

**Lee County Board Of County Commissioners  
Agenda Item Summary**

**Blue Sheet No. 20060233**

**1. ACTION REQUESTED/PURPOSE:** Approve award of formal quotation (RFP B&R 2661-SC-316 & 316A) and issuance of a purchase order to Fischer Controls International, c/o Control Associates, Inc., the low price proposer, meeting all specification requirements for control valves and severe service control valves and related equipment, in an amount of \$321,604.00, plus a not-to-exceed allowance of \$5,000 for additional related equip/services.

**2. WHAT ACTION ACCOMPLISHES:** Provides the necessary control valves for the waste to energy expansion project.

**3. MANAGEMENT RECOMMENDATION:** Staff recommends approval of the requested motion.

**4. Departmental Category:** 8

**C 8 A**

**5. Meeting Date:**

**03-14-2006**

**6. Agenda:**  
 Consent  
 Administrative  
 Appeals  
 Public  
 Walk-On

**7. Requirement/Purpose: (specify)**  
 Statute  
 Ordinance  
 Admin. Code 4-1  
 Other

**8. Request Initiated:**  
 Commissioner \_\_\_\_\_  
 Department Public Works  
 Division Solid Waste  
 By: Lindsey J. Sampson

**Background:** Sealed quotes were received by the County's design engineer, Burns & Roe, on behalf of the Solid Waste Division. Three (3) responses were received for the control valves and six (6) responses were received for the severe service control valves. After review, recommendation was made to combine the two RFP packages for the proposers' meeting all specification requirements. This recommendation is based on the fact that two vendors proposing on the severe duty valves were non-compliant with the technical specifications and one was non-competitive. The remaining vendors supplied proposals for both packages.

Funds are available in account string: 200923 40102.506540

**Attachments:** Burns & Roe bid evaluation dated 2/14/06  
 Tabulation sheets and technical review sheets  
 Covanta comment memo of 2/27/06

**10. Review for Scheduling:**

Department Director	Purchasing or Contracts	Human Resources	Other	County Attorney	Budget Services				County Manager/P.W. Director
					Analyst	Risk	Grants	Mer.	
<i>J. Saunders</i>	<i>N.A. 2/28/06 JS</i>	<i>N.A.</i>			<i>3/1/06</i>	<i>3/1/06</i>	<i>3/1/06</i>	<i>3/1/06</i>	<i>J. Saunders 2-28-06</i>

**11. Commission Action:**

- Approved
- Deferred
- Denied
- Other

RECEIVED BY COUNTY ADMIN:	<i>PP</i>
2-28-06	
4:45	
COUNTY ADMIN FORWARDED TO:	<i>PP</i>
3/2/06	
4pm	

Rec. by CoAtty	
Date:	<i>2/28/06</i>
Time:	<i>4:10pm</i>
Forwarded To:	<i>2/28/06</i>
	<i>4:23pm</i>

BID ABSTRACT		Control and Severe Service Valves					
Burns and Roe Enterprises, Inc.		1	2	3	4	5	6
ITEM	QTY UNIT DESCRIPTION	Flowserve	EMERSON Fisher	Sampson	CCI	SPX	Lesite
1	Lot SC-316 Control Valves:						
	Original Bid Price:	\$ 202,576	\$ 185,262	\$ 234,864	No Bid	No Bid	No Bid
	Revised Pricing to conform to Technical Specifications:	\$ 204,927	\$ 191,767	\$ 232,600			
2	Lot SC-316A Severe Service Valves:						
	Original Price	\$ 150,184	\$ 99,615	\$ 118,922	\$ 197,444	\$ 132,441	\$ 140,984
	Revised pricing to conform to Technical Specifications:	\$ 122,024	\$ 128,810	\$ 156,486	non-responsive	\$ 145,204	non-compliance
	Meet T&C's	\$ 1,397	incl'd	incl'd		non-competitive	
	Estimated Freight to Jobsite	\$ 6,200	incl'd	incl'd			
	Total Award Price	\$ 334,548	\$ 320,577	\$ 389,085			
		+4% (13,971)	base	+21% (88,508)			
	NOTE: 1. See attached Pricing History for detailed background.		\$ 324,604				
	Technical Field Service Drawings Submitted Delivery	none included 4 wks ARO see evaluation	none included 4wks ARO see evaluation	none included			
	PAYMENT TERMS	100% net 30 Jobsite	100% net 30 Jobsite	100% net 30 Jobsite			
	DESTINATION						
AWARD RECOMMENDATION:							
REASON FOR RECOMMENDATION:							
		PREPARED BY:	DATE:	REVIEWED BY:	DATE:		

LEE COUNTY  
RFP - 2661-C-316  
Control Valves

2/24/2008

EMERSON										FLOWSERVE		
TAG NO.	#2661-C-316, 12/5/2005	Revised Quote 2/06/06	Revised Quote 2/14-15/06	Cv @ Max (calc)	NOTES	Vendor Comments to Initial discrepancies	BREI Resolution	#2216, 12/01/2005	Revised Quote 2/8/06	Cv @ Max (calc)	NOTES	
FV-033C	\$3,165	\$3,165	\$3,160	1.261	Characteristic is m-form (equal port), not quick open. Trim is standard, not hardened. Port is reduced, not full. Valve size is 4 in not 6 in. Body/bonnet material is WC9, not WC8. Extended bonnet not required since actuator is piston style. Reducers should match pipe material WC9.	Acceptable as quoted.	Acceptable as quoted.	\$1,852	\$2,624	1.230	Mfg/model of air sets not provided. Valve quoted w/ CL 600 body; should be CL #60	
K-PV-0128	\$15,389	\$15,267	\$15,065	360.086	Valve size is 8 in not 12 in. Body/bonnet material is WC8, not WC9. Extended bonnet not required since actuator is piston style. Max noise level is 90dBA. Reducers should match pipe material WC8.	Reducer material revised from WC9 to WC8. Pricing remains the same.	Acceptable as revised.	\$19,608	\$19,608	220.572	Mfg/model of air sets not provided.	
K-PV-0127	\$24,662	\$24,527	\$24,991	621.235	Body/bonnet material is WC9, not WC5. (Note: Emerson exception states "Extended bonnet not required since actuator is piston style" but data sheet provides Extended bonnet and Spring & Diaphragm). Pressure drop is back-calculated based on the valve coefficient. (Note: data sheet includes reducers that are not required since valve and line size are identical). Valve size is 3 in, not 4 in. Quoted w/ reducers. Trim is standard, not hardened. Port is reduced, not full.	Reducer material revised from WC9 to WC8. Pricing remains the same.	Acceptable as revised.	\$60,745	\$60,745	367.694	No exceptions noted.	
K-PV-0139	\$5,598	\$5,598	\$5,462	121.000	Trim is standard, not hardened. Bonnet is standard, not extended. (T=650 F) Pressure drop is back-calculated on the valve 4 in. Valve, not 6 in. Quoted w/ reducers. Trim is standard, not hardened. Port is reduced, not full.	Acceptable as quoted.	Acceptable as quoted.	\$5,171	\$5,171	25.234	Standard bonnet provided, not extended as specified. (T = 650 F)	
K-LCV-0152	\$5,028	\$5,028	\$4,992	96.452	Trim is standard, not hardened. Port is reduced, not full.	Acceptable as quoted.	Acceptable as quoted.	\$3,785	\$3,785	65.990	Valve quoted w/ CL 160 body; should be CL	
K-HV-0201	\$6,759	\$6,759	\$6,796	506.692	Trim is standard, not hardened. Port is reduced, not full.	Acceptable as quoted.	Acceptable as quoted.	\$4,805	\$4,805	297.141	No exceptions noted.	
K-XV-0202	\$3,205	\$3,205	\$3,478	107.000	The valve does not require an extension bonnet for T=650 degF. Coat of graphite extension bonnet provided.	Acceptable with extension bonnet added included.	Acceptable as quoted.	\$2,044	\$2,044	30.248	Standard bonnet provided, not extended as specified.	
K-HV-0203	\$5,978	\$5,978	\$5,995	363.200	Trim is standard, not hardened. Packing is PTFE, not graphite. Pressure drop is back-calculated based on valve coefficient.	Acceptable as quoted.	Acceptable as quoted.	\$4,805	\$4,805	226.603	No exceptions noted.	
K-XV-0204	\$2,968	\$2,968	\$2,961	107.000	Body style is wafer. Trim is standard, not hardened. Pressure drop is back-calculated based on valve coefficient. Preliminary dimensional drawing not available for this item. Leakage is comparable to Class VI, but not ANSI rated. Valve assembly does not include inlet since actuator is rated for 120 psig.	The valve does not require graphite packing for T=625 degF. Coat of graphite packing is \$129 adder.	Acceptable with PTFE packing. No change in pricing.	\$1,763	\$1,763	25.949	1.5 in valve, not 2 in. (No reducers included)	
K-HV-0205	\$2,081	\$2,091	\$2,147	1,910.000	Packing is PTFE, not graphite. Trim is standard, not hardened.	Acceptable as quoted.	Acceptable as quoted.	\$2,511	\$2,511	1,780.714	Class VI stated, Class IV specified. (Exceeds Spec)	
K-XV-0206	\$2,968	\$2,968	\$2,861	34.030	Body style is wafer. Trim is standard, not hardened. Pressure drop is back-calculated based on valve coefficient. Preliminary dimensional drawing not available for this item. Leakage is comparable to Class VI, but not ANSI rated. Valve assembly does not include inlet since actuator is rated for 120 psig.	Acceptable as quoted.	Acceptable as quoted.	\$2,044	\$2,044	17.264	No exceptions noted.	
K-HV-0207	\$5,278	\$3,729	\$3,640	4,060.000	Packing is PTFE, not graphite. Pressure drop is back-calculated based on valve coefficient.	Acceptable as quoted.	Acceptable as quoted.	\$6,311	\$6,311	2,183.502	No exceptions noted.	
K-XV-0208	\$2,968	\$2,968	\$2,861	107.000	Trim is standard, not hardened. Bonnet is standard, not extended. Noise level is 107.6 dBA. Please advise if noise attenuation is required for this item. Line out = 12 in. Reducer required.	Acceptable as quoted.	Acceptable as quoted.	\$2,044	\$2,044	14.278	No exceptions noted.	
K-PCV-0212	\$11,149	\$17,780	\$17,652	221.736	Valve is 4 in, not 6 in. Quoted w/ reducers. Noise level is 86.3 dBA. Trim is standard, not hardened.	Valve has been revised to include WhisperFlo trim. Noise level is 86 dBA. Actuator is piston style.	Acceptable as revised.	\$10,250	\$12,293	135.559	Due to noise calculation and velocities in pipe and valve, a Megastream Plate is used. If a plate is not acceptable, we will look into internal trim solutions. Class IV leakage, not Class V as specified. Valve quoted w/ CL 160 body; should be CL 300	
K-PCV-0221	\$9,400	\$6,400	\$6,340	150.611	Valve is 4 in, not 6 in. Quoted w/ reducers. Noise level is 86.3 dBA. Trim is standard, not hardened.	Acceptable as quoted.	Acceptable as quoted.	\$4,879	\$4,879	94.568	No exceptions noted.	

