

INSTALLATION CHECKLIST

Project:					
Site Address: City:			 State:		
Contact(s):					
Contact(s)			Dlagra		
Equipment Model:			# Uni	ts:	
GE Engine Nos.	12		4	5	
Gen. Serial Nos.	12	3		5	
Turbocharger Nos.	12	3	4	5	
Compressor Nos.	12	3	4	5	·
NES Project Number	r:	NES RO #:			
The following tasks recommendations and	l requirements. All	components installed	not in complian	ice witl	h manufacturers
recommendations and		be noted with a descr	iption of installa	tion, fi	eld sketches, and
digital photographs as	may be required.				
Any component not as	sociated with the plan	t must be crossed off a	and noted as non-	applica	ble.
1. Mechanical/Hydra	nulic Part				
1.1 Fuel gas					
				YES	NO
a. Fuel gas piping-	-Is it completed?				
b. Pipe sizes-Is it i	installed according to the	ne hydraulic schematic?			
	stalled to the engine fro				
	iping with welded conr				
	iping with threaded cor	nnections?			_
d. Is there a gas fil					
• GEJ filt		let mining to the CEL co	a tuain?		
	rovide details	let piping to the GEJ ga	is train?	ш	
		GEJ gas train to gas mi	ixer =< 2 meters?		
		ne GEJ gas train to gas in			
	the piping after the GE		9 - 1		
• Cleaned	1?				
 Pickled 	.?				
 Painted 	?				
	4 Divi	sion of Penn Detroit Diesel Allis	201		

SALES • RENTALS • PARTS • SERVICE

PHILADELPHIA 8330 State Road Philadelphia, PA 19136 215-335-5010 Fax: 215-335-2163

PITTSBURGH 11 Progress Avenue Cranberry Twp., PA 16066

724-742-0022 Fax: 724-742-0040

SYRACUSE 7044 Interstate Island Rd Syracuse, NY 13209

315-451-3838 Fax: 315-461-8662 **BUFFALO**

350 Bailey Avenue Buffalo, NY 14210 716-822-0051 Fax: 716-826-1544

BOSTON 65B Mathewson Drive Weymouth, MA 02189

781-340-9640 Fax: 781-340-9649

g.	Are vent lines installed to vent to the outside of the building?			
h.	Is fuel gas?	_	_	
	• Available?			
	• Condensate free?			
1.	Is gas pressure before the gas train according to hydraulic schematic?			
j. 1-	Is there a pre-chamber gas compressor?			
k.	Is the pre-chamber gas compressor completely installed? • Mechanically			
	• Electrically?			
	All piping completed?			
1.	Are there methane (CH4) sensors installed at the site?			
	Are they mounted near the gas train?			
	Have they been calibrated?			
1.	Verify that the gas train stop valve is closed PRIOR to any pressure testing			
	on the line.			
Comm	ents			
1.2 Ex	haust gas			
		YES	NO	
a.	Exhaust gas piping-Is it completed to the engine?			
b.	Is the exhaust piping completed to the outside of the building?			
c.	Is the exhaust piping designed to prevent water ingress to the engine?			
d.	Is the exhaust flexible connection to the engine installed?			
e.	Is the exhaust flexible connection aligned properly and free of any weight?			
f.	Are the exhaust pipes properly supported?			
g.	Is there any weight or thrust forces on the turbocharger?		П	
h. i.	Is there an exhaust purge fan? Are exhaust pipe sizes according to hydraulic schematic?			
	Are condensate pipes separately piped?			
J. <i>k</i> .	Is there a condensate water trap and drain pipe?			
1.	Are the exhaust pipes insulated?			
m.				
n.	Is the exhaust heat-heat exchanger insulated?			
0.	If a steam system are there pressure relief valves?			
p.	If there is a steam system, please refer to separate checklist.			
•				
Comm	ents			

1.3 He	ating water loops App	licable 🗆	Non-	Applicable 🗆
		7	YES	NO
a.	Is there a cooling tower?			
b.	Are GEJ plate and frame heat exchangers used?			
c.	Are non-GEJ, customer furnished plate and frame heat exchangers use	ed?		
	If so provide details:			
d.	Are process plate and frame heat exchangers installed?			
e.	Is all heat recovery piping completed?			
f.	Are the following components installed and connected			4
	• Regulators?			
	• Valves?			
	• Pumps?			
	• Strainers?			
				7
Provide	e details on all installed auxiliary, non-GEJ provided heat recovery loop	devices.		
	Description Manufacturer Part Number		Purp	ose
Comm	ents			
				
g.	Are flexible connections installed between piping and the engine?			
h.	Are the heat recovery and engine coolant pipes properly supported?			
i.	Is there any weight or thrust forces on the water pump?			
i.	What is the distance of the water pump to the engine?		_	_
J. k.	Are there shutoff valves in the heat recovery piping?			
	* * * *			
l. m	Are the heat recovery pipes insulated? Are all water loops and piping filled with mixture meeting GEJ TI spe	ece?		
m. n.	Has the heat recovery system been purged of air?	cs:		
0.	Is the water quality per GEJ T.I. requirements?			
p.	Are any water softeners or additives being used?			

