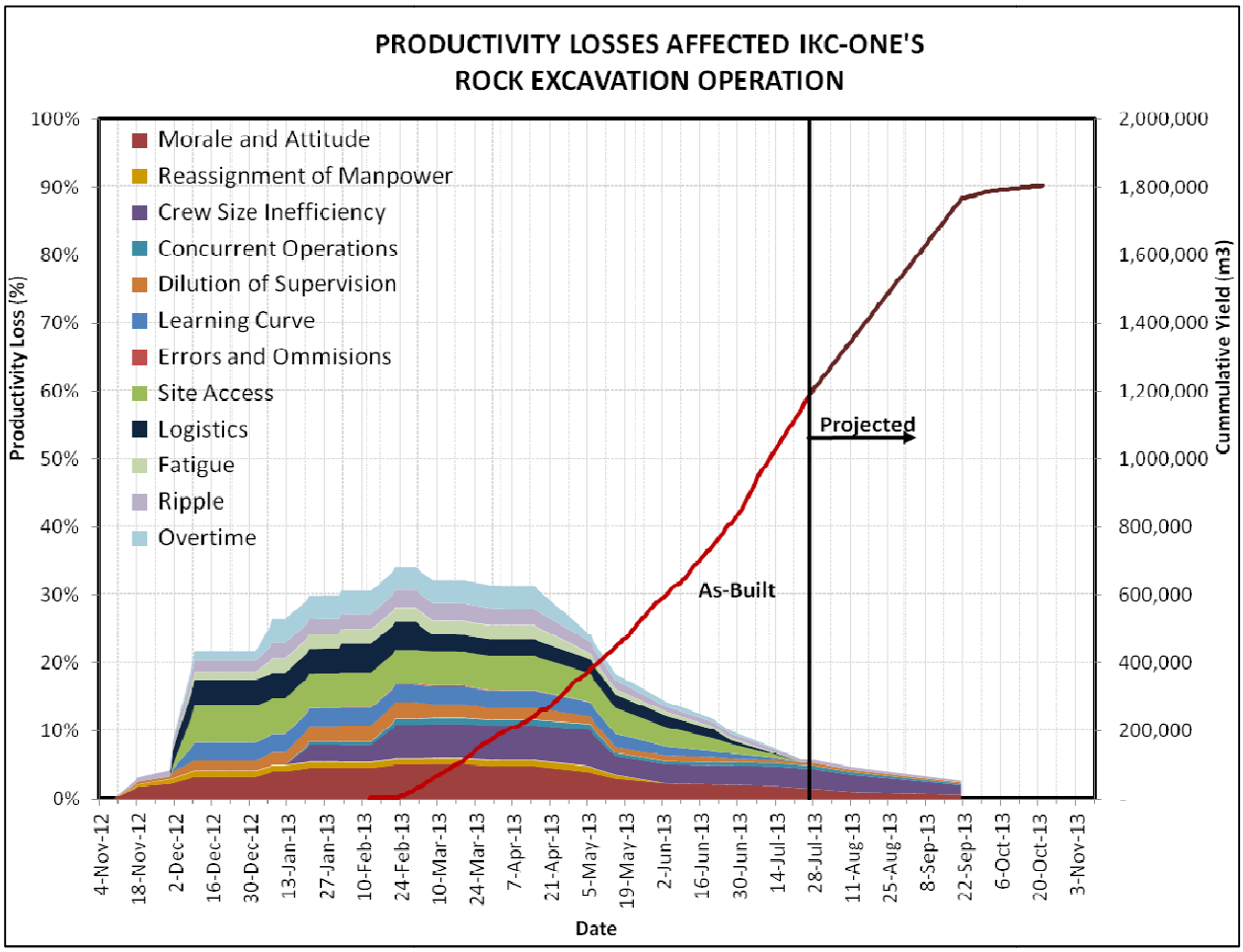


Figure 53: IKC-ONE`s rock excavation operation versus time. IKC-ONE`s productivity and production was effected by a number of productivity and production loss factors.

IKC-ONE`s rock excavation operation was affected by working overtime, fatigue, logistics issues, morale, attitude, and crew size inefficiency. The cumulative effect of these issues effected IKC-ONE`s rock excavation production and productivity.

SECTION 6 CALCULATION OF THE REQUEST FOR EQUITABLE ADJUSTMENT

Sections 2 and 4 of this document proved that the terms and conditions in the Contract and duties and obligations of the Company in the Contract that IKC-ONE relied on to prepare its price and plan for executing the work either changed, were provided late, or were not provided at all. Company had to provide initial and uninterrupted access to the site via an adequate access road, an on-site Accommodations Complex by January 1, 2013, and an environment of cooperation with local Aboriginal communities, but Company failed to provide them in accordance with the Contract. In addition, Sections 2 and 4 of this document proved that the site conditions in the footprint of the powerhouse were different from what IKC-ONE tendered.

Sections 3 and 5 explain IKC-ONE's plans for successful project completion and the resulting effects of the actual conditions, explained in Section 4, on these plans.

The cumulative effect of these issues resulted in production and productivity losses and delays that eventually forced Company to direct IKC-ONE to accelerate the work. Company's direction to accelerate caused inefficiencies and led to significantly higher construction costs. Per the Contract and law, Company is responsible for these costs. To date, Company has not compensated IKC-ONE for extra costs incurred (as detailed below), even when Company recognized they caused the situation and directed IKC-ONE to accelerate. This has required IKC-ONE to finance the additional costs.

Company has an obligation to compensate IKC-ONE for the delays and additional costs incurred because of Company's failure to perform its duties and obligations under the Contract. In this section, IKC-ONE outlines what the equitable adjustment is that Company now has a duty to make to the Contract Price and Schedule.

In the following subsections, IKC-ONE will provide a breakdown of the additional costs experienced on the project to date. These cost calculations fall into one of the following four categories:

- Direct and acceleration costs resulting from time added by disruptions, delays, and changes;
- Indirect costs resulting from the actual conditions which are not necessarily time dependant;
- Other impact costs resulting from an increase to the total project cost caused by changes; and,
- Unpaid Change Requests to-date.

The following table summarizes IKC-ONE's request for equitable adjustment.

Summary of IKC-ONE's Request For Equitable Adjustment	$
1. Total Direct and Acceleration Costs	$15,173,041
2. Total Indirect and Other Impact Costs	$9,593,209
Subtotal Request For Equitable Adjustment	$24,766,250
Total Unpaid Change Orders	$6,258,409
Total Request For Equitable Adjustment	**$31,024,659**

Figure 54: Summary of IKC-ONE`s Request For Equitable Adjustment.

In addition to **$6,258,409** in unpaid change requests to build the work, the cumulative effect of IKC-ONE's acceleration effort, in combination with other impacts, has cost IKC-ONE an additional **$24,780,979**.

6.1 Time Added By Disruptions, Delays, and Changes

IKC-ONE, based on the information provided at time of Tender, planned to substantially complete the Project by December 31, 2013. Due to the impacts of the Company-caused delays to the work, Company directed IKC-ONE to recover lost time and accelerate completion of the powerhouse excavation. Despite a myriad of sufferings and delays, IKC-ONE as directed by Company, has accelerated the schedule and has mitigated the impact of these Company-caused delays.

IKC-ONE attempted several methods to analyse the impacts of Company-caused productivity loss factors on IKC-ONE's schedule, such as the "Measured Mile" analysis. Through its analysis, IKC-ONE determined that the best method to quantify Company-caused productivity losses was using the Mechanical Contractor of Canada's published productivity loss factors. Figure 55 shows these productivity loss factors.

	Minor	Average	Severe
1. Stacking of Trades	10%	20%	30%
2. Morale and Attitude	5%	15%	30%
3. Reassignment of Manpower	5%	10%	15%
4. Crew Size Inefficiency	10%	20%	30%
5. Concurrent Operations	5%	15%	25%
6. Dilution of Supervision	10%	15%	25%
7. Learning Curve	5%	15%	30%
8. Errors and Omissions	1%	3%	6%
9. Beneficial Occupancy	15%	25%	40%
10. Joint Occupancy	5%	12%	20%
11. Site Access	5%	12%	30%
12. Logistics	10%	25%	50%
13. Fatigue	8%	10%	12%
14. Ripple	10%	15%	20%
15. Overtime	10%	15%	20%
16. Season and Weather Change	10%	20%	30%

Figure 55: MCAC Productivity Loss Factors

In Section 5.3.1, IKC-ONE described how Company's delays, disruptions, and changes affected IKC-ONE's Overburden Excavation productivity and production. Figure 56 illustrates the as-built productivity (red) and the "but-for" productivity (light blue). For example, on July 13, 2013, had it not been for the Company-caused productivity loss factors; such as, crew size inefficiency, IKC-ONE would have excavated 8% more material. Overall, had it not been for the Company-caused productivity loss factors, IKC-ONE would have moved 704,764 cubic meters in 31 less days.

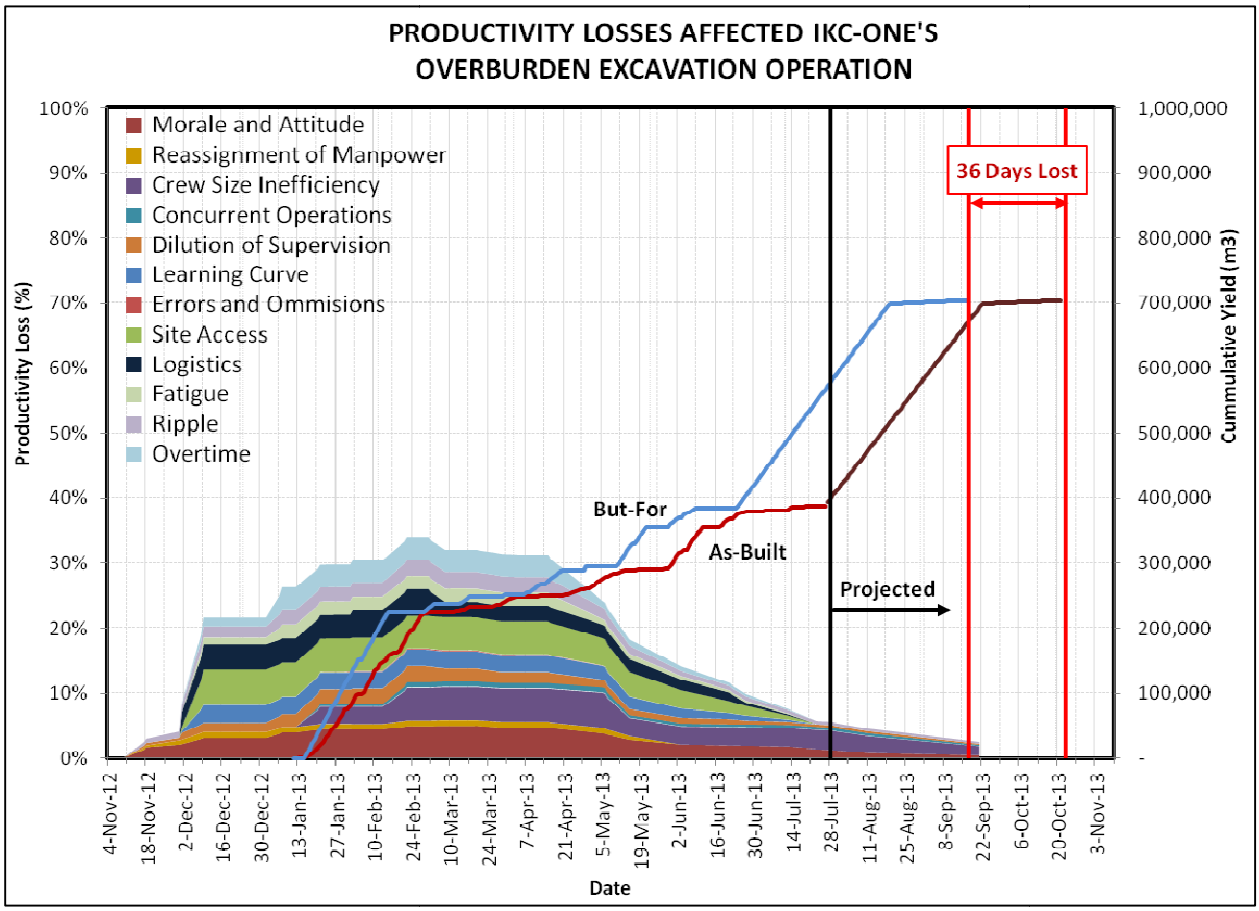


Figure 56: Showing the total days lost by Company-caused productivity loss factors.

In Section 5.3.2, IKC-ONE described how Company's delays, disruptions, and changes affected IKC-ONE's Rock Excavation productivity and production. Figure 57 illustrates the as-built productivity (red) and the "but-for" productivity (light blue). In other words, had it not been for Company-caused productivity loss factors, IKC-ONE would have moved 1,804,423 cubic meters of rock in 36 less days.

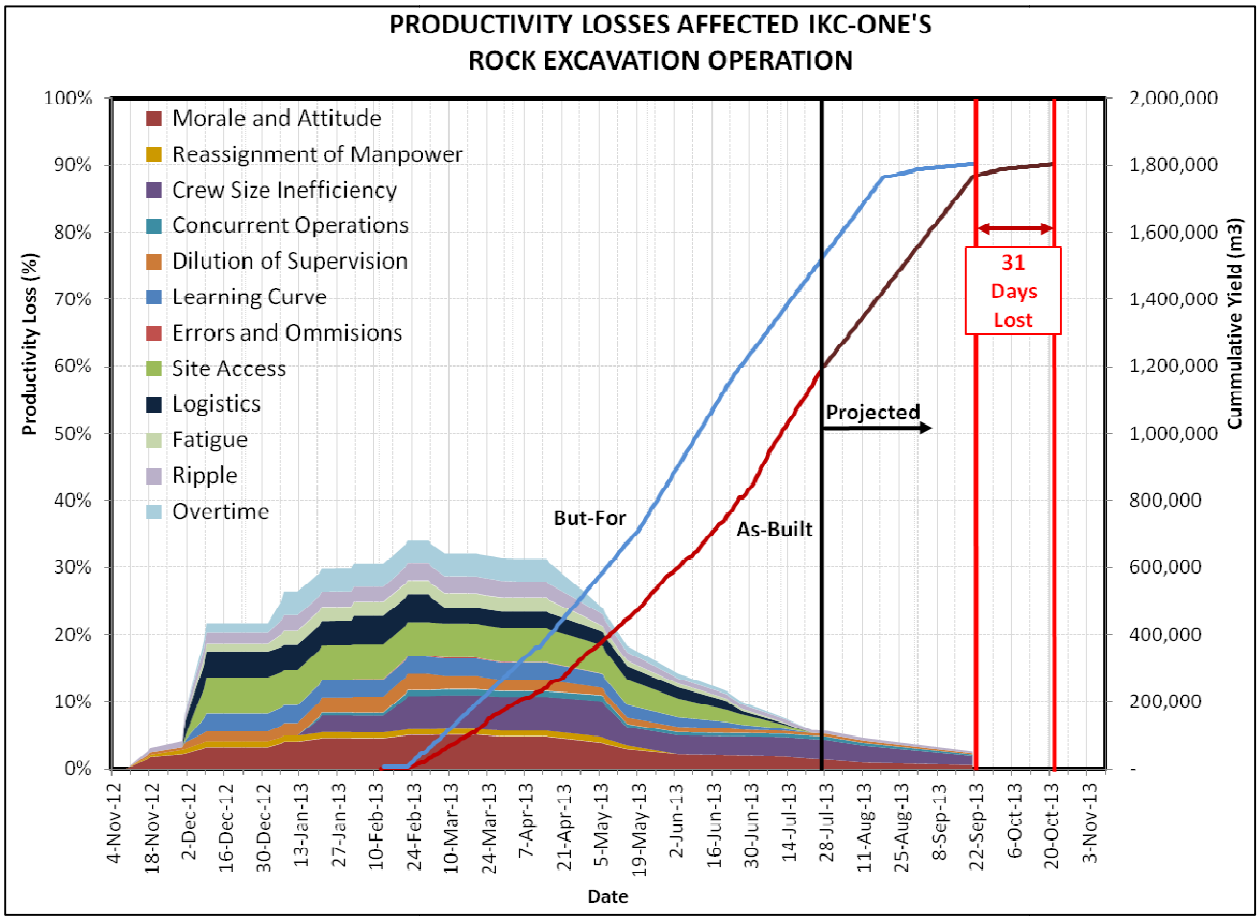


Figure 57: Showing the total days lost by Company-caused productivity loss factors.

Refer to Appendix Section 6.1 for further details, including a schedule analysis narrative.

Section 6.2 quantifies the cost resulting from the total time added by delays, disruptions, and changes.

6.2 Productivity and Production Suffered and Means and Methods Changed

As detailed in Section 5 of this document, Company caused IKC-ONE to change its means and methods for completing the work and caused IKC-ONE to miss its productivity and production targets.

The following table summarizes the cost components related to IKC-ONE's direct operations. Refer to the appendix section indicated in the left column for further details on the methodology IKC-ONE used to calculate the respective cost.

	1. Direct Cost and Acceleration Costs	$
6.2	Overburden Direct Costs and Acceleration Costs	4,732,652
6.3	Additional Subcontractor Required to Accelerate	1,276,639
6.4	Rock Excavation Direct Costs and Acceleration Costs	9,163,750
	1. Total Direct Costs and Acceleration Costs	15,173,041

Figure 58: Showing the total direct costs and acceleration costs.

Section 6.2.1 quantifies the effects of Company on IKC-ONE's overburden excavation operations. Section 6.2.2 quantifies the effects of Company on IKC-ONE's rock excavation operations.

6.2.1 Overburden Excavation Productivity Lost and Means and Methods Changed

As discussed in Section 6.1 *Time Added by Disruptions, Delays, and Changes*, Company's failure to perform a number of its Contractual obligations resulted in IKC-ONE losing 36 days of overburden excavation production, through fatigue, demoralization, overtime, etc. Because of these productivity losses and the changes in site conditions, additional equipment and labour was required for the overburden excavation operation.

Figure 59 shows the breakdown of the additional costs associated with the days of lost productivity and the incremental cost increases associated with the change to the means and methods for the operation.

6.2 - Overburden Excavation Cost Increase			
Line	Description	UOM	Total
1	Cost of Time Added by Delays, Disruptions, and Changes		
1.1	Total As-built and Projected Days of Production (only includes days with production >1000m^3)	days	163
1.2	Days of Production "But-For" Company-caused Productivity Loss Factors	days	127
1.3	Days Company Owes IKC-ONE	days	36
1.4	Total Daily Cost	$	69,942
1.5	Total Cost of Time Added by Delays, Disruptions, and Changes	$	**2,517,912**
2	Incremental Cost Increase		
2.1	Days of Incremental Cost Increase (not including days Company owes IKC-ONE)	days	127
2.2	Total Incremental Caily Cost Increase (cost of additional acceleration equipment)	$	11,358
2.3	Total Incremental Cost Increase	$	**1,442,466**
	Total Incremental Cost and Cost of Time Added by Delays, Disruptions, and Changes		
3.1	Total Cost to date & projected to the end of the job	$	3,960,378
3.2	GA&O (7.5%)	$	297,028
3.3	Profit (12%)	$	475,245
3.4	**Total:**	**$**	**4,732,652**

Figure 59: Showing the total additional overburden excavation costs.

Refer to Appendix Section 6.2 for further details on IKC-ONE's overburden excavation cost analysis resulting from means and methods changes and production and productivity losses.

6.2.2 Rock Excavation Productivity Lost and Means and Methods Changed

As discussed in Section 6.1 *Time Added by Disruptions, Delays, and Changes*, Company's failure to perform a number of its Contractual obligations resulted in IKC-ONE losing 31 days of rock excavation production, through fatigue, crew size inefficiencies, etc. IKC-ONE had to accelerate its schedule because of these lost days of production.

Excavator production is on the critical path of rock excavation, however drilling is a concurrent operation that if not performed expeditiously, can affect the critical path of rock excavation.

Therefore, in order to mitigate the possibility of drilling affecting IKC-ONE's rock excavation operation, and the powerhouse excavation October 25, 2013 target completion date, IKC-ONE had to procure a drilling subcontractor. IKC-ONE's drilling subcontractor has ensured that the concurrent drilling operation has not delayed IKC-ONE's rock excavation operation, and has been vital for IKC-ONE to secure the powerhouse excavation October 25, 2013 target completion date.

IKC-ONE projects it will incur a total of $1,276,639 in additional subcontracting costs. Refer to Appendix Section 6.3 for further details on IKC-ONE's additional rock excavation subcontracting costs.

Figure 60 shows the breakdown of the additional costs associated with the days of lost productivity and the incremental cost increases of the rock excavation operation.

6.4 - Rock Excavation Cost Increase		
Description	UOM	Total
Cost of Time Added by Delays, Disruptions, and Changes		
Total As-built and Projected Days of Production (only includes days with production >1000m^3)	days	245
Days of Production "But-For" Company-caused Productivity Loss Factors	days	217
Days Company Owes IKC-ONE	days	31
Total Daily Cost	$	209,508
Total Cost of Time Added by Delays, Disruptions, and Changes	$	**5,866,222**
Incremental Cost Increase		
Date Accelerated Equipment Started Work	date	2013-07-08
Projected Acceleration End Date	date	2013-09-15
Days of Incremental Cost Increase (not including days Company owes IKC-ONE)	days	38
Total Incremental Caily Cost Increase (cost of additional acceleration equipment)	$	47,426
Total Incremental Cost Increase	$	**1,802,188**
Total Incremental Cost and Cost of Time Added by Delays, Disruptions, and Changes		
Total Cost to date & projected to the end of the job	$	7,668,410
GA&O (7.5%)	$	575,131
Profit (12%)	$	920,209
Total:	**$**	**9,163,750**

Figure 60: Showing the total additional rock excavation costs.

Refer to Appendix Section 6.4 for further details on IKC-ONE's rock excavation cost analysis resulting from means and methods changes and production and productivity losses.

6.3 Indirect Plans Changed and Other Impacts

As detailed in Section 5 of this document, Company caused IKC-ONE to change its indirect plans. The change to these plans resulted in increased costs.

Section 6.3.1 quantifies the effects of Company caused changes on the equipment and labour components of IKC-ONE's indirect costs. Section 6.3.2 quantifies other indirect and impact costs incurred by IKC-ONE.

6.3.1 Indirect Cost Increases – Equipment and Labour Components

The following table summarizes the effects of Company-caused changes on the equipment and labour components of IKC-ONE's indirect costs.

Refer to the appendix section indicated in the left column for details on the methodology IKC-ONE used to calculate the respective cost.

	2. Indirect Costs and Other Impact Costs	$
	2. A. Indirect Costs – Equipment And Labour Cost Component	
6.5	Additional Site Services Equipment	341,991
6.6	Additional Fuel Truck Support	705,720
6.7	Additional Bussing	333,432
6.8	Additional Garage Support Equipment	2,142,375
6.9	Additional Temporary Lighting	378,000
6.10	Additional Janitorial, Waste, and Cleanup	160,285
6.11	Additional Staff Vehicles	412,720
6.12	Additional Runner	201,360
6.13	Additional Orientation Labour	97,083
6.14	Idle Equipment Costs	524,082
	Subtotal Indirect Costs – Equipment And Labour Cost Component	5,297,048
	Credit 20% Overhead	882,841
	2. A. Total Indirect Costs – Equipment And Labour Cost Component	4,414,206

Figure 61: Showing the total increased indirect costs – equipment and labour costs components.

IKC-ONE used the charge out rates included in the Contract when calculating the above costs. IKC-ONE has therefore credited all corresponding overhead charges that IKC-ONE calculated using the charge out rates. Crediting these costs eliminates the possibility of double-charging Company for indirect costs.

6.3.2 Indirect Cost Increases – Other Cost Components

The following table summarizes the other impact costs resulting from Company-caused delays, disruptions, and changes.

Refer to the appendix section indicated in the left column for details on the methodology IKC-ONE used to calculate the respective cost.

	2. Indirect Costs and Other Impact Costs	$
	2. B. Indirect Costs - Other Cost Components	
6.15	Additional Mobilization and Demobilization	677,835
6.16	Additional Infrastructure and Setup	257,516
6.17	Additional Outside Cleaning	44,625
6.18	Additional Services, Tools, Awards, and Supplies	198,400
6.19	Additional Staff Labour	2,264,817
6.20	Additional Staff Live Out Allowance	451,500
6.21	Additional Airfares	225,750
6.22	Additional Staff Travel Expenses	64,500
6.23	Additional IT Equipment	27,000
6.24	Additional Medicals	26,100
	Credit Dorm	500,000
6.25	Cancellation Fee Paid on Staff Dorm	98,425
6.26	REA Preparation Costs	145,415
6.27	Extended Bonds and Insurance and Fees	352,012
	Subtotal Indirect Costs – Other Cost Components	4,333,894
	General, Administrative, and Overhead Expense (7.5%)	325,042
	Profit (12.0%)	520,067
	2. B. Subtotal Indirect Costs – Other Cost Components	5,179,003

Figure 62: Showing the total increased indirect costs – other costs components.

6.4 Unpaid Change Orders

In the following subsections, IKC-ONE will provide a summary of Change Requests previously submitted to Company related to the changed conditions discussed in Section 2 and Section 4 of this document.

CR #13 - Bussing for Offsite Accommodations

On April 27, 2013, IKC-ONE submitted Company a change request for "*Bussing for Offsite Accommodations*" in the amount of:

- **$344,627.50**

But for Company's failure to provide an on-site Accommodations Complex IKC-ONE would not have incurred these extra costs.

Refer to Appendix Section 6.28 for a copy of the Change Request.

CR #16 - Direct Costs associated with the provisions of Room, Board Services

On April 27, 2013, IKC-ONE submitted Company a change request for "*Direct Costs associated with the provisions of Room, Board Services*" in the amount of:

- **$3,105,000.00**

But for Company's failure to provide an on-site Accommodations Complex IKC-ONE would not have incurred these extra costs.

Refer to Appendix Section 6.29 for a copy of the Change Request.

CR #17 - Bus Services to and from Goose Bay (For Locals)

On April 29, 2013, IKC-ONE submitted Company a change request for *"Bus Services to and from Goose Bay (For Locals)"* in the amount of:

- **$243,000**

But for Company's failure to provide an on-site Accommodations Complex IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.30 for a copy of the Change Request.

CR #18 - Pilot in of Transports from Security to Contractor Laydown

On April 29, 2013, IKC-ONE submitted Company a change request for *"Pilot in of Transports from Security to Contractor Laydown"* in the amount of:

- **$36,781.88**

But for Company's failure to provide uninterrupted site access on an industry standard access road IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.31 for a copy of the Change Request.

CR #19 - Late Emergency Vehicle Onsite Services (Due to "Idle No More Protest")

On May 3, 2013, IKC-ONE submitted Company a change request for *"Late Emergency Vehicle Onsite Services (Due to "Idle No More Protest")"* in the amount of:

- **$40,000.00**

But for Company's failure to provide any one of, or a combination of, an IBA agreement, jobsite security, an on-site Accommodations Complex, and uninterrupted site access on an industry standard access road, IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.32 for a copy of the Change Request.

CR #20 - Delays Due to the April 5th and April 6th Protests

On May 7, 2013, IKC-ONE submitted Company a change request for *"Delays Due to the April 5th and April 6th Protests"* in the amount of:

- **$250,000**

But for Company's failure to provide any one of, or a combination of, jobsite security, an on-site Accommodations Complex, and uninterrupted access on an industry standard site access road, IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.33 for a copy of the Change Request.

CR #21 - Late Shift Starts and Equipment Standby associated with the Substandard condition of the Site Access Road

On May 7, 2013, IKC-ONE submitted Company a change request for *"Late Shift Starts and Equipment Standby associated with the Substandard condition of the Site Access Road"* in the amount of:

- **$700,000.00**

But for Company's failure to provide an on-site Accommodations Complex and uninterrupted access to the site on an industry standard site access road IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.34 for a copy of the Change Request.

CR #22 - Public Protest Delays April 18 and April 20

On May 7, 2013, IKC-ONE submitted Company a change request for *"Public Protest Delays April 18 and April 20"* in the amount of:

- **$1,100,000**

But for Company's failure to provide an on-site Accommodations Complex and uninterrupted site access on an industry standard site access road, IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.35 for a copy of the Change Request.

CR #23 - Type A and B Rock Bolt Accessories Originally Specified Unsuitable

On May 3, 2013, IKC-ONE submitted Company a change request for *"Type A and B Rock Bolt Accessories Originally Specified Unsuitable"* in the amount of:

- **$60,000.00**

But for Company's failure to provide a constructible rock bolt specification IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.36 for a copy of the Change Request.

CR #44 - Orientation Sessions for First Nation Employees

On May 25, 2013, IKC-ONE submitted Company a change request for *"Orientation Sessions for First Nation Employees"* in the amount of:

- **$65,000**

But for Company's failure to perform its duties as specified under the IBA, IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.37 for a copy of the Change Request.

CR #50 - Lost Wages for April 18 and April 19, 2013 Protests

On June 10, 2013, IKC-ONE submitted Company a change request for *"Lost Wages for April 18 and April 19, 2013 Protests"* in the amount of:

- **$250,000.00**

But for Company's failure to provide any one of, or a combination of, an on-site Accommodations Complex, uninterrupted access on an industry standard access road, and jobsite security, IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.38 for a copy of the Change Request.

CR #52 - Cost Associated with Work stoppage for Company meeting at Camp

On July 30, 2013, IKC-ONE submitted Company a change request for *"Cost Associated with Work stoppage for Company meeting at Camp"* in the amount of:

- **$30,000.00**

But for Company's stop work order IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.39 for a copy of the Change Request.

CR #57 - Safety Stand Down Due to Intruders in IKC-ONE's Work Area

On July 7, 2013, IKC-ONE submitted Company a change request for *"Safety Stand Down Due to Intruders in IKC-ONE's Work Area"* in the amount of:

- **$34,000.00**

But for Company's failure to provide jobsite security IKC-ONE would not have incurred this extra cost.

Refer to Appendix Section 6.40 for a copy of the Change Request.

SECTION 7 CONCLUSION

7.1 Company Delayed the Work and Instructed IKC-ONE to Accelerate its Operations

In Section 1 through Section 6 of this document, IKC-ONE proved that Company did not fulfill its Contractual obligations and duties; the site conditions represented in the Contract differed; and the technical requirements of the project changed. The cumulative impact of these changes was extra work; disruptions to operations; delays; and demoralization and fatigue to IKC-ONE's workforce. These effects and the subsequent acceleration to get back on schedule, ultimately resulted in significant additional and increased costs.

On April 2, 2013, in a special progress report meeting, IKC-ONE informed Company that changes to the project, for which Company was responsible under the Contract, had delayed IKC-ONE up to that point by 35 days. Company acknowledged the delays and directed IKC-ONE to accelerate its schedule, and to "do whatever it takes" to finish powerhouse excavation by October 25, 2013. IKC-ONE has done so. Unfortunately, many of the issues that affected the progress of the work continued and IKC-ONE has sustained further losses of time and increased costs.

7.2 IKC-ONE Is Entitled To An Equitable Adjustment

In September 2012, IKC-ONE committed to the Contract terms and to preparing a price for the unique logistical, labor, and schedule-driven challenges of the Bulk Excavation Project. IKC-ONE made this commitment relying on the essential warrantees provided by the Contract.

On November 1, 2012, Company issued a Canada wide news release*: Further Site Preparation Work Starting at Muskrat Falls.* In its news release, Company stated that time was of the essence and, if the Bulk Excavation Contract was delayed, an estimated $200 million in additional costs could ultimately be passed on to island consumers in increased electricity rates. Company knew that time was of the essence and, therefore, the importance of starting (and thus finishing) the Project on time. On November 8, 2012, Company and IKC-ONE executed the Lower Churchill Project's Bulk Excavation Contract.

The Contract forms part of the "fast-track" Lower Churchill Project's critical path. Like any other remote, northern, and "fast-track" Contract, it would require certain essential elements for success: a deep labor pool, a labor agreement in place, full implementation and compliance with a First Nations agreement, site infrastructure established, a well-rested workforce with high morale, to name just a few. IKC-ONE, in reliance on the Contract, proceeded with work immediately. Contractually, Company was obligated to provide initial site access to a complete laydown area by November 30, 2012; provide a Project Labor Agreement immediately following Contract execution; provide and comply with an Innu Impact Benefits Agreement; and provide

an on-site Accommodations Complex by January 1, 2013. Unfortunately, Company did not meet these and other Contract conditions until well into the project and in some instances, not at all.

Despite the setbacks outlined in this document, IKC-ONE, after accelerating as Company directed is as of July 31, 2013, on track to complete the Project on schedule. To date, IKC-ONE is carrying the vast majority of the extra costs that resulted from Company's failure to perform in accordance with the Contract.

Few contractors would have had the ability to overcome the considerable challenges Company caused from the outset of this project, while at the same time sustaining the substantial financial losses IKC-ONE are carrying. However, the partners of IKC-ONE, having built their respective and collective reputations on a legacy of successful relationships and finishing projects on time, remain committed to completing the work as quickly and at as low a cost as possible.

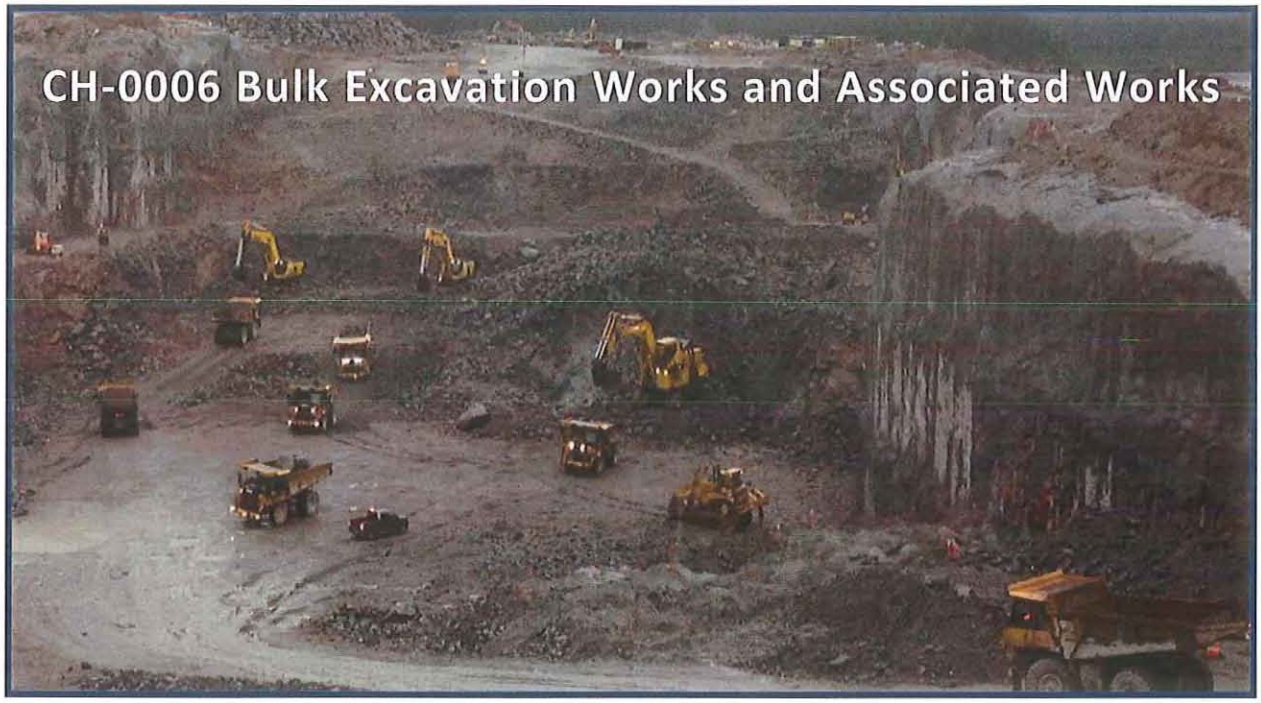
Since the meeting of April 2, 2013, IKC-ONE has determined the additional cost, including the cost to accelerate 56 days of delay to IKC-ONE's Work, for which the company is responsible. It is now the Company's duty to make a just and equitable adjustment to the Contract price for $24,766,250 (due to acceleration, indirect and other impact cost components) and $6,258,409 (in unpaid change requests) to compensate IKC-ONE for what it is entitled to by Contract and law.

IKC-ONE is committed to Company's instruction and will "do whatever it takes" to finish the Project as requested by Company on October 25, 2013. Barring further unanticipated issues, it is on track to do so. IKC-ONE will continue to perform the work in good faith and to execute its contractual obligations.

In this request for an equitable adjustment, IKC-ONE has supplied proper documentation and proven its right to compensation. It is now the responsibility of Company to perform its duties with the same diligence and compensate IKC-ONE equitably for its efforts as the Contract requires.

IKC-ONE

NALCOR Energy
Lower Churchill Project



Request for Equitable Adjustment

Submitted Without Prejudice

August 27, 2013

Appendix 1 - Footnotes

1

Nolan Jenkins - RE: Fwd: News Release - Further Site Preparation Work StartingatMuskratFalls

From: Brian Lemessurier
To: Boyd, Ian; Jenkins, Nolan; Knox, LEONARD
Date: 11/2/2012 11:55 AM
Subject: RE: Fwd: News Release - Further Site Preparation Work StartingatMuskratFalls
CC: Strickland, Don

Very good. Agreed.
Brian

>>> Ian Boyd <Ian.Boyd@bird.ca> 02/11/2012 10:17 am >>>

Agreed and I just spoke to Tim about it; he agrees so from that perspective I would assume the following approach:

No press release until such time project sanction is issued by the Province and Nalcor gives us the green light to proceed with the balance of the contract – this is my preferred approach

Press release at contract signing – any press release we would issue must mirror the message issued by Nalcor themselves (i.e. we have essentially been awarded mobilization work); you and I are on the same page with respect to Nalcor review/approving any press release;

Just so you know, anything we are even contemplating will with respect to the decision to press release or not will involve HJO (primarily you and Len) so no need to be concerned at this stage; let's get the contract and concentrate our efforts on getting the project moving;

Regards,

Ian Boyd, P.Eng.

Sr. Vice President

BIRD

120 Millennium Drive

Quispamsis, NB E2E 0C6

T: 506-849-2473 x.223

F: 506-847-0270

www.bird.ca

From: Brian Lemessurier [mailto:blemessurier@hjoc.com]
Sent: Friday, November 02, 2012 10:58 AM
To: Ian Boyd; LEONARD Knox; Nolan Jenkins
Cc: Don Strickland
Subject: RE: Fwd: News Release - Further Site Preparation Work Starting atMuskratFalls

Ian
I believe we will have to be quite vigilant in the way we disclose this. Reading the press release leads me to the conclusion that they are being a little coy in the way they have worded it. Phrases and sentences such as *"progressing with **further site preparation** work at Muskrat Falls" and "This further work will take work through November and December at which time Nalcor will re-visit the next steps in the context of the timing of a sanction decision."* do not make it clear that this work is in fact related to the permanent works. It seems to me that they want to get on with things but at the same time not appear to be dispensing with the sanctioning process. If we were to disclose this as a $100+ million contract to execute the excavation for permanent works then I think we could be creating a political problem. If they do confirm the award of the whole contract and we are required to disclose then we'll need the PR/legal minds to carefully word the release and have it approved by NALCOR (which btw is likely what you are thinking).
Brian

>>> Ian Boyd <Ian.Boyd@bird.ca> 02/11/2012 8:55 am >>>
Great news!

When we receive the actual contract, we will need to make a press release on the award of the contract; I was concerned about this relative to the public information aspect if Nalcor was remaining silent...I assume the idea of Bird issuing a press release will be OK?

It may somewhat depend on the nature of the award of the contract; if Nalcor provides the 'limited notice to proceed' and caps the value to be spent until project sanction, then I assume Bird will not make a press release; if Nalcor provides a 'full award' of the contract, we will need to make a press release.

I would recommend we get the contract form in our hands, make sure it reflects our last negotiations, and then have a conversation with Nalcor about a press release. Again, it depends on how the contract is awarded whether we need to issue a press release immediately or later after project sanction.

I will have a chat internally at Bird.

Ian Boyd, P.Eng.
Sr. Vice President

120 Millennium Drive
Quispamsis, NB E2E 0C6
T: 506-849-2473 x.223
F: 506-847-0270
www.bird.ca

-----Original Message-----
From: LEONARD Knox [mailto:LKnox@hjoc.com]
Sent: Thursday, November 01, 2012 8:46 PM
To: Brian Lemessurier; Nolan Jenkins
Cc: Ian Boyd; Don Strickland
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Let's start the engines!

Len
-----Original Message-----
From: Brian Lemessurier
Cc: <Ian.boyd@bird.ca>
Cc: Don Strickland <DStrickland@hjoc.com>
To: LEONARD Knox <LKnox@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>

Sent: 01/11/2012 7:12:15 PM
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Great news Len. Can't see any way they will turn back now.
Brian
-----Original Message-----
From: LEONARD Knox
Cc: <Ian.Boyd@bird.ca>
Cc: Brian Lemessurier <BLemessurier@hjoc.com>
Cc: Don Strickland <DStrickland@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>
To: <markturpin@nalcorenergy.com>

Sent: 01/11/2012 6:05:41 PM
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Spoke to mark. Award iminent. Its a go.

Len
-----Original Message-----
From: <MarkTurpin@nalcorenergy.com>
To: LEONARD Knox <LKnox@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>

Sent: 01/11/2012 5:53:37 PM
Subject: Fw: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

FYI

----- Original Message -----
From: Scott O'Brien
Sent: 11/01/2012 05:59 PM NDT
To: Mark Turpin
Subject: Fwd: News Release - Further Site Preparation Work Starting at Muskrat Falls

Sent from my iPhone

Begin forwarded message:

> From: "Karen O'Neill" <KONeill@nlh.nl.ca>
> Date: 1 November, 2012 5:25:20 PM NDT
> To: "Matthew Pike" <MatthewPike@nalcorenergy.com>,"Scott O'Brien"
> <ScottO'Brien@nalcorenergy.com>, "Ron Power"
> <RonPower@nalcorenergy.com>,"Paul Harrington"
> <PHarrington@nalcorenergy.com>, "Mark Dykeman"
> <MarkDykeman@nalcorenergy.com>
> Subject: Fw: News Release - Further Site Preparation Work Starting at
> Muskrat Falls
>
> This news release has been issued to media and is now being posted on our Nalcor Energy website.
>
> Please let me know if you have any questions.
>
> Thanks
> Karen
>
>
>
>
>
> Nalcor Energy has issued the following news release:
>
> Further Site Preparation Work Starting at Muskrat Falls
>
> November 1, 2012, St. John's, NL - Nalcor Energy is progressing with further site preparation work at Muskrat Falls in the coming weeks. Initial work was announced in April 2012 which included road construction and site access. This work has progressed over the summer and fall and is still underway. This further work will take work through November and December at which time Nalcor will re-visit the next steps in the context of the timing of a sanction decision.
>
> Nalcor has continued to evaluate opportunities to mitigate risks to project cost and schedule through pre-sanction work. Mobilizing the contractor and beginning site excavation before the end of 2012 and acquiring a temporary construction camp were identified as additional opportunities to advance the project and maintain the project schedule.
>

> "The decision to undertake these activities was based on an evaluation of the costs, the potential risks to the project schedule, and the long-term value of the work," said Ed Martin, president and CEO of Nalcor Energy. "A delay in the start of site excavation until spring 2013 would ultimately impact the overall project schedule and first power from Muskrat Falls could be over six months. This would result in additional carrying costs, including an estimated $200 million in additional costs for continued operation of the Holyrood plant - a cost that would ultimately be passed on to island consumers in increased electricity rates."
>
> Work will include mobilizing the site excavation contractor to the work site, carrying out preliminary excavation and installing temporary accommodations for approximately 250 workers at Muskrat Falls. While a larger, permanent camp is planned for the Muskrat Falls site following a sanction decision, temporary accommodations will be installed in the coming weeks, allowing Nalcor to meet current housing demands of the workforce without placing unnecessary pressure on existing accommodations in the Upper Lake Melville area. The temporary camp will also be reused during construction of transmission infrastructure from Muskrat Falls, as well as other projects undertaken around the province.
>
> "With the extensive analysis and engineering progress we've completed to date for Muskrat Falls, we remain confident that Muskrat Falls is the lowest-cost option for meeting electricity demands in Newfoundland and Labrador. This has been validated by the Decision Gate 3 analysis released this week and the release of Manitoba Hydro International's project analysis," said Martin. "Our objective is to deliver this project on time, on budget and in the best interest of electricity consumers. Investing in this preliminary work today will bring significant long-term value when a project sanction decision is made."
>
>
> -30-
>
> (See attached file: NR_Further Site Preparation Work at Muskrat
> Falls_Nov 2012.pdf)
>
>
> Karen O'Neill
> Senior Communications Advisor
> Corporate Communication & Shareholder Relations Nalcor Energy - Lower
> Churchill Project t. 709.737.1427 c. 709.690.2012 f. 709.737.1816 e.
> koneill@nalcorenergy.com w. nalcorenergy.com
> 1.888.576.5454
>
>
> You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

2

Nolan Jenkins - RE: Fwd: News Release - Further Site Preparation Work StartingatMuskratFalls

From: Brian Lemessurier
To: Boyd, Ian; Jenkins, Nolan; Knox, LEONARD
Date: 11/2/2012 11:55 AM
Subject: RE: Fwd: News Release - Further Site Preparation Work StartingatMuskratFalls
CC: Strickland, Don

Very good. Agreed.
Brian

>>> Ian Boyd <Ian.Boyd@bird.ca> 02/11/2012 10:17 am >>>

Agreed and I just spoke to Tim about it; he agrees so from that perspective I would assume the following approach:

No press release until such time project sanction is issued by the Province and Nalcor gives us the green light to proceed with the balance of the contract – this is my preferred approach

Press release at contract signing – any press release we would issue must mirror the message issued by Nalcor themselves (i.e. we have essentially been awarded mobilization work); you and I are on the same page with respect to Nalcor review/approving any press release;

Just so you know, anything we are even contemplating will with respect to the decision to press release or not will involve HJO (primarily you and Len) so no need to be concerned at this stage; let's get the contract and concentrate our efforts on getting the project moving;

Regards,

Ian Boyd, P.Eng.

Sr. Vice President

BIRD

120 Millennium Drive

Quispamsis, NB E2E 0C6

T: 506-849-2473 x.223

F: 506-847-0270

www.bird.ca

From: Brian Lemessurier [mailto:blemessurier@hjoc.com]
Sent: Friday, November 02, 2012 10:58 AM
To: Ian Boyd; LEONARD Knox; Nolan Jenkins
Cc: Don Strickland
Subject: RE: Fwd: News Release - Further Site Preparation Work Starting atMuskratFalls

Ian
I believe we will have to be quite vigilant in the way we disclose this. Reading the press release leads me to the conclusion that they are being a little coy in the way they have worded it. Phrases and sentences such as *"progressing with **further site preparation** work at Muskrat Falls" and "This further work will take work through November and December at which time Nalcor will re-visit the next steps in the context of the timing of a sanction decision."* do not make it clear that this work is in fact related to the permanent works. It seems to me that they want to get on with things but at the same time not appear to be dispensing with the sanctioning process. If we were to disclose this as a $100+ million contract to execute the excavation for permanent works then I think we could be creating a political problem. If they do confirm the award of the whole contract and we are required to disclose then we'll need the PR/legal minds to carefully word the release and have it approved by NALCOR (which btw is likely what you are thinking).
Brian

>>> Ian Boyd <Ian.Boyd@bird.ca> 02/11/2012 8:55 am >>>
Great news!

When we receive the actual contract, we will need to make a press release on the award of the contract; I was concerned about this relative to the public information aspect if Nalcor was remaining silent...I assume the idea of Bird issuing a press release will be OK?

It may somewhat depend on the nature of the award of the contract; if Nalcor provides the 'limited notice to proceed' and caps the value to be spent until project sanction, then I assume Bird will not make a press release; if Nalcor provides a 'full award' of the contract, we will need to make a press release.

I would recommend we get the contract form in our hands, make sure it reflects our last negotiations, and then have a conversation with Nalcor about a press release. Again, it depends on how the contract is awarded whether we need to issue a press release immediately or later after project sanction.

I will have a chat internally at Bird.

Ian Boyd, P.Eng.
Sr. Vice President

120 Millennium Drive
Quispamsis, NB E2E 0C6
T: 506-849-2473 x.223
F: 506-847-0270
www.bird.ca

-----Original Message-----
From: LEONARD Knox [mailto:LKnox@hjoc.com]
Sent: Thursday, November 01, 2012 8:46 PM
To: Brian Lemessurier; Nolan Jenkins
Cc: Ian Boyd; Don Strickland
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Let's start the engines!

Len
-----Original Message-----
From: Brian Lemessurier
Cc: <ian.boyd@bird.ca>
Cc: Don Strickland <DStrickland@hjoc.com>
To: LEONARD Knox <LKnox@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>

Sent: 01/11/2012 7:12:15 PM
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Great news Len. Can't see any way they will turn back now.
Brian
-----Original Message-----
From: LEONARD Knox
Cc: <Ian.Boyd@bird.ca>
Cc: Brian Lemessurier <BLemessurier@hjoc.com>
Cc: Don Strickland <DStrickland@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>
To: <markturpin@nalcorenergy.com>

Sent: 01/11/2012 6:05:41 PM
Subject: Re: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

Spoke to mark. Award iminent. Its a go.

Len
-----Original Message-----
From: <MarkTurpin@nalcorenergy.com>
To: LEONARD Knox <LKnox@hjoc.com>
To: Nolan Jenkins <NJenkins@hjoc.com>

Sent: 01/11/2012 5:53:37 PM
Subject: Fw: Fwd: News Release - Further Site Preparation Work Starting at MuskratFalls

FYI

----- Original Message -----
From: Scott O'Brien
Sent: 11/01/2012 05:59 PM NDT
To: Mark Turpin
Subject: Fwd: News Release - Further Site Preparation Work Starting at Muskrat Falls

Sent from my iPhone

Begin forwarded message:

> From: "Karen O'Neill" <KONeill@nlh.nl.ca>
> Date: 1 November, 2012 5:25:20 PM NDT
> To: "Matthew Pike" <MatthewPike@nalcorenergy.com>,"Scott O'Brien"
> <ScottO'Brien@nalcorenergy.com>, "Ron Power"
> <RonPower@nalcorenergy.com>,"Paul Harrington"
> <PHarrington@nalcorenergy.com>, "Mark Dykeman"
> <MarkDykeman@nalcorenergy.com>
> Subject: Fw: News Release - Further Site Preparation Work Starting at
> Muskrat Falls
>
> This news release has been issued to media and is now being posted on our Nalcor Energy website.
>
> Please let me know if you have any questions.
>
> Thanks
> Karen
>
>
>
>
>
> Nalcor Energy has issued the following news release:
>
> Further Site Preparation Work Starting at Muskrat Falls
>
> November 1, 2012, St. John's, NL - Nalcor Energy is progressing with further site preparation work at Muskrat Falls in the coming weeks. Initial work was announced in April 2012 which included road construction and site access. This work has progressed over the summer and fall and is still underway. This further work will take work through November and December at which time Nalcor will re-visit the next steps in the context of the timing of a sanction decision.
>
> Nalcor has continued to evaluate opportunities to mitigate risks to project cost and schedule through pre-sanction work. Mobilizing the contractor and beginning site excavation before the end of 2012 and acquiring a temporary construction camp were identified as additional opportunities to advance the project and maintain the project schedule.
>

> "The decision to undertake these activities was based on an evaluation of the costs, the potential risks to the project schedule, and the long-term value of the work," said Ed Martin, president and CEO of Nalcor Energy. "A delay in the start of site excavation until spring 2013 would ultimately impact the overall project schedule and first power from Muskrat Falls could be over six months. This would result in additional carrying costs, including an estimated $200 million in additional costs for continued operation of the Holyrood plant - a cost that would ultimately be passed on to island consumers in increased electricity rates."
>
> Work will include mobilizing the site excavation contractor to the work site, carrying out preliminary excavation and installing temporary accommodations for approximately 250 workers at Muskrat Falls. While a larger, permanent camp is planned for the Muskrat Falls site following a sanction decision, temporary accommodations will be installed in the coming weeks, allowing Nalcor to meet current housing demands of the workforce without placing unnecessary pressure on existing accommodations in the Upper Lake Melville area. The temporary camp will also be reused during construction of transmission infrastructure from Muskrat Falls, as well as other projects undertaken around the province.
>
> "With the extensive analysis and engineering progress we've completed to date for Muskrat Falls, we remain confident that Muskrat Falls is the lowest-cost option for meeting electricity demands in Newfoundland and Labrador. This has been validated by the Decision Gate 3 analysis released this week and the release of Manitoba Hydro International's project analysis," said Martin. "Our objective is to deliver this project on time, on budget and in the best interest of electricity consumers. Investing in this preliminary work today will bring significant long-term value when a project sanction decision is made."
>
>
> -30-
>
> (See attached file: NR_Further Site Preparation Work at Muskrat
> Falls_Nov 2012.pdf)
>
>
> Karen O'Neill
> Senior Communications Advisor
> Corporate Communication & Shareholder Relations Nalcor Energy - Lower
> Churchill Project t. 709.737.1427 c. 709.690.2012 f. 709.737.1816 e.
> koneill@nalcorenergy.com w. nalcorenergy.com
> 1.888.576.5454
>
>
> You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

3

IKC-ONE

IKC-ONE Construction Limited

Ref No.: CH0006-IO-NE-L-0001-00

November 14, 2012

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite 2
St. John's, NL A1A 4E1

Attention: Mr. Roy Lewis
Contracts Coordinator

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Special Project Order (SPO)

Dear Mr. Lewis,

As per your direction, immediately upon award of the contract we have initiated mobilization activities for the contract. Under the assumption that we will have initial access to the Company Laydown on Nov 30, 2012, we need to begin the process of securing labor for receiving materials and equipment at the project site immediately. We make this statement considering terms required under the SPO whereby all labor requires assignment through the building trades 'Mark up' process followed then by the requirement for drug, alcohol, and medical screening. The requirements of this process dictate a minimum of 3 weeks from the start in order to secure trades 'ready for work' at the project site.

Referring to Exhibit 2, the Muskrat Falls site is subject to a Special Project Order (SPO) under the Labor Relations Act of Newfoundland and Labrador. We are required to comply with all the terms of the SPO which will dictate the timelines for the 'Markup' procedure. Can you confirm if the Special Project Order has been successfully negotiated and if so, who will be the contact person for us to initiate the labor 'mark up' process? I am sure you agree that schedule requirements necessitate this process begin promptly.

Failing the conclusion of the 'SPO' and before the commencement of the work on site then we, in full co-operation with the Company, are required to take steps necessary to effect the start of work at the site by making reasonable commercial efforts to enter into supplementary or modified agreements with our current affiliated unions. Again this process will need to begin now if required.

IKC-ONE Construction Limited
59 Pippy Place
St. John's, NL A1B 4N1
Tel: (709)726-9095
Fax: (709)726-9106

At this point we are awaiting information from the client as to the status of the 'SPO' negotiations. Can you advise how we are to proceed?

If you have any questions please contact me at your earliest convenience.

Sincerely,

IKC-ONE Construction Limited

Leonard Knox, P. Eng.
VP – Major Projects

CC: Don Strickland
Willie Keats

IKC-ONE Construction Limited
59 Pippy Place
St. John's, NL A1B 4N1
Tel: (709)726-9095
Fax: (709)726-9106

4

NALCOR ENERGY - LOWER CHURCHILL PROJECT
PROJECT NO.: 505573
REQUEST FOR PROPOSAL NO.: CH0006
PACKAGE NAME: BULK EXCAVATION AND ASSOCIATED CIVIL WORKS
BID CLARIFICATION #: 3
BID CLARIFICATION REQUEST DATE: **********
ANSWERS PREPARED BY: Roy Lewis

Question Number	RFP Doc Reference	Subject	Clarification Requested	ENGINEER'S answers / comments	Status
87	Technical Specification Section 31 23 00, 3.5.8.3.5 & .6	Maximum Particle Velocity vs. RCC	Is the RCC structure and bedding concrete to be considered in the vibration limits specified?	Yes.	
88	Worksite Conditions, Part 1, Exhibit 12	7.1	Due to the ban on camp and access road construction off the Labrador Highway Route 510 per the Director of Crown Lands in Goose Bay will the contractor be allowed to place a temporary man camp along the first 7 km of the existing Southside access road to the site? Is this area considered to be off the Worksite?	No temporary camp will be allowed along the Southside Access Road. For clarity the Southside Access Road includes that portion of the road commencing at the security gate on Route 510.	
89	Appendix A13-part 2		In the list of key personnel, one of the roles listed is a "Resident Engineer" can you confirm what this role is?	Company expects 'Resident Engineer' to be Bidder's Senior Engineer at the Worksite.	
90	Instructions to Bidders - part 10		With regards to the following statement in 'Instructions to Bidders' (paragraph 10) – we acknowledge that the Company and/or Engineer will consider not only the Proposal compensation basis but Bidder's representation with respect to key issues related to the execution of the works. Can you confirm how the cost will be compared against the written representations to enable the company to select the preferred proponent?	Company Propsal Evaluation process is proprietary.	
91	Exhibit 1, Attachment 2 Drawings & Technical Specifications		Does the Owner have an alternate sand source as the granular curves for their sources do not meet specification.	No.	

5

5

2)

SNC·LAVALIN

MINUTES OF MEETING

Certifié ISO 9001

Minutes No.:	505573-3000-40MC-I-0077	Ref.:	LC-G-002
Prepared by:	Adam Kavanagh	Date:	27-Jun-2012
Meeting date:	20-Jun-2012	Project:	Lower Churchill Project
Location:	Muskrat Falls Meeting Room		
Subject:	CH0006 Bulk Excavation and Associated Civil Works – Pre-Tender Meeting		

Attendees:

SNC-Lavalin:

Michel Maeyens	Gervais Savard	Greg Snyder	Daniel Damov
Sean Lee	Adam Kavanagh	Bhasker Dubey	

Nalcor Energy:

Mark Turpin	John Mulcahy	Roy Lewis
Terry O'Reilly	Mark Dykeman	Dave Riffle

Barnard:

Mike Killian	Quincy Anderson	Jeff Ely	Jeff Higgins
Steve Byington	Brian Krohmer	Tim Howe	Kevin Ellerton

Pennecon:

Kevin Mouland	Roderick Mercer	Brad Cole

Dexter:

Chris Barron	Dick Tiller

IKC-One:

Dominique Hotte	Frederic Normandeau	Rob Hewitt
Francis Webber	Nolan Jenkins	Jean-Francois Theriault

Flatiron:

Ralph Wallace	Jeff Rogerson

Distribution: Attendees + Scott O'Brien, Normand Bechard, Alfy Hanna

Notes	
Item No.	**Description**
1.0	**Housekeeping:** Mark Turpin described how to access the exits in the case of an emergency and also described where the bathrooms where and the need for escorts for visitors in the NE/SLI LCP office.
1.1	Safety Moment and Presentation give by Sean Lee. Focus on safety is key component of the Lower Churchill Project. Contractors must come to site with a clear understanding of all safety related documentation in the Bid Package. Please see attachment for the safety presentation.

2.0	Mark Turpin gave the project overview presentation. Please see attached for the project overview presentation.
3.0	Michel Maeyens gave the CH0006 contract presentation. Daniel Damov presented the hydrological conditions slides. Please see the attached CH0006 contract presentation.
4.0	Mark Turpin gave the Labour Relations presentation. Mark stated that an SPO will be signed prior to award of CH0006. Labour Rates, Productivity incentives and turnaround frame work will all be provided at that time.
4.1	One point stressed by Mark was; The value of change for the contract award will be the difference of the bidders man hours at CLRA labour rates and the man hours at the SPO rates. Therefore the bidders must fill out the man hours and rate tables prudently.
5.0	Mark Turpin described the schedule of events to take place on the site visit 21-Jun-2012. Mark then opened the floor to questions. Roy Lewis emphasized again that this was a general information session, for official answers and answers to specific questions the bidders should follow the formal question and answer process outlined in the bid package.
5.1	Q: Can there be another extension to the bid deadline? A: There will not be another extension to the bid deadline.
5.2	Q/C: One bidder expressed concern that building Cofferdam 3 and 4 in the winter is impractical due to cold temperatures while placing till. A: The Company is looking to bidder to provide innovative solutions. Possible alternative designs or innovative winter methods to place till.
5.3	Q: Will there be an addendum to clarify liquidated damages (LDs)? A: It is not stated in the contract as it is today and there will be no addendum to clarify. This will be negotiated with the successful bidder. The Company is looking for a bidder who will concentrate efforts on delivering the contract on time.
5.4	Q: If there are geological shear zones in the powerhouse area, will there be penalties for excavation beyond the theoretical excavation lines? A: There is no evidence to suggest there are shear zones present in the powerhouse. The penalty structure will be a part of contract negotiations with the successful bidder.
5.5	Q: When is the award date for this contract? A: Mid September 2012.
5.6	Q: When will there be agreement on the SPO? A: The first week of September 2012.

