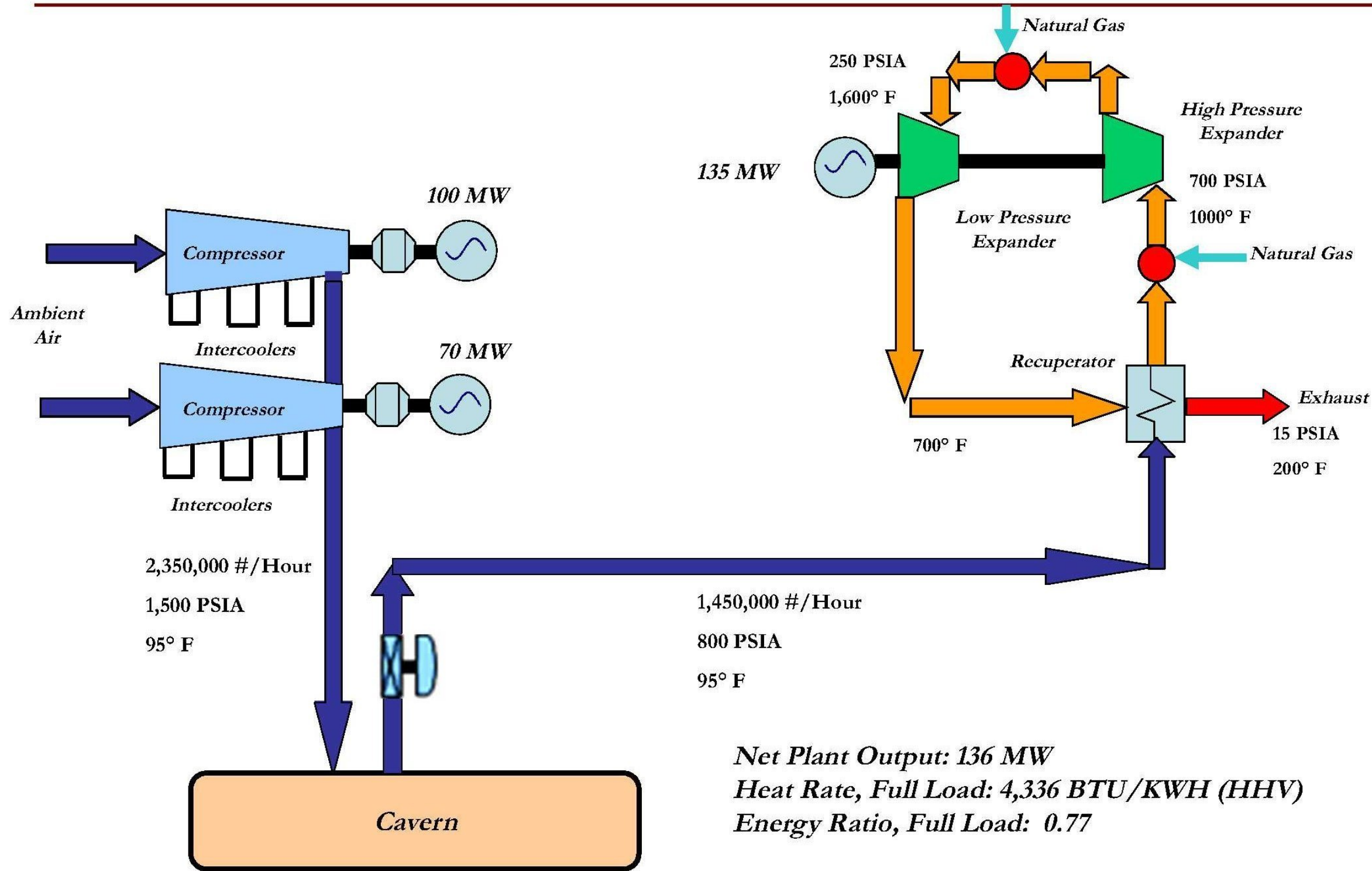


Seneca CAES Project, Cycle #1



Net Plant Output: 136 MW
Heat Rate, Full Load: 4,336 BTU/KWH (HHV)
Energy Ratio, Full Load: 0.77

