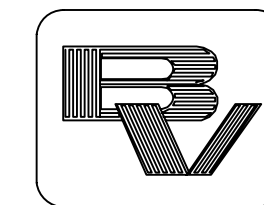


# LG&E/KU - GHENT STATION PHASE II: AIR QUALITY CONTROL STUDY PROCESS FLOW DIAGRAMS



## TABLE OF CONTENTS

168908-GCUUU-M2000	TABLE OF CONTENTS
168908-GCUUU-M2001	LEGEND
168908-GCSTG-M2547A	SITE FIRE PROTECTION

UNIT 1	UNIT 2	UNIT 3	UNIT 4
B&V DRAWING NUMBER	B&V DRAWING NUMBER	B&V DRAWING NUMBER	B&V DRAWING NUMBER
TITLE	TITLE	TITLE	TITLE
168908-G1ASB-M2022	168908-G2ASB-M2022	168908-G3ASB-M2022	168908-G4ASB-M2022
168908-G1CCE-M2145	168908-G2CCE-M2145	168908-G3CCE-M2145	168908-G4CCE-M2145
168908-G1CCH-M2148A	168908-G2CCH-M2148A	168908-G3CCH-M2148A	168908-G4CCH-M2148A
168908-G1CAB-M2182	168908-G2CCH-M2148B	168908-G3CAB-M2182	168908-G4CAB-M2182
FLY ASH HANDLING	FLY ASH HANDLING	FLY ASH HANDLING	FLY ASH HANDLING
INDUCED DRAFT	INDUCED DRAFT	INDUCED DRAFT	INDUCED DRAFT
POWDER ACTIVATED CARBON INJECTION	POWDER ACTIVATED CARBON INJECTION	POWDER ACTIVATED CARBON INJECTION	POWDER ACTIVATED CARBON INJECTION
AQCS COMPRESSED AIR	SORBENT INJECTION	AQCS COMPRESSED AIR	AQCS COMPRESSED AIR
	AQCS COMPRESSED AIR		

### RILEY POWER INC. DRAWINGS SELECTIVE CATALYTIC REDUCTION SYSTEM

DRAWING NUMBER	TITLE
502650-094900002	LEGEND
502650-094900037	AMMONIA INJECTION SYSTEM A
502650-094900038	AMMONIA INJECTION SYSTEM B
502650-094900039	DILUTION AIR SUPPLY SYSTEM
502650-094900050	SELECTIVE CATALYTIC REDUCTION SYSTEM REACTOR A
502650-094900051	SELECTIVE CATALYTIC REDUCTION SYSTEM REACTOR B
502650-094900065	SONIC HORN SYSTEM

PROJECT NO. 168908

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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
B	21/FEB/11	ISSUED FOR CLIENT REVIEW	PRP	SAT		MRW	
A	04/FEB/11	ISSUED FOR IN HOUSE REVIEW	HWB	NCM		MRW	

