



D. E. R.

AUG 99 1978

SOUTHWEST DISTRICT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

	<u> </u>
Source Type Air Pollution [X] Incinerator [] Type application: [X] Operation [] Construct Source Status: [] New [] Existing	
Source Name: C.D.McINTOSH JR. POWER PLANT DIESEL NO. 2	County POLK
Source Location: Street North Lake Parker Driv	veCityLAKELAND
UTM: East 408500	North3105800
Appl. Name and Title: City of Lakeland, Department Appl. Address: P.O. Box 368, Lakeland, Fl.	etment of E&W Utilities 33802
STATEMENTS BY APPLI	CANT AND ENGINEER
A. APPLICANT	0:+::/-6 1 1 2- 4
The undersigned owner or authorized representative of *_	CITY OF Lakeland
is fully aware that the statements made in this application	for a <u>Operating</u> permit are
	and belief. Further, the undersigned agrees to maintain and
	facilities in such a manner as to comply with the provisions of lations of the Department or revisions thereof. He also under-
	non-transferable and he will promptly notify the Department
upon sale or legal transfer of the permitted establishment.	non-transferable and the win promptly notify the Department
upon sale of regal transfer of the perimited establishment.	Mil Oslin
Sigr	nature of the Owner or Authorized Representative
·	
Date:	7 / 78 Telephone No.: (813) 682-8163
*Attach a letter of authorization. If applicant is a corpora	ation, a Certificate of Good Standing must be submitted with the Secretary of State, Bureau of Corporate Records, Talla-
B. PROFESSIONAL ENGINEER REGISTERED IN FLORID)A
•	ition control project have been designed/examined by me and
	ciples applicable to the treatment and disposal of pollutants
eharacterized in the permit application. There is reasonal	ole assurance, in my profesional judgment, that the pollution
control facilities, when properly maintained and operated	, will discharge an effluent that complies with all applicable
stativies of the State of Florida and the rules and regulati	ons of the Department. It is also agreed that the undersigned
wifffurnish the applicant a set of instructions for the proper and it applicable, pollution sources.	maintenance and operation of the pollution control facilities
and if applicable, pollution sources.	·
	D 0 D 000
and it applicable, pollution sources.	Mailing Address P.O. Box 368
Manie Cack A. Libey	Larsen Memorial Power Plant
The state of the s	Lakeland, F1. 33802
Gonipany Name City of Lakeland	Telephone No.:(813)682-8163
Florida Registration Number 18741 [Date 8-4-28

DETAILED DESCRIPTION OF SOURCE

The diesel generator is a 2.5 MW peaking unit that burns No. 2 fueloil with an average sulfur content of 0.10%. Schedule of Project Covered in this Application (Construction Permit Application Only). Start of Construction Completion of Construction Costs of Construction (Show a breakdown of costs for individual components/units of the project serving pollution or trol purpose only). Information on actual costs shall be furnished with the application for operation permit. Stack - \$2500 (Estimated)	The	ssary.							1 -				
Schedule of Project Covered in this Application (Construction Permit Application Only). Start of Construction Completion of Construction Construction (Show a breakdown of costs for individual components/units of the project serving pollution of trol purpose only). Information on actual costs shall be furnished with the application for operation permit. Stack - \$2500 (Estimated)		<u>diesel ger</u>	erator	is a	2.5 MW	peaki	ng uni	t tha	t bur	ns N	10.	2 :	fuel
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Completion of Construction Costs of Construction (Show a breakdown of costs for individual components/units of the project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit. Stack - \$2500 (Estimated)	Jened	tale of Project Co.	crod in time	прричине	(00		търже		, ,-				
Completion of Construction Costs of Construction (Show a breakdown of costs for individual components/units of the project serving pollution control purpose only). Information on actual costs shall be furnished with the application for operation permit. Stack - \$2500 (Estimated)		Start of Construct	lion									_	
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\cdot		-							-				
	For th	is source indicate	any previou	s DER per	mit: issuai	nce dates,	and expira	tion dates	s; and o	rders ar	nd n ot	ices.	
For this source indicate any previous DER permit: issuance dates, and expiration dates; and orders and notices.	o mm	it No. A05	3-5073	- Issu	led 10-	-5-76.	Expire	es 10-	-5-78	4			
	CY III						, .			•			
				. •			### T. T. T.						
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			•										
For this source indicate any previous DER permit: issuance dates, and expiration dates; and orders and notices. Permit No. A053-5073 - Issued 10-5-76, Expires 10-5-78													
					. :								
											-		
Permit No. A053-5073 - Issued 10-5-76, Expires 10-5-78 this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida State	this a						Impact (D	RI) pursı	uant to C	hapter :	380, F	lor ida	a Statu
Permit No. A053-5073 - Issued 10-5-76, Expires 10-5-78	this a						Impact (D	RI) purst	ant to C	hapter :	380, F	- larida	a Statu

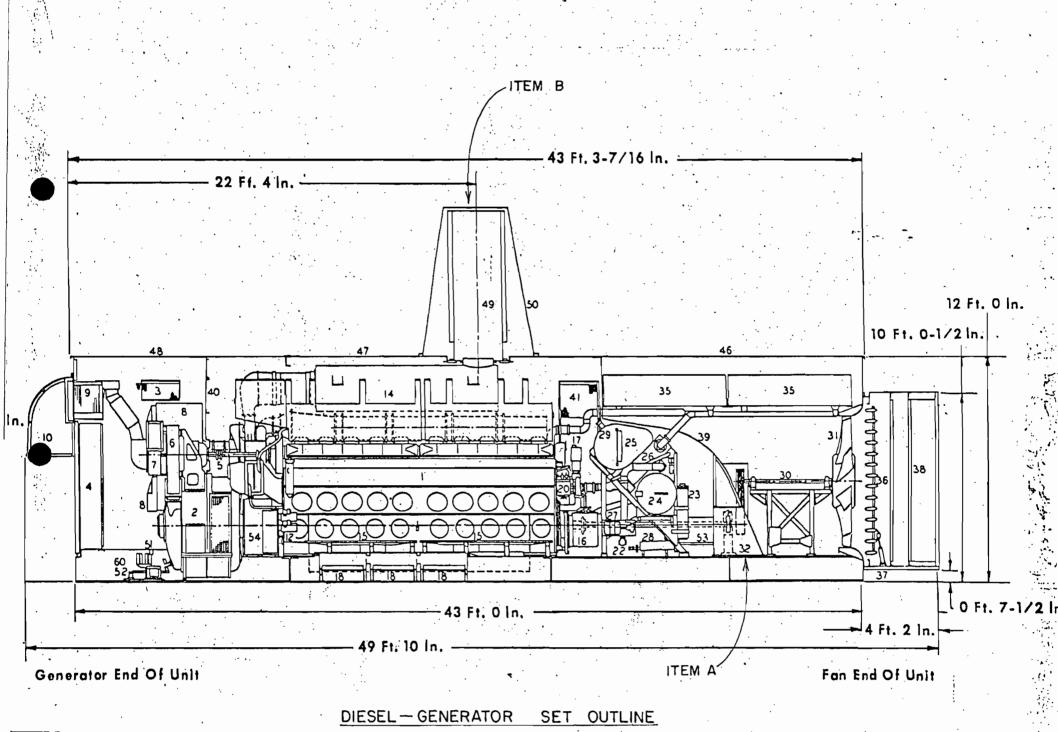
	dentification of A) [X] Particu	lates					
	a) [] Dus	(0) ()	⟨X Fly Ash	c) { Smoke	a) []	Other (Iden	tify)
. 2 a)		b) [] Reduce	d Sulfur as H ₂ S	c) [] Otho	er (Identify)	en e
3	, , ,	n Compound x as NO 2	ls - b) [] NI	la de la companya de	c)[]	Other (Ident	ify)
4)] Flourid	es		5) [] Acid M	ist 6) []	Odor	
7) [] Hydroc	ar bons		8) [] Volatil	e Organic Compo	un ds	
9) [] Other (Specify)			·		
B. R	aw Materials and	Chemicals Us	ed (Be Specific)		· · · · · · · · · · · · · · · · · · ·	• .	
· .·	Description		Utilization Rate lbs./hr.	Cont	oximate aminant ontent		Relate to Flow Diagram
	· .			Туре	- % W1.		
	NA						· -·
							, property and
							. · · · · · · · · · · · · · · · · · · ·
. 1) 2)	ocess Rate: Total Process inp Product Weight*	MWH\	DAY	-	* .	Units.	- 15
3)	Normal Operation				seasonal describ		ng service
D. Air	hrs./day		days/ ed:	wk		wks/yr	
Name	of Contaminant	Actua Discha		Discharge Criteria Rate*	Allowabl Discharg Lbs./hr	e	Relate to Flow Diagram
Sulfu	r_Dioxide		g.4 Non	е .	NA.		Item B
Parti	<u>culates</u>	see D p	g.4 Non	е	NA.		Item B
	 	 -		· · · · · · · · · · · · · · · · · · ·			
			·				
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	· ·- 			·			- N.

