This attachment is on disk.

GE 7FA.05 and 7FA.04
B&V Figure 165510-DS-0045B RevC (4/21/11)

1 cm = 22.77 m (UTM)

	Figure x (cm)	Figure y (cm)		UTM Coordinates East (m)	UTM Coordinates North (m)	
SOURCES						
New:						
7FA.05 or 7FA.04	0	0		541742	5366945	ORIGINAL LOCATION
145 ft	8.3	-9.3		541931	5368733	REVISED 2/4/11 (MOVED TO SE CORNER OF SITE)
	Moved location					
Diesel Gen	-3.25	1.65		541857	5368771	
50 ft						

EQUIPMENT & BUILDINGS

2 - Turbine Inlet:					
74 ft	-3	-0.3	Corners	541883	5366726
	-2.7	-0.3		541870	5366726
	-2.7	0.3		541870	5366740
	-3	0.3		541883	5366740
4 - SCR/CO:					
64 ft	-1.8	-0.3	Corners	541890	5366726
	0.2	-0.3		541936	5366726
	0.2	0.3		541936	5366740
	-1.8	0.3		541890	5366740
6 - Demin Water Tank:					
35 ft	3.1	0.4	Center	541813	5366954
	0.65		Diameter	15	
9 - Operations/Maintenance Bldg:					
20 ft	9.35	1.25	Corners	541955	5366973
	10.2	1.25		541974	5368973
	10.2	2.65		541974	5367005
	9.35	2.65		541955	5367005
11 - Auxilliary Transformer:					
20 ft	-3.9	0.25	Corners	541842	5366739
	-3.5	0.25		541851	5366739
	-3.5	0.65		541851	5366748
	-3.9	0.65		541842	5366748
12 - Generator Setup Transformer:					
25 ft	-4.35	0.1	Corners	541832	5366736
	-3.9	0.1		541842	5366736
	-3.9	0.7		541842	5366749
	-4.35	0.7		541832	5366749
21 - Electrical Enclosure:					
20 ft	-3.65	0.75	Corners	541848	5366750
	-2.9	0.75		541865	5366750
	-2.9	1.05		541865	5366757
	-3.65	1.05		541848	5366757
22 - Transformer Area:					
20 ft	-2.6	0.75	Corners	541872	5366750
	-2.4	0.75		541876	5366750
	-2.4	1.05		541876	5366757
	-2.6	1.05		541872	5366757
23 - Tempering Air Filter House:					
20 ft	-1.25	0.6	Corners	541903	5366747
	-0.95	0.6		541909	5366747
	-0.95	0.95		541909	5366755
	-1.25	0.95		541903	5366755

A1 - Existing FT-8 Turbine:					
40 ft	5.4	-7	Corners	541885	5366786
	6.5	-7		541890	5366786
	6.5	-6.1		541890	5366808
	5.4	-6.1		541885	5366806
A2 - Existing FT-8 Turbine:					
40 ft	6.8	-5.7	Corners	541897	5366815
	7.9	-5.7		541922	5366815
	7.9	-4.8		541922	5366836
	8.8	-4.8		541897	5366836
I - Demin Water Tank:					
42 ft	0	2.4	Center	541742	5367000
Moved location	0.65		Diameter	15	
T - Oil Storage Tank:					
42 ft	6.25	-1.7	Center	541884	5366906
	2		Diameter	46	
V - Water Treatment Bldg:					
25 ft	-3.6	1.9	Corners	541660	5366968
Moved location	-2.55	1.9		541684	5366966
	-2.55	3.5		541684	5367025
	-3.6	3.5		541660	5367025
FENCELINE					
	-6.5	4.9		541594	5367057
	-6.5	-0.9		541594	5368925
	-5.8	-0.9		541610	5366925
	-5.8	-10.6		541610	5366704
	9.5	-10.6		541958	5366704
	9.5	0.6		541958	5366959
	10.3	0.6		541977	5366959
	10.3	2.85		541977	5367010
	9.5	2.85		541958	5367010
	9.5	4.9		541958	5367057

Siemens SGT8-5000F
B&V Figure 165510-DS-0045E RevA (4/21/11)

1 cm = 22.77 m (UTM)

	Figure x (cm)	Figure y (cm)		UTM Coordinates East (m)	UTM Coordinates North (m)	
SOURCES						
New:						
SGT6-5000F	0	0		541742	5366945	ORIGINAL LOCATION
145 ft	8.3	-9.3		541931	5366733	REVISED 4/21/11 (MOVED TO SE CORNER OF SITE)
	Moved location					
Diesel Gen	-4.1	1.9		541638	5366777	
50 ft						

EQUIPMENT & BUILDINGS

2 - Turbine Inlet:					
74 ft	-2.9	-0.15	Corners	541865	5366730
	-2.7	-0.15		541870	5366730
	-2.7	0.15		541870	5366737
	-2.9	0.15		541865	5366737
4 - SCR/CO:					
64 ft	-2	-0.3	Corners	541885	5366726
	0.25	-0.3		541937	5366726
	0.25	0.3		541937	5366740
	-2	0.3		541885	5366740
6 - Demin Water Tank:					
35 ft	3.1	0.4	Center	541813	5366954
	0.65		Diameter	15	
9 - Operations/Maintenance Bldg:					
20 ft	9.35	1.25	Corners	541955	5366973
	10.2	1.25		541974	5366973
	10.2	2.65		541974	5367005
	9.35	2.65		541955	5367005
11 - Auxilliary Transformer:					
20 ft	-3.8	0.2	Corners	541844	5366738
	-3.65	0.2		541848	5366738
	-3.65	0.5		541848	5366745
	-3.8	0.5		541844	5366745
21 - Electrical Enclosure:					
20 ft	-3.65	0.75	Corners	541848	5366750
	-2.9	0.75		541865	5366750
	-2.9	1.05		541865	5366757
	-3.65	1.05		541848	5366757
12 - Main Step-up Transformer:					
20 ft	-4.2	0.15	Corners	541835	5366737
	-3.8	0.15		541844	5366737
	-3.8	0.5		541844	5366745
	-4.2	0.5		541835	5366745
23 - Tempering Air Filter House:					
20 ft	-1.25	0.6	Corners	541903	5366747
	-0.95	0.6		541909	5366747
	-0.95	0.95		541909	5366755
	-1.25	0.95		541903	5366755