	Emergency coolers (radiators etc.)	Applicable □ Non-Applicable □
		YES NO
a.	Is there a cooling tower?	
b.	Is there a heat dump radiator?	
c.	Is there a fan control panel?	
d.	Is there a fan control panel PLC to be programmed?	
	If so provide details:	
e.	Is the fan control panel wiring terminated to auxiliary contacts?	
f.	Are radiator fan motors terminated to auxiliary contacts?	
g.	Is all radiator piping completed?	
h.	Are the following components installed and connected	
	• Regulators?	
	• Valves?	
	Pumps?Strainers?	
	• Strainers?	
Pro	ovide details on all installed auxiliary, non-GEJ provided cooling s	system devices.
		,
]	Description Manufacturer Part Number	Purpose
		_
		_
Ca	mments	
CO		

Description		Manufacturer	Part Number	Purp	ose
Provide details of	on all install	ed auxiliary, non-GEJ	provided cooling system dev	vices.	
c. is the 3-way	mermostat	varve mstaneu m un	e fine correctly, per the GEJ		_
e. Is the 3-way		r tanks? ic valve installed in th	e line correctly, per the GEJ	⊔ P&ID? □	
	Strainer				
	• Pumps?				
	• Valves		,		
	Regulat				
		onents installed and c	onnected		_
		iping completed?			
		_	rame heat exchangers used?		
				YES	NO
Low Temp.	(2 nd stage)	Intercoolers	Applical	ole □ Non-	Applicable 🗆
Comments					
		or additives being use	ed?		
•	Freeze prote	ection level?			
		the engine cooling sy nanufacturer of anti-fro	eeze?		Ш
•		GEJ T.I. requirements			
	•	been purged of air?			
		in the coolant piping piping filled?	to the radiator or tower?		
		the water pump to the			
•	•	nrust forces on the wat	• •		
3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				_
		s installed between pip pipes properly support			

f.	Are flexible connections installed between piping and the engine?		
g.	Are the pipes properly supported?		
h.	Are there shutoff valves in the piping?		
i.	Are all water loops and piping filled, with mixture meeting GEJ TI specs?		
į.	Has the cooling system been purged of air?		
k.	Is the water quality per GEJ T.I. requirements?		
Co	omments		
1.6	Jacket Water Loop		
1.0	sacket Water Loop		
		YES	NO
a.	Are all water loops and piping filled?		
b.	Has the cooling system been purged of air?		
c.	Are coolant bladder tanks installed?		
d.	Is the water quality per GEJ T.I. requirements?		
e.	Is antifreeze installed in the engine cooling system?		
f.	Type and manufacturer of anti-freeze?		
g.	Freeze protection level?		
h.	Percentage concentration?		
i.	Does antifreeze or mixture meet GEJ TI specifications		
j.	Are any water softeners or additives being used?		
k.	Are the jacket water heaters properly terminated electrically?		
Comm	nents_		
Comm	lents		
1.7	Fresh Oil supply (day tank)		
	H 3	YES	NO
a.	Is the tank installed?		
b.	Where is the tank installed relative to the engine?		
	NOTE: Day tank installation height is a minimum 1 meter; maximum 3 i	meters.	
c.	Does the tank meet the minimum height requirements of GEJ P&ID?		
d.	Is all piping completed?	_	_
u.	Is the piping with welded connections?		
	 Is the piping with weided connections? Is the piping with threaded connections? 		_
	 Is the piping with threaded connections? Is there a lube oil strainer between the tank and the engine?		_
e.	Is there a flexible connector between the tank and the engine?		
f.	Is the inside of the piping after the tank:	_	_

	a. Cleaned?		
	b. Pickled?		
	c. Painted?		
g.	Has the system been purged of air?		
h.	Is the lube oil per GEJ T.I. requirements?		
i.	Is lube oil installed in the engine?		
j.	Type and manufacturer of lube oil?		. _
k.	Are electrical connections properly terminated?		
Comm	ents		
		_	
1.8	Ventilation System		
	VIIIIIII SJOVIII	YES	NO
a.	Are inlet louvers installed?		
b.	Are there inlet air filters and screens?		
c.	Are inlet louvers wired?		
d.	Are inlet fans installed?		
e.	Are inlet fans wired?		
f.	Where is the inlet louver and fan installed relative to the engine? There is a GE	EJ Techni	cal Instruction for
	this.		
g.	Are outlet louvers installed?		
h.	Are outlet louvers wired?		
i.	Are exhaust fans installed?		
j.	Are exhaust fans wired?		
k.	Where are the outlet louvers and exhaust fans installed relative to the engine?		
1.	Is the intake air drawn across the back of the engine-generator set?		
m.	Is the engine room pressurized or is intake air ducted directly to the engine air i	inlet?	
n.	Are electrical connections properly terminated?		
~			
Comm	nents		
1.9	Foundations		
	And the formal discount and a mineral and a CELEY	YES	NO
a. h	Are the foundation and equipment pad per GEJ TI requirements? Type construction:		

• Spread footing?