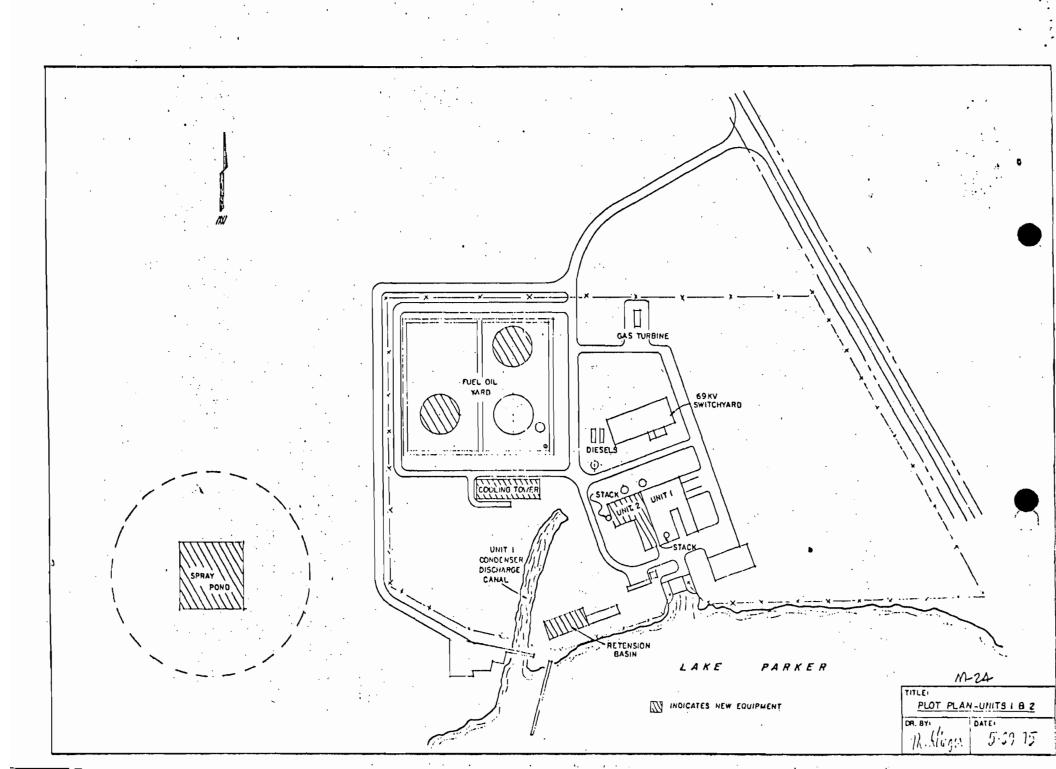
^{*}Refer to Chapter 17-2.04(2), Florida Administrative Code. (Discharge Criteria: Rate=#/ton P₂O₅, #/M BTU/hr., etc.)

^{**}Estimate only if this is an application to construct.

D. Airborne Contaminants	Di	gcd. (Cont'	'd.)		(•
Name of Contaminant	Er	lourly mission lb./hr.)	Em:	ssion (day)	Year Emiss (T/yr	ion	Basis for Estimate Data, M Balar	c (Test
Sulfur Dioxide	2.8	36 1.	. 11.4	2	0.71		Material	Balance
Particulates	0.3	4	0.56	: .	0.04		Material	Balance
				· · · · · · · · · · · · · · · · · · ·	14.4	: .		
							1	
(1) Based on 4 h	ours	'day		•			Fig. 1. April 18	20.00 mg
(2) Based on an			500 ho	urs/ye	ar			•
		1 1	A 1/2		·	.]		
	1 .				7			
E Control Devices:	· . · .							
Name and Type (Model and Serial No.)	Conta	minant	Efficienc	4	onditions Operations	-	Basis for E Operations Test, Desig	al Data,
Stack	SO ₂	.Part	NA		NA ··		NA	
e e e e e e e e e e e e e e e e e e e		* 1						
	-		· :		14,211,700			
3 mg - 3 mg	1	·		***				
			**					
	, :					· . ·	. y 	
					<u></u>			
· · · · · · · · · · · · · · · · · · ·								
See required supplement.			,					
Include any test data and/or d	esign dat	a for effici	ency substa	antiation)			.*	**
F. Fuels		•		· · · · ·				<u> </u>
Type (Bc Specifi includes %S, etc.		Da	aily Consun	Consumption *			Maximum Heat Input	
		Avg./hr.	(3)	Max./	nr.		MBTU/ḥr.	
No.2 oil		81.5		1428	6 - 6	'28 MI	BTU/Hr.	 · .
(0.10%S)			· .			•		
		•					,	
(3) Based or	8760	Hours	s/Year	£ 500	hrs/yr	oper	ration	
* Units: Natural Ga	_ _				<u> </u>			
•			,				,	
	erage	3			• • • • • • • • • • • • • • • • • • • •			· · ·
Percent Sulfur	.10		Percer	Ash_Le	ss than	0.01		· .
Density 7.0	0		o./gal.					
Heat Capacity 19,	600		_BTU/Ib	137,2	00	BTU/	gal.	.:
Other Fuel Contami	nants	Ň	lone					•
17-1-Page 4 of 6		_					-	

	``.	i	•				•
Describe briefly, wit in this application.		•			-		
<u>A diesel g</u>						tion (engine
driving a	generator t	to produce	electri	c powe	r		·
							
• • • •							
Indicate liquid or sol none	d wastes generated	d and method of o	disposal.		•	. •	
			-				
Emission Stack Geom	etry and Flow Cha	racteristics, (Prov	vide Date for	each Stack)			
Stack Height2)	ft, Stack	Diameter	2.6	ft		
Gas Flow Rate 24	,600	ACFM, Gas E	xit Temperat	ure_ 715	oF		
Required Supplements	:						·
. Total process input	rate and product v	veight — show dev	viation.				:
2. Efficiency Estimation	on.	.:					
8. An 8½" x 11" flow processes. Indicate airborne particulate	whether raw mate	erials enter, where	e solid and lic	quid waste (
An 8½" x 11" plot Relate all flows to th		exact location of	manufacturi	ng processe	s and outlets for	airborne	emissions.
An 8½" x 11" plot to the surrounding a						missions	in relation
If applicable, provide airborne contaminate capacity for controperiod(s) of discharge	nts identified in th Aftreatment device	his application. and the feature	Include detai	ils of the m	nanufacturer, mo	odel, size	, type and
Plans for storm water		• •	•				





VISIBLE EMISSIONS REPORT

observation date 7-10-78	distance to stack 100' N
time 1:15pm	wind direction/speedS
5 04 CK 10 CK 01 CM	plant - Diesel No. 2
UTM coordinatesE408500	E3105800
process description No. 2 Oil Fire	
Driven Diesel	Generator

observer Mike Gieger

opacity observations in percent

sec min	0	15	30	45
O	15	15	15	15
1	15	15	15.	15
2	15 _	15	15	15
3 .	15	15	15	15
4	15	15	.15	15
5	15	`.1 _. 5	15	15
6 .	15	15	15	15
7	15	15	15	.15
8	15	15	15	15
9	15	15	. 15	15
10	15	15	15	15
11	15	15	15	15
12	15	.15	15	.15 .
13	15	15	15	15
14	15	15	15	15
15	15	15	- 15	15

	•			
sec				1
min	0	. 15	30	45
16	15	15	15	15
17 -	15	15	15	15
18	15	15	15	15
19	15	15	15	15
20				
· 21 .				
22	· .			
23			·	
24				
25				
26		-		
27				
28				
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30	-		· - .	
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pacity observation

sec	0	15	30	45
31				
32				
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34				
35				
36				
37			•	
38				
39				
40				
41			·. ·	
42				.*
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44				
45				
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is in n	cent			•
sec	0	15	30	45
46			·.	
47				
48	•	,		
49				
50	•		,	•
51				
52		٠٠;		
53				
,54				
- 55				
56		_		
57				
58	•			
59				
. 60				

sum of readings	recorded 1200
total number of	readings 80
opacity % sum total	= 15.0

comments:

Partly cloudy Sky:

and Hot

Both diesels fully Load:

loaded to 5½Mw.

observer certification card

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO



CERTIFY THAT

MICHAEL	GIEGER
---------	--------

, has completed the STATE OF FLORIDA visible emissions evaluation training and is a qualified observer of visible emissions as specified by EPA reference method 9. October 14,