LEE COUNTY  
RFP - 2881-C-316  
Control Valves

2/24/2008

EMERSON						FLOWERVE					
TAG NO.	#2881-C-316, 12/5/2005	Revised Quote 2/08/06	Revised Quote 2/14-15/06	Cx @ Max (calc)	NOTES	Vendor Comments to Initial discrepancies	BREI Resolution	#2218, 12/01/2005	Revised Quote 2/8/06	Cx @ Max (calc)	NOTES
K-FV-0225	\$11,862	\$11,862	\$11,704	108.064	Valve is 3in, not 4in. Body/bonnet material is WC9, not WC8. Quoted w/ reducers. Reducers should match pipe material/WC8.	Reducer material revised from WC9 to WC8. Pricing remains the same.	Acceptable as revised.	\$10,514	\$10,514	70.843	Standard bonnet provided, not extended as specified. (T = 850 F)
K-LV-0256	\$3,215	\$3,215	\$3,479	2.122	(Exception States "Valve is 3in, not 4in", but valve data sheet is correct). Body/bonnet material is WC9, not WC8. Bonnet is standard, not extended. Trim is standard, not hardened.	The valve does not require an extension bonnet for T=800 degF. Cost of extension bonnet provided.	Acceptable with extension bonnet included.	\$2,156	\$2,156	1.300	Class 150 provided. Class 600 specified. Bonnet is standard, not extended as specified. Conditions present severe cavitation. We are looking into more feasible solutions for this application.
K-LCV-0302A	\$4,681	\$4,681	\$4,685	23.730	Calculation indicates cavitation, not flashing. Trim is hardened. (Sizing Calc. indicates CHOKED flow).	Valve will operate under conditions specified.	Acceptable as quoted.	\$6,526	\$6,526	20.272	
K-LCV-0302B	\$5,235	\$5,235	\$5,202	79.102	Valve size is 3in, not 4in. Quoted w/ reducers. A 3" V500 rotary valve is quoted as an alternate with 300# RF flanges and Class VI shutoff. (Alternate \$3997).	Since the V150 is oversized, a 3in globe valve is quoted. Trim is reduced, not full. Connections are equal percentage, not linear. Connections are flanged. If other connections are required, please advise. Trim is standard, not hardened. No alternate is recommended. (Sizing Calc. indicates CHOKED/FLASHING. Erosion/corrosion possible). Quoted w/ reducers.	Acceptable as quoted.	\$3,836	\$3,836	78.348	No exceptions noted.
K-LCV-0316A	\$4,293	\$4,293	\$4,285	17.878	Since the V150 is oversized, a 3in globe valve is quoted. Trim is reduced, not full. Connections are equal percentage, not linear. Connections are flanged. If other connections are required, please advise. Trim is standard, not hardened. No alternate is recommended. (Sizing Calc. indicates CHOKED/FLASHING. Erosion/corrosion possible).	Acceptable as quoted.	Acceptable as quoted.	\$3,785	\$3,785	19.008	Quoted eccentric plug valve in lieu of ball valve. Valve can be downsized for better control.
K-LCV-0316B	\$3,776	\$3,776	\$3,796	16.126	Since the V150 is oversized, a 3in globe valve is quoted. Trim is reduced, not full. Connections are equal percentage, not linear. Connections are flanged. If other connections are required, please advise. Trim is standard, not hardened. No alternate is recommended. (Sizing Calc. indicates CHOKED/FLASHING. Erosion/corrosion possible).	Acceptable as quoted.	Acceptable as quoted.	\$3,153	\$3,153	19.332	Quoted eccentric plug valve in lieu of ball valve. Flange ends, not SWE as specified. Falls CLOSE.
K-LCV-0331A	\$3,170	\$3,170	\$3,180	5.086	NO COMMENTS (Sizing Calc. indicates CHOKED/FLASHING flow with erosion/corrosion possible).	ASCO solenoid added. Valve will operate under conditions specified. Standard trim is quoted for flashing service with pressure drop less than 50 psid. Valve trim is suitable.	Acceptable as quoted.	\$2,838	\$2,838	6.830	Flange ends, not SWE as specified. Falls CLOSE.
K-LCV-0331B	\$3,170	\$3,336	\$3,326	6.560	Trim is standard, not hardened (Sizing Calc. indicates CHOKED/FLASHING flow with erosion/corrosion possible). Spec requires a Solenoid, non provided.	Acceptable as revised.	Acceptable as revised.	\$2,391	\$2,391	6.969	No exceptions noted.
K-LV-0341	\$4,733	\$4,733	\$4,686	218.382	Valve size is 4in, not 6in. Quoted w/ reducers. Characteristic is quick open, not equal %. Packing is PTFE, not graphite. Trim is standard, not hardened. (Sizing Calc. indicates CHOKED/FLASHING flow with erosion/corrosion possible).	Acceptable as quoted.	Acceptable as quoted.	\$7,110	\$7,110	192.351	Due to valve and pipe velocities, angle valve is quoted.
K-LCV-0343	\$4,237	\$4,237	\$4,210	9.638	Minimum case is at least than 10%. No exceptions noted.	Exception taken for globe valve, and connections, reducers. If a globe valve is necessary to meet spec, anti-cavitation trim can be quoted with a globe valve, but will be substantially more expensive. /- The alternate quoted valve is 316 SST, eq % characteristic, has hardened trim and max flow case is at 41% travel. 316L SST is available at additional cost.	Acceptable as quoted.	\$2,397	\$2,397	9.887	Quote Teflon gaskets and packing as requested. Design temp on spec sheets state 425 deg F which exceeds the limits of Teflon (Note: process conditions = 80F on data sheet).
K-FV-0702	\$2,842	\$2,842	\$2,817	1,582.024		Acceptable as quoted.	Acceptable as quoted.	\$1,792	\$1,792	43.825	No exceptions noted.
K-FV-0914	\$3,377	\$3,377	\$3,451	2.896	Due to cavitation with a globe valve, a V150 ball valve with micro-notch option is quoted for the application. Valve size is 1in, not 1 1/2 in. Characteristic is approx. =%, not quick open. Valve has 150# RF flanges. Body/bonnet material is 316 SST, not 316L. SST. Valve has Class VI shutoff. Reducers are not quoted with this valve. Globe valve to be quoted as an option.	Ball valve is acceptable as quoted.	Acceptable as quoted.	\$2,387	\$2,387	2.957	No exceptions noted.

