

**Document**

**B&V File No.**

**VOLUME 1**

1.0	Executive Summary and Description of Scope of Work .....	41.0808.1
2.0	Design Criteria	
2.1	Project Design Memorandum .....	22.1000
3.0	Studies and Technical Documents	
3.1	Air Quality Control Validation Report .....	41.0803
3.2	Auxiliary Electric System .....	41.0809
3.3	Constructability Review.....	41.0813
3.4	Construction Materials.....	41.0814.1
3.5	Sparing and Capacity .....	41.0814.2
3.6	Draft System .....	41.0814.3
3.7	Fly Ash and Landfill Waste Disposal .....	41.0814.4
3.8	Fly Ash Handling .....	41.0814.5
3.9	Impact of PAC Injection .....	41.0814.6
3.10	Comparison of Sorbent Receiving and Distribution Systems .....	41.0814.7
3.11	Unit 2 Cooling Tower Impacts .....	41.0814.8

**VOLUME 2**

4.0	Drawings, Diagrams, and Lists	
4.1	Site Arrangements.....	41.0402
4.1.1	Site Plot Plan Arrangement	GCDS-1000
4.1.2	Units 1 and 2 Arrangement	GCDS-1001
4.1.3	Units 3 and 4 Arrangement	GCDS-1002
4.1.4	Construction Facilities Plot Plan	GCDS-1003
4.2	Plant Arrangements (3D Screenshots) .....	41.0402
4.2.1	Overall Site	
4.2.2	Unit 1	
4.2.3	Unit 2	
4.2.4	Unit 3	
4.2.5	Unit 4	
4.3	Equipment and Load List.....	41.0801
4.4	Electrical One-Lines .....	41.0809.1
4.4.1	Overall – Unit 1 AQCS	G1DE-E1001
4.4.2	Overall – Unit 2 AQCS	G2DE-E1002
4.4.3	Overall – Unit 3 AQCS	G3DE-E1003
4.4.4	Overall – Unit 4 AQCS	G4DE-E1004
4.4.5	Overall – AQCS Reserve	GCDE-E1005

<u>Document</u>	<u>B&amp;V File No.</u>
4.5 Process Flow Diagrams.....	41.0815
4.5.1 Common	
Table of Contents	GCUUU-M2000
Legend	GCUUU-M2001
Site Fire Protection	GCSTG-M2547
4.5.2 Unit 1	
Fly Ash Handling	G1ASB-M2022
Induced Draft	G1CCE-M2145
Powder Activated Carbon Injection	G1CCH-M2148A
AQCS Compressed Air	G1CAB-M2182
4.5.3 Unit 2	
Fly Ash Handling	G2ASB-M2022
Induced Draft	G2CCE-M2145
Powder Activated Carbon Injection	G2CCH-M2148A
Sorbent Injection	G2CCH-M2148B
AQCS Compressed Air	G2CAB-M2182
Selective Catalytic Reduction System (Riley Power Inc Drawings)	
4.5.4 Unit 3	
Fly Ash Handling	G3ASB-M2022
Induced Draft	G3CCE-M2145
Powder Activated Carbon Injection	G3CCH-M2148A
AQCS Compressed Air	G3CAB-M2182
4.5.5 Unit 4	
Fly Ash Handling	G4ASB-M2022
Induced Draft	G4CCE-M2145
Powder Activated Carbon Injection	G4CCH-M2148A
AQCS Compressed Air	G4CAB-M2182
5.0 Technical Descriptions	
5.1 Modifications, Interfaces, and Tie-Ins to Existing Equipment and Systems with Terminal Points.....	41.0804.1
5.1.1 Common	
AQCS Reserve Power Supply	41.0804.1.GC01
Grounding	41.0804.1.GC02
Site Fire Protection	41.0804.1.GC03
Site	41.0804.1.GC04
5.1.2 Unit 1	
AQCS Power Supply	41.0804.1.G101
Communication	41.0804.1.G102
Control and Monitoring	41.0804.1.G103
Buildings and Enclosures	41.0804.1.G104
Ductwork	41.0804.1.G105
Fly Ash	41.0804.1.G106

