

Lucke Consulting Technology Services, LLC

Houston, Texas, USA

Trincity, Trinidad & Tobago, WI

Project Reference List



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www.luckeconsulting.com (work in progress)

List of Projects and Assignments*Member of Executive Team. NiQuan Energy. Pointe-A-Pierre, Trinidad & Tobago, WI.*

Owner's project lead for the US\$ MM 65 completion, commissioning and start-up of the NiQuan GTL project; coordination of all main contractors; responsible for overall schedule and budget; completion target is June 2020.

Process Consultant. LCTS for Limetree Bay Refinery. Baton Rouge, Louisiana.

Provided process consulting services for the refinery re-start engineering effort by supporting and guiding the engineering team of Jacobs in Baton Rouge; provided detailed input into the revamp scope of the Delayed Coker unit; attended all P&ID and design reviews as well as all HAZOP sessions for the complete refinery revamp and modification scope; reviewed and commented on all vendor documentation, as needed.

Process Department Head. CH2M. Houston, Texas.

Process management position for the EPC business. Responsible for technical accuracy and quality of all process work, schedules, man-hour budgets, training, technology development, and sales support. Provides supervision to the process and drafting department. Provides Project Management for Process Consulting and early FEL Process work.

Project Support. Stork Technical Services. Trinidad & Tobago.

Project controls and cost engineering for the following projects: BpTT Mahogany A Facility, BpTT Cannonball Rig Readiness and Upgrades, BpTT Amherstia Facility

Confidential Client. Brazil, multiple locations

Due Diligence – Project Manager leading a team of engineers in performing site visits at multiple fuel storage and distribution terminals in Brazil; developed a report assessing the areas of Operation, Maintenance, Health, Safety and Environmental. Supported client in making a final investment decision.

UOP. Process Design and Drafting support, confidential location

Supervisor for a team of process engineers and drafters to support the development of SmartPlant P&IDs and equipment datasheets, equipment list, line list and instrument index.

Confidential Client. Gulf Coast, Texas, USA

Project Kemah - Process Engineer leading the evaluation of all utilities and OSBL requirements for a new Chemical Park type facility centered around EO and EO derivatives.

*Monroe Energy. Trainer, Pennsylvania, USA**Refinery TAR Separation Study*

Process Lead performing a study to define all modifications and measures required to execute partial refinery shutdowns for TAR activities while still producing on-spec products for sale.

Petroleum Company of Trinidad and Tobago Ltd. Pointe-a-Pierre. Trinidad & Tobago.

Process engineering, cost control and quality control services for refinery operation, CAPEX and

optimization projects.

NiQuan Energy. Trinidad & Tobago, WI

GTL Facility; Owner's Engineer supporting pre-FEED activities like EPC partner selection, risk matrix development, EPC contract review and technology evaluation.

Process Area Lead Engineer. CHS. Spiritwood Fertilizer Plant. Jamestown, North Dakota.

Act as Owner's Engineer and provide technical expertise in reviewing of and commenting on engineering documents developed by the engineering contractor for the ISBL area units of a grass-roots fertilizer complex.

Process Lead Engineer. CHS. Crude Unit Troubleshooting. Laurel, Montana.

Provided process consulting services to troubleshoot crude unit operation; analyzed operations data and executed process calculations to support the determination of the root cause for the unit problems; reported findings to client, who was able to easily confirm and eliminate root cause.

Process Lead Engineer. Confidential Client. Refinery Expansion Assessment including Petroleum Coke Gasification Study and LNG Import Study. Several Locations.

Executed data review and analysis as well as benchmarking and cost estimating for refinery expansions including gasification for petroleum coke and LNG Import for several locations.

Process Lead Engineer. DNLA. Ammonia Loading and Pipeline Injection Facility. Waggaman, Louisiana.

Leading a team of process engineers in executing FEL 3 and Detail Design work for a facility to receive ammonia, load ammonia into road trucks and rail cars, and inject ammonia into a pipeline.

Process Manager. Chevron Energy. Mercury Removal Study. Multiple Locations.

Supporting subject matter expert and providing guidance and leadership in producing a study report for mercury removal from heavy hydrocarbon condensate (liquid phase).

Process Department Head. Commonwealth Engineering and Construction. Houston, Texas.

Process management position for the EPC business. Responsible for technical accuracy and quality of all process work, schedules, man-hour budgets, training, technology development, and sales support. Provides supervision to the process and drafting department. Provides Project Management for all Process Consulting and early FEL Process work.