5.7	Q: Will there be any further thought or discussion to provide camp accommodations for this contract? A: The Company will not be providing camp space for the CH0006 contract.
5.8	Q: Is there Total Suspended Solids data available for the Churchill River in the Muskrat Falls area? A: The Company is not aware of such data, but will look into it.
5.9	Q: Will the Labour Exhibit 14 be in the next addendum? A: Yes, the next addendum will contain the Labour Exhibit 14.
5.10	Q: Will the Southside Access Road (SSAR) be complete prior to the construction start of CH0006? A: The majority SSAR will be complete; there is a possibility the last number of kilometres to the main construction site will be a tote road suitable for equipment to travel on. The CH0006 contractor will not be required to do any road works outside their contract boundaries. They are responsible for roads within the CH0006 contract boundaries.
5.11	Q: Is the milestone to complete the works at the Switchyard and Future use area firm? Can it be used for contractor staging etc? A: There exists some float for the Switchyard and Future use area milestone. The area can be used for staging etc. but must be coordinated with the Company's Construction Manager.
6.0	Conclusion of Meeting: Mark Dykeman gave contractors directions for the site visit 21-Jun-2012, described how the helicopter tours would be done and distributed copies of the site layout drawing for review prior to the helicopter tour.

ACTIONS

Item No.	Description	Action to/ Expected Date
5.8	Investigate whether or not there is TSS data for the Churchill River in the area of Muskrat Falls.	Mark Turpin

6

(3)

Nolan Jenkins - CH-0006 Bulk Excavation And Associated Civil Works

From: <MarkTurpin@nalcorenergy.com>
To: <lknox@hjoc.com>, Nolan Jenkins <NJenkins@hjoc.com>
Date: 10/19/2012 1:10 PM
Subject: CH-0006 Bulk Excavation And Associated Civil Works
CC: <RoyLewis@nalcorenergy.com>

Len

Please be advised Nalcor will provide uninterrupted access to the Company Lay down area on November 30-2012 for commencement of Mobilization activities. Please provide a Mobilization Schedule based on the above dated with a milestone activity "Shovel in Ground"

The "Shovel in Ground" milestone is to indicate the date in which you would be able to start overburden excavation, constructing access roads, or Rock Drilling whichever is the first activity IKC-One plans to start.

Also please be advised Nalcor is willing to relax the requirements of "Bottom Of Power house" by Aug 31st in order to alleviate both schedule and commercial pressure.

Please call if you have any questions.

nalcor energy

Mark Turpin
Scope Leader - Mass Excavation and Dams
Lower Churchill Project
t. 709 570-5956 c. 709 725-7172
e. MarkTurpin@nalcorenergy.com
w. nalcorenergy.com

7

(3)

Nolan Jenkins - CH-0006 Bulk Excavation And Associated Civil Works

From: <MarkTurpin@nalcorenergy.com>
To: <lknox@hjoc.com>, Nolan Jenkins <NJenkins@hjoc.com>
Date: 10/19/2012 1:10 PM
Subject: CH-0006 Bulk Excavation And Associated Civil Works
CC: <RoyLewis@nalcorenergy.com>

Len

Please be advised Nalcor will provide uninterrupted access to the Company Lay down area on November 30-2012 for commencement of Mobilization activities. Please provide a Mobilization Schedule based on the above dated with a milestone activity "Shovel in Ground"

The "Shovel in Ground" milestone is to indicate the date in which you would be able to start overburden excavation, constructing access roads, or Rock Drilling whichever is the first activity IKC-One plans to start.

Also please be advised Nalcor is willing to relax the requirements of "Bottom Of Power house" by Aug 31st in order to alleviate both schedule and commercial pressure.

Please call if you have any questions.

nalcor energy

Mark Turpin
Scope Leader - Mass Excavation and Dams
Lower Churchill Project
t. 709 570-5956 c. 709 725-7172
e. MarkTurpin@nalcorenergy.com
w. nalcorenergy.com

8

SNC·LAVALIN

Certifié ISO 9001

MINUTES OF MEETING

Minutes No.:	505573-3000-40MC-I-0077	Ref.:	LC-G-002
Prepared by:	Adam Kavanagh	Date:	27-Jun-2012
Meeting date:	20-Jun-2012	Project:	Lower Churchill Project
Location:	Muskrat Falls Meeting Room		
Subject:	CH0006 Bulk Excavation and Associated Civil Works – Pre-Tender Meeting		

Attendees:

SNC-Lavalin:

Michel Maeyens	Gervais Savard	Greg Snyder	Daniel Damov
Sean Lee	Adam Kavanagh	Bhasker Dubey	

Nalcor Energy:

Mark Turpin	John Mulcahy	Roy Lewis
Terry O'Reilly	Mark Dykeman	Dave Riffle

Barnard:

Mike Killian	Quincy Anderson	Jeff Ely	Jeff Higgins
Steve Byington	Brian Krohmer	Tim Howe	Kevin Ellerton

Pennecon:

Kevin Mouland	Roderick Mercer	Brad Cole

Dexter:

Chris Barron	Dick Tiller

IKC-One:

Dominique Hotte	Frederic Normandeau	Rob Hewitt
Francis Webber	Nolan Jenkins	Jean-Francois Theriault

Flatiron:

Ralph Wallace	Jeff Rogerson

Distribution: Attendees + Scott O'Brien, Normand Bechard, Alfy Hanna

Notes	
Item No.	**Description**
1.0	**Housekeeping:** Mark Turpin described how to access the exits in the case of an emergency and also described where the bathrooms where and the need for escorts for visitors in the NE/SLI LCP office.
1.1	Safety Moment and Presentation give by Sean Lee. Focus on safety is key component of the Lower Churchill Project. Contractors must come to site with a clear understanding of all safety related documentation in the Bid Package. Please see attachment for the safety presentation.

2.0	Mark Turpin gave the project overview presentation. Please see attached for the project overview presentation.
3.0	Michel Maeyens gave the CH0006 contract presentation. Daniel Damov presented the hydrological conditions slides. Please see the attached CH0006 contract presentation.
4.0	Mark Turpin gave the Labour Relations presentation. Mark stated that an SPO will be signed prior to award of CH0006. Labour Rates, Productivity incentives and turnaround frame work will all be provided at that time.
4.1	One point stressed by Mark was; The value of change for the contract award will be the difference of the bidders man hours at CLRA labour rates and the man hours at the SPO rates. Therefore the bidders must fill out the man hours and rate tables prudently.
5.0	Mark Turpin described the schedule of events to take place on the site visit 21-Jun-2012. Mark then opened the floor to questions. Roy Lewis emphasized again that this was a general information session, for official answers and answers to specific questions the bidders should follow the formal question and answer process outlined in the bid package.
5.1	Q: Can there be another extension to the bid deadline? A: There will not be another extension to the bid deadline.
5.2	Q/C: One bidder expressed concern that building Cofferdam 3 and 4 in the winter is impractical due to cold temperatures while placing till. A: The Company is looking to bidder to provide innovative solutions. Possible alternative designs or innovative winter methods to place till.
5.3	Q: Will there be an addendum to clarify liquidated damages (LDs)? A: It is not stated in the contract as it is today and there will be no addendum to clarify. This will be negotiated with the successful bidder. The Company is looking for a bidder who will concentrate efforts on delivering the contract on time.
5.4	Q: If there are geological shear zones in the powerhouse area, will there be penalties for excavation beyond the theoretical excavation lines? A: There is no evidence to suggest there are shear zones present in the powerhouse. The penalty structure will be a part of contract negotiations with the successful bidder.
5.5	Q: When is the award date for this contract? A: Mid September 2012.
5.6	Q: When will there be agreement on the SPO? A: The first week of September 2012.

5.7	Q: Will there be any further thought or discussion to provide camp accommodations for this contract? A: The Company will not be providing camp space for the CH0006 contract.
5.8	Q: Is there Total Suspended Solids data available for the Churchill River in the Muskrat Falls area? A: The Company is not aware of such data, but will look into it.
5.9	Q: Will the Labour Exhibit 14 be in the next addendum? A: Yes, the next addendum will contain the Labour Exhibit 14.
5.10	Q: Will the Southside Access Road (SSAR) be complete prior to the construction start of CH0006? A: The majority SSAR will be complete; there is a possibility the last number of kilometres to the main construction site will be a tote road suitable for equipment to travel on. The CH0006 contractor will not be required to do any road works outside their contract boundaries. They are responsible for roads within the CH0006 contract boundaries.
5.11	Q: Is the milestone to complete the works at the Switchyard and Future use area firm? Can it be used for contractor staging etc? A: There exists some float for the Switchyard and Future use area milestone. The area can be used for staging etc. but must be coordinated with the Company's Construction Manager.
6.0	Conclusion of Meeting: Mark Dykeman gave contractors directions for the site visit 21-Jun-2012, described how the helicopter tours would be done and distributed copies of the site layout drawing for review prior to the helicopter tour.

ACTIONS

Item No.	Description	Action to/ Expected Date
5.8	Investigate whether or not there is TSS data for the Churchill River in the area of Muskrat Falls.	Mark Turpin

9

September 20, 2012

Nalcor Energy – Lower Churchill Project
c/o SNC-Lavalin Inc.
350 Torbay Road Plaza, Suite 2
St. John's, NL A1A 4E1

Attention: Mr. Roy Lewis
Contracts Coordinator

Re: Project No. 505573
Request For Proposal No.: CH0006
Construction of Bulk Excavation Works and Associated Civil Works
Response to Agenda Items from September 18, 2012 Meeting

Mr. Lewis,

IKC-ONE Earthworks Constructors, a Partnership is pleased to respond to the various items discussed at our most recent meeting on September 18, 2012.

1. **Overbreak Adjustment**

With the revised method for measuring the overbreak as proposed in Appendix A17 – Exceptions of our August 2, 2012 proposal, we have reduced the overall risk allowance in our proposal pricing by $1,349,900 (i.e. approximately 3000 m^3 of overbreak concrete). This is reflected in the revised unit rates for Item 9.1.1 Powerhouse Rock Excavation Above Water and Item 9.2.1 Spillway Rock Excavation Above Water shown in the attached revised Appendix A2.1 – Schedule of Price Breakdown.

2. **Camp Buy-back**

With the requirement to supply accommodations (i.e. Room & Board) removed from the scope of work for CH0006 and provided entirely by the Company to the Contractor, the exception in Appendix A17 – Exceptions of our August 2, 2012 proposal related to camp buy-back of $3,000,000 is withdrawn.

3. **Room & Board Allowance**

With the requirement to supply accommodations (i.e. Room & Board) removed from the scope of work for CH0006 and provided entirely by the Company to the Contractor, Item 1.3 Board and Lodging is revised as shown in the attached revised Appendix A2.1 – Schedule of Brice Breakdown.

IKC-ONE Earthworks Constructors, a Partnership
59 Pippy Place, 2nd Floor, St. John's NL A1B 4N1
(709) 726-9095 tel (709) 726-9106 fax

4. **Early CH0007 Access**

To accelerate the Work and provide clear, unrestricted access to the CH0007 Contractor in the Powerhouse base floor to allow for commencement of cast-in-place concrete work by August 31, 2013, we propose the attached revised Construction Schedule. We have also included a revised Manpower Loading Curve for your information and to facilitate your planning efforts related to the provision of accommodations for our staff and craft personnel. Based on our experience, we recommend adding a 25% contingency to the personnel levels identified.

To accommodate the larger drills and increased size of production blasts (i.e. required to efficiently use the increased equipment resources), the vibration limits of the specification will have to be revised. We would work closely with the Company and Company Representative to develop a Blast Plan that ensures the final wall and floor of the excavations is achieved to the satisfaction of the Company.

With the revised schedule, Exhibit 9 - Work and Milestone Schedule should be revised accordingly before being included in the contract documents.

5. **Room & Board Cost Until Temporary Camp is Operational**

Is discussed, we are prepared to deal with this cost on a Cost Reimbursable basis as provided in the contract documents.

6. **Reduced Travel Time from On-Site Temporary Camp**

As discussed, there are no savings related to this issue.

7. **Supervision/Indirect Accommodations Camp**

We confirm that the costs to purchase, transport and set up separate accommodations for our key staff are included in our revised proposal. Operational costs (i.e. power, housekeeping, etc.) are the responsibility of the Company. The Company will also provide catering services to all staff housed in this complex. The Company will also provide room and board to all other staff as required. Should this staff dorm not be required, we are prepared to reduce Item 1.1 Mobilization by a further $500,000 and all staff housing costs will be borne by the Company.

8. **Other**

i. **Permits** - The exception included in Appendix A17 – Exceptions of our August 2, 2012 proposal related to permits is withdrawn on the basis that the assigned responsibility for the list of permits provided in Exhibit 6 – Environmental and Regulatory Compliance Requirements is acceptable to the Contractor for the Scope of Work under CH0006.

ii. **Limit of Liability** – As requested, we propose an overall Limit of Liability of 10% of the Contract value.

iii. **Parent Company Guarantee** – IKC-ONE Earthworks Contractors, a Partnership is prepared to give a Parent Company Guarantee if required. There is no additional cost to our proposal.

iv. **Letter of Credit** - IKC-ONE Earthworks Contractors, a Partnership is prepared to give a Letter of Credit as requested in the contract documents if required. The additional cost to provide this Letter of Credit is 1.5% per annum of the value of the Letter of Credit.

v. **Bonds** – In lieu of a Letter of Credit, we would propose the Company consider increasing the Performance Bond and Labour & Material Bond from 50% to 100%. There would be **no additional price** to our proposal for this additional coverage.

vi. **Labour Agreement** – As instructed during the proposal preparation stage, our proposal pricing is based on current (i.e. 2012) wage rates and burdens established by the Construction Labour Relations Association (CLRA) – NL Building Trades agreements with the understanding that the execution of the work will be under a Special Project Order (SPO) negotiated between the Company and the applicable unions.

With the above revisions and adjustments to the scope of work, the overall price of our proposal as been reduced by $10,652,690 (including the $3,000,000 camp buy-back). Our current proposal price is now $110,942,295.

I trust the information provided satisfies the items raised at our meeting.

We look forward to the opportunity to discuss any aspects of this proposal at your convenience. If you have any further questions please do not hesitate to contact the undersigned at (709) 726-9095.

Sincerely,

Nolan Jenkins, P. Eng.
IKC-ONE Earthworks Constructors, a Partnership

Attachments: Appendix A2.1 – Schedule of Price Breakdown
Construction Schedule (Revised)
Manpower Loading Curve

IKC-ONE Earthworks Constructors, a Partnership
59 Pippy Place, 2nd Floor, St. John's NL A1B 4N1
(709) 726-9095 tel (709) 726-9106 fax

10

NALCOR ENERGY - LOWER CHURCHILL PROJECT

PROJECT NO.:	505573
REQUEST FOR PROPOSAL NO.:	CH0006
PACKAGE NAME:	BULK EXCAVATION AND ASSOCIATED CIVIL WORKS
BID CLARIFICATION #:	2
BID CLARIFICATION REQUEST DATE:	29-Jun-12
ANSWERS PREPARED BY:	Roy Lewis

Question Number	RFP Doc Reference	Subject	Clarification Requested	ENGINEER'S answers / comments	Status
53	Part 2, Exhibit 2, Attachment 1 Measurement & Payment Article 12.4	Sand Layer for Winter Protection	It appears as though this sand layer for winter protection is only indicated at the Spillway Structure location. Is this the case, or will it be required at other foundation locations such as RCC Dam, Embankment dams and Powerhouse locations? For scheduling purposes, what is the criteria for having to place this sand layer; what temperatures will trigger the requirement to place this layer? Who removes the sand layer and potentially 're-cleans' the foundation bedrock? It is assumed that this sand will not have to be processed, please confirm.	The sand layer is required on foundations of transition dams (refer to Plate G15). The sand will be removed by Others. Sand shall be placed at the end of CH0006 Work before winter conditions commence. Sand is not required to be processed.	
54	Part 2, Exhibit 2, Attachment 1 Measurement & Payment Article 7.1.18	Back charge for Over Excavation	There are shear zones and assumed shear zones indicated on the drawings which may potentially intersect the excavations. At this point, it is impossible to tell whether or not they will be an issue. If there are clearly shear zones which inevitably result in over break; will the contractor be still penalized at $800 per m3?	Excessive shear zone issues, if any, will be addressed and resolved as a field decision.	

11

(2) (11)

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0035-00

March 15, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

IKC-ONE has previously corresponded to Company that the site access road was not adequate as noted in the following letters:

- CH0006-IO-NE-L-0006-00 dated January 7, 2013
- CH0006-IO-NE-L-0024-00 dated February 17, 2013

We would like to note that there has been no work on the site access road since December, 2012.

The entire road now is quickly disintegrating, with the first 6 or 7 kilometers being practically impassable at this point. This is causing major concerns for:

- Emergency vehicle access to and from site
- Safety of craft and staff while driving
- Equipment damage
- Fuel supply risk (current conditions will not allow supplier to access the site)
- General operating supplies being delayed or stopped

IKC-ONE has little option but to advise Company if these conditions persist or deteriorate any further we will be left with no option but to immediately suspend all Work until suitable and safe access to the site is provided by Company.

The item of most concern is emergency vehicle access. Since all of us are governed by the principle of taking no risks related to the safety of the workers at the site, work cannot continue if emergency vehicles are unable to access the site in a timely and efficient manner. In this instance we assume you agree that work must be suspended immediately.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

The lack of safe and adequate access to the site will have serious schedule impacts and will result in additional costs such as, but not limited to, the following:

- Equipment standby charges
- Equipment damage
- Additional travel costs
- Loss on room and board
- Overhead charges
- Productivity losses due to frustrated craft
- Travel time due to road delays, etc.
- Standby labor costs
- Additional standby accommodation cost
- Subcontractor and supplier impact costs
- Any and all general impacts

It is our position that these costs will be the responsibility of the Company since it has not fulfilled its contractual obligation to provide access to site. IKC-ONE will request a Change Order for additional costs and for all schedule days lost. The magnitude of these costs could range from $250,000 to $500,000 per day and maybe even higher. This does not include any and all indirect and unknown (at this time) impacts costs.

As we discussed yesterday IKC-ONE will require the Company to begin repair work immediately on the access road, in an effort to mitigate overall damages to the project. IKC-ONE is very concerned that damages have already occurred and continue to occur. Time is of the essence and immediate action by the Company is essential now. We trust it is not too late to minimize serious schedule impacts to the project.

A site visit by Senior Representatives of Company on a typical warm day will be warranted so that Company can see firsthand the seriousness of the situation.

If you require any additional information or assistance, please contact the undersigned immediately.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

12

(2) (12)

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0036-00

March 15, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

Further to our letter CH0006-IO-NE-L-0035-00 sent earlier today we are left with no option but to suspend the night shift operations for March 15, 2013. We note the following restrictions:

- The road is too rough for the explosives truck and we have not been able to load a shot since yesterday. If the explosives truck should become stuck or stopped for any reason on the road while loaded with explosives it would be a serious situation.
- We will be out of fuel by end of shift with only enough for essential services such as de-watering the power house
- The capability of emergency services is in question.
- We only have enough rock on the ground for an efficient start-up, i.e., 1 and 1 ½ shifts or so.

The road/access conditions continue to worsen whereby our fuel supplier is unable to provide sufficient product to support the work. Our explosives supplier is unable to access the site thus stopping all blasting operations. Transportation of personnel is challenging and risky to say the least. This has placed all operations in jeopardy.

We will assess things the morning of March 16, 2013 and if same conditions persist we will have no option but to suspend this shift. Without a plan to provide access to the site by the end of the day March 16, 2013 we will have no choice but to demobilize all crews until such time safe and clear access to the site is secured. This will be the only action that can be taken in an effort to mitigate additional costs to the project. IKC-ONE does not accept any responsibility for resultant extra costs and other impacts.

We offer you our full co-operation in an effort to mitigate all damages as a result of the loss of access to the project.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Sincerely,

IKC-ONE Earthworks Constructors

for Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

13

(2)

13

(13)

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0037-00

March 17, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

The weather at site has cooled and the access road has temporarily improved but it remains in unacceptable condition for the following reasons:

- The first 5km requires a rock capping, proper ditches, more width, and a road topping as a minimum for a temporary fix. Otherwise it will disintegrate again as soon as the weather warms which according to today's forecast will be on Wednesday, March 20, 2013.
- The remaining 16km is extremely rough. It requires a minimum road topping immediately.

IKC-ONE appreciates that work has started on the first 5.2 km section. However, only 200m of road has been capped with rock in the past two days. It is urgent that this be accelerated.

The remaining 16 km is causing additional problems for our staff and craft. Everyone is being subjected to unreasonable driving conditions that are causing soreness, fatigue, etc. These conditions are adding risk of injury to our workers which could lead to Loss Time Incidents. This is causing safety concerns and labour issues that require immediate attention. Also, it is resulting in inefficient operations for IKC-ONE.

The recent disintegration of the site access has also prevented the delivery of explosives to the site. Therefore IKC-ONE has not been able to blast any rock during that period. Today will be the first blast since March 14, 2013. This has caused our quantity of rock available to haul to be completely depleted today. IKC-ONE will now be dependent on daily blasts for rock to haul and this also causes inefficient operations.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

IKC-ONE will continue to work when there is work to do and there is safe access to and from the site. However our ability to efficiently execute the work is being impacted by the site access conditions. Therefore it is our position that the unit rates as established in the Contract are no longer applicable and we respectfully request a Change Order (as per Article 2.1.1 of Exhibit 12) for all costs on a cost plus basis in accordance with the charge out rates in the Agreement until the access road is reasonable and our operations are back to an efficient basis. We propose that an emergency meeting be held as soon as possible to discuss this issue.

IKC-ONE has resources that are immediately available to help with the fixing of the site access. This includes graders, articulated haul trucks, loaders, etc. Craft could also be made available by suspending some of the site operations to concentrate on the road.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

14

(1) (2)

14

(14)

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0040-00

March 21, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Site Access

Dear Mr. O'Brien,

On Wednesday March 20, 2013 we met at your offices on Torbay Road to review our concerns with project access and the negative impacts caused by the substandard condition of the road. Our contract terms are clear whereby the client is responsible to provide access to the works. We made recommendations for possible actions at the meeting, however, we agreed that our General Superintendant, Brian Nichols, would do a thorough review of the current site condition to provide further recommendations for short term improvement and advice on actions to mitigate risk of long term subgrade failure when the spring thaw is pronounced, estimated to be in 2 or 3 weeks at most. For the record Brian has a 35 year history of construction in Labrador, in particular, road construction under similar conditions.

As a result of this site inspection and review this morning we have the following recommendations that must start immediately:

- Remove the berm of snow along length of road.
- Place the road topping currently onsite on the road to temporarily improve the driving surface. We do not know if there is enough road topping onsite to do the whole road, but it would be a good start. We expect most of this material will eventually be lost during the spring breakup but it will help to maintain access in short term.
- Proper ditching along the road has to be completed. There are areas with no ditching and other areas where the ditches are simply a trench created by an excavator bucket with no sloping. We expect the ditches without proper sloping to collapse during the spring thaw.
- There are locations where the road grade has to be raised a meter above the original ground, such as the Penney laydown and welding shop area, etc.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

- Additional culverts to be installed in areas where water is being observed ponding on road.
- A Class B material (6" lift or more) has to be placed on the sub-grade
- A road topping to be placed over the Class B material
- There are areas such as the side hill around 20Km and some cuts that requires slope stability to prevent flow of material during the spring thaw.

In addition to issues with supplying the site with necessary materials to maintain efficient operations our people are being injured in their dedicated attempt to keep the project moving. We have attached details of two incidents causing injury as a result of unusual and rough road conditions.

The labor force is frustrated with the daily rough transit to and from the site and continually raises their concerns with the condition of the access road. The poor condition of the road (and we expect will continue to deteriorate during the spring thaw) adds the risk of labor unrest at the work site. Obviously productivity has been severely impacted by the additional time accessing the site and the associated fatigue factor, which also introduces added risk of injury.

In our view, all measures available to the client must be taken immediately to remedy the problems associated with the substandard access road to the site. As we have said to you at yesterday's meeting and in previous correspondence we will provide you any assistance we can to ultimately mitigate the impacts to the project.

We look forward to hearing from you as soon as possible outlining the action plan that will provide access to a standard that supports safe and efficient operations. In our view, time is of essence

Sincerely,

IKC-ONE Earthworks Constructors

for Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

1. GENERAL INFORMATION

Project Name: LOWER CHURCHILL PROJECT		Project No. 505573 INCIDENT No. 2013-21
Incident Location Musk Rat Falls Contractor lay down area		
Date and Time of Incident 2013-03-18 TIME: approx 7:00 AM ☐ PM		Date Reported 2013-03-18
Name of Employee Involved Shawn Spearing	Employer IKC-ONE	Employee No. (SNC-Lavalin only)

Incident Classification: Property/Equipment Damage Vehicle Incident Near Miss (minor) Near Miss (high potential)
First Aid Medical Aid X LTI Security Incident

Medical Attention ☒ First Aid ☐ Medical Treatment | Injury Classification ☐ Occupational ☐ Non-Occupational

First Aid Attendant Name Shaun Bouzane | DAY 12 OF A 14 DAY SHIFT

Doctor / Hospital Name

Date of Doctor / Hospital Visit

Lost Time Beyond the Day of Work ☐ No | Estimated No. of Lost Days (exclude date of incident)

Witness(es) (1) (2)

List Co-Workers / Team Members:

Type of Contractor
- ☒ Construction
- ☐ Operations
- ☐ Service
- ☐ Maintenance

Type of Incident
- ☒ Personal Injury
- ☐ Equipment Damage
- ☐ Equipment Failure
- ☐ Property Damage
- ☐ Fire Explosion
- ☐ Spill Release
- ☐ Environment
- ☐ Chemical Exposure
- ☐ Contamination
- ☐ Other *(Specify)*: _____

Description of Incident: Worker found a sharp pain in his lower back as he was exiting the bus at the laydown area. He indicated that the bus ride was exceptionally rough as the ground was frozen.

2. INCIDENT INFORMATION - TO BE COMPLETED FOR INJURY / ILLNESS

Type of Contact
- ☐ struck against _____
- ☐ struck by _____
- ☐ caught in / on / between _____
- ☐ fall on same level *(specify)* _____
- ☐ fall to lower level *(specify)* _____
- ☐ contact with or exposure to:
  - ☐ electricity ☐ current
  - ☐ arc flash ☐ explosion
  - ☐ welding light ☐ steam
  - ☐ surface area ☐ extreme noise
  - ☐ hot condensate ☐ overexertion
  - ☐ radiation ☐ particle or sliver
  - ☐ chemicals:
    - ☐ flammable
    - ☐ poisonous
    - ☐ corrosive
- ☐ bodily reaction:
  - ☐ reflex ☐ fear

Nature of Injury / Illness
- ☐ death
- ☐ amputation
- ☐ thermal burns (1, 2, or 3)
- ☐ chemical burns
- ☐ crushed body part
- ☐ fracture
- ☐ torn ligaments / sprain / strain
- ☐ bruise
- ☐ concussion
- ☐ cut / abrasion / puncture
- ☐ inhalation (one time)
- ☐ dislocation of joint
- ☐ hernia
- ☐ poisoning (single/acute exposure)

Illness
- ☐ repeated trauma disorder due to repeated exposure to physical agents
- ☐ skin diseases or disorders
- ☐ dust disease
- ☐ respiratory disease
- ☐ poisoning due to repeated exposure
- ☐ irritation

Affected Body Part
- ☐ head:
  - ☐ scalp
  - ☐ face:
    - ☐ eyes ☐ nose
    - ☐ ears ☐ mouth
- ☐ neck
- ☐ chest / ribs
- ☒ back
- ☐ internal organs:
  - ☐ lungs ☐ kidney
  - ☐ heart ☐ liver
  - ☐ other *(specify)*: _____
- ☐ arm:
  - ☐ Left ☐ Right
  - ☐ wrist ☐ hand
  - ☐ finger ☐ other: _____
- ☐ leg:
  - ☐ Left ☐ Right
  - ☐ hip ☐ knee
  - ☐ foot ☐ ankle
  - ☐ toe ☐ lower leg
  - ☐ upper leg ☐ other: _____

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

3. ROOT CAUSES - IMMEDIATE CAUSES

Substandard Acts

Failure to Use Protective Defenses

- ☐ improper use of proper personal protective equipment
- ☐ failure to warn
- ☐ disabling guards or warning systems
- ☐ servicing, operating on non-isolated or energized equipment
- ☐ not using personal protective equipment
- ☐ failure to secure

Not Following Correct Procedures

General:

- ☐ not following proper Start-Up / Commissioning Procedures
- ☐ not following Safety Standards or Guidelines
- ☐ not following proper Operating Procedures or Methods
- ☐ not following proper Maintenance Procedures or Methods

Specific:

- ☐ operating equipment without authority
- ☐ taking improper position or posture
- ☐ improper placement
- ☐ overexertion of physical capacity
- ☐ unsafe mixing of chemicals
- ☐ improper loading
- ☐ working at improper speed
- ☐ conscious risk taking (by group)
- ☐ conscious risk taking (by individual)
- ☐ horseplay

Improper Use of Tools or Equipment

- ☐ using equipment improperly
- ☐ using tools improperly
- ☐ using defective equipment (aware)
- ☐ using defective tools (aware)

Inattention/Lack of Awareness

- ☐ improper decision making or lack of judgement
- ☐ distracted
- ☐ inattention of footing or surrounding

Other Substandard Acts

- ☐ Driving to fast for road conditions,

Substandard Conditions

Hardware Defects

	Specify		Specify
☐ defective equipment		☐ improperly prepared tools	
☐ defective tools		☐ improperly prepared equipment	
☐ inadequate equipment		☐ inadequate tools	

From:

☐ wear / tear ☐ corrosion ☐ other (specify)

Inadequate/Defective Controls or Defenses

	Specify		Specify
☐ inadequate guards/protective devices		☐ defective guards/protective devices	
☐ inadequate personal protective equipment		☐ defective warning systems	
☐ inadequate warning systems		☐ defective personal protective equipment	
☐ inadequate isolation of process or equipment			

Process Hazards

- ☐ fire and explosion hazards
- ☐ exposure to noise
- ☐ open systems
- ☐ exposure to radiation
- ☐ exposure to temperature extremes
- ☐ exposure to hazardous chemicals
- ☐ energized electrical system

Workspace Hazards

- ☐ working at heights
- ☐ inadequate layout, clearances, congestion or protrusions
- ☐ inadequate illumination
- ☐ inadequate housekeeping
- ☐ inadequate ventilation

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

4. ROOT CAUSES - JOB FACTORS

Inadequate Engineering/Design

Can be applied to structures, equipment, tools, etc.:

- ☒ poor technical design
- ☐ poor ergonomic design
- ☐ inadequate assessment of loss exposures
- ☒ inadequate standards, specifications and/or design criteria
- ☐ inadequate monitoring of activity
- ☒ inadequate assessment of operational readiness
- ☐ inadequate monitoring of initial operation
- ☐ inadequate evaluation and/or documentation of change
- ☐ other (*specify*)

Poor Maintenance Procedures

Encompass underlying conditions that impact on the maintenance system:

- ☐ inadequate preventative maintenance
- ☐ inadequate corrective maintenance
- ☐ excessive wear and tear
- ☐ improper extension of service life
- ☐ inadequate inspection/monitoring
- ☐ inadequate assessment of needs
- ☐ other (*specify*)

Poor Job Procedures

Factors affecting the structure of a job:

- ☐ inadequate/absent safety regulations and/or procedures
- ☐ inadequate reference documents, directives, or guidance manuals
- ☐ lack of initial orientation
- ☐ inadequate work standards
- ☐ lack of or inadequate job safety analysis regarding hazardous activities
- ☐ inadequate shift hand over procedures
- ☐ inadequate identification and evaluation of loss exposures
- ☐ negative reporting (meaning: if not told otherwise, assumed all is well)
- ☐ poor regulation of PPE use
- ☐ other (*specify*)

Error Inducing Conditions

Conditions existing in the work environment conducive to committing errors or violations:

- ☐ environmental stress:
  - ☐ noise
  - ☒ atmospheric conditions
  - ☐ oxygen deficiency
  - ☐ exposure to health hazards
  - ☐ other (*specify*)
- ☐ task-related stress:
  - ☐ repetitive/monotonous job tasks
  - ☐ confusing demands
  - ☐ extreme concentration or perception demands
  - ☐ extreme physical/physiological demands
  - ☐ fatigue due to mental task load or duration
  - ☐ fatigue due to sensory overload
  - ☐ other (*specify*)

Incompatible Goals

Chosen when the conflicting goals originate from the different management systems. A change in these conditions generally impact on the management philosophy:

- ☐ system goals vs safety goals (i.e., cost savings vs safety)
- ☐ personal goals vs safety goals (i.e., perceived inappropriate reward system)
- ☐ system vs system goals (i.e., cost cutting by means of reduction in manpower)
- ☐ other (*specify*)

Inadequate Training

This section pertains to company-provided training:

- ☐ inadequate training provided by company
- ☐ lack of training by company
- ☐ training requirements not identified as part of job description
- ☐ training deemed ineffective (boring, lack of incentive to learn)
- ☐ job requirements and training do not match
- ☐ inadequate or lack of systems to verify understanding
- ☐ other (*specify*)

Communication Failures

Includes both the tools for communication and the process of communication:

- ☐ giving unclear or incomplete instructions
- ☐ poor communications of health and safety data, regulations or guidelines
- ☐ inadequate communication tools
- ☐ inadequate horizontal communication (i.e., between peers)
- ☐ inadequate vertical communication (i.e., between supervisor to peer)
- ☐ inadequate communication between different organizations
- ☐ absence or misuse of standard terminologies and phraseologies
- ☐ other (*specify*)

Organizational Failures

Refers to systems or programs within the organization:

- ☐ inadequate work planning
- ☐ unclear or conflicting reporting relationships
- ☐ unclear or conflicting assignment of responsibility
- ☐ improper/insufficient delegation
- ☐ inadequate audit/inspection program
- ☐ inadequate incident reporting/investigation system
- ☐ inadequate purchasing
- ☐ inadequate job placement (wrong person for the job)
- ☐ inadequate performance measurement, evaluation and feedback
- ☐ lack of supervisory/management job knowledge
- ☐ inadequate or lack of safety meetings
- ☐ inadequate safety promotion (visibility, acceptance)
- ☐ inadequate control of change system
- ☐ other (*specify*)

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

5. ROOT CAUSES - PERSONAL FACTORS

Physical Capabilities

- ☐ substance sensitivities or allergies
- ☐ vision deficiency
- ☐ hearing deficiency
- ☐ other sensory deficiency
- ☐ respiratory incapacity
- ☐ other permanent physical disabilities
- ☐ temporary disabilities
- ☐ limited ability to sustain body positions
- ☐ restricted range of body movement
- ☐ other (*specify*) _____

Mental Capabilities

- ☐ fears and phobias
- ☐ emotional disturbance
- ☐ mental illness
- ☐ difficulty comprehending
- ☐ learning disability
- ☐ poor judgement
- ☐ memory failure
- ☐ poor coordination or reaction time
- ☐ other (*specify*) _____

Physical Stress

Physical conditions specific to the individual that are conducive to committing errors, or render the individual more susceptible to injury or illness:

- ☐ injury or illness
- ☐ fatigue due to lack of rest
- ☐ blood sugar insufficiency
- ☐ drug or alcohol influence
- ☐ other (*specify*) _____

Mental Stress

Mental conditions specific to the individual that are conducive to committing errors, or render the individual more susceptible to injury or illness:

- ☐ frustration
- ☐ conflicting demands
- ☐ preoccupation with problems
- ☐ confusing directions
- ☐ "meaningless" or "degrading" activities
- ☐ other (*specify*) _____

Improper Risk Taking

Chosen when the conditions are specific to or impact directly on the individual. Recommendations generally fall under the control of the supervisor and employee:

- ☐ improper performance is rewarded
- ☐ proper performance is punished
- ☐ lack of incentives
- ☐ improper supervisory example
- ☐ inadequate identification of critical safe behaviour
- ☐ inadequate reinforcement of critical safe behaviour
- ☐ inappropriate aggression
- ☐ other (*specify*) _____

Lack of Knowledge or Skill

Conditions usually specific to an individual but may be common to a peer group:

- ☐ lack of experience
- ☐ inadequate initial instruction
- ☐ infrequent performance
- ☐ lack of coaching
- ☐ inadequate practice
- ☐ misunderstood directions
- ☐ other (*specify*) _____

List all immediate and root cause selections with the accompanying rationale for each section.

Immediate & Basic Cause Selection (s)	Rationale
Poor technical design	The road in its current condition is not conducive to travel on a bus. There are many ruts and bumps that cause the bus to shift unexpectedly.
Inadequate standards, specifications and/or design criteria	The road is not built to the standard that would be expected for a project of this magnitude and the type and volume of traffic it is subjected to.
Inadequate assessment of operational readiness	The road currently with the weather that has been experienced as of late is unable to handle the amount and type of traffic it has to handle.
Atmospheric changes	Due to the warm weather the road had deteriorated severly and cold snap caused road to have an increase in depressions and ruts.

6. RECOMMENDATIONS

List all recommendations or requires actions along with the person responsible for the follow-up action and the required completion date. Every immediate and/or root cause should result in an action.

Action	By Whom	Required Date
Please ensure that road is maintained in a manner that does not subject workers to the types of forces that workers are currently being subjected to.	SNC	

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

Greg French Investigated By	Date	Reviewed By – Contractor Site Manager	March 20, 13 Date
SNC-Lavalin's Site Manager	Date	Client's Site Manager (if req'd)	Date

Photos / Sketches

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

1. GENERAL INFORMATION

Project Name: LOWER CHURCHILL PROJECT			Project No. 505573 INCIDENT No. 2012-
Incident Location Main Road between camp road and site			
Date and Time of Incident YY 13 MM 03 DD 20	TIME: 18:00	☐ AM ☒ PM	Date Reported YY 13 MM 03 DD 20
Name of Employee Involved Louis-Philippe Perron	Employer IKC-ONE		Employee No. (SNC-Lavalin only)

Incident Classification: Property/Equipment Damage | Vehicle Incident | Near Miss (minor) | Near Miss (high potential)
First Aid | ☒ Medical Aid | LTI | Security Incident

Medical Attention ☒ First Aid ☐ Medical Treatment	Injury Classification ☐ Occupational ☐ Non-Occupational
First Aid Attendant Name Jason MCarthy	DAY __7____ OF A __14____ DAY SHIFT
Doctor / Hospital Name	
Date of Doctor / Hospital Visit	
Lost Time Beyond the Day of Work ☐ No ☐ Yes	Estimated No. of Lost Days (exclude date of incident)
Witness(es) (1)	(2)

List Co-Workers / Team Members:	Type of Contractor	Type of Incident	
	☒ Construction	☒ Personal Injury	☐ Spill Release
	☐ Operations	☐ Equipment Damage	☐ Environment
	☐ Service	☐ Equipment Failure	☐ Chemical Exposure
	☐ Maintenance	☐ Property Damage	☐ Contamination
		☐ Fire Explosion	☐ Other *(Specify)*: _____

Description of Incident: Employee was driving from the camp road to the site doing approximately 10-20 km/h. The road was very rough and full of pot holes. He felt pain in the middle of his back. He had a difficult time twisting his back when he got out of the pick-up truck.

2. INCIDENT INFORMATION - TO BE COMPLETED FOR INJURY / ILLNESS

Type of Contact

- ☐ struck against _____
- ☐ struck by _____
- ☐ caught in / on / between _____
- ☐ fall on same level (*specify*) _____
- ☐ fall to lower level (*specify*) _____
- ☐ contact with or exposure to:
  - ☐ electricity ☐ current
  - ☐ arc flash ☐ explosion
  - ☐ welding light ☐ steam
  - ☒ surface area ☐ extreme noise
  - ☐ hot condensate ☐ overexertion
  - ☐ radiation ☐ particle or sliver
  - ☐ chemicals:
    - ☐ flammable
    - ☐ poisonous
    - ☐ corrosive
- ☐ bodily reaction:
  - ☒ reflex ☐ fear

Nature of Injury / Illness

- ☐ death
- ☐ amputation
- ☐ thermal burns (1, 2, or 3)
- ☐ chemical burns
- ☐ crushed body part
- ☐ fracture
- ☒ torn ligaments / sprain / strain
- ☐ bruise
- ☐ concussion
- ☐ cut / abrasion / puncture
- ☐ inhalation (one time)
- ☐ dislocation of joint
- ☐ hernia
- ☐ poisoning (single/acute exposure)

Illness

- ☐ repeated trauma disorder due to repeated exposure to physical agents
- ☐ skin diseases or disorders
- ☐ dust disease
- ☐ respiratory disease
- ☐ poisoning due to repeated exposure
- ☐ irritation

Affected Body Part

- ☐ head:
  - ☐ scalp
  - ☐ face:
    - ☐ eyes ☐ nose
    - ☐ ears ☐ mouth
- ☐ neck
- ☐ chest / ribs
- ☒ back
- ☐ internal organs:
  - ☐ lungs ☐ kidney
  - ☐ heart ☐ liver
  - ☐ other *(specify)*: _____
- ☐ arm:
  - ☐ **Left** ☐ **Right**
  - ☐ wrist ☐ hand
  - ☐ finger ☐ other: _____
- ☐ leg:
  - ☐ **Left** ☐ **Right**
  - ☐ hip ☐ knee
  - ☐ foot ☐ ankle
  - ☐ toe ☐ lower leg
  - ☐ upper leg ☐ other: _____

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

3. ROOT CAUSES - IMMEDIATE CAUSES

Substandard Acts

Failure to Use Protective Defenses

- ☐ improper use of proper personal protective equipment
- ☐ failure to warn
- ☐ disabling guards or warning systems
- ☐ servicing, operating on non-isolated or energized equipment
- ☐ not using personal protective equipment
- ☐ failure to secure

Not Following Correct Procedures

General:

- ☐ not following proper Start-Up / Commissioning Procedures
- ☐ not following Safety Standards or Guidelines
- ☐ not following proper Operating Procedures or Methods
- ☐ not following proper Maintenance Procedures or Methods

Specific:

- ☐ operating equipment without authority
- ☐ taking improper position or posture
- ☐ improper placement
- ☐ overexertion of physical capacity
- ☐ unsafe mixing of chemicals
- ☐ improper loading
- ☐ working at improper speed
- ☐ conscious risk taking (by group)
- ☐ conscious risk taking (by individual)
- ☐ horseplay

Improper Use of Tools or Equipment

- ☐ using equipment improperly
- ☐ using tools improperly
- ☐ using defective equipment (aware)
- ☐ using defective tools (aware)

Inattention/Lack of Awareness

- ☐ improper decision making or lack of judgement
- ☐ distracted
- ☐ inattention of footing or surrounding

Other Substandard Acts ☐ Specify _____

Substandard Conditions

Hardware Defects

	Specify		*Specify*
☐ defective equipment		☐ improperly prepared tools	
☐ defective tools		☐ improperly prepared equipment	
☐ inadequate equipment		☐ inadequate tools	

From:

☐ wear / tear ☐ corrosion ☒ other (specify) Road Conditions

Inadequate/Defective Controls or Defenses

	Specify		*Specify*
☐ inadequate guards/protective devices		☐ defective guards/protective devices	
☐ inadequate personal protective equipment		☐ defective warning systems	
☐ inadequate warning systems		☐ defective personal protective equipment	
☐ inadequate isolation of process or equipment			

Process Hazards

- ☐ fire and explosion hazards
- ☐ exposure to noise
- ☐ open systems
- ☐ exposure to radiation
- ☐ exposure to temperature extremes
- ☐ exposure to hazardous chemicals
- ☐ energized electrical system

Workspace Hazards

- ☐ working at heights
- ☒ inadequate layout, clearances, congestion or protrusions
- ☐ inadequate illumination
- ☐ inadequate housekeeping
- ☐ inadequate ventilation

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

4. ROOT CAUSES - JOB FACTORS

Inadequate Engineering/Design

Can be applied to structures, equipment, tools, etc.:

- ■ poor technical design
- ☐ poor ergonomic design
- ☐ inadequate assessment of loss exposures
- ■ inadequate standards, specifications and/or design criteria
- ☐ inadequate monitoring of activity
- ☐ inadequate assessment of operational readiness
- ☐ inadequate monitoring of initial operation
- ☐ inadequate evaluation and/or documentation of change
- ☐ other (*specify*)

Poor Maintenance Procedures

Encompass underlying conditions that impact on the maintenance system:

- ☐ inadequate preventative maintenance
- ☐ inadequate corrective maintenance
- ☐ excessive wear and tear
- ☐ improper extension of service life
- ☐ inadequate inspection/monitoring
- ☐ inadequate assessment of needs
- ▩ other (*specify*)

Inadequate road conditions

Poor Job Procedures

Factors affecting the structure of a job:

- ☐ inadequate/absent safety regulations and/or procedures
- ☐ inadequate reference documents, directives, or guidance manuals
- ☐ lack of initial orientation
- ☐ inadequate work standards
- ☐ lack of or inadequate job safety analysis regarding hazardous activities
- ☐ inadequate shift hand over procedures
- ☐ inadequate identification and evaluation of loss exposures
- ☐ negative reporting (meaning: if not told otherwise, assumed all is well)
- ☐ poor regulation of PPE use
- ☐ other (*specify*)

Error Inducing Conditions

Conditions existing in the work environment conducive to committing errors or violations:

- ☐ environmental stress:
  - ☐ noise
  - ■ atmospheric conditions
  - ☐ oxygen deficiency
  - ☐ exposure to health hazards
  - ☐ other (*specify*)
- ☐ task-related stress:
  - ☐ repetitive/monotonous job tasks
  - ☐ confusing demands
  - ☐ extreme concentration or perception demands
  - ☐ extreme physical/physiological demands
  - ☐ fatigue due to mental task load or duration
  - ☐ fatigue due to sensory overload
  - ☐ other (*specify*)

Incompatible Goals

Chosen when the conflicting goals originate from the different management systems. A change in these conditions generally impact on the management philosophy:

- ☐ system goals vs safety goals (i.e., cost savings vs safety)
- ☐ personal goals vs safety goals (i.e., perceived inappropriate reward system)
- ☐ system vs system goals (i.e., cost cutting by means of reduction in manpower)
- ☐ other (*specify*)

Inadequate Training

This section pertains to company-provided training:

- ☐ inadequate training provided by company
- ☐ lack of training by company
- ☐ training requirements not identified as part of job description
- ☐ training deemed ineffective (boring, lack of incentive to learn)
- ☐ job requirements and training do not match
- ☐ inadequate or lack of systems to verify understanding
- ☐ other (*specify*)

Communication Failures

Includes both the tools for communication and the process of communication:

- ☐ giving unclear or incomplete instructions
- ☐ poor communications of health and safety data, regulations or guidelines
- ☐ inadequate communication tools
- ☐ inadequate horizontal communication (i.e., between peers)
- ☐ inadequate vertical communication (i.e., between supervisor to peer)
- ☐ inadequate communication between different organizations
- ☐ absence or misuse of standard terminologies and phraseologies
- ☐ other (*specify*)

Organizational Failures

Refers to systems or programs within the organization:

- ☐ inadequate work planning
- ☐ unclear or conflicting reporting relationships
- ☐ unclear or conflicting assignment of responsibility
- ☐ improper/insufficient delegation
- ☐ inadequate audit/inspection program
- ☐ inadequate incident reporting/investigation system
- ☐ inadequate purchasing
- ☐ inadequate job placement (wrong person for the job)
- ☐ inadequate performance measurement, evaluation and feedback
- ☐ lack of supervisory/management job knowledge
- ☐ inadequate or lack of safety meetings
- ☐ inadequate safety promotion (visibility, acceptance)
- ☐ inadequate control of change system
- ▩ other (*specify*)

Inadequate road conditions

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

5. ROOT CAUSES - PERSONAL FACTORS

Physical Capabilities

- ☐ substance sensitivities or allergies
- ☐ vision deficiency
- ☐ hearing deficiency
- ☐ other sensory deficiency
- ☐ respiratory incapacity
- ☐ other permanent physical disabilities
- ☐ temporary disabilities
- ☐ limited ability to sustain body positions
- ☐ restricted range of body movement
- ☐ other (*specify*) _____

Mental Capabilities

- ☐ fears and phobias
- ☐ emotional disturbance
- ☐ mental illness
- ☐ difficulty comprehending
- ☐ learning disability
- ☐ poor judgement
- ☐ memory failure
- ☐ poor coordination or reaction time
- ☐ other (*specify*) _____

Physical Stress

Physical conditions specific to the individual that are conducive to committing errors, or render the individual more susceptible to injury or illness:

- ☐ injury or illness
- ☐ fatigue due to lack of rest
- ☐ blood sugar insufficiency
- ☐ drug or alcohol influence
- ☐ other (*specify*) _____

Mental Stress

Mental conditions specific to the individual that are conducive to committing errors, or render the individual more susceptible to injury or illness:

- ☐ frustration
- ☐ conflicting demands
- ☐ preoccupation with problems
- ☐ confusing directions
- ☐ "meaningless" or "degrading" activities
- ☐ other (*specify*) _____

Improper Risk Taking

Chosen when the conditions are specific to or impact directly on the individual. Recommendations generally fall under the control of the supervisor and employee:

- ☐ improper performance is rewarded
- ☐ proper performance is punished
- ☐ lack of incentives
- ☐ improper supervisory example
- ☐ inadequate identification of critical safe behaviour
- ☐ inadequate reinforcement of critical safe behaviour
- ☐ inappropriate aggression
- ☐ other (*specify*) _____

Lack of Knowledge or Skill

Conditions usually specific to an individual but may be common to a peer group:

- ☐ lack of experience
- ☐ inadequate initial instruction
- ☐ infrequent performance
- ☐ lack of coaching
- ☐ inadequate practice
- ☐ misunderstood directions
- ☐ other (*specify*) _____

List all immediate and root cause selections with the accompanying rationale for each section.

Immediate & Basic Cause Selection (s)	Rationale
Poor technical design	**The road in its current condition is not conducive to travel, There are many ruts and bumps that cause a vehicle to shift unexpectedly.**
Inadequate standards, Specifications and /or design criteria	**The road is not built to the standard that would be expected for a project of this magnitude and the type and volume of traffic its is subjected to.**
Inadequate assessment of operational readiness	**The road currently with the weather that has been experienced as of late is unable to handle the amount and type of traffic it is subjected to**
Atmospheric changes	**Due to the warm weather the road had deteriorated severely and cold snap caused road to an increase in depressions and ruts.**

6. RECOMMENDATIONS

List all recommendations or requires actions along with the person responsible for the follow-up action and the required completion date. Every immediate and/or root cause should result in an action.

Action	By Whom	Required Date
Please ensure that road is built to standard that does not subject workers to the types of forces that workers are currently being subjected to.	SNC	

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

SNC·LAVALIN

Incident Investigation Report
Lower Churchill Project

Investigated By	Date	Reviewed By – Contractor Site Manager	Date
SNC-Lavalin's Site Manager	Date	Client's Site Manager (if req'd)	Date

15

(2)

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0045-00

April 16, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Condition of Site Access Road
Ref No. 505573-L-NAL-IKC-CH0006-0026
Notice of Dispute

Dear Mr. O'Brien,

IKC-ONE acknowledges receipt of your letter on the above noted subject dated April 2, 2013.

Paragraph two of the letter states:

"According to weather reports, this mild weather was a one in eighty year event which none of us had expected and could not plan for. As a contractor with years of experience working in Labrador, you have experienced similar conditions during the annual spring thaw."

IKC-ONE agrees that we have experience working in Labrador. We do not agree that the event could not be planned for. IKC-ONE stated the following in letter no. CH0006-IO-NE-L-0024-00 dated February 17, 2013:

"We recommend that all work begin immediately on the road so that the risk of this delay may be reduced."

The letter from Nalcor Energy continues and states:

"We have considered the application of a road topping to temporarily improve the Road condition. As you are aware, this is not normally done on this type of road, however as noted in your letter with spring thaw expected within two or three weeks any benefits of this material will be lost in spring breakup. Based on the above, we have determined this is of little value.

IKC-ONE disagrees with this statement. There are tremendous benefits including but not limited to the health of our workers that must be considered.

The letter from Nalcor Energy continues and states:

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

"We believe that the road complies with our contractual requirements."

IKC-ONE disagrees with this statement. IKC-ONE expectation is an unimpeded, unobstructed access from the Trans-Labrador Highway to the Company Laydown that is built and operational to the design speed of the access road. This is currently not the case and we respectfully request a Change Order for all associated impacts.

IKC-ONE hereby provides our notice of dispute in accordance with Article 30 with your decision stated the above reference letter.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

16

IC

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0007-00

January 7, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Accommodation, Room and Board
Notice of Potential Delay

Dear Mr. O'Brien,

Item 8.1 of Exhibit 12 – Site Conditions contained in the Agreement for the above noted contract states: "*Company shall provide, free of cost to Contractor, access to a Temporary Construction Camp including full Room and Board for Contractor's labour resources deployed at the Site. Such access will be available from January 1, 2013 or earlier.*"

The Temporary Construction Camp is not available as of today's date.

IKC-ONE has secured the following rooms in the Happy Valley – Goose Bay Area:

- Hotel North: 45 rooms
- Royal Inn and Suites: 1 room
- Labrador Inn: 52 rooms

Letters detailing these commitments are attached.

IKC-ONE also requested rooms from 5 Wing Goose Bay on December 17, 2012. A copy of the request is attached. The request was declined on December 24, 2012. A copy of this letter is also attached.

The anticipated room requirement for the next two months based upon our baseline schedule and current progress is:

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

Date Range	*Staff and Craft*	*Local (including staff)*	*Rooms Required*
January 7 to January 16, 2013	60	15	45
January 17 to January 24, 2013	115	25	90
January 25 to February 10, 2013	160	35	125
February 11 to March 15, 2013	175	35	140

The above numbers are consistent with the information previously provided to Nalcor Energy.

IKC-ONE will be impacted due to room shortages on or about January 25, 2013.

This will cause a delay to the project and additional costs to IKC-ONE.

The addition costs to IKC-ONE includes without limitation:

- Equipment on standby
- Inefficiencies in operations
- Additional indirects for longer schedule, etc.

The extent of delay and costs will depend on when the camp is available.

IKC-ONE has done everything reasonable to secure rooms in the Goose Bay area. The temporary camp needs to be operational on or before January 25, 2013 or additional rooms have to be made available in the local area in order to avoid the delay and additional costs.

Thus we hereby provide our notice in accordance with Article 4.5 of the agreement.

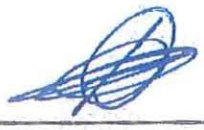
In addition, the travel time from Goose Bay to the lunchroom on site is approximately one hour on an inadequate road during favorable weather conditions. This is much longer than the travel time will be from the temporary camp to the lunchroom. The craft are complaining and we propose that Nalcor Energy consider paying an *"Inconvience Fee"* to the craft until the temporary camp opens.

If you require any further information, please do not hesitate to contact me at your convenience.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

Sincerely,

IKC-ONE Earthworks Constructors



Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

IKC-ONE IKC-ONE Earthworks Constructors

December 17, 2012

Lieutenant-colonel M.T. Ward
Wing Commander
5 Wing Goose Bay
P.O. Box 7002 Station C
Happy Valley – Goose Bay, NL
A0P 1C0

Attention: Mr. Silas Bird
Wing Commander Liason Office

RE: Use of Barracks for Non-Military Activity

Dear Mr. Bird,

IKC-ONE Earthworks Constructors has been awarded the contract by Nalcor for the bulk excavation works for the Muskrat Falls Project.

Our contract includes the overburden excavation and rock excavation for the powerhouse and spillway. It also includes some temporary earthfill cofferdams.

We have begun mobilization and the work will commence in earnest in January 2013.

Our workforce will ramp up in January and February, 2013. Nalcor is in the process of erecting a 300 person temporary camp. However it is not expected to be operational until March 1, 2013.

We have contacted the following hotels in the local area and have booked all available rooms:

- Hotel North: 45 rooms
- Royal Inn & Suites: 1 room
- Labrador Inn: 52 rooms

Letters detailing these commitments are attached.

The total rooms we have available is 98. Our work force is expected to peak at 200 people in the period of January and February, 2013.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

Our commitment is to utilize the available rooms in the area. However we are short approximately 100 rooms. We therefore respectfully ask permission to utilize the barracks at 5 Wing Goose Bay for the overflow. IKC-ONE will pay for the rooms.

If you require and further information, please do not hesitate to contact me at (780) 245-0816.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

IKC-ONE Earthworks Constructors

December 19, 2012

Lieutenant-colonel M.T. Ward
Wing Commander
5 Wing Goose Bay
P.O. Box 7002 Station C
Happy Valley – Goose Bay, NL
A0P 1C0

Attention: Mr. Silas Bird
Wing Commander Liason Office

RE: Use of Barracks for Non-Military Activity
Request # 2: Foodservice

Dear Mr. Bird,

IKC-ONE Earthworks Constructors made a request on December 17, 2012 for the use of 100 barracks as an overflow to the hotel rooms in Goose Bay. We had discussions with Sodexo on the same day and we did not realize that we had to do a request for food service also. We apologize for that error.

We approached Sodexo as we cannot find facilities in Happy Valley - Goose Bay that can provide the service for up to 175 persons on a timely and efficient manner.

We therefore respectfully request permission to utilize Sodexo and the facilities at 5 Wing Goose Bay for this service. Our expected ramp up is:

- Week of Jan 4, 2013: 40 persons
- Week of Jan 14, 2013: 100 persons
- Week of Jan 21, 2013: 125 persons
- Week of Jan 28, 2013: 150 persons
- Week of Feb 4, 2013: 175 persons
- Week of Feb 11, 2013: 175 persons
- Week of Feb 18, 2013: 175 persons
- Week of Feb 25, 2013, 175 persons

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

Our requirements are for a hot breakfast, box lunch and hot dinner. We would have our people in early, preferably 4:30 am and out by 5:30 am for breakfast, and in at 6:45 pm and out by 7:45 pm for dinner.

IKC-ONE will pay for the food service.

If you require and further information, please do not hesitate to contact me at (780) 245-0826.

Thank-you for your consideration

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

National Defence Défense nationale

5 Wing Goose Bay
P.O. Box 7002, Stn A
Happy Valley-Goose Bay
NL, A0P 1S0

1000-1 (WCLO)

24 December 2012

IKC-ONE Earthworks Constructors
P.O. Box 649, Station C
Happy Valley-Goose Bay
NL, A0P 1C0

Dear Mr. Strickland:

Thank you for your letter of 17 December 2012 requesting 100 barrack rooms for the dates 1 January to 28 February 2013. 5 Wing is unable to fulfill your request at this time. Due to new regulations recently put in place the request would have to be transferred up our chain of command taking approximately 12-14 weeks to process. This would exceed the start time of your requirement.

We also acknowledge the receipt of your 19 December 2012 requesting non-military use of Building 560, 5 Wing Dining Hall. We take it that you have directly requested Sodexho to provide food services. A Non-Military Use Agreement is not the appropriate process to undertake approval by DND. Sodexho is permitted under the service sub-contract with DND to provide third party work. It will be incumbent on Sodexho to demonstrate to DND that they are able to provide the services they are contracted for by DND and utilize the building in a way that does not disturb the service to DND. DND personnel will be communicating this to Sodexho.

Should you have any questions, please contact the undersigned 709-896-6958 or by e-mail at Silas.Bird@forces.gc.ca.

Sincerely,

Silas Bird

Silas Bird
Wing Community Liaison Officer
For Wing Commander

Canada

HOTEL NORTH TWO

17 December 2012

Hotel North 2

382 Hamilton River Road

Goose Bay, NL.

709-896-3398

This is to verify that the maximum number of rooms that we can allocate to IKC-ONE at any given time, between Jan. 14th – Feb. 28th, 2013 is 45 rooms.

Thank-you,

Rhonda Winsor
Manager

17 December 2012

Royal Inn & Suites
3 Royal Avenue
P.O. Box 69 - Stn. B
Happy Valley - Goose Bay
Newfoundland & Labrador
Canada A0P 1E0

Telephone: (709) 896-2456
Toll Free: (888) 440-2456
Facsimile: (709) 896-5501

E-mail: royal.inn@nf.sympatico.ca

This letter is to verify that the Royal Inn & Suites are only able to provide IKC-ONE with 1 room between Jan. 2nd & Feb. 28th, 2013.

Thank-you,

Monica Shea
Manager

17

17

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0011-00

January 13, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Accommodation, Room and Board
Notice of Additional Costs

Dear Mr. O'Brien,

Letter no CH0006-IO-NE-L-0007-00 dated January 7, 2013, stated that the temporary camp is not available. This has not changed.

This represents a change to the contract and IKC-ONE is incurring additional costs that include without limitation:

- additional hours for bus drivers and buses,
- additional costs for mechanics as they have to start in Goose Bay to ensure buses are operational,
- additional costs for pickups for foreman and staff travelling to and from the site,
- additional work for staff to manage travel, etc.

IKC-ONE respectfully requests a Change Order, in accordance with Article 14.8 of the Agreement, for these additional costs.

If you require any further information, please do not hesitate to contact me at your convenience.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

18

(7)

18
(24)

Nalcor Energy - Lower Churchill Project
c/o SNC-Lavalin Inc.
350 Torbay Road Plaza, Suite 2
St. John's, NL
A1A 4E1

February 4, 2013

Ref No 505573 - L-NAL - CH0006 - 0011
?