LEE COUNTY  
RFP - 2861-C-316  
Control Valves

2/24/2008

EMERSON				FLOWSERVE						
TAG NO.	#2061-C-316, 12/5/2005	Revised Quote 2/06/06	Cv's @ Max (calc)	NOTES	Vendor Comments to initial discrepancies	BREI Resolution	#216, 12/01/2005	Revised Quote 2/8/06	Cv's @ Max (calc)	NOTES
K-LV-1301	\$2,062	\$2,066	5.342	Body/bonnet material is 316 SST, not 316L SST.		Acceptable as quoted.	\$1,383	\$1,383	5.328	No exceptions noted.
K-FCV-1310	\$3,653	\$3,635	47.170	Valve size is 2in, not 4in. Quoted w/ reducers. Valve is for converging service and NC port is on left, NC port is on the right, and common outlet is on the bottom.		Acceptable as quoted.	\$3,590	\$3,590	47.029	No exceptions noted.
K-FV-1311A	\$3,677	\$3,677	16.305	Valve is for converging service and NC port is on left, NC port is on the right, and common outlet is on the bottom. Valve service is Diverter valve. The valve should comply with this arrangement.	It has been revised for DIVERGING service. Note that the common inlet will be the bottom port with the NC port to the left and NC port to the right. Pricing remains the same.	Acceptable as quoted.	\$3,587	\$3,548	16.209	Valve failure position needs to be clarified.
K-FV-1311B	\$3,677	\$3,706	16.305	Body/bonnet material is WC6, not WC8. Trim size is reduced and characteristic is linear, not quick open. Pressure drop is back-calculated based on valve coefficient.	Acceptable as revised.	Acceptable as quoted.	\$3,587	\$3,282	16.209	Valve failure position needs to be clarified.
XV-0168C	\$6,216	\$6,142	51.500	Valve size is 4in, not 6in. End connections are Class 125 (mats with 150# flanges). Valve has nitile liner and aluminum bronze disk. Valve has Class VI shutoff. Preliminary dimensional drawing not available for this item. Reducers are not quoted with this valve.	Acceptable as quoted.	Acceptable as quoted.	\$3,891	\$3,891	15.780	Standard bonnet, not extended as specified (T = 850 FT).
K-LCV-0411	\$3,133	\$3,133	237.381	Valve size is 4in, not 6in. End connections are Class 125 (mats with 150# flanges). Valve has nitile liner and aluminum bronze disk. Valve has Class VI shutoff. Preliminary dimensional drawing not available for this item. Reducers are not quoted with this valve. (NOTE: BREI SPEC CALLS FOR an 8 inch VALVE).	Exception taken to reducers.	Acceptable as quoted.	\$2,298	\$2,298	236.721	No exceptions noted.
LCV-0412	\$3,133	\$3,199	475.282	Emerson circulted total is \$165,282	Exception taken to reducers. Please note that valve size is actually 4" since cavitation occurs with the 6" and 8" sizes.	Acceptable as quoted.	\$2,928	\$2,928	474.019	No exceptions noted.
Sub-total:	\$184,812	\$191,811					\$202,576	\$204,927		
Add Reducers		\$578								
Spares Parts										
Shipping										
TOTAL:	\$184,812	\$192,387					\$202,576	\$204,927		
				EMERSON GENERAL NOTES:						FLOWSERVE GENERAL NOTES:
				1. See Bid package for comments to para. 2.						1. AFPI packing used in lieu of Graphite packing.
				2. See Bid package for comments to Document Submittal Schedule.						2. Bi-lock fittings were used
				3. General comments to BREI SPEC:						3. Limit Switches are OPAR limit switches
				(a) Positioners do not have bypass option since they are electro-pneumatic.						4. Logix 3200IQ Digital Positioners are used for modulating valves.
				(b) Pilot reducers are sized based on 70 psig air supply. It is assumed that supply pressure will not exceed 120 psig.						5. Tubing/fittings are 304/316 (Flowserve standard).
				(c) Valves in flashing service with less than 50 psi operation pressure drop are quoted with standard trim materials.						6. Chrome Mo9 WC9 used in lieu of WC6 and A182-F11.
				(d) All carbon steel bodies are quoted with WCC.						7. Stainless Steel used in lieu of A351-CF3M.
				(e) All valves for on-off service include a "wide open" calculation based on the coefficient of the valve.						8. Carbon Steel used in lieu of Cast Iron.
				(f) Valves comply with ASME (ANSI?) B16.34, not ASME TOP-1.						

LEE COUNTY  
RFP - 2881-C-316  
Control Valves

		SAMSON					
Vendor Comments to Initial discrepancies	BREI Resolution	#0511-010KC 12/01/2005	Revised Quote 1/4/08	Cv @ Max (calc)	NOTES	Vendor Comments to initial discrepancies	BREI Resolution
Valve required w/ CL 900 rating.	Acceptable as revised.	\$3,276	\$3,276	1,270	Mfg/model of air sets not provided.		Acceptable as quoted.
		\$19,411	\$19,411	190,530	5in Ball instead of Globe Equal%, not ON/OFF. Flanged ends, not BWE provided. Mfg/model of airsets not provided. Class IV provided, not Class V as specified.	BW Ends are not available for this valve. Class V is only possible with soft seat on this valve. Design temp too high for this.	Not acceptable as quoted.
		\$54,292	\$54,292	314,460	12in Ball instead of Globe Flanged ends, not BWE provided. Equal%, not ON/OFF. Noise level = 87dBA. Alternate 5in Ball offered, with SPL of 92dBA (Alternate \$33,782). Class IV provided, not Class V as specified.	BW Ends are not available for this valve. Class V is only possible with soft seat on this valve. Design temp too high for this.	Not acceptable as quoted.
Extended bonnet applied.	Acceptable as revised.	\$8,655	\$8,655	19,200	SPL=106dBA. PTFE, not Grafoil. (T=650F).	Graphite will be provided. 108 dBA is best we can do without going to a multistage 1 1/2" X 6" angle valve.	Not acceptable as quoted.
Valve required w/ CL 800 rating.	Acceptable as revised.	\$4,898	\$4,898	38,800	3in, not 4in.		Acceptable as quoted.
		\$10,594	\$10,594	297,000	PTFE, not Grafoil. (T=650 deg F)	An insulating section is provided that will protect th PTFE packing up to 860 degF.	Acceptable as quoted.
Extended bonnet applied, but not needed.	Acceptable as revised.	\$3,896	\$3,896	11,200	SPL=86dBA.		Acceptable as quoted.
		\$10,594	\$10,594	228,000	PTFE, not Graphite. (T=650 deg F)	An insulating section is provided that will protect th PTFE packing up to 860 degF.	Acceptable as quoted.
Reducers added to valve	Acceptable as revised.	\$3,257	\$3,257	12,700	PTFE, not Grafoil. (T = 425 deg F)		Acceptable as quoted.
		\$1,630	\$1,630	1,791,000	No Packing info, actuator info, or SPL	PTFE, Race&Philon, 43 dBA. See revised datasheet.	Acceptable as quoted.
		\$1,910	\$1,910	17,400	PTFE, not Graphite. (Acceptable temp=300F).		Acceptable as quoted.
		\$3,610	\$3,610	2,178,000	No Packing info, actuator info, or SPL	PTFE, Race&Philon, 38 dBA. See revised datasheet.	Acceptable as quoted.
		\$1,910	\$1,910	0,142	PTFE, not Graphite (Acceptable, Design temp=300F)		Acceptable as quoted.
Changed to Class V shut-off. Request w/ CL 300 rating.	Acceptable as revised.	\$11,319	\$11,869	135,000	No handwheel provided, as specified. SPL=66dBA.	A handwheel will be provided to a \$650 adder.	Acceptable as revised.
		\$5,578		85,400	4in, not 6in. Needs reducers.		Open Item.

