



HAROLD E. BUDDEMEYER, JR.



Mr. Buddemeyer is a Senior Principal with Long International and has over 50 years of experience in all aspects of program and construction project management and construction disputes. His experience includes project cost and schedule control, systems and procedures development and implementation, program planning as well as capital and operating cost estimating and economic analysis during the design, construction, and start-up phases of construction projects. Mr. Buddemeyer is also experienced with construction and property damage and business interruption claims analysis, and preparation, defense, and negotiation of settlements. He has been involved on projects spanning a wide variety of industries including refineries, offshore oil and gas, oil sands facilities, petrochemical plants, heavy civil, mining, nuclear, coal and gas-fired power plants, transportation, and commercial projects.

Mr. Buddemeyer has over 38 years of construction contract disputes consulting experience. He has been responsible for entitlement and issue analysis; change order analysis; labor productivity analysis; cost and damages analysis; schedule delay and impact analysis; claim report preparation and rebuttal; negotiation and mediation assistance; the organization, development, and maintenance of document databases; assistance to counsel during discovery; and depositions and interrogatory preparation. Mr. Buddemeyer has testified in U.S. and international arbitration on projects involving claimed damages as high as US\$7 billion.

EDUCATION

Professional degree program, majored in applied mathematics and operations research, minored in Chemical and Petroleum Refining Engineering, Colorado School of Mines (1965–1970)

PROFESSIONAL AFFILIATIONS

Association for the Advancement of Cost Engineering International

TECHNICAL EXPERIENCE

Representative U.S. and international technical experience includes:

- Construction claims preparation, analysis, defense, and negotiation of settlements
- Identification and systematic evaluation of major engineering and construction problems and their cause/effect relationship on cost overruns, and schedule delays and acceleration
- Direct and indirect damages assessments
- Property damage and business interruption damages assessments
- Deposition and expert witness testimony
- CPM schedule analyses of the impacts of delays, disruption, acceleration, and loss of labor productivity
- Contract/entitlement analysis
- Management of construction project control procedures, data acquisition for projects, and the organization, analysis, and reporting of project cost, schedule, procurement, and resource utilization information
- Oversight and preparation of construction project order-of-magnitude, factored, and detailed capital and operations cost estimates



- Oversight and preparation of construction project cash flow, return on investment, and interest calculations; economic analyses, risk and sensitivity analyses, range estimating, and contingency/management reserve calculations

PROJECT EXPERIENCE

Mr. Buddemeyer's project management and claims experience includes the successful completion of engagements for private sector owners, transit agencies, universities, sureties, financial institutions, law firms, architectural firms, and contractors. Representative projects include the following:

Petroleum Refining, Petrochemical, Oil & Gas, and Industrial Plants

- Provided expert analysis and arbitration testimony in respect of a multibillion-dollar in-situ steam-assisted gravity drainage oil sands extraction facility in northern Alberta, Canada. Performed cost and quantity analyses, and quantum calculations in support of the contractor's claims for delay and unpaid costs. Prepared rebuttal analyses and reports related to the owner's claims for completion costs, pre-termination costs, delay costs, and over-payments. The dispute, which involved damages in excess of CAD\$ 1 billion, comprised differing site conditions, delay, labor inefficiency, scope change, and owner furnished impact and entitlement issues.
- Project Executive for the evaluation of fire damage rebuild costs and schedule delays on an oil sands upgrading facility in Canada relative to a \$1 billion property damage and business interruption lawsuit. The rebuild included expedited demolition, safing, scope definition, procurement, construction, start up, and commissioning of a fire-damaged coker and other facilities. Retained by the defendant to analyze claims brought by the plant operator. Reviewed claims and damages alleged by the plaintiff as well as conducted an independent assessment of the compensability of incurred costs. Other services performed included incurred cost analysis, estimates of non-compensable costs for delays, improvements and execution errors, schedule delay/impact analysis, and deposition support. Prepared expert reports and mediation presentations, and provided litigation support.
- Lead damages expert on behalf of the owner on a \$140 million claim involving the design and construction of a \$700 million three-train gas processing plant, infrastructure, pipelines, and temporary facilities in Algeria. Issues involved a site relocation that allegedly resulted in increased quantities, subcontract labor man-hours and costs, engineering and construction management man-hours and costs, associated delay, productivity loss, and other costs. The owner counterclaimed delay damages because the plant was completed late. The owner alleged bid error by the contractor and inadequate and incorrect quantum calculations to support its claimed costs. Also assessed the reasonableness of recorded project costs. Testified in Paris, France in ICC arbitration. The owner received a favorable award.
- Lead damages expert on behalf of the property damages insurance carrier on the analysis of costs incurred by the owner to expedite the \$340 million completion of the reconstruction of part of an oil refinery following a fire in Alberta, Canada. The rebuild included expedited demolition, safing, scope definition, procurement, construction, start up, and commissioning of a fractionator and other units in an operating facility. The analysis included an assessment of estimated costs, and incurred total and expediting costs associated with procurement of equipment and materials, overtime costs for working multiple shifts and longer hours, and loss of productivity as a result of a compressed schedule, trade stacking, winter work and overtime. Also analyzed the trade-offs of increased time-related costs that would have been incurred had the work not been expedited compared to the increased costs as a result of a fast track schedule. The results of various cost/schedule scenarios were evaluated using Monte Carlo calculations to derive a probabilistic determination of the range of costs as a function of the variables involved in the analyses. The analyses contributed to a successful settlement between the insurance carrier and the owner.
- Lead damages expert on behalf of an insurance adjuster in respect of damages claimed by the owner/operator of a large oil sands project in northern Alberta, Canada. Evaluated the reasonableness of claimed direct and