IKC-ONE Earthworks Constructors, a Partnership
59 Pippy Place, 2nd Floor
St. John's, NL, A1B 4N1

Attention: Leonard Knox, Vice President – Major Projects

Subject: Agreement CH0006 –Bulk Excavation and Associated Civil Works
Accommodation, Room and Board
Notice of Potential Delay

Dear Sir,

Thank you for your letter Ref No.: Ch0006-IO-NE-L-0007 dated January 7, 2013 regarding Accommodation, Room and Board – Notice of Potential Delay.

Company acknowledges the delay in the provision of the Temporary Construction Camp and appreciates the effort Contractor has undertaken to secure sufficient Room and Board for its forces in the absence of the Temporary Construction Camp.

Company has also undertaken its own research of the Room and Board availability in the Happy Valley Goose Bay Region and Company has determined from this research that there are at least some 62 spaces currently available in the Region. Contractor is referred to the list of rooms/apartments for rent attached to this letter and you are encouraged to take those steps to secure the necessary Room and Board for your resources.

Accordingly, Company does not recognize the validity of Contractor's claim for delay and additional costs.

Sincerely,

Scott O'Brien
Area Manager – Muskrat Falls Facilities & Infrastructure

ROOMS /APARTMENTS FOR RENT IN GOOSE BAY

Contact Name	Phone Number	Addresss	No. of Beds	Furnished	Services	Willing to Rent for 6 Weeks
Brian Corbin	709-897-7601	80 Park Drive	2	Yes	No	Yes
Carl Kavanagh	709-896-2850	Spruce Park	2	?	?	?
Brian Rideout	709-896-7658	1 Commercial Street	4			2 months
Mene Connoly	709-896-4000 709-899-4004		36	Yes	Yes	Yes
Dave Hunt	709-899-0001	Valley View	5	Yes	No	Yes
Candice Linesteah	709-899-3696	51 Park Street	5	No	No	Yes
George Cabot	709-899-1090	31 Grenfell Street	2			
McCarthy's Roofing	902-817-4000	2 King Cres	6	Yes	No	Yes
		Total Beds	62			

19

19
(25)

(1)

Nalcor Energy-Lower Churchill Project
c/o SNC-LAVALIN INC.
350 Torbay Road, Suite 2
St. John's, NL
Canada, A1A 4E1

08-Feb-2013

Ref No 505573-L-NAL-CH0006-0015

IKC-ONE Earthworks Constructors, a Partnership
59 Pippy Place, 2nd Floor
St. John's, NL A1B 4N1

?

Attention: Leonard Knox, Vice President-Major Projects

Subject: **Agreement CH0006-Bulk Excavation and Associated Civil Works**
Accommodation, Room and Board
Notice of Additional Costs

Dear Sir,

Thank you for your letter Ref No.: CH0006-IO-NE-L-0011 dated 13-Jan-2013 regarding Accommodation, Room and Board – Notice of Additional Costs.

Company acknowledges the delay in the provision of the Temporary Construction Camp and that Contractor may be incurring additional costs resulting from this delay. If Contractor considers that a change is necessary or desirable, Contractor may request a Change Order by submitting a Change Request in writing to Engineer in accordance with the procedure set out in Exhibit 3-Coordination Procedures.

Sincerely,

Scott O'Brien
Area Manager – Muskrat Falls Facilities & Infrastructure

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0011-00

January 13, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Accommodation, Room and Board
Notice of Additional Costs

Dear Mr. O'Brien,

Letter no CH0006-IO-NE-L-0007-00 dated January 7, 2013, stated that the temporary camp is not available. This has not changed.

This represents a change to the contract and IKC-ONE is incurring additional costs that include without limitation:

- additional hours for bus drivers and buses,
- additional costs for mechanics as they have to start in Goose Bay to ensure buses are operational,
- additional costs for pickups for foreman and staff travelling to and from the site,
- additional work for staff to manage travel, etc.

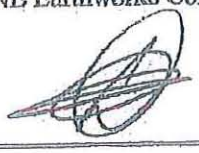
IKC-ONE respectfully requests a Change Order, in accordance with Article 14.8 of the Agreement, for these additional costs.

If you require any further information, please do not hesitate to contact me at your convenience.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Sincerely,

IKC-ONE Earthworks Constructors



Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

20

20
(26)

Ed Beresford

From: Don Strickland
Sent: Saturday, July 20, 2013 6:57 PM
To: Ed Beresford
Subject: FW: Use of Barricks at 5 Wing Goose Bay for Non-Military Activity

fyi

From: <SILAS.BIRD@forces.gc.ca>
Sent: Wednesday, February 13, 2013 1:29 PM
To: Don Strickland
Subject: RE: Use of Barricks at 5 Wing Goose Bay for Non-Military Activity

Mr. Strickland,

1) Wing Commander , Lieutenant Colonel Michael Ward has approved the Non-Military Use Agreement for the use of 95 barrack rooms at 5 Wing Goose Bay for the period 14 February to 14 April 2013.

2) The Agreement will need a signature from you to become effective. I would recommend that you phone me to arange a method/ time for your review of the Agreement and for signing. We will also arrange a time to meet with one of your personnel and a representative of the Wing to review conditions.

Silas Bird
Wing Community Liaison Officer | Officier de liaison communautaire
5 Wing Goose Bay | 5e Escadre Goose Bay
National Defence| Défence nationale
P.O. Box 7002, Station A
Happy Valley-Goose Bay, NL, A0P 1S0

Telephone| Téléphone 709-896-6958
Cell | Cellular : 709-896-7741
Facsimile| Télécopieur 709-896-6997
SILAS.BIRD@forces.gc.ca
Government of Canada | Gouvernement du Canada

From: Don Strickland [mailto:dstrickland@ikcone.com]
Sent: Thursday, 7, February, 2013 19:32 PM
To: Bird S@ 5 Wing WCLO@Goosebay
Cc: Boyd Humby; Justin Fillier; markdykeman@nalcorenergy.com
Subject: Use of Barricks at 5 Wing Goose Bay for Non-Military Activity

...r. Bird

Please find attached our letter respectfully requesting the use of the Barricks at 5 Wing Goose Bay.

Sincerely

Earthworks Constructors

DON STRICKLAND, P. ENG.
Project Manager
Lower Churchill Project
59 Pippy Place
St. John's, NL A1B 4N1
Tel: (709) 726-9095
Fax: (709) 726-9106
E-mail: dstrickland@ikcone.com

21

(1)

21

(27)

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0023-00

February 17, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Accommodation Room and Board
Notice of Potential Delay

Notice of Dispute

Dear Mr. O'Brien,

IKC-ONE acknowledges receipt of your letter dated February 4, 2013 via Aconex email NE-LCP-EMAIL-000080 sent on February 5, 2013 on the above noted subject.

We appreciate the list you have provided of available beds; however some of the locations have no furniture and others have no services. Thus beds are not available in these locations. Therefore, effectively reducing the number of available beds to 36, all of which are being utilized.

IKC-ONE had to delay a charter on February 13, 2013 due to lack of bed space. The charter will now arrive on February 18, 2013. This has resulted in a delay in the execution of the Work.

IKC-ONE obtained an agreement with 5 Wing Goose Bay for 95 beds starting on February 18, 2013. IKC-ONE has to pay for all of these beds whether they are utilized or not. Additionally IKC-ONE has to maintain utilization of rooms in the hotels in Goose Bay. IKC-ONE will do its best, but there can be no guarantee of 100% utilization. Therefore there may be additional costs to IKC-ONE.

Additional costs to IKC-ONE as a result of no camp accommodations being available on site include without limitation: additional busing, having to paint buses so they can travel on a public road, additional pickups for transportation, hiring of property managers, ineffective time for mechanics to ensure buses are running, potential under utilization of base barracks, hotels, equipment on standby, etc.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

The letter also includes the statement:

"Accordingly, Company does not recognize the validity of Contractor's claim for delay and additional costs."

IKC-ONE hereby provides our Notice of Dispute with this decision in accordance with Article 30 of the Agreement. There has been a delay in the execution of the Work and there are additional costs to IKC-ONE. Therefore a Change Order is respectfully requested for all schedule days lost and all associated costs noted in this letter.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

22

(1)

22

(23)

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0031-00

March 1, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Agreement CH0006
Accomodation, Room and Board
Notice of Additional Costs

Dear Mr. O'Brien,

IKC-ONE acknowledges receipt of the above noted letter dated February 8, 2013 received via Aconex email NE-LCP-EMAIL-000098 on February 8, 2013.

IKC-ONE hereby requests a Change Order in accordance with the letter. The Change Request is attached. Actual costs are unknown at this time so we have estimated the applicable costs for budgeting purposes.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	**Change Request No.**	00
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	**Revision No:**	00
Contractor:	IKC-ONE Earthworks Constructors	**Date:**	05-Feb-2013

Description of Change Request and Reason (attach all supporting information):

- In accordance with Exhibit 2-Compensation, this change request consists of provisions for extra costs related to provision of room and board services in Goose Bay, exclusive of HST, for Contractor labour resources deployed at the Site prior to the availability of the Site Accommodation Camp. This request represents an estimated cost at this time. Actual cost plus applicable markup will be applied once cost is finalized.

Supporting information that forms part of this Change Request:

- In reference to Exhibit 12-Site Conditions, the Company has not made available, from January 1,2013, a(Temporary)Construction Camp for the Contractor's labour resources deployed at the Site. Following this date, the Contractor has made the necessary arrangements for provisions to room and board services in Goose Bay and there are additional costs associated with this. Cost Impact is estimated below for budgeting purposes.

Description of impact on Control Schedule:

- Impact on Control Schedule unknown at this point.

Revised Finish Date: N/A

Estimated cost and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	○ Property Manager, driver around town, etc.	1	cp	$100,000	$100,000
	○ Additional Buses, bus time, etc	1	cp	$250,000	$250,000
	○ Paint Buses	1	cp	$50,000	$50,000
	○ Additional Pickups	1	cp	$200,000	$200,000
	○ Barrack non utilization, catering,	1	cp	$250,000	$250,000
	○ Inconvenience fee	1	cp	$200,000	$200,000
	○ Seat belts	1	cp	$50,000	$50,000
	○ Misc. (mechanics time, etc.)	1	cp	$100,000	$100,000
	○ Additional Travel	1	cp	$1,800,000	$1,800,000
	○ Markup (35%)	1	cp	$1,050,000	$1,050,000
				Value of this Change Request:	$4,050,000

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	Don Strickland		

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Robert Horton		
Area Manager	Michel Maeyens		
NALCOR ENERGY:			
Project Manager	Scott O'Brien		
General Project Manager	Ron Power		

Notes:

- The management of hotels, barracks, and rooms around town, requires a full time property manager in addition to regular overhead for this type of work. It also requires a driver and van for support.
- The long travel to site requires additional buses than would be required from the camp to the work site.
- Buses have to be painted so they can be registered with motor vehicles as they travel on a public road. The buses would not have to be registered on a private road.
- The long travel to site requires additional pickups as we cannot effectively utilize dayshift pickups for night shift. Key staff including foreman have to be at the site prior to the start of site so a cross over can occur. Therefore they cannot use the bus.
- We have to pay for every room in the Barracks whether we use them or not. We will do our best but there can be no guarantee of 100% utilization.
- We have to provide additional catering for coffee, water, snacks, fruit, etc. for the barracks in order to keep the craft more content.
- The inconvenience fee is required as an additional measure to keep craft in the barracks.
- Seat belts are required because of the long travel on a public road. They would not be required on the short travel from the camp to the site.
- The mechanics have to ensure the buses are started and then travel to site. Therefore their shift starts at the bus location and we have to pay from the time forward. We therefore incur some ineffective time while they are travelling to site.
- The additional travel is the result of a 14 day work 7 day out schedule. We have to utilize this shift because of the long travel time in conjunction with the 10 hour work day means the craft is working 14 to 15 hours per day before they can rest. We are concerned that this long day would cause safety concerns if we were to utilize a 28 days worked and 14 days out. In addition, once precedence is started, we do not think we will be able to stop this, even when the camp opens.

23

(9)

23
(23)

nalcor energy
LOWER CHURCHILL PROJECT

350 Torbay Road Suite 2
St. John's, NL Canada A1A 4E1
t. 709.737.1440 or 709.752.3460 f. 709.754.0787
nalcorenergy.com

30 MARCH

18 March 2013

IKC-ONE Earthworks Constructors, a Partnership
59 Pippy Place, 2nd Floor
St. John's, NL, A1B 4N1

Attention: Don Strickland – Project Manager and Contractor's Representative

Subject: **Lower Churchill Project**
Agreement No. 505573-CH0006
Construction of Bulk Excavation Works and Associated Civil Works

Change Orders CO-001/002/003/004

Dear Mr. Strickland:

Enclosed herewith are the following Change Orders (CO), which have been Approved by Company:

CO-001 – Provision for Craft Room and Board
CO-002 – Adjustment to Contractor Fuel Prices
CO-003 – Provision of Temporary Construction Power
CO-004 – Site Snow Clearing

Please sign and return a fully executed copy of each CO for our records.

In regard to CO-001, please note that this is issued to cover additional costs incurred by Contractor in provision of room and board for its personnel, prior to availability of the Site Accommodation Camp, in accordance with the applicable labour agreement and as modified to suit current market conditions in the area. For the avoidance of doubt, such costs are intended to include the $50 per day per employee inconvenience premium that has been negotiated with the RDC for payment to personnel accommodated on a temporary basis at the air force barracks in Happy Valley-Goose Bay.

Scott O'Brien
Project Manager
Muskrat Falls Generation

cc. Nalcor Energy - Mark Dykeman; Mark Turpin;
SLI - Michel Maeyens; Robert Horton; Georges Chehab

CHANGE ORDER
Between
Nalcor Energy (Company) and (Contractor)

Agreement No:	505573-CH0006	**CO NO.**	CO-001
Agreement Title:	Bulk Excavation Works	**REV. NO:**	00
Contractor:	IKC-ONE Earthworks Constructors	**COR NO.**	002
		DATE:	09-03-2013

Description of Change:
The Agreement, in Exhibit 2 Compensation Article4.6 allows for the Contractor to be compensated for the provision of room and board, meals and subsistence costs for Contractor Labour resources deployed at the site prior to the availability of the Site Accommodation Camp. For clarity, the provision of such services for the entire duration of the CHOOO6 contract was deducted from the Contractor's Proposal Price prior to contract execution. Until the availability of the Company Site Temporary Camp the Contractor has estimated 10,000 Person days will be subject to this arrangement. Compensation for this Change shall be the actual documented cost incurred by Contractor as supported by all necessary Billing Information.

Supporting Information that forms part of this Change Order: Change Request CR-002 and supporting Quotation from Hotel North.

Change Includes:	☒	Price	☐	Schedule			
Adjustment Type:	☐	Lump Sum	☐	Unit Rate	☒	Reimbursable	
	☐	Fixed Amount	☐	Estimate			

Original Contract Price	$112,942,295.00
Previous Cumulative Change Orders	0.00
Value of this Change Order	$3,090,000.00
Total Contract Price	$116,032,295.00

Impact on Control Schedule: Undetermined at this time.
Revised Finished Date: Undetermined at this time.

APPROVAL

	Approved by (Company): Nalcor Energy	**Accepted by (Contractor):** IKC-ONE Earthworks Constructors
Signature:		
Name:	Ron Power General Project Manager	
Signature:		**Signature:**
Name:	Pat Hussey Supply Chain Manager	**Name:** Don Strickland Project Manager
Date:	15 Mar 13 (dd-mm-yyyy)	**Date:** (dd-mm-yyyy)

Nalcor Energy

CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	Change Request No.	002
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	05-Feb-2013

Description of Change Request and Reason (attach all supporting information):

- In accordance with Exhibit 2-Compensation, this change request consists of provisions for room and board services, exclusive of HST, for Contractor labour resources deployed at the Site prior to the availability of the Site Accommodation Camp. This request is presented to be compensated in accordance with the applicable labour agreement and suited to current market conditions in the area.
- The current request estimates that the Contractor will be required to supply provisions for room and board services for 10,000 person-days for a 90 day (unavailable camp) delay period.

Supporting information that forms part of this Change Request:

- In reference to Exhibit 12-Site Conditions, the Company has not made available, from January 1,2013,a(Temporary)Construction Camp for the Contractor's labour resources deployed a the Site. Following this date, the Contractor has made the necessary arrangements for provisions to room and board services.

Description of Impact on Control Schedule:

- Impact on Control Schedule unknown at this point.

Revised Finish Date: N/A

Estimated cost and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
20.4	Provision for Craft Room and Board Services as of Jan,1,213	Person-Day	10,000	309.00	3,090,000.00
				Value of this Change Request:	3,090,000.00

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	Don Strickland		FEB. 21/2013

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Robert Horton		FEB 22 2013
Area Manager	Michel Maeyens		FEB 22 2013
NALCOR ENERGY:			
Project Manager	Scott O'Brien		
General Project Manager	Ron Power		

Nalcor Energy

CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	**Change Request No.**	002
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	**Revision No:**	00
Contractor:	IKC-ONE	**Date:**	05-Feb-2013

Description of Change Request and Reason (attach all supporting information):

- In accordance with Exhibit 2-Compensation, this change request consists of provisions for room and board services, exclusive of HST, for Contractor labour resources deployed at the Site prior to the availability of the Site Accommodation Camp. This request is presented to be compensated in accordance with the applicable labour agreement and suited to current market conditions in the area.
- The current request estimates that the Contractor will be required to supply provisions for room and board services for 10,000 person-days for a 90 day (unavailable camp) delay period.

Supporting information that forms part of this Change Request:

- In reference to Exhibit 12-Site Conditions, the Company has not made available, from January 1,2013,a(Temporary)Construction Camp for the Contractor's labour resources deployed a the Site. Following this date, the Contractor has made the necessary arrangements for provisions to room and board services.

Description of impact on Control Schedule:

- Impact on Control Schedule unknown at this point.

Revised Finish Date: N/A

Estimated cost and adjustment to the Contract Price: this represents 2,811 over-run

Item	Description	UOM	QTY	Unit Price	Extended Price
20.4	Provision for Craft Room and Board Services as of Jan,1,213	Person-Day	10,000	309.00	3,090,000.00
				Value of this Change Request:	3,090,000.00

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	Don Strickland		

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Robert Horton		March 01 2013
Area Manager	Michel Maeyens		March 01, 2013
Lead Cost Controller	Georges Chehab		March, 8 2013
NALCOR ENERGY:			
Project Manager	Scott O'Brien		11 Mar 2013
General Project Manager	Ron Power		14-Mar-2013

HOTEL NORTH

December 4, 2013

Accommodations and Meals

Hi Krista,

Following are the quotes for Accommodations and meals at Hotel North Two:

Rooms will be $149.00 plus HST per night; (this includes doubles, queens and kings)

Meals will be $80.00 plus HST per person per day (meals consist of a buffet breakfast, super deluxe boxed lunch and a buffet dinner)

Regards,
Rhonda Winsor
General Manager
Hotel North Two
896-3398 x 350
899-1008 ©

$149.00
$ 80.00
$229.00
35% Mark-up = $ 80.00
IKC-ONE Rate = $309.00

382 Hamilton River Road, P.O. Box 1114, Station C, Goose Bay, NL A0P 1C0
Phone: 709-896-3398 - Fax: 709-896-9608
E-mail: hotelnorthtwo@nf.albn.com

CHANGE ORDER
Between
Nalcor Energy (Company) and (Contractor)

Agreement No:	505573-CH0006	**CO NO.**	CO-002
Agreement Title:	Bulk Excavation Works	**REV. NO:**	00
Contractor:	IKC-ONE Earthworks Constructors	**COR NO.**	NE-001
		DATE:	01-03-2013

Description of Change:

- . Adjustment to Contractor Fuel Prices in accordance with Exhibit 2, Compensation, Article 11.

Establish draw down allowance for estimated cost.

Supporting information that forms part of this Change Order:

See attached Claim Analysis; Contractor fuel consumption estimate; Contractor Monthly Fuel and Gas Escalation Summary form.

Change Includes: ☒ Price ☐ Schedule

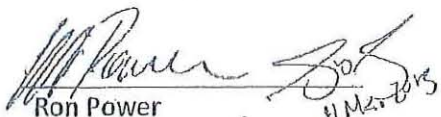
Adjustment Type: ☐ Lump Sum ☐ Unit Rate ☒ Reimbursable ☐ Fixed Amount ☐ Estimate

Original Contract Price	$112,942,295.00
Previous Cumulative Change Orders	$3,090,000.00
Value of this Change Order	$368,225.00
Total Contract Price	$116,400,520.00

Impact on Control Schedule: Undetermined at this time.

Revised Finished Date: Undetermined at this time.

APPROVAL

Approved by (Company):		**Accepted by (Contractor):**	
	Nalcor Energy		IKC-ONE Earthworks Constructors
Signature:		**Signature:**	
Name:	Ron Power General Project Manager		
Signature:		**Signature:**	
Name:	Pat Hussey Supply Chain Manager	**Name:**	Don Strickland Project Manager
Date:	15 Mar 13 (dd-mm-yyyy)	**Date:**	(dd-mm-yyyy)

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	**Change Request No.**	NE 001
Agreement Title:	Bulk Excavation and Associated Works	**Revision No:**	00
Contractor:	IKC-ONE Earthworks Constructors, a Partnership	**Date:**	13-February-2013

Description of Change Request and Reason (attach all supporting information):

- Adjustment to Contractor Fuel Prices in accordance with Exhibit 2, Compensation, Article 11.
- Establish draw down allowance for estimated cost.

Supporting information that forms part of this Change Request:

- See attached Claim Analysis; Contractor fuel consumption estimate; Contractor Monthly Fuel and Gas Escalation Summary form.

Description of impact on Control Schedule:

- No impact.

Revised Finish Date: No impact

Estimated cost and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Estimated Cost allowance:				
001	Diesel Fuel	Liter	6,428,000	.05	321,400
002	Gasoline	Liter	267,000	.05	13,350
003	Contingency	%	10		33,475
	(Reimbursement will be based on actual variance determined each month in accordance with Exhibit 2, Article 11)				
				Value of this Change Request:	368,225

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	N/A		

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Roy Lewis	Roy Lewis	13 Feb 2013
Area Manager	Michel Maeyens		11 March 13
NALCOR ENERGY:			
Scope Lead	Mark Turpin		13/March/2013
Project Manager	Scott O'Brien		11 Mar 2013
General Project Manager	Ron Power		14-Mar 2013
	Gerry Chehade		8-March-2013

Nalcor Energy
Lower Churchill Project

Claim Analysis

Contract: Bulk Excavation and Associated Works

Contract No.: CH0006

Reference: Change Order # 001

Description: Fuel Adjustment in accordance with Exhibit 2, Compensation, Item 11

Date: 13-Feb-13

Commentary

The Agreement allows for adjustment to the Contractor Fuel prices relative to a fixed Datum as follows:

Diesel 1.10/L
Gasoline 1.38/L

Adjustment to the price is based on the relative differences between the datum rates and the rates posted by the Petroleum Products Pricing Commissioner of the Province of NL - each month.

The purpose of this Change Request/Order is to establish a control budget estimated total to allow for Contractor to draw down on LCP Budget funds.

The estimated quantities of Diesel & Gasoline have been provided by Contractor; Delta is Company estimate and will need to monitored from Contractor Monthly submissions to ensure sufficient funds are allocated.

Estimate

Item	Description	Datum Price /L	Estimated Delta /L	Estimated Total Quantity (L)	Total $
1	Diesel	1.10	0.05	6,428,000	321,400
2	Gasoline	1.38	0.05	267,000	13,350

Sub total		334,750
Contingency	10%	33,475
Total estimated allowance		368,225

CH0006 - Fuel/Gas Estimated Quantities
Glenroy Balram
to:
RoyLewis
01/20/2013 05:09 PM
Show Details

History: This message has been replied to.

1 Attachment

IMAGE.BMP

Hi Roy,

As requested, please see the following estimated fuel/gas quantities for CH0006:

Gas - 267 000 litres;
Fuel - 6 428 000 litres;

Will this be sufficient for determining an escalation amount in order to generate a (blanket) Change Order?

Let me know if you require anything else.

Thanks,

Glenroy Balram, ing./Eng.
Project Controls

IKC-ONE

IKC-ONE Earthworks Constructors
Email: gbalram@hjoc.com
Mobile: 514.232.8676
Fax: 709.896.5291

IKC-ONE

MONTH: DECEMBER

MONTHLY FUEL AND GAS EXCALATION

LOWER CHURCHILL PROJECT - BULK EXCAVATION AND ASSOCIATED CIVIL WORKS (CH0806)
PROJECT NO.: 505573

CLIENT
Nalcor Energy
C/O SNC-LAVALIN Inc.
350 Torbay Road Plaza, Suite 2
St. John's, NL Canada
Ph. (709) 778-6618

REPORTING PERIOD START: 21-Nov-13
REPORTING PERIOD END: 20-Dec-13

Supplier	Invoice	Date	SITE DELIVERY									
			FUEL					REGULAR UNLEADED				
			QTY (L)	ESTABLISHED BASE $/L	PERIOD $/L	Delta	ADJUSTMENT AMOUNT	QTY (L)	ESTABLISHED BASE $/L	PERIOD $/L	Delta	ADJUSTMENT AMOUNT
Ultramar	26470	15-Dec-20	1515.6	1.100	1.421	0.321	$ 486.51	-	1.380	1.359	-0.021	$ -
Ultramar	1728204	18-Dec-20	12000	1.100	1.421	0.321	$ 3,852.00	-	1.380	1.359	-0.021	$ -
		TOTAL					$ 4,338.51					

*Zone 12 Central Labrador - Fuel Pricing from the Petroleum Products Commission of the Province of Newfoundland and Labrador for the 15th day of the November: 1.421 $/L

*Zone 12 Central Labrador - Regular Unleaded Pricing (S/S) from the Petroleum Products Commission of the Province of Newfoundland and Labrador for the 15th day of the November: 1.359 $/L

*Source: http://www.pub.nf.ca/orderapp/login.Fuel

Effective: November 15, 2012

Maximum Retail Motor Fuel Prices

Effective 12:01 a.m., Thursday, November 15, 2012

Prices include all applicable taxes

Zone	Zone Description	Maximum Retail Prices						
		Regular Unleaded		Mid-Grade Unleaded		Premium Unleaded		Diesel
		S/S	F/S	S/S	F/S	S/S	F/S	S/S or F/S
1	Avalon Peninsula	132.2	135.2	135.2	138.2	138.2	141.2	138.7
1a	Bell Island	132.8	135.8	135.8	138.8	138.8	141.8	139.3
2	Burin Peninsula / Bonavista Peninsula	134.1	137.1	137.1	140.1	140.1	143.1	140.5
3	Central Newfoundland / Notre Dame Bay East	134.7	137.7	137.7	140.7	140.7	143.7	141.2
3a	St. Brendan's (Island)	138.9	141.9	141.9	144.9	144.9	147.9	145.4
3b	Fogo Island	139.4	142.4	142.4	145.4	145.4	148.4	145.9
3c	Change Islands	143.1	146.1	146.1	149.1	149.1	152.1	149.6
4	Connaigre Peninsula	138.0	141.0	141.0	144.0	144.0	147.0	144.5
4a	Gaultois / McCallum / Rencontre East	N/A	147.0	N/A	150.0	N/A	153.0	147.9
5	Springdale - Green Bay / Triton / Baie Verte Peninsula	136.1	139.1	139.1	142.1	142.1	145.1	142.6
5a	Long Island	140.1	143.1	143.1	146.1	146.1	149.1	146.6
5b	Little Bay Islands	140.3	143.3	143.3	146.3	146.3	149.3	146.8
6	Deer Lake / Corner Brook / Bay of Islands / Gros Morne	132.9	135.9	135.9	138.9	138.9	141.9	139.4
7	Stephenville / Port au Port / Codroy Valley / Channel-Port aux Basques / Burgeo	133.8	136.8	136.8	139.8	139.8	142.8	140.3
7a	Ramea	136.4	139.4	139.4	142.4	142.4	145.4	142.9
7b	Grey River / François / Grand Bruit / La Poile	N/A	151.5	N/A	154.5	N/A	157.5	149.6
8	Northern Peninsula - Gros Morne National Park to Bellburns	134.0	137.0	137.0	140.0	140.0	143.0	140.5
9	Northern Peninsula to Englee and St. Anthony	135.9	138.9	138.9	141.9	141.9	144.9	142.4
10	Labrador - The Straits to Red Bay	138.7	141.7	141.7	144.7	144.7	147.7	145.0
11	Labrador South - Lodge Bay / Cartwright	148.7	151.7	151.7	154.7	154.7	157.7	153.8
11a	Coastal Labrador South - Tanker Supplied	N/A	155.6	N/A	N/A	N/A	N/A	161.7
11b	Coastal Labrador South - Drum Delivery	N/A	167.3	N/A	N/A	N/A	N/A	168.4
12	Central Labrador	135.9	138.9	138.9	141.9	141.9	144.9	142.1
13	Western Labrador	137.6	140.6	140.6	143.6	143.6	146.6	144.1
13a	Churchill Falls	140.0	143.0	143.0	146.0	146.0	149.0	146.5
14	Coastal Labrador North	N/A	155.6	N/A	N/A	N/A	N/A	161.7

INVOICE / FACTURE

ULTRAMAR

H J Oconell

muskrat Falls

IKC ONE

DOC 26470
PR
DATE START PARTIR
INT NF PP
DATE VOLUME NF PP 1515 6
H/WK IVOIE TYPE SCH CAL AUT. CC
DD/DJ/DUE TRUCK CAM ROUTE ITINERAIRE
IDEAL IDEALE PR GR DDO DJV
$ TANK # RES CAP

DELIVERY CODE 15/12/12 TRUCK/CAM. ZONE
FINISH 14:19:03
ACCESS NUMBER 2.
NET VOL LITRES START 0.0
NET VOL LITRES FINISH 1515.6
VOLUME CORRECTED TO 15 C
TICKET NUMBER 26470.
SALE NUMBER 25444.
DRIVER NUMBER 1.
PRODUCT CODE 8.
PRODUCT# CLEAR DIESEL DISTILLATE

$ CHEQUE
$ CASH
$ CREDIT CARD
$ OTHER

RECEIVED PAYMENT/PAIEMENT RECU

GOODS RECEIVED/MARCHANDISE RECU

EXTRA COPY
COPIE ADDITIONNELLE

Ultramar

INVOICE / FACTURE 1728204

WARNING: DISTILLATES OR TRACTOR FUEL MUST NOT BE USED IN LAMPS OR STOVES.
AVERTISSEMENT: LES DISTILLATS ET LE CARBURANT POUR TRACTEURS NE DOIVENT PAS ÊTRE UTILISÉS DANS LES LAMPES OU LES POÊLES.

CALLER ACCOUNTING USE ONLY / RÉSERVÉ À LA COMPTABILITÉ DES VENTES
CASH SALE VALUE / VALEUR DE VENTE AU COMPTANT

CTZ 542
10610

CUST. ACCT. NO. / COMPTE-CLIENT N°
TYPE
CLASS OF TRADE / CLASSE DE COMMERCE
DIV. DIV.
MONTH MOIS
YEAR ANNÉE
TYPE DOC / GENRE DE DOC.

SOLD TO / VENDU À IKC ONE
ADDRESS / ADRESSE
CITY / TOWN / VILLE
PROVINCE
DELIVERED TO / ADRESSE DE LIVRAISON

INSTALMENT / VERSEMENT NO. / NO
START / DÉBUT
CUSTOMER ORDER NUMBER / CLIENT COMMANDE N°
PROV. S.T. OR VEN. NO. / PROV. T.V.P. OU VEN. N°
BR AGENT / SUCCURSALE AGENT 4415
TRUCK NO. / CAMION N° GR105440900
DRIVER NO. / CHAUFFEUR N° 0 10020001071

SUPPLY POINT NO. / POINT D'APPRO. N° 2330

PRODUCT / PRODUIT
DESCRIPTION
SAP CODE
QUANTITY / QUANTITÉ
UNIT PRICE / PRIX UNITAIRE
PRICE PRIX
FUEL TAX TAXE-CARB.
TOTAL PRICE PRIX TOTAL
AMOUNT / MONTANT

Clear 12 | 000000000041819 | 1200

G.S.T. / T.P.S. %
PROV. TAX / TAXE PROV. %

METHOD OF PAYMENT / MODE DE PAIEMENT
CASH / COMPTANT
CHEQUE
CREDIT CARD / CARTE DE CRÉDIT
TOTAL

Ultramar Ltd.
Ultramar Ltée

RECEIVED PAYMENT/PAIEMENT REÇU
GOODS RECEIVED/MARCHANDISES REÇUES
TOTAL →

LITRE READING - FINISH / RELEVÉ - APRÈS LIVRAISON 0 0 0 1 5 1 5 6

FUEL DELIVERED RECEIVED FROM PROVINCIAL FUEL TAX EXEMPTION USE ONLY / VOIR LES RENSEIGNEMENTS IMPORTANTS AU VERSO DE L'EXEMPLAIRE
LA FAUSSE DÉCLARATION EN VUE D'OBTENIR UNE EXEMPTION DE LA TAXE SUR LES CARBURANTS EST UNE INFRACTION PASSIBLE D'UNE AMENDE OU D'UNE PEINE D'EMPRISONNEMENT OU LES DEUX.

SEE REVERSE SIDE FOR IMPORTANT INFORMATION / RENSEIGNEMENTS IMPORTANTS AU VERSO DE L'EXEMPLAIRE

3. COPY / EXEMPLAIRE

CHANGE ORDER
Between
Nalcor Energy (Company) and (Contractor)

Agreement No:	505573-CH0006	**CO NO.**	CO-003
Agreement Title:	Bulk Excavation Works	**REV. NO:**	00
Contractor:	IKC-ONE Earthworks Constructors	**COR NO.**	001
		DATE:	09-03-2013

Description of Change:
As per Exhibit 12 Site Conditions Item 3.1.1.1.1, no electrical power has been made available by the Company to the Contractor at the end of the specified transition period. Payment for the construction power will be done as indicated in the Schedule of Price Breakdown Item 18.2

Supporting information that forms part of this Change Order:
Attached Claim analysis .Ref Exhibit 12 Site Conditions, Item 3.1.1.1.1 and Exhibit 2 Measurement and Payment, Item 18.2

Change Includes: ☒ Price ☐ Schedule

Adjustment Type: ☐ Lump Sum ☐ Unit Rate ☒ Reimbursable ☐ Fixed Amount ☐ Estimate

Original Contract Price	$112,942,295.00
Previous Cumulative Change Orders	$3,458,225.00
Value of this Change Order	$352,800.00
Total Contract Price	$116,753,320.00

Impact on Control Schedule: Undetermined at this time.
Revised Finished Date: Undetermined at this time.

APPROVAL

	Approved by (Company): Nalcor Energy	Accepted by (Contractor): IKC-ONE Earthworks Constructors
Signature:	12-MAR 2013	
Name:	Ron Power General Project Manager	
Signature:		**Signature:**
Name:	Pat Hussey Supply Chain Manager	**Name:** Don Strickland Project Manager
Date:	15 Mar 13 (dd-mm-yyyy)	**Date:** (dd-mm-yyyy)

Nalcor Energy

CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	Change Request No.	001
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No:	00
Contractor:	IKC-ONE	Date:	01-Feb-2013

Description of Change Request and Reason (attach all supporting information):

- Item No.18.2 Contractor Temporary Site Services –Construction Power(rate only)
- As per Exhibit 12 Site Conditions Item 3.1.1.1.1, no electrical power has been made available by the Company to Contractor at the end of the specified transition period. Payment for the construction power will be done as indicated in the Schedule of Price Breakdown Item 18.2

Supporting information that forms part of this Change Request:

- Refer to Exhibit 12-Site Conditions, , Item 3.1.1.1.1 and Exhibit 2 Measurement and Payment, Item18.

Description of impact on Control Schedule:

- Impact on Control Schedule unknown at this point.

Revised Finish Date: N/A

Estimated cost and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
18.2	Construction Power(rate only)	Day	63	5,600.00	336,000.00
				Value of this Change Request:	352,800.00

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	Don Strickland		

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Robert Horton		Mar. 8 01 2013
Area Manager	Michel Maeyens		MAR 08 01 2013
Lead Cost Controller	Georges Chehab		March 08, 2013
NALCOR ENERGY:			
Project Manager	Scott O'Brien		11 Mar 2013
General Project Manager	Ron Power		13 Mar 2013

Nalcor Energy

CHANGE REQUEST (CR)

Agreement No:	CN0006	Change Request	1
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	0
Contractor:	IKC-ONE Earthworks Constructors	Date:	1-Feb-13

Description of Change Request and Reason (attach all supporting information):

Item No. 18.2 Contractor Temporary Site Services - Construction Power(rate only)

As per Exhibit 12 Site Conditions Item 3.1.1.1.1, no electrical power has been made available by the Company to the Contractor at end of the specified transition period. Payment for the construction power will be done as indicated in the Schedule of Price Breakdown Item 18.2.

Supporting Information comprises the following and forms part of this Change Request:

Refer to Exhibit 12 Site Conditions, Item 3.1.1.1.1 and Exhibit 2 Measurement and Payment, Item 18.

Description of Impact on Control Schedule:

Impact on Control Schedule unknown at this point.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
18.2	Construction Power (rate only)	DAY	60	5,600.00	336,000.00
		Value of this Change Request			$ 336,000.00
		Previous Contract Price			n/a
		Revised Contract Price			$

CONTRACTOR SIGNATURE

Reviewed and Approved by:	Name	Signature	Date
Contractor Representative	Don Strickland		Feb. 2/2013

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

Nalcor Energy
Lower Churchill Project

Claim Analysis

Contract: Bulk Excavation and Associated Works

Contract No.: CH0006

Reference: Change Order # 003

Description: Unavailability of Site Temporary power

Date: 13-Feb-13

Commentary

The Agreement , in Exhibit 12 Site Conditions, Article 4.6 3.1.2 allows for the provision, free of Cost, to Contractor of an electrical power supply at a designated rating. Such provision shall commence on February 1, 2013.
Such electrical power has not been provided to Contractor and is not anticipated to be provided until 31-Mar-13

Until the availability of Company provided free of cost electrical power the Contractor has estimated 60 days of continued Contract Provided electrical power.
Exhibit 2 Appendix A Item 18.2 Indentifies the unit rate/day for the provision by Contractor of Construction Power

The purpose of this Change Request/Order is to establish a control budget estimated total to allow for Contractor to draw down on LCP Budget funds.

The actual method of reimbursement will be in accordance with the agreed quantity of days that Contractor continues to provide Construction Pwer multiplied by the unit rate identified in Line item 18.2

The estimated quantity of Days and cost per day is as follows:

Estimate

Item	Description	UOM	Unit Rate (Exhibit Appendix A Line Item 18.2)	Estimated Total Quantity	Total $
1	Provision of Construction Power by Contractor	Day	5,600.00	60	336,000

Sub total		336,000
Contingency	5%	16,800
Total estimated allowance		352,800

CHANGE ORDER
Between
Nalcor Energy (Company) and (Contractor)

Agreement No:	505573-CH0006	**CO NO.**	CO-004
Agreement Title:	Bulk Excavation Works	**REV. NO:**	00
Contractor:	IKC-ONE Earthworks Constructors	**COR NO.**	NE-002
		DATE:	09-03-2013

Description of Change:
To establish arrangement for Muskrat Falls Site Snow Clearing for first half of 2013.
To establish draw down allowance for estimated cost.

Supporting information that forms part of this Change Order: Change Request NE-002 and attached Claim Analysis.

Change Includes:	☒ Price	☐ Schedule		**Original Contract Price**	$112,942,295.00
Adjustment Type:	☐ Lump Sum	☐ Unit Rate	☒ Reimbursable	**Previous Cumulative Change Orders**	$3,811,025.00
	☐ Fixed Amount	☐ Estimate		**Value of this Change Order**	$947,179.00
				Total Contract Price	$117,700,499.00

Impact on Control Schedule: Undetermined at this time.

Revised Finished Date: Undetermined at this time.

APPROVAL

Approved by (Company): Nalcor Energy	**Accepted by (Contractor):** IKC-ONE Earthworks Constructors, a Partnership
Signature: 13-MAR-2013	
Name: Ron Power General Project Manager	
Signature:	**Signature:**
Name: Pat Hussey Supply Chain Manager	**Name:** Don Strickland Project Manager
Date: 15 Mar 13 (25-02-2013)	**Date:** (25-02-2013)

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	505573-CH0006	Change Request No.	NE 002
Agreement Title:	Bulk Excavation and Associated Works	Revision No:	00
Contractor:	IKC-ONE Earthworks Constructors, a Partnership	Date:	15-February-2013

Description of Change Request and Reason (attach all supporting information):
- Establish arrangement for Muskrat Falls Site Snow Clearing for first half of 2013.
- Establish draw down allowance for estimated cost.

Supporting information that forms part of this Change Request:
- See attached Claim Analysis; Snow Clearing Equipment Review; Contractor e-mail dated 11 December 2012 NOTE: STANDBY RATES WILL NOT APPLY IF CONTRACTOR CAN PRODUCTIVELY USE SNOW CLEARING CREWS IN NORMAL OPERATIONS.

Description of Impact on Control Schedule:
- No impact.

Revised Finish Date: No Impact

Estimated cost and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Estimated Cost allowance:				
001	Refer to attached Snow Clearing Equipment Review estimate.	1	Item	861,072.00	861,072
002	Contingency			10%	86,107
	(Reimbursement will be based on actual Company/Engineer signed LEM records and compensated in accordance with Exhibit 2 Section 4.				
				Value of this Change Request:	947,179

CONTRACTOR SIGNATURE

Reviewed / Approved by:	Name	Signature	Date
Contractor Representative	N/A		

SNC-LAVALIN AND NALCOR ENERGY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
SNC-LAVALIN:			
Contracts administrator	Roy Lewis	Roy Lewis	15 Feb 2013
Area Manager	Michel Maeyens		28 Feb 2013
NALCOR ENERGY:			
Scope Lead	Mark Turpin	See Attached	
Project Manager	Scott O'Brien		19 Feb 2013
General Project Manager	Ron Power	for R. Power	19-Feb-2013

Nalcor E
Lower Churchill Project

SNOW CLEARING EQUIPMENT REVIEW

Contract: Bulk Excavation and Associated Works

Contract No.: CH0006

Item	Description	UOM	Unit Rate	Quant	Total	Unit Rate In Contract	
A	Equipment						
1	Tandem Flyer Truck Operating	Day	1,300.00	66	85,800	1,150.00	
2	Tandem Flyer Truck - Standby	Day	450.00	86	38,700	862.50	
3	Cat 966 Loader - Operating (5 hours/day x 66 days)	Hour	150.00	330	49,500	150.00	
4	Cat 966 Loader - Snow Bucket attachment	Day	100.00	150	15,000	Justify Rate	Suggest 3rd. Party Rental if not owned
5	Cat Grader 14 H - Operating	Day	1,650.00	66	108,900	1,650.00	
6	Cat Grader 14H - Wing attachment	Day	100.00	150	15,000	Justify Rate	Suggest 3rd. Party Rental if not owned
7	Pick-Up - 50% time	Day	220.00	33	7,260	220.00	
	Sub Total - Equipment				320,160		
B	Labour						
1	Teamster - Group 1 (38 days)	Hour	106.25	380	40,375	106.25	
2	Teamster - Group 1 - 2x (28 days)	Hour	170.22	280	47,662	171.53	
3	Teamster - Group 1 - Standby (50%)	Hour	106.25	190	20,188	106.25	
4	Teamster - Group 1 - 2x Standby (50%)	Hour	170.22	140	23,831	171.53	
5	O/E - Class 3 (38 days)	Hour	108.94	570	62,096	108.91	
6	O/E - Class 3 - 2x (28 days)	Hour	176.02	420	73,928	176.02	
7	O/E - Class 3 - Standby (50%)	Hour	108.94	285	31,048	108.91	
8	O/E - Class 3 - 2x - Standby (50%)	Hour	176.02	210	36,964	176.02	
9	O/E - Working Foreman (38 days)	Hour	120.19	190	22,836	120.19	
10	O/E - Working Foreman - 2x (38 days)	Hour	195.08	140	27,311	195.08	
11	O/E -Working Foreman - Standby (50%)	Hour	120.19	95	11,418	120.19	
12	O/E - Working Foreman - 2x - Standby (50%)	Hour	195.08	70	13,656	195.08	
	Sub Total - Labour				411,312		
C	Materials						
1	Road Sand + 5% Calcium mix	tonne	32.00	3,000	96,000	Invoiced Cost	
	Fee		35%		33,600	35%	
	Sub Total - Materials				129,600		
	Total Estimated Cost				861,072		

Notes: Goose Bay historical snow days for period January - May = 66 Days
Average deployment - 10 hours/snow day.
Sand/Calcium mix - 5 month x 600T/month

24

24

nalcor energy
LOWER CHURCHILL PROJECT

350 Torbay Road Suite 2
St. John's. NL Canada A1A 4E1
t. 709.737.1440 or 709.752.3460 f. 709.754.0787
nalcorenergy.com

505573-L-NAL-IKC-CH0006-0045

03 May 2013

IKC-One Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL
A0P 1C0

Attention: Mr. Don Strickland
Project Manager

Subject: Contract CH0006
Construction of Bulk Excavation Works & Associated Civil Work
Site Water Controls Update

Dear Mr. Strickland:

The measurements for Total Suspended Solids at the Site discharge points exceeds the regulatory requirements of our permit ALT6700-2012 issued by the Department of Environment and Conservation -Water Resources Division.

We have been advised by the Department of Environment and Conservation - Water Resources that they expect that our contractor's workforce will concentrate as much effort as necessary to complete the diversion ditches associated with the site water control system (see attached email).

Based upon our discussions with your representatives this morning, we are concerned that the proposed work plan to address the issue will not meet the Crowns expectations of a suitable response to this directive. The work plan, as presented this morning, involves the effort of one machine and five labourers assigned to site water controls.

A regulatory inspection is scheduled for next Tuesday (May 8th). Prior to this visit, an important milestone will be to stabilize all drainage ditching contributing to Sedimentation Pond # 1.

Your immediate attention to this matter and a revised work plan that can meet the stipulations outlined below is required.

Sincerely,

Scott O'Brien
Project Manager – Muskrat Falls Generation

cc:

Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault
Robert Horton
Michel Maeyens
Sylvain Nantel
John Skinner
LCPDCC
Marion Organ

----- Forwarded by Marion E. Organ/NLHydro on 05/03/2013 12:21 PM -----

From: "Haley, David S." <DavidS.Haley@snclavalin.com>
To: "McLean, Clyde" <ClydeMcLean@gov.nl.ca>
Cc: "Barnes, Jason" <Jason.Barnes@snclavalin.com>, <marionorgan@nalcorenergy.com>, <PeterMadden@nalcorenergy.com>, "Rebello, Krista" <kristarebello@gov.nl.ca>, "Khan, Haseen" <hkhan@gov.nl.ca>, <MarkTurpin@nalcorenergy.com>, "Maeyens, Michel" <Michel.Maeyens@snclavalin.com>, "Snyder, Greg" <Greg.Snyder@snclavalin.com>
Date: 05/02/2013 05:54 PM
Subject: RE: Lower Churchill Project - Site Water Controls Update

Clyde, good afternoon.

We acknowledge your direction. We will meet with the Contractor first thing tomorrow to review progress on this issue, and to pass along these additional stipulations.

An update will follow.

David

David Haley P. Eng, FEC, EP
Environmental Engineering Manager
Lower Churchill Project

From: McLean, Clyde [mailto:ClydeMcLean@gov.nl.ca]
Sent: May 2, 2013 4:26 PM
To: Haley, David S.
Cc: Barnes, Jason; marionorgan@nalcorenergy.com; PeterMadden@nalcorenergy.com; Rebello, Krista; Khan, Haseen
Subject: RE: Lower Churchill Project - Site Water Controls Update

Hi David,
Thank you for reporting this incident. Based on the reported very high level of TSS and non-compliance with terms and conditions of Permit ALT6700-2012, we are requiring that daily sampling be undertaken at all storm water discharge locations from the site until such time as the TSS is in compliance with the *Environmental Control Water and Sewage Regulations, 2003* (ECWSR). Results of the sampling should be sent to my attention via email as soon as they are available. Once the TSS is in compliance with the ECWSR, sampling can return to the sampling frequency outlined in the permit.

As per my letter dated April 1,2013 to Mr. Peter Madden with Nalcor, *...all storm drainage works, including sedimentation ponds must be constructed not later April 15, 2013....* Given that the diversion ditch was not completed within the required time frame, we expect the contractors workforce concentrate as much effort as necessary to complete the diversion ditch.

As noted in your email, please provide me with any updates on additional plans to ensure compliance. Officials from the Department of Environment and Conservation will be on site Tuesday May 7, 2013 to assess the storm drainage infrastructure and report back to the department.

If you have any questions please feel free to contact me.

Thanks
Clyde

Clyde McLean, P.Eng
Manager, Water Investigations Section
Water Resources Management Division
Department of Environment and Conservation
4th Floor Confederation Bldg W
PO Box 8700
St. John's NL A1B 4J6

Tel: (709) 729-5713
Fax (709) 729-0320
Email: ClydeMcLean@gov.nl.ca
Web: www.env.gov.nl.ca/Env/water

25

25

32

IKC-ONE

Interoffice Memorandum

To: All Staff
From: Don Strickland
CC: Louanne Poirier, Justin Fillier
Date: May 6, 2013
Re: Live out Allowance (LOA)

Everyone

Nalcor has now made the temporary camp available for occupancy by staff personnel.

We did not anticipate this as we thought the camp would be too small, but we are obligated to comply.

Therefore staff members not included below are hereby requested to relinquish their apartments, etc. and move to the camp by the end of May as there will be no live out allowance coverage beyond May 31, 2013. IKC-ONE will pay for costs that result from short notice, etc.

Project Manager
Construction Manager
Process Manager
Safety Manager
Quality Manager and Assistant Manager
Equipment Manager and Assistant Manager
General Superintendent
H.R. Manager
Project Engineer and Sr. Engineer
Administration Manager
Survey Manager
Project Controls manager

Don Strickland P.Eng.
Project Manager

26

IKC-ONE

IKC-ONE Construction Limited

Ref No.: CH0006-IO-NE-L-0001-00

November 14, 2012

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite 2
St. John's, NL A1A 4E1

Attention: Mr. Roy Lewis
Contracts Coordinator

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Special Project Order (SPO)

Dear Mr. Lewis,

As per your direction, immediately upon award of the contract we have initiated mobilization activities for the contract. Under the assumption that we will have initial access to the Company Laydown on Nov 30, 2012, we need to begin the process of securing labor for receiving materials and equipment at the project site immediately. We make this statement considering terms required under the SPO whereby all labor requires assignment through the building trades 'Mark up' process followed then by the requirement for drug, alcohol, and medical screening. The requirements of this process dictate a minimum of 3 weeks from the start in order to secure trades 'ready for work' at the project site.

Referring to Exhibit 2, the Muskrat Falls site is subject to a Special Project Order (SPO) under the Labor Relations Act of Newfoundland and Labrador. We are required to comply with all the terms of the SPO which will dictate the timelines for the 'Markup' procedure. Can you confirm if the Special Project Order has been successfully negotiated and if so, who will be the contact person for us to initiate the labor 'mark up' process? I am sure you agree that schedule requirements necessitate this process begin promptly.

Failing the conclusion of the 'SPO' and before the commencement of the work on site then we, in full co-operation with the Company, are required to take steps necessary to effect the start of work at the site by making reasonable commercial efforts to enter into supplementary or modified agreements with our current affiliated unions. Again this process will need to begin now if required.

IKC-ONE Construction Limited
59 Pippy Place
St. John's, NL A1B 4N1
Tel: (709)726-9095
Fax: (709)726-9106

At this point we are awaiting information from the client as to the status of the 'SPO' negotiations. Can you advise how we are to proceed?

If you have any questions please contact me at your earliest convenience.

Sincerely,

IKC-ONE Construction Limited

Leonard Knox, P. Eng.
VP – Major Projects

CC: Don Strickland
Willie Keats

IKC-ONE Construction Limited
59 Pippy Place
St. John's, NL A1B 4N1
Tel: (709)726-9095
Fax: (709)726-9106

27

(3) (6)

27

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0010-00

January 13, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Notice of Delay due to Labour Dispute/Protest

Dear Mr. O'Brien,

The highway to the site was blocked on January 11, 2013 by the "Idle No More" protestors from approximately 7:00 am to 12:00 noon.

The protest prevented employees and subcontractors of IKC-ONE access to and from the Project site. This included our subcontractors who are assembling major pieces of equipment. The assembly of the major equipment is on the critical path for the performance of the Work. As a result, there was a one (1) day delay to the scheduled completion of the Work.