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DRAWN	HWB
CHECKED	DATE

LG&E/KU - GHENT STATION PHASE II: AIR QUALITY CONTROL STUDY	
PROCESS FLOW DIAGRAM TABLE OF CONTENTS	

PROJECT	DRAWING NUMBER	REV
168908-GCUUU-M2000	168908-GCUUU-M2000	B
CODE	AREA	

PROCESS FLOW DIAGRAM LEGEND

PIPING ACCESSORIES		VALVES		OPERATORS		PIPING DETAILS		EQUIPMENT		GENERAL NOTES	
FUNCTION CODE	DESCRIPTION										
EXJ	EXPANSION JOINT		GATE VALVE		SOLENOID OPERATED		BLIND FLANGE		AGITATOR		
ORF	PRESSURE BREAKDOWN ORIFICE		GLOBE VALVE (T PATTERN)		MOTOR OPERATED		FLANGE		BLOWER, MECHANICAL EXHAUSTER		
GG	GAGE GLASS		GLOBE VALVE (Y PATTERN)		HYDRAULIC OPERATED		OPEN DRAIN FUNNEL		CENTRIFUGAL FAN		
FE	PRIMARY FLOW ELEMENT (ORIFICE)		PLUG VALVE		PISTON OPERATED		ROOF DRAIN OR FLOOR DRAIN		CENTRIFUGAL PUMPS		
FE	ANNUBAR		BALL VALVE		PISTON OPERATED WITH POSITIONER		CLOSURE, SCREWED CAP		SCREENED VENT		
FE	PRIMARY FLOW ELEMENT (NOZZLE)		NEEDLE VALVE		CONTROL VALVE WITH HANDJACK		CLOSURE, WELDED CAP		UNION		
SFI	SIGHT FLOW INDICATOR		DIAPHRAGM VALVE		SELF CONTAINED CONTROL		EQUIPMENT CONNECTION		BELL-UP		
M	MECHANICAL DISPLACEMENT OR MAGNETIC FLOW METER		IN-LINE SAFETY VALVE		DIAPHRAGM OR CYLINDER OPERATED SPRING OPENING		HOSE CONNECTION		QUICK DISCONNECT		
FI	RATE OF FLOW INDICATOR		DOUBLE DIAPHRAGM ANGLE		DIAPHRAGM OR CYLINDER OPERATED SPRING CLOSING		SPECTACLE FLANGE		PLUGGED PORT/TAP		
^	DIFFUSER ORIFICE		DELUGE		DIAPHRAGM OR CYLINDER OPERATED		FLOATING TANK SUCTION		TIE IN POINT		
TRP	TRAP		EXCESS FLOW VALVE		DIRECT FLOAT OPERATED						
STR	STRAINER, Y-TYPE		SAFETY OR RELIEF VALVE		POST INDICATOR						
STR	STRAINER, T-TYPE		ANGLE VALVE								
FLT	FILTER		THREE-WAY VALVE								
FHOS	FLEXIBLE HOSE		STOP CHECK VALVE								
STR	STRAINER, CONE OR PLATE TYPE		AIR OPERATED CHECK VALVE								
STR	STRAINER, BASKET TYPE		BUTTERFLY VALVE								
STR	STRAINER, DUPLEX BASKET TYPE		CHECK VALVE, LIFT								
AV	AUTOMATIC AIR RELEASE VALVE		CHECK VALVE, TILTING DISK								
	WASTE CONE		WAFER CHECK VALVE								
	AIR LUBRICATOR		CHECK VALVE, SWING								
	SONIC HORN		PINCH VALVE								
	CORIOLIS		ALARM CHECK VALVE								
			SLIDE GATE VALVE								
			THREE-WAY SOLENOID VALVE								
			ROTARY FEEDER								
						<p><b>PIPING</b></p> <p> PIPING</p> <p> FURNISHED WITH EQUIPMENT / EXISTING</p> <p> TEMPORARY</p> <p> FUTURE</p>					
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**BLACK & VEATCH CORPORATION**