A1 - Existing FT-8 Turbine:					
40 ft	5.4	-7	Corners	541865	5366786
	8.5	-7		541890	5366786
	6.5	-6.1		541890	5366806
	5.4	-6.1		541865	5366806
A2 - Existing FT-8 Turbine:					
40 ft	6.8	-5.7	Corners	541897	5366815
	7.9	-5.7		541922	5366815
	7.9	-4.8		541922	5366836
	6.8	-4.8		541897	5366836
I - Demin Water Tank:					
42 ft	0	2.4	Center	541742	5367000
Moved location	0.65		Diameter	15	
T - Oil Storage Tank:					
42 ft	6.25	-1.7	Center	541884	5366906
	2		Diameter	46	
V - Water Treatment Bldg:					
25 ft	-3.6	1.9	Corners	541660	5366988
Moved location	-2.55	1.9		541684	5366988
	-2.55	3.5		541684	5367025
	-3.6	3.5		541660	5367025
FENCELINE					
	-6.5	4.9		541594	5367057
	-6.5	-0.9		541594	5366925
	-5.8	-0.9		541610	5366925
	-5.8	-10.6		541610	5366704
	9.5	-10.6		541958	5366704
	9.5	0.6		541958	5366959
	10.3	0.6		541977	5366959
	10.3	2.85		541977	5367010
	9.5	2.85		541958	5367010
	9.5	4.9		541958	5367057

GE LMS100
B&V Figure 165510-DS-0042 RevE (2/4/11)

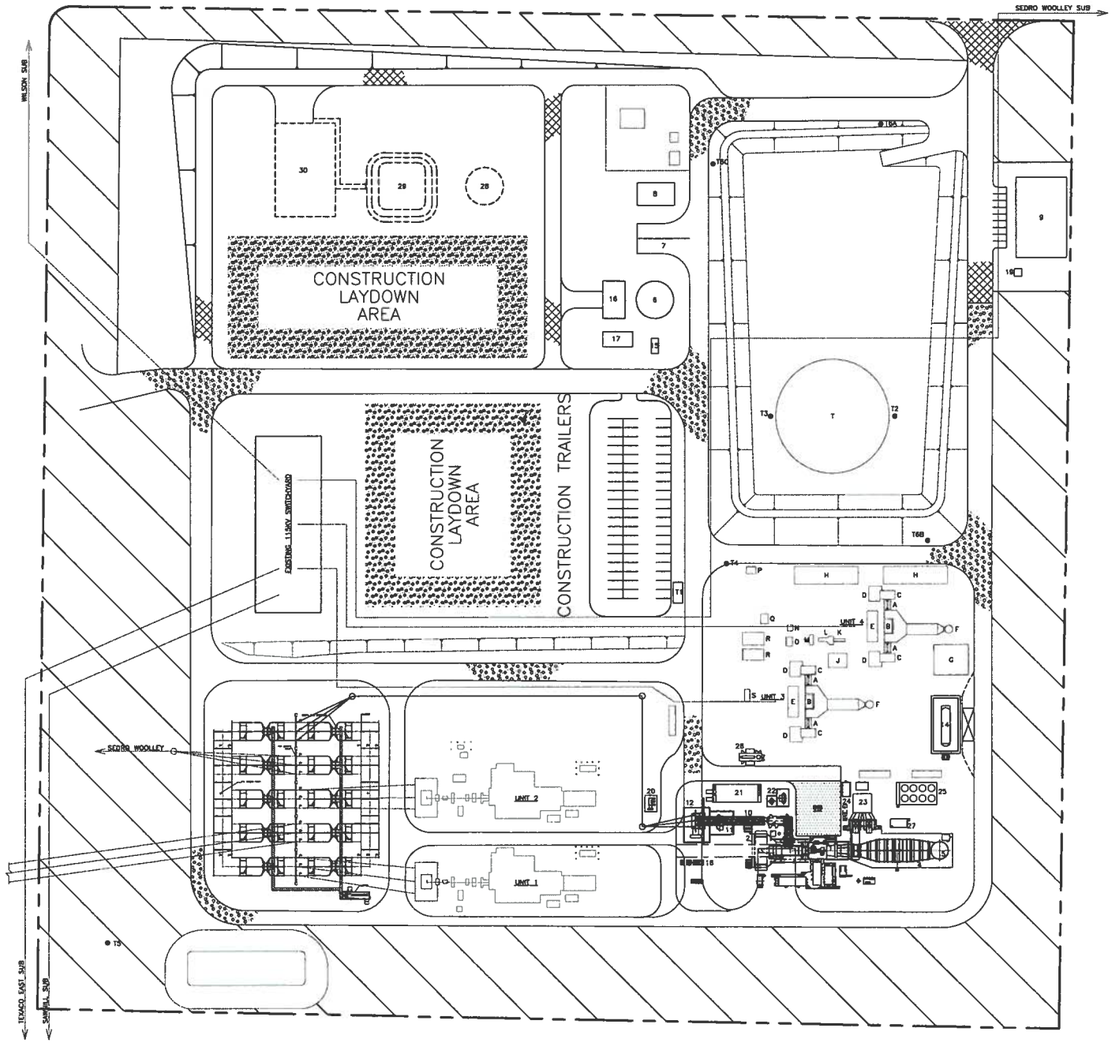
1 cm = 22.77 m (UTM)