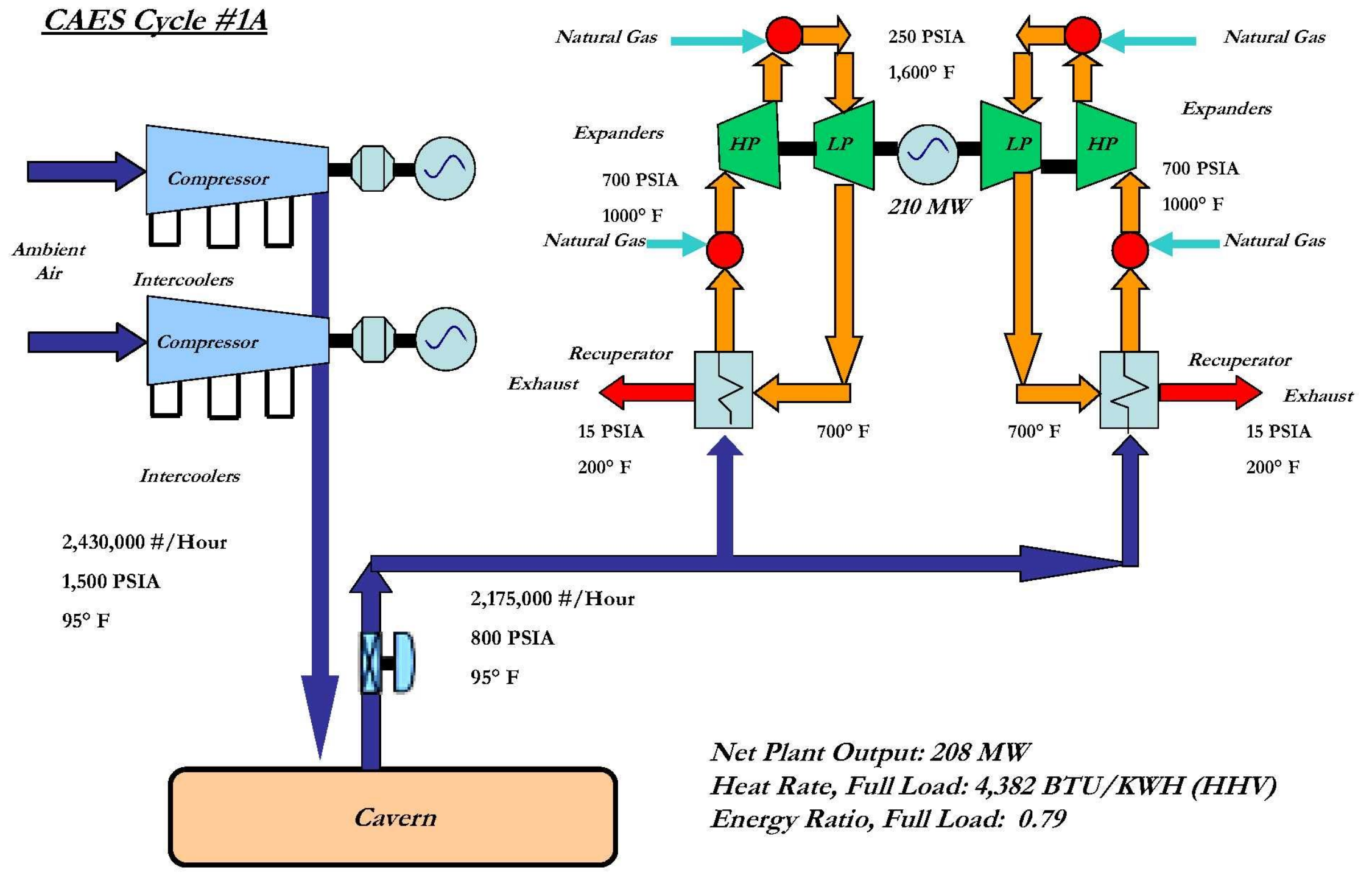
PRELIMINARY DESIGN

NOTES:

REV	DATE	DESCRIPTION	DESIGNED	CHECKED	ENGINEER	LEADER	PROJECT
A	12/12/11	ISSUED FOR INFORMATION	JEV	HGE	HGE	HGE	MH
PRELIMINARY STATUS DATE REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED. LDE H.G. EISENBISE 12/12/11							
APPROVED STATUS DATE REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS. LDE							
ORIGINATING PERSONNEL				PROFESSIONAL ENGINEER'S SEAL			
DRAWN BY: JEV							
CHECKED BY: H.G. EISENBISE, LEAD DESIGNER							
ENGINEER/TECH SPECIALIST: H.G. EISENBISE, PROJECT ENGINEERING MANAGER							
PROJECT MANAGER: M. HOLDRIDGE							
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CLIENT/PROJECT TITLE: NYSEG SENECA COMPRESSED AIR ENERGY STORAGE (CAES) PROJECT							
DRAWING TITLE: FLOW DIAGRAM CYCLE 1							
SCALE: NONE				DRAWING SIZE: ARCH D (36" x 24")			
WORLEYPARSONS DWG. NO.: CAES-1-DW-012-305-001							REV: A