This cortificate expires on Bearer's Signature Certification Officer



A053-5073



D. E. R.
CENTRAL SUB DISTRICT
WINTER HAVEN

- ATTWILL

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

Туро	rce Type e application: ece Status:	Air Pollution [XX] [XX] Operation [] New	Incinerator [] [] Construction [XX] Existing	ı [] Modification	
Sour	ce Name: _Pow	er Plant No.	3. Diesel No	. 2 County Polk	
Sour	ce Location: Str	ee. North Lake	Parker Drive	City Lakeland	· —————————
	U	TM: East_408500_		_North_3105800	
Appl Appl	. Name and Title	C.D. McInt	osh Jr., Dir 68, Lakeland	ector, Deptartment of E , Florida 33802	& W Utilit
		STATE	MENTS BY APPLICA	NT AND ENGINEER	•
	is fully aware the true, correct are operate the poll Chapter 403, F stands that a pe	nat the statements made nd complete to the best ution control source and lorida Statutes, and all	e in this application for t of his knowledge and d pollution control fac the rules and regulat Department, will he no	ity of Lakeland ra Operating d belief. Further, the undersigned agree cilities in such a manner as to comply with the sons of the Department or revisions there on-transferable and he will promptly noting	n the provisions of of. He also under-
			Signal	ure of the Owner or Authorized Represen	ntative
		r of authorization. If ag	oplicant is a corporati	on, a Certificate of Good Standing must	be submitted with
	application. The hassee, Florida		a \$5.00 charge, from	the Secretary of State, Bureau of Corpora	ite Records, Talla-
В.	This is to certiffound to be in characterized in control facilitie statutes of the will furnish the a	conformity with mode the permit application s, when properly maint State of Florida and th	eatures of this pollution can engineering principal. There is reasonable tained and operated, the rules and regulation	on control project have been designed/exples applicable to the treatment and disples assurance, in my profesional judgment, will discharge an effluent that complies as of the Department. It is also agreed the aintenance and operation of the pollution	posal of pollutants that the pollution with all applicable at the undersigned
-	Signature Name_Jack	A. Libey (Please Type)	M. L.	ailing Address P.O. Box 368 arsen Memorial Power Pl akeland, Fla. 33802	ant
	Company Name	City of Lake		lephone No.: (813) 682-8163	
	Florida Registra (Affix Se	tion Number <u>1874</u>	1 . Da	te	· · · · · · · · · · · · · · · · · · ·

DETAILED DESCRIPTION OF SOURCE

The diesel generator oil with an average	sulfur content of	0.10%.	<u> </u>	· · ·
		. 7.		Nage - Land
	· · · · · · · · · · · · · · · · · · ·	·		
				
·			. 0	
Schedule of Project Covered in this A	Application (Construction Perm	it Application	o Only).	
Start of Construction	····			· ·
Completion of Construction _	· · · · · · · · · · · · · · · · · · ·	· ··		•
		•	•	
rol purpose only). Information on : -Stack\$2500_(Esti	uctual costs shall be furnished w	vith the applic	cation for operation	n permit.
	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated)	vith the applic	eation for operation	n permit.
Stack- \$2500 (Esti	mated)	vith the applic	eation for operation	n permit.
rol purpose only). Information on : -Stack\$2500(Esti	mated) DER permit: issuance dates, a	nd expiration	dates; and orders	and notices.
Stack - \$2500 (Esti	mated) DER permit: issuance dates, a	nd expiration	dates; and orders	and notices.
For this source indicate any previous Permit No. A053-265	mated) DER permit: issuance dates, a	nd expiration	dates; and orders	and notices.
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Stack - \$2500 (Esti	mated) DER permit: issuance dates, a	nd expiration	dates; and orders	and notices.
For this source indicate any previous Permit No. A053-265	mated) DER permit: issuance dates, a	nd expiration	dates; and orders	and notices.

AIR POLLUTION SOURCES & CONTROL DEVICES

(other than incinerators)

Α.	Identification of Ai 1) [X] Particul a) [] Dust	ates		sh	c) [] Smoke	d)[]	Other (Ide	ntify)	
	2) X Sulfur (a) a) X SO x		þ) []	Reduce	d Sulfur as H ₂ S	c) [] Oth	er (Identify) ()	
		n Compound as NO2		[] NH	l ₃	c)[]	Other (Ide	ntify)	
	4) [] Flouride	es			5) [] Acid Mis	st 6) []	Odor		
	7) [.] Hydroca	arbons			8) [] Volatile	Organic Comp	ounds		
	9) .] Other (5	Specify)		٠.	<u> </u>		. •	,	
В.	Raw Materials and (Chemicals Us	sed (Be Sp	ecific)					
	Description		Utiliza Rat lbs./	le	Conta	oximate minant ntent		Relate to Flow Diagram	
	<u> </u>				Туре	% Wt.			
	NA								
			ļ	<u></u>					
		<u>. </u>					į		
C.	Process Rate: 1) Total Process inp 2) Product Weight*			U/Hr.	Units.		Units.		
	3) Normal Operation	ng Time_40	0-600		-			_	
	hrs./day		 	days/	wk		wks/yr		
D.	Airborne Contamina	ants Discharg	ged:						
N:	ame of Contaminant	Actu Disch			Discharge Criteria Rate*	Allowat Dischar Lbs./r	ge	Relate to Flow Diagram	===
Sul	fur Dioxide	see D	og.4	Non	ıe	NA_		Item B	
Par	ticulates	see D	og.4	Non	ie	NA	l	Item B	
- —									

(Discharge Criteria: Rate=#/ton P2O5, #/M BTU/hr., etc.)

^{*}Refer to Chapter 17-2.04(2), Florida Administrative Code.

^{**}Estimate only if this is an application to construct.

D. Airborne Contaminants Discharged. (Cont'd.)

Name of Contaminant	Hourly Emission (lb./hr.)	Daily Emission (lb./day) (1)	Yearly Emission (T/yr.) (2)	Basis for Emission Estimate (Test Data, Material Balance)
Sulfur Dioxide	2.86	11.42	0.71	Material Balance
Particulates	0.14	0.56	0.04	Material Balance
,				the state of the s
(1) Based on 4 hc	urs/day			and the second s
(2) Based on an a	1	00 hours/ye	ar ·	
			\$ e1 :	

E. Control Devices:

Name ar (Model and	nd Type Serial No.)	Contaminant	Efficiency*	Conditions of Operations	Basis for Efficiency Operational Data, Test, Design, Data)
Stack		SO ₂ .Part.	NA	NA ·	NA · · ·
		•			
	_		-		
			.'		
				_	

^{*}See required supplement. (Include any test data and/or design data for efficiency substantiation)

-	-		el		
	1	u	C.	13	

Type (Be Specific, includes %S, etc.)	Daily Const	umption *	Maximum Heat Input
	Avg./hr. (3)	Max./hr	MBTU/hr.
No.2 oil	81.5	1428.6	28 MBTU/Hr.
(0.10%S)			•
-			
(3) Based on 8	760 Hours/Year	8 500 brs/vr	. operation

(3)	Based	on	0100	nours	ream,	G	300	шъу.	L'i	ober.	at.

* (Juits:	Natural	Gas-MCF	/hr.; F	uel Oil	s, Coal—	ibs./hr
-----	--------	---------	---------	---------	---------	----------	---------

Fuel Analysis: Average

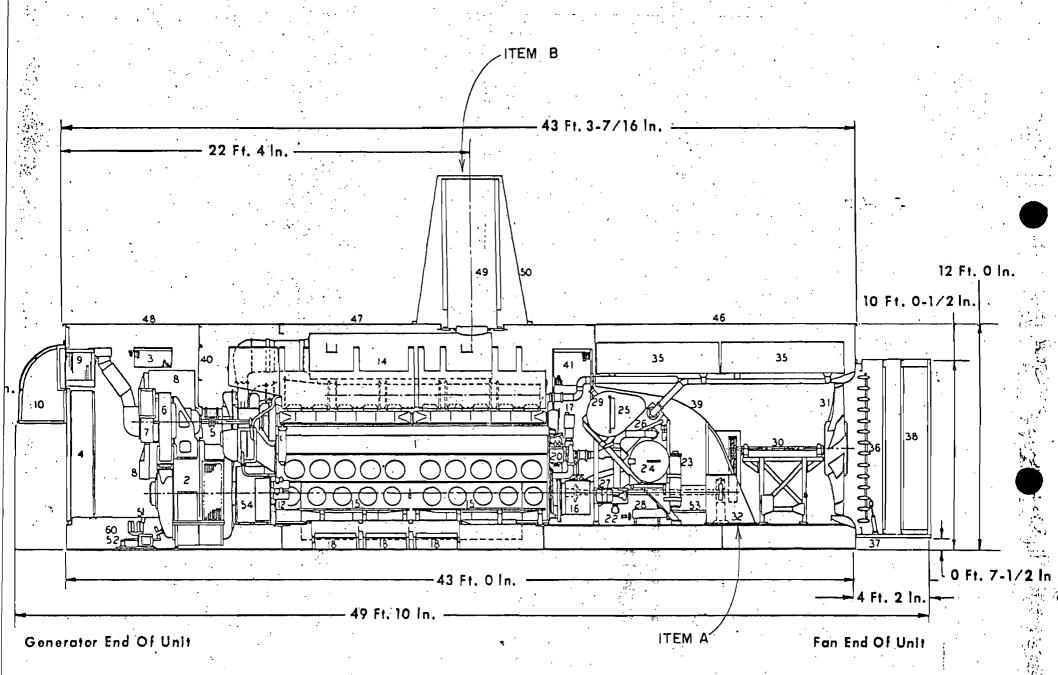
Percent Sulfur 0.10 Percent Ash Less than 0.01

Density 7.00 lb./gal.