CHECKED: \_\_\_\_\_ DATE: \_\_\_\_\_

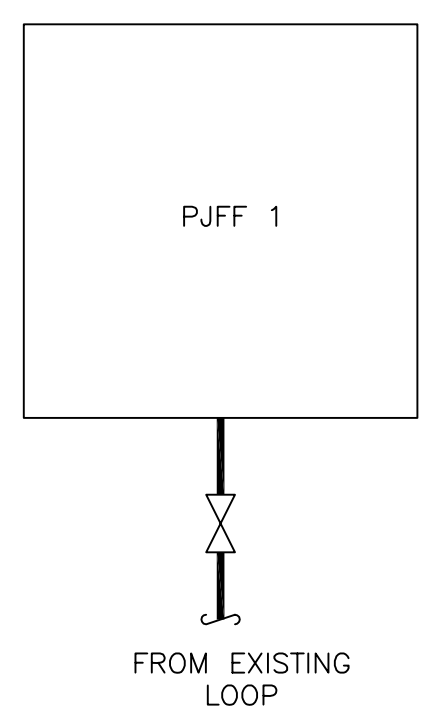
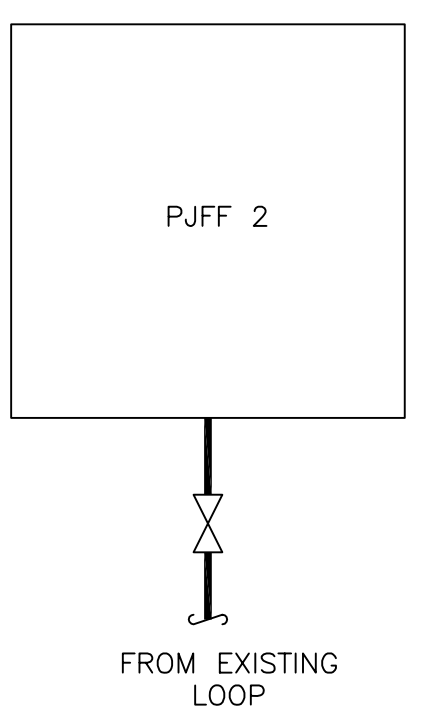
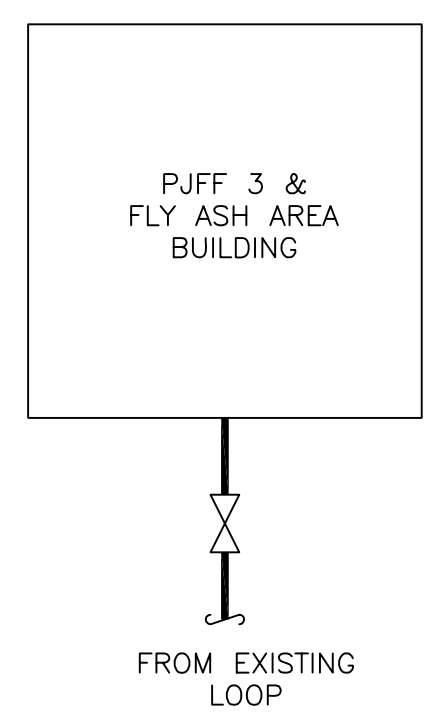
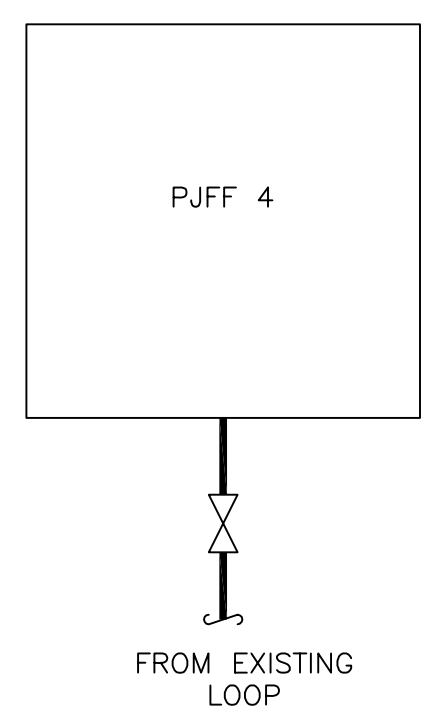
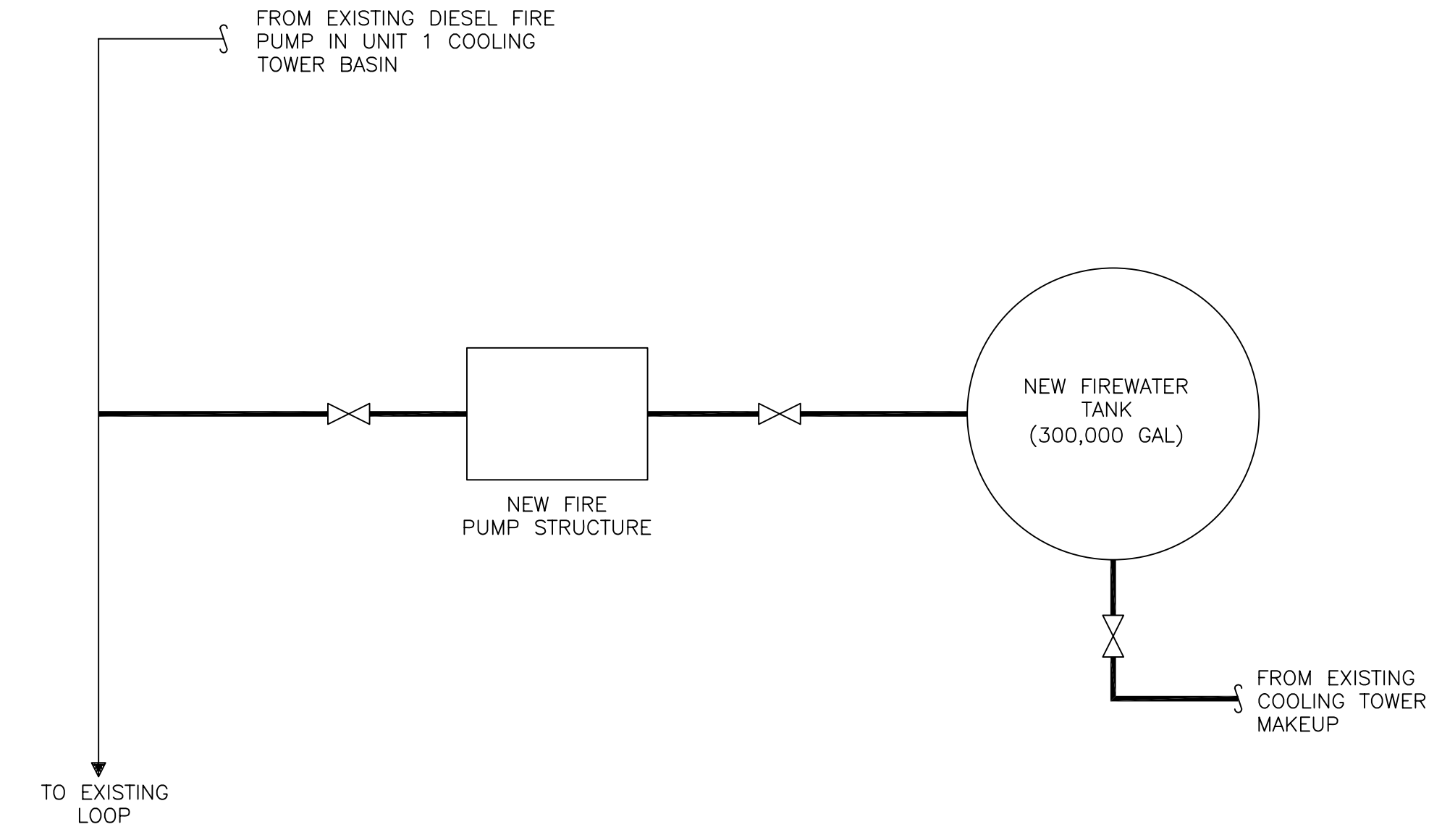
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LG&E/KU - GHENT STATION  
 PHASE 1I: AIR QUALITY CONTROL STUDY

PROCESS FLOW DIAGRAM LEGEND

PROJECT	DRAWING NUMBER	REV
168908-GCUUU-M2001		B
CODE		
AREA		

- NOTES:**
1. FIVE NEW HYDRANTS ARE INCLUDED. ADDITIONAL PIPE AND HYDRANTS MAY NEED TO BE ADDED DURING DETAILED DESIGN.
  2. ADDITIONAL TANK AND PUMP MAY BE NEEDED DURING DETAILED DESIGN.
  3. EXISTING FIRE PROTECTION LOOPS ASSUMED. TO BE CONFIRMED DURING DETAILED DESIGN.



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NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
B	21/FEB/11	ISSUED FOR CLIENT REVIEW	PRP	SAT	MRW		
A	04/FEB/11	ISSUED FOR IN HOUSE REVIEW	PRP	SAT	MRW		

	LG&E/KU - GHENT STATION PHASE 1I: AIR QUALITY CONTROL STUDY	PROJECT 168908-GCSTG-M2547A	DRAWING NUMBER B
	PROCESS FLOW DIAGRAM SITE FIRE PROTECTION	CODE AREA	
CHECKED DATE	DRAWN PRP		