In accordance with Article 31.5 of the Agreement, IKC-ONE hereby notifies the Company of the delay. We also respectfully request a Change Order for the schedule delay and all associated costs in accordance with Article 14.8 of the Agreement.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

28

IKC-ONE

IKC-ONE Construction Limited
MUSKRAT FALLS HYDROELECTRIC DEVELOPMENT
RFI LOG

RFI No.	Rev. No.	Date Issued	Response Req'd by	Description	Area	Prepared by	Approved by	Aconex Ref. No.	IKC-ONE Transmittal No.	Date Responded	Date Received	Returned Via	Response Returned	Site Query No.	SQ Rev.
CH0000-IO-SLI-RFI-0001	00	7-Dec-12	14-Dec-12	Colferdam #3 Conflict	Powerhouse Excavation, Colferdam #3	Dominic Allaire	Isabel Fernandez		CH0000-IO-SLI-TR-0001-00	17-Dec-12	N/A	NE-LCP-EMAIL-000038	20-Dec-12	N/A	N/A
CH0000-IO-SLI-RFI-0002	00	7-Dec-12	14-Dec-12	Maximum Station Location for Spillway Excavation	Spillway Excavation	Dominic Allaire	Isabel Fernandez		CH0000-IO-SLI-TR-0001-00	17-Dec-12	N/A	NE-LCP-EMAIL-000039	22-Dec-12	N/A	N/A
CH0000-IO-SLI-RFI-0003	00	7-Dec-12	2-Jan-13	Overburden Drilling	Powerhouse Excavation, Spillway Excavation	Isabel Fernandez	Justin Fillier		CH0000-IO-SLI-TR-0001-00	14-Dec-12	N/A	NE-LCP-EMAIL-000011	21-Dec-12	N/A	N/A
CH0000-IO-SLI-RFI-0004	00	8-Dec-12	15-Dec-12	Missing Dimensions Powerhouse	Powerhouse Excavation	Brian Hogan	Isabel Fernandez		CH0000-IO-SLI-TR-0002-00	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0004	00
CH0000-IO-SLI-RFI-0005	00	8-Dec-12	15-Dec-12	Missing Dimensions RCC Colferdam	RCC Dam	Brian Hogan	Isabel Fernandez		CH0000-IO-SLI-TR-0002-00	17-Jan-13	24-Jan-13	NE-LCP-EMAIL-000051	25-Jan-13	N/A	N/A
CH0000-IO-SLI-RFI-0006	00	8-Dec-12	15-Dec-12	Missing Dimensions Sed Ponds	Sedimentation Ponds and Ditches	Brian Hogan	Isabel Fernandez		CH0000-IO-SLI-TR-0002-00	17-Jan-13	24-Jan-13	NE-LCP-EMAIL-000062	25-Jan-13	N/A	N/A
CH0000-IO-SLI-RFI-0007	00	9-Dec-12	16-Dec-12	Blasting Expert	Construction Roads/Laydowns, Powerhouse Excavation, Sedimentation Ponds and Ditches, Spillway Excavation, Switchyard, Area Reserved for Future Use	Ken Bailley	Isabel Fernandez		CH0000-IO-SLI-TR-0003-00	8-Feb-13	N/A	NE-LCP-EMAIL-000095	8-Feb-13	N/A	N/A
CH0000-IO-SLI-RFI-0008	00	9-Dec-12	16-Dec-13	Environmental Permits	All Areas	Isabel Fernandez	Justin Fillier		CH0000-IO-SLI-TR-0003-00	14-Feb-13	N/A	NE-LCP-EMAIL-000109	14-Feb-13	N/A	N/A
CH0000-IO-SLI-RFI-0009	00	9-Dec-12	16-Dec-12	EZ-Dip Inclinometer	Construction Roads/Laydowns, Powerhouse Excavation, Sedimentation Ponds and Ditches, Spillway Excavation, Switchyard	Ken Bailley	Isabel Fernandez		CH0000-IO-SLI-TR-0003-00	14-Dec-12	N/A	NE-LCP-EMAIL-000012	21-Dec-12	N/A	N/A
CH0000-IO-SLI-RFI-0010	00	9-Dec-12	16-Dec-12	Topsoil Excavation	All Areas	Matt Bailey	Isabel Fernandez		CH0000-IO-SLI-TR-0003-00	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0010	00
CH0000-IKC-ONE-RFI-0011	00	6-Jan-13	13-Jan-13	Overburden Excavation Clarification	Powerhouse Excavation, Spillway Excavation	Isabel Fernandez	Justin Fillier	IKC-ONE-EMAIL-000015	CH0000-IO-NE-TR-0009-00	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0011	00
CH0000-IKC-ONE-RFI-0012	00	12-Jan-13	19-Jan-13	Chain Link Wire Mesh	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000020	CH0000-IO-NE-TR-0013-00	30-Jan-13	N/A	NE-LCP-EMAIL-000073	1-Feb-13	N/A	N/A
CH0000-IKC-ONE-RFI-0013	00	14-Jan-13	19-Jan-13	Designated Engineer for Excavation Operations	Powerhouse Excavation, Spillway Excavation, Switchyard, Area Reserved for Future Use	Isabel Fernandez	Justin Fillier	IKC-ONE-EMAIL-000022	CH0000-IO-NE-TR-0015-00	9-Apr-13	N/A	SLI-LCP-EMAIL-000724	9-Apr-13	CH0000-SQ-0013	00
CH0000-IKC-ONE-RFI-0014	00	13-Jan-13	17-Jan-13	Grouting of Rock Dowels	Powerhouse Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000022	CH0000-IO-NE-TR-0015-00	30-Jan-13	N/A	NE-LCP-EMAIL-000097	8-Feb-13	N/A	N/A
CH0000-IKC-ONE-RFI-0015	00	14-Jan-13	21-Jan-13	Hydraulic Jack Stressing Equipment for Rock Bolts	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000023	CH0000-IO-NE-TR-0016-00	1-Feb-13	N/A	NE-LCP-EMAIL-000071	1-Feb-13	CH0000-SQ-0015	00
CH0000-IKC-ONE-RFI-0016	00	30-Jan-13	6-Feb-13	Dimensions missing from IFC versus CAD Drawing	Powerhouse Excavation	Isabel Fernandez	Ed Knox	IKC-ONE-EMAIL-000054	CH0000-IO-NE-TR-0030-00	4-Feb-13	N/A	NE-LCP-EMAIL-000085	5-Feb-13	CH0000-SQ-0016	00 & 01
CH0000-IKC-ONE-RFI-0017	00	30-Jan-13	31-Jan-13	Technical Deviation - Inclinometer Measurments	Powerhouse Excavation	Matt Bailey	Justin Fillier	IKC-ONE-EMAIL-000054	CH0000-IO-NE-TR-0030-00	4-Feb-13	N/A	NE-LCP-EMAIL-000084	5-Feb-13	CH0000-SQ-0017	00
CH0000-IKC-ONE-RFI-0018	00	8-Feb-13	12-Feb-13	Potential Unstable Slope - Southern Limit of Powerhouse	Powerhouse Excavation	James Geggans	Isabel Fernandez	IKC-ONE-EMAIL-000076	N/A	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0018	00
CH0000-IKC-ONE-RFI-0019	00	13-Feb-13	19-Feb-13	Drilling of controlled perimeter blasting holes	Powerhouse Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000077	N/A	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0019	00
CH0000-IKC-ONE-RFI-0019	01	7-Mar-13	9-Mar-13	Drilling of controlled perimeter blasting holes	Powerhouse Excavation, Spillway Excavation	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000119	N/A	8-Mar-13	N/A	SLI-LCP-EMAIL-000400	8-Mar-13	CH0000-SQ-0019	01
CH0000-IKC-ONE-RFI-0019	02	11-Apr-13	15-Apr-13	Drilling of controlled perimeter blasting holes	Powerhouse Excavation, Spillway Excavation	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000174	N/A	11-Apr-13	N/A	SLI-LCP-EMAIL-000886	23-Apr-13	CH0000-SQ-0019	02
CH0000-IKC-ONE-RFI-0019	03	10-Jun-13	12-Jun-13	Drilling of controlled perimeter blasting holes	Powerhouse Excavation, Spillway Excavation	Georges Vallee	Isabel Fernandez	IKONE-CM-TRANSMIT-000003	N/A	12-Jun-13	N/A	LCP-CM-TRANSMIT-000201	14-Jun-13	CH0000-SQ-0019	03
CH0000-IKC-ONE-RFI-0020	00	13-Feb-13	19-Feb-13	Reflex EZ-Trac	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000077	N/A	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0020	00
CH0000-IKC-ONE-RFI-0021	00	13-Feb-13	19-Feb-13	Length of controlled perimeter holes	Powerhouse Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000077	N/A	18-Feb-13	N/A	CONSTRUCTION SANDBOX	21-Feb-13	CH0000-SQ-0021	00
CH0000-IKC-ONE-RFI-0021	01	25-Feb-13	28-Feb-13	Length of controlled perimeter holes outside of concrete area	Powerhouse Excavation	Georges Vallee	Justin Fillier	IKC-ONE-EMAIL-000099	N/A	26-Feb-13	N/A	SLI-LCP-EMAIL-000269	27-Feb-13	CH0000-SQ-0021	01
CH0000-IKC-ONE-RFI-0022	00	15-Feb-13	18-Feb-13	AutoCAD Files of Revised Drawings	All Areas	Patrice Abel	Isabel Fernandez	IKC-ONE-EMAIL-000087	N/A	21-Feb-13	N/A	SLI-LCP-EMAIL-000229	22-Feb-13	CH0000-SQ-0022	00
CH0000-IKC-ONE-RFI-0023	00	16-Feb-13	19-Feb-13	Dimension for Detail Rock Excavation in the Powerhouse	Powerhouse Excavation	Brian Hogan	Isabel Fernandez	IKC-ONE-EMAIL-000090	N/A	21-Feb-13	N/A	SLI-LCP-EMAIL-000305	8-Mar-13	CH0000-SQ-0023	00
CH0000-IKC-ONE-RFI-0024	00	16-Feb-13	19-Feb-13	Elevation for Rock Excavation in the Powerhouse	Powerhouse Excavation	Brian Hogan	Isabel Fernandez	IKC-ONE-EMAIL-000090	N/A	21-Feb-13	N/A	SLI-LCP-EMAIL-000305	8-Mar-13	CH0000-SQ-0024	00
CH0000-IKC-ONE-RFI-0025	00	26-Feb-13	28-Feb-13	Non-woven Geotextile	Powerhouse Excavation, Sedimentation Ponds and Ditches	Justin Hynes	Georges Vallee	IKC-ONE-EMAIL-000100	N/A	27-Feb-13	N/A	SLI-LCP-EMAIL-000408	8-Mar-13	CH0000-SQ-0025	00
CH0000-IKC-ONE-RFI-0026	00	27-Feb-13	28-Feb-13	Dowels to be drilled and installed in the Service Bay - North side	Powerhouse Excavation	Georges Vallee	Justin Fillier	IKC-ONE-EMAIL-000102	N/A	27-Feb-13	N/A	SLI-LCP-EMAIL-000407	8-Mar-13	CH0000-SQ-0026	00
CH0000-IKC-ONE-RFI-0027	00	1-Mar-13	5-Mar-13	Culvert Specifications	Construction Roads / Laydowns	Justin Hynes	Justin Fillier	IKC-ONE-EMAIL-000107	N/A	4-Mar-13	N/A	SLI-LCP-EMAIL-000371	6-Mar-13	CH0000-SQ-0027	00
CH0000-IKC-ONE-RFI-0028	00	3-Mar-13	5-Mar-13	Location of Culverts on construction road to Spoil disposal	Dewatering	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000111	N/A	4-Mar-13	N/A	SLI-LCP-EMAIL-000374	6-Mar-13	CH0000-SQ-0028	00
CH0000-IKC-ONE-RFI-0029	00	3-Mar-13	4-Mar-13	Rock dowels installed prior to blast	Powerhouse Excavation	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000112	N/A	4-Mar-13	N/A	SLI-LCP-EMAIL-000348	5-Mar-13	CH0000-SQ-0029	00
CH0000-IKC-ONE-RFI-0030	00	5-Mar-13	7-Mar-13	Rockiopography surveyed at South Transition Dam fondation	South Transition Dam Foundation	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000114	N/A	8-Mar-13	N/A	SLI-LCP-EMAIL-000421	11-Mar-13	CH0000-SQ-0030	00
CH0000-IKC-ONE-RFI-0030	01	6-Mar-13	7-Mar-13	Rockiopography surveyed at South Transition Dam fondation	South Transition Dam Foundation	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000115	N/A	8-Mar-13	N/A	SLI-LCP-EMAIL-000412	8-Mar-13	CH0000-SQ-0030	01
CH0000-IKC-ONE-RFI-0031	00	14-Mar-13	15-Mar-13	Modified Profile of Road to Topsoil Stockpile Area	Construction Roads / Laydowns, Switchyard & Converter Station, Area Reserved for Future Use	Matt Bailey	Isabel Fernandez	IKC-ONE-EMAIL-000125	N/A	15-Mar-13	N/A	SLI-LCP-EMAIL-000501	21-Mar-13	CH0000-SQ-0033	00
CH0000-IKC-ONE-RFI-0031	01	20-Mar-13	2-Apr-13	Modified Profile of Road to Topsoil Stockpile Area	Construction Roads / Laydowns, Switchyard & Converter Station, Area Reserved for Future Use	James Geggans	Isabel Fernandez	IKC-ONE-EMAIL-000151	N/A	24-Apr-13	N/A	NE-LCP-EMAIL-000243	25-Apr-13	CH0000-SQ-0033	01
CH0000-IKC-ONE-RFI-0032	00	16-Mar-13	22-Mar-13	Inclination of the holes for Rock Bolts	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000130	N/A	21-Mar-13	N/A	SLI-LCP-EMAIL-000532	25-Mar-13	CH0000-SQ-0035	00
CH0000-IKC-ONE-RFI-0033	00	16-Mar-13	22-Mar-13	Calibration of Gauges	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000130	N/A	21-Mar-13	N/A	SLI-LCP-EMAIL-000533	25-Mar-13	CH0000-SQ-0036	00
CH0000-IKC-ONE-RFI-0034	00	18-Mar-13	20-Mar-13	2400mm Culvert Specifications	Construction Roads / Laydowns	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000133	N/A	18-Mar-13	N/A	SLI-LCP-EMAIL-000408	21-Mar-13	CH0000-SQ-0034	00
CH0000-IKC-ONE-RFI-0035	00	22-Mar-13	25-Mar-13	Horizontal alignment for South Access road	Construction Roads / Laydowns	James Geggans	Georges Vallee	IKC-ONE-EMAIL-000139	N/A	25-Mar-13	N/A	SLI-LCP-EMAIL-000552	26-Mar-13	CH0000-SQ-0037	00
CH0000-IKC-ONE-RFI-0036	00	25-Mar-13	27-Mar-13	Delay to start Rock Bolting after first Proof Testing	Powerhouse Excavation	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000145	N/A	25-Mar-13	N/A	SLI-LCP-EMAIL-000555	26-Mar-13	CH0000-SQ-0038	00
[illegible]	[illegible]	[illegible]	[illegible]	Calibration of Hydraulic Gauges	Powerhouse Excavation, Spillway Excavation	James Geggans	Georges Vallee	IKC-ONE-EMAIL-000146	N/A	25-Mar-13	N/A	SLI-LCP-EMAIL-000556	26-Mar-13	CH0000-SQ-0039	00
						Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000147	N/A	25-Mar-13	N/A	SLI-LCP-EMAIL-000554	26-Mar-13	CH0000-SQ-0040	00
								[illegible]	[illegible]	3-Apr-13	N/A	SLI-LCP-EMAIL-000651	4-Apr-13	CH0000-SQ-0041	00

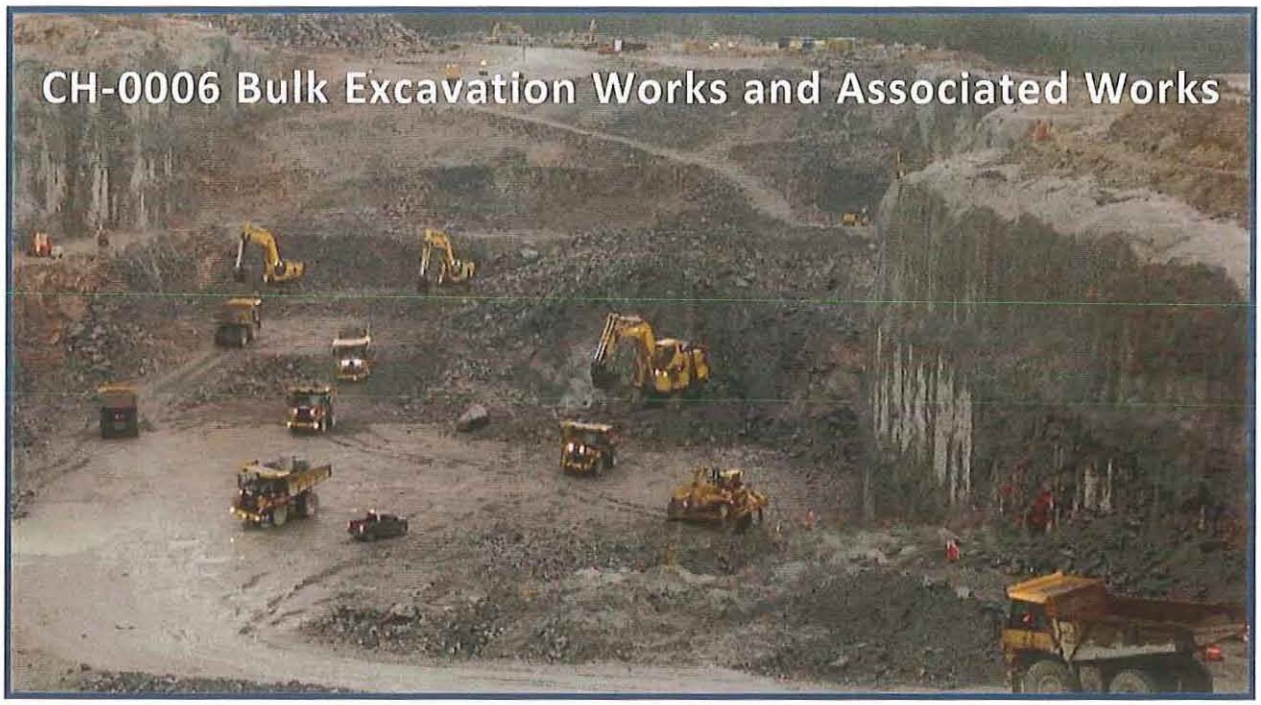
IKC-ONE

IKC-ONE Construction Limited
MUSKRAT FALLS HYDROELECTRIC DEVELOPMENT
RFI LOG

RFI No.	Rev. No.	Date Issued	Response Required by	Description	Area	Prepared by	Approved by	Aconex Ref. No.	IKC-ONE Transmittal No.	Date Responded	Date Reviewed	Returned Via	Response Returned	Site Query No.	SQ Rev.
CH0000-IKC-ONE-RFI-0040	00	29-Mar-13	3-Apr-13	Powerhouse Access road	Powerhouse Excavation	Isabel Fernandez	Don Strickland	IKC-ONE-EMAIL-000152	N/A	2-Apr-13	N/A	SLI-LCP-EMAIL-000607	5-Apr-13	CH0000-SQ-0042	00
CH0000-IKC-ONE-RFI-0040	01	19-Apr-13	24-Apr-13	Powerhouse Access road	Powerhouse Excavation	Isabel Fernandez	Don Strickland	IKC-ONE-EMAIL-000185	N/A	22-Apr-13	N/A	SLI-LCP-EMAIL-000686	23-Apr-13	CH0000-SQ-0042	01
CH0000-IKC-ONE-RFI-0041	00	31-Mar-13	4-Apr-13	Approval to Field Fit Ditches	Sedimentation Ponds and Ditches	Justin Hynes	Isabel Fernandez	IKC-ONE-EMAIL-000153	N/A	1-Apr-13	N/A	SLI-LCP-EMAIL-000617	2-Apr-13	CH0000-SQ-0043	00
CH0000-IKC-ONE-RFI-0042	00	3-Apr-13	5-Apr-13	Sed Pond #2 Location	Sedimentation Ponds and Ditches	Justin Hynes	Justin Fillier	IKC-ONE-EMAIL-000160	N/A	4-Apr-13	N/A	SLI-LCP-EMAIL-000671	5-Apr-13	CH0000-SQ-0044	00
CH0000-IKC-ONE-RFI-0043	00	6-Apr-13	9-Apr-13	Peak Flow of River	Powerhouse Excavation	Louis-Philippe Perron	Justin Fillier	IKC-ONE-EMAIL-000162	N/A	17-Apr-13	N/A	SLI-LCP-EMAIL-000629	17-Apr-13	CH0000-SQ-0045	00
CH0000-IKC-ONE-RFI-0044	00	6-Apr-13	8-Apr-13	Sedimentation Pond #2	Sedimentation Ponds and Ditches, Dewatering	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000164	N/A	8-Apr-13	N/A	SLI-LCP-EMAIL-000708	9-Apr-13	CH0000-SQ-0046	00
CH0000-IKC-ONE-RFI-0045	00	8-Apr-13	12-Apr-13	Cofferdam #1	Cofferdam #1	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000166	N/A	8-Apr-13	N/A	SLI-LCP-EMAIL-000707	9-Apr-13	CH0000-SQ-0047	00
CH0000-IKC-ONE-RFI-0046	00	9-Apr-13	12-Apr-13	Ditch Slopes	Sedimentation Ponds and Ditches	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000169	N/A	24-Apr-13	N/A	NE-LCP-EMAIL-000242	25-Apr-13	CH0000-SQ-0048	00
CH0000-IKC-ONE-RFI-0046	01	3-May-13	4-May-13	Ditch Slopes	Sedimentation Ponds and Ditches	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000220	N/A	3-May-13	N/A	NE-LCP-EMAIL-000320	4-May-13	CH0000-SQ-0048	01
CH0000-IKC-ONE-RFI-0046	01	3-May-13	4-May-13	Ditch Slopes	Sedimentation Ponds and Ditches	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000220	N/A	10-May-13	N/A	LCP-CM-TRANSMIT-000049	10-May-13	CH0000-SQ-0048	02
CH0000-IKC-ONE-RFI-0047	00	11-Apr-13	9-Apr-13	Holes verified by Inclinometer	Powerhouse Excavation, Spillway Excavation	Louis-Philippe Perron	Ed Knox	IKC-ONE-EMAIL-000175	N/A	12-Apr-13	N/A	SLI-LCP-EMAIL-000771	12-Apr-13	CH0000-SQ-0049 & 0017	00
CH0000-IKC-ONE-RFI-0048	00	12-Apr-13	15-Apr-13	Widening of Road between Site and Laydown	Construction Roads / Laydowns	Louis-Philippe Perron	Don Strickland	IKC-ONE-EMAIL-000176	N/A	24-Apr-13	N/A	NE-LCP-EMAIL-000245	25-Apr-13	CH0000-SQ-0050	00
CH0000-IKC-ONE-RFI-0049	00	12-Apr-13	13-Apr-13	Sed Pond #1 Ditch Conflict	Sedimentation Ponds and Ditches	James Goggans	Don Strickland	IKC-ONE-EMAIL-000177	N/A	16-Apr-13	N/A	SLI-LCP-EMAIL-000812	16-Apr-13	CH0000-SQ-0051	00
CH0000-IKC-ONE-RFI-0049	01	21-Apr-13	23-Apr-13	Sed Pond #1 Ditch Conflict	Sedimentation Ponds and Ditches	Tavish Russell	Isabel Fernandez	IKC-ONE-EMAIL-000187	N/A	24-Apr-13	N/A	NE-LCP-EMAIL-000421	14-May-13	CH0000-SQ-0051	01
CH0000-IKC-ONE-RFI-0050	00	17-Apr-13	18-Apr-13	Change in Construction Road Layout	Construction Roads / Laydowns	Louis-Philippe Perron	Isabel Fernandez	IKC-ONE-EMAIL-000184	N/A	17-Apr-13	N/A	SLI-LCP-EMAIL-000840	19-Apr-13	CH0000-SQ-0054	00
CH0000-IKC-ONE-RFI-0051	00	22-Apr-13	29-Apr-13	Retaining Wall for Cofferdam #2 inside the Spillway	Cofferdam #2, Spillway Excavation	James Goggans	Isabel Fernandez	IKC-ONE-EMAIL-000192	N/A	29-Apr-13	N/A	NE-LCP-EMAIL-000284	1-May-13	CH0000-SQ-0055	01
CH0000-IKC-ONE-RFI-0052	00	22-Apr-13	25-Apr-13	Subgrade Material for the Contractor Laydown Area	Construction Roads / Laydowns	James Goggans	Isabel Fernandez	IKC-ONE-EMAIL-000193	N/A	25-Apr-13	N/A	NE-LCP-EMAIL-000321	4-May-13	CH0000-SQ-0056	01
CH0000-IKC-ONE-RFI-0053	00	25-Apr-13	29-Apr-13	South Transition Dam Revised Layout	Powerhouse Excavation	Matt Bailey	Isabel Fernandez	IKC-ONE-EMAIL-000200	N/A	25-Apr-13	N/A	NE-LCP-EMAIL-000267	27-Apr-13	CH0000-SQ-0057	00
CH0000-IKC-ONE-RFI-0053	01	27-Apr-13	29-Apr-13	South Transition Dam Revised Layout	Powerhouse Excavation	Matt Bailey	Isabel Fernandez	IKC-ONE-EMAIL-000205	N/A						
CH0000-IKC-ONE-RFI-0054	00	25-Apr-13	29-Apr-13	Bulk Excavation Temporary Construction Power	Dewatering	James Goggans	Isabel Fernandez	IKC-ONE-EMAIL-000200	N/A	1-May-13	N/A	LCP-CM-EMAIL-000213	7-Jun-13	CH0000-SQ-0058	00
CH0000-IKC-ONE-RFI-0055	00	29-Apr-13	3-May-13	Compaction Requirement for Zone 1 of the Cofferdams	Cofferdam #1, 2, 3 & 4	Isabel Fernandez	Justin Fillier	IKC-ONE-EMAIL-000224	N/A	1-May-13	N/A	NE-LCP-EMAIL-000290	2-May-13	CH0000-SQ-0059	00
CH0000-IKC-ONE-RFI-0056	00	2-May-13	4-May-13	Length of Controlled Perimeter Holes Outside of Concrete Area	Powerhouse Excavation	Georges Vallee	Justin Fillier	IKC-ONE-EMAIL-000227	N/A	3-May-13	N/A	NE-LCP-EMAIL-000319	4-May-13	CH0000-SQ-0062	00
CH0000-IKC-ONE-RFI-0057	00	5-May-13	6-May-13	South Service Bay - Drilling of Control Perimeter Holes	Powerhouse Excavation	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000234	N/A	9-May-13	N/A	NE-LCP-EMAIL-000366	9-May-13	CH0000-SQ-0063	00
CH0000-IKC-ONE-RFI-0058	00	6-May-13	13-May-13	Request for Vector Drawings related to CH0000-ECN-0007	Construction Roads / Laydowns, Dewatering	Kelley Green	Don Strickland	IKC-ONE-EMAIL-000240	N/A	14-May-13	N/A	LCP-CM-TRANSMIT-000044	16-May-13	CH0000-SQ-0064	00
CH0000-IKC-ONE-RFI-0059	00	6-May-13	17-May-13	Proposed New Location for Access Road to Pad B	Construction Roads / Laydowns	Louis-Philippe Perron	Georges Vallee	IKC-ONE-EMAIL-000241	N/A	15-May-13	N/A	LCP-CM-TRANSMIT-000043	16-May-13	CH0000-SQ-0065	00
CH0000-IKC-ONE-RFI-0060	00	6-May-13	6-May-13	Company's Laydown Area	Construction Roads / Laydowns	Georges Vallee	Isabel Fernandez	IKC-ONE-EMAIL-000242	N/A	14-May-13	N/A	LCP-CM-TRANSMIT-000034	15-May-13	CH0000-SQ-0066	00
CH0000-IKC-ONE-RFI-0061	00	7-May-13	11-May-13	Trees to be removed for the South Access Road	Powerhouse Excavation	James Goggans	Georges Vallee	IKC-ONE-EMAIL-000245	N/A	9-May-13	N/A	NE-LCP-EMAIL-000625	7-Jun-13	CH0000-SQ-0067	00
CH0000-IKC-ONE-RFI-0062	00	8-May-13	11-May-13	Sedimentation Pond #2 - North East Corner Leak	Sedimentation Ponds and Ditches	Andre Wells	Isabel Fernandez	IKC-ONE-EMAIL-000249	N/A	15-May-13	N/A	LCP-CM-TRANSMIT-000042	16-May-13	CH0000-SQ-0068	00
CH0000-IKC-ONE-RFI-0062	01	20-May-13	22-May-13	Sedimentation Pond #2 - North East Corner Leak REVISION	Sedimentation Ponds and Ditches	Matt Bailey	Georges Vallee	IKC-ONE-EMAIL-000272	N/A	6-Jun-13	N/A	LCP-CM-TRANSMIT-000540	3-Aug-13	CH0000-SQ-0068	01
CH0000-IKC-ONE-RFI-0063	00	10-May-13	13-May-13	Diversion Channel – Rock Encountered in Excavation	Sedimentation Ponds and Ditches	Andre Wells	Isabel Fernandez	IKC-ONE-EMAIL-000254	N/A	14-May-13	N/A	LCP-CM-TRANSMIT-000046	16-May-13	CH0000-SQ-0070	00
CH0000-IKC-ONE-RFI-0064	00	10-May-13	14-May-13	Ditch South of Converter Station Clearing	Dewatering	James Goggans	Isabel Fernandez	IKC-ONE-EMAIL-000255	N/A	14-May-13	N/A	LCP-CM-TRANSMIT-000045	16-May-13	CH0000-SQ-0071	00
CH0000-IKC-ONE-RFI-0065	00	11-May-13	15-May-13	Type C Rock Bolt Tensioning	Powerhouse Excavation, Spillway Excavation	James Goggans	Isabel Fernandez	IKC-ONE-EMAIL-000257	N/A	15-May-13	N/A	LCP-CM-TRANSMIT-000120	7-Jun-13	CH0000-SQ-0073	00
CH0000-IKC-ONE-RFI-0066	00	16-May-13	20-May-13	Removal of Logs for Laydown A and Subgrade Material for Laydown Areas A & B	Construction Roads / Laysdowns	Matt Bailey	Isabel Fernandez	IKC-ONE-EMAIL-000261	N/A	27-May-13	N/A	LCP-CM-TRANSMIT-000060	28-May-13	CH0000-SQ-0074	00
CH0000-IKC-ONE-RFI-0067	00	16-May-13	28-May-13	Material to Construct Diversion Channel Dam	Sedimentation Ponds and Ditches	Matt Bailey	Justin Fillier	IKC-ONE-EMAIL-000266	N/A	27-May-13	N/A	LCP-CM-TRANSMIT-000059	28-May-13	CH0000-SQ-0075	00
CH0000-IKC-ONE-RFI-0068	00	16-May-13	24-May-13	Stockpiles of Aggregates for RCC Dam	RCC Dam	Matt Bailey	George Ardeleanu	IKC-ONE-EMAIL-000270	N/A	27-May-13	N/A	LCP-CM-TRANSMIT-000058	28-May-13	CH0000-SQ-0076	00
CH0000-IKC-ONE-RFI-0069	00	23-May-13	30-May-13	RCC Facing Concrete	RCC Dam	George Ardeleanu	Don Strickland	IKC-ONE-EMAIL-000295	N/A	6-Jun-13	N/A	LCP-CM-TRANSMIT-000125	7-Jun-13	CH0000-SQ-0078	00

IKC-ONE

NALCOR Energy
Lower Churchill Project



Request for Equitable Adjustment

Submitted Without Prejudice

August 27, 2013

Appendix 2 – REA Cost Calculation

IKC-ONE

Request For Equitable Adjustment Cost Calculation

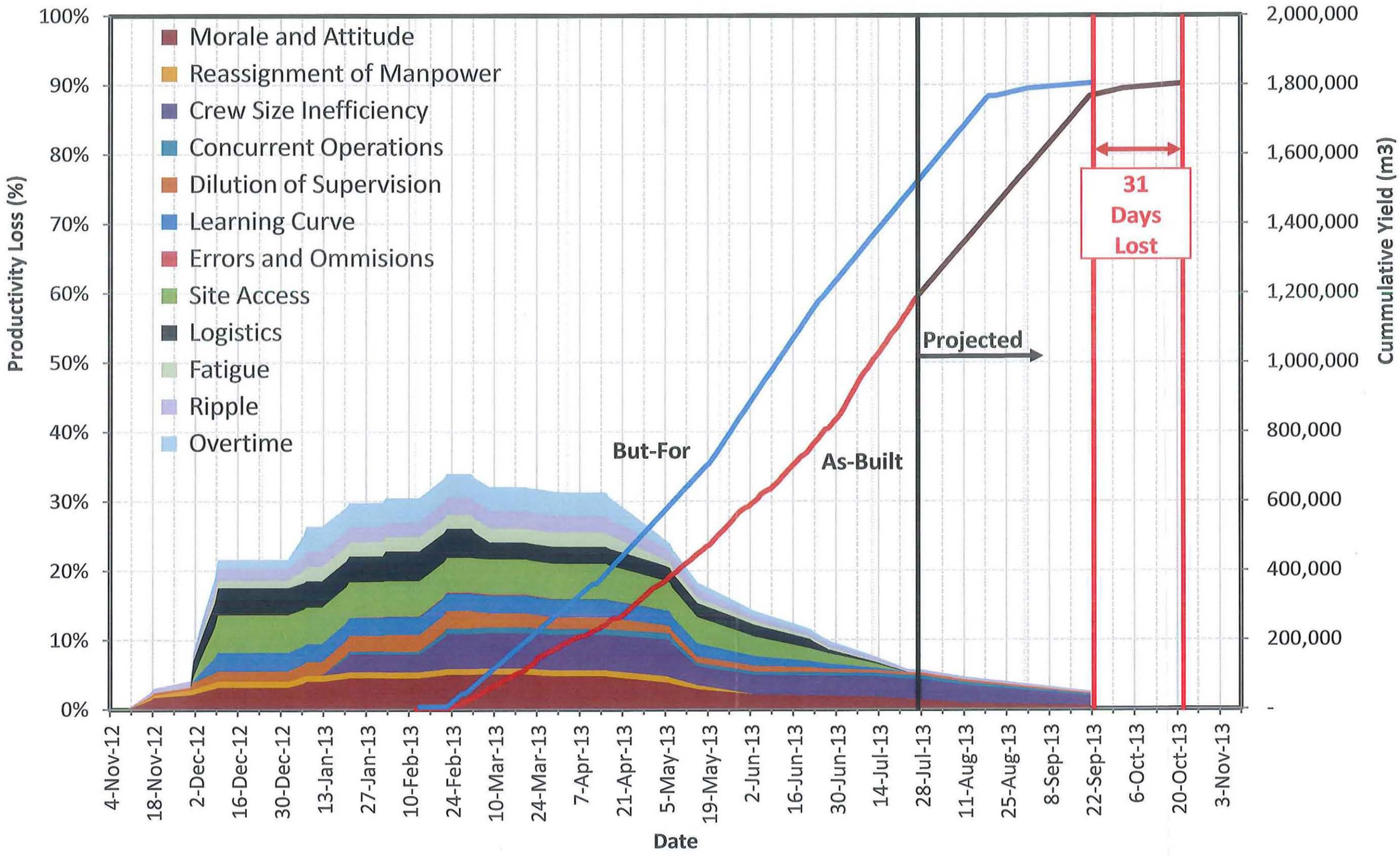
#	Description (1)	$ (2)
6.1	Time Added by Delays, Disruptions, and Changes	
6.2	Overburden Direct Costs and Acceleration Costs	4,732,652
6.3	Additional Subcontractor Required to Accelerate	1,276,639
6.4	Rock Excavation Direct Costs and Acceleration Costs	9,163,750
6.5	Additional Site Services Equipment (2)	341,991
6.6	Additional Fuel Truck Support (2)	705,720
6.7	Additional Bussing (2)	333,432
6.8	Additional Garage Support Equipment (2)	2,142,375
6.9	Additional Temporary Lighting (2)	378,000
6.10	Additional Janitorial, Waste, and Cleanup (2)	160,285
6.11	Additional Staff Vehicles (2)	412,720
6.12	Additional Runner (2)	201,360
6.13	Additional Orientation Labour (2)	97,083
6.14	Idle Equipment Costs (2)	524,082
6.15	Additional Mobilization and Demobilization (3)	677,835
6.16	Additional Infrastructure and Setup (3)	257,516
6.17	Additional Outside Cleaning (3)	44,625
6.18	Additional Services, Tools, Awards, and Supplies (3)	198,400
6.19	Additional Staff Labour (3)	2,264,817
6.20	Additional Staff Live Out Allowance (3)	451,500
6.21	Additional Airfares (3)	225,750
6.22	Additional Staff Travel Expenses (3)	64,500
6.23	Additional IT Equipment (3)	27,000
6.24	Additional Medicals (3)	26,100
6.25	Cancellation Fee Paid on Staff Dorm (3)	98,425
6.26	REA Preparation Costs (3)	145,415
6.27	Extended Bonds and Insurance and Fees (3)	352,012
6.28	CR #13	344,628
6.29	CR #16	3,105,000
6.30	CR #17	243,000
6.31	CR #18	36,782
6.32	CR #19	40,000
6.33	CR #20	250,000
6.34	CR #21	700,000
6.35	CR #22	1,100,000
6.36	CR #23	60,000
6.37	CR #44	65,000
6.38	CR #50	250,000
6.39	CR #52	30,000
6.40	CR #57	34,000

Notes:

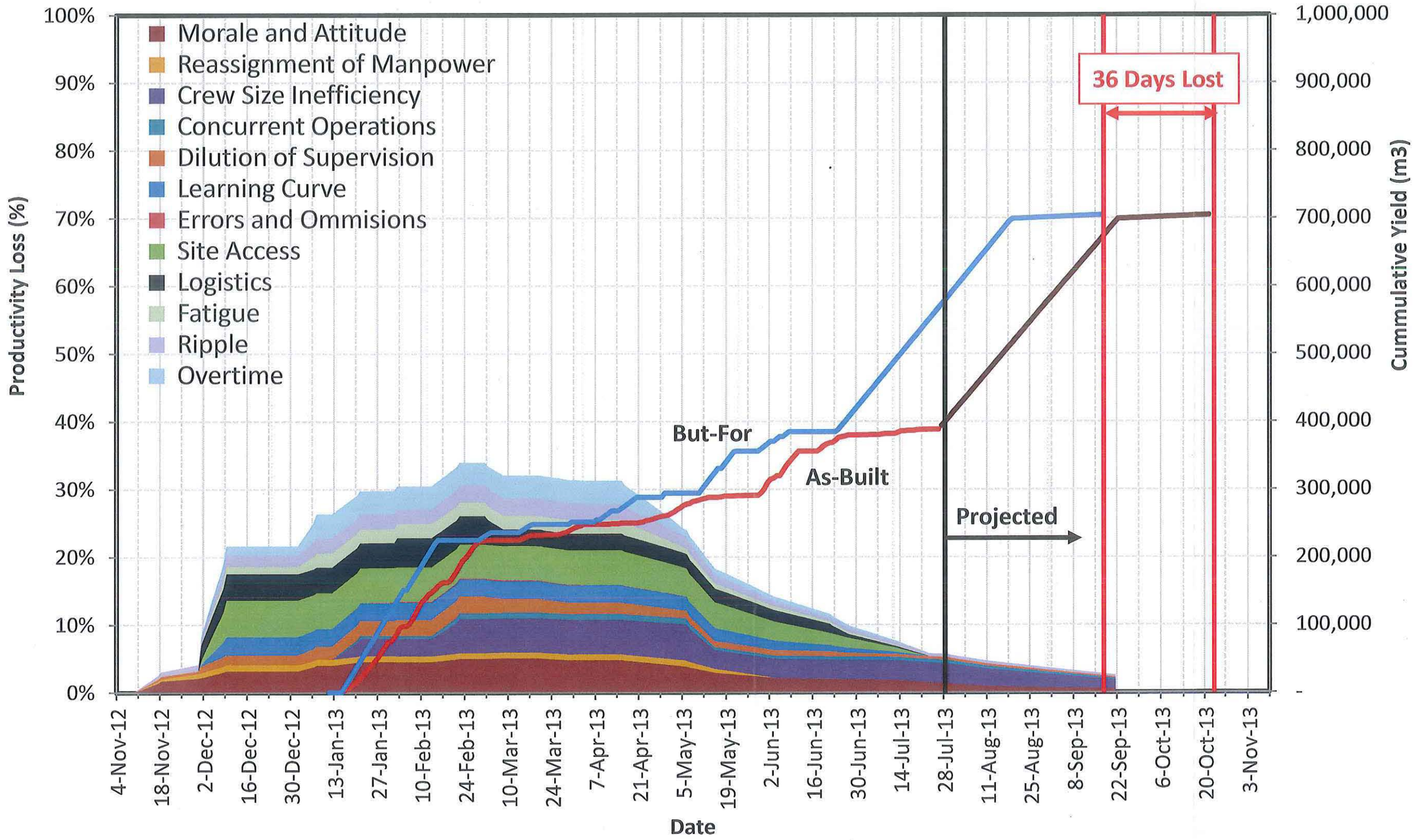
(1) REA Cost Calculation does not include the description of the Dorm Credit
(2) The numbers in this table do include the 20% overhead credit.
(3) Numbers do not include 7.5% GA&O and 12% Profit.

1

PRODUCTIVITY LOSSES AFFECTED IKC-ONE'S ROCK EXCAVATION OPERATION



PRODUCTIVITY LOSSES AFFECTED IKC-ONE'S OVERBURDEN EXCAVATION OPERATION



IKC-ONE

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

July 2013

(1) Relative Weighting	Warrantees Related to the Conditions and Facilities at the Jobsite Were Not Met					Company Did Not Perform its Duties					Site Conditions Changed		Company's Rock Excavation Design Changed And Tehnical Issues Delayed And Disrupted IKC-ONE					MCAC Factors Adjusted (1)	MCAC Factors Applied	MCAC Productivity Factors		
	1.1 Access to Site Frequently Interrupted, Substandard, and Problematic	1.2 IKC-ONE Required to React to Company's Accommodation Complex Not Provided	1.3 Insufficient Laydown Area Provided Late – On December 19, 2012	1.4 Company Did Not Provide Permanent Electrical Power Supply	1.5 Insufficient Telecommunications And Data On-Site	2.1 Company Did Not Have A Special Project Order Project Labour Agreement (SPO) In Place Until March 19, 2013	2.2 Company Has Not Lead And Has Not Complied With The Terms And Conditions Of The IBA	2.3 Company's Jobsite Security Insufficient To Mitigate The Effects Of Numerous Protests and Security Breaches	2.4 Company Has Not Provided Timely Responses To Requests For Information And Company's "Aconex" Document Control System Has Been Dysfunctional	2.5 Company Did Not Provide A Full Notice To Proceed Until December 19, 2012	3.1 Levels, Quantity, and Intensity of Water in the Soils Far Beyond Contract Representations and Expectations	3.2 Rock Grade Significantly Jagged and Undulating and With Deep Pockets of Silt and Water	4.1 Prescriptive Rock Specification Did Not Change In A Timely Manner As Promised	4.2 Rock Stabilization Anchor Bolts Design Did Not Work	4.3 Final Rock Wall Approval Not Executed In An Organized And Timely Manner	4.4 Labour Requirements For Scalers Changed	Total			Minor	Average	Severe
	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4.1	4.2	4.3	4.4						
Severe Factors																						
Morale and Attitude	3	3				1	3	2	1		2	2					17	6%	30%	5%	15%	30%
Crew Size Inefficiency											3	3					6	6%	30%	10%	20%	30%
Site Access	3																3	6%	30%	5%	12%	30%
Overtime	3	5															8	4%	20%	10%	15%	20%
Fatigue	3	3															6	2%	12%	8%	10%	12%
Average Factors																						
Logistics	3		3	1													7	5%	25%	10%	25%	50%
Ripple	3	3					3		2			1		1			13	3%	15%	10%	15%	20%
Dilution of Supervision	3	3	3	1		2					2	1					15	3%	15%	10%	15%	25%
Learning Curve	1																1	3%	15%	5%	15%	30%
Minor Factors																						
Reassignment of Manpower							1										1	1%	5%	5%	10%	15%
Concurrent Operations											3	3					6	1%	5%	5%	15%	25%
Errors and Ommisions													1	1	1	1	4	0.2%	1.0%	1%	3%	6%

(2) Effective Dates of Actual Conditions																
Actual Condition Start Date	30-Nov-12	1-Jan-13	30-Nov-12	1-Feb-13	1-Feb-13	9-Nov-12	9-Nov-12	9-Nov-12	9-Nov-12	9-Nov-12	12-Jan-13	13-Feb-13	24-Jan-13	13-Feb-13	1-Mar-13	15-Jan-13
Days from Start Date to be in Full Effect	10	7	0	0	1	10	30	10	10	30	10	10	10	10	10	10
Actual Condition End Date	14-Apr-13	14-Apr-13	1-Mar-13	20-Jun-13	30-Jun-13	19-Mar-13	4-May-13	12-Jul-13	28-Jul-13	19-Dec-12	28-Jul-13	5-May-13	15-Mar-13	25-Mar-13	30-Apr-13	15-Mar-13
Days after End Date that Effects are Not Being Applied	100	21	7	7	100	10	30	30	150	10	100	10	10	10	10	10
Date That Effects Are Not Applied	23-Jul-13	5-May-13	8-Mar-13	27-Jun-13	8-Oct-13	29-Mar-13	3-Jun-13	11-Aug-13	25-Dec-13	29-Dec-12	5-Nov-13	15-May-13	25-Mar-13	4-Apr-13	10-May-13	25-Mar-13

(3) Percentage Weighting																	
1. Stacking of Trades	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2. Morale and Attitude	18%	18%	0%	0%	0%	6%	18%	12%	6%	0%	12%	12%	0%	0%	0%	0%	100%
3. Reassignment of Manpower	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
4. Crew Size Inefficiency	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	100%
5. Concurrent Operations	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	100%
6. Dilution of Supervision	20%	20%	20%	7%	0%	13%	0%	0%	0%	0%	13%	7%	0%	0%	0%	0%	100%
7. Learning Curve	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
8. Errors and Ommisions	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	25%	25%	25%	100%
9. Beneficial Occupancy	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10. Joint Occupancy	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11. Site Access	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
12. Logistics	43%	0%	43%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
13. Fatigue	50%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
14. Ripple	23%	23%	0%	0%	0%	0%	23%	0%	15%	0%	0%	8%	0%	8%	0%	0%	100%
15. Overtime	38%	63%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
16. Season and Weather Change	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Notes:
(1) IKC-ONE has reduced the MCAC Productivity Factors by a factor of 5 as there are 5 major productivities losses being experienced simultaneously.

127-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(4) Actual Conditions - Chart Calculates the Percentage that Each Actual Condition is in Effect as Shown in *Chart (2) - Effective Dates of Actual Conditions*															
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4.1	4.2	4.3	4.4
5-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	10%	3%	10%	10%	3%	0%	0%	0%	0%	0%	0%
11-Nov-12	101%	1%	99%	0%	0%	0%	0%	0%	20%	7%	20%	20%	7%	0%	0%	0%	0%	0%	0%
12-Nov-12	101%	1%	99%	0%	0%	0%	0%	0%	30%	10%	30%	30%	10%	0%	0%	0%	0%	0%	0%
13-Nov-12	101%	1%	99%	0%	0%	0%	0%	0%	40%	13%	40%	40%	13%	0%	0%	0%	0%	0%	0%
14-Nov-12	102%	2%	98%	0%	0%	0%	0%	0%	50%	17%	50%	50%	17%	0%	0%	0%	0%	0%	0%
15-Nov-12	102%	2%	98%	0%	0%	0%	0%	0%	60%	20%	60%	60%	20%	0%	0%	0%	0%	0%	0%
16-Nov-12	102%	2%	98%	0%	0%	0%	0%	0%	70%	23%	70%	70%	23%	0%	0%	0%	0%	0%	0%
17-Nov-12	103%	3%	97%	0%	0%	0%	0%	0%	80%	27%	80%	80%	27%	0%	0%	0%	0%	0%	0%
18-Nov-12	103%	3%	97%	0%	0%	0%	0%	0%	100%	30%	100%	100%	30%	0%	0%	0%	0%	0%	0%
19-Nov-12	103%	3%	97%	0%	0%	0%	0%	0%	100%	33%	100%	100%	33%	0%	0%	0%	0%	0%	0%
20-Nov-12	103%	3%	97%	0%	0%	0%	0%	0%	100%	37%	100%	100%	37%	0%	0%	0%	0%	0%	0%
21-Nov-12	103%	3%	97%	0%	0%	0%	0%	0%	100%	40%	100%	100%	40%	0%	0%	0%	0%	0%	0%
22-Nov-12	104%	3%	97%	0%	0%	0%	0%	0%	100%	43%	100%	100%	43%	0%	0%	0%	0%	0%	0%
23-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	47%	100%	100%	47%	0%	0%	0%	0%	0%	0%
24-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	50%	100%	100%	50%	0%	0%	0%	0%	0%	0%
25-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	53%	100%	100%	53%	0%	0%	0%	0%	0%	0%
26-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	57%	100%	100%	57%	0%	0%	0%	0%	0%	0%
27-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	60%	100%	100%	60%	0%	0%	0%	0%	0%	0%
28-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	63%	100%	100%	63%	0%	0%	0%	0%	0%	0%
29-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	67%	100%	100%	67%	0%	0%	0%	0%	0%	0%
30-Nov-12	104%	4%	96%	0%	0%	0%	0%	0%	100%	70%	100%	100%	70%	0%	0%	0%	0%	0%	0%
1-Dec-12	109%	8%	92%	10%	0%	100%	0%	0%	100%	73%	100%	100%	73%	0%	0%	0%	0%	0%	0%
2-Dec-12	111%	10%	90%	20%	0%	100%	0%	0%	100%	77%	100%	100%	77%	0%	0%	0%	0%	0%	0%
3-Dec-12	113%	11%	89%	30%	0%	100%	0%	0%	100%	80%	100%	100%	80%	0%	0%	0%	0%	0%	0%
4-Dec-12	115%	13%	87%	40%	0%	100%	0%	0%	100%	83%	100%	100%	83%	0%	0%	0%	0%	0%	0%
5-Dec-12	117%	15%	85%	50%	0%	100%	0%	0%	100%	87%	100%	100%	87%	0%	0%	0%	0%	0%	0%
6-Dec-12	119%	16%	84%	60%	0%	100%	0%	0%	100%	90%	100%	100%	90%	0%	0%	0%	0%	0%	0%
7-Dec-12	121%	17%	83%	70%	0%	100%	0%	0%	100%	93%	100%	100%	93%	0%	0%	0%	0%	0%	0%
8-Dec-12	123%	19%	81%	80%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
9-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
10-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
11-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
12-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
13-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
14-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
15-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
16-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
17-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
18-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
19-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
20-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%
21-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	80%	0%	0%	0%	0%	0%	0%
22-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	70%	0%	0%	0%	0%	0%	0%
23-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	60%	0%	0%	0%	0%	0%	0%
24-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	50%	0%	0%	0%	0%	0%	0%
25-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	40%	0%	0%	0%	0%	0%	0%
26-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	30%	0%	0%	0%	0%	0%	0%
27-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	20%	0%	0%	0%	0%	0%	0%
28-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	10%	0%	0%	0%	0%	0%	0%
29-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
30-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
31-Dec-12	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
1-Jan-13	128%	22%	78%	100%	0%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
2-Jan-13	129%	22%	78%	100%	14%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
3-Jan-13	130%	23%	77%	100%	29%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
4-Jan-13	131%	24%	76%	100%	43%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
5-Jan-13	132%	24%	76%	100%	57%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
6-Jan-13	133%	25%	75%	100%	71%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
7-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
8-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
9-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
10-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
11-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
12-Jan-13	136%	26%	74%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
13-Jan-13	136%	27%	73%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	10%	0%	0%	0%	0%	0%
14-Jan-13	137%	27%	73%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	20%	0%	0%	0%	0%	0%
15-Jan-13	138%	27%	73%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	30%	0%	0%	0%	0%	0%
16-Jan-13	138%	28%	72%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	40%	0%	0%	0%	0%	10%
17-Jan-13	139%	28%	72%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	50%	0%	0%	0%	0%	20%
18-Jan-13	140%	28%	72%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	60%	0%	0%	0%	0%	30%
19-Jan-13	140%	29%	71%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	70%	0%	0%	0%	0%	40%
20-Jan-13	141%	29%	71%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	80%	0%	0%	0%	0%	50%
21-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	0%	0%	0%	60%
22-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	0%	0%	0%	70%
23-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	0%	0%	0%	80%
24-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	0%	0%	0%	100%
25-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	10%	0%	0%	100%
26-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	20%	0%	0%	100%
27-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	30%	0%	0%	100%
28-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	40%	0%	0%	100%
29-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	50%	0%	0%	100%
30-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	60%	0%	0%	100%
31-Jan-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	70%	0%	0%	100%
1-Feb-13	142%	30%	70%	100%	100%	100%	0%	0%	100%	100%	100%	100%	0%	100%	0%	80%	0%	0%	100%
2-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
3-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
4-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
6-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
7-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
8-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
9-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
10-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
11-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
12-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
13-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
14-Feb-13	144%	30%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	0%	100%	0%	0%	100%
15-Feb-13	145%	31%	69%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	10%	100%	10%	0%	100%
16-Feb-13	145%	31%	69%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	20%	100%	20%	0%	100%
17-Feb-13	146%	32%	68%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	30%	100%	30%	0%	100%
18-Feb-13	147%	32%	68%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	40%	100%	40%	0%	100%
19-Feb-13	148%	32%	68%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	50%	100%	50%	0%	100%
20-Feb-13	148%	33%	67%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	60%	100%	60%	0%	100%
21-Feb-13	149%	33%	67%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	70%	100%	70%	0%	100%
22-Feb-13	150%	33%	67%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	80%	100%	80%	0%	100%
23-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
24-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
25-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
26-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
27-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(4) Actual Conditions - Chart Calculates the Percentage that Each Actual Condition is in Effect as Shown in *Chart (2) - Effective Dates of Actual Conditions*														
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4.1	4.2	4.3	4.4
28-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
1-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
2-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	0%	100%
3-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	10%	100%
4-Mar-13	150%	33%	67%	100%	100%	71%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	20%	100%
5-Mar-13	150%	33%	67%	100%	100%	57%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	30%	100%
6-Mar-13	149%	33%	67%	100%	100%	43%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	40%	100%
7-Mar-13	148%	33%	67%	100%	100%	29%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	50%	100%
8-Mar-13	148%	32%	68%	100%	100%	14%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	60%	100%
9-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	70%	100%
10-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	80%	100%
11-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
12-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
13-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
14-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
15-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
16-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
17-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	100%
18-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	80%	100%	100%	80%
19-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	70%	100%	100%	70%
20-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	60%	100%	100%	60%
21-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	100%	100%	100%	100%	0%	100%	100%	50%	100%	100%	50%
22-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	80%	100%	100%	100%	0%	100%	100%	40%	100%	100%	40%
23-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	70%	100%	100%	100%	0%	100%	100%	30%	100%	100%	30%
24-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	60%	100%	100%	100%	0%	100%	100%	20%	100%	100%	20%
25-Mar-13	147%	32%	68%	100%	100%	0%	100%	100%	50%	100%	100%	100%	0%	100%	100%	10%	100%	100%	10%
26-Mar-13	146%	32%	68%	100%	100%	0%	100%	100%	40%	100%	100%	100%	0%	100%	100%	0%	100%	100%	0%
27-Mar-13	146%	32%	68%	100%	100%	0%	100%	100%	30%	100%	100%	100%	0%	100%	100%	0%	100%	100%	0%
28-Mar-13	146%	32%	68%	100%	100%	0%	100%	100%	20%	100%	100%	100%	0%	100%	100%	0%	80%	100%	0%
29-Mar-13	146%	31%	69%	100%	100%	0%	100%	100%	10%	100%	100%	100%	0%	100%	100%	0%	70%	100%	0%
30-Mar-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	60%	100%	0%
31-Mar-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	50%	100%	0%
1-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	40%	100%	0%
2-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	30%	100%	0%
3-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	20%	100%	0%
4-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	10%	100%	0%
5-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
6-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
7-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
8-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
9-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
10-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
11-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
12-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
13-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
14-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
15-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
16-Apr-13	146%	31%	69%	100%	100%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
17-Apr-13	144%	31%	69%	98%	90%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
18-Apr-13	144%	30%	70%	97%	86%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
20-Apr-13	143%	30%	70%	96%	81%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
21-Apr-13	142%	30%	70%	95%	76%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
22-Apr-13	142%	29%	71%	94%	71%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
23-Apr-13	141%	29%	71%	93%	67%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
24-Apr-13	140%	29%	71%	92%	62%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
25-Apr-13	140%	28%	72%	91%	57%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
26-Apr-13	139%	28%	72%	90%	52%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
27-Apr-13	138%	28%	72%	89%	48%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
28-Apr-13	138%	27%	73%	88%	43%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
29-Apr-13	137%	27%	73%	87%	38%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
30-Apr-13	136%	27%	73%	86%	33%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
1-May-13	136%	26%	74%	85%	29%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
2-May-13	135%	26%	74%	84%	24%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
3-May-13	134%	26%	74%	83%	19%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	100%	0%
4-May-13	134%	25%	75%	82%	14%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	80%	0%
5-May-13	133%	25%	75%	81%	10%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	70%	0%
6-May-13	133%	25%	75%	80%	5%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	60%	0%
7-May-13	132%	24%	76%	79%	0%	0%	100%	100%	0%	100%	100%	100%	0%	100%	100%	0%	0%	50%	0%
8-May-13	132%	24%	76%	78%	0%	0%	100%	100%	0%	93%	100%	100%	0%	100%	100%	0%	0%	40%	0%
9-May-13	130%	23%	77%	77%	0%	0%	100%	100%	0%	90%	100%	100%	0%	100%	80%	0%	0%	30%	0%
10-May-13	129%	22%	78%	76%	0%	0%	100%	100%	0%	87%	100%	100%	0%	100%	70%	0%	0%	20%	0%
11-May-13	128%	22%	78%	75%	0%	0%	100%	100%	0%	83%	100%	100%	0%	100%	60%	0%	0%	10%	0%
12-May-13	127%	21%	79%	74%	0%	0%	100%	100%	0%	80%	100%	100%	0%	100%	50%	0%	0%	0%	0%
13-May-13	126%	21%	79%	73%	0%	0%	100%	100%	0%	77%	100%	100%	0%	100%	40%	0%	0%	0%	0%
14-May-13	125%	20%	80%	72%	0%	0%	100%	100%	0%	73%	100%	100%	0%	100%	30%	0%	0%	0%	0%
15-May-13	124%	19%	81%	71%	0%	0%	100%	100%	0%	70%	100%	100%	0%	100%	20%	0%	0%	0%	0%
16-May-13	123%	19%	81%	70%	0%	0%	100%	100%	0%	67%	100%	100%	0%	100%	10%	0%	0%	0%	0%
17-May-13	122%	18%	82%	69%	0%	0%	100%	100%	0%	63%	100%	100%	0%	100%	0%	0%	0%	0%	0%
18-May-13	122%	18%	82%	68%	0%	0%	100%	100%	0%	60%	100%	100%	0%	100%	0%	0%	0%	0%	0%
19-May-13	122%	18%	82%	67%	0%	0%	100%	100%	0%	57%	100%	100%	0%	100%	0%	0%	0%	0%	0%
20-May-13	121%	18%	82%	66%	0%	0%	100%	100%	0%	53%	100%	100%	0%	100%	0%	0%	0%	0%	0%
21-May-13	121%	17%	83%	65%	0%	0%	100%	100%	0%	50%	100%	100%	0%	100%	0%	0%	0%	0%	0%
22-May-13	121%	17%	83%	64%	0%	0%	100%	100%	0%	47%	100%	100%	0%	100%	0%	0%	0%	0%	0%
23-May-13	121%	17%	83%	63%	0%	0%	100%	100%	0%	43%	100%	100%	0%	100%	0%	0%	0%	0%	0%
24-May-13	120%	17%	83%	62%	0%	0%	100%	100%	0%	40%	100%	100%	0%	100%	0%	0%	0%	0%	0%
25-May-13	120%	17%	83%	61%	0%	0%	100%	100%	0%	37%	100%	100%	0%	100%	0%	0%	0%	0%	0%
26-May-13	120%	16%	84%	60%	0%	0%	100%	100%	0%	33%	100%	100%	0%	100%	0%	0%	0%	0%	0%
27-May-13	119%	16%	84%	59%	0%	0%	100%	100%	0%	30%	100%	100%	0%	100%	0%	0%	0%	0%	0%
28-May-13	119%	16%	84%	58%	0%	0%	100%	100%	0%	27%	100%	100%	0%	100%	0%	0%	0%	0%	0%
29-May-13	119%	16%	84%	57%	0%	0%	100%	100%	0%	23%	100%	100%	0%	100%	0%	0%	0%	0%	0%
30-May-13	118%	16%	84%	56%	0%	0%	100%	100%	0%	20%	100%	100%	0%	100%	0%	0%	0%	0%	0%
31-May-13	118%	15%	85%	55%	0%	0%	100%	100%	0%	17%	100%	100%	0%	100%	0%	0%	0%	0%	0%
1-Jun-13	118%	15%	85%	54%	0%	0%	100%	100%	0%	13%	100%	100%	0%	100%	0%	0%	0%	0%	0%
2-Jun-13	117%	15%	85%	53%	0%	0%	100%	100%	0%	10%	100%	100%	0%	100%	0%	0%	0%	0%	0%
3-Jun-13	117%	15%	85%	52%	0%	0%	100%	100%	0%	7%	100%	100%	0%	100%	0%	0%	0%	0%	0%
4-Jun-13	117%	14%	86%	51%	0%	0%	100%	100%	0%	3%	100%	100%	0%	100%	0%	0%	0%	0%	0%
5-Jun-13	117%	14%	86%	50%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
6-Jun-13	116%	14%	86%	49%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
7-Jun-13	116%	14%	86%	48%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
8-Jun-13	116%	14%	86%	47%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
9-Jun-13	116%	14%	86%	46%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
10-Jun-13	116%	13%	87%	45%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
11-Jun-13	115%	13%	87%	44%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
12-Jun-13	115%	13%	87%	43%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
13-Jun-13	115%	13%	87%	42%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
14-Jun-13	115%	13%	87%	41%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
15-Jun-13	115%	13%	87%	40%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
16-Jun-13	114%	13%	87%	39%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
17-Jun-13	114%	12%	88%	38%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
18-Jun-13	114%	12%	88%	37%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
19-Jun-13	114%	12%	88%	36%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
20-Jun-13	114%	12%	88%	35%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
21-Jun-13	113%	12%	88%	34%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
22-Jun-13	113%	12%	88%	33%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(4) Actual Conditions - Chart Calculates the Percentage that Each Actual Condition is in Effect as Shown in *Chart (2) - Effective Dates of Actual Conditions*														
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4.1	4.2	4.3	4.4
23-Jun-13	113%	12%	88%	32%	0%	0%	100%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
24-Jun-13	113%	11%	89%	31%	0%	0%	71%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
25-Jun-13	112%	11%	89%	30%	0%	0%	57%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
26-Jun-13	112%	11%	89%	29%	0%	0%	43%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
27-Jun-13	112%	10%	90%	28%	0%	0%	29%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
28-Jun-13	111%	10%	90%	27%	0%	0%	14%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
29-Jun-13	111%	10%	90%	26%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
30-Jun-13	111%	10%	90%	25%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
1-Jul-13	111%	10%	90%	24%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
2-Jul-13	110%	9%	91%	23%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
3-Jul-13	110%	9%	91%	22%	0%	0%	0%	100%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
4-Jul-13	110%	9%	91%	21%	0%	0%	0%	98%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
5-Jul-13	110%	9%	91%	20%	0%	0%	0%	97%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
6-Jul-13	110%	9%	91%	19%	0%	0%	0%	96%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
7-Jul-13	110%	9%	91%	18%	0%	0%	0%	95%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
8-Jul-13	109%	9%	91%	17%	0%	0%	0%	94%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
9-Jul-13	109%	8%	92%	16%	0%	0%	0%	93%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
10-Jul-13	109%	8%	92%	15%	0%	0%	0%	92%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
11-Jul-13	109%	8%	92%	14%	0%	0%	0%	91%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
12-Jul-13	109%	8%	92%	13%	0%	0%	0%	90%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
13-Jul-13	108%	8%	92%	12%	0%	0%	0%	89%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
14-Jul-13	108%	8%	92%	11%	0%	0%	0%	88%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
15-Jul-13	108%	8%	92%	10%	0%	0%	0%	87%	0%	0%	100%	100%	0%	100%	0%	0%	0%	0%	0%
16-Jul-13	108%	7%	93%	9%	0%	0%	0%	86%	0%	0%	93%	100%	0%	100%	0%	0%	0%	0%	0%
17-Jul-13	108%	7%	93%	8%	0%	0%	0%	85%	0%	0%	90%	100%	0%	100%	0%	0%	0%	0%	0%
18-Jul-13	107%	7%	93%	7%	0%	0%	0%	84%	0%	0%	87%	100%	0%	100%	0%	0%	0%	0%	0%
19-Jul-13	107%	7%	93%	6%	0%	0%	0%	83%	0%	0%	83%	100%	0%	100%	0%	0%	0%	0%	0%
20-Jul-13	107%	7%	93%	5%	0%	0%	0%	82%	0%	0%	80%	100%	0%	100%	0%	0%	0%	0%	0%
21-Jul-13	107%	6%	94%	4%	0%	0%	0%	81%	0%	0%	77%	100%	0%	100%	0%	0%	0%	0%	0%
22-Jul-13	107%	6%	94%	3%	0%	0%	0%	80%	0%	0%	73%	100%	0%	100%	0%	0%	0%	0%	0%
23-Jul-13	107%	6%	94%	2%	0%	0%	0%	79%	0%	0%	70%	100%	0%	100%	0%	0%	0%	0%	0%
24-Jul-13	106%	6%	94%	1%	0%	0%	0%	78%	0%	0%	67%	100%	0%	100%	0%	0%	0%	0%	0%
25-Jul-13	106%	6%	94%	0%	0%	0%	0%	77%	0%	0%	63%	100%	0%	100%	0%	0%	0%	0%	0%
26-Jul-13	106%	6%	94%	0%	0%	0%	0%	76%	0%	0%	60%	100%	0%	100%	0%	0%	0%	0%	0%
27-Jul-13	106%	6%	94%	0%	0%	0%	0%	75%	0%	0%	57%	100%	0%	100%	0%	0%	0%	0%	0%
28-Jul-13	106%	6%	94%	0%	0%	0%	0%	74%	0%	0%	53%	100%	0%	100%	0%	0%	0%	0%	0%
29-Jul-13	106%	6%	94%	0%	0%	0%	0%	73%	0%	0%	50%	100%	0%	100%	0%	0%	0%	0%	0%
30-Jul-13	106%	6%	94%	0%	0%	0%	0%	72%	0%	0%	47%	100%	0%	100%	0%	0%	0%	0%	0%
31-Jul-13	106%	6%	94%	0%	0%	0%	0%	71%	0%	0%	43%	100%	0%	100%	0%	0%	0%	0%	0%
1-Aug-13	106%	5%	95%	0%	0%	0%	0%	70%	0%	0%	40%	99%	0%	98%	0%	0%	0%	0%	0%
2-Aug-13	106%	5%	95%	0%	0%	0%	0%	69%	0%	0%	37%	98%	0%	97%	0%	0%	0%	0%	0%
3-Aug-13	106%	5%	95%	0%	0%	0%	0%	68%	0%	0%	33%	97%	0%	96%	0%	0%	0%	0%	0%
4-Aug-13	106%	5%	95%	0%	0%	0%	0%	67%	0%	0%	30%	97%	0%	95%	0%	0%	0%	0%	0%
5-Aug-13	105%	5%	95%	0%	0%	0%	0%	66%	0%	0%	27%	96%	0%	94%	0%	0%	0%	0%	0%
6-Aug-13	105%	5%	95%	0%	0%	0%	0%	65%	0%	0%	23%	95%	0%	93%	0%	0%	0%	0%	0%
7-Aug-13	105%	5%	95%	0%	0%	0%	0%	64%	0%	0%	20%	95%	0%	92%	0%	0%	0%	0%	0%
8-Aug-13	105%	5%	95%	0%	0%	0%	0%	63%	0%	0%	17%	94%	0%	91%	0%	0%	0%	0%	0%
9-Aug-13	105%	5%	95%	0%	0%	0%	0%	62%	0%	0%	13%	93%	0%	90%	0%	0%	0%	0%	0%
10-Aug-13	105%	5%	95%	0%	0%	0%	0%	61%	0%	0%	10%	93%	0%	89%	0%	0%	0%	0%	0%
11-Aug-13	105%	5%	95%	0%	0%	0%	0%	60%	0%	0%	7%	92%	0%	88%	0%	0%	0%	0%	0%
12-Aug-13	105%	5%	95%	0%	0%	0%	0%	59%	0%	0%	3%	91%	0%	87%	0%	0%	0%	0%	0%
13-Aug-13	105%	5%	95%	0%	0%	0%	0%	58%	0%	0%	0%	91%	0%	86%	0%	0%	0%	0%	0%
14-Aug-13	105%	5%	95%	0%	0%	0%	0%	57%	0%	0%	0%	90%	0%	85%	0%	0%	0%	0%	0%
15-Aug-13	105%	5%	95%	0%	0%	0%	0%	56%	0%	0%	0%	89%	0%	84%	0%	0%	0%	0%	0%
16-Aug-13	105%	4%	96%	0%	0%	0%	0%	55%	0%	0%	0%	89%	0%	83%	0%	0%	0%	0%	0%
17-Aug-13	105%	4%	96%	0%	0%	0%	0%	54%	0%	0%	0%	88%	0%	82%	0%	0%	0%	0%	0%
18-Aug-13	105%	4%	96%	0%	0%	0%	0%	53%	0%	0%	0%	87%	0%	81%	0%	0%	0%	0%	0%
19-Aug-13	105%	4%	96%	0%	0%	0%	0%	52%	0%	0%	0%	87%	0%	80%	0%	0%	0%	0%	0%
20-Aug-13	104%	4%	96%	0%	0%	0%	0%	51%	0%	0%	0%	86%	0%	79%	0%	0%	0%	0%	0%
21-Aug-13	104%	4%	96%	0%	0%	0%	0%	50%	0%	0%	0%	85%	0%	78%	0%	0%	0%	0%	0%
22-Aug-13	104%	4%	96%	0%	0%	0%	0%	49%	0%	0%	0%	85%	0%	77%	0%	0%	0%	0%	0%
23-Aug-13	104%	4%	96%	0%	0%	0%	0%	48%	0%	0%	0%	84%	0%	76%	0%	0%	0%	0%	0%
24-Aug-13	104%	4%	96%	0%	0%	0%	0%	47%	0%	0%	0%	83%	0%	75%	0%	0%	0%	0%	0%
25-Aug-13	104%	4%	96%	0%	0%	0%	0%	46%	0%	0%	0%	83%	0%	74%	0%	0%	0%	0%	0%
26-Aug-13	104%	4%	96%	0%	0%	0%	0%	45%	0%	0%	0%	82%	0%	73%	0%	0%	0%	0%	0%
27-Aug-13	104%	4%	96%	0%	0%	0%	0%	44%	0%	0%	0%	81%	0%	72%	0%	0%	0%	0%	0%
28-Aug-13	104%	4%	96%	0%	0%	0%	0%	43%	0%	0%	0%	81%	0%	71%	0%	0%	0%	0%	0%
29-Aug-13	104%	4%	96%	0%	0%	0%	0%	42%	0%	0%	0%	80%	0%	70%	0%	0%	0%	0%	0%
30-Aug-13	104%	4%	96%	0%	0%	0%	0%	41%	0%	0%	0%	79%	0%	69%	0%	0%	0%	0%	0%
31-Aug-13	104%	4%	96%	0%	0%	0%	0%	40%	0%	0%	0%	79%	0%	68%	0%	0%	0%	0%	0%
1-Sep-13	104%	4%	96%	0%	0%	0%	0%	39%	0%	0%	0%	78%	0%	67%	0%	0%	0%	0%	0%
2-Sep-13	104%	4%	96%	0%	0%	0%	0%	38%	0%	0%	0%	77%	0%	66%	0%	0%	0%	0%	0%
3-Sep-13	104%	4%	96%	0%	0%	0%	0%	37%	0%	0%	0%	77%	0%	65%	0%	0%	0%	0%	0%
4-Sep-13	104%	4%	96%	0%	0%	0%	0%	36%	0%	0%	0%	76%	0%	64%	0%	0%	0%	0%	0%
5-Sep-13	104%	3%	97%	0%	0%	0%	0%	35%	0%	0%	0%	75%	0%	63%	0%	0%	0%	0%	0%
6-Sep-13	104%	3%	97%	0%	0%	0%	0%	34%	0%	0%	0%	75%	0%	62%	0%	0%	0%	0%	0%
7-Sep-13	103%	3%	97%	0%	0%	0%	0%	33%	0%	0%	0%	74%	0%	61%	0%	0%	0%	0%	0%
8-Sep-13	103%	3%	97%	0%	0%	0%	0%	32%	0%	0%	0%	73%	0%	60%	0%	0%	0%	0%	0%
9-Sep-13	103%	3%	97%	0%	0%	0%	0%	31%	0%	0%	0%	73%	0%	59%	0%	0%	0%	0%	0%
10-Sep-13	103%	3%	97%	0%	0%	0%	0%	30%	0%	0%	0%	72%	0%	58%	0%	0%	0%	0%	0%
11-Sep-13	103%	3%	97%	0%	0%	0%	0%	29%	0%	0%	0%	71%	0%	57%	0%	0%	0%	0%	0%
12-Sep-13	103%	3%	97%	0%	0%	0%	0%	28%	0%	0%	0%	71%	0%	56%	0%	0%	0%	0%	0%
13-Sep-13	103%	3%	97%	0%	0%	0%	0%	27%	0%	0%	0%	70%	0%	55%	0%	0%	0%	0%	0%
14-Sep-13	103%	3%	97%	0%	0%	0%	0%	26%	0%	0%	0%	69%	0%	54%	0%	0%	0%	0%	0%
15-Sep-13	103%	3%	97%	0%	0%	0%	0%	25%	0%	0%	0%	69%	0%	53%	0%	0%	0%	0%	0%
16-Sep-13	103%	3%	97%	0%	0%	0%	0%	24%	0%	0%	0%	68%	0%	52%	0%	0%	0%	0%	0%
17-Sep-13	103%	3%	97%	0%	0%	0%	0%	23%	0%	0%	0%	67%	0%	51%	0%	0%	0%	0%	0%
18-Sep-13	103%	3%	97%	0%	0%	0%	0%	22%	0%	0%	0%	67%	0%	50%	0%	0%	0%	0%	0%
19-Sep-13	103%	3%	97%	0%	0%	0%	0%	21%	0%	0%	0%	66%	0%	49%	0%	0%	0%	0%	0%
20-Sep-13	103%	3%	97%	0%	0%	0%	0%	20%	0%	0%	0%	65%	0%	48%	0%	0%	0%	0%	0%
21-Sep-13	103%	3%	97%	0%	0%	0%	0%	19%	0%	0%	0%	65%	0%	47%	0%	0%	0%	0%	0%
22-Sep-13	103%	3%	97%	0%	0%	0%	0%	18%	0%	0%	0%	64%	0%	46%	0%	0%	0%	0%	0%
23-Sep-13	103%	3%	97%	0%	0%	0%	0%	17%	0%	0%	0%	63%	0%	45%	0%	0%	0%	0%	0%
24-Sep-13	103%	3%	97%	0%	0%	0%	0%	16%	0%	0%	0%	63%	0%	44%	0%	0%	0%	0%	0%
25-Sep-13	103%	2%	98%	0%	0%	0%	0%	15%	0%	0%	0%	62%	0%	43%	0%	0%	0%	0%	0%
26-Sep-13	102%	2%	98%	0%	0%	0%	0%	14%	0%	0%	0%	61%	0%	42%	0%	0%	0%	0%	0%
27-Sep-13	102%	2%	98%	0%	0%	0%	0%	13%	0%	0%	0%	61%	0%	41%	0%	0%	0%	0%	0%
28-Sep-13	102%	2%	98%	0%	0%	0%	0%	12%	0%	0%	0%	60%	0%	40%	0%	0%	0%	0%	0%
29-Sep-13	102%	2%	98%	0%	0%	0%	0%	11%	0%	0%	0%	59%	0%	39%	0%	0%	0%	0%	0%
30-Sep-13	102%	2%	98%	0%	0%	0%	0%	10%	0%	0%	0%	59%	0%	38%	0%	0%	0%	0%	0%
1-Oct-13	102%	2%	98%	0%	0%	0%	0%	9%	0%	0%	0%	58%	0%	37%	0%	0%	0%	0%	0%
2-Oct-13	102%	2%	98%	0%	0%	0%	0%	8%	0%	0%	0%	57%	0%	36%	0%	0%	0%	0%	0%
3-Oct-13	102%	2%	98%	0%	0%	0%	0%	7%	0%	0%	0%	57%	0%	35%	0%	0%	0%	0%	0%
4-Oct-13	102%	2%	98%	0%	0%	0%	0%	6%	0%	0%	0%	56%	0%	34%	0%	0%	0%	0%	0%
5-Oct-13	102%	2%	98%	0%	0%	0%	0%	5%	0%	0%	0%	55%	0%	33%	0%	0%	0%	0%	0%
6-Oct-13	102%	2%	98%	0%	0%	0%	0%	4%	0%	0%	0%	55%	0%	32%	0%	0%	0%	0%	0%
7-Oct-13	102%	2%	98%	0%	0%	0%	0%	3%	0%	0%	0%	54%	0%	31%	0%	0%	0%	0%	0%
8-Oct-13	102%	2%	98%	0%	0%	0%	0%	2%	0%	0%	0%	53%	0%	30%	0%	0%	0%	0%	0%
9-Oct-13	102%	2%	98%	0%	0%	0%	0%	1%	0%	0%	0%	53%	0%	29%	0%	0%	0%	0%	0%
10-Oct-13	102%	2%	98%	0%	0%	0%	0%	0%	0%	0%	0%	52%	0%	28%	0%	0%	0%	0%	0%
11-Oct-13	102%	2%	98%	0%	0%	0%	0%	0%	0%	0%	0%	51%	0%	27%	0%	0%	0%	0%	0%
12-Oct-13	102%	2%	98%	0%	0%	0%	0%	0%	0%	0%	0%	51%	0%	26%	0%	0%	0%	0%	0%
13-Oct-13	102%	2%	98%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	25%	0%	0%	0%	0%	0%
14-Oct-13	102%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	49%	0%	24%	0%	0%	0%	0%	0%