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CAES Cycle #1A



Net Plant Output: 208 MW
Heat Rate, Full Load: 4,382 BTU/KWH (HHV)
Energy Ratio, Full Load: 0.79

PRELIMINARY DESIGN

NOTES:

REV	DATE	DESCRIPTION	DESIGNED	CHECKED	ENGINEER	LEAD DESIGNER	PROJECT ENGINEER	PROJECT MANAGER
A	12/12/11	ISSUED FOR INFORMATION	JEV	HGE	HGE	HGE	MH	

PRELIMINARY STATUS DATE REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
 LDC H.G. EISENBISE 12/12/11
 APPROVED STATUS DATE REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
 LDC

ORIGINATING PERSONNEL	PROFESSIONAL ENGINEER'S SEAL
DRAWN BY JEV	
CHECKED BY H.G. EISENBISE LEAD DESIGNER	
ENGINEER/TECH SPECIALIST H.G. EISENBISE PROJECT ENGINEERING MANAGER	
PROJECT MANAGER M. HOLDRIDGE	

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 LIC. NO.: _____

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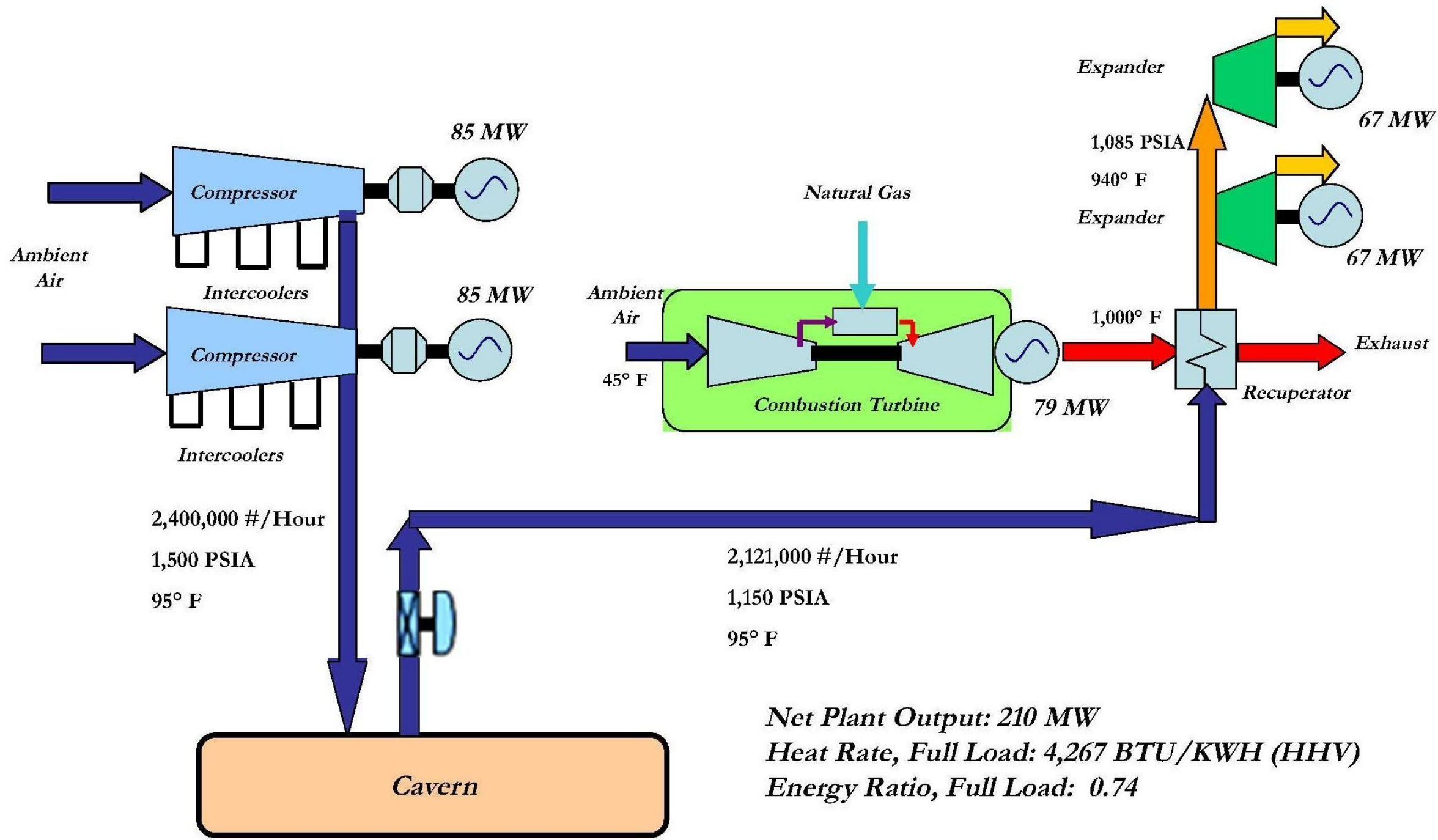
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 NYSEG
 SENECA COMPRESSED AIR ENERGY STORAGE (CAES) PROJECT

