DELTA
CONSULTING GROUP

Introduction to Construction Claims

What are Construction Claims and Why do They Occur?

Cory Milburn
VICE PRESIDENT
Delta Consulting Group

Matt Nichols
DIRECTOR
Delta Consulting Group

Cory Milburn, MBA, CFCC, PSP, CCP

Vice President

For over 30 years, **Cory Milburn** has guided clients through management optimization, risk mitigation, and the resolution of challenging situations in the construction industry.

His success evolved from various roles in expert-level claims development and defense strategy, expert testimony, CPM scheduling, project controls management, productivity analysis, forensic schedule analysis, contract entitlement, risk management, dispute resolution, and training.

Education

- **University of Denver**
  MBA, 2026
- **University of Phoenix**
  B.S. Business Administration, 2010
- **U.S. Army Special Warfare Training Center and School**
  U.S. Army Special Forces, 2005

Certifications & Licenses

- AACE Certified Forensic Claims Consultant (CFCC)
- AACE Certified Planning and Scheduling Professional (PSP)
- AACE Certified Cost Professional (CCP)

DELTA CONSULTING GROUP

T: 303-406-2430
E: cmilburn@delta-cgi.com

Matthew Nichols, PSP

Director

Matthew Nichols specializes in project controls, with expertise in construction scheduling and the development and analysis of claims involving delay, loss of productivity and damages. He provides expert analysis, testimony, and advisory services to owners, contractors, and subcontractors across the United States, Canada, the United Kingdom, the Middle East, and Australia. His experience spans a wide range of projects valued from $1 million to $15 billion, including airports and bridges to energy, mining, and infrastructure developments.

- **13 Years Experience:**
  - **Project Controls Professional – Construction Claims and Project Advisory**
  - **Provides expert testimony on delay and damages**

Education

- **Texas A&M University**
  MEng Construction Engineering and Management, 2012
- **Texas A&M University**
  B.S. in Civil Engineering, 2011

Certifications & Licenses

- AACE Certified Planning and Scheduling Professional (PSP)

DELTA CONSULTING GROUP

T: 972-725-7177
E: mnichols@delta-cgi.com

Agenda

- What is a construction claim?
- Common causes of construction claims
- Common types of construction claims
- Strategies for avoiding claims and disputes

What is a Construction Claim?

What is a Construction Claim?

A formal request made by a party to a construction contract seeking time, cost, or other adjustment to the contract terms due to a change or event

Common Causes of Claims

- Directed Changes to the Work
- Differing Site Conditions
- Incomplete Design / Design Changes
- Adverse Working Conditions
  (*e.g.*, Safety, Debris, Heat/Cold)
- Changes to Logistics Plan
  (*e.g.*, Lifts, Crane Time, Material Staging, Facilities)
- Incomplete Predecessor Work by Others
- Lack of Access
- Trade Stacking / Compression
- Tariffs

DELTA
CONSULTING GROUP

Unique Risks for Mining Projects

- Workforce and supply chain challenges due to remote locations
- Environmental and regulatory constraints
- Harsh weather (*e.g.*, mountain, desert, jungle, arctic)
- Geotechnical uncertainty
- Specialized processes and equipment

Common Types of Claims

EXTENSION OF TIME / DELAY

DISRUPTION / LOSS OF PRODUCTIVITY (LOP)

ACCELERATION

Types of Claims

Types of Claims: Delay

- **Prospective Delay Analysis:**
  - Analysis occurs prior to the start or conclusion of the delay event
  - Quantification of delay based on an estimate of time
  - Includes assumptions regarding sequence, timing, and effect
  - Requires the use of a “modeled” delay
  - Only one (reasonable) method of prospective delay analysis
- **Retrospective Delay Analysis:**
  - Analysis occurs after the conclusion of the delay event
  - Should be based on what actually happened (but not always)
  - Commonly referred to as “forensic delay analysis”
  - Multiple methods of performing forensic delay analysis with varying results

DELTA CONSULTING GROUP

Types of Claims: Delay

Unexcused:

A delay for which the contractor (or its subcontractors/suppliers) is responsible:

- May expose the contractor to assessment of liquidated damages by the owner
- Contract may require that the contractor recover the delay at own expense

Excusable / Non-Compensable:

1) A delay which was not caused by the owner and for which the contractor has not assumed the risk or
2) Concurrent delay:

- Contractor may be entitled to a time extension, but not compensation
- Common types:
  - Weather Days
  - Force Majeure

Excusable / Compensable:

A delay not anticipated at the time of the contract for which the owner is responsible:

- Contractor may be entitled to a time extension and compensation
- Common types:
  - Design changes
  - Additional work
  - Unforeseen conditions

Delay Analysis - Prospective

Time Impact Analysis:

- AKA “Schedule Impact Analysis” or “Time Impact Evaluation”
- Only accepted method that allows for forecasting of delay
- Commonly required in construction contracts to substantiate a time extension request
- Method for estimating the delay caused by an event or series of events
- Useful for the proactive management of changes to the contract time

Delay Analysis - Prospective

Time Impact Analysis Requirements:

- Critical Path Method schedule (with exceptions)
- Schedule update in place prior to the event
- Estimate of the duration of the impact/additional work
- Knowledge of how the work will be affected

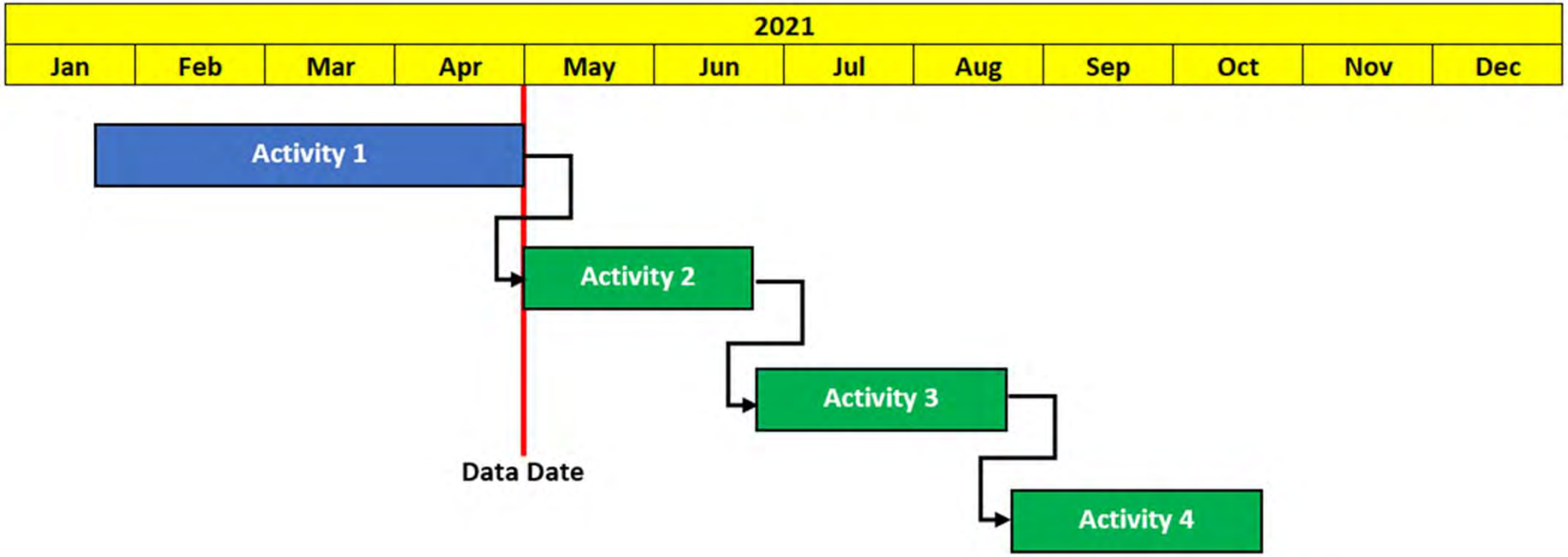
Delay Analysis - Prospective

Time Impact Analysis Steps:

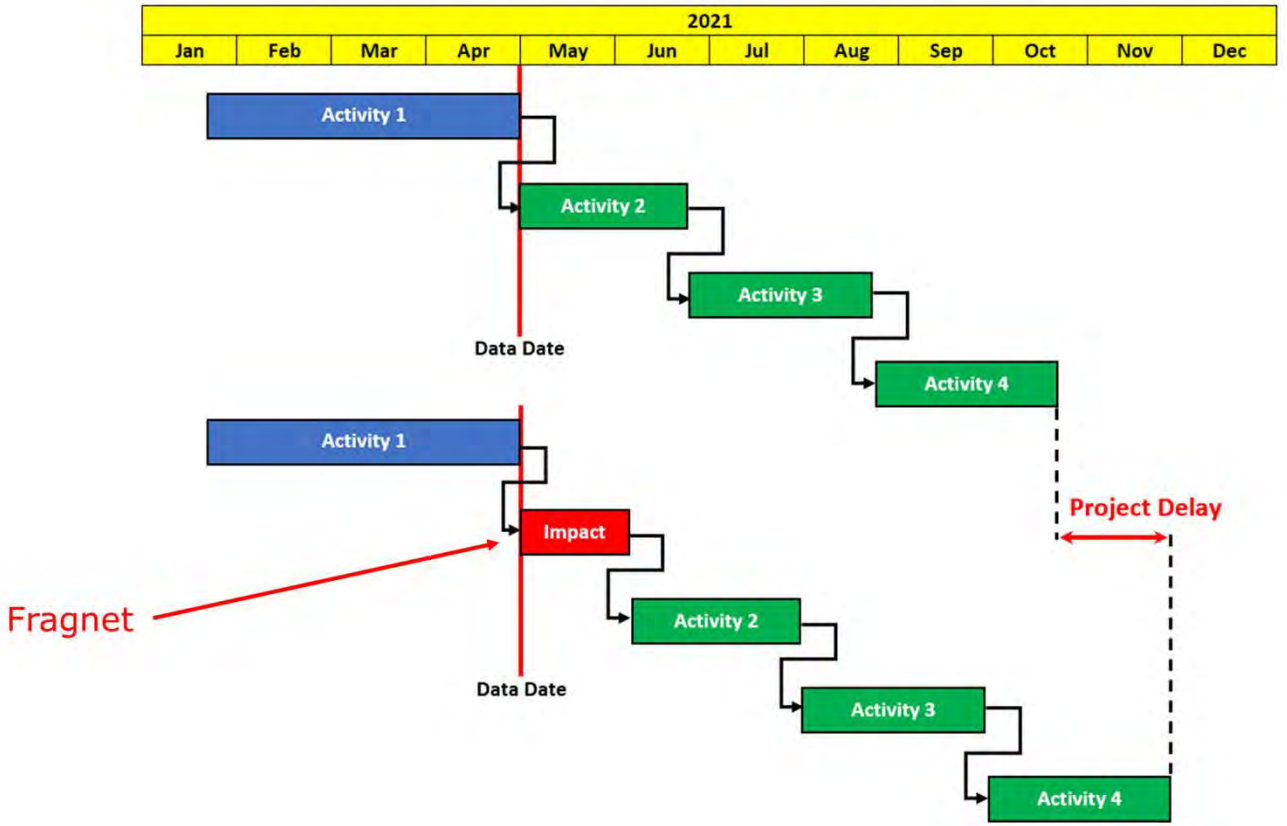
1. Model the event with a network fragment (fragnet)
2. Select the appropriate unimpacted schedule update
3. Insert the fragnet into a copy of the unimpacted schedule (0 duration)
4. Insert the durations into the fragnet & recalculate
5. Identify the activity that will be used to measure the impact
6. Determine the correct time impact (calendar days, workdays)
7. Determine the delay
8. Account for previously granted time extensions
9. Writing the narrative/explanation

AACE RP 52R-06

Delay Analysis - Prospective



Delay Analysis - Prospective



Delay Analysis - Prospective

Common Errors and Pitfalls when performing TIAs:

1. Impacting a schedule that was not in place just prior to the event
2. Making the fragnet too complicated
3. Failing to perform the analysis timely – "waiting for better information"
4. Not addressing (potential) concurrent delays
5. Not listing assumptions in the TIA narrative

*Update the TIA if the situation changes

AACE RP 52R-06

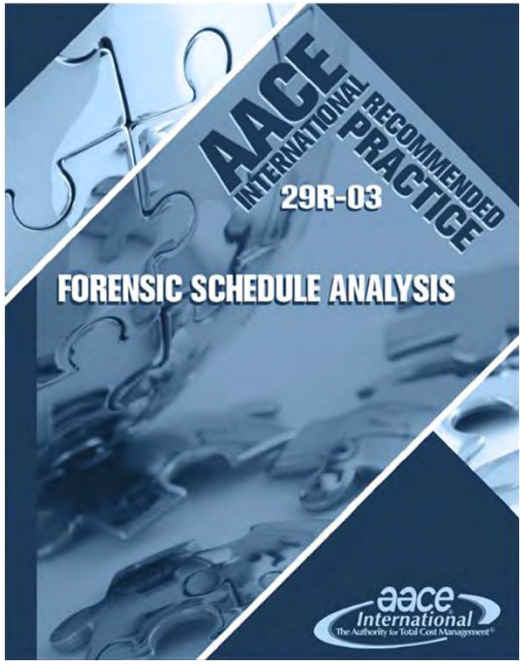
DELTA CONSULTING GROUP

Delay Analysis - Retrospective

Common Types of Forensic Delay Analysis Methods (AACE RP 29R-03):