time-related indirect costs resulting from delays to a planned turn-around maintenance that had been impacted by fire damage in adjacent facilities. The evaluation resulted in a reduction and equitable resolution of the \$70 million claim.

- Lead cost/damages expert retained by the owner to perform an estimate review, and conduct cost, progress, and performance assessments related to the greenfield construction of a large chemical plant in Louisiana. The review and assessments included an evaluation of the accuracy and composition of several gated-process cost estimates prepared for the project by the EPC contractor, a project contingency evaluation, and an evaluation of the EPC contractor's standard of care and contractual obligations. Also conducted a cost variance analysis by process unit and cost type, evaluated earned value progress and performance by process area/unit for engineering and construction, and evaluated the multibillion-dollar cost overrun including probable causes of the cost overruns and potential compensability/recoverability. Conducted a PowerPoint presentation to owner management and counsel of findings and conclusions.
- Project executive on a multimillion-dollar claim for a major U.S. oil company. The claim was advanced by a large engineering and construction firm for cost overruns and delays associated with the lump sum construction of hydrocarbon production and process modules for the Kuparuk Project on the north slope of Alaska. Prepared an independent causation analysis, damage estimates, and schedule delay analyses. Evaluated the contractor's claims, prepared demonstrative exhibits, and participated in settlement negotiations.
- Damages expert retained by an owner to evaluate the sources, causation, composition, and documentary support for \$300 million in affirmative claims, which resulted from repairs, standby, disruption, and delay on a U.S. Gulf Coast offshore production platform project due to material defects and rework. The evaluations were performed in support of negotiations, and in anticipation of the preparation of expert reports and expert testimony.
- Analyzed a Canadian contractor's \$25 million delay and disruption claim against the owner of a Caribbean refinery. The venue was international arbitration under UNCITRAL arbitration rules. The contractor's scope of work involved the construction of a new visbreaker unit, modernization of instrumentation facilities, and a revamp of a fluid catalytic cracker oil upgrading process unit. Responsible for the assessment of alleged disruption impacts resulting from change orders and other impacts to the contractor's labor productivity.
- On behalf of the owner, performed an analysis of cost overrun claims resulting from mismanagement, delays, and rework by an EPC contractor on an offshore oil and gas production SPAR installed in the Gulf of Mexico. The claims pertained to fabrication of the soft tank/truss in Texas, fabrication of the hard tank in Finland, transportation rigging and preparation costs, and excess home office engineering and project management costs.
- Project Manager on a multimillion-dollar dispute involving the grassroots construction of a CO₂ recovery and processing plant in Texas. Prepared an independent damage and schedule analysis for a major oil company in order to defend against a contractor's claim for cost overruns on the lump sum contract.
- Lead damages expert for the analysis of various contractors' delay and change order claims on behalf of the owner on a major gasoline optimization project in Trinidad. The project included modifications to an existing FCCU unit, a new alky-acid unit, an isomerization unit, a new heavy naphtha hydrotreater and continuous catalytic regeneration platformer unit, and offsites facilities modifications. Damages evaluations included reviewing cost support for the requested change order amounts, recalculation of time-related costs based on delay analyses, and determination of damages based on assessment of contractual entitlements under the terms of the contract. Participated in negotiations to achieve settlement of the change order claims.
- Advisor to a major engineering and construction firm on a \$20 million dispute pertaining to the design and construction of a large gas processing plant in California. Provided guidance relative to claim preparation for cost overruns and schedule delays.