	Figure x (cm)	Figure y (cm)	UTM East (m)	UTM North (m)
SOURCES				
New:				
	0	0	541742	5366945
LMS100a	-4.1	1.35	541649	5366976
LMS100b	0	-2.85	541742	5366880
125 ft				
Diesel Gen	1	-0.2	541765	5366940
50 ft			541764	5366940

EQUIPMENT & BUILDINGS

13 - GSU Transformer(a):					
22 ft	-3.1	2.25	Corners	541671	5366996
	-2.7	2.25		541681	5366996
	-2.7	2.5		541681	5367002
	-3.1	2.5		541671	5367002
13 - GSU Transformer(b):					
22 ft	1	-1.95	Corners	541765	5366901
	1.4	-1.95		541774	5366901
	1.4	-1.7		541774	5366906
	1	-1.7		541765	5366906
16 - Water Treatment/Mech Bldg:					
25 ft	0.6	0.35	Corners	541756	5366953
	1.65	0.35		541780	5366953
	1.65	1.3		541780	5366975
	0.6	1.3		541756	5366975
21 - CO/SCR(a)					
44 ft	-4	1.2	Corners	541651	5366972
	-3.3	1.2		541667	5366972
	-3.3	1.5		541667	5366979
	-4	1.5		541651	5366979
21 - CO/SCR(b)					
44 ft	0.1	-3	Corners	541744	5366877
	0.8	-3		541760	5366877
	0.8	-2.7		541760	5366884
	0.1	-2.7		541744	5366884
26 - Electrical Bldg(a):					
20 ft	-2.35	1.85	Corners	541688	5366987
	-2.25	1.85		541691	5366987
	-2.25	2.25		541691	5366996
	-2.35	2.25		541688	5366996
26 - Electrical Bldg(b):					
20 ft	1.75	-2.35	Corners	541782	5366891
	1.85	-2.35		541784	5366891
	1.85	-1.95		541784	5366901
	1.75	-1.95		541782	5366901
39 - Combustion Turbine/Filter(a)					
40 ft	-3.4	0.25	Corners	541665	5366951
	-3.5	0.25		541662	5366951
	-3.5	0.45		541662	5366955
	-3.4	0.45		541665	5366955
39 - Combustion Turbine/Filter(b)					
40 ft	0.7	-3.95	Corners	541758	5366855
	0.6	-3.95		541756	5366855
	0.6	-3.75		541756	5366860
	0.7	-3.75		541758	5366860
43 - Dry Cooling Tower(a):					
42 ft	-1.85	0.35	Corners	541700	5366953
	-1	0.35		541719	5366953
	-1	1.6		541719	5366981
	-1.85	1.6		541700	5366981
43 - Dry Cooling Tower(b):					
42 ft	2.25	-3.85	Corners	541793	5366857
	3.1	-3.85		541813	5366857
	3.1	-2.6		541813	5366886
	2.25	-2.6		541793	5366886

44 - Operations/Maintenance Bldg:					
20 ft	9.35	1.25	Corners	541955	5366973
	10.2	1.25		541974	5366973
	10.2	2.65		541974	5367005
	9.35	2.65		541955	5367005
A1 - Existing FT-8 Turbine:					
40 ft	5.4	-7	Corners	541865	5366786
	6.5	-7		541890	5366786
	6.5	-6.1		541890	5366806
	5.4	-6.1		541865	5366806
A2 - Existing FT-8 Turbine:					
40 ft	6.8	-5.7	Corners	541897	5366815
	7.9	-5.7		541922	5366815
	7.9	-4.8		541922	5366836
	6.8	-4.8		541897	5366836
V - Water Treatment Bldg:					
25 ft	5	-9.4	Corners	541856	5366731
	6	-9.4		541879	5366731
	6	-7.8		541879	5366767
	5	-7.8		541856	5366767
TANKS (and stacks)					
18 - Raw Water Storage Tank:					
40 ft	1.15	1.95	Center	541768	5366989
	0.8		Diameter	18	
19 - Demin Water Storage Tank:					
40 ft	1.15	2.75	Center	541768	5367008
	0.5		Diameter	11	
20 - Filtered Water Storage Tank:					
40 ft	1.15	3.3	Center	541768	5367020
	0.25		Diameter	6	
VBV - VBV Stack(a):					
55 ft	-2.85	0.65	Center	541677	5366960
	0.1		Diameter	2	
VBV - VBV Stack(b):					
55 ft	1.25	-3.55	Center	541770	5366864
	0.1		Diameter	2	
I - Demin Water Tank:					
42 ft	7.1	-7.4	Center	541904	5366777
	0.65		Diameter	15	
T - Oil Storage Tank:					
42 ft	6.25	-1.7	Center	541884	5366906
	2		Diameter	46	
FENCELINE					
	-6.5	4.9		541594	5367057
	-6.5	-0.9		541594	5366925
	-5.8	-0.9		541610	5366925
	-5.8	-10.6		541610	5366704
	9.5	-10.6		541958	5366704
	9.5	0.6		541958	5366959
	10.3	0.6		541977	5366959
	10.3	2.85		541977	5367010
	9.5	2.85		541958	5367010
	9.5	4.9		541958	5367057



EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES (METERS) NORTH	EAST	HEIGHT	REMARKS
1	COMBUSTION TURBINE GE7241 (7FA)	–	–	–	–	
2	COMBUSTION TURBINE INLET AIR FILTER	–	–	–	–	
3	COMBUSTION TURBINE GENERATOR ROTOR REMOVAL	–	–	–	–	
4	CO AND SCR CATALYST	–	–	–	–	
5	COMBUSTION TURBINE STACK	–	5388733	541931	189' ASL	DIA APPROX 23'
6	DEMINERALIZED WATER TANK	–	–	–	–	
7	DEMIN WATER TRAILER AREA	–	–	–	–	
8	NATURAL GAS COMPRESSION AREA	–	–	–	–	
9	OPERATION/MAINTENANCE BUILDING	–	–	–	20'	
10	GENERATOR BREAKER	–	–	–	–	
11	AUXILIARY TRANSFORMER	–	–	–	–	
12	GENERATOR STEPUP TRANSFORMER	–	–	–	20'	
13	MAINTENANCE ACCESS	–	–	–	–	
14	AMMONIA STORAGE AREA	–	–	–	–	
15	FUEL OIL FORWARDING SKID	–	–	–	–	
16	PUMP ENCLOSURE	–	–	–	–	NOx INJECTION WATER PUMPS, POTABLE WATER BOOSTER PUMPS, AIR COMPRESSORS/DRYERS
17	WASTEWATER COLLECTION SUMP	–	–	–	–	
18	OIL/WATER SEPARATOR	–	–	–	–	
19	SANITARY LIFT STATION	–	–	–	–	
20	SPARE AUXILIARY TRANSFORMER	–	–	–	–	
21	ELECTRICAL ENCLOSURE	–	–	–	–	
22	COMBUSTION TURBINE TRANSFORMER AREA	–	–	–	–	
23	TEMPERING AIR FILTER HOUSE	–	–	–	–	
24	COMBUSTION TURBINE WASH WATER DRAINS TANK	–	–	–	–	
25	COMBUSTION TURBINE FIN FAN COOLER	–	–	–	–	
26	DIESEL GENERATOR	–	5366771	541857	97' ASL	
27	AMMONIA SKID	–	–	–	–	
28	DEMINERALIZED WATER TANK (RELOCATED)	–	–	–	42'	–
29	WASTE WATER POND (RELOCATED)	–	–	–	–	–
30	WATER TREATMENT BUILDING (RELOCATED)	–	–	–	25'	–

EXISTING EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES (METERS) NORTH	EAST	HEIGHT	REMARKS
A	FT-8 COMBUSTION TURBINE	–	–	–	40'	–
B	CT GENERATOR	–	–	–	–	–
C	CT INLET FILTER	–	–	–	–	–
D	CT NOx WATER INJECTION & LUBE OIL SKID	–	–	–	–	–
E	CONTROL HOUSE	–	–	–	–	–
F	EXHAUST STACK	–	–	–	–	–
G	AQUEOUS AMONNIA STORAGE	–	–	–	–	–
H	LIQUID FUEL OIL UNLOADING STATION	–	–	–	–	–
I	~~DEMINERALIZED WATER TANK (RELOCATED)~~	–	–	–	42'	–
J	INSTRUMENT AIR COMPRESSOR SKID	–	–	–	14'	–
K	480V PCC, 480V BOP MCC (UNIT 3) & 480V BOP MCC (UNIT 4)	–	–	–	–	–
L	1000KVA, 4.16KV/480V COMMON AUX TRANSFORMER	–	–	–	–	–
M	2500KVA,13.85KV/4.16KV COMMON AUX TRANSFORMER	–	–	–	–	–
H	DUAL MODE TRANSFER SWITCH	–	–	–	–	–
D	4160V GAS COMPRESSOR MCC	–	–	–	–	–
P	LIQUID FUEL OIL TRANSFER PUMP	–	–	–	–	–
O	FUEL OIL FORWARDING SKID	–	–	–	–	–
R	FUEL GAS COMPRESSOR SKID	–	–	–	14'	–
S	MAIN STEP-UP TRANSFORMER	–	–	–	–	–
T	OIL STORAGE TANK	–	–	–	42'	–
U	~~WASTE WATER POND (RELOCATED)~~	–	–	–	–	–
V	~~WATER TREATMENT BUILDING (RELOCATED)~~	–	–	–	25'	–

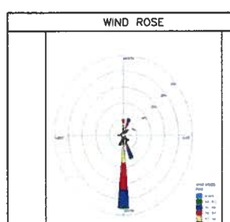
TERMINAL POINTS

T1	NATURAL GAS
T2	FUEL OIL SUPPLY
T3	FUEL OIL RECIRCULATION
T4	WASTEWATER DISCHARGE
T5	RAW WATER/FIRE WATER
T6A, T6B, T6C	FIRE WATER
T7	CONSTRUCTION POWER

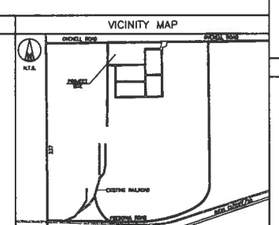
LEGEND

ROADWAY
FENCE
ASPHALT
SLIDE GATE
AGGREGATE
PROPERTY LINE
WOODED AREA
CONCRETE
RELOCATED

WIND ROSE



VICINITY MAP



NOTES

1. SOURCE OF WIND ROSE IS BELLINGHAM, WASHINGTON ANNUAL WIND ROSE FROM 1995 THROUGH 2008.
2. SCALE IS APPROXIMATE. EXISTING SITE CREATED FROM AERIAL IMAGE.
3. UTM COORDINATES ARE APPROXIMATE. COORDINATES WERE DETERMINED BY OVERLAYING A USGS MAP ON THE DRAWING.
4. THE HEIGHTS INDICATED IN THE EQUIPMENT IDENTIFICATION LIST ARE FEET ABOVE EXISTING GRADE UNLESS INDICATED AS ABOVE SEA LEVEL. FINAL GRADE HAS NOT BEEN DETERMINED AT THIS STAGE OF THE DESIGN, BUT IS EXPECTED TO BE 59' ON THE NORTH END OF THE SITE SLOPING TO 48' ON THE SOUTH END.

NOT TO BE USED FOR CONSTRUCTION

THE DISTRIBUTION AND USE OF THE NATIVE FILE FORMAT OF THIS DRAWING OUTSIDE OF BLACK & VEATCH IS UNCONTROLLED AND SHALL BE USED FOR REFERENCE PURPOSES ONLY.