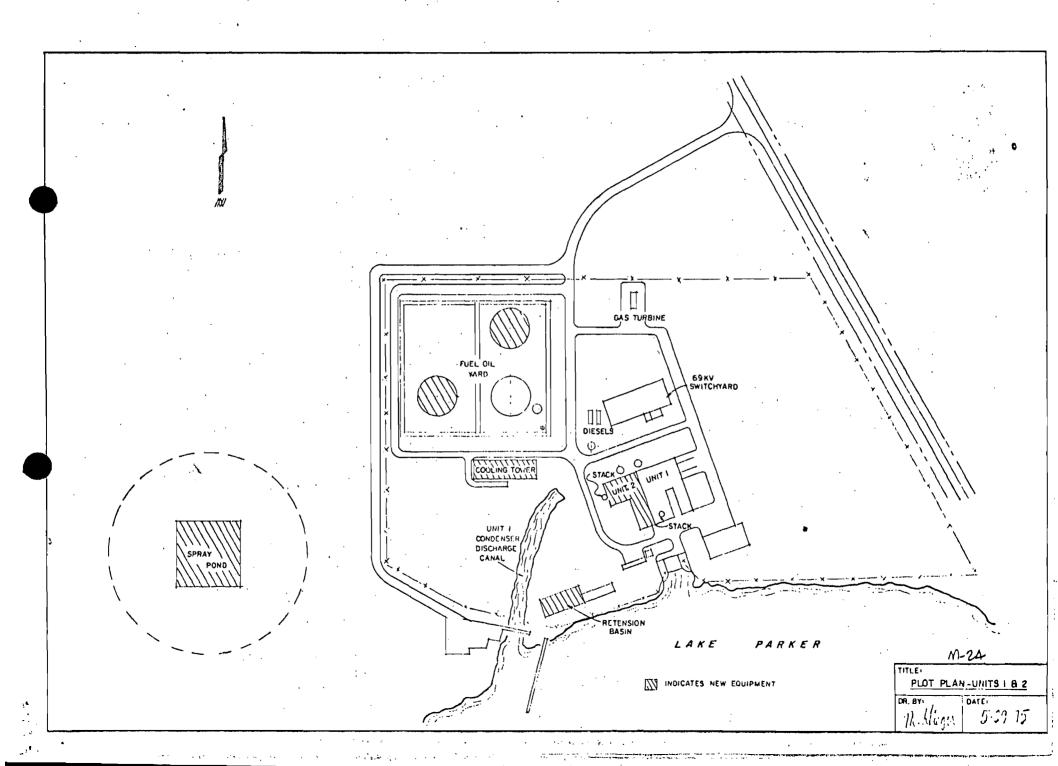
Heat Capacity 19,600 BTU/lb. 137,200 BTU/gal.

Other Fuel Contaminants None

TI dieber Benerator	<u>is a diesel fueled i</u>	nternal combustion engi
driving a generator	r to produce electric	power
	• •	
•		
Indicate liquid or solid wastes gener none		· · · · · · · · · · · · · · · · · · ·
		<u> </u>
Emission Stack Geometry and Flow	Characteristics, (Provide Date for each	ch Stack).
Stack Height 20	ft, Stack Diameter	2.6
Gas Flow Rate 24,600	ACFM, Gas Exit Temperature	e 715 or
·		
Required Supplements:		
. Total process input rate and produ	or mainhe a sham danishina	*
. Total process input fate and produ	ict weight — show deviation.	
2. Efficiency Estimation.		
•	•	
processes. Indicate whether raw		ets, identify the individual operations ar id waste exit, where gaseous emissions an ned.
4. An 8½" x 11" plot plan showing Relate all flows to the flow diagram		processes and outlets for airborne emiss
	the exact location of the establishmer and other permanent structures and	nt, and points of airborne emissions in rela roadways.
	· ·	tment system serving the discharge poin



DIESEL - GENERATOR SET OUTLINE







DEPARTMENT OF POLLUTION CONTROL APPLICATION TO OPERATE/CONSTRUCT POLLUTION SOURCES WINTER HAVEN SECTION I – GENERAL INJECTIVATION CONTROL

SECTION I – GENERAL INFORMATION FOR ALL POLLUTION SOURCES 1 TO BE FILLED IN BY APPLICANT

Source Type: Type application: Status Source:	Air Pollution [X] Operation [] New	[] Temporar	y Operation	[] Construction [] Modification
Source Name: Power	er Plant No.	3 Diesel N	lo. 2	County: Polk
Source Location: Stre (Water Source Only) (Air Source Only)	Lat:		" Long: _	City:Lakeland
Appl. Name and Title: Appl. Address:	P.O. Box 36	osh, Jr. Dir 88 Lakeland, EDIN BY REGION	, Fla. 3380	
Control No: Region_				*Project
Type Permit	Date Rec'd		*Issue Date	*Compl. Date *Exp. Date
Source Description: Control Equipment:	. 5.			
Receiving Body Code: Station No.: Influent:		Water P	ermits Surface Water Effluent:	· · · · · · · · · · · · · · · · · · ·
Effluent: Flow rate, I BOD, lbs/d Susp. Sol., Other:	MGD ay lbs/day	verage	Design	% Reduction
	[] Continuous , tons/day	Air Pe	rmits [] Inter M-BTU/hr. In Pu Type Wast	iti
Pollutant Emissions, lbs Particula Sulfur O Other:	s/day A ate xides	ctual	Design	Allowable
Implementation: Estim Estimated Start of Cons			Estimated Co	mpliance Date

DESCRIPTION OF PROPOSED PROJECT

The diesel ge	nerators	are small	(2.5MW)	peaking	units	capabl	e of
burning 0.18%	Sulfur N	lo. 2 oil					
				• ,	<u> </u>		
				· · · · · · · · · · · · · · · · · · ·			
,		·			· · · · · ·		
	•	· · · · · · · · · · · · · · · · · · ·	<u> </u>				_
							
		· · ·					-
			·	_ 			<u> </u>
	•				· · · · · · · · · · · · · · · · · · ·	 	·
Schedule of Project Covere	d in this Applic	ation (Construct	ion Permit App	lication Only).			
Federally or State Fina		-		,			
Planning Complete	inced Projects of	iuy.					
Planning Complete Financing Program	Complete				.		- '
Indicate other local	complete	daral aganay an	royals and date				- .
ilidicate builti local	i, state and/or re	cuciai agency app	olovais aliu uate				_
				. :			
							_
. A 11		_					
All projects:	a-i		· .				
Start of Construction	on	· ·	· .	· · · · · · · · · · · · · · · · · · ·		-	-
Start of Construction Completion of Con	struction	<u> </u>	_	· · · · · · · · · · · · · · · · · · ·			- -
Start of Construction Completion of Con Costs of Construction (SI	struction	wn of costs for	individual com	ponents/units	of the pro	oposed proje	 ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction how a breakdow only). Informat	wn of costs for ion on actual cos	individual com sts shall be furn	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (SI	how a breakdow only): Informat	wn of costs for ion on actual cos	individual com sts shall be furn	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si collution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si collution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si collution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si collution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	n for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	n for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose	struction	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	n for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose Stack - \$2500	how a breakdow only): Informat	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	n for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose Stack - \$2500	how a breakdow only): Informat	wn of costs for ion on actual cos	individual com	ponents/units ished with the	of the pro	n for operation	ect ser
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose Stack - \$2500 Indicate any previous DPC	permits, issuance	wn of costs for ion on actual costated)	individual comsts shall be furn	ponents/units ished with the	of the pro	n for operation	on per
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose Stack - \$2500 Indicate any previous DPC Operation peri	permits, issuance	wn of costs for ion on actual costated)	individual comsts shall be furn	ponents/units ished with the	of the pro	n for operation	on per
Start of Construction Completion of Con Costs of Construction (Si pollution control purpose Stack - \$2500 Indicate any previous DPC	permits, issuance	wn of costs for ion on actual costated)	individual comsts shall be furn	ponents/units ished with the	of the pro	n for operation	on per

AIR POLLUTION SOURCES & CONTROL DEVICES

A. Identification of A 1) [X] Particu a) [] Dus	lates	•	c) [] Smoke	d) [] Ot	her (Identify)
2) [X] Sulfur a) [X] SO,		b) [] Red	uced Sulfur as H ₂ S	c) [] Ot	her (Identify)
3) [X] Nitroge a) [X] NO	en Compound as NO ₂	s b) [] NH ₃	, · · · · · · · · · · · · · · · · · · ·	c) [] Ot	her (Identify)
4) [] Flourid	les	5)	[] Acid Mist	6)	[] Odor
7) [] Hydrod	carbons	8)	[] Volatile Orga	nic Compounds	
9) [] Other (Specify):	· .		·	
B. Raw Materials and		ed (Be Specific)			
Description		Utilization Tons/day, lbs./day, etc.	Approx Contam Cont	inant .	Relate to Flow Diagram
NA			Туре	% Wt.	
			·		· · · <u> </u>
· · · · · · · · · · · · · · · · · · ·					
2) Product Weig	tht _1.0MWH	/day1	lbs./hr. [See ab./hr. expressed as	2.5MW@ 4	
				if seasonal describ	e: <u>peaking service</u>
will ave	erage 40	0 hrs per	year		
D. Airborne Contamir	nants Discharg	ed:			
Name of Contaminant	Actua Dischar		Discharge Criteria *	Allowable Discharge*	Relate Location to Flow Diagram
Particulates	0.09	lb/MBTU	NONE	NA	ITEM B
SULFUR DIOXIDE	0 15 1	h/MBTII	NONE	NA	ттем в

^{*} Refer to Chapter 17-2 Florida Administrative Code (Discharge Criteria: Process Weight Rate, #/tonP₂O₅, #/M BTU/hr etc.)

