CITY OF COFFEYVILLE
BOARD OF COMMISSIONERS AGENDA ITEM

MEETING DATE	November 25, 2014	
RESOLUTION OR ORDINANCE NUMBER	R-14-94	
AGENDA TITLE	**Engineering Services – New Generation** **Task Authorization #2, Construction Management Services**	
REQUESTING DEPARTMENT	Electric	
PRESENTER	Gene Ratzlaff	
FISCAL INFORMATION	Cost as recommended:	$3,300,000
	Budget Line Item:	810-5-030-478
	Balance Available	
	New Appropriation Required:	[ ] Yes [X] No Initially funds will come from the CML&P reserves until we receive funds from Revenue Bonds
PURPOSE	Secure services to provide project management, site management, scheduling, quality control, procurement and safety support services for the installation of 56 MW of new engine-based power generation capacity.	
BACKGROUND	The Electric Utility presented to the City Commission on September 23, 2014, a proposal to select Burns & McDonnell as the City's Owner's Engineer, for the purpose of installing new generation.	
SPECIAL NOTES	N/A	

ANALYSIS	Staff met with Burns & McDonnell to negotiate cost and scope for engineering services, as defined in the attached “CM Agent Scope of Services”. Burns & McDonnell has agreed to the not to exceed amount of $3,300,000 to perform these services. Should at any point, scope need to be amended or changed; Utility Staff will then present this to the City Commission for consideration.
PUBLIC INFORMATION PROCESS	N/A
BOARD OR COMMISSION RECOMMENDATION	
STAFF RECOMMENDATION	Staff recommends that the Mayor be authorized to enter into an engineering services agreement (Task Authorization #1) for construction management and support services with Burns & McDonnell for the amount not to exceed $3,300,000.
REFERENCE DOCUMENTS ATTACHED	City of Coffeyville B & M Task Authorization #2 Final (11-17-14), New Generation Owner’s Engineer Task Authorization #2 - Resolution

RESOLUTION NO. R-14-94

A RESOLUTION TO ENTER INTO AN ENGINEERING SERVICES AGREEMENT WITH BURNS & MCDONNELL (TASK AUTHORIZATION #2) IN THE AMOUT NOT TO EXCEED $3,300,000 FOR CONSTRUCTION MANAGEMENT AND SUPPORT SERVICES FOR THE CITY OF COFFEYVILLE ELECTRIC UTILITY.

BE IT RESOLVED by the Board of Commissioners of the City of Coffeyville, Kansas that the Mayor be and is hereby authorized to enter into an engineering services agreement with Burns & McDonnell (Task Authorization #2) in the amount not to exceed $3,300,000 for construction management and support services for the City of Coffeyville Electric Utility.

ADOPTED THIS 25th DAY OF November, 2014.

_____
James Falkner, Mayor

ATTEST:

_____
Cindy Price, City Clerk

APPROVED AS TO FORM AND LEGALITY:

_____
Paul Kritz, City Attorney

TASK AUTHORIZATION #2
of
AGREEMENT BETWEEN OWNER AND ENGINEER
FOR PROFESSIONAL SERVICES

City of Coffeyville, Kansas 56MW Reciprocating Engine Power Plant
Owner: City of Coffeyville, Kansas
Engineer/CM Agent: Burns and McDonnell

THIS TASK AUTHORIZATION is made as of November 17, 2014 by and between City of Coffeyville, KS ("Owner") and Burns & McDonnell Engineering Company, Inc., a Missouri corporation ("Engineer"). This Task Authorization shall be considered a Change Order as defined by the Agreement between Owner and Engineer for Professional Services dated October 14, 2014.

Owner authorizes Engineer/CM Agent to proceed with the following:

SCOPE OF SERVICES

The Scope of Services will be as defined in Exhibit A2 attached.

TERMS AND CONDITIONS

The term and conditions defined by the AGREEMENT BETWEEN OWNER AND ENGINEER FOR PROFFESSIONAL SERVICES dated October 14, 2014 are incorporated by reference in and made a part of this Task Authorization.