Process Director and Lead Engineer. HollyFrontier. LPG Storage Study. El Dorado, Kansas.

Leading a team of process engineers in performing a study to evaluate several options to increase LPG storage, add new process units and new on/offloading facilities for LPG streams at the El Dorado Refinery.

Process Director. HollyFrontier. Crude Oil Storage Study. El Dorado, Kansas.

Supervising a team of process engineers in performing a study to install a crude oil pipeline and additional crude oil storage at the El Dorado Refinery.

Process Director. Multiple Clients. Upstream Facility Design. USA.

Supervising a team of process engineers in performing design work (P&IDs, datasheets, equipment and line sizing, process data for instrumentation) for multiple upstream oil and gas production facilities.

Process Director. INEOS Olefins and Polymers. New Heater Integration. Alvin, Texas.

Supervised a team of process engineers in detail design for the integration of a new cracking heater including evaluation and/or design all utilities and auxiliary systems.

Process Director. INEOS Olefins and Polymers. PSV Calculations and Documentation. Alvin, Texas.

Supervised a team of process engineers in executing relief header calculations, PSV calculations and in updating PSV documentation including a list of required modifications to comply with OSHA regulations.

Process Director. INEOS Nitriles. PSV Calculations and Documentation. Green Lake, Texas.

Supervised a team of process engineers in executing filed walks, PSV calculations and in updating PSV documentation including a list of required modifications to comply with OSHA regulations.

Process Director. Odfjell Terminals. Bay 9 Design. Houston, Texas.

Supervising a team of process engineers in specifying and designing an additional storage bay at the existing Houston Terminal for Odfjell including on/offloading facilities.

Process Director and Lead Engineer. Niquan Energy. GTL Plant Evaluation. Pointe-St-Pierre, Trinidad and Tobago.

Executed a full evaluation of all process documentation for a small scale GTL facility (construction about 80% complete) to estimate cost for completion of construction and start-up.

Process Director and Lead Engineer. Bellelli Engineering. New Amine Plant. Sinjhoru Field, Pakistan.

Provided a full Process Design Package for a new amine plant to Bellelli Engineering to be installed in Pakistan.

Process Director and Lead Engineer. Canexus Chemicals. New Calcium Chloride Plant. North Vancouver, BC, Canada.

Supervised a team of process engineers in developing a process scheme for a new calcium chloride plant. Developed PFDs, heat and material balances, P&IDs, line list, equipment datasheets and process design basis to FEL 2 design level. Had to change design basis and capacity of the unit several times during design development due to client request.

Process Director. HollyFrontier. Delayed Coker Expansion Study. El Dorado, Kansas.

Supervised a team of process engineers in performing an expansion study for the Delayed Coker at Holly Frontier in El Dorado, Kansas. Scope of work includes replacement of the Wet Gas Compressor, new coke drum overhead piping, vapor valves and switch deck, additional air coolers and new heater charge pumps.

Process Director. HollyFrontier. Delayed Coker Charge Heater Replacement. El Dorado, Kansas.

Supervised and guided a team of process engineers from Feasibility Study through FEL design and Detail Engineering for the Delayed Coker Charge Heater Replacement Project in El Dorado. Consulted the client in selection of optimum heater configuration, technology selection, vendor management and specialty simulation work.

Process Director and Lead Engineer. KinderMorgan. Ethane Pipeline Study. East Texas.

Developed hydraulic models and recommendations for new pumps and pump modifications for several options to increase the capacity of an ethane pipeline. Presented a technical report to the client comparing all feasible options, technical challenges and estimated capital cost.

Process Director. Enterprise Products. New Crude Oil Pipeline. South Texas.

Supervised a team of process engineers during detail design of 5 pumping stations with LACT units, storage tanks and truck loading/offloading facilities.

Process Director/Engineer. UTA. CTL Facility Design. TBD, Texas.

Supported the design development for a proving facility to convert lignite coal into a synthetic crude oil using a proprietary UTA technology.

Process Director/Engineer. 1stRG. Small Scale GTL. TBD, Texas.

Developed a process scheme and material balance for a small-scale GTL facility to convert natural gas from different sources into diesel and wax using fixed bed FT reactor technology.

Process Director and Lead Engineer. CariSal. Calcium Chloride Plant. Point Lizas, Trinidad and Tobago.

Led all process activities for Phase 3 engineering for a new calcium chloride plant. Supervised CFD modeling for the reactor section (3rd party) and evaluated process alternatives for client. Very challenging project since the client made changes to the scope of the facility during the FEL 3 design work.