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(4) Actual Conditions - Chart Calculates the Percentage that Each Actual Condition is in Effect as Shown in *Chart (2) - Effective Dates of Actual Conditions*														
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	1.1	1.2	1.3	1.4	1.5	2.1	2.2	2.3	2.4	2.5	3.1	3.2	4.1	4.2	4.3	4.4
15-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	49%	0%	23%	0%	0%	0%	0%	0%
16-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	48%	0%	22%	0%	0%	0%	0%	0%
17-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	21%	0%	0%	0%	0%	0%
18-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	20%	0%	0%	0%	0%	0%
19-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	46%	0%	19%	0%	0%	0%	0%	0%
20-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	45%	0%	18%	0%	0%	0%	0%	0%
21-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	45%	0%	17%	0%	0%	0%	0%	0%
22-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	44%	0%	16%	0%	0%	0%	0%	0%
23-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	43%	0%	15%	0%	0%	0%	0%	0%

LCP CH0006 Bulk Excavation

				(5) Productivity Factors Applied - Chart Calculates the Percentage that Each Productivity Factor is in Effect Based on the Actual Conditions shown in *Chart (4)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
5-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Nov-12	100%	0%	100%	3%	3%	0%	0%	1%	0%	0%	0%	0%	0%	2%	0%
11-Nov-12	101%	1%	99%	6%	7%	0%	0%	3%	0%	0%	0%	0%	0%	5%	0%
12-Nov-12	101%	1%	99%	9%	10%	0%	0%	4%	0%	0%	0%	0%	0%	7%	0%
13-Nov-12	101%	1%	99%	12%	13%	0%	0%	5%	0%	0%	0%	0%	0%	9%	0%
14-Nov-12	102%	2%	98%	15%	17%	0%	0%	7%	0%	0%	0%	0%	0%	12%	0%
15-Nov-12	102%	2%	98%	18%	20%	0%	0%	8%	0%	0%	0%	0%	0%	14%	0%
16-Nov-12	102%	2%	98%	21%	23%	0%	0%	9%	0%	0%	0%	0%	0%	16%	0%
17-Nov-12	103%	3%	97%	24%	27%	0%	0%	11%	0%	0%	0%	0%	0%	18%	0%
18-Nov-12	103%	3%	97%	29%	30%	0%	0%	13%	0%	0%	0%	0%	0%	22%	0%
19-Nov-12	103%	3%	97%	29%	33%	0%	0%	13%	0%	0%	0%	0%	0%	23%	0%
20-Nov-12	103%	3%	97%	30%	37%	0%	0%	13%	0%	0%	0%	0%	0%	24%	0%
21-Nov-12	103%	3%	97%	31%	40%	0%	0%	13%	0%	0%	0%	0%	0%	25%	0%
22-Nov-12	104%	3%	97%	31%	43%	0%	0%	13%	0%	0%	0%	0%	0%	25%	0%
23-Nov-12	104%	4%	96%	32%	47%	0%	0%	13%	0%	0%	0%	0%	0%	26%	0%
24-Nov-12	104%	4%	96%	32%	50%	0%	0%	13%	0%	0%	0%	0%	0%	27%	0%
25-Nov-12	104%	4%	96%	33%	53%	0%	0%	13%	0%	0%	0%	0%	0%	28%	0%
26-Nov-12	104%	4%	96%	34%	57%	0%	0%	13%	0%	0%	0%	0%	0%	28%	0%
27-Nov-12	104%	4%	96%	34%	60%	0%	0%	13%	0%	0%	0%	0%	0%	29%	0%
28-Nov-12	104%	4%	96%	35%	63%	0%	0%	13%	0%	0%	0%	0%	0%	30%	0%
29-Nov-12	104%	4%	96%	35%	67%	0%	0%	13%	0%	0%	0%	0%	0%	31%	0%
30-Nov-12	104%	4%	96%	36%	70%	0%	0%	13%	0%	0%	0%	0%	0%	32%	0%
1-Dec-12	109%	8%	92%	38%	73%	0%	0%	35%	10%	0%	10%	47%	5%	35%	4%
2-Dec-12	111%	10%	90%	41%	77%	0%	0%	37%	20%	0%	20%	51%	10%	38%	8%
3-Dec-12	113%	11%	89%	43%	80%	0%	0%	39%	30%	0%	30%	56%	15%	41%	11%
4-Dec-12	115%	13%	87%	45%	83%	0%	0%	41%	40%	0%	40%	60%	20%	44%	15%
5-Dec-12	117%	15%	85%	48%	87%	0%	0%	43%	50%	0%	50%	64%	25%	47%	19%
6-Dec-12	119%	16%	84%	50%	90%	0%	0%	45%	60%	0%	60%	69%	30%	50%	23%
7-Dec-12	121%	17%	83%	52%	93%	0%	0%	47%	70%	0%	70%	73%	35%	53%	26%
8-Dec-12	123%	19%	81%	55%	100%	0%	0%	49%	80%	0%	80%	77%	40%	57%	30%
9-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
10-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
11-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
12-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
13-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
14-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
15-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
16-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
17-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
18-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
19-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
20-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
21-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
22-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
23-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
24-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
25-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
26-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
27-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
28-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
29-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
30-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
31-Dec-12	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
1-Jan-13	128%	22%	78%	59%	100%	0%	0%	53%	100%	0%	100%	86%	50%	62%	38%
2-Jan-13	129%	22%	78%	61%	100%	0%	0%	56%	100%	0%	100%	86%	57%	65%	46%
3-Jan-13	130%	23%	77%	64%	100%	0%	0%	59%	100%	0%	100%	86%	64%	68%	55%
4-Jan-13	131%	24%	76%	66%	100%	0%	0%	62%	100%	0%	100%	86%	71%	71%	64%
5-Jan-13	132%	24%	76%	69%	100%	0%	0%	65%	100%	0%	100%	86%	79%	75%	73%
6-Jan-13	133%	25%	75%	71%	100%	0%	0%	68%	100%	0%	100%	86%	86%	78%	82%
7-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
8-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
9-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
10-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
11-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
12-Jan-13	136%	26%	74%	76%	100%	0%	0%	73%	100%	0%	100%	86%	100%	85%	100%
13-Jan-13	136%	27%	73%	78%	100%	5%	5%	75%	100%	0%	100%	86%	100%	85%	100%
14-Jan-13	137%	27%	73%	79%	100%	10%	10%	76%	100%	0%	100%	86%	100%	85%	100%
15-Jan-13	138%	27%	73%	80%	100%	15%	15%	77%	100%	0%	100%	86%	100%	85%	100%
16-Jan-13	138%	28%	72%	81%	100%	20%	20%	79%	100%	3%	100%	86%	100%	85%	100%
17-Jan-13	139%	28%	72%	82%	100%	25%	25%	80%	100%	5%	100%	86%	100%	85%	100%
18-Jan-13	140%	28%	72%	84%	100%	30%	30%	81%	100%	8%	100%	86%	100%	85%	100%
19-Jan-13	140%	29%	71%	85%	100%	35%	35%	83%	100%	10%	100%	86%	100%	85%	100%
20-Jan-13	141%	29%	71%	86%	100%	40%	40%	84%	100%	13%	100%	86%	100%	85%	100%
21-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	15%	100%	86%	100%	85%	100%
22-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	18%	100%	86%	100%	85%	100%
23-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	20%	100%	86%	100%	85%	100%
24-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	25%	100%	86%	100%	85%	100%
25-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	28%	100%	86%	100%	85%	100%
26-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	30%	100%	86%	100%	85%	100%
27-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	33%	100%	86%	100%	85%	100%
28-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	35%	100%	86%	100%	85%	100%
29-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	38%	100%	86%	100%	85%	100%
30-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	40%	100%	86%	100%	85%	100%
31-Jan-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	43%	100%	86%	100%	85%	100%
1-Feb-13	142%	30%	70%	88%	100%	50%	50%	87%	100%	45%	100%	86%	100%	85%	100%
2-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
3-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
4-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
6-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
7-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
8-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
9-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
10-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
11-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
12-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
13-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
14-Feb-13	144%	30%	70%	88%	100%	50%	50%	93%	100%	50%	100%	100%	100%	85%	100%
15-Feb-13	145%	31%	69%	89%	100%	55%	55%	94%	100%	53%	100%	100%	100%	86%	100%
16-Feb-13	145%	31%	69%	91%	100%	60%	60%	95%	100%	55%	100%	100%	100%	88%	100%
17-Feb-13	146%	32%	68%	92%	100%	65%	65%	95%	100%	58%	100%	100%	100%	89%	100%
18-Feb-13	147%	32%	68%	93%	100%	70%	70%	96%	100%	60%	100%	100%	100%	91%	100%
19-Feb-13	148%	32%	68%	94%	100%	75%	75%	97%	100%	63%	100%	100%	100%	92%	100%
20-Feb-13	148%	33%	67%	95%	100%	80%	80%	97%	100%	65%	100%	100%	100%	94%	100%
21-Feb-13	149%	33%	67%	96%	100%	85%	85%	98%	100%	68%	100%	100%	100%	95%	100%
22-Feb-13	150%	33%	67%	98%	100%	90%	90%	99%	100%	70%	100%	100%	100%	97%	100%
23-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
24-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
25-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
26-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
27-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%

				(5) Productivity Factors Applied - Chart Calculates the Percentage that Each Productivity Factor is in Effect Based on the Actual Conditions shown in *Chart (4)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
28-Feb-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
1-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
2-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	75%	100%	100%	100%	100%	100%
3-Mar-13	151%	34%	66%	100%	100%	100%	100%	100%	100%	78%	100%	100%	100%	100%	100%
4-Mar-13	150%	33%	67%	100%	100%	100%	100%	94%	100%	80%	100%	88%	100%	100%	100%
5-Mar-13	150%	33%	67%	100%	100%	100%	100%	91%	100%	83%	100%	82%	100%	100%	100%
6-Mar-13	149%	33%	67%	100%	100%	100%	100%	89%	100%	85%	100%	76%	100%	100%	100%
7-Mar-13	148%	33%	67%	100%	100%	100%	100%	86%	100%	88%	100%	69%	100%	100%	100%
8-Mar-13	148%	32%	68%	100%	100%	100%	100%	83%	100%	90%	100%	63%	100%	100%	100%
9-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	93%	100%	57%	100%	100%	100%
10-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	95%	100%	57%	100%	100%	100%
11-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
12-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
13-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
14-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
15-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
16-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
17-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	100%	100%	57%	100%	100%	100%
18-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	90%	100%	57%	100%	100%	100%
19-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	85%	100%	57%	100%	100%	100%
20-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	80%	100%	57%	100%	100%	100%
21-Mar-13	147%	32%	68%	100%	100%	100%	100%	80%	100%	75%	100%	57%	100%	100%	100%
22-Mar-13	147%	32%	68%	99%	100%	100%	100%	77%	100%	70%	100%	57%	100%	100%	100%
23-Mar-13	147%	32%	68%	98%	100%	100%	100%	76%	100%	65%	100%	57%	100%	100%	100%
24-Mar-13	147%	32%	68%	98%	100%	100%	100%	75%	100%	60%	100%	57%	100%	100%	100%
25-Mar-13	147%	32%	68%	97%	100%	100%	100%	73%	100%	55%	100%	57%	100%	100%	100%
26-Mar-13	146%	32%	68%	96%	100%	100%	100%	72%	100%	50%	100%	57%	100%	100%	100%
27-Mar-13	146%	32%	68%	96%	100%	100%	100%	71%	100%	50%	100%	57%	100%	100%	100%
28-Mar-13	146%	32%	68%	95%	100%	100%	100%	69%	100%	45%	100%	57%	100%	98%	100%
29-Mar-13	146%	31%	69%	95%	100%	100%	100%	68%	100%	43%	100%	57%	100%	98%	100%
30-Mar-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	40%	100%	57%	100%	97%	100%
31-Mar-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	38%	100%	57%	100%	96%	100%
1-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	35%	100%	57%	100%	95%	100%
2-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	33%	100%	57%	100%	95%	100%
3-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	30%	100%	57%	100%	94%	100%
4-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	28%	100%	57%	100%	93%	100%
5-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
6-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
7-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
8-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
9-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
10-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
11-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
12-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
13-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
14-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
15-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
16-Apr-13	146%	31%	69%	94%	100%	100%	100%	67%	100%	25%	100%	57%	100%	92%	100%
17-Apr-13	144%	31%	69%	92%	100%	100%	100%	64%	98%	25%	98%	56%	94%	90%	93%
18-Apr-13	144%	30%	70%	91%	100%	100%	100%	63%	97%	25%	97%	56%	91%	88%	90%
20-Apr-13	143%	30%	70%	90%	100%	100%	100%	62%	96%	25%	96%	55%	88%	87%	87%
21-Apr-13	142%	30%	70%	89%	100%	100%	100%	61%	95%	25%	95%	55%	86%	86%	83%
22-Apr-13	142%	29%	71%	88%	100%	100%	100%	60%	94%	25%	94%	55%	83%	84%	80%
23-Apr-13	141%	29%	71%	87%	100%	100%	100%	59%	93%	25%	93%	54%	80%	83%	77%
24-Apr-13	140%	29%	71%	86%	100%	100%	100%	57%	92%	25%	92%	54%	77%	82%	73%
25-Apr-13	140%	28%	72%	85%	100%	100%	100%	56%	91%	25%	91%	53%	74%	80%	70%
26-Apr-13	139%	28%	72%	84%	100%	100%	100%	55%	90%	25%	90%	53%	71%	79%	66%
27-Apr-13	138%	28%	72%	83%	100%	100%	100%	54%	89%	25%	89%	52%	68%	78%	63%
28-Apr-13	138%	27%	73%	82%	100%	100%	100%	53%	88%	25%	88%	52%	65%	76%	60%
29-Apr-13	137%	27%	73%	81%	100%	100%	100%	52%	87%	25%	87%	52%	63%	75%	56%
30-Apr-13	136%	27%	73%	80%	100%	100%	100%	51%	86%	25%	86%	51%	60%	74%	53%
1-May-13	136%	26%	74%	79%	100%	100%	100%	49%	85%	25%	85%	51%	57%	72%	50%
2-May-13	135%	26%	74%	78%	100%	100%	100%	48%	84%	25%	84%	50%	54%	71%	46%
3-May-13	134%	26%	74%	77%	100%	100%	100%	47%	83%	25%	83%	50%	51%	70%	43%
4-May-13	134%	25%	75%	76%	100%	100%	100%	46%	82%	20%	82%	49%	48%	68%	40%
5-May-13	133%	25%	75%	75%	100%	100%	100%	45%	81%	18%	81%	49%	45%	67%	36%
6-May-13	133%	25%	75%	74%	100%	100%	100%	44%	80%	15%	80%	49%	42%	66%	33%
7-May-13	132%	24%	76%	73%	100%	100%	100%	42%	79%	13%	79%	48%	40%	64%	30%
8-May-13	132%	24%	76%	71%	93%	100%	100%	42%	78%	10%	78%	48%	39%	63%	29%
9-May-13	130%	23%	77%	68%	90%	90%	90%	41%	77%	8%	77%	47%	39%	60%	29%
10-May-13	129%	22%	78%	66%	87%	85%	85%	40%	76%	5%	76%	47%	38%	58%	29%
11-May-13	128%	22%	78%	64%	83%	80%	80%	39%	75%	3%	75%	46%	38%	57%	28%
12-May-13	127%	21%	79%	62%	80%	75%	75%	38%	74%	0%	74%	46%	37%	55%	28%
13-May-13	126%	21%	79%	61%	77%	70%	70%	37%	73%	0%	73%	46%	37%	53%	27%
14-May-13	125%	20%	80%	59%	73%	65%	65%	36%	72%	0%	72%	45%	36%	51%	27%
15-May-13	124%	19%	81%	57%	70%	60%	60%	36%	71%	0%	71%	45%	36%	49%	27%
16-May-13	123%	19%	81%	55%	67%	55%	55%	35%	70%	0%	70%	44%	35%	48%	26%
17-May-13	122%	18%	82%	53%	63%	50%	50%	34%	69%	0%	69%	44%	35%	46%	26%
18-May-13	122%	18%	82%	52%	60%	50%	50%	34%	68%	0%	68%	43%	34%	45%	26%
19-May-13	122%	18%	82%	51%	57%	50%	50%	33%	67%	0%	67%	43%	34%	44%	25%
20-May-13	121%	18%	82%	50%	53%	50%	50%	33%	66%	0%	66%	43%	33%	43%	25%
21-May-13	121%	17%	83%	50%	50%	50%	50%	33%	65%	0%	65%	42%	33%	42%	24%
22-May-13	121%	17%	83%	49%	47%	50%	50%	33%	64%	0%	64%	42%	32%	41%	24%
23-May-13	121%	17%	83%	48%	43%	50%	50%	33%	63%	0%	63%	41%	32%	40%	24%
24-May-13	120%	17%	83%	47%	40%	50%	50%	32%	62%	0%	62%	41%	31%	39%	23%
25-May-13	120%	17%	83%	47%	37%	50%	50%	32%	61%	0%	61%	40%	31%	38%	23%
26-May-13	120%	16%	84%	46%	33%	50%	50%	32%	60%	0%	60%	40%	30%	37%	23%
27-May-13	119%	16%	84%	45%	30%	50%	50%	32%	59%	0%	59%	40%	30%	36%	22%
28-May-13	119%	16%	84%	44%	27%	50%	50%	32%	58%	0%	58%	39%	29%	35%	22%
29-May-13	119%	16%	84%	44%	23%	50%	50%	31%	57%	0%	57%	39%	29%	34%	21%
30-May-13	118%	16%	84%	43%	20%	50%	50%	31%	56%	0%	56%	38%	28%	33%	21%
31-May-13	118%	15%	85%	42%	17%	50%	50%	31%	55%	0%	55%	38%	28%	32%	21%
1-Jun-13	118%	15%	85%	41%	13%	50%	50%	31%	54%	0%	54%	37%	27%	31%	20%
2-Jun-13	117%	15%	85%	41%	10%	50%	50%	31%	53%	0%	53%	37%	27%	30%	20%
3-Jun-13	117%	15%	85%	40%	7%	50%	50%	30%	52%	0%	52%	37%	26%	29%	20%
4-Jun-13	117%	14%	86%	39%	3%	50%	50%	30%	51%	0%	51%	36%	26%	28%	19%
5-Jun-13	117%	14%	86%	38%	0%	50%	50%	30%	50%	0%	50%	36%	25%	27%	19%
6-Jun-13	116%	14%	86%	38%	0%	50%	50%	30%	49%	0%	49%	35%	25%	27%	18%
7-Jun-13	116%	14%	86%	38%	0%	50%	50%	30%	48%	0%	48%	35%	24%	26%	18%
8-Jun-13	116%	14%	86%	38%	0%	50%	50%	29%	47%	0%	47%	34%	24%	26%	18%
9-Jun-13	116%	14%	86%	38%	0%	50%	50%	29%	46%	0%	46%	34%	23%	26%	17%
10-Jun-13	116%	13%	87%	37%	0%	50%	50%	29%	45%	0%	45%	34%	23%	26%	17%
11-Jun-13	115%	13%	87%	37%	0%	50%	50%	29%	44%	0%	44%	33%	22%	26%	17%
12-Jun-13	115%	13%	87%	37%	0%	50%	50%	29%	43%	0%	43%	33%	22%	25%	16%
13-Jun-13	115%	13%	87%	37%	0%	50%	50%	28%	42%	0%	42%	32%	21%	25%	16%
14-Jun-13	115%	13%	87%	37%	0%	50%	50%	28%	41%	0%	41%	32%	21%	25%	15%
15-Jun-13	115%	13%	87%	36%	0%	50%	50%	28%	40%	0%	40%	31%	20%	25%	15%
16-Jun-13	114%	13%	87%	36%	0%	50%	50%	28%	39%	0%	39%	31%	20%	24%	15%
17-Jun-13	114%	12%	88%	36%	0%	50%	50%	28%	38%	0%	38%	31%	19%	24%	14%
18-Jun-13	114%	12%	88%	36%	0%	50%	50%	27%	37%	0%	37%	30%	19%	24%	14%
19-Jun-13	114%	12%	88%	36%	0%	50%	50%	27%	36%	0%	36%	30%	18%	24%	14%
20-Jun-13	114%	12%	88%	36%	0%	50%	50%	27%	35%	0%	35%	29%	18%	23%	13%
21-Jun-13	113%	12%	88%	35%	0%	50%	50%	27%	34%	0%	34%	29%	17%	23%	13%
22-Jun-13	113%	12%	88%	35%	0%	50%	50%	27%	33%	0%	33%	28%	17%	23%	12%

LCP CH0006 Bulk Excavation

				(5) Productivity Factors Applied - Chart Calculates the Percentage that Each Productivity Factor is in Effect Based on the Actual Conditions shown in *Chart (4)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
23-Jun-13	113%	12%	88%	35%	0%	50%	50%	26%	32%	0%	32%	28%	16%	23%	12%
24-Jun-13	113%	11%	89%	35%	0%	50%	50%	24%	31%	0%	31%	23%	16%	23%	12%
25-Jun-13	112%	11%	89%	35%	0%	50%	50%	23%	30%	0%	30%	21%	15%	22%	11%
26-Jun-13	112%	11%	89%	35%	0%	50%	50%	22%	29%	0%	29%	19%	15%	22%	11%
27-Jun-13	112%	10%	90%	34%	0%	50%	50%	21%	28%	0%	28%	16%	14%	22%	11%
28-Jun-13	111%	10%	90%	34%	0%	50%	50%	20%	27%	0%	27%	14%	14%	22%	10%
29-Jun-13	111%	10%	90%	34%	0%	50%	50%	19%	26%	0%	26%	11%	13%	21%	10%
30-Jun-13	111%	10%	90%	34%	0%	50%	50%	18%	25%	0%	25%	11%	13%	21%	9%
1-Jul-13	111%	10%	90%	34%	0%	50%	50%	18%	24%	0%	24%	10%	12%	21%	9%
2-Jul-13	110%	9%	91%	33%	0%	50%	50%	18%	23%	0%	23%	10%	12%	21%	9%
3-Jul-13	110%	9%	91%	33%	0%	50%	50%	18%	22%	0%	22%	9%	11%	20%	8%
4-Jul-13	110%	9%	91%	33%	0%	50%	50%	18%	21%	0%	21%	9%	11%	20%	8%
5-Jul-13	110%	9%	91%	33%	0%	50%	50%	17%	20%	0%	20%	9%	10%	20%	8%
6-Jul-13	110%	9%	91%	33%	0%	50%	50%	17%	19%	0%	19%	8%	10%	20%	7%
7-Jul-13	110%	9%	91%	33%	0%	50%	50%	17%	18%	0%	18%	8%	9%	20%	7%
8-Jul-13	109%	9%	91%	32%	0%	50%	50%	17%	17%	0%	17%	7%	9%	19%	6%
9-Jul-13	109%	8%	92%	32%	0%	50%	50%	17%	16%	0%	16%	7%	8%	19%	6%
10-Jul-13	109%	8%	92%	32%	0%	50%	50%	16%	15%	0%	15%	6%	8%	19%	6%
11-Jul-13	109%	8%	92%	32%	0%	50%	50%	16%	14%	0%	14%	6%	7%	19%	5%
12-Jul-13	109%	8%	92%	32%	0%	50%	50%	16%	13%	0%	13%	6%	7%	18%	5%
13-Jul-13	108%	8%	92%	32%	0%	50%	50%	16%	12%	0%	12%	5%	6%	18%	5%
14-Jul-13	108%	8%	92%	31%	0%	50%	50%	16%	11%	0%	11%	5%	6%	18%	4%
15-Jul-13	108%	8%	92%	31%	0%	50%	50%	15%	10%	0%	10%	4%	5%	18%	4%
16-Jul-13	108%	7%	93%	30%	0%	50%	50%	15%	9%	0%	9%	4%	5%	17%	3%
17-Jul-13	108%	7%	93%	30%	0%	50%	50%	15%	8%	0%	8%	3%	4%	17%	3%
18-Jul-13	107%	7%	93%	29%	0%	50%	50%	15%	7%	0%	7%	3%	4%	17%	3%
19-Jul-13	107%	7%	93%	29%	0%	50%	50%	15%	6%	0%	6%	3%	3%	17%	2%
20-Jul-13	107%	7%	93%	28%	0%	50%	50%	14%	5%	0%	5%	2%	3%	17%	2%
21-Jul-13	107%	6%	94%	27%	0%	50%	50%	14%	4%	0%	4%	2%	2%	16%	2%
22-Jul-13	107%	6%	94%	27%	0%	50%	50%	14%	3%	0%	3%	1%	2%	16%	1%
23-Jul-13	107%	6%	94%	26%	0%	50%	50%	14%	2%	0%	2%	1%	1%	16%	1%
24-Jul-13	106%	6%	94%	26%	0%	50%	50%	14%	1%	0%	1%	0%	1%	16%	0%
25-Jul-13	106%	6%	94%	25%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
26-Jul-13	106%	6%	94%	25%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
27-Jul-13	106%	6%	94%	24%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
28-Jul-13	106%	6%	94%	24%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
29-Jul-13	106%	6%	94%	24%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
30-Jul-13	106%	6%	94%	23%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
31-Jul-13	106%	6%	94%	23%	0%	50%	50%	13%	0%	0%	0%	0%	0%	15%	0%
1-Aug-13	106%	5%	95%	22%	0%	49%	49%	13%	0%	0%	0%	0%	0%	15%	0%
2-Aug-13	106%	5%	95%	21%	0%	49%	49%	13%	0%	0%	0%	0%	0%	15%	0%
3-Aug-13	106%	5%	95%	21%	0%	48%	48%	13%	0%	0%	0%	0%	0%	15%	0%
4-Aug-13	106%	5%	95%	20%	0%	48%	48%	13%	0%	0%	0%	0%	0%	15%	0%
5-Aug-13	105%	5%	95%	20%	0%	47%	47%	13%	0%	0%	0%	0%	0%	15%	0%
6-Aug-13	105%	5%	95%	19%	0%	47%	47%	12%	0%	0%	0%	0%	0%	15%	0%
7-Aug-13	105%	5%	95%	19%	0%	46%	46%	12%	0%	0%	0%	0%	0%	15%	0%
8-Aug-13	105%	5%	95%	18%	0%	46%	46%	12%	0%	0%	0%	0%	0%	14%	0%
9-Aug-13	105%	5%	95%	18%	0%	45%	45%	12%	0%	0%	0%	0%	0%	14%	0%
10-Aug-13	105%	5%	95%	17%	0%	45%	45%	12%	0%	0%	0%	0%	0%	14%	0%
11-Aug-13	105%	5%	95%	17%	0%	44%	44%	12%	0%	0%	0%	0%	0%	14%	0%
12-Aug-13	105%	5%	95%	16%	0%	44%	44%	12%	0%	0%	0%	0%	0%	14%	0%
13-Aug-13	105%	5%	95%	15%	0%	43%	43%	11%	0%	0%	0%	0%	0%	14%	0%
14-Aug-13	105%	5%	95%	15%	0%	43%	43%	11%	0%	0%	0%	0%	0%	14%	0%
15-Aug-13	105%	5%	95%	15%	0%	42%	42%	11%	0%	0%	0%	0%	0%	14%	0%
16-Aug-13	105%	4%	96%	15%	0%	42%	42%	11%	0%	0%	0%	0%	0%	14%	0%
17-Aug-13	105%	4%	96%	15%	0%	41%	41%	11%	0%	0%	0%	0%	0%	14%	0%
18-Aug-13	105%	4%	96%	15%	0%	41%	41%	11%	0%	0%	0%	0%	0%	13%	0%
19-Aug-13	105%	4%	96%	15%	0%	40%	40%	11%	0%	0%	0%	0%	0%	13%	0%
20-Aug-13	104%	4%	96%	14%	0%	40%	40%	11%	0%	0%	0%	0%	0%	13%	0%
21-Aug-13	104%	4%	96%	14%	0%	39%	39%	10%	0%	0%	0%	0%	0%	13%	0%
22-Aug-13	104%	4%	96%	14%	0%	39%	39%	10%	0%	0%	0%	0%	0%	13%	0%
23-Aug-13	104%	4%	96%	14%	0%	38%	38%	10%	0%	0%	0%	0%	0%	13%	0%
24-Aug-13	104%	4%	96%	14%	0%	38%	38%	10%	0%	0%	0%	0%	0%	13%	0%
25-Aug-13	104%	4%	96%	14%	0%	37%	37%	10%	0%	0%	0%	0%	0%	13%	0%
26-Aug-13	104%	4%	96%	13%	0%	37%	37%	10%	0%	0%	0%	0%	0%	13%	0%
27-Aug-13	104%	4%	96%	13%	0%	36%	36%	10%	0%	0%	0%	0%	0%	13%	0%
28-Aug-13	104%	4%	96%	13%	0%	36%	36%	9%	0%	0%	0%	0%	0%	12%	0%
29-Aug-13	104%	4%	96%	13%	0%	35%	35%	9%	0%	0%	0%	0%	0%	12%	0%
30-Aug-13	104%	4%	96%	13%	0%	35%	35%	9%	0%	0%	0%	0%	0%	12%	0%
31-Aug-13	104%	4%	96%	13%	0%	34%	34%	9%	0%	0%	0%	0%	0%	12%	0%
1-Sep-13	104%	4%	96%	12%	0%	34%	34%	9%	0%	0%	0%	0%	0%	12%	0%
2-Sep-13	104%	4%	96%	12%	0%	33%	33%	9%	0%	0%	0%	0%	0%	12%	0%
3-Sep-13	104%	4%	96%	12%	0%	33%	33%	9%	0%	0%	0%	0%	0%	12%	0%
4-Sep-13	104%	4%	96%	12%	0%	32%	32%	9%	0%	0%	0%	0%	0%	12%	0%
5-Sep-13	104%	3%	97%	12%	0%	32%	32%	8%	0%	0%	0%	0%	0%	12%	0%
6-Sep-13	104%	3%	97%	12%	0%	31%	31%	8%	0%	0%	0%	0%	0%	11%	0%
7-Sep-13	103%	3%	97%	12%	0%	31%	31%	8%	0%	0%	0%	0%	0%	11%	0%
8-Sep-13	103%	3%	97%	11%	0%	30%	30%	8%	0%	0%	0%	0%	0%	11%	0%
9-Sep-13	103%	3%	97%	11%	0%	30%	30%	8%	0%	0%	0%	0%	0%	11%	0%
10-Sep-13	103%	3%	97%	11%	0%	29%	29%	8%	0%	0%	0%	0%	0%	11%	0%
11-Sep-13	103%	3%	97%	11%	0%	29%	29%	8%	0%	0%	0%	0%	0%	11%	0%
12-Sep-13	103%	3%	97%	11%	0%	28%	28%	7%	0%	0%	0%	0%	0%	11%	0%
13-Sep-13	103%	3%	97%	11%	0%	28%	28%	7%	0%	0%	0%	0%	0%	11%	0%
14-Sep-13	103%	3%	97%	10%	0%	27%	27%	7%	0%	0%	0%	0%	0%	11%	0%
15-Sep-13	103%	3%	97%	10%	0%	27%	27%	7%	0%	0%	0%	0%	0%	11%	0%
16-Sep-13	103%	3%	97%	10%	0%	26%	26%	7%	0%	0%	0%	0%	0%	10%	0%
17-Sep-13	103%	3%	97%	10%	0%	26%	26%	7%	0%	0%	0%	0%	0%	10%	0%
18-Sep-13	103%	3%	97%	10%	0%	25%	25%	7%	0%	0%	0%	0%	0%	10%	0%
19-Sep-13	103%	3%	97%	10%	0%	25%	25%	7%	0%	0%	0%	0%	0%	10%	0%
20-Sep-13	103%	3%	97%	9%	0%	24%	24%	6%	0%	0%	0%	0%	0%	10%	0%
21-Sep-13	103%	3%	97%	9%	0%	24%	24%	6%	0%	0%	0%	0%	0%	10%	0%
22-Sep-13	103%	3%	97%	9%	0%	23%	23%	6%	0%	0%	0%	0%	0%	10%	0%
23-Sep-13	103%	3%	97%	9%	0%	23%	23%	6%	0%	0%	0%	0%	0%	10%	0%
24-Sep-13	103%	3%	97%	9%	0%	22%	22%	6%	0%	0%	0%	0%	0%	10%	0%
25-Sep-13	103%	2%	98%	9%	0%	22%	22%	6%	0%	0%	0%	0%	0%	10%	0%
26-Sep-13	102%	2%	98%	9%	0%	21%	21%	6%	0%	0%	0%	0%	0%	9%	0%
27-Sep-13	102%	2%	98%	8%	0%	21%	21%	5%	0%	0%	0%	0%	0%	9%	0%
28-Sep-13	102%	2%	98%	8%	0%	20%	20%	5%	0%	0%	0%	0%	0%	9%	0%
29-Sep-13	102%	2%	98%	8%	0%	20%	20%	5%	0%	0%	0%	0%	0%	9%	0%
30-Sep-13	102%	2%	98%	8%	0%	19%	19%	5%	0%	0%	0%	0%	0%	9%	0%
1-Oct-13	102%	2%	98%	8%	0%	19%	19%	5%	0%	0%	0%	0%	0%	9%	0%
2-Oct-13	102%	2%	98%	8%	0%	18%	18%	5%	0%	0%	0%	0%	0%	9%	0%
3-Oct-13	102%	2%	98%	7%	0%	18%	18%	5%	0%	0%	0%	0%	0%	9%	0%
4-Oct-13	102%	2%	98%	7%	0%	17%	17%	5%	0%	0%	0%	0%	0%	9%	0%
5-Oct-13	102%	2%	98%	7%	0%	17%	17%	4%	0%	0%	0%	0%	0%	9%	0%
6-Oct-13	102%	2%	98%	7%	0%	16%	16%	4%	0%	0%	0%	0%	0%	8%	0%
7-Oct-13	102%	2%	98%	7%	0%	16%	16%	4%	0%	0%	0%	0%	0%	8%	0%
8-Oct-13	102%	2%	98%	7%	0%	15%	15%	4%	0%	0%	0%	0%	0%	8%	0%
9-Oct-13	102%	2%	98%	7%	0%	15%	15%	4%	0%	0%	0%	0%	0%	8%	0%
10-Oct-13	102%	2%	98%	6%	0%	14%	14%	4%	0%	0%	0%	0%	0%	8%	0%
11-Oct-13	102%	2%	98%	6%	0%	14%	14%	4%	0%	0%	0%	0%	0%	8%	0%
12-Oct-13	102%	2%	98%	6%	0%	13%	13%	3%	0%	0%	0%	0%	0%	8%	0%
13-Oct-13	102%	2%	98%	6%	0%	13%	13%	3%	0%	0%	0%	0%	0%	8%	0%
14-Oct-13	102%	1%	99%	6%	0%	12%	12%	3%	0%	0%	0%	0%	0%	8%	0%

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(5) Productivity Factors Applied - Chart Calculates the Percentage that Each Productivity Factor is in Effect Based on the Actual Conditions shown in *Chart (4)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
15-Oct-13	101%	1%	99%	6%	0%	12%	12%	3%	0%	0%	0%	0%	0%	7%	0%
16-Oct-13	101%	1%	99%	5%	0%	11%	11%	3%	0%	0%	0%	0%	0%	7%	0%
17-Oct-13	101%	1%	99%	5%	0%	11%	11%	3%	0%	0%	0%	0%	0%	7%	0%
18-Oct-13	101%	1%	99%	5%	0%	10%	10%	3%	0%	0%	0%	0%	0%	7%	0%
19-Oct-13	101%	1%	99%	5%	0%	10%	10%	3%	0%	0%	0%	0%	0%	7%	0%
20-Oct-13	101%	1%	99%	5%	0%	9%	9%	2%	0%	0%	0%	0%	0%	7%	0%
21-Oct-13	101%	1%	99%	5%	0%	9%	9%	2%	0%	0%	0%	0%	0%	7%	0%
22-Oct-13	101%	1%	99%	4%	0%	8%	8%	2%	0%	0%	0%	0%	0%	7%	0%
23-Oct-13	101%	1%	99%	4%	0%	8%	8%	2%	0%	0%	0%	0%	0%	7%	0%

LCP CH0006 Bulk Excavation

				(6) Productivity Factors - Chart Multiplies the Values in *Chart (5)* with the Adjusted MCAC Factors in *Chart (1)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
				6%	1%	6%	1%	3%	3%	0.2%	6%	5%	2%	3%	4%
5-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Nov-12	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Nov-12	101%	1%	99%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Nov-12	101%	1%	99%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Nov-12	103%	3%	97%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
18-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
19-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
20-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
21-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
22-Nov-12	104%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
23-Nov-12	104%	4%	96%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
24-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
25-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
26-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
27-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
28-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
29-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
30-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
1-Dec-12	109%	8%	92%	2%	1%	0%	0%	1%	0%	0%	1%	2%	0%	1%	0%
2-Dec-12	111%	10%	90%	2%	1%	0%	0%	1%	1%	0%	1%	3%	0%	1%	0%
3-Dec-12	113%	11%	89%	3%	1%	0%	0%	1%	1%	0%	2%	3%	0%	1%	0%
4-Dec-12	115%	13%	87%	3%	1%	0%	0%	1%	1%	0%	2%	3%	0%	1%	1%
5-Dec-12	117%	15%	85%	3%	1%	0%	0%	1%	2%	0%	3%	3%	1%	1%	1%
6-Dec-12	119%	16%	84%	3%	1%	0%	0%	1%	2%	0%	4%	3%	1%	2%	1%
7-Dec-12	121%	17%	83%	3%	1%	0%	0%	1%	2%	0%	4%	4%	1%	2%	1%
8-Dec-12	123%	19%	81%	3%	1%	0%	0%	1%	2%	0%	5%	4%	1%	2%	1%
9-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
10-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
11-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
12-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
13-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
14-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
15-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
16-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
17-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
18-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
19-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
20-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
21-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
22-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
23-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
24-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
25-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
26-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
27-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
28-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
29-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
30-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
31-Dec-12	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
1-Jan-13	128%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
2-Jan-13	129%	22%	78%	4%	1%	0%	0%	2%	3%	0%	6%	4%	1%	2%	2%
3-Jan-13	130%	23%	77%	4%	1%	0%	0%	2%	3%	0%	6%	4%	2%	2%	2%
4-Jan-13	131%	24%	76%	4%	1%	0%	0%	2%	3%	0%	6%	4%	2%	2%	3%
5-Jan-13	132%	24%	76%	4%	1%	0%	0%	2%	3%	0%	6%	4%	2%	2%	3%
6-Jan-13	133%	25%	75%	4%	1%	0%	0%	2%	3%	0%	6%	4%	2%	2%	3%
7-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
8-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
9-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
10-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
11-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
12-Jan-13	136%	26%	74%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
13-Jan-13	136%	27%	73%	5%	1%	0%	0%	2%	3%	0%	6%	4%	2%	3%	4%
14-Jan-13	137%	27%	73%	5%	1%	1%	0%	2%	3%	0%	6%	4%	2%	3%	4%
15-Jan-13	138%	27%	73%	5%	1%	1%	0%	2%	3%	0%	6%	4%	2%	3%	4%
16-Jan-13	138%	28%	72%	5%	1%	1%	0%	2%	3%	0%	6%	4%	2%	3%	4%
17-Jan-13	139%	28%	72%	5%	1%	2%	0%	2%	3%	0%	6%	4%	2%	3%	4%
18-Jan-13	140%	28%	72%	5%	1%	2%	0%	2%	3%	0%	6%	4%	2%	3%	4%
19-Jan-13	140%	29%	71%	5%	1%	2%	0%	2%	3%	0%	6%	4%	2%	3%	4%
20-Jan-13	141%	29%	71%	5%	1%	2%	0%	3%	3%	0%	6%	4%	2%	3%	4%
21-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
22-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
23-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
24-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
25-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
26-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
27-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
28-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
29-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
30-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
31-Jan-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
1-Feb-13	142%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	4%	2%	3%	4%
2-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
3-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
4-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
6-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
7-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
8-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
9-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
10-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
11-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
12-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
13-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
14-Feb-13	144%	30%	70%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
15-Feb-13	145%	31%	69%	5%	1%	3%	1%	3%	3%	0%	6%	5%	2%	3%	4%
16-Feb-13	145%	31%	69%	5%	1%	4%	1%	3%	3%	0%	6%	5%	2%	3%	4%
17-Feb-13	146%	32%	68%	6%	1%	4%	1%	3%	3%	0%	6%	5%	2%	3%	4%
18-Feb-13	147%	32%	68%	6%	1%	4%	1%	3%	3%	0%	6%	5%	2%	3%	4%
19-Feb-13	148%	32%	68%	6%	1%	5%	1%	3%	3%	0%	6%	5%	2%	3%	4%
20-Feb-13	148%	33%	67%	6%	1%	5%	1%	3%	3%	0%	6%	5%	2%	3%	4%
21-Feb-13	149%	33%	67%	6%	1%	5%	1%	3%	3%	0%	6%	5%	2%	3%	4%
22-Feb-13	150%	33%	67%	6%	1%	5%	1%	3%	3%	0%	6%	5%	2%	3%	4%
23-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
24-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
25-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
26-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
27-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%

LCP CH0006 Bulk Excavation

				(6) Productivity Factors - Chart Multiplies the Values in *Chart (5)* with the Adjusted MCAC Factors in *Chart (1)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
				6%	1%	6%	1%	3%	3%	0.2%	6%	5%	2%	3%	4%
28-Feb-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
1-Mar-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
2-Mar-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
3-Mar-13	151%	34%	66%	6%	1%	6%	1%	3%	3%	0%	6%	5%	2%	3%	4%
4-Mar-13	150%	33%	67%	6%	1%	6%	1%	3%	3%	0%	6%	4%	2%	3%	4%
5-Mar-13	150%	33%	67%	6%	1%	6%	1%	3%	3%	0%	6%	4%	2%	3%	4%
6-Mar-13	149%	33%	67%	6%	1%	6%	1%	3%	3%	0%	6%	4%	2%	3%	4%
7-Mar-13	148%	33%	67%	6%	1%	6%	1%	3%	3%	0%	6%	3%	2%	3%	4%
8-Mar-13	148%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
9-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
10-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
11-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
12-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
13-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
14-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
15-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
16-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
17-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
18-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
19-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
20-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
21-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
22-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
23-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
24-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
25-Mar-13	147%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
26-Mar-13	146%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
27-Mar-13	146%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
28-Mar-13	146%	32%	68%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
29-Mar-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
30-Mar-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
31-Mar-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
1-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
2-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
3-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
4-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
5-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
6-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
7-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
8-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
9-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
10-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
11-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
12-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
13-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
14-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
15-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
16-Apr-13	146%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
17-Apr-13	144%	31%	69%	6%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
18-Apr-13	144%	30%	70%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	4%
20-Apr-13	143%	30%	70%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	3%
21-Apr-13	142%	30%	70%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	3%
22-Apr-13	142%	29%	71%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	3%	3%
23-Apr-13	141%	29%	71%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	2%	3%
24-Apr-13	140%	29%	71%	5%	1%	6%	1%	2%	3%	0%	6%	3%	2%	2%	3%
25-Apr-13	140%	28%	72%	5%	1%	6%	1%	2%	3%	0%	5%	3%	2%	2%	3%
26-Apr-13	139%	28%	72%	5%	1%	6%	1%	2%	3%	0%	5%	3%	2%	2%	3%
27-Apr-13	138%	28%	72%	5%	1%	6%	1%	2%	3%	0%	5%	3%	2%	2%	3%
28-Apr-13	138%	27%	73%	5%	1%	6%	1%	2%	3%	0%	5%	3%	2%	2%	2%
29-Apr-13	137%	27%	73%	5%	1%	6%	1%	2%	3%	0%	5%	3%	2%	2%	2%
30-Apr-13	136%	27%	73%	5%	1%	6%	1%	2%	3%	0%	5%	3%	1%	2%	2%
1-May-13	136%	26%	74%	5%	1%	6%	1%	1%	3%	0%	5%	3%	1%	2%	2%
2-May-13	135%	26%	74%	5%	1%	6%	1%	1%	3%	0%	5%	3%	1%	2%	2%
3-May-13	134%	26%	74%	5%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	2%
4-May-13	134%	25%	75%	5%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	2%
5-May-13	133%	25%	75%	4%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	1%
6-May-13	133%	25%	75%	4%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	1%
7-May-13	132%	24%	76%	4%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	1%
8-May-13	132%	24%	76%	4%	1%	6%	1%	1%	2%	0%	5%	2%	1%	2%	1%
9-May-13	130%	23%	77%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	1%
10-May-13	129%	22%	78%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	1%
11-May-13	128%	22%	78%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	1%
12-May-13	127%	21%	79%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
13-May-13	126%	21%	79%	4%	1%	4%	1%	1%	2%	0%	4%	2%	1%	2%	1%
14-May-13	125%	20%	80%	4%	1%	4%	1%	1%	2%	0%	4%	2%	1%	2%	1%
15-May-13	124%	19%	81%	3%	1%	4%	1%	1%	2%	0%	4%	2%	1%	1%	1%
16-May-13	123%	19%	81%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
17-May-13	122%	18%	82%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
18-May-13	122%	18%	82%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
19-May-13	122%	18%	82%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
20-May-13	121%	18%	82%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
21-May-13	121%	17%	83%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
22-May-13	121%	17%	83%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
23-May-13	121%	17%	83%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
24-May-13	120%	17%	83%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
25-May-13	120%	17%	83%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
26-May-13	120%	16%	84%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
27-May-13	119%	16%	84%	3%	0%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
28-May-13	119%	16%	84%	3%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
29-May-13	119%	16%	84%	3%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
30-May-13	118%	16%	84%	3%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
31-May-13	118%	15%	85%	3%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
1-Jun-13	118%	15%	85%	2%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
2-Jun-13	117%	15%	85%	2%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
3-Jun-13	117%	15%	85%	2%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
4-Jun-13	117%	14%	86%	2%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
5-Jun-13	117%	14%	86%	2%	0%	3%	1%	1%	2%	0%	3%	2%	1%	1%	1%
6-Jun-13	116%	14%	86%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
7-Jun-13	116%	14%	86%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
8-Jun-13	116%	14%	86%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
9-Jun-13	116%	14%	86%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
10-Jun-13	116%	13%	87%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
11-Jun-13	115%	13%	87%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
12-Jun-13	115%	13%	87%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
13-Jun-13	115%	13%	87%	2%	0%	3%	1%	1%	1%	0%	3%	2%	1%	1%	1%
14-Jun-13	115%	13%	87%	2%	0%	3%	1%	1%	1%	0%	2%	2%	0%	1%	1%
15-Jun-13	115%	13%	87%	2%	0%	3%	1%	1%	1%	0%	2%	2%	0%	1%	1%
16-Jun-13	114%	13%	87%	2%	0%	3%	1%	1%	1%	0%	2%	2%	0%	1%	1%
17-Jun-13	114%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	2%	0%	1%	1%
18-Jun-13	114%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	2%	0%	1%	1%
19-Jun-13	114%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	1%
20-Jun-13	114%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	1%
21-Jun-13	113%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	1%
22-Jun-13	113%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%

				(6) Productivity Factors - Chart Multiplies the Values in *Chart (5)* with the Adjusted MCAC Factors in *Chart (1)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
				6%	1%	6%	1%	3%	3%	0.2%	6%	5%	2%	3%	4%
23-Jun-13	113%	12%	88%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
24-Jun-13	113%	11%	89%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
25-Jun-13	112%	11%	89%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
26-Jun-13	112%	11%	89%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
27-Jun-13	112%	10%	90%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
28-Jun-13	111%	10%	90%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
29-Jun-13	111%	10%	90%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
30-Jun-13	111%	10%	90%	2%	0%	3%	1%	1%	1%	0%	2%	1%	0%	1%	0%
1-Jul-13	111%	10%	90%	2%	0%	3%	1%	1%	1%	0%	1%	1%	0%	1%	0%
2-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
3-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
4-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
5-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
6-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
7-Jul-13	110%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
8-Jul-13	109%	9%	91%	2%	0%	3%	1%	1%	1%	0%	1%	0%	0%	1%	0%
9-Jul-13	109%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
10-Jul-13	109%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
11-Jul-13	109%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
12-Jul-13	109%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
13-Jul-13	108%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
14-Jul-13	108%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
15-Jul-13	108%	8%	92%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
16-Jul-13	108%	7%	93%	2%	0%	3%	1%	0%	0%	0%	1%	0%	0%	1%	0%
17-Jul-13	108%	7%	93%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	1%	0%
18-Jul-13	107%	7%	93%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	1%	0%
19-Jul-13	107%	7%	93%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	1%	0%
20-Jul-13	107%	7%	93%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
21-Jul-13	107%	6%	94%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
22-Jul-13	107%	6%	94%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
23-Jul-13	107%	6%	94%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
24-Jul-13	106%	6%	94%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
25-Jul-13	106%	6%	94%	2%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
26-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
27-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
28-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
29-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
30-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
31-Jul-13	106%	6%	94%	1%	0%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%
1-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
31-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Sep-13	104%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Sep-13	104%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25-Sep-13	103%	2%	98%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26-Sep-13	102%	2%	98%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27-Sep-13	102%	2%	98%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Oct-13	102%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

LCP CH0006 Bulk Excavation

				(6) Productivity Factors - Chart Multiplies the Values in *Chart (5)* with the Adjusted MCAC Factors in *Chart (1)*											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
				6%	1%	6%	1%	3%	3%	0.2%	6%	5%	2%	3%	4%
15-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