FLOW DIAGRAM
 CYCLE 1A

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 WORLEYPARSONS DWG. NO.: CAES-1-DW-012-305-003 REV: A

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Seneca CAES Project, Cycle #2



Net Plant Output: 210 MW
Heat Rate, Full Load: 4,267 BTU/KWH (HHV)
Energy Ratio, Full Load: 0.74

PRELIMINARY DESIGN

NOTES:

REV	DATE	DESCRIPTION	DESIGNED	CHECKED	ENGINEER	PROJECT
A	12/12/11	ISSUED FOR INFORMATION	JEV	HGE	HGE	MH

PRELIMINARY STATUS DATE REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
 LDE H.G. EISENBISE 12/12/11
 APPROVED STATUS DATE REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
 LDE

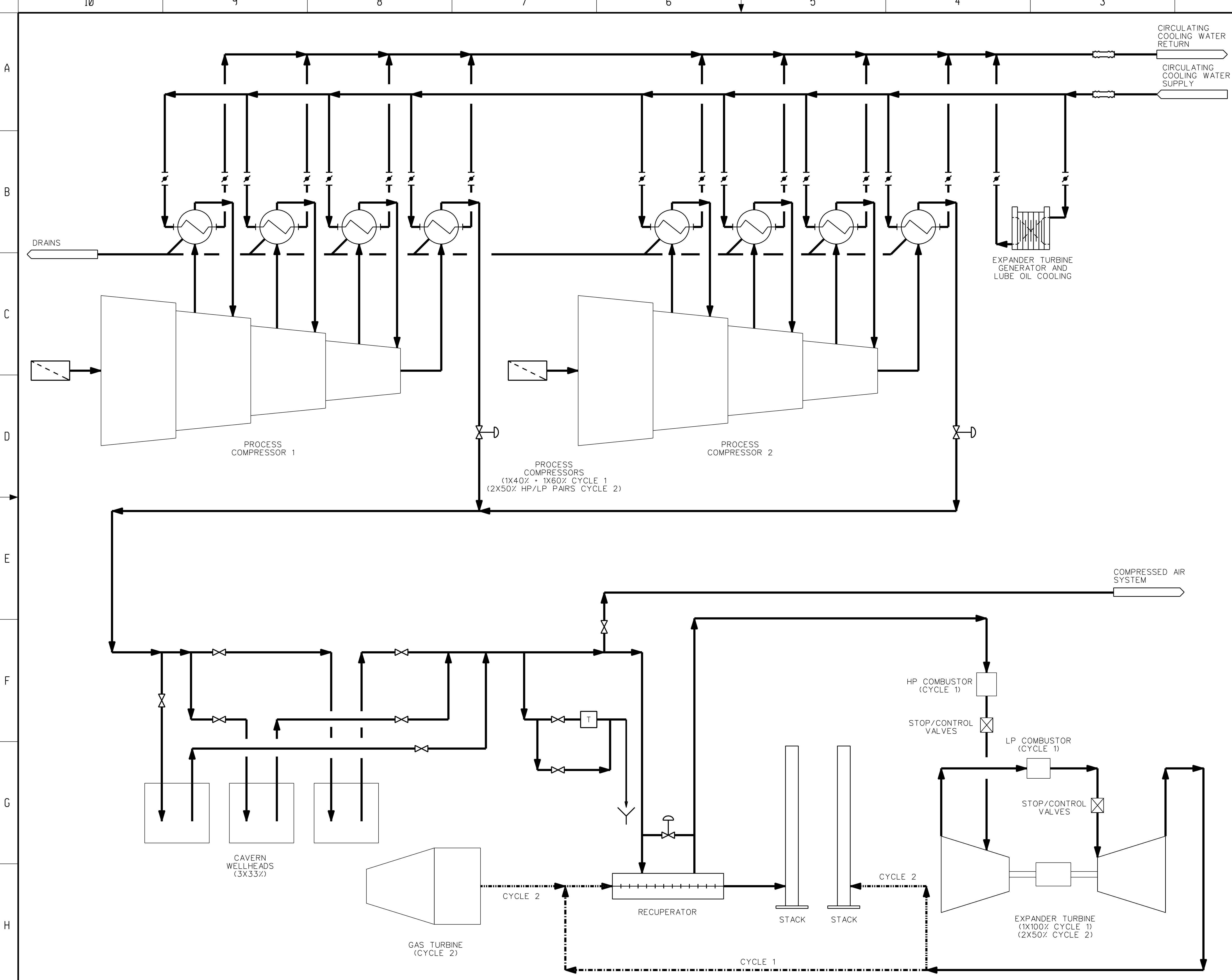
ORIGINATING PERSONNEL	PROFESSIONAL ENGINEER'S SEAL
DRAWN BY JEV	
CHECKED BY H.G. EISENBISE LEAD DESIGNER	
ENGINEER/TECH SPECIALIST H.G. EISENBISE PROJECT ENGINEERING MANAGER	
PROJECT MANAGER M. HOLDRIDGE	
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CLIENT/PROJECT TITLE
 NYSEG
 SENECA COMPRESSED AIR ENERGY STORAGE (CAES) PROJECT