LEE COUNTY  
RFP - 2861-C-316  
Control Valves

Vendor Comments to Initial discrepancies		BREV Resolution		#0511-010KC 12/01/2005	Revised Quote 1/4/06	Cv's @ Max (rate)	NOTES	Vendor Comments to Initial discrepancies	BREV Resolution
Extended bonnet applied.		Acceptable as revised.		\$9,636	\$9,636	71.100	Fail action is OPEN, not CLOSED as specified.	Fail action close will result in a #1823 deduct due to smaller actuator.	Not acceptable as explained. The action should be OPEN not CLOSE
Extended bonnet applied. Class 6008 valve added.		Acceptable as revised.		\$3,113	\$3,113	1,280	Class 300 provided. Class 600 Specified. Class 600 to be quoted.	Design pressure of 175 psig at 800F only requires Class 300. Please advise if you want Class 600 anyway.	Open item.
		Open item		\$3,970	\$3,970	20.700	2 1/2in, not 2in.		Not acceptable as quoted.
				\$4,952	\$4,952	79.800	No exceptions noted.		Acceptable as quoted.
				\$4,952	\$3,976	15.900	4in Globe instead of 4in Ball. BWE, not RF Flange as specified.	RF flanges will result in \$878 deduct.	Acceptable as revised.
				\$3,812	\$3,218	14.400	3in Globe instead of 3in Ball. BWE, not RF Flange as specified.	RF flanges will result in \$598 deduct.	Acceptable as revised.
		Open item		\$2,950	\$2,950	3.760	No exceptions noted.		Acceptable as quoted.
				\$3,340	\$3,340	5.970	No exceptions noted.		Acceptable as quoted.
				\$10,556	\$10,556	98.000	PTFE, not Grefol. (Temp = 425F). ON/OFF. not equal%.		Acceptable as quoted.
				\$4,057	\$4,057	9.960	No exceptions noted.		Acceptable as quoted.
				\$1,863	\$1,863	44.500	No exceptions noted.		Acceptable as quoted.
				\$3,070	\$3,070	3.000	No exceptions noted.		Acceptable as quoted.

LEE COUNTY  
RFP - 2861-C-316  
Control Valves

Vendor Comments to Initial discrepancies	BREI Resolution	#0511-010KC, 12/01/2005	Revised Quote 1/4/06	Cv's @ Max (calc)	NOTES	Vendor Comments to Initial discrepancies	BREI Resolution
		\$2,072	\$2,072	5,400	Fail action is CLOSE, not OPEN as specified.	Open will be provided.	Acceptable as revised.
		\$4,652	\$4,652	47,000	No exceptions noted.		Acceptable as quoted.
Valve failure position changed to Converging.	Acceptable as revised.	\$1,476	\$3,494	16,500	Verify 3-way valve. Define failure positions.	Three way valve will be provided. Cost adder: \$2018. Valve fails with flow path B closed.	Acceptable as revised.
Valve failure position changed to Diverging.	Acceptable as revised.	\$1,476	\$3,494	16,500	Verify 3-way valve. Define failure positions.	Three way valve will be provided. Cost adder: \$2018. Valve fails with flow path B closed.	Acceptable as revised.
Extended bonnet applied.	Acceptable as revised.	\$7,951	\$7,951	6,300	2 in, not 1.5 in as specified. SPL = 111 dBA.	111 dBA is the best we can do without going to a multistage 2 X 6 angle valve.	Not acceptable as quoted.
		\$1,336	\$2,336	240,000	"Lug" end connections, not FF flange as specified. No data provided for packing or SPL.	The lug body goes between the flanges. PTFE, Ract&Pinion, 66 dBA.	Acceptable as quoted.
		\$2,824	\$2,824	610,000	No data provided for packing or SPL.	PTFE, Ract&Pinion, 66 dBA.	Acceptable as revised.
		\$223,680	\$221,416				
		\$11,184	\$11,184				
		FOB Job Site	\$234,600				
<b>SAMSON GENERAL NOTES:</b>							
1. As noted above.							



LEE COUNTY  
RFP-2661-SC-316A  
SEVERE SERVICE CONTROL VALVES

SPEC ITEM NO. TAG NO.	CCI			SPX			ORIG BID 11/17/2005	REVISED PRICE	DELTA	COMMENTS	REVISD PRICE	DELTA	COMMENTS	ORIG BID 11/17/2005
	ORIG BID 11/17/2005	REVISED PRICE	DELTA	ORIG BID 12/21/2005	REVISED PRICE	DELTA								
1 K-PCV-0209	\$28,130			\$22,755	\$28,059	\$5,304		\$24,805		Added 4x3 Reducer	\$24,805		BREI revised line size. Smaller valve size. (\$3,254) bid.	\$15,074
2 K-PCV-0123	\$43,890			\$43,324	\$49,872	\$6,348		\$49,872		Reducers	\$49,872			\$25,706
3 K-PCV-0216	\$16,755			\$6,238	\$7,107	\$869		\$7,107		Reducer	\$7,107			\$6,680
4 K-TCV-0222	\$9,280			\$4,788	\$4,788	\$0		\$4,788			\$4,788			\$4,738
5 K-FCV-014A	\$20,630			\$6,612	\$9,247	\$635		\$9,247		Reducer	\$9,247			\$12,086
6 K-FCV-014B	\$20,630			\$8,612	\$9,230	\$618		\$9,230		Reducer	\$9,230			\$12,066
7 FCV-0028C	\$31,310			\$7,547	\$9,790	\$2,243		\$9,790		Reducer	\$9,790			\$9,327
8 K-PCV-0254	\$13,788			\$22,416	\$22,416	\$0		\$22,416		Class III to IV Leakage. No price change.	\$22,416			\$14,917
9 K-TCV-0255	\$9,160			\$4,964	\$4,964	\$0		\$4,964			\$4,964			\$2,797
SPARES	\$3,871			\$1,985	\$1,985	\$0		\$1,985			\$1,985			\$5,170
SHIPPING	INCLUDED			\$1,200	\$1,200	\$0		\$1,200			\$1,200			\$10,341
<b>TOTAL:</b>	<b>\$197,444</b>			<b>\$132,441</b>	<b>\$148,458</b>	<b>\$16,017</b>		<b>\$148,458</b>			<b>\$148,458</b>		<b>\$145,204</b>	<b>\$118,922</b>
													(\$3,254)	

LEE COUNTY  
RFP-2661-SC-316A  
SEVERE SERVICE CONTROL VALVES

SPEC ITEM NO.	TAG NO.	12/15/2005				SAMSON CONTROLS				12/28/2005			
		Revised Price	DELTA	COMMENTS	Revised Price	Delta	Comments	Revised Price	Delta	Comments	Revised Price	Delta	Comments
1	K-PCV-0208	\$15,412	\$338	12x8=\$338 Reducer.	\$29,351	\$13,939	Pricing error by Samson. Also, increased Cv. Need to confirm water line conn)	\$41,721	\$12,370	Changed valve to 1500# Class because of Water Flange connection.			
2	K-PCV-0123	\$30,122	\$4,416	12x8=\$978; 8x18=\$3438	\$30,122	\$0		\$30,122	\$0				
3	K-PCV-0216	\$6,748	\$68	(2) 4x6=\$68	\$6,748	\$0		\$6,748	\$0				
4	K-TCV-0222	\$4,738	\$0		\$4,738	\$0		\$4,738	\$0				
5	K-FCV-014A	\$12,086	\$0		\$12,086	\$0		\$12,086	\$0				
6	K-FCV-014B	\$12,086	\$0		\$12,086	\$0		\$12,086	\$0				
7	FCV-0028C	\$9,641	\$314	(2) 6x4=\$314	\$9,641	\$0		\$9,641	\$0				
8	K-PCV-0254	\$14,917	\$0	Hardened Trm. if req'd = \$1343	\$14,917	\$0	(Need to confirm water line conn)	\$21,035	\$6,118	Changed valve to 1500# Class because of Water Flange connection.			
9	K-TCV-0255	\$2,797	\$0		\$2,797	\$0		\$2,797	\$0				
	SPARES	\$5,170	\$0		\$5,170	\$0		\$5,170	\$0				
	SHIPPING	\$10,341	\$0		\$10,341	\$0		\$10,341	\$0				
	<b>TOTAL:</b>	<b>\$124,058</b>	<b>\$5,136</b>		<b>\$137,997</b>	<b>\$13,939</b>		<b>\$156,465</b>	<b>\$18,488</b>				