COMPENSATION

Owner shall pay Engineer for Services set forth in this Task Authorization a Lump Sum amount of Three Million Three Hundred Thousand Dollars ($3,300,000). The Lump Sum includes compensation for Engineer's services and services of Engineer's Consultants, if any. Appropriate amounts have been incorporated in the Lump Sum to account for labor, overhead, profit, and Reimbursable Expenses.

For services provided to Owner by Engineer that is not defined in this Task Authorization or in a lump sum defined by additional Task Authorizations and is approved by Owner, Owner shall pay Engineer an amount equal to the cumulative hours charged in connection with the task by each class of Engineer's employees times the Professional Service Billing Rates for each applicable billing class, plus Reimbursable Expenses. The Professional Service Billing Rates are set forth in the attached Schedule of Hourly Professional Service Billing Rates, Form BMR1215, which will be adjusted annually.

SCHEDULE

The schedule will be as defined in the Appendix 1 to Exhibit A2 attached.

TASK AUTHORIZATION #2
11/17/14

IN WITNESS WHEREOF, Owner, by and through its authorized representatives and Engineer/CM Agent, by and through its authorized representatives, have made and executed this Agreement as of the day and year first above written:

Owner City of Coffeyville, Kansas	Engineer/CM Agent Burns & McDonnell Engineering Company, Inc.
_____	_____
Signature	Signature
_____	_____
Printed Name	Printed Name
Title:_____	Title: _____
Date:_____	Date: _____

Schedule of Hourly Professional Service Billing Rates

Position Classification	Classification Level	Hourly Billing Rate
General Office *	5	$65.00
Technician *	6	79.00
Assistant *	7	90.00
	8	125.00
	9	145.00
Staff *	10	160.00
	11	177.00
Senior	12	192.00
	13	213.00
Associate	14	224.00
	15	236.00
	16	242.00
	17	249.00

NOTES:

1. Position classifications listed above refer to the firm's internal classification system for employee compensation. For example, "Associate", "Senior", etc., refer to such positions as "Associate Engineer", "Senior Architect", etc.

2. For any nonexempt personnel in positions marked with an asterisk (*), overtime will be billed at 1.5 times the hourly labor billing rates shown.

3. Project time spent by corporate officers will be billed at the Level 17 rate plus 25 percent.

4. For outside expenses incurred by Burns & McDonnell, such as authorized travel and subsistence, and for services rendered by others such as subcontractors, the client shall pay the cost to Burns & McDonnell plus 10%.

5. A technology charge of $9.95 per labor hour will be billed for normal computer usage, computer aided drafting (CAD) long distance telephone, fax, photocopy and mail services. Specialty items (such as web and video conferencing) are not included in the technology charge.

6. Monthly invoices will be submitted for payment covering services and expenses during the preceding month. Invoices are due upon receipt. A late payment charge of 1.5% per month will be added to all amounts not paid within 30 days of the invoice date.

7. The services of contract/agency personnel shall be billed to Owner according to the rate sheet as if such contract/agency personnel is a direct employee of Burns & McDonnell.

8. The rates shown above are effective for services through December 31, 2015, and are subject to revision thereafter.

Form BMR1215

Exhibit A2
CM Agent Scope of Services

City of Coffeyville

Confidential & Proprietary

General Project and Scope Description	Burns & McDonnell's CM Agent Scope of Services for the City of Coffeyville (Owner) includes Project Management, Home Office Procurement and Scheduling Support, and Site Management, Quality Control, and Safety Services. This scope is based on the installation of a nominal 56 MW of engine-based power generation capacity with no provisions for future capacity. The design basis of the Coffeyville engine power plant is to duplicate the equipment ratings, equipment sizes, and design redundancy of a "sister plant" being designed by Burns & McDonnell for Stillwater Utility Authority in Stillwater, OK. Consequently, the same equipment specifications and technical bid evaluations used for Stillwater will be used for Coffeyville. The cost of services will be limited to and based on the development of one site. The project scope is based on the plant general arrangement and site layout in Drawing GA001, Rev. A, dated July 14, 2014 and on the project schedule and assumptions dated November 4, 2014 in Appendix 1 to Exhibit A2. Project features, limits of scope, and assumptions: • Engine OEM and capacity based on a Wärtsilä 18V50SG. OEM scope shall be identical to the OEM scope provided in the "sister plant". • Plant will be defined as a "non-critical" facility; Class III per ASCE 7, reference IBC. • Electrical interconnections: high voltage bushings of power plant GSU; standby power – high voltage bushings of standby transformer located on Owner's site. • Remote start capability by Owner, and AGC control of generators by either SPP or GRDA; implementation and programming of both by Engine OEM control system. • Engine OEM control system (Wärtsilä WOIS PLC) will be used for the plant control system • Natural gas plant heating from local distribution company (Atmos); Atmos to provide U/G piping, metering and regulation installation up to building(s) service • High-pressure natural gas interconnection: valved and isolated aboveground piping connection located inside Owner's site; no infrastructure (surface prep; fencing and gate; separate egress, etc…) furnished by Owner; minimum 125 psig and maximum 900 psig at the site property line • SCR reagent: urea • Plant process waste water will be discharged to City municipal sewer system; no separate NPDES permit required • Plant sanitary will be discharged to City municipal sewer system • City potable and fire water available capacity and pressure available adjacent to Owner's site and sufficient to service the new power plant