- Lead analyst for the examination of a South African contractor's multimillion-dollar delay and disruption claim against a major U.S. oil company for construction of two offshore oil production platforms off the coast of Angola, Africa. On behalf of the owner, conducted an independent assessment of estimated and incurred costs, a schedule analysis of alleged construction and transportation delays, and entitlement analysis. Visited the project site to review construction and interconnect status and quality. Prepared affirmative claims against the contractor.
- Task Manager for incurred and estimated cost analysis work on a large petrochemical plant property damage/business interruption damage engagement. Assisted the plant operator/owner with respect to the evaluation of plant rebuild costs and schedule duration for the purpose of quantifying damage compensability. Managed the preparation of risk and sensitivity analyses of rebuild costs to determine the potential range of cost recovery.
- Lead cost analyst with respect to the evaluation of the reasonableness of several contractor-prepared multimillion-dollar cost estimates for the design and construction of a LNG multi-train debottlenecking project. The analysis, which was performed for the owner, focused on estimated cost growth in several categories of cost, and in particular, the scope and cost of long-lead fabricated materials, labor and indirect costs.
- Lead cost analyst for the examination of the owner's damages resulting from the delayed installation of an oil production facility in the Gulf of Mexico due to defects in the fabrication of shackles. Identified the owner's direct costs and time-related costs from its job cost project files. Analyzed the owner's project CPM schedules to identify critical path delays associated with the work to replace the defective shackles.
- Lead analyst regarding schedule delay and cost overrun issues on a NGL processing project involving construction of central process and satellite facilities in Wyoming. The analysis work was performed on behalf of the owner to identify the magnitude and compensability of potential affirmative claims against the prime contractor.
- Retained by a major U.S. oil company to evaluate the status, record keeping, schedules, and costs relative to the design and construction of hulls and topsides for two oil and gas processing offshore platforms being constructed in Korea. The evaluation followed a visit to the contractor's fabrication yard, and focused on the analysis of cost overruns, schedule delays, and entitlement, and an assessment of the potential for claims from the prime contractor.
- Evaluated a claim by the operator of a chemical storage facility associated with delays and cost overruns caused by scope changes and hurricane impacts. The operator alleged that the cost of the facility significantly increased as a result of owner-caused changes and impacts from Hurricanes Katrina and Rita, and that the owner agreed to compensate the operator for the hurricane impacts. The owner alleged that the operator mismanaged the project, and that the delays and cost increases were primarily caused by other problems not related to the hurricanes.
- Lead cost analyst on a team retained by an owner to assess cost overrun and schedule delay issues for construction of process units and ancillary facilities comprising a multimillion-dollar petrochemical plant project. The analysis focused on the magnitude and compensability of the contractor's alleged cost overruns, and the quantification of the owner's affirmative claims for discrete items and liquidated damages.
- Damages expert for an owner regarding the cost reimbursable construction of a large NGL separation, processing, and storage facility in Illinois. Damages analysis focused on the reasonableness and causation of significant construction and start-up cost overruns related to work performed by the prime contractor's electrical subcontractor.
- On behalf of the owner, evaluated contractors' claims for delays and cost overruns associated with two offshore gas pipeline projects in Trinidad.
- Lead cost and estimating consultant retained by a group of insurance companies to evaluate the reasonableness of a \$200 million cost estimate, and cost/schedule risks associated with the repair of fire



damage to four electrostatic precipitators and enclosures in a large oil sands plant in Alberta, Canada. The engagement involved site visits and interviews. Evaluated rebuild costs, schedule estimates and supporting documentation, with particular scrutiny on assumptions, construction means and methods, labor costs and productivity, field indirect costs, contingency, and expediting and delay costs. Final work products included written reports that addressed, the bases for and reasonableness of, the repair cost estimate and scope of repair, and the cost impact of several expedited repair schedule alternatives. Provided oral presentations to insurance company representatives.