E. Control Devices:

Name		· ·	Eff.	Conditions of Operation, Particle Size Range, etc.	Relate to Flow Diagram
STACK	(FLYASH)	. * 1	NΑ	EXIT GAS TEMP IS	ITEM B
STACK	(SO ₂)		NA	465 ^O F @149 fps	ITEM B
STACK	(NO _X)		NA		ITEM B

F. Fuels:

Type (Be specific)	Daily Consumption	Heat Input BTU/hr.	Relate to Flow Diagram
NO. 2 FUEL OIL	4.3 bbl/day	28 M BTU/hr	Item A
	(yearly ave.)		

G. Describe briefly, without revealing trade secrets, the unit processes/operations generating the airborne emissions identified in this application:

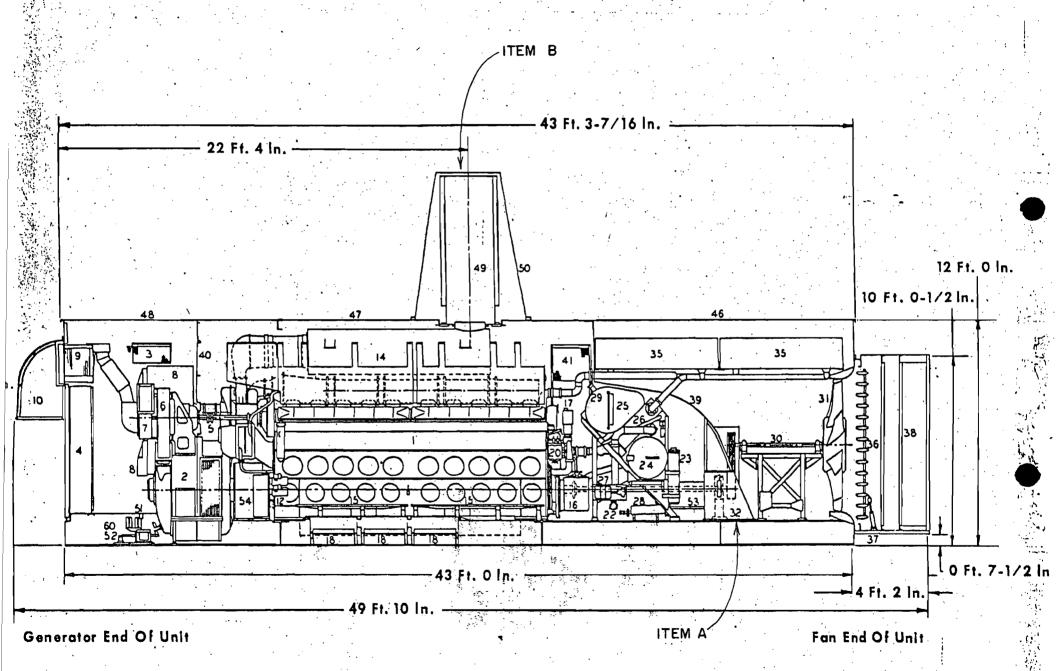
A diesel generator is a diesel fueled internal combustion engine driving a generator to produce electric power

H. Indicate liquid or solid wastes generated and method of disposal.

There are no solid or liquid wastes generated

STATEMENTS BY APPLICANT AND ENGINEER

A.	. Applicant
	The undersigned owner or authorized representative of * City of Lakeland is fully aware that the statements made in this application for a <u>operation</u> permit are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter
	403 Florida Statutes and all the rules and regulations of the Department or revisions thereof. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale of legal transfer of the permitted establishment.
	Complato
	Signature of the Owner or Authorized Representative
	C.D.McIntosh, Jr., Director, E&W Utilities
	Name and Title (Please Type
	Date: June 10, 1975 Telephone No.: (813)682-1121
	* Attach a letter of authorization
В.	Professional Engineer Registered in Florida:
	This is to certify that the engineering features of this pollution control project have been designed/examined by me an found to be in conformity with modern engineering principles applicable to the control and discharge of pollutant characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollutio source(s) with appropriate control facilities, when properly maintained and operated, will comply with all applicable statutes of the State of Florida and the rules and regulations of the Department. It is also agreed that the undersigne will furnish the applicant a set of instructions for the proper maintenance and operation of the installation covered it this application.
	Name:
Flo	orida Registration Number 18741 Date: June 10, 1975 (Please affix seal)



DIESEL-GENERATOR SET OUTLINE

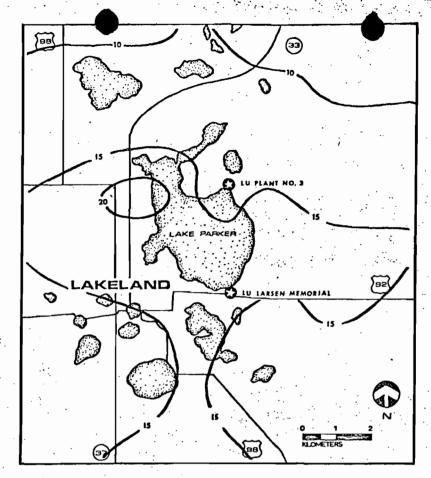


Figure 7-18. Predicted Annual Average Sulfur Dioxide Concentrations $(\nu g/m^3)$ Near the City of Lakeland Power Plants, 1973.

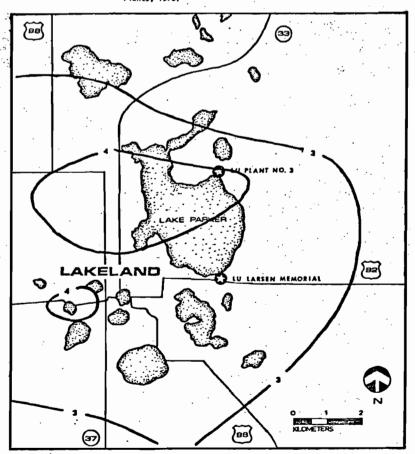


Figure 7-19. Predicted Annual Average Sulfur Dioxide Concentrations (ug/m^3) Near Lakeland Utilities Power Plants at 1
Percent Sulfur, 1975. Assumes all other sources in compilance with emission limitations.

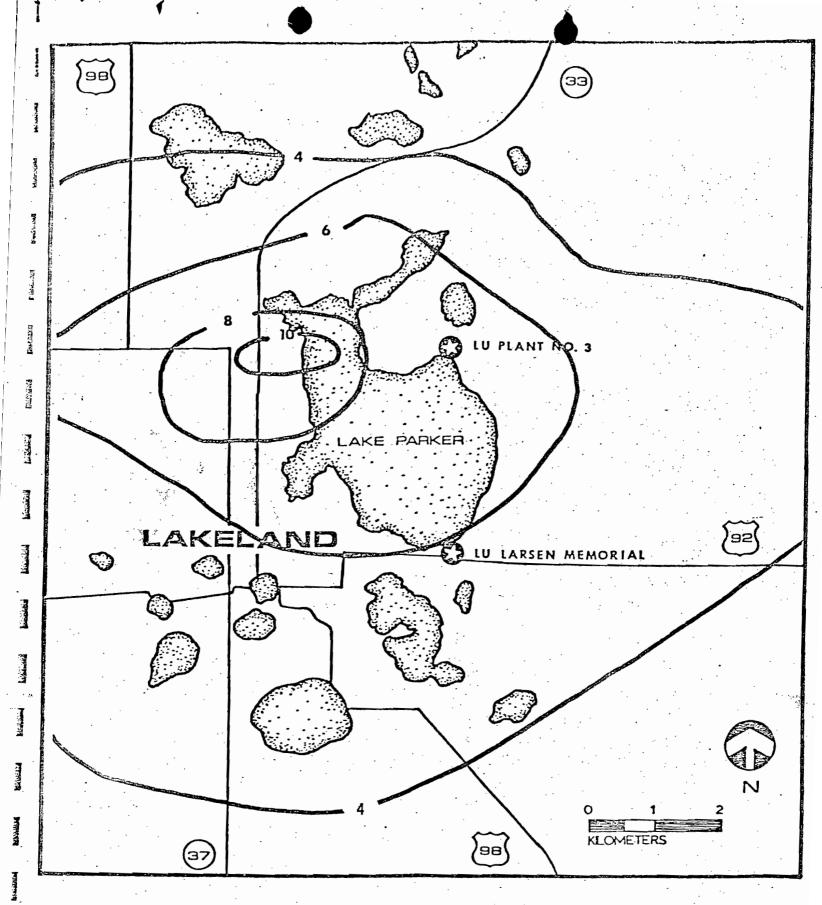


Figure 7-20. Predicted Annual Average Sulfur Dioxide Concentrations (µg/m³) Near Lakeland Utilities Power Plants at 2.8 Percent Sulfur, 1975. Assumes all other sources in compliance with emission limitations.