1. Contemporaneous Period Analysis/Windows Analysis (3.3)
2. Half-Step/Bifurcated Contemporaneous Period Analysis (3.4)
3. As-Planned versus As-Built Analysis (3.1 & 3.2)
4. Impacted As-Planned Analysis (3.6)
5. Retrospective Time Impact Analysis (3.7)
6. Collapsed As-Built Analysis (3.8 & 3.9)

Taxonomy																
	1	RETROSPECTIVE														
	2	OBSERVATIONAL							MODELED							
	3	Static Logic			Dynamic Logic				Additive				Subtractive			
	4	3.1 Gross	3.2 Periodic		Contemporaneous Updates (3.3 As-Is or 3.4 Split)		3.5 Modified / Reconstructed Updates		3.6 Single Base[2]		3.7 Multi Base[1]		3.8 Single Simulation		3.9 Multi Simulation[1]	
	5		Fixed Periods	Variable Windows	All Periods	Grouped Periods	Fixed Periods	Variable Windows	Global Insertion	Stepped Insertion	Fixed Periods	Variable Windows or Grouped	Global Extraction	Stepped Extraction	Fixed Periods	Stepped Extraction
Common Names		As-Planned vs As-Built	Window Analysis		Contemporaneous Period Analysis, Time Impact Analysis, Window	Contemporaneous Period Analysis, Time Impact Analysis, Window Analysis	Contemporaneous Period Analysis, Time Impact Analysis	Window Analysis, Time Impact Analysis	Impacted As Planned, What-If	Time Impact Analysis, Impacted As-Planned	Time Impact Analysis	Window Analysis, Impacted As-Planned	Collapsed As-Built	Time Impact Analysis, Collapsed As-Built	Time Impact Analysis, Collapsed As-Built	Time Impact Analysis, Window Analysis, Collapsed As-Built



AACE RP 29R-03

DELTA CONSULTING GROUP

Types of Claims: Loss of Productivity

- Specific type of claim under umbrella of disruption
- Productivity *vs.* production

Productivity:
The measure of production output per measure of input

- **Example:** Yards of concrete placed per hour

Production:
The measure of output only

- **Example:** Yards of concrete placed

DELTA CONSULTING GROUP

Types of Claims: Loss of Productivity

- **Comparison of planned vs. actual**
  - Productivity Factor – Actual Hours / Earned Hours
    - Above 1 – Bad
    - Below 1 – Good

$$\textbf{Productivity Factor} = \frac{\textbf{120 Actual Hours}}{\textbf{90 Earned Hours}} = \textbf{1.33}$$

  - Performance Factor – Earned Hours / Actual Hours
    - Above 1 – Good
    - Below 1 – Bad

$$\textbf{Performance Factor} = \frac{\textbf{90 Earned Hours}}{\textbf{120 Actual Hours}} = \textbf{0.75}$$

DELTA CONSULTING GROUP

Types of Claims: Loss of Productivity

"It is rare that in a working environment that lost productivity can be so readily ascertainable or related to a single effective cause."

- Trade stacking
- Resequencing of activities
- Learning curve
- Access constraints
- Weather impacts
- Material supply by others
- Drawing and design changes
- Cumulative change

DELTA CONSULTING GROUP

Types of Claims: Loss of Productivity

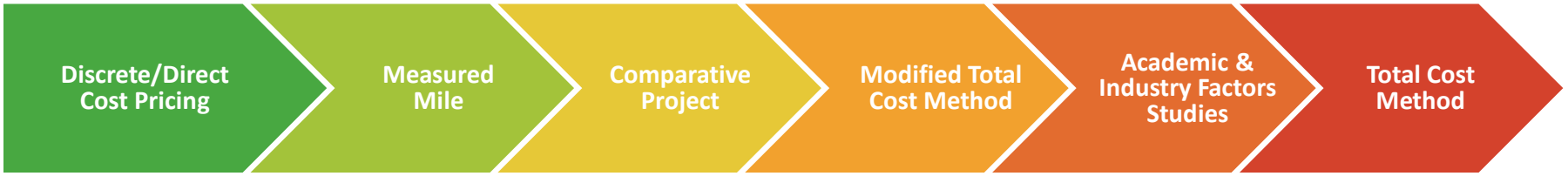
Documenting the cause of LOP

- Daily reports
- Letters
- Notices
- Schedule impact narrative
- Change order submissions
- Creation of cost codes in job cost report