- Damages expert retained by the defendants to evaluate the composition, timing, and compensability of \$400 million in alleged cost overruns and damages related to the construction of an oil sands project in Alberta, Canada. The engagement included the preparation of expert reports, and the evaluation of cost growth details. Contemplated testimony concerning project cost overruns based largely upon analyses of the underlying bases, assumptions, composition, knowledge, decisions, and timing related to the AFE cost estimate, cost forecasts, trends, change orders, estimate updates, and the incurred project costs.

Power Plant Projects

- Testifying damages expert in an ICC arbitration regarding the design and construction of a new nuclear power plant project in Europe involving billions of Euros of damages. Retained by the plant operator respondent to evaluate and to prepare expert reports in response to damage allegations brought by the prime contractor joint venture plaintiff against the operator. Prepared ten voluminous reports in response to alleged damages, which had been advanced in several tranches, and comprised allegations and damages for delay, disruption and inefficiency, and scope change; and which involved analyses of the contractor's damages methodology; direct and indirect project costs, man-hours, and quantities; home office overhead, and profit and interest. Also prepared affirmative claims and related reports against the contractor, in several tranches, for delay-related damages incurred by the operator with respect to the operator's project team, regulatory costs, insurance, and indirect costs, the duration of which had been greatly extended due to contractor-caused delays to the Project's Provisional Turnover Date and various work disciplines. Testified four times in 2016.
- Project Manager on a \$500 million nuclear power plant litigation in Michigan. Responsible for team efforts in document research and database management, litigation and deposition support, technical problem/entitlement analyses, and cost, schedule, and labor productivity analyses. The cost analysis focused on the detailed evaluation of base estimate, change order, actual, trend, and forecast costs and man-hours for all construction disciplines. The cost analysis involved cause-affect analyses of cost and man-hour growth, labor productivity analyses, quantity growth analyses, and evaluations regarding the consistency or lack thereof between estimated and forecast man-hours, various production and construction factors, and the project schedule durations, logic, and the mechanical completion date.
- Task Manager on a large nuclear power plant prudency audit in Arizona. Managed the evaluation of the justification and causes for scope and cost growth as well as the origin, composition, and reasonableness of \$1.3 billion of start-up and commissioning cost overruns. The causation analysis considered many issues such as scope changes, labor inefficiency, estimate errors, performance problems, delay and standby impacts, escalation, and mismanagement for all of the major components of the plant start up and commissioning plan and work breakdown structure.
- Lead damages expert for the U.S. federal government on a major nuclear power plant litigation involving the investigation of damages resulting from alleged antitrust and racketeering activities by several major electrical contractors. Provided database research, discovery and deposition support, issues research, and incurred cost, schedule, productivity, and estimate analyses. Analysis emphasized the evaluation of both estimated and actual electrical commodity quantities, material unit costs, labor unit productivity rates, labor rates and extensions, and global estimate basis assumptions, adjustments, conditioning and productivity factor considerations. The cost evaluations also comprised numerous comparative analyses of project information against industry standards and other nuclear power plants.



- Damages expert retained by a nuclear reactor vendor to analyze and defend against claims alleged against the vendor by a nuclear power plant owner. The damage analysis focused on the evaluation of the basis for, and reasonableness of, numerous large claims for direct and time-related damages resulting from alleged scope growth, labor inefficiencies, and schedule delays attributed by the owner to NSSS design and operational defects. The damage analysis comprised detailed evaluations of estimated and incurred time-related costs as well as the costs for all construction disciplines such as civil, structural, equipment, piping, electrical and instrumentation. Employed cause and effect analysis, WBS cost matrix analysis, and schedule analysis techniques to evaluate and refute the alleged damages. Some of the alleged damages were found to be attributable to estimate errors and performance problems for which the owner was responsible, and remaining damages were found to be largely unsubstantiated or very excessive.
- Lead damages consultant for the preparation of a multimillion-dollar claim for a large mechanical contractor on a coal-fired power plant retrofit project in Tennessee.
- Analysis of an EPC contractor's \$35 million damages claim involving the design and construction of two heat recovery steam generators in Illinois. Issues involved delay, loss of productivity, and constructability of the HRSGs. Prepared an assessment of the contractor's cost and man-hour records, and the corresponding damages calculations in support of its claim.
- Testifying damages expert on behalf of a HRSG manufacturer on a gas-fired power plant project. Performed analysis work, and provided testimony related to the independent analysis and rebuttal of significant cost overruns alleged by the prime contractor for schedule delays and changes.
- Retained by a HRSG manufacturer on a three-train, gas-fired power plant project in Michigan. Visited the construction site. Assessed the impact of delays related to HRSG rework, and the mitigating effects of concurrent delays resulting from prime contractor completion work, and owner start up and commissioning activities.
- Retained by a Texas utility and power company to evaluate contract terms and conditions. Participated in an evaluation and risk analysis of a contractor's technical and commercial proposals for construction of a multimillion-dollar bag house retrofit project for a coal-fired power plant. Reviewed the contractor's cost estimate and trade-offs between acceptable financial risks and contract incentives.
- Damages consultant retained by a mechanical contractor to evaluate cost overruns, and to prepare a multimillion-dollar claim and demonstrative exhibits for litigation on a grassroots, coal-fired power plant project. Causal issues included schedule delays, defective contract documents, scope changes, acceleration, and labor efficiency impacts.
- Consultant retained by a lending institution to evaluate problems associated with a biomass power plant facility in California. Performed evaluations for construction and operations cost overruns, design defects, and economic viability issues related to process reliability and the plant's failure to meet design performance criteria and revenue projections.
- Performed an analysis of labor productivity costs associated with repair of damaged electrical transmission lines following Hurricane Rita.