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP
D		UPDATED STACK LOCATIONS, ROTATED LAYOUT	LRH	SMR			
C	21/APR/11	UPDATED STACK ELEVATION	LRH	SMR			
B	04/FEB/11	ISSUED FOR CLIENT REVIEW	RDS	SMR			
A		ISSUED FOR CLIENT REVIEW	WG	SMR			

N

60' 30' 0 60' 120'
APPROX 1"=60'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON.

SIGNED _____
DATE _____ REG NO. _____

BLACK & VEATCH CORPORATION

ENGINEER SMR | DRAWN WG
CHECKED | DATE

PUGET SOUND
FREDONIA, WASHINGTON

GE 7FA SIMPLE CYCLE
SITE ARRANGEMENT

PROJECT DRAWING NUMBER: 165510-DS-0045B
REV: D
CODE
AREA

ACAD 18.1s (LMS Tech)
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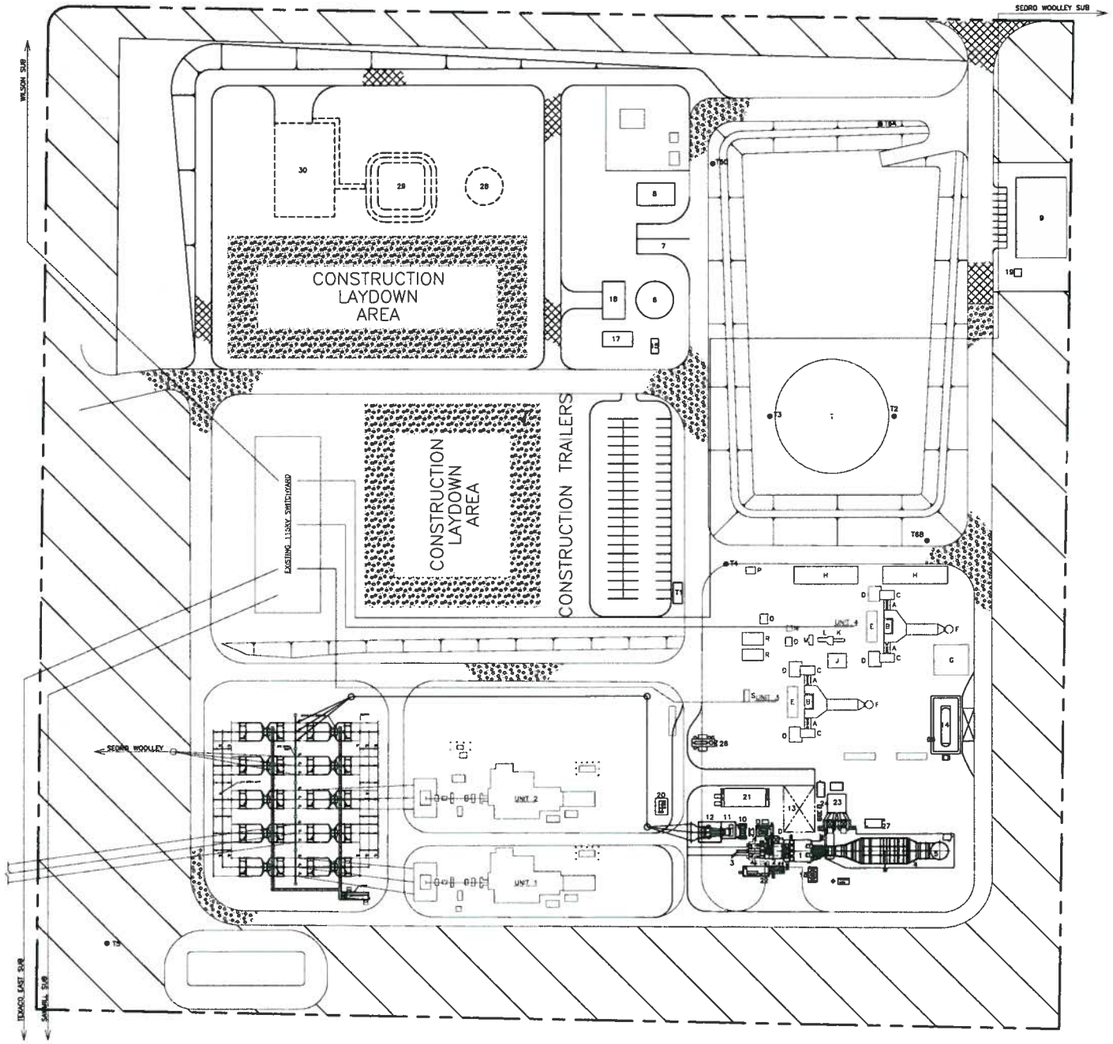
06/13/11 08:59:44



EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES METERS NORTH	UTM COORDINATES METERS EAST	HEIGHT	REMARKS
1	COMBUSTION TURBINE (SIEMENS SGT6-5000F)	–	–	–	–	
2	COMBUSTION TURBINE GENERATOR	–	–	–	–	
3	COMBUSTION TURBINE GENERATOR ROTOR REMOVAL	–	–	–	–	
4	CO AND SCR CATALYST	–	–	–	–	
5	STACK	–	5386733	541931	199' ASL	DIA APPROX 23'
6	DEMINERALIZED WATER TANK	–	–	–	–	
7	DEMIN WATER TRAILER AREA	–	–	–	–	
8	NATURAL GAS COMPRESSION AREA	–	–	–	–	
9	OPERATION/MAINTENANCE BUILDING	–	–	–	20'	
10	GENERATOR BREAKER	–	–	–	–	
11	AUXILIARY TRANSFORMER	–	–	–	–	
12	GENERATOR STEPUP TRANSFORMER	–	–	–	20'	
13	MAINTENANCE ACCESS	–	–	–	–	
14	AMMONIA STORAGE AREA	–	–	–	–	
15	FUEL OIL FORWARDING SKID	–	–	–	–	
16	PUMP ENCLOSURE	–	–	–	–	NOx INJECTION WATER PUMPS, POTABLE WATER BOOSTER PUMPS, AIR COMPRESSORS/DRYERS
17	WASTEWATER COLLECTION SUMP	–	–	–	–	
18	COMBUSTION TURBINE ROTOR AIR COOLER	–	–	–	–	
19	SANITARY LIFT STATION	–	–	–	–	
20	SPARE AUXILIARY TRANSFORMER	–	–	–	–	
21	ELECTRICAL ENCLOSURE	–	–	–	–	
22	COMBUSTION TURBINE ELECTRICAL PACKAGE	–	–	–	–	
23	TEMPERING AIR FILTER HOUSE	–	–	–	–	
24	COMBUSTION TURBINE WASH WATER DRAINS TANK	–	–	–	–	
25	NOT USED	–	–	–	–	
26	DIESEL GENERATOR	–	5368777	541838	97' ASL	
27	AMMONIA SKID	–	–	–	–	
28	DEMINERALIZED WATER TANK (RELOCATED)	–	–	–	42'	
29	WASTE WATER POND (RELOCATED)	–	–	–	–	
30	WATER TREATMENT BUILDING (RELOCATED)	–	–	–	25'	

EXISTING EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES METERS NORTH	UTM COORDINATES METERS EAST	HEIGHT	REMARKS
A	FT-8 COMBUSTION TURBINE	–	–	–	40'	–
B	CT GENERATOR	–	–	–	–	–
C	CT INLET FILTER	–	–	–	–	–
D	CT NOx WATER INJECTION & LUBE OIL SKID	–	–	–	–	–
E	CONTROL HOUSE	–	–	–	–	–
F	EXHAUST STACK	–	–	–	–	–
G	AQUEOUS AMONNIA STORAGE	–	–	–	–	–
H	LIQUID FUEL OIL UNLOADING STATION	–	–	–	–	–
I	~~DEMINERALIZED WATER TANK (RELOCATED)~~	–	–	–	42'	–
J	INSTRUMENT AIR COMPRESSOR SKID	–	–	–	14'	–
K	480V PCC, 480V BOP MCC (UNIT 3) & 480V BOP MCC (UNIT 4)	–	–	–	–	–
L	10000KVA, 4.16KV/480V COMMON AUX TRANSFORMER	–	–	–	–	–
M	2500KVA,13.85KV/4.16KV COMMON AUX TRANSFORMER	–	–	–	–	–
N	DUAL MODE TRANSFER SWITCH	–	–	–	–	–
O	4160V GAS COMPRESSOR MCC	–	–	–	–	–
P	LIQUID FUEL OIL TRANSFER PUMP	–	–	–	–	–
Q	FUEL OIL FORWARDING SKID	–	–	–	–	–
R	FUEL GAS COMPRESSOR SKID	–	–	–	14'	–
S	MAIN STEP-UP TRANSFORMER	–	–	–	–	–
T	OIL STORAGE TANK	–	–	–	42'	–
U	~~WASTE WATER POND (RELOCATED)~~	–	–	–	–	–
V	~~WATER TREATMENT BUILDING (RELOCATED)~~	–	–	–	25'	–

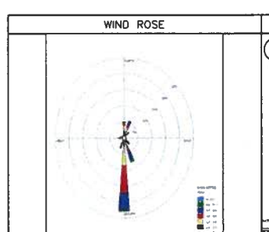
TERMINAL POINTS

T1	NATURAL GAS
T2	FUEL OIL SUPPLY
T3	FUEL OIL RECIRCULATION
T4	WASTEWATER DISCHARGE
T5	RAW WATER/FIRE WATER
T6A, T6B, T6C	FIRE WATER
T7	CONSTRUCTION POWER

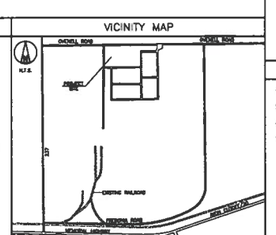
LEGEND

ROADWAY
FENCE
ASPHALT
SLIDE GATE
AGGREGATE
PROPERTY LINE
WOODED AREA
CONCRETE
RELOCATED

WIND ROSE



VICINITY MAP



NOTES

1. SOURCE OF WIND ROSE IS BELLINGHAM, WASHINGTON ANNUAL WIND ROSE FROM 1995 THROUGH 2008.
2. SCALE IS APPROXIMATE. EXISTING SITE CREATED FROM AERIAL IMAGE.
3. UTM COORDINATES ARE APPROXIMATE. COORDINATES WERE DETERMINED BY OVERLAYING A USGS MAP ON THE DRAWING.
4. THE HEIGHTS INDICATED IN THE EQUIPMENT IDENTIFICATION LIST ARE FEET ABOVE EXISTING GRADE UNLESS INDICATED AS ABOVE SEA LEVEL. FINAL GRADE HAS NOT BEEN DETERMINED AT THIS STAGE OF THE DESIGN, BUT IS EXPECTED TO BE 59' ON THE NORTH END OF THE SITE SLOPING TO 48' ON THE SOUTH END.

NOT TO BE USED FOR CONSTRUCTION

THE DISTRIBUTION AND USE OF THE NATIVE FILE FORMAT OF THIS DRAWING OUTSIDE OF BLACK & VEATCH IS UNCONTROLLED AND SHALL BE USED FOR REFERENCE PURPOSES ONLY.

NO	DATE	REVISIONS AND RECORD OF ISSUE	DRAWN	DES	CHK	PDE	APP
B		UPDATED STACK LOCATIONS, ROTATED LAYOUT	JRH		GMR		
A	21/APR/11	ISSUED FOR CLIENT REVIEW	JRH		GMR		

60' 30' 0 60' 120'
APPROX 1"=60'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON.
SIGNED
DATE REG NO.