Process Director and Lead Engineer. AAL. Super Absorbent Plant Offsites and Utilities. Pasadena, Texas.

Led all process activities for Phase 2 design through detail engineering of all utilities and auxiliary systems for a new SAP plant. Required excellent communication with client and ISBL contractor to coordinate design work at interfaces. Also required evaluation of existing utilities to confirm capacities and as-built conditions.

Process Director and Lead Engineer. Marathon Oil. Flare System Optimization Study. Robinson, Illinois.

Led all process activities in simulating and optimizing the existing refinery flare system. Checked all flare header hydraulics and defined all required modifications to reduce the number of flares from six to three stacks. Recommended modifications had to take into account approved modifications to any refinery units. Required extensive site walks, data search and coordination with the client.

Process Director and Lead Engineer. Marathon Oil. Delayed Coker Expansion Study. Robinson, Illinois.

Led all process activities in evaluating all required process changes to two delayed coker units to increase the unit's capacity. Suggested modifications had to be feasible for implementation in very confined space in the existing units.

Process Director and Lead Engineer. Applied NanoWorks. Process Development and Pilot Plant Design. United States

Led all process activities in process development, basic and detail engineering, and development of a TIC estimate for an oxidative desulfurization pilot plant, including feed preparation section, utilities and waste stream handling. This is a first-of-its-kind unit and required deep understanding of the chemistry to develop design criteria for the equipment and piping. Supported the client in developing a more focused test plan for laboratory work and bench scale testing.

Process Design Manager and Lead Engineer. REFICAR. Refinery Expansion Project - Grassroots Coker. Colombia.

Led all process activities for Licensor Basic Engineering Package and TIC estimate for the construction of a new, 4-drum delayed coker unit for anode grade and fuel grade coke production. Also supported early phase detail engineering activities, vendor selection, equipment criticality

rating, and team training activities.

Process Design Manager. Valero. Coker Reliability Project. St. Charles, Louisiana.

Led process team in detailed engineering and TIC estimate for reliability improvement measures, including automated unheading systems, automated isolation and switch valves, interlock system, and new vapor transfer line.

Process Design Manager and Lead Engineer. Valero. Coker Expansion Study. St. Charles, Louisiana.

Led all process activities for technical evaluation study and budgetary estimate to increase unit capacity by 15%. Performed detailed studies on heat integration, fired heaters, blowdown system, and wet gas compressor.

Process Design Manager and Lead Engineer. Western Refining. Coker Flare Gas Recovery Study. Yorktown, Virginia.

Led all process activities for a basic engineering study and budgetary estimate to install a flare gas recovery system in the delayed coker unit. Developed alternative solutions to reduce complexity and capital investment. Audited coker operations to define and report general areas of concern in unit performance and reliability.

Process Design Manager. Valero. Coker Reliability Project. Texas City, Texas.

Led process team during detailed engineering study and TIC estimate for implementing various projects to improve unit reliability, including automated unheading systems and various equipment upgrades.

Process Design Manager. Valero. Coker Expansion Study. Texas City, Texas.

Led process team during basic engineering study and budgetary estimate for expansion of the coker unit, including detailed studies on coker heaters, wet gas compressor, blowdown system and coke handling/water separation.

Process Design Manager. Hunt Refining. Coker Expansion Project. Tuscaloosa, Alabama.

Supervised process team during basic engineering study, development of basic design licensor package and detail engineering.

Process Design Manager. Sinclair Oil. Coker Relocation Study. United States.

Led process team in conducting a feasibility study and developing an estimate for relocation of a delayed coker unit. Responsible for definition of relocation scope versus new construction requirements. Supplied main fractionator data sheet and PSV relief study to local engineering and construction contractor.

Process Design Manager and Lead Engineer. Valero. Coker Reliability Improvement. Wilmington, California.

Led all process activities in basic engineering study and TIC estimate for coke drum repairs, installation of automated unheading systems, and automated isolation valves.

Process Design Manager. Frontier. Coke Drum Replacement. El Dorado, Kansas.

Led process team in EPC study, detail engineering and construction support for a new, state-of-the-art coke drum structure including automated unheading and remote coke cutting systems; acted as main contact for hydraulic decoking vendor and supported site acceptance test for remote cutting system.

Consultant/Process Specialist. KBC Advanced Technologies. Thermal Conversion Units. Europe, North and South America.

Performed numerous optimization studies for delayed coker units, visbreakers, thermal crackers and refineries. Performed front-end engineering for Coker revamp projects. Lead engineer in detailed heater studies for vacuum units, visbreakers, and delayed cokers. Involved in sales activities in Europe and North America.