Transportation Projects

- Claim consultant retained by a transportation agency to defend against claims advanced by the contractor on a project involving street and overpass construction and improvements in Colorado. Analyzed and rebutted plaintiff's claim, and performed alternative quantum calculations. Authored an expert report, assisted in discovery and deposition preparation, and provided expert testimony during arbitration proceedings.
- Project Management Oversight Evaluator for the LB-LA Light Rail Transit Project in Los Angeles. Worked on the review, definition, creation, and implementation of project control policies, procedures, systems, methods, reporting, data acquisition, and organizational interfaces.



- Lead estimator for a \$380 million cost estimate of underground construction costs of a rapid transit subway system for a major western U.S. transportation district.
- Retained by a California rapid transit agency to perform performance audits. Also conducted project progress and status assessments, for several large in-progress TBM tunneling construction contracts to measure conformance of the contract work with the agency's program cost and schedule objectives. Identified potential problems and made mitigation recommendations.
- Damages consultant for a DBE contractor on a railroad track-work project in Colorado. Evaluated the contractor's cost overruns and causation. Prepared affirmative claims, and negotiated the recovery of equitable sums owed the contractor for scope changes and delays.

Heavy Civil and Mining Projects

- Lead damages consultant for the preparation of a \$30 million affirmative claim for an international construction company on a heavy civil construction project in Nevada. Analysis included quantity and cost evaluations, estimating, productivity analysis, schedule analysis and report preparation related to scope changes and differing site conditions, which resulted in impacts to costs and schedule for piles, earth and rock excavation, and concrete structures.
- Principal consultant retained by an architectural design firm to defend against claims advanced by a contractor for cost overruns and delays on a water distribution pipeline project in Montana.
- Project Manager for CPM schedule development and control on a U.S. Department of Energy nuclear waste storage facility construction project in New Mexico for an international heavy civil contractor. The schedule planning, control, and periodic updates, which included the incorporation of the effects of significant scope changes, facilitated completion of the project earlier than the original contract completion date despite the fact that the scope of underground construction work doubled after execution of the contract.
- Project Manager for an audit of the open-pit mine reclamation methods and costs of a Montana coal producer/supplier for a major central U.S. power company.
- Damages expert retained by a MBE subcontractor to prepare a multimillion-dollar affirmative claim against the prime contractor for significant quantity and cost overruns and lost profits related to furnishing, stockpiling, and handling of concrete batch plant raw materials; batch plant operations; demurrage; schedule delays; inequitable distribution of profit-sharing incentives; and bankruptcy. The subcontractor's damages pertained to concrete production for airport runways at the Denver International Airport.
- Retained by an international heavy civil construction company to prepare affirmative claims against the owner of a western Colorado dam project. The claim preparation included quantum, productivity, and schedule analyses of excavation and cast in place concrete operations and impacts related to construction of the dam's cut-off wall.