LEE COUNTY  
RFP-2661-SC-316A  
SEVERE SERVICE CONTROL VALVES

SPEC ITEM NO.	TAG NO.	LESLIE CONTROLS				FLOWSERVE								
		ORIG BID 11/17/2005	Revised Price	DELTA	COMMENT	ORIG BID 11/17/2005	Alternate Price	DELTA	COMMENTS	Revised Price 12/30/2005	Delta	Comments	Revised Price 1/17/2006	Delta
1	K-PCV-0209	\$16,939			12/29/05: Leslie was asked to re-quote for line size change to 4in x 6in. Leslie states that they cannot provide a valve for this application for the new line size!	\$14,076	\$10,345	-\$3,731	Minor material changes.	\$11,022	-\$3,054	Quoted alt valve. Trim change.	\$11,022	\$0
2	K-PCV-0123	\$35,573			Need to recalc using correct pressures.	\$79,382	\$36,457	-\$40,925	Changed from 5-Stage to 1-Stage Trim. Changed guides and packing material.	\$38,614	-\$40,768	Changed Actuator size.	\$53,323	\$14,709
3	K-PCV-0216	\$7,075			Need to recalc using correct pressures.	\$6,176	\$6,139	-\$37	Minor material changes.	\$6,068	-\$108	Removed Regulator.	\$6,068	\$0
4	K-TCV-0222	\$11,162				\$7,530	\$7,498	-\$32	Minor material changes.	\$7,499	-\$31		\$7,499	\$0
5	K-FCV-014A	\$7,965			Need to recalc using correct pressures.	\$11,477	\$11,445	-\$32	Minor material changes.	\$11,513	\$36		\$11,513	\$0
6	K-FCV-014B	\$7,965			Need to recalc using correct pressures.	\$11,629	\$11,597	-\$32	Minor material changes.	\$11,535	-\$94	Removed Regulator.	\$11,535	\$0
7	FCV-0028C	\$11,032			Need to recalc using correct pressures.	\$7,702	\$7,668	-\$36	Minor material changes.	\$7,781	\$79	Changed Trim.	\$8,079	\$298
8	K-PCV-0254	\$12,992			2/29/05: Leslie states that they have no alternate solution!	\$5,881	\$5,844	-\$37	Minor material changes.	\$6,819	\$738	Requested as an Angle Valve.	\$6,819	\$0
9	K-TCV-0255	\$4,716				\$6,331	\$6,295	-\$36	Minor material changes.	\$6,226	-\$105	Removed Regulator.	\$6,388	\$162
	SPARES SHIPPING	\$25,575				\$0	\$0	\$0	Approximat 20% discount if purchased through Bangalor, India. Extends lead time to 28-30 wks.	\$0			\$0	\$0
	TOTAL:	\$140,994				\$160,184	\$105,286	-\$54,898		\$106,877		Delivery, 16 weeks ARO.	\$122,848	

SPEC ITEM NO.	TAG NO.	Comments	EMERSON		Revised Price	DELTA	COMMENTS	Revised Price	Delta	Comments
			ORIG BID	12/1/2005						
1	K-PCV-0209	Quoted alt valve. Trim change.	HOLD		\$18,391	\$18,391	Added valve K-PCV-0209	\$24,497	\$6,106	BREI revised line size. Different valve bid.
2	K-PCV-0123	Trim Change for noise control.	\$46,942	\$0	\$46,942	\$0		\$46,942	\$0	
3	K-PCV-0216		\$5,461	\$0	\$5,461	\$0		\$5,461	\$0	Changed Trim to Cavitation Trim.
4	K-TCV-0222		\$3,363	\$0	\$3,363	\$0		\$8,803	\$5,440	
5	K-FCV-014A		\$9,019	\$0	\$9,019	\$0		\$9,019	\$0	
6	K-FCV-014B	Changed Trim again.	\$9,019	\$0	\$9,019	\$0		\$9,019	\$0	
7	FCV-0028C		\$8,395	\$0	\$8,395	\$0		\$8,395	\$0	
8	K-PCV-0254		\$14,053	\$0	\$14,053	\$0		\$14,053	\$0	
9	K-TCV-0255	Changed to Class V SPARES SHIPPING	\$3,363	\$0	\$3,363	\$0		\$3,363	\$0	
TOTAL:			\$99,615	\$18,391	\$118,006	\$18,391		\$129,552	\$11,546	
AFR.										
Delivery. 16 weeks										

CONTROL VALVES  
TECHNICAL REVIEW OF PROPOSALS  
FOR SC-316  
2/14/06 - KCC

The proposals were received from the following three (3) vendors for supply of the Severe Service Control Valves:

- Samson Controls Inc.
- Pro-Quip (Representing Flowserve)
- Control Associates Inc. (Representing Fisher)

All of the proposals were technically evaluated. Some vendors took some exceptions to the specification. The exceptions and the resolutions are attached (Attachment A) as are the revised pricing along with justification for any price changes (Attachment B).

In summary, after discussions of the exceptions and clarifications .....all bids were found technically acceptable, except for Samson Controls since Samson could not provide valves that meet the spec requirements in 5 cases listed below in Attachments A and B. **(Flowserve has 2 open items as of 2/14/06)**

# ATTACHMENT A

## BRE RESOLUTION OF TECHNICAL COMMENTS/ CLARIFICATIONS AND EXCEPTIONS SC-316

*Note: Portions in italics represent vendors' responses.*

### CONTROL ASSOCIATES (FISHER CONTROLS)

Technical Exception/Clarification	BRE Response
<p>Item # 7, K-XV-0202, extension bonnet is required for service temp greater than 450 degF (T=650 F); standard bonnet provided: <i>Exception was taken to this requirement since the valve does not require an extension bonnet for T=650 degF. If an extension bonnet is required to satisfy the customer's spec. add \$292 to price quoted.</i></p>	Acceptable with extension bonnet adder \$292.
<p>Item # 9, K-XV-0204, PTFE packing provided: <i>Exception was taken to this requirement since the valve does not require graphite packing for T=425 degF. If graphite packing is required to satisfy the customer's spec. Add \$129 to price quoted.</i></p>	Accepted as quoted with PTFE packing.
<p>Item # 14, K-PCV-0212, SPL=107.6 dBA <i>Valve has been revised to include WhisperFlo trim. Max calculated noise level is 88 dBA and max and normal cases are 83% travel. Actuator is piston style.</i></p>	Accepted as revised.
<p>Item # 17, K-LV-0256, Standard bonnet provided: <i>Exception was taken to this requirement since the valve does not require an extension bonnet for T=800 degF. If an extension bonnet is required to satisfy the customer's spec. Add \$284 to price quoted.</i></p>	Acceptable with extension bonnet adder \$284.
<p>Item # 18, K-LCV-0302A, sizing calc indicates CHOKED flow. Verify that the valve will operate under conditions specified: <i>Valve will operate under conditions specified.</i></p>	Acceptable as quoted.
<p>Item # 23, K-LCV-0331B, no solenoid valve quoted, sizing calc indicates CHOKED/FLASHING flow: <i>ASCO solenoid added. Valve will operate under conditions specified. Standard trim is quoted for flashing service with pressure drop less than 50 psid. Valve trim is suitable and valve will operate under specified conditions.</i></p>	Acceptable as revised with solenoid valve.
<p>Item # 27, K-FCV-0914, RF flanges quoted, no</p>	Acceptable as originally quoted ball valve.