NO

YES

• Piers?		
Material?		
Dimensions:		
c. Has the engine been placed on sylomer strips per the GEJ Installation Manual?		
c. Thas the engine occur placed on sylomer surps per the GES installation Walldar.	_	_
Comments		
	<u> </u>	
	- N	
Specify Any Concerns or Variances from Mechanical Installation Requiremen	ts or R	est Practices
Specify Any Concerns of Variances from Mechanical Instanation Requirement	ts of D	est I factices
		
2. Electrical Part		
2.1 Power Cables		

a. b.	Are power cables completed and terminated properly? Cable type and size. Describe:		
c.	Is the cable termination per GEJ TI requirements?		
Comm	ents		
2.2 Co	ntrol Systems, Control and Measuring Cables		
a. b.	Is the DiANE control panel within 100 meters of the generator set? Where is the DiANE control panel located?	YES	NO □
c. d. e.	Are control and measuring cables completed and terminated properly? Are current transformers installed and sized correctly? Cable type and size. Describe:		
f. g. Comm	Is the cable termination per GEJ TI requirements? Is there Internet access available?		
2.3 Au	xiliaries	YES	NO
a. b.	Are control and measuring cables completed and terminated properly? Cable type and size. Describe:		NO □
c.	Is the cable termination per GEJ TI requirements?		
Comm	ents		
2.4 Int	erface Cables (to customer system)		

YES

NO

a. b.	Cable type and size. Describe:		_
c.	Is the cable termination per GEJ TI requirements?		
C.	is the cubic termination per GLS 11 requirements.		
Comm	ents		
_ ~			
.5 Sta	arter and Control Batteries	TIEG	NO
		YES	NO
a.	Are engine starting batteries installed and terminated properly?		
b.	Is the starting battery charger properly terminated and functioning?		
c.	Cable type and size. Describe:		
		_	_
d.	Are control batteries installed and charged?		
	Are control batteries installed and charged? ents	Ц	
omm			
Comm	rall System	YES	NO
Ove	ents		
. Ove	ents	YES	NO □
Ove	rall System Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable?	YES	NO
. Ove	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on?	YES	NO
. Ove	rall System Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed?	YES	NO D
. Ove	rall System Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place?	YES	NO D
a. b.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place?	YES	NO D
a. b.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation?	YES	NO D
a. b. c. d. e. f. g.	rall System Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available?	YES	NO D
a. b. c. d. e. f. g. h.	rall System Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place?	YES	NO
a. b. c. d. e. f. g. h. i.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place? Are all heating and cooling circuits ready for operation?	YES	NO
a. b. c. d. e. f. g. h. i. j.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place? Are all heating and cooling circuits ready for operation? Is there a city water supply available to fill all water circuits?	YES	NO
a. b. c. d. e. f. g. h. i. j. k.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place? Are all heating and cooling circuits ready for operation? Is there a city water supply available to fill all water circuits? Are electrical control, interconnect, and power circuits ready for operation?	YES	NO D
a. b. c. d. e. f. g. h. i. j. k. l.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place? Are all heating and cooling circuits ready for operation? Is there a city water supply available to fill all water circuits? Are electrical control, interconnect, and power circuits ready for operation? Is relay testing required before parallel operation?	YES	NO
a. b. c. d. e. f. g. h. i. j. k.	Are auxiliary electrical circuits completed and ready to be switched on? Are external gas supply systems such as compressors, regulators, dryers, dehumidifiers, and gas cleaning systems installed and operable? Is the plant gas supply ready to switch on? Is the utility interconnection completed? Are utility interconnect permits in place? Are emissions permits in place? Is there auxiliary switchgear required for island operation? Is load for island operation available? Is load shed capability in place? Are all heating and cooling circuits ready for operation? Is there a city water supply available to fill all water circuits? Are electrical control, interconnect, and power circuits ready for operation? Is relay testing required before parallel operation?	YES	NO

Description	Manufacturer	Part Number	Durnoso
Description	Manufacturei	rart Number	Purpose
			
mments			
Specify Any Concerns or V	Variances from Fla	etrical Installation Page	uirements or Best Practices
Specify Any Concerns of V	variances from Elec	ctrical installation Keqi	intellents of Dest Fractices
te Started:		Date Completed:	
		Date Completed: Name:	
ortheast Energy System		Name:	