Commercial, Institutional, Industrial, and Residential Projects

- Project Manager for the development and evaluation of alternatives for the modification of a large wastewater treatment plant in Colorado. The work focused on the identification and evaluation of project risks and cost/schedule sensitivities associated with each of several design/construction alternatives.
- Damages consultant retained by a cement manufacturing company to prepare alternative damage assessments and to defend against the prime contractor's claims related to construction of a large cement production facility. Issues included alleged schedule delays, design defects, and scope changes.
- Damages expert retained by an insurance company to evaluate repair and other costs, and to prepare an alternative damage summary associated with swelling soils, water migration, defective soils investigations,



defective civil/structural designs, and defective construction for over fifty homes in a Colorado residential subdivision.

- Project Executive on a \$45 million dispute involving the construction of two hospitals in Kuwait. Retained by the claimant, an Italian construction firm, to quantify compensable damages and to prepare a comprehensive schedule delay analysis. Causation included delay, scope changes, differing site conditions, and constructive interference.
- Damages consultant retained by a masonry contractor to evaluate cost overruns and to quantify compensable damages caused by scope changes, schedule delays, and productivity losses related to the construction of Invesco Field in Denver, Colorado.
- Damages consultant retained by the owner to audit the prime contractor's costs and to quantify the equitable costs owed the contractor for schedule delays and scope changes associated with construction of a prison in Colorado.
- Damages expert retained by an architectural firm to evaluate claims and to prepare independent causation and cost assessments for damages claimed by the owner for alleged design defects related to construction of a hospital in California.
- Damages consultant responsible for evaluating cost overruns, claims and schedule delays related to construction of a biomedical research facility in Colorado.
- Damages expert retained by a contractor to defend against claims and to prepare independent evaluations of the compensability, causation, and responsibility for substantial costs associated with asbestos removal and abatement in a Colorado school.
- Damages consultant retained by a prime contractor to prepare affirmative claims for cost overruns incurred during construction of a large condominium and conference center project in Utah. Issues related to schedule delays, scope changes, and defective design.
- Damages consultant retained by the masonry contractor to evaluate its cost overruns and to recommend an equitable value for damages sustained during construction of improvements to the Red Rocks Amphitheater in Colorado.
- Lead damages expert retained by an international construction company to evaluate the merits and reasonableness of claimed costs, and potential additional claims, with respect to over \$50 million of damages sustained on eight projects constructed in Afghanistan. The damage and cost reviews included substantial disruption and delay cost analyses, as well as evaluation of the scope and cost composition of changes resulting from differing site conditions and defective contract documents.
- Damages consultant for the preparation of a claim on behalf of a contractor for delays, impacts, and cost overruns experienced during construction of a multi-unit apartment complex in Denver, Colorado.
- Testifying expert for a mechanical subcontractor on a postal service automated mail handling system. Testimony and analysis comprised the independent analysis and defense of claims alleged by the prime contractor against the subcontractor, and preparation of subcontractor claims against the prime contractor for delays and scope changes. Work included a retrospective schedule delay analysis, quantification and causation of cost growth, a scope change analysis, preparation of an expert report, and expert testimony.
- Testifying expert on behalf of the architect and project manager concerning the design and construction of three fire stations in Nevada. The engagement comprised the analysis and rebuttal of prime contractor claims, and the quantification of affirmative claims for the project manager against the prime contractor. Services included the analysis of costs, damage calculations and causation, a delay analysis, preparation of an expert report, and testimony.
- Damages expert for a material manufacturer vs. a general contractor regarding alleged defects and repair costs on a large condominium construction project in Colorado. The engagement comprised the evaluation



and rebuttal of the plaintiff's costs and damage allocations to the parties, the preparation of alternative damages quantifications based upon several different causation and entitlement theories, and expert testimony.

- On behalf of the insurer, evaluated property damage claims associated with flood-damaged industrial buildings and manufacturing facilities following a flood in Indiana. Prepared comparative cost estimates for the damaged equipment and facilities to test the reasonableness of the damage claims alleged by the owner.

PROFESSIONAL EXPERIENCE

Long International, Inc.

Littleton, Colorado (April 1997 to Present)

As a Senior Principal, Mr. Buddemeyer provides specialized construction disputes and project management services on oil refinery, petrochemical, oil production, mining and mineral processing, power and cogeneration, and industrial process plant projects. Mr. Buddemeyer's extensive experience in damages analysis, change order management, delay and disruption analysis, and cost and schedule control provides owner and contractor clients with the skills to successfully analyze and resolve major construction disputes.