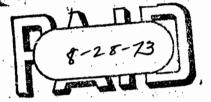
53-211 D. P. C.

AUG 28 1973

WEST CENTRAL REGION

State of Florida Oth VHI Department of Air and Water Pollution Control

Application For Permit to Operate Air Pollution Control Facilities



(Owner or authorized agent)		C. D. McIntosh, Jr., Director (Name and Title)
Name of Establishment		City of Lakeland, Plant No. 3, Gas Turbin (Corporation, Company, Political SD, Firm, etc.)
Mailing Address		Department of Electric & Water Utilities P. O. Box 368, Lakeland, Florida 33802
Location of Pollution Source		North-East Lake Parker Drive, Lakeland (Number and Street) (City)
		Polk (County)
Nature of Industrial Operation		Electric Utility GAS TURBINE BEAKING UNIT, PET. No.3
Permit Applied For Operating:		Project Engineer:
New Source	₽	William R. Lesnett
Existing Source		City of Lakeland
Existing Source after modification		Department of Electric & Water Utilities P. O. Box 368, Lakeland, Florida 33802 Mailing Address
Existing Source after Expansion	. 🗆	Signature R. Lesnett
Existing Source After relocation, expansion or reconstruction		4104 Florida Registration Number
-		-

The undersigned of framework of

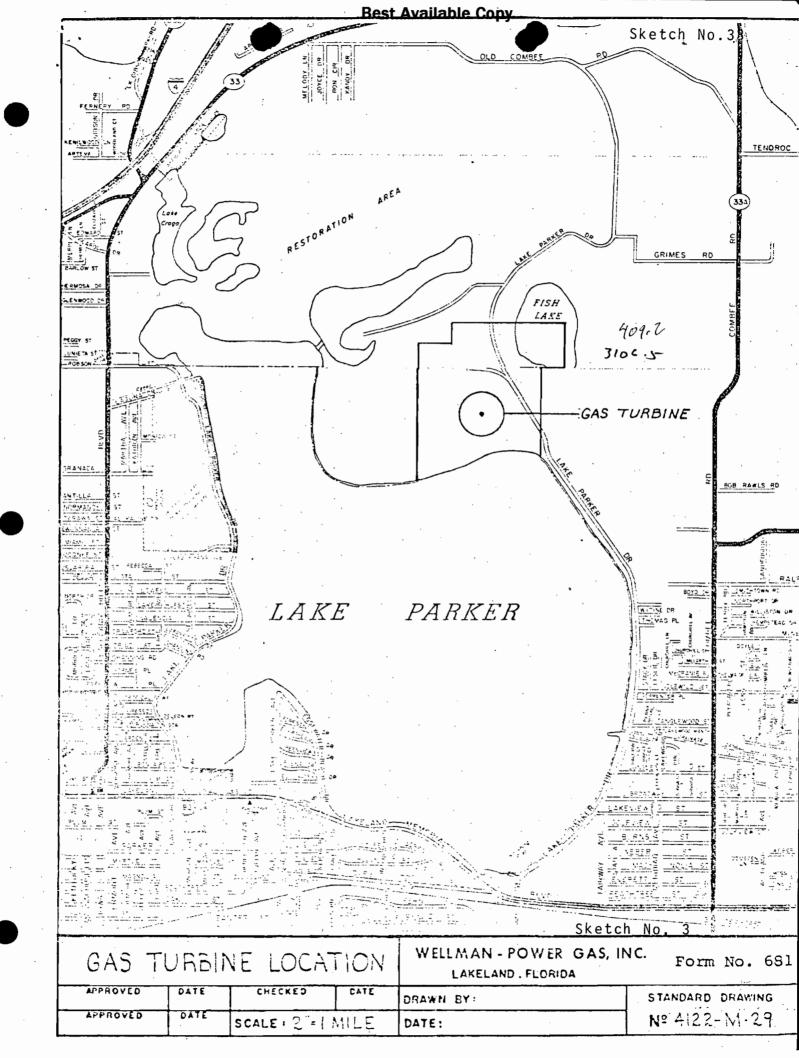
Signature of owner or agent.

C. D. McIntosh, Jr., Director

Name and Title

Date: August 24, 1973

*Attach letter of authorization.



Information Regarding Pollution Sources and Proposed Control Facilities

Air Pollution

- 1. Estimated cost of proposed control facilities \$Stack \$6000.00
- 2. Prepare and attach an 8½" x 11" flow diagram, without revealing trade secrets, identifying the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.
- Refer to Sketch No. 1
 3. Include an 8½ x 11" plot plan showing location of manufacturing processes and location of outlets for airborne emissions. Relate all flows to the flow diagram.
- Refer to Sketch No. 2
 4. Submit an 8½" x 11 plot plan showing the exact location of the establishment and points of discharge in relation to the surrounding area, residences and other permanent structures and roadways.

Refer to Sketch No. 3

I General

A. Raw Materials and Chemicals Used.

Description	Utilization Tons/day, Lbs./day, etc.	App Con	Relate to Flow	
	Lbs./day, etc.	Ţype	Percent Dry Weight	Diagram
. ,	and the second second	. : .		
N/A				
			·	
			•	

B. Fuels		q			n 1
Type (Be Specific)	Dai	ily Consumption	Gross Maxim	um Heat Output	Relate to Flow Diagram
No. 2 Fuel Oill	208	5.57 bbls.	12,280.6 Th	erms/Day	(Item B)
C. Products					
	Descri	iptíon	Average Daily Produ (Tons/Day. Lbs/Hr		
	Elec	ctricity	88 mwh/day	av.	- -
			22 mw @ 4hr	rs/da y	_
D. Normal operation: Ho	urs/Day		Day and Week		
. Compounds of:		II Identification of	f Air Contaminants		
Chlorine		Hydrocarbons		Acid Mists	
Flourine		Smoke		Odors	
Nitrogen	X	Fly Ash	X	Radioisotopes	
Sulfur	X	Dusts		Other	□
Specific Compounds 50,	c, NOx				

III Air Pollution Control Devices

Contaminant	Control Device	Relate to Flow Diagram	Operating Efficiency	Conditions (Particle Size Range, Temp. etc.)
Fly Ash	Stack	Item C	N/A	*Exit gas 84.93 cfs at 965 F. Particle size unknown.
_so _x	Stack.	Item C		unknown.
NOx	Stack_	Item C		<u>.</u>
•	•			

Provide a brief description of the control device or treatment system. Attach separate sheets giving details regarding principle of operation, manufacturer, model, size, type and capacity of control/treatment device and the basis for calculating its efficiency. Show any bypasses of the control device and specify when such bypasses are to be used and under what conditions.

Gas turbine is fired with low sulfur bearing No. 2 fuel oil.

NOTE: Values in this report are calculated for peak operating conditions with an ambient air temperature of 95 F.

#2 Ful 208.57 bbls./kay - 8759,9 gol/day- 1191.3 mm 1374)day

allowable
part. 119.1 #/day

SORiles 953.0 #/day

IV. Contaminant Balance

From contaminant content in raw materials, waste products, and manufactured products, summarize daily contaminant flow:

				minant per Day
		In	put	Output
List Raw Materials:		' ਹ	• :	
Fuel Sulfur		. 9	8.588 1	s./day
Fuel Ash		;	3.080	bs./day
List Manufactured Products:				
Electricity				
List Solid Wastes:			٠.	:
Total Retained Ash				None
List Liquid Wastes:				
	•			
	Totals		101.6	668 lbs.
irborne Wastes (Total input minus total	l output)			

Note: If more than one contaminant, specify each Contaminants recovered in control devices should be shown as either a liquid or a solid waste.

Information Regarding Pollution Sources and Proposed Control Facilities

Air Pollution

- 1. Estimated cost of proposed control facilities \$ Stack \$6000.00
- 2. Prepare and attach an 8½" x 11" flow diagram, without revealing trade secrets, identifying the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.