				(7) Weight of Total Productiviy Loss Due to Each Productivity Factor											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
5-Nov-12	100%	0%	100%												
6-Nov-12	100%	0%	100%												
7-Nov-12	100%	0%	100%												
8-Nov-12	100%	0%	100%												
9-Nov-12	100%	0%	100%												
10-Nov-12	100%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Nov-12	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Nov-12	101%	1%	99%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Nov-12	101%	1%	99%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Nov-12	102%	2%	98%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Nov-12	103%	3%	97%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
18-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
19-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
20-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
21-Nov-12	103%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
22-Nov-12	104%	3%	97%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
23-Nov-12	104%	4%	96%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
24-Nov-12	104%	4%	96%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
25-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
26-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
27-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
28-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
29-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
30-Nov-12	104%	4%	96%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
1-Dec-12	109%	8%	92%	2%	1%	0%	0%	1%	0%	0%	1%	2%	0%	1%	0%
2-Dec-12	111%	10%	90%	2%	1%	0%	0%	1%	1%	0%	1%	2%	0%	1%	0%
3-Dec-12	113%	11%	89%	2%	1%	0%	0%	1%	1%	0%	2%	3%	0%	1%	0%
4-Dec-12	115%	13%	87%	3%	1%	0%	0%	1%	1%	0%	2%	3%	0%	1%	1%
5-Dec-12	117%	15%	85%	3%	1%	0%	0%	1%	1%	0%	3%	3%	1%	1%	1%
6-Dec-12	119%	16%	84%	3%	1%	0%	0%	1%	2%	0%	3%	3%	1%	1%	1%
7-Dec-12	121%	17%	83%	3%	1%	0%	0%	1%	2%	0%	4%	3%	1%	1%	1%
8-Dec-12	123%	19%	81%	3%	1%	0%	0%	1%	2%	0%	4%	4%	1%	2%	1%
9-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
10-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
11-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
12-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
13-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
14-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
15-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
16-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
17-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
18-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
19-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
20-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
21-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
22-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
23-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
24-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
25-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
26-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
27-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
28-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
29-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
30-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
31-Dec-12	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
1-Jan-13	128%	22%	78%	3%	1%	0%	0%	1%	3%	0%	5%	4%	1%	2%	1%
2-Jan-13	129%	22%	78%	3%	1%	0%	0%	2%	3%	0%	5%	4%	1%	2%	2%
3-Jan-13	130%	23%	77%	3%	1%	0%	0%	2%	3%	0%	5%	4%	1%	2%	2%
4-Jan-13	131%	24%	76%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	2%
5-Jan-13	132%	24%	76%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	3%
6-Jan-13	133%	25%	75%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	3%
7-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
8-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
9-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
10-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
11-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
12-Jan-13	136%	26%	74%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
13-Jan-13	136%	27%	73%	4%	1%	0%	0%	2%	3%	0%	5%	4%	2%	2%	4%
14-Jan-13	137%	27%	73%	4%	1%	1%	0%	2%	3%	0%	5%	4%	2%	2%	3%
15-Jan-13	138%	27%	73%	4%	1%	1%	0%	2%	3%	0%	5%	4%	2%	2%	3%
16-Jan-13	138%	28%	72%	4%	1%	1%	0%	2%	3%	0%	5%	4%	2%	2%	3%
17-Jan-13	139%	28%	72%	4%	1%	1%	0%	2%	3%	0%	5%	4%	2%	2%	3%
18-Jan-13	140%	28%	72%	4%	1%	2%	0%	2%	3%	0%	5%	4%	2%	2%	3%
19-Jan-13	140%	29%	71%	4%	1%	2%	0%	2%	3%	0%	5%	4%	2%	2%	3%
20-Jan-13	141%	29%	71%	4%	1%	2%	0%	2%	3%	0%	5%	4%	2%	2%	3%
21-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
22-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
23-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
24-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
25-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
26-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
27-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
28-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
29-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
30-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
31-Jan-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
1-Feb-13	142%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
2-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
3-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
4-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
6-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
7-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
8-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
9-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
10-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
11-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
12-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
13-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
14-Feb-13	144%	30%	70%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
15-Feb-13	145%	31%	69%	5%	1%	3%	0%	2%	3%	0%	5%	4%	2%	2%	3%
16-Feb-13	145%	31%	69%	5%	1%	3%	1%	2%	3%	0%	5%	4%	2%	2%	3%
17-Feb-13	146%	32%	68%	5%	1%	3%	1%	2%	3%	0%	5%	4%	2%	2%	3%
18-Feb-13	147%	32%	68%	5%	1%	4%	1%	2%	3%	0%	5%	4%	2%	2%	3%
19-Feb-13	148%	32%	68%	5%	1%	4%	1%	2%	3%	0%	5%	4%	2%	2%	3%
20-Feb-13	148%	33%	67%	5%	1%	4%	1%	2%	3%	0%	5%	4%	2%	2%	3%
21-Feb-13	149%	33%	67%	5%	1%	4%	1%	2%	3%	0%	5%	4%	2%	2%	3%
22-Feb-13	150%	33%	67%	5%	1%	5%	1%	2%	3%	0%	5%	4%	2%	2%	3%
23-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
24-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
25-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
26-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
27-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%

				(7) Weight of Total Productiviy Loss Due to Each Productivity Factor											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
28-Feb-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
1-Mar-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
2-Mar-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
3-Mar-13	151%	34%	66%	5%	1%	5%	1%	3%	3%	0%	5%	4%	2%	3%	3%
4-Mar-13	150%	33%	67%	5%	1%	5%	1%	2%	3%	0%	5%	4%	2%	3%	3%
5-Mar-13	150%	33%	67%	5%	1%	5%	1%	2%	3%	0%	5%	3%	2%	3%	3%
6-Mar-13	149%	33%	67%	5%	1%	5%	1%	2%	3%	0%	5%	3%	2%	3%	3%
7-Mar-13	148%	33%	67%	5%	1%	5%	1%	2%	3%	0%	5%	3%	2%	3%	3%
8-Mar-13	148%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	3%	2%	3%	3%
9-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
10-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
11-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
12-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
13-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
14-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
15-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
16-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
17-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
18-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
19-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
20-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
21-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
22-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
23-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
24-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
25-Mar-13	147%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
26-Mar-13	146%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
27-Mar-13	146%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
28-Mar-13	146%	32%	68%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	3%	3%
29-Mar-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
30-Mar-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
31-Mar-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
1-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
2-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
3-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
4-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
5-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
6-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
7-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
8-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
9-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
10-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
11-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
12-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
13-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
14-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
15-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
16-Apr-13	146%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
17-Apr-13	144%	31%	69%	5%	1%	5%	1%	2%	3%	0%	5%	2%	2%	2%	3%
18-Apr-13	144%	30%	70%	5%	1%	5%	1%	2%	2%	0%	5%	2%	2%	2%	3%
20-Apr-13	143%	30%	70%	5%	1%	5%	1%	2%	2%	0%	5%	2%	2%	2%	3%
21-Apr-13	142%	30%	70%	5%	1%	5%	1%	2%	2%	0%	5%	2%	2%	2%	3%
22-Apr-13	142%	29%	71%	5%	1%	5%	1%	2%	2%	0%	5%	2%	2%	2%	3%
23-Apr-13	141%	29%	71%	5%	1%	5%	1%	2%	2%	0%	5%	2%	2%	2%	3%
24-Apr-13	140%	29%	71%	4%	1%	5%	1%	1%	2%	0%	5%	2%	2%	2%	3%
25-Apr-13	140%	28%	72%	4%	1%	5%	1%	1%	2%	0%	5%	2%	2%	2%	2%
26-Apr-13	139%	28%	72%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	2%
27-Apr-13	138%	28%	72%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	2%
28-Apr-13	138%	27%	73%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	2%
29-Apr-13	137%	27%	73%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	2%
30-Apr-13	136%	27%	73%	4%	1%	5%	1%	1%	2%	0%	5%	2%	1%	2%	2%
1-May-13	136%	26%	74%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	2%
2-May-13	135%	26%	74%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	2%
3-May-13	134%	26%	74%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	2%
4-May-13	134%	25%	75%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
5-May-13	133%	25%	75%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
6-May-13	133%	25%	75%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
7-May-13	132%	24%	76%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
8-May-13	132%	24%	76%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
9-May-13	130%	23%	77%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
10-May-13	129%	22%	78%	4%	1%	5%	1%	1%	2%	0%	4%	2%	1%	2%	1%
11-May-13	128%	22%	78%	3%	1%	4%	1%	1%	2%	0%	4%	2%	1%	2%	1%
12-May-13	127%	21%	79%	3%	1%	4%	1%	1%	2%	0%	4%	2%	1%	1%	1%
13-May-13	126%	21%	79%	3%	1%	4%	1%	1%	2%	0%	4%	2%	1%	1%	1%
14-May-13	125%	20%	80%	3%	1%	4%	1%	1%	2%	0%	4%	2%	1%	1%	1%
15-May-13	124%	19%	81%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
16-May-13	123%	19%	81%	3%	1%	3%	1%	1%	2%	0%	4%	2%	1%	1%	1%
17-May-13	122%	18%	82%	3%	1%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
18-May-13	122%	18%	82%	3%	1%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
19-May-13	122%	18%	82%	3%	1%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
20-May-13	121%	18%	82%	3%	0%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
21-May-13	121%	17%	83%	3%	0%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
22-May-13	121%	17%	83%	3%	0%	3%	0%	1%	2%	0%	4%	2%	1%	1%	1%
23-May-13	121%	17%	83%	3%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
24-May-13	120%	17%	83%	3%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
25-May-13	120%	17%	83%	3%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
26-May-13	120%	16%	84%	3%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
27-May-13	119%	16%	84%	3%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
28-May-13	119%	16%	84%	2%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
29-May-13	119%	16%	84%	2%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
30-May-13	118%	16%	84%	2%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
31-May-13	118%	15%	85%	2%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
1-Jun-13	118%	15%	85%	2%	0%	3%	0%	1%	2%	0%	3%	2%	1%	1%	1%
2-Jun-13	117%	15%	85%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
3-Jun-13	117%	15%	85%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
4-Jun-13	117%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
5-Jun-13	117%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
6-Jun-13	116%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
7-Jun-13	116%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
8-Jun-13	116%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
9-Jun-13	116%	14%	86%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
10-Jun-13	116%	13%	87%	2%	0%	3%	0%	1%	1%	0%	3%	2%	1%	1%	1%
11-Jun-13	115%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	2%	0%	1%	1%
12-Jun-13	115%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	2%	0%	1%	1%
13-Jun-13	115%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	2%	0%	1%	1%
14-Jun-13	115%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	2%	0%	1%	1%
15-Jun-13	115%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	1%
16-Jun-13	114%	13%	87%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	1%
17-Jun-13	114%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	1%
18-Jun-13	114%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	1%
19-Jun-13	114%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	1%
20-Jun-13	114%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
21-Jun-13	113%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
22-Jun-13	113%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

				(7) Weight of Total Productiviy Loss Due to Each Productivity Factor											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
23-Jun-13	113%	12%	88%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
24-Jun-13	113%	11%	89%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
25-Jun-13	112%	11%	89%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
26-Jun-13	112%	11%	89%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
27-Jun-13	112%	10%	90%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
28-Jun-13	111%	10%	90%	2%	0%	3%	0%	1%	1%	0%	2%	1%	0%	1%	0%
29-Jun-13	111%	10%	90%	2%	0%	3%	0%	1%	1%	0%	1%	1%	0%	1%	0%
30-Jun-13	111%	10%	90%	2%	0%	3%	0%	1%	1%	0%	1%	1%	0%	1%	0%
1-Jul-13	111%	10%	90%	2%	0%	3%	0%	1%	1%	0%	1%	0%	0%	1%	0%
2-Jul-13	110%	9%	91%	2%	0%	3%	0%	1%	1%	0%	1%	0%	0%	1%	0%
3-Jul-13	110%	9%	91%	2%	0%	3%	0%	1%	1%	0%	1%	0%	0%	1%	0%
4-Jul-13	110%	9%	91%	2%	0%	3%	0%	1%	1%	0%	1%	0%	0%	1%	0%
5-Jul-13	110%	9%	91%	2%	0%	3%	0%	1%	1%	0%	1%	0%	0%	1%	0%
6-Jul-13	110%	9%	91%	2%	0%	3%	0%	0%	1%	0%	1%	0%	0%	1%	0%
7-Jul-13	110%	9%	91%	2%	0%	3%	0%	0%	1%	0%	1%	0%	0%	1%	0%
8-Jul-13	109%	9%	91%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
9-Jul-13	109%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
10-Jul-13	109%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
11-Jul-13	109%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
12-Jul-13	109%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
13-Jul-13	108%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
14-Jul-13	108%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
15-Jul-13	108%	8%	92%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
16-Jul-13	108%	7%	93%	2%	0%	3%	0%	0%	0%	0%	1%	0%	0%	1%	0%
17-Jul-13	108%	7%	93%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	1%	0%
18-Jul-13	107%	7%	93%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Jul-13	107%	7%	93%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Jul-13	107%	7%	93%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Jul-13	107%	6%	94%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Jul-13	107%	6%	94%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Jul-13	107%	6%	94%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24-Jul-13	106%	6%	94%	2%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
31-Jul-13	106%	6%	94%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Aug-13	106%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Aug-13	105%	5%	95%	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Aug-13	105%	5%	95%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Aug-13	105%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
31-Aug-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Sep-13	104%	4%	96%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Sep-13	104%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Sep-13	104%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
15-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Sep-13	103%	3%	97%	1%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
24-Sep-13	103%	3%	97%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
25-Sep-13	103%	2%	98%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
26-Sep-13	102%	2%	98%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
27-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
28-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
29-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
30-Sep-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
1-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
3-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
6-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
7-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
12-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
13-Oct-13	102%	2%	98%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
14-Oct-13	102%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

				(7) Weight of Total Productiviy Loss Due to Each Productivity Factor											
Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Morale and Attitude	Reassignment of Manpower	Crew Size Inefficiency	Concurrent Operations	Dilution of Supervision	Learning Curve	Errors and Ommisions	Site Access	Logistics	Fatigue	Ripple	Overtime
15-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
16-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
17-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
18-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
19-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
20-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
21-Oct-13	101%	1%	99%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
22-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
23-Oct-13	101%	1%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

(8) Overburden Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
5-Nov-12	100%	0%	100%			-		-			
6-Nov-12	100%	0%	100%			-		-			
7-Nov-12	100%	0%	100%			-		-			
8-Nov-12	100%	0%	100%			-		-			
9-Nov-12	100%	0%	100%			-		-			
10-Nov-12	100%	0%	100%			-		-			
11-Nov-12	101%	1%	99%			-		-			
12-Nov-12	101%	1%	99%			-		-			
13-Nov-12	101%	1%	99%			-		-			
14-Nov-12	102%	2%	98%			-		-			
15-Nov-12	102%	2%	98%			-		-			
16-Nov-12	102%	2%	98%			-		-			
17-Nov-12	103%	3%	97%			-		-			
18-Nov-12	103%	3%	97%			-		-			
19-Nov-12	103%	3%	97%			-		-			
20-Nov-12	103%	3%	97%			-		-			
21-Nov-12	103%	3%	97%			-		-			
22-Nov-12	104%	3%	97%			-		-			
23-Nov-12	104%	4%	96%			-		-			
24-Nov-12	104%	4%	96%			-		-			
25-Nov-12	104%	4%	96%			-		-			
26-Nov-12	104%	4%	96%			-		-			
27-Nov-12	104%	4%	96%			-		-			
28-Nov-12	104%	4%	96%			-		-			
29-Nov-12	104%	4%	96%			-		-			
30-Nov-12	104%	4%	96%			-		-			
1-Dec-12	109%	8%	92%			-		-			
2-Dec-12	111%	10%	90%			-		-			
3-Dec-12	113%	11%	89%			-		-			
4-Dec-12	115%	13%	87%			-		-			
5-Dec-12	117%	15%	85%			-		-			
6-Dec-12	119%	16%	84%			-		-			
7-Dec-12	121%	17%	83%			-		-			
8-Dec-12	123%	19%	81%			-		-			
9-Dec-12	128%	22%	78%			-		-			
10-Dec-12	128%	22%	78%			-		-			
11-Dec-12	128%	22%	78%			-		-			
12-Dec-12	128%	22%	78%			-		-			
13-Dec-12	128%	22%	78%			-		-			
14-Dec-12	128%	22%	78%			-		-			
15-Dec-12	128%	22%	78%			-		-			
16-Dec-12	128%	22%	78%			-		-			
17-Dec-12	128%	22%	78%			-		-			
18-Dec-12	128%	22%	78%			-		-			
19-Dec-12	128%	22%	78%			-		-			
20-Dec-12	128%	22%	78%			-		-			
21-Dec-12	128%	22%	78%			-		-			
22-Dec-12	128%	22%	78%			-		-			
23-Dec-12	128%	22%	78%			-		-			
24-Dec-12	128%	22%	78%			-		-			
25-Dec-12	128%	22%	78%			-		-			
26-Dec-12	128%	22%	78%			-		-			
27-Dec-12	128%	22%	78%			-		-			
28-Dec-12	128%	22%	78%			-		-			
29-Dec-12	128%	22%	78%			-		-			
30-Dec-12	128%	22%	78%			-		-			
31-Dec-12	128%	22%	78%			-		-			
1-Jan-13	128%	22%	78%			-		-			
2-Jan-13	129%	22%	78%			-		-	-		
3-Jan-13	130%	23%	77%			-		-	-		
4-Jan-13	131%	24%	76%			-		-	-		
5-Jan-13	132%	24%	76%			-		-	-		
6-Jan-13	133%	25%	75%			-		-	-		
7-Jan-13	136%	26%	74%			-		-	-		
8-Jan-13	136%	26%	74%			-		-	-		
9-Jan-13	136%	26%	74%			-		-	-		
10-Jan-13	136%	26%	74%			-		-	-		
11-Jan-13	136%	26%	74%	-	-	-	-	-	-	-	-
12-Jan-13	136%	26%	74%	-	-	-	-	-	-	-	-
13-Jan-13	136%	27%	73%	618	-	844	-	618	844	-	-
14-Jan-13	137%	27%	73%	-	-	-	-	618	844	-	-
15-Jan-13	138%	27%	73%	596	-	821	-	1,214	1,664	-	-
16-Jan-13	138%	28%	72%	2,072	5,242	2,867	7,575	3,286	4,531	7,575	7,575
17-Jan-13	139%	28%	72%	2,247	5,242	3,124	7,575	5,532	7,656	15,149	15,149
18-Jan-13	140%	28%	72%	2,665	5,242	3,723	7,575	8,197	11,379	22,724	22,724
19-Jan-13	140%	29%	71%	4,288	5,242	6,020	7,575	12,485	17,398	30,298	30,298
20-Jan-13	141%	29%	71%	3,273	5,242	4,616	7,575	15,757	22,014	37,873	37,873
21-Jan-13	142%	30%	70%	4,454	5,242	6,343	7,575	20,211	28,357	45,447	45,447
22-Jan-13	142%	30%	70%	5,368	5,242	7,645	7,575	25,580	36,002	53,022	53,022
23-Jan-13	142%	30%	70%	5,634	5,242	8,024	7,575	31,213	44,026	60,596	60,596
24-Jan-13	142%	30%	70%	5,442	5,242	7,752	7,575	36,656	51,778	68,171	68,171
25-Jan-13	142%	30%	70%	5,418	5,242	7,718	7,575	42,074	59,496	75,745	75,745
26-Jan-13	142%	30%	70%	5,170	5,242	7,364	7,575	47,244	66,860	83,320	83,320
27-Jan-13	142%	30%	70%	6,025	5,242	8,583	7,575	53,269	75,443	90,894	90,894
28-Jan-13	142%	30%	70%	7,108	5,242	10,127	7,575	60,377	85,570	98,469	98,469

(8) Overburden Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
29-Jan-13	142%	30%	**70%**	6,914	5,242	9,851	7,575	**67,292**	95,421	106,043	**106,043**
30-Jan-13	142%	30%	**70%**	6,794	5,242	9,680	7,575	**74,085**	105,101	113,618	**113,618**
31-Jan-13	142%	30%	**70%**	2,086	5,242	2,973	7,575	**76,172**	108,074	121,192	**121,192**
1-Feb-13	142%	30%	**70%**	4,705	5,242	6,704	7,575	**80,876**	114,778	128,767	**128,767**
2-Feb-13	144%	30%	**70%**	7,147	5,242	10,283	7,575	**88,024**	125,061	136,341	**136,341**
3-Feb-13	144%	30%	**70%**	8,513	5,242	12,247	7,575	**96,536**	137,308	143,916	**143,916**
4-Feb-13	144%	30%	**70%**	1,685	5,242	2,424	7,575	**98,221**	139,732	151,491	**151,491**
5-Feb-13	144%	30%	**70%**	-	-	-	-	**98,221**	139,732	151,491	**151,491**
6-Feb-13	144%	30%	**70%**	3,323	5,242	4,780	7,575	**101,543**	144,512	159,065	**159,065**
7-Feb-13	144%	30%	**70%**	7,787	5,242	11,203	7,575	**109,330**	155,716	166,640	**166,640**
8-Feb-13	144%	30%	**70%**	8,750	5,242	12,589	7,575	**118,081**	168,305	174,214	**174,214**
9-Feb-13	144%	30%	**70%**	8,966	5,242	12,900	7,575	**127,047**	181,205	181,789	**181,789**
10-Feb-13	144%	30%	**70%**	7,837	5,242	11,275	7,575	**134,884**	192,481	189,363	**189,363**
11-Feb-13	144%	30%	**70%**	4,240	5,242	6,100	7,575	**139,124**	198,580	196,938	**196,938**
12-Feb-13	144%	30%	**70%**	6,009	5,242	8,645	7,575	**145,132**	207,225	204,512	**204,512**
13-Feb-13	144%	30%	**70%**	3,022	5,242	4,348	7,575	**148,154**	211,573	212,087	**212,087**
14-Feb-13	145%	31%	**69%**	3,783	5,242	5,470	7,575	**151,937**	217,043	219,661	**219,661**
15-Feb-13	145%	31%	**69%**	5,487	5,242	7,975	7,575	**157,424**	225,018	**225,425**	**225,425**
16-Feb-13	146%	32%	**68%**	4,056	5,242	5,925	7,575	**161,480**	230,943		**225,425**
17-Feb-13	147%	32%	**68%**	1,422	5,242	436	7,575	**162,902**	231,379		**225,425**
18-Feb-13	148%	32%	**68%**	30	-	44	-	**162,931**	231,423		**225,425**
19-Feb-13	148%	33%	**67%**	2,502	5,242	3,712	7,575	**165,434**	235,135		**225,425**
20-Feb-13	149%	33%	**67%**	6,771	5,242	10,097	7,575	**172,205**	245,232		**225,425**
21-Feb-13	150%	33%	**67%**	7,068	5,242	10,594	7,575	**179,274**	255,827		**225,425**
22-Feb-13	151%	34%	**66%**	8,245	5,242	12,487	7,575	**187,519**	268,313		**225,425**
23-Feb-13	151%	34%	**66%**	7,880	5,242	11,933	7,575	**195,399**	280,246		**225,425**
24-Feb-13	151%	34%	**66%**	4,054	5,242	6,139	7,575	**199,453**	286,386		**225,425**
25-Feb-13	151%	34%	**66%**	5,862	5,242	8,877	7,575	**205,314**	295,263		**225,425**
26-Feb-13	151%	34%	**66%**	6,823	5,242	10,333	7,575	**212,138**	305,596		**225,425**
27-Feb-13	151%	34%	**66%**	6,170	5,242	9,344	7,575	**218,308**	314,940		**225,425**
28-Feb-13	151%	34%	**66%**	4,195	5,242	6,353	7,575	**222,503**	321,293		**225,425**
1-Mar-13	151%	34%	**66%**	872	-	1,321	-	**223,375**	322,614		**228,257**
2-Mar-13	151%	34%	**66%**	980	-	1,484	-	**224,356**	324,099		**231,088**
3-Mar-13	150%	33%	**67%**	1,069	5,242	1,606	7,575	**225,425**	325,705		**233,920**
4-Mar-13	150%	33%	**67%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
5-Mar-13	149%	33%	**67%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
6-Mar-13	148%	33%	**67%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
7-Mar-13	148%	32%	**68%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
8-Mar-13	147%	32%	**68%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
9-Mar-13	147%	32%	**68%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
10-Mar-13	147%	32%	**68%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
11-Mar-13	147%	32%	**68%**	-	-	-	-	**225,425**	325,705	225,425	**236,752**
12-Mar-13	147%	32%	**68%**	297	-	437	-	**225,722**	326,142	225,425	**236,752**
13-Mar-13	147%	32%	**68%**	-	-	-	-	**225,722**	326,142	225,425	**236,752**
14-Mar-13	147%	32%	**68%**	1,377	1,936	2,028	2,832	**227,099**	328,170	228,257	**239,584**
15-Mar-13	147%	32%	**68%**	1,464	1,936	2,156	2,832	**228,563**	330,326	231,088	**242,416**
16-Mar-13	147%	32%	**68%**	2,173	1,936	3,200	2,832	**230,736**	333,526	233,920	**245,248**
17-Mar-13	147%	32%	**68%**	1,682	1,936	2,477	2,832	**232,418**	336,003	236,752	**248,080**
18-Mar-13	147%	32%	**68%**	8	-	12	-	**232,427**	336,015	236,752	**248,658**
19-Mar-13	147%	32%	**68%**	159	-	234	-	**232,585**	336,249	236,752	**248,658**
20-Mar-13	147%	32%	**68%**	10	-	15	-	**232,596**	336,264	236,752	**248,658**
21-Mar-13	147%	32%	**68%**	220	-	323	-	**232,815**	336,587	236,752	**248,658**
22-Mar-13	147%	32%	**68%**	423	-	621	-	**233,239**	337,208	236,752	**248,658**
23-Mar-13	147%	32%	**68%**	-	-	-	-	**233,239**	337,208	236,752	**248,658**
24-Mar-13	147%	32%	**68%**	9	-	13	-	**233,247**	337,221	236,752	**248,658**
25-Mar-13	146%	32%	**68%**	183	-	268	-	**233,431**	337,489	236,752	**248,658**
26-Mar-13	146%	32%	**68%**	399	-	584	-	**233,830**	338,074	236,752	**248,658**
27-Mar-13	146%	32%	**68%**	1,353	1,936	1,978	2,832	**235,184**	340,051	239,584	**248,658**
28-Mar-13	146%	31%	**69%**	1,283	1,936	1,873	2,832	**236,467**	341,925	242,416	**248,658**
29-Mar-13	146%	31%	**69%**	2,407	1,936	3,509	2,832	**238,874**	345,434	245,248	**248,658**
30-Mar-13	146%	31%	**69%**	2,422	1,936	3,531	2,832	**241,296**	348,964	248,080	**251,973**
31-Mar-13	146%	31%	**69%**	2,330	1,936	3,394	2,832	**243,626**	352,359	**248,658**	**251,973**
1-Apr-13	146%	31%	**69%**	1,465	1,936	2,133	2,832	**245,090**	354,492		**251,973**
2-Apr-13	146%	31%	**69%**	1,296	1,936	1,887	2,832	**246,386**	356,379		**251,973**
3-Apr-13	146%	31%	**69%**	2,272	1,936	3,308	2,832	**248,658**	359,687		**251,973**
4-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**251,973**
5-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**251,973**
6-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**251,973**
7-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**255,287**
8-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**255,287**
9-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**258,602**
10-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**261,917**
11-Apr-13	146%	31%	**69%**	-	-	-	-	**248,658**	359,687	248,658	**265,232**
12-Apr-13	146%	31%	**69%**	809	-	1,178	-	**249,467**	360,865	248,658	**268,546**
13-Apr-13	146%	31%	**69%**	-	-	-	-	**249,467**	360,865	248,658	**268,546**
14-Apr-13	146%	31%	**69%**	-	-	-	-	**249,467**	360,865	248,658	**268,546**
15-Apr-13	146%	31%	**69%**	1,099	2,482	1,599	3,315	**250,566**	362,464	251,973	**271,861**
16-Apr-13	144%	31%	**69%**	-	-	-	-	**250,566**	362,464	251,973	**275,176**
17-Apr-13	144%	30%	**70%**	-	-	-	-	**250,566**	362,464	251,973	**278,491**
18-Apr-13	143%	30%	**70%**	-	-	-	-	**250,566**	362,464	251,973	**281,805**
19-Apr-13	142%	30%	**70%**	-	-	-	-	**250,566**	362,464	251,973	**285,120**
20-Apr-13	142%	29%	**71%**	-	-	-	-	**250,566**	362,464	251,973	**288,376**
21-Apr-13	141%	29%	**71%**	731	-	1,030	-	**251,297**	363,494	251,973	**288,376**
22-Apr-13	140%	29%	**71%**	724	-	1,015	-	**252,021**	364,509	251,973	**288,376**

(8) Overburden Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
23-Apr-13	140%	28%	**72%**	2,070	2,482	2,888	3,315	**254,091**	367,398	255,287	**288,376**
24-Apr-13	139%	28%	**72%**	724	-	1,006	-	**254,815**	368,404	255,287	**288,376**
25-Apr-13	138%	28%	**72%**	1,225	2,482	1,694	3,315	**256,040**	370,098	258,602	**288,376**
26-Apr-13	138%	27%	**73%**	1,752	2,482	2,412	3,315	**257,792**	372,509	261,917	**288,376**
27-Apr-13	137%	27%	**73%**	1,458	2,482	1,998	3,315	**259,251**	374,507	265,232	**288,376**
28-Apr-13	136%	27%	**73%**	1,167	2,482	1,591	3,315	**260,418**	376,098	268,546	**288,376**
29-Apr-13	136%	26%	**74%**	603	-	819	-	**261,021**	376,917	268,546	**294,433**
30-Apr-13	135%	26%	**74%**	866	-	1,169	-	**261,887**	378,087	268,546	**294,433**
1-May-13	134%	26%	**74%**	2,494	2,482	3,354	3,315	**264,381**	381,441	271,861	**294,433**
2-May-13	134%	25%	**75%**	2,471	2,482	3,308	3,315	**266,852**	384,749	275,176	**294,433**
3-May-13	133%	25%	**75%**	3,329	2,482	4,435	3,315	**270,181**	389,184	278,491	**294,433**
4-May-13	133%	25%	**75%**	2,539	2,482	3,367	3,315	**272,721**	392,552	281,805	**294,433**
5-May-13	132%	24%	**76%**	3,727	2,482	4,920	3,315	**276,448**	397,471	285,120	**294,433**
6-May-13	132%	24%	**76%**	2,083	2,482	2,739	3,315	**278,531**	400,210	288,376	**294,433**
7-May-13	130%	23%	**77%**	765	-	993	-	**279,295**	401,204	288,376	**294,433**
8-May-13	129%	22%	**78%**	2,829	2,482	3,647	3,315	**282,124**	404,851	**288,376**	**294,433**
9-May-13	128%	22%	**78%**	926	-	1,185	-	**283,051**	406,036		**294,433**
10-May-13	127%	21%	**79%**	1,272	2,482	1,615	3,315	**284,322**	407,651		**294,433**
11-May-13	126%	21%	**79%**	1,513	2,482	1,907	3,315	**285,835**	409,558		**300,490**
12-May-13	125%	20%	**80%**	904	-	1,131	-	**286,739**	410,689		**306,547**
13-May-13	124%	19%	**81%**	1,637	2,482	2,034	3,315	**288,376**	412,723		**312,604**
14-May-13	123%	19%	**81%**	-	-	-	-	**288,376**	412,723	288,376	**318,661**
15-May-13	122%	18%	**82%**	-	-	-	-	**288,376**	412,723	288,376	**324,718**
16-May-13	122%	18%	**82%**	-	-	-	-	**288,376**	412,723	288,376	**330,775**
17-May-13	122%	18%	**82%**	431	-	524	-	**288,807**	413,248	288,376	**330,775**
18-May-13	121%	18%	**82%**	1,195	5,203	1,452	6,057	**290,002**	414,699	294,433	**336,832**
19-May-13	121%	17%	**83%**	119	-	144	-	**290,121**	414,843	294,433	**342,888**
20-May-13	121%	17%	**83%**	89	-	108	-	**290,210**	414,951	294,433	**348,945**
21-May-13	121%	17%	**83%**	-	-	-	-	**290,210**	414,951	294,433	**355,002**
22-May-13	120%	17%	**83%**	488	-	587	-	**290,698**	415,538	294,433	**356,019**
23-May-13	120%	17%	**83%**	-	-	-	-	**290,698**	415,538	294,433	**356,019**
24-May-13	120%	16%	**84%**	-	-	-	-	**290,698**	415,538	294,433	**356,019**
25-May-13	119%	16%	**84%**	100	-	119	-	**290,798**	415,657	294,433	**356,019**
26-May-13	119%	16%	**84%**	70	-	83	-	**290,868**	415,740	294,433	**356,019**
27-May-13	119%	16%	**84%**	-	-	-	-	**290,868**	415,740	294,433	**356,019**
28-May-13	118%	16%	**84%**	150	-	178	-	**291,018**	415,918	294,433	**356,019**
29-May-13	118%	15%	**85%**	170	-	201	-	**291,188**	416,118	294,433	**356,019**
30-May-13	118%	15%	**85%**	3,682	5,203	4,335	6,057	**294,870**	420,453	300,490	**359,620**
31-May-13	117%	15%	**85%**	5,995	5,203	7,041	6,057	**300,865**	427,494	306,547	**363,220**
1-Jun-13	117%	15%	**85%**	8,787	5,203	10,293	6,057	**309,652**	437,787	312,604	**366,821**
2-Jun-13	117%	14%	**86%**	5,369	5,203	6,273	6,057	**315,022**	444,060	318,661	**370,421**
3-Jun-13	117%	14%	**86%**	1,513	5,203	1,763	6,057	**316,535**	445,823	324,718	**370,421**
4-Jun-13	116%	14%	**86%**	3,542	5,203	4,121	6,057	**320,077**	449,944	330,775	**374,022**
5-Jun-13	116%	14%	**86%**	-	-	-	-	**320,077**	449,944	330,775	**377,622**
6-Jun-13	116%	14%	**86%**	6,890	5,203	7,989	6,057	**326,967**	457,932	336,832	**377,622**
7-Jun-13	116%	14%	**86%**	7,175	5,203	8,306	6,057	**334,142**	466,239	342,888	**381,223**
8-Jun-13	116%	13%	**87%**	6,200	5,203	7,165	6,057	**340,342**	473,404	348,945	**384,823**
9-Jun-13	115%	13%	**87%**	5,355	5,203	6,178	6,057	**345,697**	479,582	355,002	**384,823**
10-Jun-13	115%	13%	**87%**	5,384	5,203	6,202	6,057	**351,081**	485,784	**356,019**	**384,823**
11-Jun-13	115%	13%	**87%**	4,938	5,203	5,679	6,057	**356,019**	491,463		**384,823**
12-Jun-13	115%	13%	**87%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
13-Jun-13	115%	13%	**87%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
14-Jun-13	114%	13%	**87%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
15-Jun-13	114%	12%	**88%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
16-Jun-13	114%	12%	**88%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
17-Jun-13	114%	12%	**88%**	-	-	-	-	**356,019**	491,463	356,019	**384,823**
18-Jun-13	114%	12%	**88%**	3,111	3,230	3,536	3,601	**359,130**	495,000	359,620	**384,823**
19-Jun-13	113%	12%	**88%**	4,537	3,230	5,149	3,601	**363,666**	500,149	363,220	**384,823**
20-Jun-13	113%	12%	**88%**	2,699	3,230	3,058	3,601	**366,365**	503,207	366,821	**384,823**
21-Jun-13	113%	12%	**88%**	1,977	3,230	2,236	3,601	**368,342**	505,443	370,421	**384,823**
22-Jun-13	113%	11%	**89%**	596	-	671	-	**368,937**	506,114	370,421	**384,823**
23-Jun-13	112%	11%	**89%**	3,442	3,230	3,866	3,601	**372,379**	509,979	374,022	**384,823**
24-Jun-13	112%	11%	**89%**	3,990	3,230	4,467	3,601	**376,369**	514,447	377,622	**388,323**
25-Jun-13	112%	10%	**90%**	920	-	1,027	-	**377,289**	515,474	377,622	**393,901**
26-Jun-13	111%	10%	**90%**	1,053	3,230	1,172	3,601	**378,342**	516,646	381,223	**399,479**
27-Jun-13	111%	10%	**90%**	1,483	3,230	1,645	3,601	**379,825**	518,292	384,823	**405,057**
28-Jun-13	111%	10%	**90%**	-	-	-	-	**379,825**	518,292	384,823	**410,635**
29-Jun-13	111%	10%	**90%**	-	-	-	-	**379,825**	518,292	384,823	**416,213**
30-Jun-13	110%	9%	**91%**	-	-	-	-	**379,825**	518,292	384,823	**421,791**
1-Jul-13	110%	9%	**91%**	-	-	-	-	**379,825**	518,292	384,823	**427,369**
2-Jul-13	110%	9%	**91%**	281	-	309	-	**380,106**	518,601	384,823	**432,947**
3-Jul-13	110%	9%	**91%**	-	-	-	-	**380,106**	518,601	384,823	**438,525**
4-Jul-13	110%	9%	**91%**	309	-	339	-	**380,415**	518,940	384,823	**444,103**
5-Jul-13	110%	9%	**91%**	-	-	-	-	**380,415**	518,940	384,823	**449,681**
6-Jul-13	109%	9%	**91%**	-	-	-	-	**380,415**	518,940	384,823	**455,259**
7-Jul-13	109%	8%	**92%**	-	-	-	-	**380,415**	518,940	384,823	**460,837**
8-Jul-13	109%	8%	**92%**	967	-	1,054	-	**381,382**	519,994	384,823	**466,415**
9-Jul-13	109%	8%	**92%**	547	-	595	-	**381,928**	520,589	384,823	**471,993**
10-Jul-13	109%	8%	**92%**	-	-	-	-	**381,928**	520,589	384,823	**477,571**
11-Jul-13	108%	8%	**92%**	-	-	-	-	**381,928**	520,589	384,823	**483,149**
12-Jul-13	108%	8%	**92%**	-	-	-	-	**381,928**	520,589	384,823	**488,727**
13-Jul-13	108%	8%	**92%**	1,911	3,230	2,066	3,601	**383,839**	522,655	**388,323**	**494,305**
14-Jul-13	108%	7%	**93%**	1,837	3,230	1,982	3,601	**385,676**	524,637		**499,883**
15-Jul-13	108%	7%	**93%**	-	-	-	-	**385,676**	524,637		**505,461**

(8) Overburden Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
16-Jul-13	107%	7%	93%	819	-	881	-	386,495	525,518		511,039
17-Jul-13	107%	7%	93%	-	-	-	-	386,495	525,518		516,617
18-Jul-13	107%	7%	93%	-	-	-	-	386,495	525,518		522,195
19-Jul-13	107%	6%	94%	988	-	1,056	-	387,483	526,574		527,773
20-Jul-13	107%	6%	94%	338	-	361	-	387,821	526,935		533,351
21-Jul-13	107%	6%	94%	333	-	355	-	388,154	527,289		538,929
22-Jul-13	106%	6%	94%	-	-	-	-	388,154	527,289		544,507
23-Jul-13	106%	6%	94%	169	-	179	-	388,323	527,469		550,085
24-Jul-13	106%	6%	94%	-	-	-	-	388,323	527,469		555,663
25-Jul-13	106%	6%	94%	-	-	-	-	388,323	527,469		561,241
26-Jul-13	106%	6%	94%	-	-	-	-	388,323	527,469		566,819
27-Jul-13	106%	6%	94%	5,355	5,355	5,676	5,578	393,678	533,145	393,901	572,397
28-Jul-13	106%	6%	94%	5,355	5,355	5,675	5,578	399,032	538,819	399,479	577,975
29-Jul-13	106%	6%	94%	5,355	5,355	5,673	5,578	404,387	544,493	405,057	583,553
30-Jul-13	106%	5%	95%	5,355	5,355	5,666	5,578	409,741	550,159	410,635	589,131
31-Jul-13	106%	5%	95%	5,355	5,355	5,662	5,578	415,096	555,821	416,213	594,709
1-Aug-13	106%	5%	95%	5,355	5,355	5,657	5,578	420,450	561,478	421,791	600,287
2-Aug-13	106%	5%	95%	5,355	5,355	5,653	5,578	425,805	567,131	427,369	605,864
3-Aug-13	105%	5%	95%	5,355	5,355	5,649	5,578	431,159	572,780	432,947	611,442
4-Aug-13	105%	5%	95%	5,355	5,355	5,644	5,578	436,514	578,424	438,525	617,020
5-Aug-13	105%	5%	95%	5,355	5,355	5,640	5,578	441,868	584,065	444,103	622,598
6-Aug-13	105%	5%	95%	5,355	5,355	5,636	5,578	447,223	589,701	449,681	628,176
7-Aug-13	105%	5%	95%	5,355	5,355	5,632	5,578	452,577	595,332	455,259	633,754
8-Aug-13	105%	5%	95%	5,355	5,355	5,627	5,578	457,932	600,959	460,837	639,332
9-Aug-13	105%	5%	95%	5,355	5,355	5,623	5,578	463,286	606,582	466,415	644,910
10-Aug-13	105%	5%	95%	5,355	5,355	5,619	5,578	468,641	612,201	471,993	650,488
11-Aug-13	105%	5%	95%	5,355	5,355	5,614	5,578	473,995	617,816	477,571	656,066
12-Aug-13	105%	5%	95%	5,355	5,355	5,611	5,578	479,350	623,427	483,149	661,644
13-Aug-13	105%	5%	95%	5,355	5,355	5,609	5,578	484,704	629,036	488,727	667,222
14-Aug-13	105%	4%	96%	5,355	5,355	5,606	5,578	490,059	634,641	494,305	672,800
15-Aug-13	105%	4%	96%	5,355	5,355	5,603	5,578	495,413	640,244	499,883	678,378
16-Aug-13	105%	4%	96%	5,355	5,355	5,600	5,578	500,768	645,844	505,461	683,956
17-Aug-13	105%	4%	96%	5,355	5,355	5,597	5,578	506,122	651,441	511,039	689,534
18-Aug-13	104%	4%	96%	5,355	5,355	5,594	5,578	511,477	657,034	516,617	695,112
19-Aug-13	104%	4%	96%	5,355	5,355	5,591	5,578	516,831	662,625	522,195	698,885
20-Aug-13	104%	4%	96%	5,355	5,355	5,588	5,578	522,186	668,213	527,773	699,080
21-Aug-13	104%	4%	96%	5,355	5,355	5,585	5,578	527,541	673,799	533,351	699,274
22-Aug-13	104%	4%	96%	5,355	5,355	5,582	5,578	532,895	679,381	538,929	699,468
23-Aug-13	104%	4%	96%	5,355	5,355	5,579	5,578	538,250	684,960	544,507	699,662
24-Aug-13	104%	4%	96%	5,355	5,355	5,576	5,578	543,604	690,536	550,085	699,856
25-Aug-13	104%	4%	96%	5,355	5,355	5,573	5,578	548,959	696,110	555,663	700,050
26-Aug-13	104%	4%	96%	5,355	5,355	5,571	5,578	554,313	701,680	561,241	700,244
27-Aug-13	104%	4%	96%	5,355	5,355	5,568	5,578	559,668	707,248	566,819	700,438
28-Aug-13	104%	4%	96%	5,355	5,355	5,565	5,578	565,022	712,813	572,397	700,631
29-Aug-13	104%	4%	96%	5,355	5,355	5,562	5,578	570,377	718,375	577,975	700,825
30-Aug-13	104%	4%	96%	5,355	5,355	5,559	5,578	575,731	723,933	583,553	701,018
31-Aug-13	104%	4%	96%	5,355	5,355	5,556	5,578	581,086	729,489	589,131	701,212
1-Sep-13	104%	4%	96%	5,355	5,355	5,553	5,578	586,440	735,043	594,709	701,405
2-Sep-13	104%	4%	96%	5,355	5,355	5,550	5,578	591,795	740,593	600,287	701,598
3-Sep-13	104%	3%	97%	5,355	5,355	5,547	5,578	597,149	746,140	605,864	701,791
4-Sep-13	104%	3%	97%	5,355	5,355	5,544	5,578	602,504	751,685	611,442	701,984
5-Sep-13	103%	3%	97%	5,355	5,355	5,542	5,578	607,858	757,226	617,020	702,177
6-Sep-13	103%	3%	97%	5,355	5,355	5,539	5,578	613,213	762,765	622,598	702,370
7-Sep-13	103%	3%	97%	5,355	5,355	5,536	5,578	618,567	768,300	628,176	702,562
8-Sep-13	103%	3%	97%	5,355	5,355	5,533	5,578	623,922	773,833	633,754	702,755
9-Sep-13	103%	3%	97%	5,355	5,355	5,530	5,578	629,276	779,363	639,332	702,947
10-Sep-13	103%	3%	97%	5,355	5,355	5,527	5,578	634,631	784,890	644,910	703,139
11-Sep-13	103%	3%	97%	5,355	5,355	5,524	5,578	639,985	790,415	650,488	703,332
12-Sep-13	103%	3%	97%	5,355	5,355	5,521	5,578	645,340	795,936	656,066	703,524
13-Sep-13	103%	3%	97%	5,355	5,355	5,518	5,578	650,694	801,454	661,644	703,716
14-Sep-13	103%	3%	97%	5,355	5,355	5,516	5,578	656,049	806,970	667,222	703,908
15-Sep-13	103%	3%	97%	5,355	5,355	5,513	5,578	661,404	812,483	672,800	704,100
16-Sep-13	103%	3%	97%	5,355	5,355	5,510	5,578	666,758	817,993	678,378	704,291
17-Sep-13	103%	3%	97%	5,355	5,355	5,507	5,578	672,113	823,500	683,956	704,483
18-Sep-13	103%	3%	97%	5,355	5,355	5,504	5,578	677,467	829,004	689,534	-
19-Sep-13	103%	3%	97%	5,355	5,355	5,501	5,578	682,822	834,505	695,112	-
20-Sep-13	103%	3%	97%	5,355	5,355	5,498	5,578	688,176	840,004	698,885	-
21-Sep-13	103%	3%	97%	5,355	5,355	5,496	5,578	693,531	845,499		-
22-Sep-13	103%	3%	97%	5,355	5,355	5,493	5,578	698,885	850,992		-
23-Sep-13	103%	2%	98%	190	-	194		699,075	851,186	699,080	-
24-Sep-13	102%	2%	98%	190	-	194		699,264	851,381	699,274	-
25-Sep-13	102%	2%	98%	190	-	194		699,454	851,575	699,468	-
26-Sep-13	102%	2%	98%	190	-	194		699,644	851,769	699,662	-
27-Sep-13	102%	2%	98%	190	-	194		699,833	851,963	699,856	-
28-Sep-13	102%	2%	98%	190	-	194		700,023	852,157	700,050	-
29-Sep-13	102%	2%	98%	190	-	194		700,213	852,351	700,244	-
30-Sep-13	102%	2%	98%	190	-	194		700,402	852,544	700,438	-
1-Oct-13	102%	2%	98%	190	-	194		700,592	852,738	700,631	-
2-Oct-13	102%	2%	98%	190	-	194		700,782	852,932	700,825	-
3-Oct-13	102%	2%	98%	190	-	193		700,971	853,125	701,018	-
4-Oct-13	102%	2%	98%	190	-	193		701,161	853,318	701,212	-
5-Oct-13	102%	2%	98%	190	-	193		701,350	853,512	701,405	-
6-Oct-13	102%	2%	98%	190	-	193		701,540	853,705	701,598	-
7-Oct-13	102%	2%	98%	190	-	193		701,730	853,898	701,791	-

(8) Overburden Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
8-Oct-13	102%	2%	98%	190	-	193		701,919	854,091	701,984	-
9-Oct-13	102%	2%	98%	190	-	193		702,109	854,284	702,177	-
10-Oct-13	102%	2%	98%	190	-	193		702,299	854,476	702,370	-
11-Oct-13	102%	2%	98%	190	-	193		702,488	854,669	702,562	-
12-Oct-13	102%	1%	99%	190	-	193		702,678	854,861	702,755	-
13-Oct-13	101%	1%	99%	190	-	192		702,868	855,054	702,947	-
14-Oct-13	101%	1%	99%	190	-	192		703,057	855,246	703,139	-
15-Oct-13	101%	1%	99%	190	-	192		703,247	855,438	703,332	-
16-Oct-13	101%	1%	99%	190	-	192		703,437	855,630	703,524	-
17-Oct-13	101%	1%	99%	190	-	192		703,626	855,823	703,716	-
18-Oct-13	101%	1%	99%	190	-	192		703,816	856,014	703,908	-
19-Oct-13	101%	1%	99%	190	-	192		704,005	856,206	704,100	
20-Oct-13	101%	1%	99%	190	-	192		704,195	856,398	704,291	
21-Oct-13	101%	1%	99%	190	-	192		704,385	856,590	704,483	
22-Oct-13	100%		100%	190	-	190		704,574	856,779		
23-Oct-13	100%		100%	190		190		704,764	856,969		

(9) Rock Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
5-Nov-12	100%	0%	100%			-		-			
6-Nov-12	100%	0%	100%			-		-			
7-Nov-12	100%	0%	100%			-		-			
8-Nov-12	100%	0%	100%			-		-			
9-Nov-12	100%	0%	100%			-		-			
10-Nov-12	100%	0%	100%			-		-			
11-Nov-12	101%	1%	99%			-		-			
12-Nov-12	101%	1%	99%			-		-			
13-Nov-12	101%	1%	99%			-		-			
14-Nov-12	102%	2%	98%			-		-			
15-Nov-12	102%	2%	98%			-		-			
16-Nov-12	102%	2%	98%			-		-			
17-Nov-12	103%	3%	97%			-		-			
18-Nov-12	103%	3%	97%			-		-			
19-Nov-12	103%	3%	97%			-		-			
20-Nov-12	103%	3%	97%			-		-			
21-Nov-12	103%	3%	97%			-		-			
22-Nov-12	104%	3%	97%			-		-			
23-Nov-12	104%	4%	96%			-		-			
24-Nov-12	104%	4%	96%			-		-			
25-Nov-12	104%	4%	96%			-		-			
26-Nov-12	104%	4%	96%			-		-			
27-Nov-12	104%	4%	96%			-		-			
28-Nov-12	104%	4%	96%			-		-			
29-Nov-12	104%	4%	96%			-		-			
30-Nov-12	104%	4%	96%			-		-			
1-Dec-12	109%	8%	92%			-		-			
2-Dec-12	111%	10%	90%			-		-			
3-Dec-12	113%	11%	89%			-		-			
4-Dec-12	115%	13%	87%			-		-			
5-Dec-12	117%	15%	85%			-		-			
6-Dec-12	119%	16%	84%			-		-			
7-Dec-12	121%	17%	83%			-		-			
8-Dec-12	123%	19%	81%			-		-			
9-Dec-12	128%	22%	78%			-		-			
10-Dec-12	128%	22%	78%			-		-			
11-Dec-12	128%	22%	78%			-		-			
12-Dec-12	128%	22%	78%			-		-			
13-Dec-12	128%	22%	78%			-		-			
14-Dec-12	128%	22%	78%			-		-			
15-Dec-12	128%	22%	78%			-		-			
16-Dec-12	128%	22%	78%			-		-			
17-Dec-12	128%	22%	78%			-		-			
18-Dec-12	128%	22%	78%			-		-			
19-Dec-12	128%	22%	78%			-		-			
20-Dec-12	128%	22%	78%			-		-			
21-Dec-12	128%	22%	78%			-		-			
22-Dec-12	128%	22%	78%			-		-			
23-Dec-12	128%	22%	78%			-		-			
24-Dec-12	128%	22%	78%			-		-			
25-Dec-12	128%	22%	78%			-		-			
26-Dec-12	128%	22%	78%			-		-			
27-Dec-12	128%	22%	78%			-		-			
28-Dec-12	128%	22%	78%			-		-			
29-Dec-12	128%	22%	78%			-		-			
30-Dec-12	128%	22%	78%			-		-			
31-Dec-12	128%	22%	78%			-		-			
1-Jan-13	128%	22%	78%			-		-			
2-Jan-13	129%	22%	78%			-		-			
3-Jan-13	130%	23%	77%			-		-			
4-Jan-13	131%	24%	76%			-		-			
5-Jan-13	132%	24%	76%			-		-			
6-Jan-13	133%	25%	75%			-		-			
7-Jan-13	136%	26%	74%			-		-			
8-Jan-13	136%	26%	74%			-		-			
9-Jan-13	136%	26%	74%			-		-			
10-Jan-13	136%	26%	74%			-		-			
11-Jan-13	136%	26%	74%	-		-		-			
12-Jan-13	136%	26%	74%	-		-		-			
13-Jan-13	136%	27%	73%	-		-		-			
14-Jan-13	137%	27%	73%	-		-		-			
15-Jan-13	138%	27%	73%	-		-		-			
16-Jan-13	138%	28%	72%	-		-		-			
17-Jan-13	139%	28%	72%	-		-		-			
18-Jan-13	140%	28%	72%	-		-		-			
19-Jan-13	140%	29%	71%	-		-		-			
20-Jan-13	141%	29%	71%	-		-		-			
21-Jan-13	142%	30%	70%	-		-		-			
22-Jan-13	142%	30%	70%	-		-		-			
23-Jan-13	142%	30%	70%	-		-		-			
24-Jan-13	142%	30%	70%	-		-		-			
25-Jan-13	142%	30%	70%	-		-		-			
26-Jan-13	142%	30%	70%	-		-		-			
27-Jan-13	142%	30%	70%	-		-		-			
28-Jan-13	142%	30%	70%	-		-		-			

(9) Rock Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
29-Jan-13	142%	30%	70%	-		-		-			
30-Jan-13	142%	30%	70%	-		-		-			
31-Jan-13	142%	30%	70%	-		-		-			
1-Feb-13	142%	30%	70%	-		-		-			
2-Feb-13	144%	30%	70%	-		-		-			
3-Feb-13	144%	30%	70%	-		-		-			
4-Feb-13	144%	30%	70%	-		-		-			
5-Feb-13	144%	30%	70%	-		-		-			
6-Feb-13	144%	30%	70%	-		-		-			
7-Feb-13	144%	30%	70%	-		-		-			
8-Feb-13	144%	30%	70%	-		-		-			
9-Feb-13	144%	30%	70%	-		-		-			
10-Feb-13	144%	30%	70%	-		-		-			
11-Feb-13	144%	30%	70%	-		-		-			
12-Feb-13	144%	30%	70%	-		-		-			
13-Feb-13	144%	30%	70%	3,018	5,241	4,342	7,564	3,018	4,342	7,564	7,564
14-Feb-13	145%	31%	69%	534	-	773	-	3,552	5,115	7,564	7,564
15-Feb-13	145%	31%	69%	-	-	-	-	3,552	5,115	7,564	7,564
16-Feb-13	146%	32%	68%	-	-	-	-	3,552	5,115	7,564	7,564
17-Feb-13	147%	32%	68%	-	-	-	-	3,552	5,115	7,564	7,564
18-Feb-13	148%	32%	68%	-	-	-	-	3,552	5,115	7,564	7,564
19-Feb-13	148%	33%	67%	-	-	-	-	3,552	5,115	7,564	7,564
20-Feb-13	149%	33%	67%	-	-	-	-	3,552	5,115	7,564	7,564
21-Feb-13	150%	33%	67%	-	-	-	-	3,552	5,115	7,564	7,564
22-Feb-13	151%	34%	66%	131	-	199	-	3,684	5,314	7,564	7,564
23-Feb-13	151%	34%	66%	1,990	5,241	3,014	7,564	5,674	8,328	15,127	15,127
24-Feb-13	151%	34%	66%	3,911	5,241	5,923	7,564	9,585	14,251	22,691	22,691
25-Feb-13	151%	34%	66%	1,924	5,241	2,914	7,564	11,510	17,165	30,254	30,254
26-Feb-13	151%	34%	66%	3,001	5,241	4,545	7,564	14,511	21,710	37,818	37,818
27-Feb-13	151%	34%	66%	4,863	5,241	7,365	7,564	19,374	29,075	45,381	45,381
28-Feb-13	151%	34%	66%	814	-	1,233	-	20,188	30,307	45,381	45,381
1-Mar-13	151%	34%	66%	5,882	5,241	8,907	7,564	26,069	39,214	52,945	52,945
2-Mar-13	151%	34%	66%	4,537	5,241	6,872	7,564	30,607	46,086	60,508	60,508
3-Mar-13	150%	33%	67%	3,924	5,241	5,894	7,564	34,531	51,981	68,072	68,072
4-Mar-13	150%	33%	67%	4,533	5,241	6,782	7,564	39,064	58,763	75,635	75,635
5-Mar-13	149%	33%	67%	5,272	5,241	7,856	7,564	44,336	66,619	83,199	83,199
6-Mar-13	148%	33%	67%	5,255	5,241	7,800	7,564	49,591	74,419	90,762	90,762
7-Mar-13	148%	32%	68%	4,755	5,241	7,028	7,564	54,346	81,448	98,326	98,326
8-Mar-13	147%	32%	68%	5,606	5,241	8,254	7,564	59,952	89,702	105,889	105,889
9-Mar-13	147%	32%	68%	5,147	5,241	7,579	7,564	65,099	97,281	113,453	113,453
10-Mar-13	147%	32%	68%	4,675	5,241	6,885	7,564	69,774	104,166	121,017	121,017
11-Mar-13	147%	32%	68%	4,412	5,241	6,498	7,564	74,186	110,663	128,580	128,580
12-Mar-13	147%	32%	68%	4,302	5,241	6,335	7,564	78,488	116,998	136,144	136,144
13-Mar-13	147%	32%	68%	5,898	5,241	8,686	7,564	84,386	125,684	143,707	143,707
14-Mar-13	147%	32%	68%	4,114	5,241	6,058	7,564	88,500	131,742	151,271	151,271
15-Mar-13	147%	32%	68%	4,158	5,241	6,123	7,564	92,657	137,864	158,834	158,834
16-Mar-13	147%	32%	68%	5,230	5,241	7,702	7,564	97,888	145,566	166,398	166,398
17-Mar-13	147%	32%	68%	5,072	5,241	7,467	7,564	102,960	153,034	173,961	173,961
18-Mar-13	147%	32%	68%	3,740	5,241	5,506	7,564	106,700	158,540	181,525	181,525
19-Mar-13	147%	32%	68%	1,653	5,241	2,433	7,564	108,353	160,973	189,088	189,088
20-Mar-13	147%	32%	68%	8,499	5,241	12,509	7,564	116,852	173,482	196,652	196,652
21-Mar-13	147%	32%	68%	7,397	5,241	10,869	7,564	124,248	184,351	204,215	204,215
22-Mar-13	147%	32%	68%	3,733	5,241	5,481	7,564	127,982	189,832	211,779	211,779
23-Mar-13	147%	32%	68%	8,110	5,241	11,896	7,564	136,091	201,728	219,342	219,342
24-Mar-13	147%	32%	68%	13,259	5,241	19,431	7,564	149,350	221,159	226,906	226,906
25-Mar-13	146%	32%	68%	2,409	5,241	3,528	7,564	151,760	224,687	234,470	234,470
26-Mar-13	146%	32%	68%	6,592	5,241	9,645	7,564	158,352	234,332	242,033	242,033
27-Mar-13	146%	32%	68%	4,467	5,241	6,526	7,564	162,818	240,858	249,597	249,597
28-Mar-13	146%	31%	69%	4,351	5,241	6,351	7,564	167,170	247,209	257,160	257,160
29-Mar-13	146%	31%	69%	3,877	5,241	5,653	7,564	171,047	252,862	264,724	264,724
30-Mar-13	146%	31%	69%	4,548	5,241	6,629	7,564	175,595	259,491	272,287	272,287
31-Mar-13	146%	31%	69%	5,017	5,241	7,311	7,564	180,612	266,802	279,851	279,851
1-Apr-13	146%	31%	69%	7,144	5,241	10,407	7,564	187,756	277,209	287,414	287,414
2-Apr-13	146%	31%	69%	3,300	5,241	4,805	7,564	191,056	282,014	294,978	294,978
3-Apr-13	146%	31%	69%	4,018	5,241	5,849	7,564	195,074	287,864	302,541	302,541
4-Apr-13	146%	31%	69%	5,280	5,241	7,686	7,564	200,354	295,549	310,105	310,105
5-Apr-13	146%	31%	69%	4,151	5,241	6,042	7,564	204,506	301,592	317,668	317,668
6-Apr-13	146%	31%	69%	3,909	5,241	5,690	7,564	208,415	307,281	325,232	325,232
7-Apr-13	146%	31%	69%	1,847	5,241	2,688	7,564	210,262	309,970	332,795	332,795
8-Apr-13	146%	31%	69%	2,642	5,241	3,846	7,564	212,904	313,815	340,359	340,359
9-Apr-13	146%	31%	69%	2,868	5,241	4,174	7,564	215,772	317,989	347,923	347,923
10-Apr-13	146%	31%	69%	5,099	5,241	7,421	7,564	220,871	325,411	355,486	355,486
11-Apr-13	146%	31%	69%	5,109	5,241	7,436	7,564	225,980	332,847	361,637	361,637
12-Apr-13	146%	31%	69%	3,999	5,241	5,820	7,564	229,979	338,667	361,637	361,637
13-Apr-13	146%	31%	69%	4,375	5,241	6,367	7,564	234,354	345,034		371,099
14-Apr-13	146%	31%	69%	5,936	5,241	8,639	7,564	240,290	353,674		380,562
15-Apr-13	146%	31%	69%	2,941	5,241	4,280	7,564	243,230	357,954		390,025
16-Apr-13	144%	31%	69%	8,524	5,241	12,291	7,564	251,754	370,245		399,487
17-Apr-13	144%	30%	70%	8,745	5,241	12,551	7,564	260,499	382,796		408,950
18-Apr-13	143%	30%	70%	1,912	5,241	2,731	7,564	262,411	385,527		418,412
19-Apr-13	142%	30%	70%	-	-	-	-	262,411	385,527		427,875
20-Apr-13	142%	29%	71%	4,170	5,241	5,902	7,564	266,581	391,428		437,337
21-Apr-13	141%	29%	71%	6,890	5,241	9,705	7,564	273,471	401,133		446,800
22-Apr-13	140%	29%	71%	8,484	5,241	11,896	7,564	281,955	413,029		456,263