DELTA
CONSULTING GROUP

Types of Claims: Loss of Productivity

- Productivity is a relative concept, so the calculation of a loss is relative to what would have been **but for** the disruption
- Hierarchy of Quantification Methods



DELTA CONSULTING GROUP

Strategies for Avoiding Claims and Disputes

Strategies for Avoiding Claims and Disputes

- Understand the contract
- Comply with contract notification requirements
- Document impacts in the field
- Manage impacts using a log

The Contract

- **The Contract is the rulebook for managing claims on a project**
- **The Contract should define:**
  - Contract Milestones, Completion Dates, and/or Durations
  - Types of Delay
    - Excusable/Non-Compensable
    - Excusable/Compensable
    - Unexcused
  - Claim Process
- **Contractor's Obligations**
  - Notice
  - Time Extension Request
  - Pricing
- **Owner's Obligations**
  - Review and Response
  - Delay or Acceleration

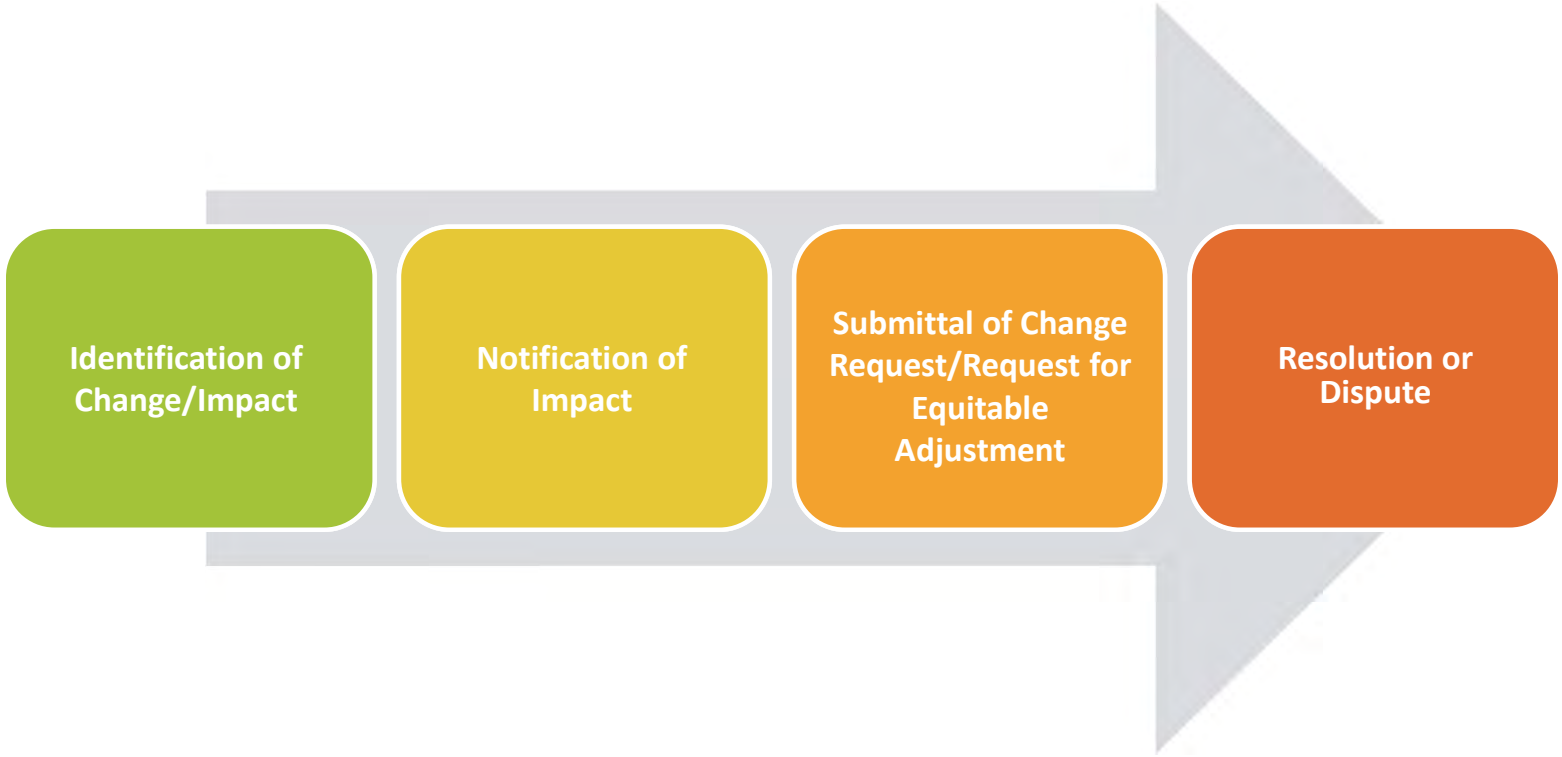
DELTA CONSULTING GROUP

Contract Notification Requirements

- **Method of Notification** (*e.g.*, letter, email, daily reports)
- **Recipient of Notification** (*e.g.*, Owner, Owner Rep, General Contractor)
- **Timing of Notification** (within XX days of events giving rise thereto)
- **Content of Notification** (*e.g.*, date, location, event description, scope)