	• Soils remediation, abatement, or building / structure demolition services are not included • Owner to provide the following: permit costs; ESA Phase I; topographic and ALTA survey in digital format • NERC CIP is not applicable to the plant • Standard spread footing and drilled pier foundation designs (no pile design) • Building design will not include storm shelter provisions • Owner to provide permanent telephone service, internet service, and any SCADA communications • Existing substation modifications for any Owner upgrades or for the interconnection to the Plant will be by others Owner project financing support will be limited to the development of documents by Burns & McDonnell in the course of the Scope of Services in Exhibit A1. All other financing support effort is not included.
Project Engineering	The Project Engineering work in this scope of work includes the following: • Engineering Assistance during Construction, Start-Up and Commissioning as requested by Burns & McDonnell site management.
	The following Project Engineering Assistance during Construction, Start-Up and Commissioning is included in the Not-to-Exceed Sum. Additional services will be provided as requested by Owner on a time and material basis. • Engineering: 500 hours; 4 trips to Coffeyville site
CM Agent Services	As part of the CM Agent Services, Burns & McDonnell will provide the following functions: • Assist Owner in conforming the commercial sections of procurement packages under the cooperative procurement strategy. • Assist Owner in the commercial review of up to 5 bids received from the contractors. • Develop a site specific Safety Plan and implement on site • Develop a site specific Quality Control plan and implement on site • Develop a site specific project schedule • Assist Owner with Change Management • Administer procurement and construction contracts on behalf of Owner • Manage construction activities • Manage Startup Activities

Project Meetings	Burns & McDonnell personnel will travel to the project site for Project Meetings. The necessity of Project Meetings and locations of the meetings will be agreed upon by Owner and Burns & McDonnell, but shall be no more than once per every 2 months during the design phase of the project and no more than once per month during the construction phase of the project. It is anticipated that weekly progress meetings will be handled with conference calls. We have assumed that Owner will attend all Equipment factory testing in the respective test facilities. The cost for Burns & McDonnell to attend the factory testing of the Equipment is not included.

Safety Program & Construction Management Agent	The proposed tasks include:
	
	• Safety Program Administration
	• Construction Management Agent
	  ▪ Home Office
	  ▪ Project Site Office
	  ▪ Quality Control

Introduction	This document identifies both in general and with specifics the scope of services that Burns & McDonnell will be providing to support construction of the Owner reciprocating engine generation facility. The roles, responsibilities, procedures and programs to be developed and implemented for this project are described in this document. In general Burns & McDonnell's Construction Management Agent (CMA) Team will function as an extension of the Owner's staff for services provided under this Agreement. The CMA Team and Owner will discuss the exact approach for the project to verify compliance with plans and specifications, time schedules, budget and job site management. The CMA Team will manage all construction-related aspects of the project from pre-construction, construction and post-construction phases. The Construction Site Manager, along with office project managers, will implement Construction Management administration, technical inspections, provide important input during the conceptual planning of the project and manage the project office at the job site. Burns & McDonnell's CMA Team will support Owner to monitor that the project is constructed in accordance with the contract documents. The CMA team will also monitor the project schedule and the project budget and provide monthly update to Owner. The following paragraphs provide a general discussion of scope for each of the listed CMA tasks.
Safety	Burns & McDonnell will implement, administer and maintain a Health and Safety Plan (HASP) throughout the duration of construction activities in strict conformance with all current safety requirements. During the construction period, Burns & McDonnell's CMA personnel will maintain a sign-in and log sheet of all workers and visitors on the project site. Hard hat, safety glasses, sleeved shirts and hard sole shoes are required of all visitors and construction workers in construction areas. The duties during pre-construction and construction stages include: **Pre-construction Phase** • Administer a Pre-Construction Health and Safety Plan Meeting with Contractors • Evaluate and develop a file of all Material Safety Data Sheets for any materials Contractors plan to bring on the site • Categorize anticipated on-site job tasks before construction begins • Review Contractor submittals that document the quality and degree of the health and safety program; including written programs, employee training and management commitment to a safe and healthy work site