<u>Document</u>	<u>B&amp;V File No.</u>
Induced Draft	41.0804.1.G107
AQCS Compressed Air	41.0804.1.G108
Service Water	41.0804.1.G109
5.1.3 Unit 2	
AQCS Power Supply	41.0804.1.G201
Communication	41.0804.1.G202
Control and Monitoring	41.0804.1.G203
Buildings and Enclosures	41.0804.1.G204
Ductwork	41.0804.1.G205
Fly Ash	41.0804.1.G206
Induced Draft	41.0804.1.G207
AQCS Compressed Air	41.0804.1.G208
Service Water	41.0804.1.G209
Ammonia Supply	41.0804.1.G210
5.1.4 Unit 3	
AQCS Power Supply	41.0804.1.G301
Communication	41.0804.1.G302
Control and Monitoring	41.0804.1.G303
Buildings and Enclosures	41.0804.1.G304
Ductwork	41.0804.1.G305
Fly Ash	41.0804.1.G306
Induced Draft	41.0804.1.G307
AQCS Compressed Air	41.0804.1.G308
Service Water	41.0804.1.G309
5.1.5 Unit 4	
AQCS Power Supply	41.0804.1.G401
Communication	41.0804.1.G402
Control and Monitoring	41.0804.1.G403
Buildings and Enclosures	41.0804.1.G404
Ductwork	41.0804.1.G405
Fly Ash	41.0804.1.G406
Induced Draft	41.0804.1.G407
AQCS Compressed Air	41.0804.1.G408
Service Water	41.0804.1.G409
5.2 Specifications and Systems Lists .....	41.0804.2
5.2.1 Unit 1	41.0804.2.G1
5.2.2 Unit 2	41.0804.2.G2
5.2.3 Unit 3	41.0804.2.G3
5.2.4 Unit 4	41.0804.2.G4
5.3 System Descriptions.....	41.0804.3
5.3.1 Common	
AQCS Reserve Power Supply	41.0804.3.GC01
Grounding	41.0804.3.GC02
Site Fire Protection	41.0804.3.GC03

<u>Document</u>	<u>B&amp;V File No.</u>
Site	41.0804.3.GC04
5.3.2 Unit 1	
AQCS Power Supply	41.0804.3.G101
Communication	41.0804.3.G102
Control and Monitoring	41.0804.3.G103
Lighting	41.0804.3.G104
Buildings and Enclosures	41.0804.3.G105
Fly Ash	41.0804.3.G106
Induced Draft	41.0804.3.G107
Pulse Jet Fabric Filter	41.0804.3.G108
Neural Networks	41.0804.3.G109
AQCS Compressed Air	41.0804.3.G110
Service Water	41.0804.3.G111
Powder Activated Carbon Injection	41.0804.3.G112
5.3.3 Unit 2	
AQCS Power Supply	41.0804.3.G201
Communication	41.0804.3.G202
Control and Monitoring	41.0804.3.G203
Lighting	41.0804.3.G204
Buildings and Enclosures	41.0804.3.G205
Fly Ash	41.0804.3.G206
Induced Draft	41.0804.3.G207
Pulse Jet Fabric Filter	41.0804.3.G208
Neural Networks	41.0804.3.G209
AQCS Compressed Air	41.0804.3.G210
Service Water	41.0804.3.G211
Powder Activated Carbon Injection	41.0804.3.G212
Sorbent Injection	41.0804.3.G213
NOx Reduction	41.0804.3.G214
Ammonia Supply	41.0804.3.G215
5.3.4 Unit 3	
AQCS Power Supply	41.0804.3.G301
Communication	41.0804.3.G302
Control and Monitoring	41.0804.3.G303
Lighting	41.0804.3.G304
Buildings and Enclosures	41.0804.3.G305
Fly Ash	41.0804.3.G306
Induced Draft	41.0804.3.G307
Pulse Jet Fabric Filter	41.0804.3.G308
Neural Networks	41.0804.3.G309
AQCS Compressed Air	41.0804.3.G310
Service Water	41.0804.3.G311
Powder Activated Carbon Injection	41.0804.3.G312

<u>Document</u>	<u>B&amp;V File No.</u>
5.3.5 Unit 4	
AQCS Power Supply	41.0804.3.G401
Communication	41.0804.3.G402
Control and Monitoring	41.0804.3.G403
Lighting	41.0804.3.G404
Buildings and Enclosures	41.0804.3.G405
Fly Ash	41.0804.3.G406
Induced Draft	41.0804.3.G407
Pulse Jet Fabric Filter	41.0804.3.G408
Neural Networks	41.0804.3.G409
AQCS Compressed Air	41.0804.3.G410
Service Water	41.0804.3.G411
Powder Activated Carbon Injection	41.0804.3.G412
5.4 Demolitions and Relocations Requirements.....	41.0804.5
5.4.1 Unit 1	41.0804.5.G1
5.4.2 Unit 2	41.0804.5.G2
5.4.3 Unit 3	41.0804.5.G3
5.4.4 Unit 4	41.0804.5.G4
6.0 Cost Estimates	
6.1 Capital Cost Estimate.....	41.0805
6.1.1 Capital Cost Estimate – Plan and Basis	
6.1.2 Unit 1	
6.1.3 Unit 2	
6.1.4 Unit 3	
6.1.5 Unit 4	
6.1.7 Common	
6.2 O&M Cost Estimate.....	41.0805.1
7.0 Schedules	
7.1 Level 1 Schedules .....	41.0807
7.1.1 Schedule – Plan and Basis	
7.1.2 Ghent Units 1, 2, 3, & 4 Schedule	
7.2 Cash Flows.....	41.0807.1