(9) Rock Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
23-Apr-13	140%	28%	**72%**	7,343	5,241	10,247	7,564	**289,298**	423,277		465,725
24-Apr-13	139%	28%	**72%**	8,747	5,241	12,151	7,564	**298,045**	435,428		475,188
25-Apr-13	138%	28%	**72%**	7,379	5,241	10,203	7,564	**305,424**	445,631		484,650
26-Apr-13	138%	27%	**73%**	7,973	5,241	10,973	7,564	**313,397**	456,604		494,113
27-Apr-13	137%	27%	**73%**	7,568	5,241	10,368	7,564	**320,965**	466,972		503,575
28-Apr-13	136%	27%	**73%**	7,628	5,241	10,402	7,564	**328,593**	477,374		513,038
29-Apr-13	136%	26%	**74%**	8,847	5,241	12,009	7,564	**337,441**	489,382		522,500
30-Apr-13	135%	26%	**74%**	9,196	5,241	12,424	7,564	**346,637**	501,807		531,963
1-May-13	134%	26%	**74%**	4,588	5,241	6,169	7,564	**351,224**	507,976		541,426
2-May-13	134%	25%	**75%**	5,710	5,241	7,643	7,564	**356,935**	515,619		550,888
3-May-13	133%	25%	**75%**	4,702	5,241	6,265	7,564	**361,637**	521,884		560,351
4-May-13	133%	25%	**75%**	4,848	7,883	6,429	9,463	**366,485**	528,313	371,099	569,813
5-May-13	132%	24%	**76%**	7,871	7,883	10,388	9,463	**374,356**	538,701	380,562	579,276
6-May-13	132%	24%	**76%**	8,708	7,883	11,452	9,463	**383,063**	550,153	390,025	588,738
7-May-13	130%	23%	**77%**	6,353	7,883	8,253	9,463	**389,417**	558,406	399,487	598,201
8-May-13	129%	22%	**78%**	5,573	7,883	7,185	9,463	**394,989**	565,590	408,950	607,664
9-May-13	128%	22%	**78%**	8,866	7,883	11,345	9,463	**403,856**	576,936	418,412	617,126
10-May-13	127%	21%	**79%**	8,109	7,883	10,299	9,463	**411,964**	587,234	427,875	626,589
11-May-13	126%	21%	**79%**	6,808	7,883	8,583	9,463	**418,772**	595,818	437,337	636,051
12-May-13	125%	20%	**80%**	6,752	7,883	8,449	9,463	**425,524**	604,267	446,800	645,514
13-May-13	124%	19%	**81%**	6,309	7,883	7,838	9,463	**431,834**	612,105	456,263	654,976
14-May-13	123%	19%	**81%**	8,366	7,883	10,316	9,463	**440,200**	622,421	465,725	664,439
15-May-13	122%	18%	**82%**	7,887	7,883	9,654	9,463	**448,087**	632,075	475,188	673,901
16-May-13	122%	18%	**82%**	6,305	7,883	7,698	9,463	**454,392**	639,773	484,650	683,364
17-May-13	122%	18%	**82%**	6,414	7,883	7,810	9,463	**460,806**	647,583	494,113	692,827
18-May-13	121%	18%	**82%**	8,388	7,883	10,188	9,463	**469,194**	657,771	503,575	702,289
19-May-13	121%	17%	**83%**	4,258	7,883	5,158	9,463	**473,452**	662,929	513,038	708,490
20-May-13	121%	17%	**83%**	9,968	7,883	12,044	9,463	**483,420**	674,973	522,500	721,520
21-May-13	121%	17%	**83%**	10,653	7,883	12,838	9,463	**494,073**	687,811	531,963	734,549
22-May-13	120%	17%	**83%**	9,522	7,883	11,445	9,463	**503,595**	699,256	541,426	747,579
23-May-13	120%	17%	**83%**	8,399	7,883	10,069	9,463	**511,993**	709,325	550,888	760,609
24-May-13	120%	16%	**84%**	8,355	7,883	9,991	9,463	**520,348**	719,315	560,351	773,639
25-May-13	119%	16%	**84%**	9,570	7,883	11,414	9,463	**529,918**	730,729	569,813	786,669
26-May-13	119%	16%	**84%**	8,586	7,883	10,215	9,463	**538,504**	740,943	579,276	799,699
27-May-13	119%	16%	**84%**	9,956	7,883	11,813	9,463	**548,460**	752,756	588,738	812,729
28-May-13	118%	16%	**84%**	10,586	7,883	12,528	9,463	**559,046**	765,285	598,201	825,759
29-May-13	118%	15%	**85%**	10,083	7,883	11,902	9,463	**569,129**	777,187	607,664	838,789
30-May-13	118%	15%	**85%**	6,714	7,883	7,905	9,463	**575,843**	785,092	617,126	851,819
31-May-13	117%	15%	**85%**	5,475	7,883	6,429	9,463	**581,318**	791,521	626,589	864,849
1-Jun-13	117%	15%	**85%**	3,828	7,883	4,484	9,463	**585,146**	796,005	636,051	877,879
2-Jun-13	117%	14%	**86%**	8,520	7,883	9,954	9,463	**593,666**	805,959	645,514	890,909
3-Jun-13	117%	14%	**86%**	6,282	7,883	7,320	9,463	**599,948**	813,279	654,976	903,939
4-Jun-13	116%	14%	**86%**	6,836	7,883	7,953	9,463	**606,784**	821,232	664,439	916,968
5-Jun-13	116%	14%	**86%**	12,712	7,883	14,764	9,463	**619,496**	835,996	673,901	929,998
6-Jun-13	116%	14%	**86%**	5,712	7,883	6,623	9,463	**625,208**	842,619	683,364	943,028
7-Jun-13	116%	14%	**86%**	5,336	7,883	6,177	9,463	**630,544**	848,796	692,827	956,058
8-Jun-13	116%	13%	**87%**	4,262	7,883	4,926	9,463	**634,806**	853,722	702,289	969,088
9-Jun-13	115%	13%	**87%**	8,640	7,883	9,969	9,463	**643,446**	863,691	708,490	982,118
10-Jun-13	115%	13%	**87%**	7,062	7,883	8,135	9,463	**650,508**	871,826		995,148
11-Jun-13	115%	13%	**87%**	9,472	7,883	10,893	9,463	**659,980**	882,719		1,008,178
12-Jun-13	115%	13%	**87%**	10,402	7,883	11,943	9,463	**670,382**	894,661		1,021,208
13-Jun-13	115%	13%	**87%**	9,762	7,883	11,189	9,463	**680,144**	905,851		1,034,238
14-Jun-13	114%	13%	**87%**	9,742	7,883	11,148	9,463	**689,886**	916,999		1,047,268
15-Jun-13	114%	12%	**88%**	9,514	7,883	10,869	9,463	**699,400**	927,869		1,060,298
16-Jun-13	114%	12%	**88%**	9,090	7,883	10,368	9,463	**708,490**	938,237		1,073,328
17-Jun-13	114%	12%	**88%**	9,486	11,935	10,802	13,030	**717,976**	949,038	721,520	1,086,358
18-Jun-13	114%	12%	**88%**	9,950	11,935	11,312	13,030	**727,926**	960,350	734,549	1,099,387
19-Jun-13	113%	12%	**88%**	5,414	11,935	6,145	13,030	**733,340**	966,495	747,579	1,112,417
20-Jun-13	113%	12%	**88%**	6,146	11,935	6,964	13,030	**739,486**	973,459	760,609	1,125,447
21-Jun-13	113%	12%	**88%**	11,400	11,935	12,896	13,030	**750,886**	986,355	773,639	1,138,477
22-Jun-13	113%	11%	**89%**	12,136	11,935	13,670	13,030	**763,022**	1,000,025	786,669	1,151,507
23-Jun-13	112%	11%	**89%**	10,096	11,935	11,339	13,030	**773,118**	1,011,364	799,699	1,164,537
24-Jun-13	112%	11%	**89%**	10,076	11,935	11,283	13,030	**783,194**	1,022,647	812,729	1,177,567
25-Jun-13	112%	10%	**90%**	12,136	11,935	13,549	13,030	**795,330**	1,036,196	825,759	1,185,888
26-Jun-13	111%	10%	**90%**	12,188	11,935	13,567	13,030	**807,518**	1,049,764	838,789	1,196,510
27-Jun-13	111%	10%	**90%**	2,334	11,935	2,590	13,030	**809,852**	1,052,354	851,819	1,207,132
28-Jun-13	111%	10%	**90%**	9,462	11,935	10,485	13,030	**819,314**	1,062,839	864,849	1,217,755
29-Jun-13	111%	10%	**90%**	10,788	11,935	11,934	13,030	**830,102**	1,074,773	877,879	1,228,377
30-Jun-13	110%	9%	**91%**	10,032	11,935	11,080	13,030	**840,134**	1,085,853	890,909	1,238,999
1-Jul-13	110%	9%	**91%**	11,088	11,935	12,226	13,030	**851,222**	1,098,080	903,939	1,249,622
2-Jul-13	110%	9%	**91%**	14,714	11,935	16,198	13,030	**865,936**	1,114,278	916,968	1,260,244
3-Jul-13	110%	9%	**91%**	16,476	11,935	18,108	13,030	**882,412**	1,132,386	929,998	1,270,866
4-Jul-13	110%	9%	**91%**	15,978	11,935	17,532	13,030	**898,390**	1,149,918	943,028	1,281,489
5-Jul-13	110%	9%	**91%**	15,450	11,935	16,925	13,030	**913,840**	1,166,843	956,058	1,292,111
6-Jul-13	109%	9%	**91%**	15,060	11,935	16,471	13,030	**928,900**	1,183,314	969,088	1,302,734
7-Jul-13	109%	8%	**92%**	17,056	11,935	18,624	13,030	**945,956**	1,201,938	982,118	1,313,356
8-Jul-13	109%	8%	**92%**	13,948	11,935	15,205	13,030	**959,904**	1,217,143	995,148	1,323,978
9-Jul-13	109%	8%	**92%**	12,334	11,935	13,424	13,030	**972,238**	1,230,567	1,008,178	1,334,601
10-Jul-13	109%	8%	**92%**	9,558	11,935	10,386	13,030	**981,796**	1,240,953	1,021,208	1,345,223
11-Jul-13	108%	8%	**92%**	13,650	11,935	14,808	13,030	**995,446**	1,255,760	1,034,238	1,355,845
12-Jul-13	108%	8%	**92%**	14,440	11,935	15,639	13,030	**1,009,886**	1,271,400	1,047,268	1,366,468
13-Jul-13	108%	8%	**92%**	9,755	11,935	10,548	13,030	**1,019,641**	1,281,948	1,060,298	1,377,090
14-Jul-13	108%	7%	**93%**	11,680	11,935	12,603	13,030	**1,031,321**	1,294,551	1,073,328	1,387,712
15-Jul-13	108%	7%	**93%**	13,535	11,935	14,577	13,030	**1,044,856**	1,309,128	1,086,358	1,398,335

(9) Rock Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
16-Jul-13	107%	7%	93%	11,200	11,935	12,040	13,030	1,056,056	1,321,168	1,099,387	1,408,957
17-Jul-13	107%	7%	93%	14,498	11,935	15,556	13,030	1,070,554	1,336,724	1,112,417	1,419,580
18-Jul-13	107%	7%	93%	13,032	11,935	13,957	13,030	1,083,586	1,350,681	1,125,447	1,430,202
19-Jul-13	107%	6%	94%	9,416	11,935	10,066	13,030	1,093,002	1,360,747	1,138,477	1,440,824
20-Jul-13	107%	6%	94%	11,266	11,935	12,021	13,030	1,104,268	1,372,768	1,151,507	1,451,447
21-Jul-13	107%	6%	94%	13,338	11,935	14,205	13,030	1,117,606	1,386,973	1,164,537	1,462,069
22-Jul-13	106%	6%	94%	14,675	11,935	15,600	13,030	1,132,281	1,402,574	1,177,567	1,472,691
23-Jul-13	106%	6%	94%	11,632	11,935	12,342	13,030	1,143,913	1,414,916	1,185,888	1,483,314
24-Jul-13	106%	6%	94%	14,097	11,935	14,954	13,030	1,158,010	1,429,870		1,493,936
25-Jul-13	106%	6%	94%	15,164	11,935	16,082	13,030	1,173,174	1,445,953		1,504,558
26-Jul-13	106%	6%	94%	12,714	11,935	13,481	13,030	1,185,888	1,459,434		1,515,181
27-Jul-13	106%	6%	94%	10,194	10,194	10,806	10,622	1,196,082	1,470,240	1,196,510	1,525,803
28-Jul-13	106%	6%	94%	10,194	10,194	10,804	10,622	1,206,276	1,481,044	1,207,132	1,536,426
29-Jul-13	106%	6%	94%	10,194	10,194	10,801	10,622	1,216,470	1,491,845	1,217,755	1,547,048
30-Jul-13	106%	5%	95%	10,194	10,194	10,787	10,622	1,226,664	1,502,632	1,228,377	1,557,670
31-Jul-13	106%	5%	95%	10,194	10,194	10,779	10,622	1,236,858	1,513,411	1,238,999	1,568,293
1-Aug-13	106%	5%	95%	10,194	10,194	10,771	10,622	1,247,052	1,524,182	1,249,622	1,578,915
2-Aug-13	106%	5%	95%	10,194	10,194	10,763	10,622	1,257,246	1,534,944	1,260,244	1,589,537
3-Aug-13	105%	5%	95%	10,194	10,194	10,754	10,622	1,267,440	1,545,699	1,270,866	1,600,160
4-Aug-13	105%	5%	95%	10,194	10,194	10,746	10,622	1,277,634	1,556,445	1,281,489	1,610,782
5-Aug-13	105%	5%	95%	10,194	10,194	10,738	10,622	1,287,828	1,567,183	1,292,111	1,621,404
6-Aug-13	105%	5%	95%	10,194	10,194	10,730	10,622	1,298,022	1,577,912	1,302,734	1,632,027
7-Aug-13	105%	5%	95%	10,194	10,194	10,722	10,622	1,308,216	1,588,634	1,313,356	1,642,649
8-Aug-13	105%	5%	95%	10,194	10,194	10,713	10,622	1,318,411	1,599,347	1,323,978	1,653,272
9-Aug-13	105%	5%	95%	10,194	10,194	10,705	10,622	1,328,605	1,610,053	1,334,601	1,663,894
10-Aug-13	105%	5%	95%	10,194	10,194	10,697	10,622	1,338,799	1,620,750	1,345,223	1,674,516
11-Aug-13	105%	5%	95%	10,194	10,194	10,689	10,622	1,348,993	1,631,439	1,355,845	1,685,139
12-Aug-13	105%	5%	95%	10,194	10,194	10,683	10,622	1,359,187	1,642,122	1,366,468	1,695,761
13-Aug-13	105%	5%	95%	10,194	10,194	10,678	10,622	1,369,381	1,652,800	1,377,090	1,706,383
14-Aug-13	105%	4%	96%	10,194	10,194	10,672	10,622	1,379,575	1,663,472	1,387,712	1,717,006
15-Aug-13	105%	4%	96%	10,194	10,194	10,667	10,622	1,389,769	1,674,138	1,398,335	1,727,628
16-Aug-13	105%	4%	96%	10,194	10,194	10,661	10,622	1,399,963	1,684,799	1,408,957	1,738,250
17-Aug-13	105%	4%	96%	10,194	10,194	10,655	10,622	1,410,157	1,695,455	1,419,580	1,748,873
18-Aug-13	104%	4%	96%	10,194	10,194	10,650	10,622	1,420,351	1,706,104	1,430,202	1,759,495
19-Aug-13	104%	4%	96%	10,194	10,194	10,644	10,622	1,430,545	1,716,749	1,440,824	1,766,950
20-Aug-13	104%	4%	96%	10,194	10,194	10,639	10,622	1,440,739	1,727,387	1,451,447	1,766,950
21-Aug-13	104%	4%	96%	10,194	10,194	10,633	10,622	1,450,933	1,738,020	1,462,069	1,766,950
22-Aug-13	104%	4%	96%	10,194	10,194	10,628	10,622	1,461,128	1,748,648	1,472,691	1,768,994
23-Aug-13	104%	4%	96%	10,194	10,194	10,622	10,622	1,471,322	1,759,270	1,483,314	1,771,038
24-Aug-13	104%	4%	96%	10,194	10,194	10,616	10,622	1,481,516	1,769,886	1,493,936	1,773,082
25-Aug-13	104%	4%	96%	10,194	10,194	10,611	10,622	1,491,710	1,780,497	1,504,558	1,775,126
26-Aug-13	104%	4%	96%	10,194	10,194	10,605	10,622	1,501,904	1,791,103	1,515,181	1,777,171
27-Aug-13	104%	4%	96%	10,194	10,194	10,600	10,622	1,512,098	1,801,702	1,525,803	1,779,215
28-Aug-13	104%	4%	96%	10,194	10,194	10,594	10,622	1,522,292	1,812,297	1,536,426	1,781,259
29-Aug-13	104%	4%	96%	10,194	10,194	10,589	10,622	1,532,486	1,822,885	1,547,048	1,783,303
30-Aug-13	104%	4%	96%	10,194	10,194	10,583	10,622	1,542,680	1,833,468	1,557,670	1,785,347
31-Aug-13	104%	4%	96%	10,194	10,194	10,578	10,622	1,552,874	1,844,046	1,568,293	1,787,391
1-Sep-13	104%	4%	96%	10,194	10,194	10,572	10,622	1,563,068	1,854,618	1,578,915	1,788,950
2-Sep-13	104%	4%	96%	10,194	10,194	10,567	10,622	1,573,262	1,865,185	1,589,537	1,789,696
3-Sep-13	104%	3%	97%	10,194	10,194	10,561	10,622	1,583,456	1,875,746	1,600,160	1,790,442
4-Sep-13	104%	3%	97%	10,194	10,194	10,556	10,622	1,593,650	1,886,302	1,610,782	1,791,189
5-Sep-13	103%	3%	97%	10,194	10,194	10,550	10,622	1,603,845	1,896,852	1,621,404	1,791,935
6-Sep-13	103%	3%	97%	10,194	10,194	10,545	10,622	1,614,039	1,907,396	1,632,027	1,792,681
7-Sep-13	103%	3%	97%	10,194	10,194	10,539	10,622	1,624,233	1,917,935	1,642,649	1,793,427
8-Sep-13	103%	3%	97%	10,194	10,194	10,534	10,622	1,634,427	1,928,469	1,653,272	1,794,174
9-Sep-13	103%	3%	97%	10,194	10,194	10,528	10,622	1,644,621	1,938,997	1,663,894	1,794,920
10-Sep-13	103%	3%	97%	10,194	10,194	10,523	10,622	1,654,815	1,949,520	1,674,516	1,795,666
11-Sep-13	103%	3%	97%	10,194	10,194	10,517	10,622	1,665,009	1,960,037	1,685,139	1,796,413
12-Sep-13	103%	3%	97%	10,194	10,194	10,512	10,622	1,675,203	1,970,549	1,695,761	1,797,159
13-Sep-13	103%	3%	97%	10,194	10,194	10,506	10,622	1,685,397	1,981,055	1,706,383	1,797,905
14-Sep-13	103%	3%	97%	10,194	10,194	10,501	10,622	1,695,591	1,991,556	1,717,006	1,798,651
15-Sep-13	103%	3%	97%	10,194	10,194	10,495	10,622	1,705,785	2,002,051	1,727,628	1,799,398
16-Sep-13	103%	3%	97%	10,194	10,194	10,490	10,622	1,715,979	2,012,541	1,738,250	1,800,144
17-Sep-13	103%	3%	97%	10,194	10,194	10,484	10,622	1,726,173	2,023,025	1,748,873	1,800,890
18-Sep-13	103%	3%	97%	10,194	10,194	10,479	10,622	1,736,367	2,033,504	1,759,495	1,801,637
19-Sep-13	103%	3%	97%	10,194	10,194	10,473	10,622	1,746,562	2,043,978	1,766,950	1,802,383
20-Sep-13	103%	3%	97%	10,194	10,194	10,468	10,622	1,756,756	2,054,446		1,803,129
21-Sep-13	103%	3%	97%	10,194	10,194	10,463	10,622	1,766,950	2,064,908		1,803,876
22-Sep-13	103%	3%	97%	2,000	2,000	2,052	2,044	1,768,950	2,066,960	1,768,994	1,804,423
23-Sep-13	103%	2%	98%	2,000	2,000	2,051	2,044	1,770,950	2,069,010	1,771,038	
24-Sep-13	102%	2%	98%	2,000	2,000	2,049	2,044	1,772,950	2,071,060	1,773,082	
25-Sep-13	102%	2%	98%	2,000	2,000	2,048	2,044	1,774,950	2,073,108	1,775,126	
26-Sep-13	102%	2%	98%	2,000	2,000	2,047	2,044	1,776,950	2,075,156	1,777,171	
27-Sep-13	102%	2%	98%	2,000	2,000	2,046	2,044	1,778,950	2,077,202	1,779,215	
28-Sep-13	102%	2%	98%	2,000	2,000	2,045	2,044	1,780,950	2,079,247	1,781,259	
29-Sep-13	102%	2%	98%	2,000	2,000	2,044	2,044	1,782,950	2,081,291	1,783,303	
30-Sep-13	102%	2%	98%	2,000	2,000	2,043	2,044	1,784,950	2,083,335	1,785,347	
1-Oct-13	102%	2%	98%	2,000	2,000	2,042	2,044	1,786,950	2,085,377	1,787,391	
2-Oct-13	102%	2%	98%	2,000	2,000	2,041	2,044	1,788,950	2,087,418	1,788,950	
3-Oct-13	102%	2%	98%	737	737	752	746	1,789,687	2,088,169	1,789,696	
4-Oct-13	102%	2%	98%	737	737	751	746	1,790,423	2,088,920	1,790,442	
5-Oct-13	102%	2%	98%	737	737	751	746	1,791,160	2,089,671	1,791,189	
6-Oct-13	102%	2%	98%	737	737	750	746	1,791,897	2,090,421	1,791,935	
7-Oct-13	102%	2%	98%	737	737	750	746	1,792,634	2,091,171	1,792,681	

(9) Rock Excavation Productivity Analysis

Date	But-For Productivity	Productivity Loss	As-Built Efficiency	Effected As-Built Production	Average Effected As-Built Production for the Period	Unimpacted Production	Average Unimpacted Production for the Period	Cummulative Effected As-Built Production	Cummulative Unimpacted Production	Cummulative Average Unimpacted Production	Cummulative Unimpacted Production with lost days removed
8-Oct-13	102%	2%	98%	737	737	750	746	**1,793,371**	2,091,921	1,793,427	
9-Oct-13	102%	2%	98%	737	737	749	746	**1,794,108**	2,092,670	1,794,174	
10-Oct-13	102%	2%	98%	737	737	749	746	**1,794,844**	2,093,419	1,794,920	
11-Oct-13	102%	2%	98%	737	737	748	746	**1,795,581**	2,094,168	1,795,666	
12-Oct-13	102%	1%	99%	737	737	748	746	**1,796,318**	2,094,916	1,796,413	
13-Oct-13	101%	1%	99%	737	737	748	746	**1,797,055**	2,095,663	1,797,159	
14-Oct-13	101%	1%	99%	737	737	747	746	**1,797,792**	2,096,411	1,797,905	
15-Oct-13	101%	1%	99%	737	737	747	746	**1,798,529**	2,097,157	1,798,651	
16-Oct-13	101%	1%	99%	737	737	747	746	**1,799,265**	2,097,904	1,799,398	
17-Oct-13	101%	1%	99%	737	737	746	746	**1,800,002**	2,098,650	1,800,144	
18-Oct-13	101%	1%	99%	737	737	746	746	**1,800,739**	2,099,396	1,800,890	
19-Oct-13	101%	1%	99%	737	737	745	746	**1,801,476**	2,100,141	1,801,637	
20-Oct-13	101%	1%	99%	737	737	745	746	**1,802,213**	2,100,886	1,802,383	
21-Oct-13	101%	1%	99%	737	737	745	746	**1,802,950**	2,101,631	1,803,129	
22-Oct-13	100%		100%	737	737	737	746	**1,803,686**	2,102,368	1,803,876	
23-Oct-13	100%		100%	737	737	737	746	**1,804,423**	2,103,104	1,804,423	

2

6.2 - Overburden Excavation Cost Increase			
Line	Description	UOM	Total
1	Cost of Time Added by Delays, Disruptions, and Changes		
1.1	Total As-built and Projected Days of Production (only includes days with production >1000m^3)	days	163
1.2	Days of Production "But-For" Company-caused Productivity Loss Factors	days	127
1.3	Days Company Owes IKC-ONE	days	36
1.4	Total Daily Cost	$	69,942
1.5	Total Cost of Time Added by Delays, Disruptions, and Changes	$	**2,517,912**
2	Incremental Cost Increase		
2.1	Days of Incremental Cost Increase (not including days Company owes IKC-ONE)	days	127
2.2	Total Incremental Caily Cost Increase (cost of additional acceleration equipment)	$	11,358
2.3	Total Incremental Cost Increase	$	**1,442,466**
	Total Incremental Cost and Cost of Time Added by Delays, Disruptions, and Changes		
3.1	Total Cost to date & projected to the end of the job	$	3,960,378
3.2	GA&O (7.5%)	$	297,028
3.3	Profit (12%)	$	475,245
3.4	**Total:**	**$**	**4,732,652**

3

6.3 Additional Subcontractor Required to Accelerate

Item Description	Rate (1)	RCMI Additional Hours						Total (1)
	$	May	Jun.	Jul.	Aug. (2)	Sep. (2)	Total	$
Drill	128.11	741.50	685.00	677.00	681.00	681.00	3,465.50	443,965.21
Pickup	9.13	252.00	250.00	250.00	250.00	250.00	1,252.00	11,430.76
Flat Deck Pickup	14.90	479.00	425.00	425.00	425.00	425.00	2,179.00	32,467.10
Service rate (3)	49.72	350.50	300.00	300.00	300.00	300.00	1,550.50	77,090.86
IKC-ONE Driller	37.57	1,516.50	1,405.00	1,381.00	1,393.00	1,393.00	7,088.50	266,314.95
RCMI Driller	46.96	110.00	0.00	0.00	0.00	0.00	110.00	5,165.60
RCMI Foreman (4)	68.96	540.50	600.00	600.00	600.00	600.00	2,940.50	202,776.88
Manager (5)	140.95	86.50	30.00	30.00	30.00	30.00	206.50	29,106.18
Total Cost								1,068,317.53
GA&O (7.5%)								80,123.81
Profit (12%)								128,198.10
Total:								1,276,639.44

Notes

1 Surcharge is the additional cost above the project rates.
2 August & September hours are projected based on the average of June & July
3 Mechanic and Truck
4 Keith and Chris
5 Peter and Justin, includes pickup

4

LCP CH0006 Bulk Excavation

6.4 - Rock Excavation Cost Increase			
Line	Description	UOM	Total
1	Cost of Time Added by Delays, Disruptions, and Changes		
1.1	Total As-built and Projected Days of Production (only includes days with production >1000m^3)	days	245
1.2	Days of Production "But-For" Company-caused Productivity Loss Factors	days	217
1.3	Days Company Owes IKC-ONE	days	31
1.4	Total Daily Cost	$	209,508
1.5	Total Cost of Time Added by Delays, Disruptions, and Changes	$	**5,866,222**
2	Incremental Cost Increase		
2.1	Date Accelerated Equipment Started Work	date	2013-07-08
2.2	Projected Acceleration End Date	date	2013-09-15
2.3	Days of Incremental Cost Increase (not including days Company owes IKC-ONE)	days	38
2.4	Total Incremental Caily Cost Increase (cost of additional acceleration equipment)	$	47,426
2.5	Total Incremental Cost Increase	$	**1,802,188**
	Total Incremental Cost and Cost of Time Added by Delays, Disruptions, and Changes		
3.1	Total Cost to date & projected to the end of the job	$	7,668,410
3.2	GA&O (7.5%)	$	575,131
3.3	Profit (12%)	$	920,209
3.4	**Total:**	**$**	**9,163,750**

5

6.5 Additional Site Service Equipment							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo.	Unit Cost ($/hr) (1)	Total Cost ($)
Float (3)	1	2	0.5	30	5	321.24	48,186.00
Skidsteer (2)	1	2	0.5	30	10	189.75	56,925.00
125' Manlift (3)	2	2	3.5	420	6	94.00	236,880.00
Subtotal							341,991.00
Less 20% Overhead							- 56,998.50
Total Cost							**284,992.50**

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers original impact time frame, up to and including April 2013, and the accelerated period following.
3. Covers accelerated period.

6

6.6 Additional Fuel Truck Support							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	UNIT COST (1)	Total Cost ($)
Fuel Truck	1	2	5	300	10	235.24	705,720.00
Subtotal							705,720.00
Less 20% Overhead							- 117,620.00
Total Cost							588,100.00

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers accelerated period.

7

6.7 Additional Bussing							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	UNIT COST (1)	Total Cost ($)
Additional Bussing	2	2	3	360	5	185.24	333,432.00
Subtotal							333,432.00
Less 20% Overhead							- 55,572.00
Total Cost							277,860.00

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers accelerated period.

8

6.8 Additional Garage Support Equipment							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	Unit Cost ($/hr) (1)	Total Cost ($)
Mechanic Truck (Large)	2	2	7.5	900	10	77.00	693,000.00
Mechanic Truck (Large) - Standby	2	2	3.5	420	10	57.75	242,550.00
- Toromont Cat	1	1	11	330	10	77.00	254,100.00
- TMH	1	2	11	660	10	77.00	508,200.00
Mechanic Truck (Small)	1	1	8.5	255	5	23.00	29,325.00
- Atlas Copco	1	1	11	330	10	23.00	75,900.00
Welding Truck	1	2	6	360	10	58.00	208,800.00
Welding Truck - Standby	1	2	5	300	10	43.50	130,500.00
Subtotal							2,142,375.00
Less 20% Overhead							- 357,062.50
Total Cost							1,785,312.50

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers original impact time frame, up to and including April 2013, and the accelerated period following.

9

6.9 Additional Temporary Lighting							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	Unit Cost (1)	Total Cost ($)
Tower Lights	7	1	10	2100	6	30.00	378,000
Subtotal							378,000
Less 20% Overhead							- 63,000
Total Cost							**315,000**

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers accelerated period.

10

6.10 Additional Janitorial, Waste, Cleanup							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	Unit Cost ($/hr) (1)	Total Cost ($)
Site Offices							
Cleaning	2	1	2.5	150	6	127.21	114,489.00
Site Washroom							
Cleaning - Internal	2	1	1	60	6	127.21	45,795.60
Subtotal							160,284.60
Less 20% Overhead							- 26,714.10
Total Cost							**133,570.50**

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers accelerated period.

11

6.11 Additional Staff Vehicles					
JOB DESCRIPTION (BY DEPARTMENT)	PICK-UP WEEKS (1)	HOURS PER WEEK	$ / HOUR	$ / WEEK	TOTAL ($)
MANAGEMENT					
CONSTRUCTION MANAGER	57	70	$ 22.00	$ 1,540.00	$ 87,780.00
ENGINEERING					
SENIOR ENGINEER	23	70	$ 22.00	$ 1,540.00	$ 35,420.00
FIELD ENGINEER	15	70	$ 22.00	$ 1,540.00	$ 23,100.00
HUMAN RESOURCES/TRAVEL					
RUNNER	35	70	$ 22.00	$ 1,540.00	$ 53,900.00
QA/QC					
QA/QC ENGINEER	28	70	$ 22.00	$ 1,540.00	$ 43,120.00
MAINTENANCE					
MAINTENANCE SUPERINTENDENT II	23	70	$ 22.00	$ 1,540.00	$ 35,420.00
MAINTENANCE SUPERINTENDENT	22	70	$ 22.00	$ 1,540.00	$ 33,880.00
DRILLERS/BLASTERS					
DRILL & BLAST SUPERINTENDENT IV	24	70	$ 22.00	$ 1,540.00	$ 36,960.00
EARTHWORKS / FORMWORK					
EARTHWORKS SUPERINTENDENT	21	70	$ 22.00	$ 1,540.00	$ 32,340.00
EARTHWORKS SUPERINTENDENT	20	70	$ 22.00	$ 1,540.00	$ 30,800.00
Total:	**268 Weeks**			**$ 1,540.00**	**$ 412,720.00**

Notes:
(1) Includes total weeks to date and weeks projected to the end of acceleration

12

6.12 Additional Runner							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo. (2)	Unit Cost ($/hr) (1)	Total Cost ($)
Additional Travel Runner	0.5	1	10	150	10	134.24	201,360
Subtotal							201,360
Less 20% Overhead							- 33,560
Total Cost							**167,800**

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers original impact time frame, up to and including April 2013, and the accelerated period following.

13

6.13 Additional Orientation Labour				
Description	Shifts	Avg. Hrs/Shift	Unit Cost ($/hr)	Total Cost ($)
Additional Orientation Labour	90	10	107.87	97,083.00
Subtotal				97,083.00
Less 20% Overhead				- 16,180.50
Total Cost				**80,902.50**

14

6.14 Idle Equipment Costs	
Description	Total Cost ($)
Subtotal	524,081.96
Less 20% Overhead	- 87,346.99
Total Cost	**436,734.97**

15

IKC-ONE IKC-ONE EARTHWORKS CONSTRUCTORS July 2013

LCP CH0006 Bulk Excavation

Equipment	Acceleration	Total Cost
EARTHMOVERS	27	$ 356,401.67
DOZERS	3	$ 13,200.00
EXCAVATOR	7	$ 104,135.00
LOADERS	1	$ 20,100.00
OFF-HIGHWAY TRUCKS	14	$ 202,900.00
ROCK DRILL	1	$ 9,600.00
SKID STEER	1	$ 6,466.67
FORKLIFT	3	$ 41,400.00
FORKLIFT	3	$ 41,400.00
HIGHWAY TRUCKS	27	$ 220,033.34
BUSES	2	$ 17,000.00
FLOAT	1	$ 8,500.00
FUEL TRUCK	1	$ 8,500.00
MECHANICS TRUCK	3	$ 28,733.33
PICKUP	14	$ 96,133.33
TRACTOR	1	$ 8,500.00
VACUUM	1	$ 13,000.00
WELDING TRUCK	1	$ 10,933.33
PWR GEN	11	$ 49,500.00
GEN SETS	3	$ 29,500.00
LGHT PLANT	8	$ 20,000.00
TRAILERS	6	$ 10,500.00
Total	68	$ 677,835.01

16

6.16 Additional Infrastructure and Setup							
Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo.	Unit Cost	Total Cost ($)
Site offices (2, 3)	5				6	1,125.00	33,750.00
Set up/Removal (4)	5					21,671.81	108,359.05
Site washroom (2, 3)	1				6	3,385.00	20,310.00
Set up (4)	1					21,671.81	21,671.81
Electricians (Iskueteu) for site maintenance (1)	2.5	1	10	750	1	97.90	73,425.00
Total Cost							**257,515.86**

Notes

1. Hourly rates based on actual equipment and labour costs for 2013.
2. Covers accelerated period.
3. Montly rental cost.
4. Lump sum cost.

17

IKC-ONE

IKC-ONE EARTHWORKS CONSTRUCTORS
LCP CH0006 Bulk Excavation

July 2013

Description	Qty.	Shifts	Avg. Hrs/Shift	Avg. Hrs/Mo.	Mo.	Unit Cost	Total Cost ($)
- Cleaning - Outside (Pardy's), Per trip:	210					$ 212.50	$ 44,625.00
Total Cost							**44,625.00**

18

6.18 STS (Safety, Tools, Awards, Orientation)	
Description	Total Cost ($)
Total Cost	**$ 198,400.00**

19

6.19 Additional Staff Labour

JOB DESCRIPTION (BY DEPARTMENT)	TOTAL WEEKS (1)	HOURS / WEEK	TOTAL HOURS	$ / HOUR	TOTAL COSTS
MANAGEMENT					
CONSTRUCTION MANAGER	57	40	2,280	$ 150.75	$ 343,710.00
ADMINISTRATION					
PAYROLL CLERK III	31	40	1,240	$ 62.82	$ 77,896.80
PAYROLL CLERK	13	40	520	$ 62.82	$ 32,666.40
ACCOUNTS PAYABLE II	30	40	1,200	$ 62.82	$ 75,384.00
ADMIN STUDENT	18	40	720	$ 62.82	$ 45,230.40
PURCHASING CLERK	21	40	840	$ 62.82	$ 52,768.80
ENGINEERING					
SENIOR ENGINEER	23	40	920	$ 100.50	$ 92,460.00
FIELD ENGINEER II	30	40	1,200	$ 75.38	$ 90,450.00
FIELD ENGINEER	15	40	600	$ 75.38	$ 45,225.00
COST ENGINEER II	22	40	880	$ 87.95	$ 77,391.60
COOP ENGINEERING STUDENT	19	40	760	$ 56.53	$ 42,963.75
COOP ENGINEERING STUDENT	19	40	760	$ 56.53	$ 42,963.75
HUMAN RESOURCES/TRAVEL					
HR MANAGER	29	40	1,160	$ 113.07	$ 131,161.20
ASST TRAVEL COORDINATOR	34	40	1,360	$ 75.38	$ 102,510.00
RUNNER	35	40	1,400	$ 75.38	$ 105,525.00
QA/QC					
QA/QC ENGINEER	28	40	1,120	$ 100.50	$ 112,560.00
QA/QC ENGINEER V	29	40	1,160	$ 75.38	$ 87,435.00
COOP ENGINEERING STUDENT (QAQC)	20	40	800	$ 56.53	$ 45,225.00
SAFETY					
SAFETY ADVISOR	13	40	520	$ 100.50	$ 52,260.00
SAFETY ADVISOR VI	6	40	240	$ 100.50	$ 24,120.00
MAINTENANCE					
MAINTENANCE SUPERINTENDENT II	23	40	920	$ 120.60	$ 110,952.00
MAINTENANCE SUPERINTENDENT	22	40	880	$ 120.60	$ 106,128.00
MAINTENANCE STUDENT	18	40	720	$ 75.38	$ 54,270.00
DRILLERS/BLASTERS					
DRILL & BLAST SUPERINTENDENT IV	24	40	960	$ 120.60	$ 115,776.00
EARTHWORKS / FORMWORK					
EARTHWORKS SUPERINTENDENT	21	40	840	$ 120.60	$ 101,304.00
EARTHWORKS SUPERINTENDENT	20	40	800	$ 120.60	$ 96,480.00
Total:			**24,800**		**$ 2,264,816.70**

Notes:
(1) Includes total weeks to date and weeks projected to the end of acceleration

20

6.20 Additional Staff Live Out Allowance			
JOB DESCRIPTION (BY DEPARTMENT)	MONTHS (1)	MONTHLY LIVE OUT ALLOWANCE	TOTAL COST
MANAGEMENT			
PROJECT MANAGER	7	$ 3,500.00	$ 24,500.00
ADMINISTRATION			
OFFICE MANAGER	7	$ 3,500.00	$ 24,500.00
ASSISTANT OFFICE MANAGER	7	$ 3,500.00	$ 24,500.00
ACCOUNTS PAYABLE I	7	$ 3,500.00	$ 24,500.00
ENGINEERING			
PROJECT ENGINEER	7	$ 3,500.00	$ 24,500.00
PROJECT CONTROL MANAGER	7	$ 3,500.00	$ 24,500.00
SENIOR ENGINEER	6	$ 3,500.00	$ 21,000.00
HUMAN RESOURCES/TRAVEL			
HR MANAGER	7	$ 3,500.00	$ 24,500.00
QA/QC			
QA/QC MANAGER	7	$ 3,500.00	$ 24,500.00
QA/QC ENGINEER II	6	$ 3,500.00	$ 21,000.00
SAFETY			
SAFETY MANAGER I	7	$ 3,500.00	$ 24,500.00
ASST SAFETY MANAGER	7	$ 3,500.00	$ 24,500.00
SURVEY			
SURVEY MANAGER	7	$ 3,500.00	$ 24,500.00
SURVEY ENGINEER	6	$ 3,500.00	$ 21,000.00
MAINTENANCE			
MAINTENANCE MANAGER I	7	$ 3,500.00	$ 24,500.00
MAINTENANCE MANAGER II	7	$ 3,500.00	$ 24,500.00
EARTHWORKS / FORMWORK			
EARTHWORKS SUPERINTENDENT I	7	$ 3,500.00	$ 24,500.00
EARTHWORKS SUPERINTENDENT IV	7	$ 3,500.00	$ 24,500.00
Total:	**129**	**$ 3,500.00**	**$ 451,500.00**

Notes:

(1) Includes total months after April 2013 only to date and weeks projected to the end of acceleration

21

6.21 Additional Staff Air Fare				
JOB DESCRIPTION (BY DEPARTMENT)	TOTAL WEEKS (1)	# OF ROTATIONS	$ PER RETURN FLIGHT	TOTAL COST
MANAGEMENT				
CONSTRUCTION MANAGER	57	19	$ 1,050.00	$ 19,950.00
ADMINISTRATION				
PAYROLL CLERK III	31	11	$ 1,050.00	$ 11,550.00
PAYROLL CLERK	13	5	$ 1,050.00	$ 5,250.00
ACCOUNTS PAYABLE II	30	10	$ 1,050.00	$ 10,500.00
ADMIN STUDENT	18	6	$ 1,050.00	$ 6,300.00
PURCHASING CLERK	21	7	$ 1,050.00	$ 7,350.00
ENGINEERING				
SENIOR ENGINEER	23	8	$ 1,050.00	$ 8,400.00
FIELD ENGINEER II	30	10	$ 1,050.00	$ 10,500.00
FIELD ENGINEER	15	5	$ 1,050.00	$ 5,250.00
COST ENGINEER II	22	8	$ 1,050.00	$ 8,400.00
COOP ENGINEERING STUDENT	19	7	$ 1,050.00	$ 7,350.00
COOP ENGINEERING STUDENT	19	7	$ 1,050.00	$ 7,350.00
HUMAN RESOURCES/TRAVEL				
HR MANAGER	29	10	$ 1,050.00	$ 10,500.00
ASST TRAVEL COORDINATOR	34	12	$ 1,050.00	$ 12,600.00
RUNNER	35	12	$ 1,050.00	$ 12,600.00
QA/QC				
QA/QC ENGINEER	28	10	$ 1,050.00	$ 10,500.00
QA/QC ENGINEER V	29	10	$ 1,050.00	$ 10,500.00
COOP ENGINEERING STUDENT (QAQC)	20	7	$ 1,050.00	$ 7,350.00
SAFETY				
SAFETY ADVISOR	13	5	$ 1,050.00	$ 5,250.00
SAFETY ADVISOR VI	6	2	$ 1,050.00	$ 2,100.00
MAINTENANCE				
MAINTENANCE SUPERINTENDENT II	23	8	$ 1,050.00	$ 8,400.00
MAINTENANCE SUPERINTENDENT	22	8	$ 1,050.00	$ 8,400.00
MAINTENANCE STUDENT	18	6	$ 1,050.00	$ 6,300.00
DRILLERS/BLASTERS				
DRILL & BLAST SUPERINTENDENT IV	24	8	$ 1,050.00	$ 8,400.00
EARTHWORKS / FORMWORK				
EARTHWORKS SUPERINTENDENT	21	7	$ 1,050.00	$ 7,350.00
EARTHWORKS SUPERINTENDENT	20	7	$ 1,050.00	$ 7,350.00
Total:				**$ 225,750.00**

Notes:
(1) Includes total weeks to date and weeks projected to the end of acceleration

22

6.22 Additional Staff Travel Expenses				
JOB DESCRIPTION (BY DEPARTMENT)	TOTAL WEEKS (1)	# OF ROTATIONS	$ PER RETURN FLIGHT	TOTAL COST
MANAGEMENT				
CONSTRUCTION MANAGER	57	19	$ 300.00	$ 5,700.00
ADMINISTRATION				
PAYROLL CLERK III	31	11	$ 300.00	$ 3,300.00
PAYROLL CLERK	13	5	$ 300.00	$ 1,500.00
ACCOUNTS PAYABLE II	30	10	$ 300.00	$ 3,000.00
ADMIN STUDENT	18	6	$ 300.00	$ 1,800.00
PURCHASING CLERK	21	7	$ 300.00	$ 2,100.00
ENGINEERING				
SENIOR ENGINEER	23	8	$ 300.00	$ 2,400.00
FIELD ENGINEER II	30	10	$ 300.00	$ 3,000.00
FIELD ENGINEER	15	5	$ 300.00	$ 1,500.00
COST ENGINEER II	22	8	$ 300.00	$ 2,400.00
COOP ENGINEERING STUDENT	19	7	$ 300.00	$ 2,100.00
COOP ENGINEERING STUDENT	19	7	$ 300.00	$ 2,100.00
HUMAN RESOURCES/TRAVEL				
HR MANAGER	29	10	$ 300.00	$ 3,000.00
ASST TRAVEL COORDINATOR	34	12	$ 300.00	$ 3,600.00
RUNNER	35	12	$ 300.00	$ 3,600.00
QA/QC				
QA/QC ENGINEER	28	10	$ 300.00	$ 3,000.00
QA/QC ENGINEER V	29	10	$ 300.00	$ 3,000.00
COOP ENGINEERING STUDENT (QAQC)	20	7	$ 300.00	$ 2,100.00
SAFETY				
SAFETY ADVISOR	13	5	$ 300.00	$ 1,500.00
SAFETY ADVISOR VI	6	2	$ 300.00	$ 600.00
MAINTENANCE				
MAINTENANCE SUPERINTENDENT II	23	8	$ 300.00	$ 2,400.00
MAINTENANCE SUPERINTENDENT	22	8	$ 300.00	$ 2,400.00
MAINTENANCE STUDENT	18	6	$ 300.00	$ 1,800.00
DRILLERS/BLASTERS				
DRILL & BLAST SUPERINTENDENT IV	24	8	$ 300.00	$ 2,400.00
EARTHWORKS / FORMWORK				
EARTHWORKS SUPERINTENDENT	21	7	$ 300.00	$ 2,100.00
EARTHWORKS SUPERINTENDENT	20	7	$ 300.00	$ 2,100.00
Total:				**$ 64,500.00**

Notes:
(1) Includes total weeks to date and weeks projected to the end of acceleration

23

6.23 Additional IT Equipment	
Description	Total Cost ($)
Server, Network, License, Printers	27,000
Total Cost	**27,000**

24

6.24 Additional Medicals				
Description	Qty	UOM	Unit Cost	Total Cost ($)
Additional Medicals	90	PEOPLE	290	$ 26,100.00
Total Cost				**$ 26,100.00**

25

6.25 Cancellation Fee Paid on Staff Dorm	
Description	Total Cost ($)
Management Dorm Pre-payment	$ 98,424.75
Total Cost	**$ 98,424.75**

26

6.26 Request for Equitable Adjustment Preparation Costs

ITEM	QTY	UOM	Cost ($)	Total
SPECIAL PROJECTS MANAGER				
LABOUR	320	HOURS	175.88	$ 56,280.00
TRAVEL	2	FLIGHTS	1,050.00	$ 2,100.00
ACCOMMODATIONS	26	NIGHTS	225.00	$ 5,850.00
COST ENGINEER				
LABOUR	320	WEEKS	87.95	$ 28,142.40
TRAVEL	2	FLIGHTS	1,050.00	$ 2,100.00
ACCOMMODATIONS / MEALS	26	NIGHTS	225.00	$ 5,850.00
COST ENGINEER				
LABOUR	320	HOURS	87.95	$ 28,142.40
TRAVEL	5	TRIPS	1,050.00	$ 5,250.00
ACCOMMODATIONS / MEALS	52	NIGHTS	225.00	$ 11,700.00
Total Cost:				**$ 145,414.80**

27

6.27 Extended Bonds, Insurance, Fees, etc.	
Description	Total Cost ($)
Total Cost	**$ 352,012.00**

28

28

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-13
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	0
Contractor:	IKC-ONE Earthworks Constructors	Date:	05-Apr-13

Description of Change Request and Reason (attach all supporting information):

To establish a change order for all bussing (vehicle and associated operator costs) for transporting workers from offsite accommodations and onto site.

According to Item 2.1.6 in Exhibit 2, board and lodging to a Temporary Construction Camp at the Site is the responsibility of the Company. Access to this camp was supposed to be available from no later than January 1, 2013. No Temporary Construction Camp at Site had been made available and the Contractor had been required to incurr additional bussing from offsite accommodations.

Supporting information comprises the following and forms part of this Change Request:

In accordance with Exhibit 2, Compensation, and Item 2.1.6. Please refer to attached claim analysis; Bussing for Offfsite Accommodation Estimate.

Description of impact on Control Schedule:

Impact on Control Schedule is unknown at this point.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Refer to attached "Bussing for Offsite Accommodation Estimate"	1	Item		344,627.50
		Value of this Change Request			$ 344,627.50
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE

Bussing for Offsite Accommodation Estimate

Contract: Bulk Excavation and Associated Works

Contract No.: CH0006

Item	Description	UOM	Unit Rate	Quantity	Total
A	**Equipment**				
1	Pass Bus	Hour	51.00	1,130	57,630
2	Pickup	Hour	22.00	300	6,600
	Sub Total - Equipment				**64,230.00**
B	**Labour**				
1	Group 1 Heavy Trucks	Hour	106.25	1,430	151,938
	Sub Total - Labour				**280,397.50**

Total Estimated Cost	**344,627.50**

Notes:

Estimate is from Jan 1 to April 30 2013.

Travel time is consider to be from offsite accommodation to approx where Temporary Camp installation was supposed to be provided.

2.5hrs of travel time/bus/shift. Two busses on two shifts (as of Jan 18 2013) of work.

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0046-00

April 12, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Requests

Dear Mr. O'Brien,

As per Article 14 of the Agreement, sign and return the enclosed Change Requests for the following items:

- Installation of the 2400 mm culvert on the Site Service Access Road as detailed in CH0006-ECN-006.
- Installation of the 1000 mm culvert on the Site Service Access Road as detailed in CH0006-ECN-006.
- Item 18.2 Contractor Temporary Site Services – Construction Power (rate only)
- Site Snow Clearing
- Site Services
- Signage on Permanent Access Road
- Safety Berm on Permanent Access Road
- Fuel and Gasoline Escalation
- Bussing for Offsite Accommodation

If you require any further information, please do not hesitate to contact me at your convenience.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

29

29

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0069-00

April 27, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Contract CH0006
Change Request # CH0006-CR-200-016 Rev 01 Additional Costs Associated with the Provision of Room and Board Services

Dear Mr. O'Brien,

As per the onsite contract administration meeting on April 24, 2013, IKC-ONE is resubmitting Change Request # CH0006-CR-200-016 Rev 01 for the additional costs associated with the provision of offsite room and board services. This supersedes the revision submitted in letter number CH0006-IO-NE-0054-00 dated April 22, 2013. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-16
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	1
Contractor:	IKC-ONE Earthworks Constructors	Date:	24-Apr-13

Description of Change Request and Reason (attach all supporting information):

In accordance with Exhibit 2-Compensation, this change request consists of provisions for extra costs related to provision of room and board services in Goose Bay, exclusive of HST, for Contractor labour resources deployed at the Site prior to the availability of the Site Accomodation Camp. This request represents an estimated cost at this time. Actual cost plus applicable markup will be applied once cost is finalized.

Supporting information comprises the following and forms part of this Change Request:

In reference to Exhibit 12-Site Conditions, the Company has not made available, from January 1, 2013, a (Temporary) Construction Camp for the Contractor's labour resources deployed at the Site. Following this date, the Contractor has made the necessary arrangements for provisions to room and board services in Goose Bay and there are additional costs associated with this. Cost Impact is estimated below for budgeting purposes (the cost impact revised to reflect items captured in CO#1 and CR#13)

Description of impact on Control Schedule:

Impact on Control Schedule to be determined.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Property Manager, driver around town, etc	CP	1	$ 100,000.00	$ 100,000.00
	Paint Busses	CP	1	$ 50,000.00	$ 50,000.00
	Additional Pickups	CP	1	$ 200,000.00	$ 200,000.00
	Seat belts (for the busses)	CP	1	$ 50,000.00	$ 50,000.00
	Misc (mechanics time, etc)	CP	1	$ 100,000.00	$ 100,000.00
	Additional Travel (Utilizing 2 + 1 rotation)	CP	1	$ 1,800,000.00	$ 1,800,000.00
	Markup (35%)				**$ 805,000.00**
	Please refer to "Change Request 200-16 Rev 1 Notes" attached to this document for further details of the descriptions provided.				
		Value of this Change Request			**$ 3,105,000.00**
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-16
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	0
Contractor:	IKC-ONE Earthworks Constructors	Date:	20-Apr-13

Description of Change Request and Reason (attach all supporting information):

In accordance with Exhibit 2-Compensation, this change request consists of provisions for extra costs related to provision of room and board services in Goose Bay, exclusive of HST, for Contractor labour resources deployed at the Site prior to the availability of the Site Accomodation Camp. This request represents an estimated cost at this time. Actual cost plus applicable markup will be applied once cost is finalized.

Supporting information comprises the following and forms part of this Change Request:

In reference to Exhibit 12-Site Conditions, the Company has not made available, from January 1, 2013, a (Temporary) Construction Camp for the Contractor's labour resources deployed at the Site. Following this date, the Contractor has made the necessary arrangements for provisions to room and board services in Goose Bay and there are additional costs associated with this. Cost Impact is estimated below for budgeting purposes (the cost impact revised to reflect items captured in CO#1 and CR#13)

Description of impact on Control Schedule:

Impact on Control Schedule unkonwn at this point.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Property Manager, driver around town, etc	CP	1	$ 100,000.00	$ 100,000.00
	Paint Busses	CP	1	$ 50,000.00	$ 50,000.00
	Additional Pickups	CP	1	$ 200,000.00	$ 200,000.00
	Seat belts (for the busses)	CP	1	$ 50,000.00	$ 50,000.00
	Misc (mechanics time, etc)	CP	1	$ 100,000.00	$ 100,000.00
	Additional Travel	CP	1	$ 1,800,000.00	$ 1,800,000.00
	Markup (35%)	CP	1	$ 1,050,000.00	$ 1,050,000.00
		Value of this Change Request			$ 3,350,000.00
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0054-00

April 22, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Contract CH0006
Change Requests

Dear Mr. O'Brien,

As per Article 14 of the Agreement, sign and return the enclosed Change Requests for the following items:

- Item 18.2 Contractor Temporary Site Services – Construction Power (rate only) – revised and date range specified
- Site Snow Clearing (revised with date range specified)
- Site Services (revised with date range specified)
- Fuel and Gasoline Escalation (revised and date range specified)
- Provision of temporary power to Client site office
- Additional costs associated with the provision of offsite room and board services

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709)726-9095
Fax: (709)726-9106

30

30

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0076-00

April 29, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Contract CH0006
Change Request # CH0006-CR-200-017 Rev 00 - Bus Services to and from Goose Bay

Dear Mr. O'Brien,

IKC-ONE is submitting Change Request # CH0006-CR-200-017 Rev 00 for the Bus Services to and from Goose Bay. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-017
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	29-Apr-13

Description of Change Request and Reason (attach all supporting information):

Following the opening of the temporary camp (April 13/13), no services were in place to transport local employees from a designated location in Goose Bay to the project Site for work and return or permit on-site parking. IKC-ONE has been requested to arrange this service until such time as the Client implements the service.

Supporting information comprises the following and forms part of this Change Request:

See attached letters CH0006-IO-NE-L-0048-00 and CH0006-IO-NE-L-0076-00.

Description of impact on Control Schedule:

No impact on Control Schedule.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	*(2) Busses for roundtrip service to and from Goose Bay for 60 days	BUS DAY	120	1,500.00	180,000.00
	Markup (35%)				63,000.00
	*Note: This estimate is based on the current outside service cost. The actual billable amount for this change will be the outside service invoice plus IKC-ONE markup amount.				
		Value of this Change Request			$ 243,000.00
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

31

31

2

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0077-00

April 29, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-018 Rev 00 - Additional Costs Associated with Piloting Transports on the SSAR

Dear Mr. O'Brien,

As per the onsite contract administration meeting on April 24, 2013, IKC-ONE is submitting Change Request # CH0006-CR-200-018 Rev 00 for the additional costs associated with the piloting of transports from security to the contractor's laydown. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-18
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	29-Apr-13

Description of Change Request and Reason (attach all supporting information):

To establish a change order for all piloting (vehicle and associated operator costs) of transports from security to approx. 5km onto the Site Service Access Road (SSAR).

Supporting information comprises the following and forms part of this Change Request:

In accordance with Item 2.1 Section 1 of Exhibit 12, IKC-ONE requests a Change Order be issued for the additional cost associated with the piloting of transports from security to approx. 5km onto the Site Service Access Road (SSAR). The onsite Client representative has asked for this to be done due to this narrow section on the SSAR.

Description of impact on Control Schedule:

No Impact on Control Schedule.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Refer to attached "Additional Costs Associated with Piloting Transports on the SSAR"	1	Item		$ 36,871.88
	Estimate from the period of March 31 2013 to October 31 2013 based on estimated cost (time and materials)				
	Reimbursement will be based on actual LEM records and compensated in accordance with Exhibit 2 Section 4				
		Value of this Change Request			$ 36,871.88
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE

Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

32

32

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0078-00

May 8, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-019 Rev 00 - Late Emergency Vehicle Onsite Services

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-019 Rev 00 for the additional costs and schedule delay associated with the Late Emergency Vehicle Onsite Services on January 11, 2013. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-019
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	3-May-13

Description of Change Request and Reason (attach all supporting information):

To establish a change order for all costs and half day lost schedule associated with the late arrival of emergency services to site , due to "Idle No More" protest which occurred on January 11, 2013. IKC-ONE was not permitted by the Owner's Engineer to commence dayshift operations until the service was in place.

Supporting information comprises the following and forms part of this Change Request:

As a change to the contract, IKC-ONE requests a Change Order per Article 14.8 of the agreement. See document CH0006-IO-NE-L-0009-00.

Description of impact on Control Schedule:

The Impact on Control Schedule is approximately a half day (0.5) lost.

Revised Finish Date: An additional half day (0.5) to the finished date

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Late arrival of emergency Services Onsite (January 11, 2013). Refer to "Cost Impact Associated to the Late Arrival of Emergency Services Onsite" for estimate.	1	Item		40,000.00
	Reimbursement will be on time and materials, based on actual LEM records and compensated in accordance with Exhibit 2 Section 4				
		Value of this Change Request			$ 40,000.00
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0078-00

May 3, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Contract CH0006
Change Request # CH0006-CR-200-019 Rev 00 - Late Emergency Vehicle Onsite Services

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-019 Rev 00 for the additional costs and schedule delay associated with the Late Emergency Vehicle Onsite Services on January 11, 2013. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

33

33

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0079-00

May 7, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-020 Rev 00 - Delays Due to the April 5th and 6th Protests

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-020 Rev 00, requesting reimbursement of additional costs and impacts associated with protests on April 5th and 6th. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your earliest convenience.

Sincerely,

IKC-ONE Earthworks Constructors

W. Keats Co

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-020
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	07-May-13

Description of Change Request and Reason (attach all supporting Information):

To establish a change order for all costs and lost schedule associated with the protests occuring April 5th and 6th

Supporting Information comprises the following and forms part of this Change Request:

In accordance with Article 31.5 of the agreement, IKC-ONE notifies the Company requests a change order be issued for the schedule delay and associated costs.

Description of Impact on Control Schedule:

The Impact on Control Schedule is two (2) days production lost.

Revised Finish Date: An additional two (2) days to the finish date.