	• Developing a Site-Specific Health and Safety Plan **Construction Phase** • Provide pre-site entry health and safety orientations • Receive and review pre-mobilization, daily, weekly, and monthly safety submittals • Perform periodic on-site Health and Safety Inspections, record deficiencies and follow up with corrective measures • Prepare investigative reports that identify potential safety problems and can be used to correct their causal factors • In summary, implement and enforce the site specific safety program at all levels of the project. Owner employees involved with the construction or start-up phase of the project will be expected to be in full compliance with the established site safety program.
Construction Management Staffing	The following paragraphs provide a general discussion of scope for each of the listed CMA tasks and personnel. The personnel positions may include the following positions and may be staffed on a part time basis as required to execute the following tasks. **Pre-Construction and Construction Phase Home Office personnel will include**: • EPC Project Manager • Construction Manager • Quality Control Manager • Procurement • Assistant Project Manager • Scheduler/Project Controls • Safety • Administrative Assistant **Field Office personnel will include**: • Site Manager • Safety Manager • Administrative Assistant • Discipline Superintendents (As Needed) • Startup Manager

Preconstruction Support Services	During this phase of the project, Burns & McDonnell home office construction personnel will be providing support to the design and procurement teams with respect to the following activities: • Contracting Strategy • Constructability evaluations and recommendations • Contract specification reviews • Development and prequalification of bidders • Evaluation and recommendation of proposals received • Further development of detailed construction schedule(s) • Initial plan for site establishment and mobilization of site facilities including laydown and fabrication areas and service requirements such as power, communication, water and sewer. • Recommendation of an Owner site safety program for insertion into bid documents • Provide construction representation at project review meetings • Establish site rules in conjunction with current Owner procedures
Construction Administration Services	Burns & McDonnell will administer site construction contracts with respect to contract document(s) and procedural compliance. This will include but not be limited to the following: • Chair and conduct weekly overall construction coordination meetings with all onsite contractors to discuss upcoming events that effect multiple disciplines or scopes of work. Maintain communication between all project entities with respect to schedule and owner issues. • Maintain construction documents in an organized fashion including engineering deliverables, vendor drawings and manuals, owner / contractor correspondence, environmental documentation, as conformed to construction documents, etc. • Expediting of Equipment procurement contracts and construction contracts • Maintain current copies of all home office procurement and expediting logs
Quality Assurance/Quality Control	Burns & McDonnell will develop and implement a comprehensive project specific QA/QC program including but not limited to the following aspects of construction inspection and testing programs: • Material receiving, warehousing, and material control programs. • Site Discipline / Contract inspection and test plans. • NCR / CAR procedures (Non Conformance Report/Corrective Action Report). • Welding procedures and testing documentation review and approvals. • Daily inspections by competent inspectors with each discipline of work scope. • Monthly audits of all construction documents received from vendors or engineering centers. • Witnessing and documentation of all testing as identified in the specific contract inspection and testing plans.