<p>reducers included:  <i>Exception taken to globe valve since cavitation will occur with a globe valve. If a globe valve is necessary to meet customer spec, a globe valve with anti-cavitation trim can be quoted.</i>  <i>The alternate quoted valve is 316 SST, eq % characteristic, has hardened trim and max flow case is at 41% travel. 316L SST is available at additional cost.</i></p>	
<p>Item # 33, K-LCV-0411, no reducers included in quote:  <i>Exception taken to reducers for a wafer-style butterfly valve.</i></p>	Acceptable as quoted.
<p>Item # 34, LCV-0412, No reducer included in quote (Vendor should also note that an 8in valve was specified not 6in):  <i>Exception taken to reducers. Please note that valve size is actually 4" since cavitation occurs with the 6" and 8" sizes.</i></p>	Acceptable as quoted.
<p>Valve reducers should match the pipe material instead of valve's where it is different, such as WC9 valve to WC6 pipe:  <i>Items 2, 3 and 16 (Tags K-PV-0126, K-PV-0127 and K-FV-0225): Reducer material revised from WC9 to WC6. Pricing remains the same.</i></p>	Acceptable as revised.
<p>Item # 31, K-FV-1311B is a diverter service not converging. Please confirm that quoted valve complies with this service:  <i>Item 31 (K-FV-1311B) has been revised for DIVERGING service. Note that the common inlet will be the bottom port with the NO port to the left and the NC port to the right. Pricing remains the same.</i></p>	Acceptable as revised.
<p><i>Positioners do not have bypass option since they are electro-pneumatic.</i></p>	Accepted.
<p><i>Piston actuators are sized based on 70 psig air supply. It is assumed that supply pressure will not exceed 120 psig.</i></p>	Accepted.
<p><i>All carbon steel bodies are quoted with WCC.</i></p>	Accepted.
<p><i>All valves for on-off service include a "wide open" calculation based on the coefficient of the valve.</i></p>	Accepted.
<p><i>Valves comply with ASME (ANSI?) B16.34, not ASME TDP-1.</i></p>	Accepted. Although not stated by vendor, all applicable requirements of TDP-1 are complied with

FLowsERVE

Technical Exception/Clarification	BRE Response
Item # 4, K-PV-0139, standard bonnet provided: <i>Extended bonnet applied.</i>	Acceptable as revised.
Item # 7, K-XV-0202, standard bonnet provided: <i>Extended bonnet applied, but not needed.</i>	Acceptable as revised.
Item # 9, K-XV-0204, no reducers included in quote: <i>Reducers added to valve.</i>	Acceptable as revised.
Item # 14, K-PCV-0212, Class IV provided: <i>Changed to Class V shut-off.</i>	Acceptable as revised.
Item # 16, K-FV-0225, standard bonnet provided: <i>Extended bonnet applied.</i>	Acceptable as revised.
Item # 17, K-LV-0256, standard bonnet provided, Class 150 provided: <i>Extended bonnet applied, Class 600# valve added.</i>	Acceptable as revised.
Item # 18, K-LCV-0302A, Vendor states severe cavitation:	<b>Open item</b>
Item # 22, K-LCV-0331A, flanged ends provided, valve fails close:	<b>Open item</b>
Item # 30 and 31, K-FV-1311A and B, the failure position needs to be clarified: <i>K-FV-1311A is converging, K-FV-1311B is diverging service.</i>	Acceptable as revised.
Item # 32, XV-0168C, standard bonnet provided: <i>Extended bonnet applied.</i>	Acceptable as revised.
Item # 1, FV-0033C, should be Class 900 valve: <i>Valve has been revised to Class 900 rating.</i>	Acceptable as revised.
Item # 5, K-LCV-0152, should be Class 600 valve: <i>Valve has been revised to Class 600 rating.</i>	Acceptable as revised.
Item # 14, K-PCV-0212, is changed to Class 300: <i>Valve has been revised to Class 300 rating.</i>	Acceptable as revised.



SAMSON CONTROLS

Technical Exception/Clarification	BRE Response
<p>Item # 2, K-PV-0126, Flanged ends provided, Class IV provided:  <i>BW Ends are not available for this valve. Class V is only possible with a soft seat on this valve. Design temperature is too high for this.</i></p>	<p>Not acceptable. It does not meet shut-off classification.</p>
<p>Item # 3, K-PV-0127, Flanged ends provided, Class IV provided:  <i>BW Ends are not available for this valve. Class V is only possible with a soft seat on this valve. Design temperature is too high for this.</i></p>	<p>Not acceptable. It does not meet shut-off classification.</p>
<p>Item # 4, K-PV-0139, PTFE provided, SPL=106 dBA:  <i>Graphite will be provided. 106 dBA is the best we can do without going to a multistage 1 1/2" X 6" angle valve.</i></p>	<p>Not acceptable. It does not meet the spec requirement of max 85 dBA noise and 1 1/2" X 6" angle valve is not suitable for this application.</p>
<p>Item # 6, K-HV-0201, PTFE provided:  <i>An insulating section is provided that will protect the PTFE packing up to 800F.</i></p>	<p>Acceptable as revised.</p>
<p>Item # 8, K-HV-0203, PTFE provided:  <i>An insulating section is provided that will protect the PTFE packing up to 800F.</i></p>	<p>Acceptable as revised.</p>
<p>Item # 10, K-HV-0205, no data provided on datasheet about packing and actuator:  <i>PTFE, Rack &amp; Pinion, 43 dBA.</i></p>	<p>Acceptable as quoted.</p>
<p>Item # 12, K-HV-0207, no data provided on datasheet about packing and actuator:  <i>PTFE, Rack &amp; Pinion, 38 dBA.</i></p>	<p>Acceptable as quoted.</p>
<p>Item # 14, K-PCV-0212, no Handwheel provided:  <i>A Handwheel will be provided for a \$550 adder.</i></p>	<p>Acceptable as revised with handwheel</p>
<p>Item # 16, K-FV-0225, fail action provided is CLOSE should be OPEN:  <i>Fail action close will result in a \$1823 deduct due to smaller actuator.</i></p>	<p>Not acceptable as explained. The action should be OPEN not CLOSE.</p>
<p>Item # 17, K-LV-0256, Class 300 valve provided:  <i>Design pressure of 175 psig at 800F only requires Class 300. Please advise if you want Class 600 anyway.</i></p>	<p><b>Not acceptable as quoted.</b></p>
<p>Item # 20, K-LCV-0316A, BWE provided:  <i>RF flanges will result in a \$676 deduct.</i></p>	<p>Acceptable as revised.</p>
<p>Item # 21, K-LCV-0316B, BWE provided:  <i>RF flanges will result in a \$596 deduct.</i></p>	<p>Acceptable as revised.</p>
<p>Item # 28, K-LV-1301, Fail action provided is CLOSE:</p>	<p>Acceptable as revised.</p>

<i>OPEN will be provided.</i>	
Item # 30, K-FV-1311A, verify 3-way valve provided, define failure position: <i>Three way valve will be provided. Cost adder \$2018. Valve fails with flow path B closed.</i>	Acceptable as revised.
Item # 31, K-FV-1311B, verify 3-way valve provided, define failure position: <i>Three way valve will be provided. Cost adder \$2018. Valve fails with flow path B closed.</i>	Acceptable as revised.
Item # 32, XV-0138C, SPL=111 dBA provided: <i>111 dBA is the best we can do without going to a multistage 2" X 6" angle valve.</i>	Not acceptable. It does not meet the spec requirement of max 85 dBA noise and 2" X 6" angle valve is not suitable for this application.
Item # 33, K-LCV-0411, Lug connection provided, no data provided on datasheet: <i>The Lug body goes between the flanges. PTFE, Rack &amp; Pinion, 56 dBA.</i>	Acceptable as quoted.
Item # 33, K-LCV-0412, no data provided on datasheet: <i>PTFE, Rack &amp; Pinion, 66 dBA.</i>	Acceptable as quoted.

SEVERE SERVICE CONTROL VALVES  
TECHNICAL REVIEW OF PROPOSALS  
FOR SC-316A

Updated 2/10/06 - KCC

The proposals were received from the following six (6) vendors for supply of the Severe Service Control Valves:

- CCI.
- SPX
- Samson Controls Inc.
- Leslie Controls
- Flowserve
- Control Associates Inc.

All of the proposals were technically evaluated. Some vendors took some exceptions to the specification. The exceptions and the resolutions are attached (Attachment A) as are the revised pricing along with justification for any price changes (Attachment B).