Refer to Sketch No. 1.

3. Include an 8½" x 11" plot plan showing location of manufacturing processes and location of outlets for airborne emissions. Relate all flows to the flow diagram.

Refer to Sketch No. 2
4. Submit an 8½" x 11' plot plan showing the exact location of the establishment and points of discharge in relation to the surrounding area, residences and other permanent structures and roadways.

Refer to Sketch No. 3

I General

A. Raw Materials and Chemicals Used. Approximate Utilization Relate to Contaminant Tons/day, Content Flow Description Lbs./day, Percent Diagram etc. Type · Dry Weight N/A

B. Fuels		D 11 (**	Relate	
Type	(Be Specific)	Daily C	Consumption	Gross M	aximu	ım Heat Output	Flow Dia	agram ———
Marine	Diesel Oil	208.57	bbls/day	12,280	,6 T	herms/day	Item	В
C. Produ	icts							
		Descriptio	on	Average Daily (Tons/Day. Lb			_	
		Electi	ricity	88 mwh/d	ay a	v	_	
				22 mw @	hr.	s/day	-	
D. Norm	nal operation: Hou	rs/Day		Day and Week				
		т	Identification o	f Air Contamina	inte			
Compoun	ds of:	11	Also –	i Air Containin	liits			
Chlorine			Hydrocarbons]	Acid Mists		
Flourine			Smoke		3	Odors		
Nitrogen		x	Fly Ash	bic.]	Radioisotopes		
Sulfur		x	Dusts	Ė]	Other		🗆
Specific (Compounds SO	c, NO _x					_	

III Air Pollution Control Devices

Contaminant	Control Device	Relate to Flow Diagram	Operating Efficiency	Conditions (Particle Size Range, Temp. etc.)
Fly Ash	Stack	C	N/A	*Exit gas 84.93 cfs at 965 F. Particle size
SO _x	Stack	Item_C		unknown /
_NO _x	Stack_	Item_C		

Provide a brief description of the control device or treatment system. Attach separate sheets giving details regarding principle of operation, manufacturer, model, size, type and capacity of control/treatment device and the basis for calculating its efficiency. Show any bypasses of the control device and specify when such bypasses are to be used and under what conditions.

Gas Turbine is fired with low sulfur bearing Marine Diesel fuel oil.

NOTE: Values in this report are calculated for peak operating conditions with an ambient air temperature of 95 F.

IV. Contaminant Balance

From contaminant content in raw materials, waste products, and manufactured products, summarize daily contaminant flow:

		minant per Day
	Input	Output
List Raw Materials:		
Fuel Sulfur	528.15	lbs/day
Fuel Ash	3.18	lbs/day
List Manufactured Products:		
Electricity		
List Solid Wastes:		
Total Retained Ash		None :
List Liquid Wastes:		
Totals	531.33	lbs.
airborne Wastes (Total input minus total output)		

Note: If more than one contaminant, specify each

Contaminants recovered in control devices should be shown as either a liquid or a solid waste.

V. Discharged Emmissions to Atmosphere

A. Discharge Points and Design Conditions

Discharge Point Description	Relate to Flow Diagram	Height above Ground (ft.)	Cross Sect. Area (sq. ft.)	Periods of Flow Hrs./ Hrs./ Day Wk.		Temp. of Discharge (°F)	
Stack	Item C	35!-0"	66.2	Peaking	Serv.	965.	
			· · · · · · ·	·		. :	

B. Tabulation of Discharged Contaminants Calculated

Total Contaminants Discharged

	Total Containmants Discharged									
Flow Rate	Particulates		Other Contaminants (F ⁻ , SO _X , NO _X etc.)							
at Std. Cond. (cfm)	Gr/ft3 (Std.Cond.)	lbs./ Day	Gr/ft3 (Std. Cond.)	lbs/ Day	Gr/ft3 (Std.Cond)	lbs/ Day				
188,718	0.0004927	3.18	S0x 0.1632	1056.3						
	0.0004927	3.18	0.1632 S0 _x	1056.3						
	at Std. Cond. (cfm)	at Std. Cond. (cfm) Gr/ft3 (Std.Cond.) 188,718 0.0004927	at Std. Cond. (cfm) Gr/ft3 lbs./ Day	at Std. Cond. (cfm) (Std.Cond.) lbs./ Day (Std. Cond.) SOx 0.1632	at Std. Cond. (cfm) Cr/ft3 (Std.Cond.) Ibs./ Day SOx 0.1632 1056.3	at Std. Cond. (cfm) Cr/ft3 (Std.Cond.) Day Cr/ft3 (Std. Cond.) Day Cr/ft3 (S				

VI. Treatment and Disposal of Liquid and Solid Waste

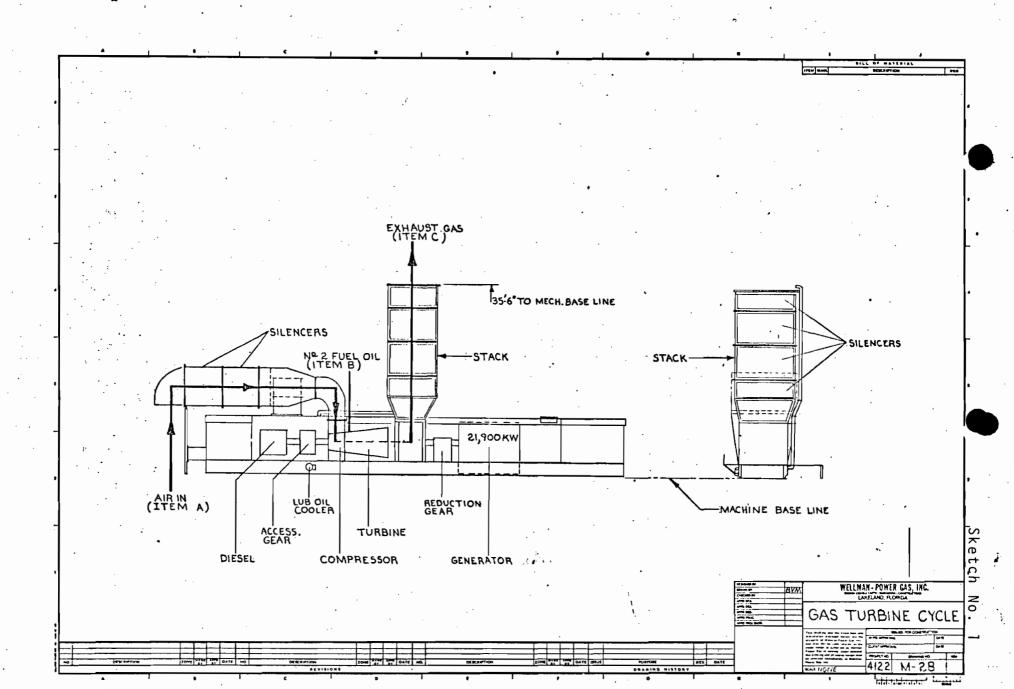
1. Identify the contaminants which will be discharged as liquid or solid wastes.

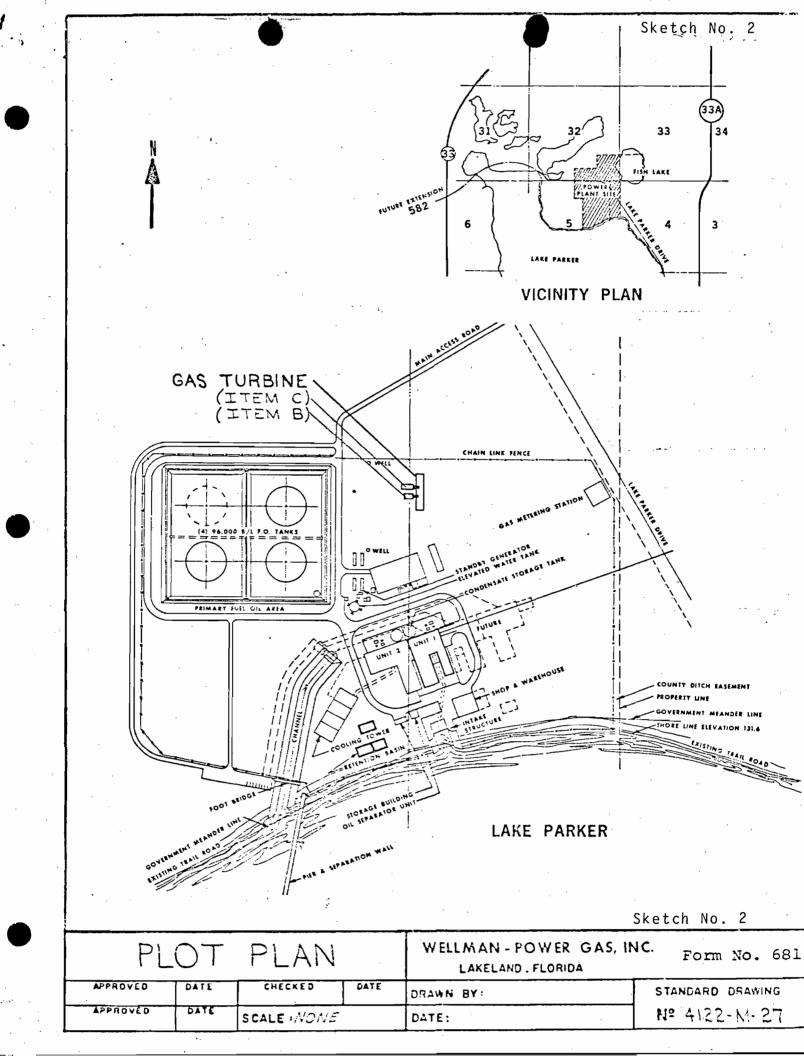
Total Retained Ash

2. Describe the treatment and disposal of liquid and solid wastes. Indicate the concentrations and volume of individual contaminants in treated wastes before disposal.