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Protest Occuring April 5th and 6th, 2013. Refer to "Protests APR 5&6" for estimate. Reimbursement will be on time and materials, based on actual LEM records and compensated in accordance with Exhibit 2 Section 4	1	Item		250,000.00
				Value of this Change Request	$ 250,000.00
				Previous Contract Price	
				Revised Contract Price	

CONTRACTOR SIGNATURE

Reviewed and Approved by:	Name	Signature	Date
Contractor Representative	Willis Keats	[signature]	May 7/13

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE

Protests APR 5&6
Budgetary Estimate

Labour Hrs	Hrs x	1.5Hrs x	2Hrs x	Rate x	Rate 1.5x	Rate 2x	Cost	
Carpenter	0	20	20	105.37	133.71	170.04	6075	
Non Working- Carpenter Foreman	0	5	5	113.21	144.25	183.29	1637.7	
OE - Apprentice	0	15	15	104.01	131.88	167.75	4494.45	
OE- Class 2	0	50	50	109.63	139.44	177.24	15834	
OE - Non-Working Foreman	0	10	10	120.19	153.63	195.08	3487.1	
Labourer- Non-Working Foreman	0	10	10	108.05	137.31	174.57	3118.8	
Labourer- Class1	0	45	45	104.82	132.96	169.1	13592.7	
Group 1 - Heavy trucks	0	25	25	106.25	134.89	171.53	7660.5	
Teamster- Foreman	0	5	5	109.03	138.62	176.22	1574.2	
					TOTAL LABOUR		57,474.45	

Equipment	Hr	Day	Week	Standby Hr Rate	Standby Day Rate	Standby Week Rate	Cost	Rate Notes
PICKUP FORD F150	340			16.50	165.00	1,155.00	5,610.00	
AIR COMPRESSOR ATLAS COPCO	15			31.50	315.00	2,205.00	472.50	
BOBCAT - 262C	15			71.25	712.50	4,987.50	1,068.75	SET EQUAL TO CAT 315
BOOM TRUCK 25T	10			99.75	997.50	6,982.50	997.50	
COMPACTOR CAT CS563	15			66.75	667.50	4,672.50	1,001.25	
DOZER CAT D10	7			346.50	3,465.00	24,255.00	2,425.50	
DOZER CAT D8N	22			193.75	1,937.50	13,912.50	4,372.50	
DOZER CAT D9N	7			281.25	2,812.50	19,687.50	1,968.75	
DRILL ATLAS COPCO D7	7			192.00	1,920.00	13,440.00	1,344.00	
DRILL ATLAS COPCO D9	7			192.00	1,920.00	13,440.00	1,344.00	SET EQUAL TO D7
DRILL ATLAS COPCO L8	25			317.25	3,172.50	22,207.50	7,931.25	
DRILL ATLAS COPCO T40R	25			192.00	1,920.00	13,440.00	4,800.00	SET EQUAL TO D7
EXCAVATOR CAT 330	7			135.00	1,350.00	9,450.00	945.00	SET EQUAL TO 336
EXCAVATOR CAT 336	25			135.00	1,350.00	9,450.00	3,375.00	
EXCAVATOR CAT 345	15			150.00	1,500.00	10,500.00	2,250.00	
EXCAVATOR HITACHI EX1200	7			420.00	4,200.00	29,400.00	2,940.00	
EXCAVATOR PC1250	7			420.00	4,200.00	29,400.00	2,940.00	SET EQUAL TO 1200
EXCAVATOR PC2000	7			617.00	6,170.00	43,190.00	4,319.00	
EXPLOSIVES TRUCK	7			35.25	352.50	2,467.50	246.75	
FLOAT MACK GU 713	7			140.25	1,402.50	9,817.50	981.75	
FORKLIFT - JLG	25			53.25	532.50	3,727.50	1,331.25	SET EQUAL TO JLG MAN LIFT
FORKLIFT - JCB	7			53.25	532.50	3,727.50	372.75	SET EQUAL TO JLG MAN LIFT
FUEL TRUCK MACK RD688S	25			75.75	757.50	5,302.50	1,893.75	
GRADER CAT 14H	7			123.75	1,237.50	8,662.50	866.25	
GRADER CAT 14M	15			123.75	1,237.50	8,662.50	1,856.25	SET EQUAL TO 14H
GROVE CRANE 60T	7			201.00	2,010.00	14,070.00	1,407.00	
LOADER CAT 938G	7			71.25	712.50	4,987.50	498.75	
LOADER CAT 966G	15			112.50	1,125.00	7,875.00	1,687.50	
LOADER CAT 980	7			236.25	2,362.50	16,537.50	1,653.75	SET EQUAL TO 938
LUBE TRUCK MACK RD688S	7			86.25	862.50	6,037.50	603.75	
MECH. TRUCK INTERNATIONAL	30			57.75	577.50	4,042.50	1,732.50	
OFF-HIGHWAY TRUCK CAT 740 ARTIC	25			187.50	1,875.00	13,125.00	4,687.50	
OFF-HIGHWAY TRUCK CAT 773D	60			236.25	2,362.50	16,537.50	14,175.00	
OFF-HIGHWAY TRUCK CAT 775D	40			262.50	2,625.00	18,375.00	10,500.00	
PASS BUS FREIGHTLINER SOLARIS	50			38.25	382.50	2,677.50	1,912.50	
TRAXXON DRILL ATTACHMENT	7			97.41	974.10	6,818.70	681.87	SET EQUAL TO D7
WELDING MACHINE MILLER	25			20.25	202.50	1,417.50	506.25	
WELDING TRUCK INTERNATIONAL 4700	15			43.50	435.00	3,045.00	652.50	
					TOATL EQUIPMENT		98,352.62	

NOTE: ** ESTIMATE DOES NOT INCLUDE INDIRECT / OVERHEAD COSTS (OFFICE INFRASTRUCTURE, STAFF SALARY, ETC)

SUBTOTAL COST	155,827.07
ESTIMATE OF INDIRECTS NOT CAPTURED ABOVE	75,000.00
CONTINGENCY	19,172.93
TOTAL COST (excl. HST)	250,000.00

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0079-00

May 5, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-020 Rev 00 - Delays Due to the April 5th and 6th Protests

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-020 Rev 00 requesting reimbursement of additional cost and impacts associated with protests on April 5th and 6th, 2013. Please sign and return at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

34

34

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0080-00

May 7, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-021 Rev 00 - Additional Time, Craft Hours, Equipment Standby Waiting for Crews to Arrive on Specified Days

Dear Mr. O'Brian,

Attached please find Change Request form CH0006-CR-200-021 Rev 00 for the additional costs associated with late crew arrivals, additional labour cost, equipment associated with travel delays on the Site Service Access Road (SSAR) due to its the deteriorated condition on March 14 to 16, 18 to 20, 27 and 28 2013. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-021
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	07-May-13

Description of Change Request and Reason (attach all supporting information):

This CR provides the cost implications that IKC-ONE has experienced for additional time, craft hours, equipment standby waiting for crews to arrive, as a result of delayed hours during travel on days (March 14th -16th, 18th-20th, 27th and 28th 2013), from soft conditions prevented buses from arriving/leaving on site.

Supporting information comprises the following and forms part of this Change Request:

See documents CH0006-IO-NE-L-0035-00, CH0006-IO-NE-L-0036-00 and CH0006-IO-NE-L-0037-00.

Description of impact on Control Schedule:

The Impact on Control Schedule is under review.

Revised Finish Date: N/A

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Late shift starts and equipment standby associated with the degraded condition of the site access road. Refer to "Additional time, craft hours, equipment standby waiting for crews to arrive on March 14th -16th, 18th-20th, 27th and 28th 2013" for estimate.	1	Item		700,000.00
	Reimbursement will be on time and materials, based on actual LEM records and compensated in accordance with Exhibit 2 Section 4				
				Value of this Change Request	$ 700,000.00
				Previous Contract Price	
				Revised Contract Price	

CONTRACTOR SIGNATURE

Reviewed and Approved by:	Name	Signature	Date
Contractor Representative	Willie Kosta		May 7/13

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE

Additional time, craft hours, equipment standby waiting for crews to arrive on March 14th -16th, 18th-20th, 27th and 28th 2013
Budgetary Estimate for delay time on March 14th -16th, 18th-20th, 27th and 28th 2013

Labour Hrs	Hrs x	1.5Hrs x	2Hrs x	Rate x	Rate 1.5x	Rate 2x	Cost	
Carpenter	10	10	10	105.37	133.71	170.04	4081.2	
Apprentice Carpenter	0	0	5	105.37	133.71	170.04	850.2	
Non Working- Carpenter Foreman	5	5	5	113.21	144.25	183.29	2203.75	
OE - Apprentice	15	10	10	101.01	131.88	167.75	4556.45	
OE- Class 2	25	25	25	109.63	139.44	177.24	10657.75	
OE - Non-Working Foreman	10	10	10	120.19	153.63	195.08	4659	
Labourer- Non-Working Foreman	20	20	20	108.05	137.31	174.57	8398.6	
Labourer- Class1	80	30	30	101.82	132.96	169.1	12206.4	
Labourer- Class2	5	5	5	101.91	133.08	169.26	2036.25	
Group 1 - Heavy trucks	60	40	40	106.25	134.89	171.53	18631.8	
Teamster- Foreman	15	15	15	109.03	138.62	176.22		
	0	0	0					
					TOTAL LABOUR		69,321.40	

Equipment	Hr	Day	Week	Standby Hr Rate	Day Rate		Week Rate	Cost	Rate Notes
PICKUP FORD F150	1500				16.50	165.00	1,155.00	24,750.00	
AIR COMPRESSOR ATLAS COPCO	65				31.50	315.00	2,205.00	2,047.50	
BOBCAT - 262C	65				71.25	712.50	4,987.50	4,631.25	RATE SET EQUAL TO CAT 315
BOOM TRUCK 25T	35				99.75	997.50	6,982.50	3,491.25	
COMPACTOR CAT CS563	65				66.75	667.50	4,672.50	4,338.75	
DOZER CAT D10	35				346.50	3,465.00	24,255.00	12,127.50	
DOZER CAT D8N	100				198.75	1,987.50	13,912.50	19,875.00	
DOZER CAT D9N	35				281.25	2,812.50	19,687.50	9,843.75	
DRILL ATLAS COPCO D7	35				192.00	1,920.00	13,440.00	6,720.00	
DRILL ATLAS COPCO D9	35				192.00	1,920.00	13,440.00	6,720.00	RATE SET EQUAL TO D7
DRILL ATLAS COPCO L8	100				317.25	3,172.50	22,207.50	31,725.00	
DRILL ATLAS COPCO T40R	100				192.00	1,920.00	13,440.00	19,200.00	RATE SET EQUAL TO D7
EXCAVATOR CAT 330	35				135.00	1,350.00	9,450.00	4,725.00	RATE SET EQUAL TO 336
EXCAVATOR CAT 336	100				135.00	1,350.00	9,450.00	13,500.00	
EXCAVATOR CAT 345	70				150.00	1,500.00	10,500.00	10,500.00	
EXCAVATOR HITACHI EX1200	35				420.00	4,200.00	29,400.00	14,700.00	
EXCAVATOR PC1250	35				420.00	4,200.00	29,400.00	14,700.00	RATE SET EQUAL TO 1200
EXCAVATOR PC2000	35				617.00	6,170.00	43,190.00	21,595.00	
EXPLOSIVES TRUCK	35				35.25	352.50	2,467.50	1,233.75	
FLOAT MACK GU 713	35				140.25	1,402.50	9,817.50	4,908.75	
FORKLIFT - JLG	100				53.25	532.50	3,727.50	5,325.00	RATE SET EQUAL TO JLG MAN LIFT
FORKLIFT - JCB	35				53.25	532.50	3,727.50	1,863.75	RATE SET EQUAL TO JLG MAN LIFT
FUEL TRUCK MACK RD688S	100				75.75	757.50	5,302.50	7,575.00	
GRADER CAT 14H	35				123.75	1,237.50	8,662.50	4,331.25	
GRADER CAT 14M	70				123.75	1,237.50	8,662.50	8,662.50	RATE SET EQUAL TO 14H
GROVE CRANE EOT	35				201.00	2,010.00	14,070.00	7,035.00	
LOADER CAT 938G	35				71.25	712.50	4,987.50	2,493.75	
LOADER CAT 966G	70				112.50	1,125.00	7,875.00	7,875.00	
LOADER CAT 980	35				236.25	2,362.50	16,537.50	8,268.75	RATE SET EQUAL TO 988
LUBE TRUCK MACK RD688S	35				86.25	862.50	6,037.50	3,018.75	
MECH. TRUCK INTERNATIONAL	140				57.75	577.50	4,042.50	8,085.00	
OFF-HIGHWAY TRUCK CAT 740 ARTIC	100				187.50	1,875.00	13,125.00	18,750.00	
OFF-HIGHWAY TRUCK CAT 773D	300				236.25	2,362.50	16,537.50	70,875.00	
OFF-HIGHWAY TRUCK CAT 775D	170				262.50	2,625.00	18,375.00	44,625.00	
PASS BUS FREIGHTLINER SOLARIS	250				38.25	382.50	2,677.50	9,562.50	
SNOW PLOW W/T SANDER	40				115.00	1,150.00	8,050.00	4,600.00	ESTIMATED AT TANDEM RATE
TRAXXON DRILL ATTACHMENT	40				97.41	974.10	6,818.70	3,896.40	
WELDING MACHINE MILLER	120				20.25	202.50	1,417.50	2,430.00	
WELDING TRUCK INTERNATIONAL 4700	70				43.50	435.00	3,045.00	3,045.00	
						TOTAL EQUIPMENT		453,650.15	

SUBTOTAL COST	521,971.55
ESTIMATED INDIRECTS NOT CAPTURED IN THE RATE ABOVE	112,500.00
CONTINGENCY	65,528.45
TOTAL COST (Excl. HST)	700,000.00

IKC-ONE IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0037-00

March 17, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

The weather at site has cooled and the access road has temporarily improved but it remains in unacceptable condition for the following reasons:

- The first 5km requires a rock capping, proper ditches, more width, and a road topping as a minimum for a temporary fix. Otherwise it will disintegrate again as soon as the weather warms which according to today's forecast will be on Wednesday, March 20, 2013.
- The remaining 16km is extremely rough. It requires a minimum road topping immediately.

IKC-ONE appreciates that work has started on the first 5.2 km section. However, only 200m of road has been capped with rock in the past two days. It is urgent that this be accelerated.

The remaining 16 km is causing additional problems for our staff and craft. Everyone is being subjected to unreasonable driving conditions that are causing soreness, fatigue, etc. These conditions are adding risk of injury to our workers which could lead to Loss Time Incidents. This is causing safety concerns and labour issues that require immediate attention. Also, it is resulting in inefficient operations for IKC-ONE.

The recent disintegration of the site access has also prevented the delivery of explosives to the site. Therefore IKC-ONE has not been able to blast any rock during that period. Today will be the first blast since March 14, 2013. This has caused our quantity of rock available to haul to be completely depleted today. IKC-ONE will now be dependent on daily blasts for rock to haul and this also causes inefficient operations.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

IKC-ONE will continue to work when there is work to do and there is safe access to and from the site. However our ability to efficiently execute the work is being impacted by the site access conditions. Therefore it is our position that the unit rates as established in the Contract are no longer applicable and we respectfully request a Change Order (as per Article 2.1.1 of Exhibit 12) for all costs on a cost plus basis in accordance with the charge out rates in the Agreement until the access road is reasonable and our operations are back to an efficient basis. We propose that an emergency meeting be held as soon as possible to discuss this issue.

IKC-ONE has resources that are immediately available to help with the fixing of the site access. This includes graders, articulated haul trucks, loaders, etc. Craft could also be made available by suspending some of the site operations to concentrate on the road.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0036-00

March 15, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

Further to our letter CH0006-IO-NE-L-0035-00 sent earlier today we are left with no option but to suspend the night shift operations for March 15, 2013. We note the following restrictions:

- The road is too rough for the explosives truck and we have not been able to load a shot since yesterday. If the explosives truck should become stuck or stopped for any reason on the road while loaded with explosives it would be a serious situation.
- We will be out of fuel by end of shift with only enough for essential services such as de-watering the power house
- The capability of emergency services is in question.
- We only have enough rock on the ground for an efficient start-up, i.e., 1 and 1 ½ shifts or so.

The road/access conditions continue to worsen whereby our fuel supplier is unable to provide sufficient product to support the work. Our explosives supplier is unable to access the site thus stopping all blasting operations. Transportation of personnel is challenging and risky to say the least. This has placed all operations in jeopardy.

We will assess things the morning of March 16, 2013 and if same conditions persist we will have no option but to suspend this shift. Without a plan to provide access to the site by the end of the day March 16, 2013 we will have no choice but to demobilize all crews until such time safe and clear access to the site is secured. This will be the only action that can be taken in an effort to mitigate additional costs to the project. IKC-ONE does not accept any responsibility for resultant extra costs and other impacts.

We offer you our full co-operation in an effort to mitigate all damages as a result of the loss of access to the project.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Sincerely,

IKC-ONE Earthworks Constructors

for Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0035-00

March 15, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Agreement CH0006
Site Access
Notice of Delay

Dear Mr. O'Brien,

IKC-ONE has previously corresponded to Company that the site access road was not adequate as noted in the following letters:

- CH0006-IO-NE-L-0006-00 dated January 7, 2013
- CH0006-IO-NE-L-0024-00 dated February 17, 2013

We would like to note that there has been no work on the site access road since December, 2012.

The entire road now is quickly disintegrating, with the first 6 or 7 kilometers being practically impassable at this point. This is causing major concerns for:

- Emergency vehicle access to and from site
- Safety of craft and staff while driving
- Equipment damage
- Fuel supply risk (current conditions will not allow supplier to access the site)
- General operating supplies being delayed or stopped

IKC-ONE has little option but to advise Company if these conditions persist or deteriorate any further we will be left with no option but to immediately suspend all Work until suitable and safe access to the site is provided by Company.

The item of most concern is emergency vehicle access. Since all of us are governed by the principle of taking no risks related to the safety of the workers at the site, work cannot continue if emergency vehicles are unable to access the site in a timely and efficient manner. In this instance we assume you agree that work must be suspended immediately.

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

The lack of safe and adequate access to the site will have serious schedule impacts and will result in additional costs such as, but not limited to, the following:

- Equipment standby charges
- Equipment damage
- Additional travel costs
- Loss on room and board
- Overhead charges
- Productivity losses due to frustrated craft
- Travel time due to road delays, etc.
- Standby labor costs
- Additional standby accommodation cost
- Subcontractor and supplier impact costs
- Any and all general impacts

It is our position that these costs will be the responsibility of the Company since it has not fulfilled its contractual obligation to provide access to site. IKC-ONE will request a Change Order for additional costs and for all schedule days lost. The magnitude of these costs could range from $250,000 to $500,000 per day and maybe even higher. This does not include any and all indirect and unknown (at this time) impacts costs.

As we discussed yesterday IKC-ONE will require the Company to begin repair work immediately on the access road, in an effort to mitigate overall damages to the project. IKC-ONE is very concerned that damages have already occurred and continue to occur. Time is of the essence and immediate action by the Company is essential now. We trust it is not too late to minimize serious schedule impacts to the project.

A site visit by Senior Representatives of Company on a typical warm day will be warranted so that Company can see firsthand the seriousness of the situation.

If you require any additional information or assistance, please contact the undersigned immediately.

Sincerely,

IKC-ONE Earthworks Constructors

for Don Strickland, P. Eng.
Project Manager

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0080-00

May 5, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-021 Rev 00 - Late Shift Starts and Equipment Standby Time Due to SSAR Condition

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-021 Rev 00 for the additional costs associated with the degraded condition of the permanent access road. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

35

35

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0081-00

May 5, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: Construction of Bulk Excavation Works & Associated Civil Work
Contract CH0006
Change Request # CH0006-CR-200-022 Rev 00 - Delays Due to Protests
April 18th - 19th

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-022 Rev 00 for the additional costs and schedule associated with the delays due to the protests on April 18th and 19th. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Natcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-022
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	07-May-13

Description of Change Request and Reason (attach all supporting information):

To establish a change order for all costs and lost schedule associated with the protests occuring April 18th and 19th 2013.

Supporting information comprises the following and forms part of this Change Request:

In accordance with Article 31.5 of the agreement, IKC-ONE notifies the Company of the delay and requests a change order be issued for the schedule delay and associated costs. See letter number CH0006-IO-NE-L-0051-00 for additional information.

Description of Impact on Control Schedule:

The Impact on Control Schedule is two and a half days (2.5) days of lost production

Revised Finish Date: An additional (2.5) days to the finish date.

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	For the Protest Occuring April 18th and 19th, 2013. Refer to "Protests APR 18&19" for estimate.	1	Item		1,100,000.00
	Reimbursement will be on time and materials, based on actual LEM records and compensated in accordance with Exhibit 2 Section 4				
				Value of this Change Request	$ 1,100,000.00
				Previous Contract Price	
				Revised Contract Price	

CONTRACTOR SIGNATURE

Reviewed and Approved by:	Name	Signature	Date
Contractor Representative	Willie Keats	W.Keats	May 7/13

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKG-ONE

Protests ASR 125.19
Budgetary Estimate

Labour Hrs	Hrs x	1.5Hrs x	2Hrs x	Rate x	Rate 1.5x	Rate 2x	Cost	
Carpenter	7	0	0	105.37	133.71	170.61	737.59	
Non Working-Carpenter Foreman	4	0	0	113.21	143.25	182.39	452.84	
GE - Apprentice	15	0	0	104.01	131.83	167.75	1560.15	
GE- Class 1	18	0	0	111.43	141.92	180.37	2009.64	
GE- Class 2	83	20	10	109.63	139.44	177.31	15503.01	
GE - Non-Working Foreman	11	17	3	123.19	153.63	195.03	4519.01	
Labourer- Non-Working Foreman	7	5	0	103.05	127.31	174.57	1412.9	
Labourer- Class'	45	12	7	104.82	132.86	169.1	7496.13	
Group 1 - Heavy trucks	25	11	2	108.25	134.69	171.53	4483.1	
Teamster- Foreman	4	5	2	101.03	133.62	176.22	1431.66	
					TOTAL LABOUR		39,788.03	

Equipment	Hr	Day	Week	Standby Hr Rate	Standby Day Rate	Standby Week Rate	Cost	Rate Notes
PICKUP FORD F150	2424			16.50	165.00	1,155.00	40,936.00	
AIR COMPRESSOR ATLAS COPCO	103			31.50	315.00	2,205.00	3,402.00	
BOBCAT - 257C	103			71.25	712.50	4,987.50	7,695.00	RATE SET EQUAL TO CAT 315
BOOM TRUCK 25T	54			93.75	937.50	6,562.50	5,535.50	
COMPACTOR CAT CS56B	103			66.75	667.50	4,672.50	7,709.60	
DOZER CAT D10	54			246.50	2,465.00	24,255.00	13,711.00	
DOZER CAT D6R	54			150.00	1,500.00	10,500.00	8,100.00	
DOZER CAT D7R	152			198.75	1,987.50	13,912.50	32,197.50	
DOZER CAT D8R	54			281.25	2,812.50	19,687.50	15,187.50	
DRILL ATLAS COPCO D7	54			192.00	1,920.00	13,440.00	10,368.00	
DRILL ATLAS COPCO D8	54			192.00	1,920.00	13,440.00	10,368.00	RATE SET EQUAL TO D7
DRILL ATLAS COPCO L8	152			317.25	3,172.50	22,207.50	51,334.50	
DRILL ATLAS COPCO T40B	216			392.00	3,920.00	33,440.00	41,472.00	RATE SET EQUAL TO D7
EXCAVATOR CAT 330	54			135.00	1,350.00	9,450.00	7,290.00	RATE SET EQUAL TO 336
EXCAVATOR CAT 336	216			135.00	1,350.00	9,450.00	23,166.00	
EXCAVATOR CAT 345	103			150.00	1,500.00	10,500.00	16,200.00	
EXCAVATOR HITACHI EX1200	54			420.00	4,200.00	29,400.00	22,680.00	
EXCAVATOR PC1250	54			420.00	4,200.00	29,400.00	22,680.00	RATE SET EQUAL TO 1250
EXCAVATOR PC2000	54			617.00	6,170.00	43,190.00	33,318.00	
EXPLOSIVES TRUCK	54			35.25	352.50	2,467.50	1,903.50	
FLOAT MACK CU 713	54			140.25	1,402.50	9,817.50	7,573.50	
JLG MODEL 600	54			53.25	532.50	3,727.50	2,875.50	RATE SET EQUAL TO JLG MAN LIFT
JLG MODEL 600AJ	152			53.25	532.50	3,727.50	8,626.50	RATE SET EQUAL TO JLG MAN LIFT
JLG MODEL 450AJ	54			53.25	532.50	3,727.50	2,875.50	RATE SET EQUAL TO JLG MAN LIFT
JLG MODEL 1250	54			53.25	532.50	3,727.50	2,875.50	RATE SET EQUAL TO JLG MAN LIFT
FUEL TRUCK MACK RD 6935	152			73.25	357.50	5,302.50	12,771.50	
GRADER CAT 14H	54			123.75	1,237.50	8,662.50	6,682.50	
GRADER CAT 14M	54			123.75	1,237.50	8,662.50	6,682.50	RATE SET EQUAL TO 14H
GROVE CRANE 80T	54			201.00	2,010.00	14,070.00	10,854.00	
LOADER CAT 913G	54			71.25	712.50	4,987.50	3,847.50	
LOADER CAT 966G	103			112.50	1,125.00	7,875.00	12,150.00	
LOADER CAT 980	54			233.25	2,332.50	16,537.50	12,757.50	RATE SET EQUAL TO 913
LUBE TRUCK MACK RD 6935	54			86.25	862.50	6,037.50	4,657.50	
MECH. TRUCK INTERNATIONAL	216			57.75	577.50	4,042.50	12,474.00	
OFF-HIGHWAY TRUCK CAT 740 ARTIC	216			187.50	1,875.00	13,125.00	40,500.00	
OFF-HIGHWAY TRUCK VOLVO A40 ARTIC	152			187.50	1,875.00	13,125.00	28,575.00	
OFF-HIGHWAY TRUCK CAT 730	432			236.25	2,362.50	16,537.50	102,060.00	
OFF-HIGHWAY TRUCK CAT 730	270			262.50	2,625.00	18,375.00	70,875.00	
PASS BUS FREIGHTLINER SOLARIS	378			33.25	332.50	2,327.50	14,453.50	
TRAXXON DRILL ATTACHMENT	54			97.41	974.10	6,818.70	5,260.14	
WELDING MACHINE MILLER	152			30.25	302.50	3,417.50	3,250.50	
WELDING TRUCK INTERNATIONAL 4700	108			43.50	435.00	3,045.00	4,698.00	
					TOTAL EQUIPMENT		724,419.14	
					SUBTOTAL COST		604,202.32	
					ESTIMATED INCIDECES WHICH ARE NOT CAPTURED ABOVE		197,500.00	
					CONTINGENCY		103,297.78	
					TOTAL COST (Excl. HST)		1,103,000.00	

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0051-00

April 21, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Agreement CH0006
Protest of April 18 and April 19, 2013
Notice of Delay

Dear Mr. O'Brien,

IKC-ONE respectfully notes for the record that the above noted protest caused a delay to the Work.

The delay started on or about 2:00 pm on April 18, and we were advised at 9:01 pm on April 19, 2013, that the site was re-opened.

We transferred the workers back to camp on April 20, 2013 and began a gradual back to work at approximately noon on April 20, 2013.

In accordance with Article 31.5 of the Agreement, IKC-ONE hereby notifies the Company of the delay and we also respectfully request a change order for the schedule delay and all associated costs.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

36

IKC-ONE

IKC-ONE Earthworks Constructors

Ref No.: CH0006-IO-NE-L-0082-00

May 3, 2013

Nalcor Energy
Lower Churchill Project
350 Torbay Road, Suite No. 2
St. John's, NL
A1A 4E1

Attention: Mr. Scott O'Brien

RE: **Construction of Bulk Excavation Works & Associated Civil Work**
Contract CH0006
Change Request # CH0006-CR-200-023 Rev 00 Rock Bolt Shells Specified Unsuitable

Dear Mr. O'Brien,

Attached please find Change Request form CH0006-CR-200-023 Rev 00 requesting payment for additional costs associated with providing a different Rock Bolt Shell and Cone to accommodate site rock conditions. Please sign and return the enclosed at your earliest convenience.

If you require any further information, please do not hesitate to contact me at your convenience.

Sincerely,

IKC-ONE Earthworks Constructors

Don Strickland, P. Eng.
Project Manager

Encl.

CC: Leonard Knox
Willie Keats
Francis Webber
Dominique Hotte
Jean-Francois Theriault

IKC-ONE Earthworks Constructors
10 Hillcrest Road
P.O. Box 649, Station C
Goose Bay, NL A0P 1C0
Tel: (709) 896-7272

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-023
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	03-May-13

Description of Change Request and Reason (attach all supporting information):

For the rock stabilization and surface protection portion of work described in the section 313300 of the technical specification, Type A and B rock bolts (HDR-25) along with rock anchor (D-20-N-25), which conforms to standard CSA M430 and approved by the Engineer were procured. After the rock bolt installation process had begun, it became apparent that the type of rock anchor specified for use, was not suitable for the pull test requirements outlined in the Client technical specifications. According to the onsite investigation by the rock bolt supplier (NCA), installation procedures were followed, however, it was advised that Type A and B rock bolts with AR rock anchor (shell & cone) should've be used as the alternative (refer to NCA report for further details). This CR provides an estimated budget, based on the differential (additional) cost between D-20-N-25 and the AR rock anchor (shell & cone) , used with type A and B rock bolts.

Supporting information comprises the following and forms part of this Change Request:

Please refer to CH0006-IKC-ONE-SS-014-00, CH0006-IKC-ONE-SS-003-00, CH0006-IKC-ONE-SS-006-00, CH0006-IKC-ONE-FIR-003-00 (report from rock bolt supplier, NCA), Appendix A - Technical Specification 31 33 00 Rock Stabilization & Surface Protection (Section 2.1 Rock bolts)

Description of impact on Control Schedule:

No Impact on the Control Schedule

Revised Finish Date: No Impact on finish date.

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Please refer to attached document "Rock bolt Shells Unsuitable CR-200-023" for the estimated cost details of this CR.				60,000.00
	Actual reimbursement will be based on invoice records and compensated in accordance with Exhibit 2 Section 4.				
		Value of this Change Request			$ 60,000.00
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE			
Reviewed and Approved by:	Name	Signature	Date
Contractor Representative			

COMPANY REVIEW AND APPROVAL			
Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

IKC-ONE

Rock Bolt Shells Unsuitable CR-200-023
Budgetary Estimate

Materials	Price Difference ($/unit)	Type A and B - Rock Bolt Qty		
Price Differential (D-20-N-25 and AR Shells)	15	1985		29,775.00
Visit From NCA Rep				2,475.11
Freight				7,500.00
			Contingency	6,337.35
			Mark-up (35%) Subtotal Cost	13,912.54
			Total Cost	60,000.00

37

37

Nalcor Energy
CHANGE REQUEST (CR)

Agreement No:	CH0006	Change Request	200-044
Agreement Title:	Construction of Bulk Excavation Works and Ass. Civil Works	Revision No.:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	25-May-13

Description of Change Request and Reason (attach all supporting information):

This CR provides the estimated cost associated with the client orientation sessions for first nation employees (as planned and organized between Client Training/Lead personnel and IKC-ONE). The estimate includes time for the employees participating in the orientation session, any additional teamster and bus time, equipment standby time etc. These costs do not form part of the "Schedule of Price Breakdown Contract Execution" provided in Exhibit 2 -Appendix A. The estimates provided below are based on the rates and prices outlined in Exhibit 2 - Compensation.

Supporting information comprises the following and forms part of this Change Request:

Please refer to the email correspondance attached to serve as (temporary) supporting information.

Description of impact on Control Schedule:

No impact to the Control Schedule

Revised Finish Date: No impact to revised finish date for this CR.

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
	Pass. Bus	Hrs	50	$ 51.00	$ 2,550.00
	Group 3 - Single Axle (Regular Time rate)	Hrs	25	$ 105.48	$ 2,637.00
	Group 3 - Single Axle (2X rate)	Hrs	25	$ 170.22	$ 4,255.50
	Labourer - Class 1(Regular Time rate)	Hrs	125	$ 104.82	$ 13,102.50
	Labourer - Class 1 (2X rate)	Hrs	125	$ 169.10	$ 21,137.50
	Group1 - Heavy Truck (Regular Time rate)	Hrs	25	$ 106.25	$ 2,656.25
	Group 1 - Heavy Truck (2X rate)	Hrs	25	$ 171.53	$ 4,288.25
	Contingency	Unit	1		$ 14,373.00
	Reimbursement will be on time and materials, based on actual LEM records and compensated in accordance with Exhibit 2 Section 4.				
		Value of this Change Request (exlc. HST)			$ 65,000.00
		Previous Contract Price			
		Revised Contract Price			

CONTRACTOR SIGNATURE

Reviewed and Approved by: Contractor Representative	Name: Don Strickland	Signature	Date: May 31/2013

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
ENGINEER:			
-Cost Control			
-Planning			
-Contracts Coordinator			
-Technical			
COMPANY REPRESENTATIVE			

On 2013-05-20, at 12:48 PM, "Boyd Humby" <bhumby@ikcone.com> wrote:

Good Day Bob,

As Requested please find attached are the names of our First Nations Employees who are scheduled to be onsite on May 23rd and 24th. In addition the following names below will be on R&R and or on Night shift and will not be able to attend this training due to schedule conflicts.

Night Shift:
(8) eight names identified by IKC-ONE HR

On R&R:
(1) one name identified by IKC-ONE HR

I have checked with our Project / Cost Control and we have not yet seen the "Commercial Directive" to cover lost wages for these (2) days therefore can you please send it to us at your earliest.

Thanks,

Earthworks Constructors

BOYD HUMBY
Human Resources/Labour Relations Manager
Lower Churchill Project

>>> <BobMarshall@nalcorenergy.com> 5/17/2013 8:20 AM >>>
Guys

I've created a spreadsheet for you to enter names of your employees attending the two sessions scheduled for next week. Would appreciate if you can fill in and send to me by Monday end of the day at the latest. We need the names and numbers to action this properly.

Also, given your total numbers on and off shift, please advise the next closest dates to reschedule another couple of sessions to complete...

Thanks
Bob

Bob Marshall
Training Lead
LC Project
LC Business Services

38

38

CHANGE REQUEST (CR)

Agreement No:	CH0006	CR No.	200-050
Agreement Title:	Construction of Bulk Exc. Works and Ass. Civil Works	Revision No:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	June 10, 2013

Description of Change Request and Reason (attach all supporting information):

As a result of circumstances outside the control of the Parties involved in the Memorandum of Agreement for Lost Work Days ("MOA", see attached document), employees scheduled to work on the night shift of April 18, 2013 and the day and night shift on April 19, 2013 were unable to work. An agreement had been reached whereby, without prejudice and precedent basis, it has been agreed to pay the employees for lost wages for the regularly scheduled hours employees who were scheduled to work, but could not work.

Supporting information that forms part of this Change Request:

Memorandum of Agreement for Lost Work Days ("MOA") agreed on May 14th, 2013 and signed by the representatives of the Muskrat Falls Employers' Association Inc., The Resource Development Trades Council of Newfoundland/Labrador and IKC-ONE Earthworks Constructors (a partnership).

Description of impact on Control Schedule:

The schedule impact of this event has been detailed in CR-200-22

Revised Finish Date: TBD

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
1	*Lost Wages April 18 and 19 due to protests	T&M	1	$250,000.00	$250,000.00
	*See attached summary for details supporting the value of this CR.				
				Value of this Change Request:	$250,000.00

CONTRACTOR SIGNATURE

Reviewed by:	Name	Signature	Date
Contractor Representative	Willie Keats	WKeats	June 10/13

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
- Contract Administrator			
- Area Construction Manager			
- Package Leader			
- Estimating			
- Planning			
- Cost Control			
- Area Manager			
COMPANY REPRESENTATIVE			

TRADE	DAY SHIFT		NIGHT SHIFT		SUBTOTAL HOURS	DAY SHIFT		NIGHT SHIFT		TOTAL
	RT HOURS	OT HOURS	RT HOURS	OT HOURS		RT RATE	OT RATE	RT RATE	OT RATE	
Labourer- Non-Working Foreman	0	26	20	10	56	$ 108.05	137.31	118.47	147.73	$ 7,416.76
Labourer- Class1	0	100	70	80	250	$ 104.82	132.96	114.6	142.74	$ 32,737.20
Labourer- Class11	0	30	20	20	70	$ 106.78	135.6	116.95	145.77	$ 9,322.40
OE- Class 2	0	180	180	180	540	$ 109.63	139.44	114.71	144.52	$ 71,760.60
OE - Apprentice	0	40	60	60	160	$ 104.01	131.88	109.09	136.96	$ 20,038.20
Teamster- Foreman	0	6	10	10	26	$ 109.03	138.62	111.8	141.39	$ 3,363.62
Group 1 - Heavy trucks	0	131	140	140	411	$ 106.25	134.89	109.02	137.66	$ 52,205.79
OE - Non-Working Foreman	0	22	20	20	62	$ 120.19	153.63	125.27	158.71	$ 9,059.46
OE- Class 1	0	60	40	40	140	$ 111.48	141.92	116.56	147	$ 19,057.60
Group 4- Warehousing	0	10	10	10	30	$ 106.25	134.89	109.02	137.66	$ 3,815.70
Non Working- Carpenter	0	10	0	0	10	$ 113.21	144.25	122.47	153.51	$ 1,442.50
Carpenter	0	30	0	0	30	$ 105.37	133.71	113.45	141.79	$ 4,011.30

TOTAL HOURS:	1785	SUBTOTAL:	$ 234,231.13
		CONTINGENCY:	$ 15,768.87
		TOTAL (excl HST):	$ 250,000.00

Emp #	Name	Position	CONTRACT CLASS	HOURS	
				RT	OT
	Thursday, April 18th, 2013				
	NIGHT SHIFT				
	Labourers				
091	James Lane	Labour Foreman	Labourer- Non-Working Foreman	10	
076	Archie Andrew	Labourer	Labourer- Class1	10	
125	Eugene Rich	Labourer	Labourer- Class1	10	
031	David Pottle	Labourer	Labourer- Class1	10	
252	Matthew Harnum	Labourer	Labourer- Class1	10	
	Survey				
023	Cordell Barney	Survey Tech	Labourer- Class11	10	
050	Magella Boudreau	Survey Tech	Labourer- Class11	10	
	Drill/Blast				
087	Earl tulk	Driller- Group 2	OE- Class 2	10	
089	George Powell	Driller- Group 2	OE- Class 2	10	
148	Dave Brenton	Driller- Group 2	OE- Class 2	10	
118	Austin Lambe	HE App.-Level 6	OE - Apprentice	10	
251	Tom Ferris	Driller- Group 2	OE- Class 2	10	
169	Warren Pottle	HE App.-Level 6	OE - Apprentice	10	
193	Steve LeBreton	Driller- Group 2	OE- Class 2	10	
211	Christian Rioux	Driller- Group 2	OE- Class 2	10	
080	Jeremy Broomfield	Labourer	Labourer- Class1	10	
127	Norman Mutrey	Labourer	Labourer- Class1	10	
184	Sean Lake	Blaster Foreman	Labourer- Non-Working Foreman	10	
	Teamsters				
064	Wade Earle	Teamster Foreman	Teamster- Foreman	10	
259	Phil Mercer	Teamster-Group 1	Group 1 - Heavy trucks	10	
182	Blair Parsons	Teamster-Group 1	Group 1 - Heavy trucks	10	
166	Chris Maloney	Teamster-Group 1	Group 1 - Heavy trucks	10	
167	Bill Whelan	Teamster-Group 1	Group 1 - Heavy trucks	10	
178	Fabian Rumbolt	Teamster-Group 1	Group 1 - Heavy trucks	10	
180	Laurie Kelly	Teamster-Group 1	Group 1 - Heavy trucks	10	
159	John Noseworthy	Teamster-Group 1	Group 1 - Heavy trucks	10	
101	Lorne Rogers	Teamster-Group 1	Group 1 - Heavy trucks	10	
084	Clifford Vincent	Teamster-Group 1	Group 1 - Heavy trucks	10	
075	Joseph Pike	Teamster-Group 1	Group 1 - Heavy trucks	10	
163	Casmir Gibbons	Teamster-Group 1	Group 1 - Heavy trucks	10	
077	Velroy Brown	Teamster-Group 1	Group 1 - Heavy trucks	10	
168	Anna March	Teamster-Group 1	Group 1 - Heavy trucks	10	
097	Jim Williams	Teamster-Group 1	Group 1 - Heavy trucks	10	
	OEs (HE Operator)				
162	Don Chaulk	OE Foreman	OE - Non-Working Foreman	10	
074	Graham Way	Grader Operator-Group 2	OE- Class 2	10	
164	John Tubrett	Dozer Operator- Group 2	OE- Class 2	10	
071	George Morris	Loader Operator-Group 2	OE- Class 2	10	
099	Jerome Carroll	Excavator Operator-Group 2	OE- Class 2	10	
181	Ryan Nugent	Excavator Operator-Group 2	OE- Class 2	10	
100	Keith Fulford	Excavator Operator-Group 2	OE- Class 2	10	
236	Eugene Bauld	Excavator Operator-Group 2	OE- Class 2	10	
094	Monty White	Excavator Operator-Group 2	OE- Class 2	10	
086	Sheldon Hancock	HE App.-Level 2	OE - Apprentice	10	
105	Steve Penton	Dozer Operator- Group 2	OE- Class 2	10	
096	Carroll Blanchard	Dozer Operator- Group 2	OE- Class 2	10	
	Maintenance/Mechanics				
005	Jason Ash	HE Mechanic Foreman-Group 1	OE - Non-Working Foreman	10	
006	Walter Bradbury	HE Mechanic-Group 2	OE- Class 1	10	
013	Trevor Bullock	HE Mechanic-Group 2	OE- Class 1	10	
078	Michael Ford	HE App.-Level 2	OE - Apprentice	10	
102	Clayton Parsons	Welder-Group 2	OE- Class 2	10	
111	Rene-Pierre Villeneuve	HE Mechanic-Group 2	OE- Class 1	10	
183	Ken Rowe	Welder-Group 2	OE- Class 2	10	
212	Brian Penney	HE App.-Level 6	OE - Apprentice	10	
221	Darry Sampson	HE Mechanic-Group 2	OE- Class 1	10	
	Maintenance Support				

Emp #	Name	Position	CONTRACT CLASS	HOURS	
				RT	OT
173	Steve Picard	Labourer	Labourer- Class1	10	
233	Chris Evans	Teamster-Group 4	Group 4- Warehousing	10	
069	Terry Roberts	HE App.-Level 2	OE - Apprentice	10	
		Friday, April 19th, 2013			
		DAY SHIFT			
	Labourers				
002	**Justin Lane**	**Labour Foreman**	Labourer- Non-Working Foreman		6
210	**Levi Collier**	**Labour Foreman**	Labourer- Non-Working Foreman		10
012	Peter Adams	Labourer	Labourer- Class1		10
157	Brad Heard	Labourer	Labourer- Class1		10
207	Murray Wells	Labourer	Labourer- Class1		10
208	Bruce Wells	Labourer	Labourer- Class1		10
252	Eric LeFebvre	Labourer	Labourer- Class1		10
108	Frank Pokue	Labourer	Labourer- Class1		10
138	Troy Webber	Labourer	Labourer- Class1		10
140	Maria Soloman	Labourer	Labourer- Class1		10
	Survey				
070	Cliff Normore	Survey Tech	Labourer- Class11		10
197	Guy Marchand	Survey Tech	Labourer- Class11		10
250	Richard Messier	Survey Tech	Labourer- Class11		10
	Drill/Blast				
186	Marcel Langlais	Driller- Group 2	OE- Class 2		10
198	Denis Cyr	Driller- Group 2	OE- Class 2		10
209	Jean-Francis Tessier	Driller- Group 2	OE- Class 2		10
217	Gilles Caouette	Driller- Group 2	OE- Class 2		10
218	David Durette	Driller- Group 2	OE- Class 2		10
237	Alan Caissie	Blaster Foreman	Labourer- Non-Working Foreman		10
073	Ernest Pottle	Labourer	Labourer- Class1		10
081	Lorne Battcock	Labourer	Labourer- Class1		10
170	Chad Pelley	Teamster	Group 1 - Heavy trucks		9
	Teamsters				
007	**Mike Carew**	**Teamster Foreman**	Teamster- Foreman		6
018	Charlie Parsons	Teamster-Group 1	Group 1 - Heavy trucks		6
027	Glen Williams	Teamster-Group 1	Group 1 - Heavy trucks		10
213	Durwin Pilgrim	Teamster-Group 1	Group 1 - Heavy trucks		10
120	Rex Mahar	Teamster-Group 1	Group 1 - Heavy trucks		10
215	Roland Clark	Teamster-Group 1	Group 1 - Heavy trucks		10
141	Marius Pike	Teamster-Group 1	Group 1 - Heavy trucks		10
019	John Connors	Teamster-Group 1	Group 1 - Heavy trucks		6
134	Shawn Rideout	Teamster-Group 1	Group 1 - Heavy trucks		10
137	Dexter Allen	Teamster-Group 1	Group 1 - Heavy trucks		10
133	Darren Luff	Teamster-Group 1	Group 1 - Heavy trucks		10
029	Clifford Jones	Teamster-Group 1	Group 1 - Heavy trucks		10
106	Damico Cabot	Teamster-Group 1	Group 1 - Heavy trucks		10
	OEs (HE Operator)				
022	**Isaac Tatchell**	**OE Foreman**	OE - Non-Working Foreman		6
033	**Lester Sparkes**	**OE Foreman**	OE - Non-Working Foreman		6
008	Michael Roberts	Excavator Operator-Group 2	OE- Class 2		10
017	Ellison Avery	Excavator Operator-Group 2	OE- Class 2		10
117	Terry Wells	Excavator Operator-Group 2	OE- Class 2		10
129	David Peddle	Excavator Operator-Group 2	OE- Class 2		10
145	Harry Ackerman	Excavator Operator-Group 2	OE- Class 2		10
009	Leon Bessey	Loader Operator-Group 2	OE- Class 2		10
132	Monty White	Grader Operator-Group 2	OE- Class 2		10
014	Dean Pittman	Dozer Operator- Group 2	OE- Class 2		10
030	Walter Roberts	Dozer Operator- Group 2	OE- Class 2		10
136	Merdock Critch	Dozer Operator- Group 2	OE- Class 2		10
126	Brad Evoy	HE Operator App.Level 2	OE - Apprentice		10
144	Ian Michelin	HE Operator App.Level 3	OE - Apprentice		10
234	Gabriel Rich	Clerk 2	Group 4- Warehousing		10
	Maintenance/Mechanics				
220	TomYoung	HE Mechanic Foreman-Group 1	OE - Non-Working Foreman		10
185	Steve Rideout	HE Mechanic-Group 1	OE- Class 1		10

Emp #	Name	Position	CONTRACT CLASS	HOURS	
				RT	OT
235	Rejean St. Louis	HE Mechanic-Group 1	OE- Class 1		10
241	Glen Stuckless	HE Mechanic-Group 1	OE- Class 1		10
254	James Pye	HE Mechanic-Group 1	OE- Class 1		10
114	Robert Drake	Welder-Group 1	OE- Class 2		10
116	Justin Dredge	Welder-Group 1	OE- Class 2		10
088	Chris Tobin	HE Mechanic App.-Level 6	OE - Apprentice		10
128	Jamie Rice	HE Mechanic App.-Level 4	OE - Apprentice		10
	Maintenance Support				
192	David Barney	Teamster-Group 1	Group 1 - Heavy trucks		10
142	Brendan Roberts	Loader Operator-Group 2	OE- Class 2		10
016	Leo Myers	Crane/Boom Truck-Group 1	OE- Class 1		10
214	Philip Brake	Crane/Boom Truck-Group 2	OE- Class 1		10
	Carpenters				
103	Shawn Travers	Carpenter Foreman	Non Working- Carpenter		10
036	Max Blake	JP Carpenter	Carpenter		10
035	Shawn Spearing	JP Carpenter	Carpenter		10
035	Herbert Critchley	JP Carpenter	Carpenter		10
	Thursday, April 19th, 2013				
	NIGHT SHIFT				
	Labourers				
091	James Lane	Labour Foreman	Labourer- Non-Working Foreman		10
076	Archie Andrew	Labourer	Labourer- Class1		10
125	Eugene Rich	Labourer	Labourer- Class1		10
031	David Pottle	Labourer	Labourer- Class1		10
252	Matthew Harnum	Labourer	Labourer- Class1		10
	Survey				
023	Cordell Barney	Survey Tech	Labourer- Class11		10
050	Magella Boudreau	Survey Tech	Labourer- Class11		10
	Drill/Blast				
087	Earl tulk	Driller- Group 2	OE- Class 2		10
089	George Powell	Driller- Group 2	OE- Class 2		10
148	Dave Brenton	Driller- Group 2	OE- Class 2		10
118	Austin Lambe	HE App.-Level 6	OE - Apprentice		10
251	Tom Ferris	Driller- Group 2	OE- Class 2		10
169	Warren Pottle	HE App.-Level 6	OE - Apprentice		10
193	Steve LeBreton	Driller- Group 2	OE- Class 2		10
211	Christian Rioux	Driller- Group 2	OE- Class 2		10
080	Jeremy Broomfield	Labourer	Labourer- Class1		10
127	Norman Mutrey	Labourer	Labourer- Class1		10
242	Bruce Applin	Labourer	Labourer- Class1		10
	Teamsters				
064	Wade Earle	Teamster Foreman	Teamster- Foreman		10
259	Phil Mercer	Teamster-Group 1	Group 1 - Heavy trucks		10
182	Blair Parsons	Teamster-Group 1	Group 1 - Heavy trucks		10
166	Chris Maloney	Teamster-Group 1	Group 1 - Heavy trucks		10
167	Bill Whelan	Teamster-Group 1	Group 1 - Heavy trucks		10
178	Fabian Rumbolt	Teamster-Group 1	Group 1 - Heavy trucks		10
180	Laurie Kelly	Teamster-Group 1	Group 1 - Heavy trucks		10
159	John Noseworthy	Teamster-Group 1	Group 1 - Heavy trucks		10
101	Lorne Rogers	Teamster-Group 1	Group 1 - Heavy trucks		10
084	Clifford Vincent	Teamster-Group 1	Group 1 - Heavy trucks		10
075	Joseph Pike	Teamster-Group 1	Group 1 - Heavy trucks		10
163	Casmir Gibbons	Teamster-Group 1	Group 1 - Heavy trucks		10
077	Velroy Brown	Teamster-Group 1	Group 1 - Heavy trucks		10
168	Anna March	Teamster-Group 1	Group 1 - Heavy trucks		10
097	Jim Williams	Teamster-Group 1	Group 1 - Heavy trucks		10
	OEs (HE Operator)				
162	Don Chaulk	OE Foreman	OE - Non-Working Foreman		10
074	Graham Way	Grader Operator-Group 2	OE- Class 2		10
164	John Tubrett	Dozer Operator- Group 2	OE- Class 2		10
071	George Morris	Loader Operator-Group 2	OE- Class 2		10
099	Jerome Carroll	Excavator Operator-Group 2	OE- Class 2		10

Emp #	Name	Position	CONTRACT CLASS	HOURS	
				RT	OT
181	Ryan Nugent	Excavator Operator-Group 2	OE- Class 2		10
100	Keith Fulford	Excavator Operator-Group 2	OE- Class 2		10
236	Eugene Bauld	Excavator Operator-Group 2	OE- Class 2		10
094	Monty White	Excavator Operator-Group 2	OE- Class 2		10
086	Sheldon Hancock	HE App.-Level 2	OE - Apprentice		10
105	Steve Penton	Dozer Operator- Group 2	OE- Class 2		10
096	Carroll Blanchard	Dozer Operator- Group 2	OE- Class 2		10
	Maintenance/Mechanics				
005	Jason Ash	HE Mechanic Foreman-Group 1	OE - Non-Working Foreman		10
006	Walter Bradbury	HE Mechanic-Group 2	OE- Class 1		10
013	Trevor Bullock	HE Mechanic-Group 2	OE- Class 1		10
078	Michael Ford	HE App.-Level 2	OE - Apprentice		10
102	Clayton Parsons	Welder-Group 2	OE- Class 2		10
111	Rene-Pierre Villeneuve	HE Mechanic-Group 2	OE- Class 1		10
183	Ken Rowe	Welder-Group 2	OE- Class 2		10
212	Brian Penney	HE App.-Level 6	OE - Apprentice		10
221	Darry Sampson	HE Mechanic-Group 2	OE- Class 1		10
	Maintenance Support				
173	Steve Picard	Labourer	Labourer- Class1		10
233	Chris Evans	Teamster-Group 4	Group 4- Warehousing		10
069	Terry Roberts	HE App.-Level 2	OE - Apprentice		10

RT and OT HRS	570	1215
TOTAL HRS (RT and OT)	1785	

MEMORANDUM OF AGREEMENT FOR LOST WORK DAYS ("MOA")

BETWEEN

Muskrat Falls Employers' Association Inc.
("MFEA")

OF THE FIRST PART

AND:

Resource Development Trades Council of Newfoundland and Labrador
("RDC")

OF THE SECOND PART

AND:

IKG-ONE EARTH CONSTRUCTORS, a partnership

(the "Contractor")

OF THE THIRD PART

WHEREAS the RDC and the Contractor have entered into a Memorandum of Agreement and Collective Agreement dated the 30th day of November, 2012 ("Collective Agreement"), which Collective Agreement is to remain in effect until a Special Project Order is enacted under Section 70 of the *Labour Relations Act* RSNL 1990, c L-1 for the Construction of the Lower Churchill Hydroelectric Generation Project at Muskrat Falls on the Lower Churchill River Newfoundland and Labrador.

As a result of circumstances outside the control of the Parties to this MOA employees scheduled to work on the night shift of April 18, 2013 and the day and night shift on April 19, 2013 were unable to work.

The Contractor has, on a without prejudice and precedent basis, agreed to pay the employees for lost wages for the regularly scheduled hours employees were scheduled to work, but could not work.

The Parties agree as follows:

1. This MOA is entered into on a without prejudice or precedent basis and may not be relied upon in any grievance or legal proceeding as a precedent;
2. Each employee that was scheduled to work and was unable to attend at work on the night shift of April 18, 2013 and the day shift and night shift of April 19, 2013, shall be paid for their regularly scheduled hours and shall be provided no other form of compensation under the Collective Agreement;
3. The RDC agrees that no grievance will be filed on behalf of any employee as a result of any employees' inability to attend at work on the night shift of April 18, 2013 and the day and night shift on April 19, 2013.

AGREED to this 17th day of May, 2013 in the City of St. John's, in the Province of Newfoundland and Labrador.

Muskrat Falls Employers' Association Inc.

The Resource Development Trades Council
Of Newfoundland and Labrador

IKC-ONE Earthworks Constructors, a partnership

39

CHANGE REQUEST (CR)

Agreement No:	CH0006	CR No.	200-052
Agreement Title:	Construction of Bulk Exc. Works and Ass. Civil Works	Revision No:	00
Contractor:	IKC-ONE Earthworks Constructors	Date:	June 25, 2013

Description of Change Request and Reason (attach all supporting information):

IKC-ONE suspended site operations on June 6th, 2013 for personnel to attend the mandatory town hall meeting hosted by the Client. As per the email received June 5th, 2013 operations were stopped at 3pm.

Supporting information that forms part of this Change Request:

See attached email containing site shut down instructions.

Description of impact on Control Schedule:

The impact on the control schedule is one half day of production lost.

Revised Finish Date: T.B.D.

Lump sum price (or estimated cost) and adjustment to the Contract Price:

Item	Description	UOM	QTY	Unit Price	Extended Price
1	Wages and Equipment standby time associated with the site shut down.	T&M	1	$111,240.55	$111,240.55
2	Contingency (~5%)	LS	1	$8,759.45	$8,759.45
3	Total				$120,000.00
	*See attached summary for details supporting the value of this CR.				
				Value of this Change Request:	$120,000.00

CONTRACTOR SIGNATURE

Reviewed by:	Name	Signature	Date
Contractor Representative	Don Shirtliff		June 25/2013

COMPANY REVIEW AND APPROVAL

Reviewed and Approved by:	Name	Signature	Date
- Contract Administrator			
- Area Construction Manager			
- Package Leader			
- Estimating			
- Planning			
- Cost Control			
- Area Manager			
COMPANY REPRESENTATIVE			

IKC-ONE

Lower Churchill Project

Estimated Weekly Extra Work Summary - Nalcor Meeting on June 6
Change Request #200-52
Summary Period: June 1-7

	6-Jun-2013 Thursday			6-Jun-2013 Thursday												
Trade	RT	OT	DT				Total Reg (day)	Total OT (day)	Sub Total DT	Unit RT	Unit OT	Unit DT	Night RT	Night OT	Night DT	
Non Working- Carpenter	25	0	0	0	0	0	25	0	0	113.21	144.25	183.29	122.47	153.51	192.55	
OE - Apprentice	25	0	0	7.5	0	0	25	0	0	$104.01	$131.83	$167.75	$109.09	$135.69	$172.83	
OE- Class 2	45	0	0	12.5	0	0	45	0	0	$109.83	$139.44	$177.24	$114.71	$144.52	$182.32	
OE - Non-Working Foreman	7.5	0	0	0	0	0	7.5	0	0	$120.19	$153.63	$195.08	$125.27	$159.71	$200.16	
Labourer- Non-Working Foreman	5	0	0	0	0	0	5	0	0	$103.05	$137.31	$174.57	$118.47	$147.73	$184.99	
Labourer- Class1	40	0	0	25	0	0	40	0	0	$104.82	$132.96	$169.10	$114.60	$142.74	$178.88	
Group 1 - Heavy trucks	55	0	0	2.5	0	0	55	0	0	$108.25	$134.69	$171.53	$109.02	$137.66	$174.30	
Teamster- Foreman	2.5	0	0	0	0	0	2.5	0	0	$109.03	$138.62	$176.22	$111.20	$141.39	$178.99	
SUB TOTAL	$17,227.20	50.00	50.00	$5,329.60	50.00	50.00	17227.2	0	0							
	160.00			47.50				Total Hours:	160.00							

	JUNE			JUNE					
Equipment	RT						Sub Total	U.P.Rate	Total Rate	
PICKUP FORD F150	137.5			137.5			275	16.50	4,537.50	
AIR COMPRESSOR ATLAS COPCO	7.5			7.5			15	31.50	472.50	
BOBCAT - 232C	5			5			10	71.25	712.50	*RATE ESTIMATED
BOOM TRUCK 25T	2.5			2.5			5	99.75	498.75	
COMPACTOR CAT CS563	5			5			10	66.75	667.50	
COMPACTOR CAT CS74	2.5			2.5			5	66.75	333.75	*RATE ESTIMATED
COMPACTOR CAT DX700E	2.5			2.5			5	66.75	333.75	*RATE ESTIMATED
DOZER CAT D10	2.5			2.5			5	281.25	1,406.25	*RATE ESTIMATED
DOZER CAT D6N	2.5			2.5			5	150.00	750.00	*RATE ESTIMATED
DOZER CAT D6T	7.5			7.5			15	193.75	2,906.25	
DOZER CAT D9T	2.5			2.5			5	281.25	1,406.25	
DRILL ATLAS COPCO D7	2.5			2.5			5	192.00	960.00	
DRILL ATLAS COPCO D9	2.5			2.5			5	192.00	960.00	*RATE ESTIMATED
DRILL ATLAS COPCO L8	7.5			7.5			15	317.25	4,758.75	
DRILL ATLAS COPCO T40R	10			10			20	192.00	3,840.00	*RATE ESTIMATED
EXCAVATOR CAT 308	5			5			10	71.25	712.50	*RATE ESTIMATED
EXCAVATOR CAT 320	5			5			10	101.25	1,012.50	*RATE ESTIMATED
EXCAVATOR CAT 326	10			10			20	101.25	2,025.00	
EXCAVATOR CAT 345	5			5			10	150.00	1,500.00	
EXCAVATOR CAT 349	2.5			2.5			5	150.00	750.00	*RATE ESTIMATED
EXCAVATOR CAT 374	2.5			2.5			5	150.00	750.00	*RATE ESTIMATED
EXCAVATOR HITACHI EX1200	2.5			2.5			5	420.00	2,100.00	
EXCAVATOR PC1250	5			5			10	420.00	4,200.00	*RATE ESTIMATED
EXCAVATOR PC2000	2.5			2.5			5	420.00	2,100.00	*RATE ESTIMATED
EXPLOSIVES TRUCK	2.5			2.5			5	33.25	166.25	
FLOAT MACK GU 713	2.5			2.5			5	140.25	701.25	
FUEL TRUCK MACK RD688S	7.5			7.5			15	75.75	1,136.25	
GRADER CAT 14H	2.5			2.5			5	123.75	618.75	
GRADER CAT 14M	2.5			2.5			5	123.75	618.75	*RATE ESTIMATED
GROVE CRANE 60T	2.5			2.5			5	201.00	1,005.00	
JLG MODEL 1250	5			5			10	53.25	532.50	*RATE ESTIMATED
JLG MODEL 600AJ	7.5			7.5			15	53.25	798.75	*RATE ESTIMATED
LOADER CAT 938G	2.5			2.5			5	71.25	356.25	
LOADER CAT 950G	2.5			2.5			5	112.50	562.50	
LOADER CAT 980	2.5			2.5			5	234.25	1,181.25	*RATE ESTIMATED
LUBE TRUCK MACK RD688S	2.5			2.5			5	86.25	431.25	
MECH. TRUCK INTERNATIONAL	10			10			20	57.75	1,155.00	
OFF-HIGHWAY TRUCK CAT 740 ARTIC	10			10			20	187.50	3,750.00	
OFF-HIGHWAY TRUCK CAT 740	10			10			20	187.50	3,750.00	*RATE ESTIMATED
OFF-HIGHWAY TRUCK CAT 772D	35			35			70	236.25	16,537.50	
OFF-HIGHWAY TRUCK CAT 775D	12.5			12.5			25	262.50	6,562.50	
OFF-HIGHWAY TRUCK VOLVO A40 ARTIC	7.5			7.5			15	187.50	2,812.50	*RATE ESTIMATED
PASS BUS FREIGHTLINER SOLARIS	17.5			17.5			35	38.25	1,338.75	
SAGALEK SCREEN	2.5			2.5			5	191.25	956.25	
TRAXXON DRILL ATTACHMENT	5			5			10	192.00	1,920.00	*RATE ESTIMATED
VACUUM TRUCK KENWORTH T300	2.5			2.5			5	60.75	303.75	*RATE ESTIMATED
WATER TRUCK KENWORTH T300	7.5			7.5			15	60.75	911.25	
WELDING MACHINE MILLER	7.5			7.5			15	20.25	303.75	
WELDING TRUCK INTERNATIONAL 4700	5			5			10	43.50	435.00	
TOTAL	$		44,311.88	$		44,311.88	830		83,923.76	
	415.00			415.00						

	Current Period
Equipment Hours	830
Material & Subs	0.00
Manhours	160.00
Total Cost	$111,240.55

From: <DaveHealey@nalcorenergy.com>
Date: 5 June, 2013 11:55:41 AM ADT
To: Justin Fillier <JFillier@ikcone.com>, Don Strickland <DStrickland@ikcone.com>, <mario.lavoie@kiewit.com>
Subject: Fw: TOWNHALL Meeting for Thursday, June 6 @ 4:00 p.m.

Please notify all staff.

TOWNHALL MEETING
DATE: 06-June-2013, Thursday
TIME: 4:00 p.m.
LOCATION: Temporary Camp Pad – Kitchen
Attendance is Mandatory

Attendance is required for all SITE STAFF (including contractors).
Site will be shut down at 3:00 pm to ensure you have ample time to make your way to the meeting location.

If I have missed anyone of this email, please ensure that this message is forward on to these individuals. Thank you.

Dave Healey
Site Manager (Interim)
Nalcor Energy - Lower Churchill Project
t. (709) 896-6790 c. (709) 897-5681
e. DaveHealey@nalcorenergy.com
w. www.nlh.nl.ca
1.888.576.5454

40