- CCI, SPX and Samson quoted desuperheaters integral to the main steam letdown valve and BFP turbine driver valve as intended in the project design.
- Leslie, for main steam letdown valve, quoted a variable orifice desuperheater attached to outlet. This design utilizes a spray control valve integral with the desuperheater. BREI later requested that this valve be requoted for a smaller line size due to a mechanical change. Leslie stated that they could offer no solution to this change. Also Leslie offered a second atomizing steam valve for the desuperheater on the turbine driver valve. The required steam pressure for this valve according to Leslie is 975 psia; this steam is not available in the plant. **This design is not technically acceptable.** In subsequent discussions, Leslie stated that they could offer no alternative for this application.
- Flowserve's quote has a separate nozzle type desuperheater and requires a minimum 16 ft straight run after the nozzle for the main steam letdown, and a minimum 7 ft straight run after turbine driver valve nozzle. The quote does not include outlet pipes, reducers and flanges for these connections. The other requirement for the turbine driver valve (K-PCV-0254) desuperheater is that a section of outlet pipe is to be increased from 3" to 4" to be able to mount the nozzle and to reduce thermal shock. These are technically acceptable requirements. Questions are still outstanding with Flowserve regarding the length of larger pipe that is required for the K-PCV-0254 desuperheater before returning to the smaller size, and regarding the percent opening of valve FCV-0028C at the low end which is below the specification requirement (12% quoted vs. 15% specified). A response to these questions has been requested. Verbal response was received on FCV-0028C sizing, where Flowserve has indicated that their latest offering is the best fit they can provide. Burns and Roe feels that for this particular application, feedwater flow control, it will be very rare that this minimum flow condition is encountered, and the quoted minimum opening will be acceptable. The other open items with Flowserve are informational and do not impact technical acceptability.
- Control Associates quoted an annular design desuperheater for both desuperheating valves. These are to be mounted up against the outlet of the valves. The min downstream straight run requirement is 10 ft. The size of the annular desuperheater for valve -0209 has been resized to 6". Therefore no reducers are required. This is technically acceptable.

- All vendors were requested to re-quote valve K-PCV-0209 since the piping design was changed to a smaller size pipe (4in Inlet x 6in Outlet, vs. the original 6in Inlet x 8in Outlet). All vendors provided a new quote for this valve except CCI (not received yet) and Leslie (unable to meet the new size).
- Late in the evaluation process, it became necessary to revise spec requirements for K-PCV-0254 to increase shutoff to Class IV and for FCV\_0028C to increase maximum flow to 490 GPM, based on comments from Covanta. These changes were requested from the 3 lowest bidders and revised pricing and data was received.
- Subsequent to the above changes, Samson discovered an error in their quotation for valve K-PCV-0209 regarding shutoff pressure. They had used too low of a pressure, and when the correct shutoff pressure was applied, they needed to change the type of internal valve trim to a balanced design. This had the undesirable effect of reducing the shutoff class of the valve from class IV to class III. So this valve is no longer technically acceptable.
- Lead Time: it should be noted that CCI quoted delivery 28 weeks ARO. Also, Flowserve can reduce the prices of the valves if purchased out of Bangalore, India. However this also increases delivery to 28-30 weeks.

In summary, after discussions of the exceptions and clarifications ..... all bids were found technically acceptable, except for Leslie Controls and Samson, since Leslie could not provide alternatives for the desuperheaters and Samson could not meet the shutoff pressure on K-PCV-0209 without falling short of the required leakage class. The two lowest acceptable bidders were have provided responses to the latest technical changes and this information has been incorporated into the updated pricing summary and technical evaluation.

# ATTACHMENT A

## BRE RESOLUTION OF TECHNICAL COMMENTS/ CLARIFICATIONS AND EXCEPTIONS SC-316A

*Note: Portions in italics represent vendors' responses.*

### CCI

Technical Exception/Clarification	BRE Response
All valves will be painted in accordance with CCI standard practices.	Acceptable.
CCI recommends that 1/2 " dia drain pots be installed at 2/3 of the distance to the temp sensor. Drains should be sized for a minimum of 3-5% of the max spray water flow.	There already is a drain pot in our design. Accepted.
Inspection and Testing shall be per CCI Standard. No source inspection/witnessing is included.	Accepted.
CCI valves are custom designed and do not conform to ISA face-to face dimensions.	Accepted.
CCI offers valve design suitable for steam temps > 1000 degF w/o extension bonnets.	Accepted.
CCI trim materials do not necessarily match those specified.	Accepted after evaluating quoted trim materials.
CCI proposes our standard column yokes with bolted sub-plates and accessories mounted to the actuator not on the yoke.	Accepted.
CCI proposes 316 SS tubing and 316 SS Swagelok fittings in lieu of Copper and Brass.	Accepted.
Quote item 1 and 8 valves have water connections in carbon steel. Revise them to P11. <i>CCI will be happy to revise this flange connection to F11 to match the P11 piping.</i>	Accepted
Provide actuator and Positioner model numbers for quote items 5, 6 and 7. <i>CC/Smart-Hart Positioner is offered for all valves in this quote. Item 5 and 6 use Actuator model SC/V 200, Pneumatic Double Acting Piston with Fail Open via Spring. Item 7 uses Actuator Model SC/V 200, Pneumatic Low Volume Double Acting Piston w/o spring and Fails in-Place.</i>	Accepted.

CCI quoted BFP recirc valves w/ 42 gpm min flow. The design min flow is @ 35 gpm.	After consultation w/ CCI, the min flow requirement was removed. CCI stated that it was a conservative number based on 3000-psi pressure drop.
Item 1, K-PCV-0209 line size was changed by BREI to 4in Inlet and 6in Outlet. CCI was requested to re-quote by A. Martin email dated 12/21/05.	

SPX

Technical Exception/Clarification	BRE Response
We have not included extension bonnets on any valve. We are providing bolted bonnets for all valves.	After review of the datasheets this is acceptable.
Trim material is as shown on our datasheets.	The trim materials offered were found acceptable.
Stem – Our standard finish is 16 micro inches.	Accepted.
Actuators are sized to use the air pressure as shown on our datasheets; not 3-15 psi.	Accepted.
No strike times are specified for any valve, therefore we have not done any review of stroke times for these valves.	Accepted.
<i>Reducers need to be added for item # 8. For item 2 (should be 8) our standard 2 X 4 PRDs has sufficient material in the casting such that we can machine a 3" inlet and 3"outlet to match the line size. Thus no reducers/expanders are needed and our price does not need to be adjusted to match the 3" line size.</i>	Accepted.
We have changed the valve size for item 1, K-PCV-0209 to 4" X 6". Please revise your quote to eliminate the outlet reducer, which is not required anymore.	New quote rec'd 12/21/05. Accepted.

SAMSON CONTROLS

Technical Exception/Clarification	BRE Response
Valve K-PCV-0123 has a noise level; of 93 dBA. An alternate has been proposed that has a noise level of 85 dBA, but is more expensive.	The quoted valve is acceptable since 93 dBA does not include 4" insulation's effect.
Max dP on the plug for item # 4,5, 6 and 7 is less then the shut-off pressure. <i>This is an error in our program. The actuator is sized correctly. Please disregard.</i>	Accepted.
Hardened trim is required for item # 5, 6. <i>The trim is made of WN1.4112. This is harder than stellite (similar to AISI440B). No further hardening is required.</i>	Accepted.
Hardened trim is required for item # 7. <i>Hardened trim is not necessary based on the flow conditions given. There is no cavitation (not even cavitation noise), and the noise level is well below 85 dBA (73 dBA). If you still require it, the adder is \$1343 for stellite.</i>	Accepted.
Item number 8, K-PCV-0254; what is the flange connection rating of the spray water line? The connected pipe is P11 and flange rating is 1500 # RF. <i>ANSI 600</i>	This is not acceptable. Either the flange connection has to be 1500# RF or connection to be Socketweld. <b>This valve was re-quoted as a 1500# CLASS valve. Accepted.</b>
The valve travel is 80% @ normal flow for K-PCV-0209, main steam letdown valve. The characteristic is Linear.	The acceptable travel for Linear characteristic is 70% @ max flow. Email rec'd on 12/22/05. Valve Cv was increased. A larger Actuator was required. Samson has also discovered an error in their pricing. New price for this valve is \$29,351. Accepted. Due to requirement for water connection, <b>this valve was re-quoted as a 1500# CLASS valve (\$41,721). Accepted</b>



LESLIE

Technical Exception/Clarification	BRE Response
Leslie Controls utilizes heat-treated 400 series SST for valve trim parts. This material has wear properties equal or exceeding that of satellite. For this reason valves as quoted do not have satellite surfaces.	Acceptable.
Leslie takes exception to the requirement that actuators operate at input ranges of 3-15 or 6-30 psig.	Accepted.
In that actuators fitted to Leslie Valves are not sized to operate of signal pressure levels (3-15 psig or 6-30 psig) bypass switches are not functional. Therefore Leslie has not included these with the Fisher DVC-6010 positioners quoted.	Accepted.
K-PCV-0209 – Main Letdown Valve. Leslie has fitted this valve with a variable orifice desuperheater, which provides both the spray and water control function. <b>BREI changed the line size to 4inx6in. Vendor was requested to requote the valve for this line size by 12/5/05 email.</b>	<b>Leslie cannot provide a re-quote as requested. Does not have a solution for the 4in x 6in size for this application.</b>
K-PCV-0254 – BFP Turbine Driver Steam Valve. This valve required a water to steam ratio that is beyond the range of the desuperheater equipment offered by Leslie. In order to offer a proposal for this system, Leslie has quoted a 6” dia pipe outlet. Also it is necessary to utilize a steam assist desuperheater. This will require an additional on/off valve. Atomizing steam must be 1.4 times (975 psia) downstream pressure of the main valve.	Item number 8, K-PCV-0254 requires a 975 psia atomizer steam which is not available. Please provide alternate quote for this item. <b>Leslie has no alternative for this application.</b>