- **Other Documentation** (impact identified in daily reports)
- **Submittal of Change Request** following Notification
- **Failure to Issue Notification** may waive right to claim

DELTA
CONSULTING GROUP

Notification Process



Notification Process

- Capture the impacts identified by field personnel on daily reports/quality control reports (Contract may require submission of reports to Owner)
- Issue timely notification in accordance with the contract and include pertinent/required information
- Contemporaneously track/estimate the cost of the change/impact and advise Owner of the associated costs
- Submit pricing in accordance with the contract and apply the same process for subcontractors
- If negotiations fail, implement the dispute resolution process

DELTA
CONSULTING GROUP

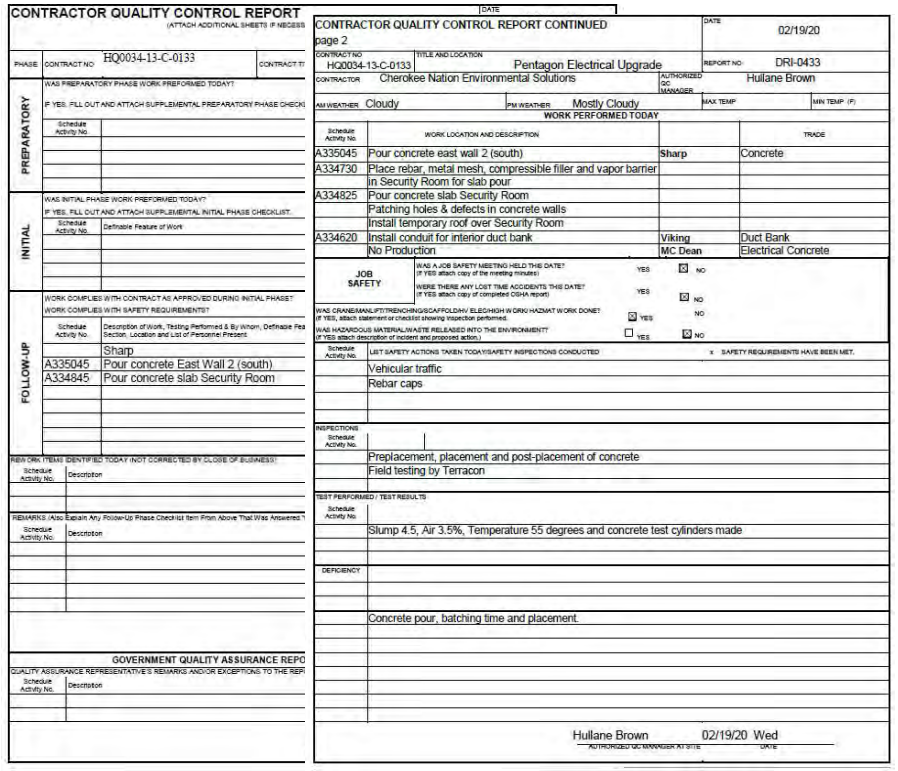
Communication of Changes & Impacts

- **Communication of Owner-Directed Changes to Work:**
  - Requests for Proposal
  - Change Directives (Lump Sum, Unit Price, Force Account)
  - Design Changes/Bulletins
  - Direction through RFI Responses & Submittal Reviews
- **Documenting Impacts:**
  - Daily Reports/Quality Control Reports
  - Subcontractor Daily Reports
  - Coordination/Project Meetings
  - Observations by Field Management/Supervision