Harold E. Buddemeyer

Littleton, Colorado (May 1994 to March 1997)

As an independent consultant, Mr. Buddemeyer provided claims analysis consulting on a variety of major construction projects.

Kellogg Corporation and Peterson Consulting LLC

Littleton, Colorado (March 1983 to April 1994)

Mr. Buddemeyer prepared claims for contractors, and analyzed claims in defense of owner's positions on numerous U.S. and international engineering and construction projects in the process, petrochemical, and power industries. His responsibilities included training, work product development, work product quality oversight, and client liaison. Mr. Buddemeyer was Chairman of the Project Control Services Users Group and Cost Estimating Group, and consultant for the CPM Scheduling Group. He was an instructor for seminars on CPM scheduling, schedule delay analysis, damage analysis, project management, project controls, and contract administration. Notable examples of organizations for which he presented one-to-three-day seminars include: Tennessee Valley Authority, U.S. Department of Energy, Atlantic Richfield Corporation, and City and County of Denver – Stapleton Airport. He was a guest lecturer on CPM scheduling and schedule delay analysis at the University of Colorado School of Engineering, and lectured on construction project controls and claims for Colorado Bar Association accredited courses.

Tosco Corporation

Aurora, Colorado (May 1980 to February 1983)

Mr. Buddemeyer was Manager of Project Controls for the Oil Shale Division, and had general responsibility for management and supervision of all division project planning, estimating, scheduling, and control activities. He directed development of project specific control and reporting procedures for the \$6 billion Colony Oil Shale Project, and the \$1.5 billion Sand Wash Oil Shale Project. He coordinated acquisition, analysis, and reporting of project control data from joint venture partners and Tosco liaison personnel for the Colony Oil Shale Project. He also managed and coordinated major E&C contractors in the preparation of a capital cost estimate in excess of \$1 billion for a single-train shale oil project, and a \$4 billion capital cost estimate for a six-train shale oil project. He also had lead responsibility for the selection, acquisition,



and implementation of an integrated cost/schedule control system. Mr. Buddemeyer also served as a consultant to Exxon's senior project control team on matters pertaining to the management and control of the Colony Shale Oil Project. Team activities focused on the review and evaluation of the adequacy and accuracy of project control activities and capital cost estimates performed and prepared by Exxon Research and Engineering and various contractors for Exxon, U.S.A.

Harrison Western Corp.

Lakewood, Colorado (March 1971 to April 1980)

Mr. Buddemeyer was Manager of Cost, Scheduling, and Planning. In this role, he was responsible for the application of all construction management information systems and procedures. He administered project control procedures, project data acquisition, and the preparation and analysis of project cost, schedule, cash flow, procurement, and resource utilization reports. He was responsible for the design, development and implementation of the company's first integrated cost/schedule control system, as well as the development and application of corporate long-range planning, forecasting and economic analysis capabilities. Mr. Buddemeyer had lead responsibility for special activities in corporate budget control, bidding strategy, linear programming, Monte Carlo cost simulations, and contract claims analysis. He conducted corporate seminars on proof of claims, project documentation, and the application of project control techniques to heavy construction.

As a Data Processing Manager, Mr. Buddemeyer was responsible for operations, programming and systems analysis, and acting as a liaison among various corporate user groups. He was a Senior Estimator responsible for the preparation of heavy civil construction cost estimates for competitively bid projects. He managed the development of a corporate competitive bidding and marketing strategy, and assumed lead responsibility for project risk/sensitivity analysis. He also managed the development of a computerized estimating capability.

Mr. Buddemeyer served as a Cost/Schedule Engineer responsible for cost and scheduling data acquisition, analysis and reporting for all active construction projects. He was also a Field Construction Engineer on the Henderson Number 2 Project for Amax, Inc. where he provided construction engineering, surveying, productivity, and cost and scheduling evaluations during the shaft sinking and mine development phase of the project.

PUBLICATIONS AND SPEAKING ENGAGEMENTS

"Proving the Cause-Effect Linkage," with Richard J. Long, P.E., P.Eng., and Rod C. Carter, CCP, PSP, *Long International, Inc.*, March 2018.

Cumulative Impact and Other Disruption Claims in Construction, with Richard J. Long, P.E., and Rod C. Carter, CCP, PSP, *Virtualbookworm.com Publishing, Inc.*, College Station Texas, June 2014.