Project Controls	Primavera *Contract Manager*, (formerly known as Expedition) a Windows-based software program, will be used on the project to provide project management control and accountability. This system electronically tracks all Transmittals, Requests For Information, Construction Change Directives, Requests For Proposals, Submittal Logs, Shop Drawing Logs, Change Order Logs, Contracts and Applications for Payment by vendors, suppliers, or contractors. Project files will be accessible to both Burns & McDonnell Construction Management Team members and to Owner. Burns & McDonnell will be responsible for overall cost, schedule and progress measurement functions to be provided as identified in this scope of services document. This will include the following activities and deliverables: • Development of detailed master construction schedule in Primavera critical path scheduling program, including coordination and incorporation of on-site construction contractors schedules, material delivery schedules, and environmental permitting schedules. • Monthly updates of the master construction schedule and issuance to Owner. Owner and Burns& McDonnell shall agree to and set a baseline schedule. Monthly updates shall provide a comparison to the baseline schedule and an explanation of any significant variances to baseline. • Provide detailed cost report on a monthly basis identifying all budgets, committed costs, and forecast to complete with respect to construction management, procurement contracts, and construction contract costs. • Maintain a complete listing of all Request for Information (RFIs) received from contractors on site and associated change orders incorporating RFI's into the current contract value if applicable. Track and provide a monthly report on spending for all Contracts and Change Orders, including the amount of retention on each. Provide a forecast for estimate at completion for each Purchase Order with associated Change Orders to assure spending does not exceed authorized amounts. • Develop with each contractor, a schedule of values with an acceptable work breakdown structure in sufficient detail to accurately monitor and approve contractor pay applications.
Material Management	Burns & McDonnell will implement a Quality Management System with respect to material receiving, warehousing, and material control. Key items of interest will include but not be limited to the following: • Receipt (material receiving reports) and inspection of all material delivered to the Owner generation facility to insure compliance with contract terms and conditions, quantity, storage requirements and conformance to project specifications prior to care, custody, and control hand over to appropriate construction contractor. • Work with Owner and contractors to maintain identified laydown and fabrication areas through the project duration. • Develop, maintain and issue to Owner all material certifications, vendor O/M manuals and any other pertinent documentation associated with any material received on site. All equipment shall include a bill of materials with manufacturer and part numbers attached. • Manage all preventive maintenance programs per vendor or construction best

	practices. • Storage / construction site security will be the responsibility of the discipline contractor for their own materials.
	Field Office: BMcD will provide site office facilities adequate for the site staff and for construction progress meeting. Burns & McDonnell's CMA Team personnel will need to have the capability to communicate with the design and office management team via a high speed internet access. The high speed internet access and service, telephone access and service and electrical access and service will be provided by Owner.
Site Staffing Plan	Our Cost of Services is based on the attached schedule in Appendix 1. The following site staffing plan is included in the Not-to-Exceed Sum. Additional site services will be provided as requested by Owner on a time and material basis. • Site Manager: 56 Weeks • Safety Manager: 43 Weeks • Admin Assistant: 48 Weeks • Discipline Superintendent #1 (Civil/Foundations): 19 Weeks • Discipline Superintendent #2 (Mechanical): 28 Weeks • Discipline Superintendent #3 (Electrical): 26 Weeks • Power Plant Start-Up Manager: 17 Weeks