DELTA
CONSULTING GROUP

Documenting Impacts

- **Daily Reports/ Quality Control Reports**
  - Identify the work performed
  - Identify subcontractors on the project
  - Identify the quantities installed
  - Describes weather/jobsite conditions
  - Identify conversations/direction received
  - Describes impacts to the work



CONTRACTOR QUALITY CONTROL REPORT

CONTRACTOR QUALITY CONTROL REPORT CONTINUED page 2

DATE 02/19/20

CONTRACT NO HQ0034-13-C-0133

TITLE AND LOCATION Pentagon Electrical Upgrade

REPORT NO: DRI-0433

CONTRACTOR Cherokee Nation Environmental Solutions

AUTHORIZED QC MANAGER Hullane Brown

AM WEATHER Cloudy

PM WEATHER Mostly Cloudy

MAX TEMP

MIN TEMP (F)

WORK PERFORMED TODAY

Schedule Activity No.	WORK LOCATION AND DESCRIPTION		TRADE
A335045	Pour concrete east wall 2 (south)	Sharp	Concrete
A334730	Place rebar, metal mesh, compressible filler and vapor barrier in Security Room for slab pour		
A334825	Pour concrete slab Security Room		
	Patching holes & defects in concrete walls		
	Install temporary roof over Security Room		
A334620	Install conduit for interior duct bank	Viking	Duct Bank
	No Production	MC Dean	Electrical Concrete

JOB SAFETY

WAS A JOB SAFETY MEETING HELD THIS DATE? (If YES attach copy of the meeting minutes) YES ☒ NO

WERE THERE ANY LOST TIME ACCIDENTS THIS DATE? (If YES attach copy of completed OSHA report) YES ☒ NO

WAS CRANE/MAN-LIFT/TRENCHING/SCAFFOLD/HV ELEC/HIGH W ORK/ HAZMAT WORK DONE? (If YES, attach statement or checklist showing inspection performed) ☒ YES NO

WAS HAZARDOUS MATERIAL/WASTE RELEASED INTO THE ENVIRONMENT? (If YES attach description of incident and proposed action.) ☐ YES ☒ NO

Schedule Activity No.	LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED	x SAFETY REQUIREMENTS HAVE BEEN MET.
	Vehicular traffic	
	Rebar caps	

INSPECTIONS

Schedule Activity No.	
	Preplacement, placement and post-placement of concrete
	Field testing by Terracon

TEST PERFORMED / TEST RESULTS

Schedule Activity No.	
	Slump 4.5, Air 3.5%, Temperature 55 degrees and concrete test cylinders made

DEFICIENCY

	Concrete pour, batching time and placement

Hullane Brown 02/19/20 Wed

AUTHORIZED QC MANAGER AT SITE DATE

CONTRACTOR QUALITY CONTROL REPORT (ATTACH ADDITIONAL SHEETS IF NECESS)

PHASE CONTRACT NO HQ0034-13-C-0133 CONTRACT TI

PREPARATORY

WAS PREPARATORY PHASE WORK PREFORMED TODAY?

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL PREPARATORY PHASE CHECKL

Schedule Activity No.	

INITIAL

WAS INITIAL PHASE WORK PREFORMED TODAY?

IF YES, FILL OUT AND ATTACH SUPPLEMENTAL INITIAL PHASE CHECKLIST.

Schedule Activity No.	Definable Feature of Work

FOLLOW-UP

WORK COMPLIES WITH CONTRACT AS APPROVED DURING INITIAL PHASE?

WORK COMPLIES WITH SAFETY REQUIREMENTS?

Schedule Activity No.	Description of Work, Testing Performed & By Whom, Definable Fea Section, Location and List of Personnel Present
	Sharp
A335045	Pour concrete East Wall 2 (south)
A334845	Pour concrete slab Security Room

REM ORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)

Schedule Activity No.	Description

REMARKS (Also Explain Any Follow-Up Phase Checklist Item From Above That Was Answered "