FLOW DIAGRAM
 CYCLE 2

SCALE NONE DRAWING SIZE ARCH D (36" x 24")
 WORLEYPARSONS DWG. NO. CAES-1-DW-012-305-002 REV A

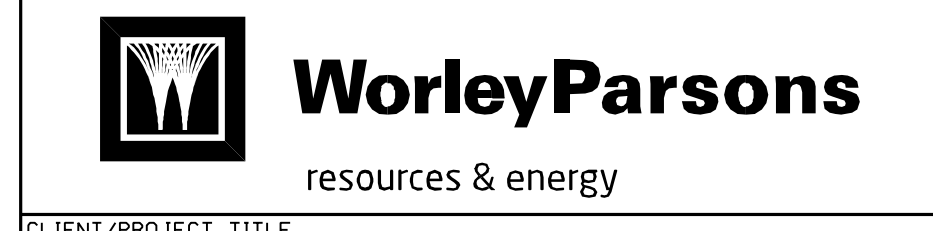


NOTES:

NO.	DATE	DESCRIPTION	DRAWN	CHECKED	DESIGNED	ENGINEER/TECH SPECIALIST	PROJECT ENGINEERING MANAGER	PROJECT MANAGER	PROJECT
B		ISSUED FOR REVIEW AND COMMENT			TAD	HGE	HGE	HGE	MH
A		ISSUED FOR REVIEW AND COMMENT			TAD	HGE	HGE	HGE	MH

PRELIMINARY STATUS DATE REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
 APPROVED STATUS DATE REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.

ORIGINATING PERSONNEL	PROFESSIONAL ENGINEER'S SEAL
DRAWN BY TAD	
CHECKED BY H.G. EISENBISE LEAD DESIGNER	
ENGINEER/TECH SPECIALIST H.G. EISENBISE PROJECT ENGINEERING MANAGER	
PROJECT MANAGER M. HOLDRIDGE	
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CLIENT/PROJECT TITLE
 NYSEG
 SENECA COMPRESSED AIR ENERGY STORAGE (CAES) PROJECT

BLOCK DIAGRAM
 CAES CYCLES

SCALE NONE	DRAWING SIZE ARCH D (36" x 24")
WORLEYPARSONS DWG. NO. CAES-1-DW-022-304-001	REV B

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