Appendix 1 to
Exhibit A2

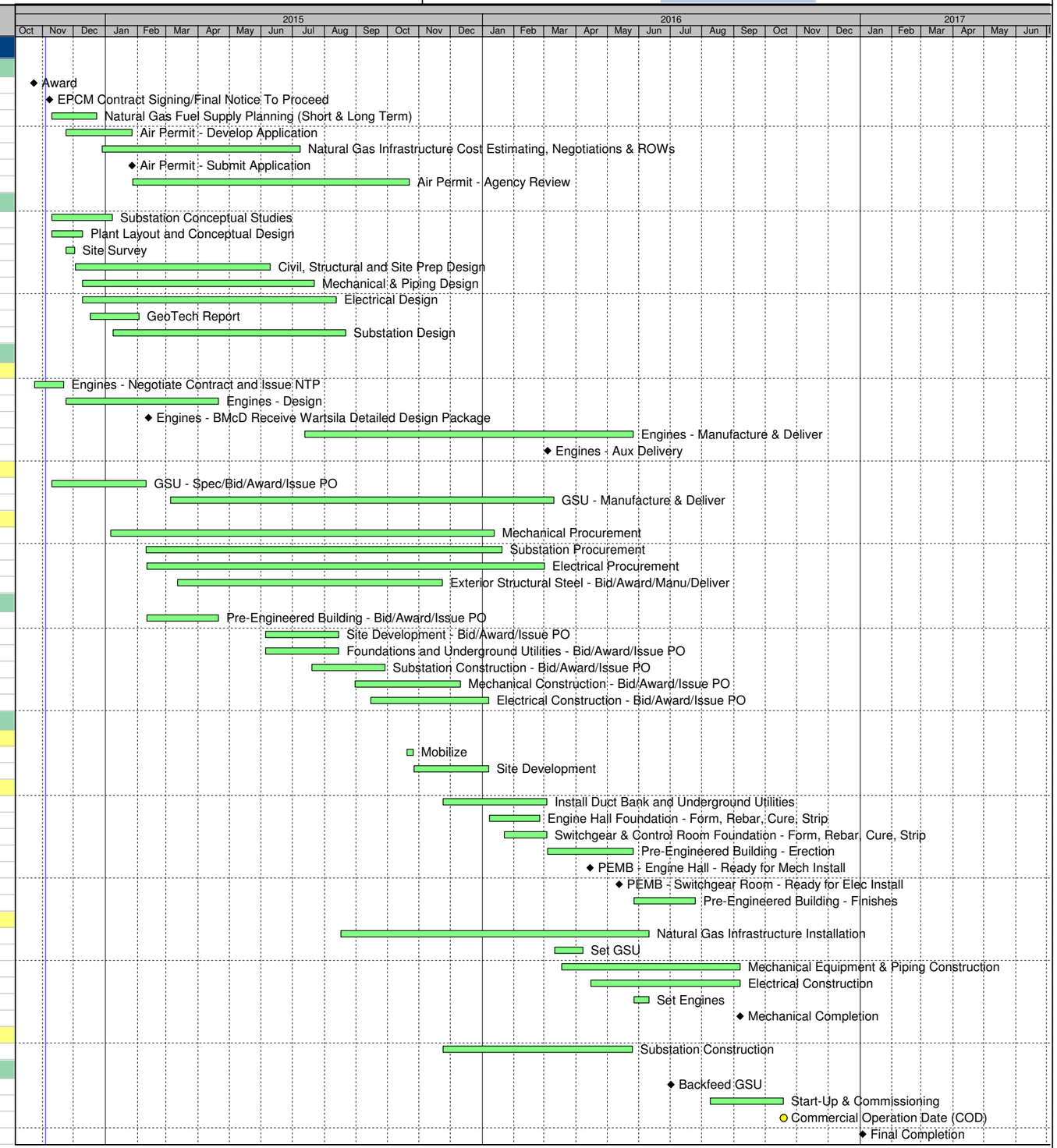
Burns & McDonnell SINCE 1898

Reciprocating Engine Power Plant

DRAFT Contract Level 1 Schedule - 3x18V50SG Engines

Coffeyville KANSAS

Activity ID	Activity Name	Duration	Start	Finish
3 x Wartsila 50SG Recip Engine Power Plant - L1 Schedule		543d	24-Oct-14 A	03-Jan-17
Project Development		251d	24-Oct-14 A	22-Oct-15
D1430	Award	0d		24-Oct-14 A
D1460	EPCM Contract Signing/Final Notice To Proceed	0d		07-Nov-14
D1450	Natural Gas Fuel Supply Planning (Short & Long Term)	30d	10-Nov-14	23-Dec-14
D1050	Air Permit - Develop Application	40d	24-Nov-14	26-Jan-15
D1420	Natural Gas Infrastructure Cost Estimating, Negotiations & ROWs	135d	29-Dec-14	08-Jul-15
D1060	Air Permit - Submit Application	0d		26-Jan-15
D1080	Air Permit - Agency Review	190d	27-Jan-15	22-Oct-15
Engineering		197d	10-Nov-14	21-Aug-15
E1350	Substation Conceptual Studies	37d	10-Nov-14	07-Jan-15
E1400	Plant Layout and Conceptual Design	20d	10-Nov-14	09-Dec-14
E1340	Site Survey	5d	24-Nov-14	02-Dec-14
E1300	Civil, Structural and Site Prep Design	130d	03-Dec-14	09-Jun-15
E1280	Mechanical & Piping Design	155d	10-Dec-14	22-Jul-15
E1290	Electrical Design	170d	10-Dec-14	12-Aug-15
E1390	GeoTech Report	30d	17-Dec-14	02-Feb-15
E1380	Substation Design	160d	08-Jan-15	21-Aug-15
Procurement		393d	24-Oct-14 A	26-May-16
Engines		393d	24-Oct-14 A	26-May-16
P1070	Engines - Negotiate Contract and Issue NTP	21d	24-Oct-14 A	21-Nov-14
P1160	Engines - Design	100d	24-Nov-14	20-Apr-15
P1490	Engines - BMcD Receive Wartsila Detailed Design Package	0d		11-Feb-15
P1040	Engines - Manufacture & Deliver	215d	13-Jul-15	26-May-16
P1430	Engines - Aux Delivery	0d		04-Mar-16
GSU		327d	10-Nov-14	10-Mar-16
P1250	GSU - Spec/Bid/Award/Issue PO	60d	10-Nov-14	09-Feb-15
P1260	GSU - Manufacture & Deliver	250d	05-Mar-15	10-Mar-16
Balance of Procurement		285d	06-Jan-15	01-Mar-16
P1370	Mechanical Procurement	250d	06-Jan-15	12-Jan-16
P1390	Substation Procurement	232d	09-Feb-15	20-Jan-16
P1360	Electrical Procurement	260d	10-Feb-15	01-Mar-16