Schedule Activity No.	Description

GOVERNMENT QUALITY ASSURANCE REPO

QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REP

Schedule Activity No.	Description

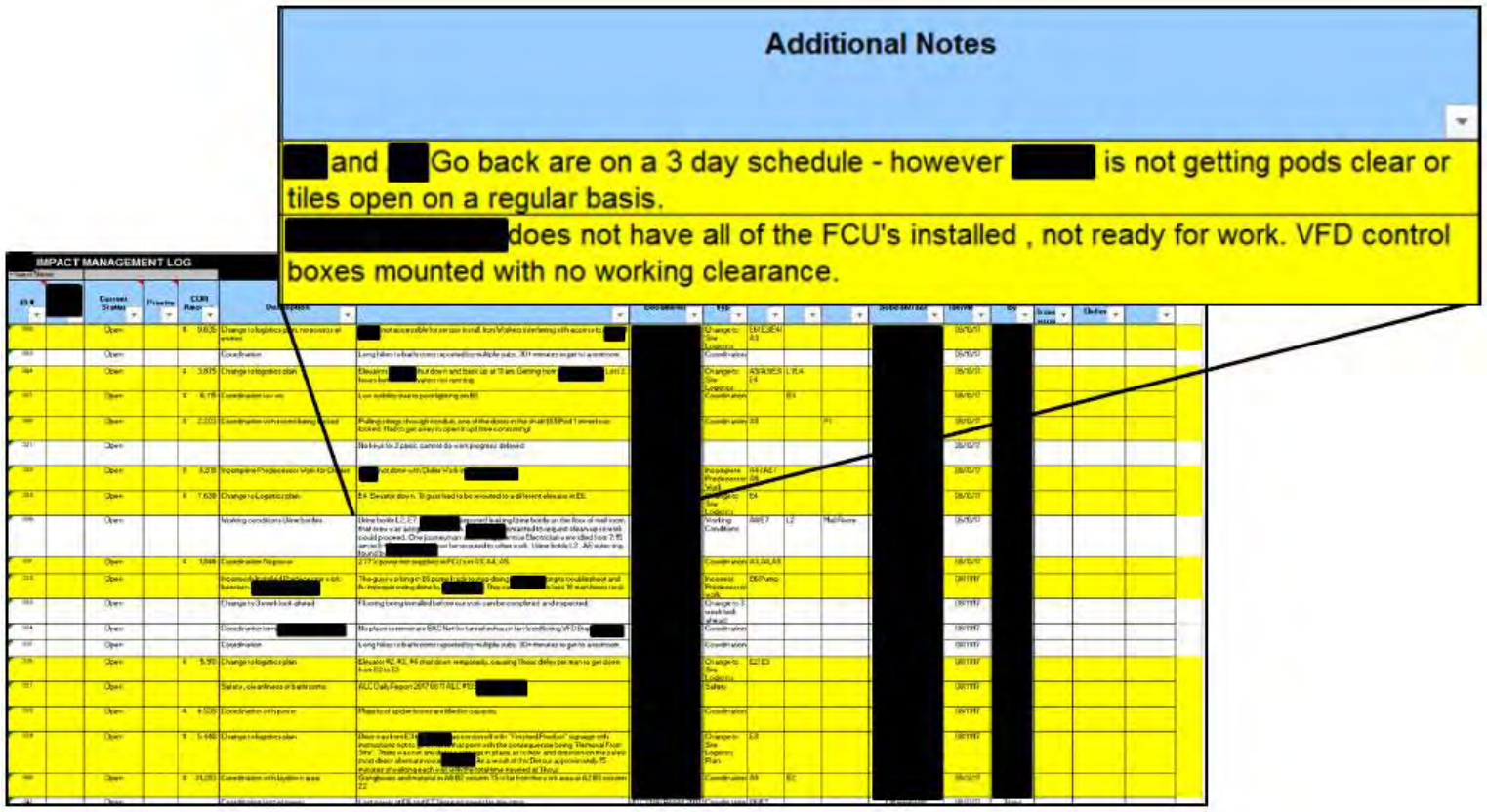
DELTA CONSULTING GROUP

Issue Notification Log

- Notifications tracked through “Issue Notification Log”
- Unique numbers assigned to each issue/notification
- Log includes:
  - Date of impact
  - Date of notice
  - Description of the impact
  - Type of impact
  - Location of impact
  - Price Estimate
  - Date of receipt of notice from subcontractor
  - Date of receipt of responses by General Contractor and/or Owner

DELTA CONSULTING GROUP

Issue Notification Log



Conclusions

- A construction claim is a formal request made by a party in a construction contract seeking time, cost, or another adjustment to the contract terms due to an impact to a project.
- Mine projects have specific causes of claims due to their remote/harsh locations
- To avoid claims and disputes, all parties should:
  - Understand the contract
  - Comply with contract notification requirements
  - Document impacts in the field
  - Manage impacts using a log

DELTA
CONSULTING GROUP

Thank You!

Questions?

+1 (303) 406-2430 info@delta-cgi.com