BLACK & VEATCH CORPORATION

PUGET SOUND
FREDONIA, WASHINGTON

SIEMENS SGT6-5000F SIMPLE CYCLE
SITE ARRANGEMENT

ENGINEER SMR DRAWN JRH
CHECKED DATE

PROJECT DRAWING NUMBER 165510-DS-0045E
REV B
CODE
AREA

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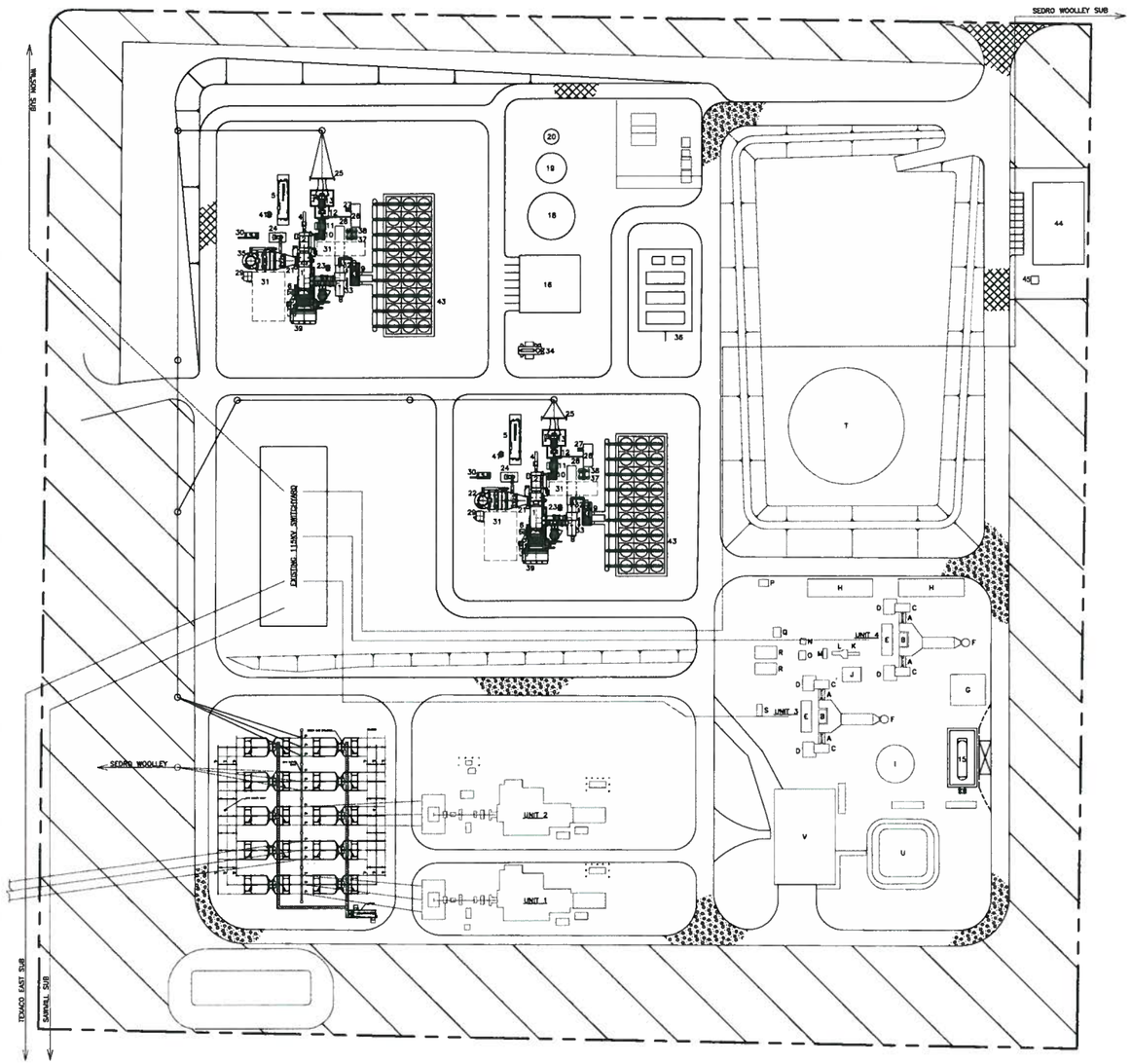


EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES METERS NORTH	UTM COORDINATES METERS EAST	HEIGHT	REMARKS
1	COMBUSTION TURBINE GE LMS100	–	–	–	–	
2	COMBUSTION TURBINE GENERATOR	–	–	–	–	
3	COMBUSTION TURBINE MECH ACCESSORY COMPARTMENT	–	–	–	–	
4	COMBUSTION TURBINE GENERATOR ROTOR REMOVAL	–	–	–	–	
5	COMBUSTION TURBINE ELECTRICAL / CONTROL CENTER	–	–	–	–	
6	COMBUSTION TURBINE CO2 PROTECTION SKID	–	–	–	–	
7	COMBUSTION TURBINE VBV EXHAUST STACK	–	–	–	–	
8	COMBUSTION TURBINE INTERCOOLER	–	–	–	–	
9	COMBUSTION TURBINE INTERCOOLER WATER PUMP SKID	–	–	–	–	
10	COMBUSTION TURBINE ISOLATED PHASE BUS DUCT	–	–	–	–	
11	COMBUSTION TURBINE GENERATOR BREAKER	–	–	–	–	
12	COMBUSTION TURBINE AUXILIARY TRANSFORMER	–	–	–	–	
13	COMBUSTION TURBINE GEN STEPUP TRANSFORMER	–	–	–	–	
14	NOT USED	–	–	–	–	
15	AMMONIA UNLOADING AND STORAGE AREA	–	–	–	–	
16	WATER TREATMENT / MECHANICAL EQUIPMENT BUILDING	–	–	–	–	
17	NOT USED	–	–	–	–	
18	RAW WATER STORAGE TANK	–	–	–	–	
19	DEMINERALIZED WATER STORAGE TANK	–	–	–	–	
20	FILTERED WATER STORAGE TANK	–	–	–	–	
21	CO/SCR MODULE	–	–	–	–	
22	STACK – UNIT 5	–	5368880	541742	169' ASL	DIA APPROX 12'
23	COMBUSTION TURBINE COALESCER SKID	–	–	–	–	
24	TEMPERING AIR FANS	–	–	–	–	
25	DEAD END TOWER	–	–	–	–	
26	ELECTRICAL BUILDING	–	–	–	–	
27	480V SWITCHGEAR TRANSFORMER	–	–	–	–	
28	NON-SEGREGATED BUS DUCT	–	–	–	–	
29	CONTINUOUS EMISSIONS MONITOR EQUIPMENT	–	–	–	–	
30	AMMONIA SKID	–	–	–	–	
31	EQUIPMENT MAINTENANCE AREA	–	–	–	–	
32	COMBUSTION TURBINE INTERCOOLER DRAIN VALVE SKID	–	–	–	–	
33	COMBUSTION TURBINE INTERCOOLER DRAIN VALVE TANK	–	–	–	–	
34	DIESEL GENERATOR	–	5368940	541784	109' ASL	
35	STACK – UNIT 6	–	5368976	541849	169' ASL	DIA APPROX 12'
36	GAS COMPRESSOR AREA	–	–	–	–	
37	OILY WATER DRAIN TANK	–	–	–	–	
38	WASTE WATER TANK	–	–	–	–	
39	COMBUSTION TURBINE INLET AIR FILTER	–	–	–	–	
40	NOT USED	–	–	–	–	
41	TRANSFORMER	–	–	–	–	
42	NOT USED	–	–	–	–	
43	DRY FIN-FAN COOLER FOR INTERCOOLER	–	–	–	–	
44	OPERATION/MAINTENANCE BUILDING	–	–	–	–	
45	SANITARY LIFT STATION	–	–	–	–	

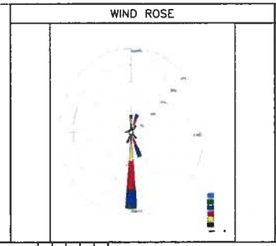
EXISTING EQUIPMENT IDENTIFICATION LIST

ID	FACILITY	FOUNDATION	UTM COORDINATES METERS NORTH	UTM COORDINATES METERS EAST	HEIGHT	REMARKS
A	FT-8 COMBUSTION TURBINE	–	–	–	40'	–
B	CT GENERATOR	–	–	–	–	–
C	CT INLET FILTER	–	–	–	–	–
D	CT NOx WATER INJECTION & LUBE OIL SKID	–	–	–	–	–
E	CONTROL HOUSE	–	–	–	–	–
F	EXHAUST STACK	–	–	–	–	–
G	AQUEOUS AMOMNIA STORAGE	–	–	–	–	–
H	LIQUID FUEL OIL UNLOADING STATION	–	–	–	–	–
I	DEMINERALIZED WATER TANK	–	–	–	42'	–
J	INSTRUMENT AIR COMPRESSOR SKID	–	–	–	14'	–
K	480V PCC, 480V BOP MCC (UNIT 3) & 480V BOP MCC (UNIT 4)	–	–	–	–	–
L	1000KVA, 4.16KV/480V COMMON AUX TRANSFORMER	–	–	–	–	–
M	2500KVA,13.85KV/4.16KV COMMON AUX TRANSFORMER	–	–	–	–	–
N	DUAL MODE TRANSFER SWITCH	–	–	–	–	–
O	4160V GAS COMPRESSOR MCC	–	–	–	–	–
P	LIQUID FUEL OIL TRANSFER PUMP	–	–	–	–	–
Q	FUEL OIL FORWARDING SKID	–	–	–	–	–
R	FUEL GAS COMPRESSOR SKID	–	–	–	14'	–
S	MAIN STEP-UP TRANSFORMER	–	–	–	–	–
T	OIL STORAGE TANK	–	–	–	42'	–
U	WASTE WATER POND	–	–	–	–	–
V	WATER TREATMENT BUILDING	–	–	–	25'	–

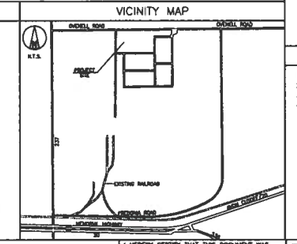
LEGEND

- ROADWAY
- FENCE
- ASPHALT
- SLIDE GATE
- AGGREGATE
- PROPERTY LINE
- WOODED AREA

WIND ROSE



VICINITY MAP



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REV	DATE	REVISIONS AND RECORD OF ISSUE	DRAWN	DES	CHK	PDC	APP
D	27/JUL/10	UPDATE PER CLIENT COMMENTS	JRH	MJS			
C	20/JUL/10	ISSUED FOR CLIENT REVIEW	JRH	MJS			
B	08/JUL/10	ISSUED FOR CLIENT REVIEW	JRH	MJS			
A	29/JUN/10	ISSUED FOR CLIENT REVIEW	JRH	MJS			
F		ADDED STACK LOCATIONS, ROTATED LAYOUT	BOS	SMR			
E	04/FEB/11	ISSUED FOR CLIENT REVIEW	BOS	SMR			

60' 30' 0 60' 120'
APPROX (" = 60')

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WASHINGTON.
SIGNED
DATE REG NO.

BLACK & VEATCH CORPORATION

ENGINEER MJS DRAWN JRH
CHECKED DATE

PUGET SOUND
FREDONIA, WASHINGTON

LMS 100 – DRY INTERCOOLING
SITE ARRANGEMENT

PROJECT 165510--DS--0042
DRAWING NUMBER
REV F
CODE
AREA

ACAD 16.1s (LMS Tech)
HR2573I
A.MUST1
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