Start-up Advisor and Transition Coordinator. Operadora Cerro Negro, S.A. (OCN), ExxonMobil & PdVSA. Heavy Oil Upgrader Project. Jose, Venezuela.

Responsible for implementation of operations organization, implementation of management control systems, operations personnel selection and training, development and implementation of operations manuals and procedures, unit commissioning and turnover, initial start-up, and line-up.

Area Process Engineer and Deputy Area Manager. Veba Oel AG. Horst Refinery, Delayed Coker/Calcliner Area. Germany.

Responsible for overall performance (yields, qualities, energy and safety) of coker/calcliner area: delayed coker, calcliner, two sour water strippers, two hydrotreaters, H₂ purification unit, and tankages. Implemented projects and procedures to reduce the overall energy consumption of the area by 15%. Served as ISO 9002 auditor in company-wide audits, and was the focal point for the cooperation with the technology department on project development and evaluation. Also responsible for scheduling, unit troubleshooting, coordination, and controlling of chemical vendors.

Operations Engineer reporting to Refinery Manager. Veba Oel AG. Horst Refinery, Delayed Coker/Calcliner Area, Germany.

Responsible for monitoring refinery operation, development of key performance indicators, data support for the refinery and area manager for the coker/calcliner area. Also oversaw the optimization of a new rotary kiln calcliner unit and control of waste water and flue gas qualities.

Process Engineer, Veba Oel AG. Horst Refinery, Conversion Units Area. Germany.

Responsible for monitoring of conversion unit performance, data collection, development of monitoring tools, unit simulation and development of new optimization projects. Initiated and implemented the “automation of coke drum handling” and “coker optimization (ultralow recycle)” projects.

Junior Process Engineer. Veba Oel AG. Scholven Refinery, Conversion Units Area. Germany.

Trained in refinery processes and site configuration. Reviewed and updated refinery data books tested new simulation software for olefin plants.

List of Projects for other services via partnerships

Provision of High Definition Survey. The National Gas Company of Trinidad and Tobago. Union Industrial Estate, New Abyssinia Accumulator Facility, Tobago Cove Estate, Phoenix Park Valve Station.

3D Laser Scanning, 3D Cyclone Modeling, 3D CADWorx Modeling, 2D engineering drawings (piping, structural, civil, architectural/HVAC, plumbing and P&IDs).

Provision of High Definition Laser Scanning. Bechtel International. Galeota.

Provided 3D Laser Scanning and 3D Point Cloud of the entire Galeota Facility.

Provision of High Definition Laser Scanning and 3D Model. Petrotrin. Pointe-a-Pierre..

3D Laser Scanning and 3D Cyclone Modeling of the Sulphur Recovery Unit.

Provision of High Definition Survey. The National Gas Company of Trinidad and Tobago. Nationwide.

3D Laser Scanning, 3D Cyclone Modeling, 3D CADWorx Modeling, 2D engineering drawings for over fifteen (15) of NGC's gas facilities.

Provision of High Definition Laser Scanning and Dimensional Control. Massy Wood Group. Nationwide.

Dimensional control services for multiple Massy Wood Group projects.

Dimensional Control Survey. Carillion Caribbean Limited. Brickfield Waterloo.

Dimensional control services for piping spools at the company's fabrication facility.

Dolphin Starfish Project. British Gas of Trinidad and Tobago. Dolphin Platform, East Coast of Trinidad.

3D Laser Scanning, 3D CADWorx Modeling, and dimensional control survey on the Dolphin Platform.

Provision of High Definition Laser Scanning. Repsol YPF. Teak and Samaan Platforms. East Coast of Trinidad.

3D Laser Scanning and 3D Point Cloud of the entire Teak and Samaan Platforms.

Provision of High Definition Laser Scanning and 3D Models. BP Trinidad and Tobago. Kapok Platform, East Coast of Trinidad.

3D Laser Scanning, 3D Cyclone Modeling, 3D CADWorx Modeling, of a major part of the Kapok Platform.

Provision of High Definition Laser Scanning and 3D Models. BP Trinidad and Tobago. Cassia A, Mahogany A and Immortelle Platforms, East Coast of Trinidad.

3D Laser Scanning, 3D Cyclone Modeling, 3D CADWorx Modeling of the entire Cassia A, Mahogany A and Immortelle Platforms.

Lucke Consulting Technology Services, LLC
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Hemawatee Indira Ramroop - COO