P1350	Exterior Structural Steel - Bid/Award/Manu/Deliver	180d	12-Mar-15	23-Nov-15
Subcontracts		222d	10-Feb-15	07-Jan-16
P1310	Pre-Engineered Building - Bid/Award/Issue PO	50d	10-Feb-15	20-Apr-15
P1460	Site Development - Bid/Award/Issue PO	50d	05-Jun-15	14-Aug-15
P1470	Foundations and Underground Utilities - Bid/Award/Issue PO	50d	05-Jun-15	14-Aug-15
P1480	Substation Construction - Bid/Award/Issue PO	50d	20-Jul-15	28-Sep-15
P1440	Mechanical Construction - Bid/Award/Issue PO	70d	31-Aug-15	10-Dec-15
P1450	Electrical Construction - Bid/Award/Issue PO	70d	15-Sep-15	07-Jan-16
Construction		260d	17-Aug-15	06-Sep-16
Site Development		45d	20-Oct-15	07-Jan-16
C1090	Mobilize	5d	20-Oct-15	26-Oct-15
C1100	Site Development	40d	27-Oct-15	07-Jan-16
Foundations & Pre-Engineered Building		160d	24-Nov-15	25-Jul-16
C1110	Install Duct Bank and Underground Utilities	60d	24-Nov-15	03-Mar-16
C1120	Engine Hall Foundation - Form, Rebar, Cure, Strip	35d	08-Jan-16	25-Feb-16
C1130	Switchgear & Control Room Foundation - Form, Rebar, Cure, Strip	30d	22-Jan-16	03-Mar-16
C1140	Pre-Engineered Building - Erection	60d	04-Mar-16	26-May-16
C1170	PEMB - Engine Hall - Ready for Mech Install	0d		14-Apr-16
C1440	PEMB - Switchgear Room - Ready for Elec Install	0d		12-May-16
C1150	Pre-Engineered Building - Finishes	40d	27-May-16	25-Jul-16
Mechanical/Electrical Installation		260d	17-Aug-15	06-Sep-16
C1430	Natural Gas Infrastructure Installation	200d	17-Aug-15	10-Jun-16
C1270	Set GSU	20d	11-Mar-16	07-Apr-16
C1190	Mechanical Equipment & Piping Construction	120d	18-Mar-16	06-Sep-16
C1200	Electrical Construction	100d	15-Apr-16	06-Sep-16
C1180	Set Engines	10d	27-May-16	10-Jun-16
C1210	Mechanical Completion	0d		06-Sep-16
Substation Construction		118d	24-Nov-15	25-May-16
C1410	Substation Construction	118d	24-Nov-15	25-May-16
Start-Up & Commissioning		125d	01-Jul-16	03-Jan-17
S1240	Backfeed GSU	0d		01-Jul-16
S1220	Start-Up & Commissioning	50d	09-Aug-16	18-Oct-16
S1230	Commercial Operation Date (COD)	0d		18-Oct-16
S1440	Final Completion	0d		03-Jan-17