## FLOWSERVE

Technical Exception/Clarification	BRE Response
Quote item 1, K-PCV-0209 normal flow is @ 80% travel; Equal percentage characteristic valve should have max flow at this travel. Quote smaller valve or reduced trim.	<ul style="list-style-type: none"> <li>• Changed Trim from 3 Stage to 2 Stage.</li> <li>• Removed Regulator (not req'd).</li> </ul> Accepted.
Quote item 1, K-PCV-0209 uses a fixed area nozzle type desuperheater to be mounted at the outlet of valve. Min 16 ft straight run required after the nozzle. A section of the line should be schedule 80 to reduce thermal shock.	Pipe isometrics show that there is 18 ft of straight run after the valve. This design is acceptable.
Quote item 8, K-PCV-0254 is quoted with same type of desuperheater as item 1 with min 7 ft straight run requirement. Also a section of the outlet pipe to be increased to 4" to mount the nozzle.	The desuperheater design is acceptable but the original valve was straight thru, not angle. Requoted as an Angle valve. Accepted. Still awaiting info on piping requirements for downstream line.
Quote item 7, FCV-0028C with revised trim, normal flow is @ 66% travel, max is @ 75% and min is @ 12%. 12% is below minimum allowed by spec.	Flowserve has indicated this is the best fit valve/trim combination they can furnish for the application. Valve is marginally acceptable at the low flow condition.

CONTROL ASSOCIATES

Technical Exception/Clarification	BRE Response
<p>Item number 1, K-PCV-0209 travel at 88 % @ normal flow is higher then spec requirement, please check it with a different valve or port size.</p> <p>Also confirm the spray water flow rate, it is much higher then what we had in the spec datasheet.</p> <p>The valve type is angle valve and the desuperheater DVI's installation orientation is horizontal per your datasheet. Please clarify. (This also applies to item # 8)</p> <p><i>If the valve is unacceptable as quoted, I will need to re quote as a 4 inch angle body or a 3 inch straight-through globe. If you decide on the 4 inch angle body, a reducer will be welded in between the valve outlet and the 3 inch 600# flange. This is an awkward configuration, but do-able. Would this be acceptable? If we stick with an angle valve, 'Horizontal' on desuperheater spec sheets will be corrected to read 'Vertical'. (Note: For any WhisperIII cage for a straight-through globe valve, this same cage can be used in an angle valve that is one size smaller.)</i></p> <p>Please quote item 1 as a 4" angle valve with DVI on the outlet. Also confirm the spray water rates on both item 1 and 8.</p>	<p>New quote rec'd by 12/20/05, 12/23 &amp; 12/27 emails. After review, this valve is acceptable. (Note 1500# RF on water line verified. Also for K-PCV-0254, Item 8).</p>
<p>Item number 2, K-PCV-0123 minimum air pressure required to the actuator is 80 psig. The actuator calcs should use 70 psig available air per spec. Please calculate the actuator size using 70 psig. The Fisher valve spec sheet shows valve open 22 % @ maximum and 66 % @ minimum flow. Please clarify.</p> <p><i>Air supply revised to 70 psig. Actuator remains as quoted. Percent opens are backwards on valve spec sheet and will be corrected.</i></p>	<p>Accepted.</p>

Item number 3, KPCV-0216; the calc sheet used psig as pressure unit, it should be psia. Please verify the calc. (Same thing for item number 8). <i>Units revised to psia for inlet pressure.</i>	Accepted.

**Sampson, Lindsey J.**

**From:** Gounaris, Demetrios [Demetrios\_Gounaris@CovantaEnergy.com]  
**Sent:** Monday, February 27, 2006 12:03 PM  
**To:** Cole, Kevin  
**Cc:** Young, Peter; Anacker, Dennis; D'Amico, Don  
**Subject:** LeeExpDCG-90 BOP Control Valve Covanta Comments

See Covanta's responses in

-----Original Message-----

From: Glenn Fontana [mailto:gfontana@roe.com]  
Sent: Thursday, February 23, 2006 2:04 PM  
To: Young, Peter  
Cc: D'Amico, Don; Cole, Kevin  
Subject: Fwd: RE: Lee Control Valve Covanta Comments

Peter,

Below is the response we received from Fisher regarding the additional requirements/concerns that Covanta had to the proposed control valves.

Please advise if the adders should be included in the PO. If so, we will incorporate in the conformed specification.

Regards,

Glenn Fontana  
Burns and Roe Enterprises Inc.  
(201) 986-4151

>>> "Chraplewski, Alexandra" <Alexandra.Chraplewski@control-associates.com>  
2/22/2006 2:27 PM >>>  
Don and Kevin,

See my responses in red below.

Please let me know if you have any questions or any further requests.

Regards,

ALEX

-----Original Message-----

From: Don D'Amico [mailto:ddamico@roe.com]  
Sent: Wednesday, February 22, 2006 9:37 AM  
To: Chraplewski, Alexandra; Kevin Cole  
Cc: Glenn Fontana  
Subject: Re: Lee Control Valve Covanta Comments

Alex,

Please respond to the below questions on a line item basis. Identify your responses by the referenced Item #. Do not adjust latest quote.

Regards,

Don D'Amico

201/986/4087  
ddamico@roe.com

>>> Kevin Cole 02/21/06 5:37 PM >>>  
Alex,

Below are comments from Demetri that I believe he already mentioned to you. Please consider this your formal request to provide responses and if changes are proposed to what is currently in your bid, please provide them as options. Some of these items were discussed with you during Burns and Roe's initial review. I think we can live with the DP greater than critical, but please provide your response. For the flashing conditions, you indicated that while it exists, the conditions are not severe enough to warrant taking steps to address it. Apparently Covanta has had bad experience with flashing in some cases so they want to be extra cautious. Your response explaining Fisher's practice and what options are available would be good.

tag K-HV-0205: confirm contact rating for GO Switches

Contact rating for the GO switch model quoted with this item is 15 amps @120VAC.

, tag K-PCV-0212: noted DP is greater than calculated Critical DP?

When I spoke to Dimitri about this item, I realized that he was looking at a calculation that did not reference the Whisperflo trim. Attached is the correct calculation for this item.

, tag K-LV-0256: noted DP is greater than calculated Critical DP?

Since the DP is greater than the critical DP, the flow is choked. This means that for DP values greater than the critical DP, the calculated coefficient,  $C_s$ , does not change. The valve will operate under these conditions.

tag K-LCV-0316A: unacceptable flashing conditions, propose solution to minimize valve and piping wear.

Typically, hardened trim for flashing service is only recommended for pressure drops greater than 50 psid. If hardened trim is required to be conservative, I recommend Trim 139 (316SST/Alloy 6) for the EZ valves and Trim 28 (Alloy 6 seat) for the ET valves.

The adder for this trim is \$567.

tag K-LCV-0316B: unacceptable flashing conditions, propose solution to minimize valve and piping wear.

The adder for Trim 139 is \$567.

2/28/2006

tag K-LCV-0331A: unacceptable flashing conditions, propose solution to minimize valve and piping wear.

The adder for Trim 139 is \$460.

, tag K-LCV-0331B: unacceptable flashing conditions, propose solution to minimize valve and piping wear.

The adder for Trim 139 is \$460.

tag K-LV-0341: unacceptable flashing conditions, propose solution to minimize valve and piping wear.

The adder for Trim 28 is \$632.

, tag K-LCV-0343: Minimum condition valve opening is at ~8% open - unacceptable, confirm process data, provide alternate valve configuration.

For the process data specified on the Burns and Roe/Covanta spec sheet, I can requote a 2 inch Baumann 24000S with socketweld ends. There will be no need for the reducers. The min case is at 7% open. Note that the minimum travel for this valve is 5%. The price of this valve is approx. \$3,020 .

Demetri