Non Critical ◆ ◆ Milestone ○ ○ COD

*See attached schedule assumptions

Report Date: 04-Nov-14

Data Date: 04-Nov-14

Appendix 1 to Exhibit A2 (continued)
City of Coffeyville (COC)
Project Schedule Assumptions (11-4-14)

The following assumptions were used in schedule development to meet a 10/18/2016 in service date for the COC project. Achieving an October 2016 in service date depends on expediting front end engine and BOP design. This can be achieved through sole sourcing with Wärtsilä for a 3x18V50SG facility and beginning BOP engineering immediately. Burns & McDonnell will proceed with engineering and procurement based on the Stillwater Energy Center and leverage equipment bids on that project to expedite procurement for Coffeyville.

- BMcD EPCM contracting approach.
- Coffeyville will sole source engines with Wärtsilä for a 3x18V50SG facility.
- Wärtsilä will be released to start engineering by 11/21/14.
- BMcD will be released to begin supporting (at a minimum) surveying, geotechnical investigation, gas line RFP development, GSU procurement, air permit development, general arrangement development, conceptual plant/substation design and up front Construction Management support by 11/17/14.
- Wärtsilä detailed design package received within calendar 75 days of NTP.
- Engines will be set by Wärtsilä in no longer than 2 weeks.
- 6 weeks for Wärtsilä to commission engines.
- Emissions emission testing will occur after COD.
- Engines can be delivered directly to foundation when needed with no onsite laydown required.
- SPP Interconnect requirements will not delay substation design or procurement
- Minor source air permit requirement with 9 month agency review period duration.
- City has ability to sole source equipment and services contracts on a cooperative procurement basis.
- 5 business day owner review period for critical design deliverables and procurement packages. 10 business day owner review period for all other design deliverables and packages.
- 2 day City Commission award approval turnaround for critical equipment and construction packages as needed after recommendation is provided by BMcD. Twice monthly approvals assumed for all other packages.
- Critical BOP equipment procurement and subcontract bidding will proceed based on Wärtsilä design from previous projects, with conservative assumptions made to cover unknowns. Burns & McDonnell will leverage equipment bid evaluations and purchase orders on existing projects to enter direct negotiations with vendors instead of formal bid cycles where needed.
- Bid periods for equipment and critical subcontracts shall not exceed 30 days.
- Greenfield site assumed. Demolition of existing facilities or underground utilities will be by City.
- Project site is assumed to have favorable geotechnical conditions. Piers, piles or footers are assumed to not be required under the power generation building. Site is assumed to be balanced from an earthwork standpoint with no excessive clearing and leveling required.
- Acquisition of ROW for gas line will not impact gas line construction.
- Any existing line or substation outages required for tie in will be provided as needed to meet the project construction schedule.

SITE KEY

1	ENGINE HALL
2	ELECTRICAL AREA
3	ADMIN-CONTROL AREA
4	MECHANICAL AREA
5	RADIATORS
6	SILENCERS - STACKS
7	SELECTIVE CATALYTIC REDUCER
8	EXHAUST GAS DUCT
9	UNLOADING STATION
10	STEP-UP TRANSFORMER AND CONTAINMENT
11	FIRE WATER TANK
12	FIRE PUMP HOUSE
13	GAS CONDITIONING
14	GAS YARD (BY OTHERS)
15	TANK CONTAINMENT

no.	date	by	ckd	description
A	08/27/14	WRL		PRELIMINARY

CONFIDENTIAL

PRELIMINARY - NOT FOR CONSTRUCTION

Burns & McDonnell SINCE 1898

9400 WARD PARKWAY
KANSAS CITY, MO 64114

date July 14, 2014	detailed W. LESNIAK
designed	checked V. RANALLETTA

Coffeyville KANSAS

PLANT CONSTRUCTION
W18V50SG GENERAL ARRANGEMENT
OVERALL SITE ARRANGMENT

project XXXXX	contract
drawing **GA001**	rev. **A**
sheet - of - sheets	
file COFFEY_GA001.DWG	

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Scale For Microfilming
Millimeters
Inches