No disposal required on Marine Diesel fuel oil.

Best Available Copy





V. Discharged Emmissions to Atmosphere

A. Discharge Points and Design Conditions

Discharge Point Description	Relate to Flow Diagram	Height above Ground (ft.)	Cross Sect. Area (sq. ft.)	Periods of Flow Hrs./ Hrs./ Day Wk.	Temp. of Discharge
Stack	_Item_C_	35' -0"	66.2	Peaking Serv.	965
			·		
					

B. Tabulation of Discharged Contaminants Calculated

Total Contaminants Discharged

Discharge	Flow Rate	Particulate		Other Cont	Other Contaminants (F-, SO _X , NO _X etc.)			
Point — Relate to Flow Diagram	at Std. Cond. (cfm)	Gr/ft3 (Std.Cond.)	lbs./ Day	Gr/ft3 (Std. Cond.)	lbs/ Day	Gr/ft3 (Std.Cond)	lbs/ Day	
Peak Condi- tion Stack	188,718	0.0004769	3.08	S0x 0.03047	197.1	76		
			-			-		
Totals		0.0004769	3.08	0.03047 S0 _x	197.1	76		

VI. Treatment and Disposal of Liquid and Solid Waste

1. Identify the contaminants which will be discharged as liquid or solid wastes.

Total Retained Ash

2. Describe the treatment and disposal of liquid and solid wastes. Indicate the concentrations and volume of individual contaminants in treated wastes before disposal.

No disposal required on No. 2 fuel oil.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING 2600 BLAIR STONE ROAD TALLAHASSEE, FLORIDA 32301

PAID SEP 2 1983



D. E. RIGTORIA

GOVERNOR J. TSCHINKEL SECRETARY

SEP 2 198

APPLICATION FOR RENEWAL OF SOUTHWEST DISTRICT PERMIT TO OPERATE AIR POLLUTION SOURCE(S) TAMPA

Permit Application Form.	bblicant anould complete the Standard Air
Source Type: Diesel Turbine	Renewal of DER Permit No. A053-12366
Company Name: City of Lakeland	County: Polk
Identify the specific emission point source(s) Kiln No. 4 with Venturi Scrubber; Peaking Unit	
Peaking Unit No.3, fuel oil fired	
Source Location: Street: 3030 East Lake Parket	r Drive City: Lakeland
UTM: East 408.500	North 3105.800
Latitude: 2 8 0 4 3 0 N.	Longitude: <u>8 1 ° 5 5 ' 4 5 "W</u> .
and the second s	والتقالية والمتحدد

- Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05.
- 2. Have there been any alterations to the plant since last permitted? [] Yes [X] No If minor alterations have occurred, describe on a separate sheet and attach.
- 3. Attach the last compliance test report required per permit conditions if not submitted previously.
- 4. Have previous permit conditions been adhered to? [X] Yes [] No If no, explain on a separate sheet and attach.
- 5. Has there been any malfunction of the pollution control equipment during tenure of current permit? [] Yes [X] No If yes, and not previously reported, give brief details and what action was taken on a separate sheet and attach.
- 6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department? [X] Yes [] No
- 7. Has the annual operating report for the last calendar year been submitted? [X] Yes [] No If no, please attach.

DER Form 17-1.202(4) Effective November 30, 1982

Page 1 of 2

8.	Please	provide	the	following	information	i f	applicable:

	Cont	aminant %Wt	Utilization Rate lbs/h
	:		
B. Product Weight (1bs/	/hr):		
C. Fuels			
Type (Be Specific)	Avg/hr*	mption* Max/hr**	Maximum Heat Input (MMBTU/hr)
o.2 fuel oil with an aver f 0.1% sulfur	rage .30	4,8 1428.6	28
.2			
		·	
Peaking Unit - Ave			
	· ·		
e undersigned owner or aut fully aware that the sta			or a renewal of a permi
fully aware that the sta crate an air pollution sou	itements made in turce are true, cor	his application frect and complete	to the best of his knowle
fully aware that the sta rate an air pollution sou belief. Further, the u pollution control facili	tements made in t irce are true, cor ndersigned agrees ities in such a ma	this application rect and complete to maintain and nner as to comply	to the best of his knowl operate the pollution so with the provisions of C
fully aware that the sta erate an air pollution sou belief. Further, the un pollution control facili 403, Florida Statutes,	tements made in turce are true, cor ndersigned agrees ities in such a ma and all the rules	this application rect and complete to maintain and nner as to comply and regulations	to the best of his knowl operate the pollution so with the provisions of Confithe Department. He
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fully aware that the state an air pollution sound belief. Further, the understands facilies 403, Florida Statutes, lerstands that a permit, of promptly notify the Dept.	tements made in (irce are true, cor ndersigned agrees ities in such a ma and all the rules if granted by the	this application rect and complete to maintain and nner as to comply and regulations Department, will or Degal transfe	to the best of his knowledge operate the pollution some with the provisions of Clof the Department. He is to be non-transferable and the permitted facility.
fully aware that the startate an air pollution sound belief. Further, the underpollution control facility 403, Florida Statutes, lerstands that a permit, all promptly notify the Deprouring actual time of operation.	ttements made in (irce are true, cor ndersigned agrees ities in such a ma and all the rules if granted by the partment upon sale	this application rect and complete to maintain and nner as to comply and regulations Department, will or Degal transfe	to the best of his knowledgerate the pollution so with the provisions of Clof the Department. He is to non-transferable and of the permitted facility of Authorized Representations
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fully aware that the startate an air pollution soul belief. Further, the under pollution control facility 403, Florida Statutes, lerstands that a permit, if promptly notify the Deptouring actual time of operation. Units: Natural Gas-MMCF/h Fuel Oils-barrels/hr; Colls/hr.	ttements made in (irce are true, cor ndersigned agrees ities in such a ma and all the rule: if granted by the partment upon sale ar; eal- tation	this application rect and complete to maintain and nner as to comply and regulations Department, will or Degal transfe (Notariza Ron J. Foster, Su	to the best of his knowledgerate the pollution some with the provisions of Clark of the Department. He is to non-transferable and a facility of the permitted facility of Authorized Representation is mandatory) perintendent of Name and Title

Date Page 2 of 2

ER Form 17-1.202(4) Effective November 30, 1982

STATE OF FLORIDA COUNTY OF POLK

My commission expires

Before me personally	appeared
Ronald J. Foster	to me well known
and known to me to be the person	on described in
and who executed the foregoing	instrument,
and acknowledged to and before	me that
Ronald J. Foster	executed said
instrument for the purposes the	erein expressed.
WITNESS my hand and o this <u>31st</u> day of <u>August</u>	
Notary My commission expires	Public State of Florida consisting the Lange of Florida consisting the Language of the Languag

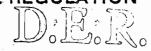
STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING 2600 BLAIR STONE ROAD TALLAHASSEE, FLORIDA 32301

PAID SEP 2





BOB GRAHAM GOVERNOR

VICTORIA J. TSCHINKEL SECRETARY

SEP 2 1983

SOUTHWEST DISTRICT TAMPA

APPLICATION FOR RENEWAL OF PERMIT TO OPERATE AIR POLLUTION SOURCE(S)

If major alterations have occurred, the applicant should complete the Standard Air

Permit Application Form.	
Source Type: Gas Turbine	Renewal of DER Permit No. A053-6980
Company Name: City of Lakeland	County: Polk
Identify the specific emission point source(s) Kiln No. 4 with Venturi Scrubber; Peaking Unit Peaking Unit No.1 Gas & fuel oil fired.	· · · · · · · · · · · · · · · · · · ·
	- Dut
Source Location: Street: 3030 East Lake Parker	Drive City: Lakeland
UTM: East 408.500	North 3105.800
Latitude: 2 8 0 4 3 0 N.	Longitude: <u>8 1 ° 5 5 ' 4 5 "W.</u>
	·

- Attach a check made payable to the Department of Environmental Regulation in accordance with operation permit fee schedule set forth in Florida Administrative Code Rule 17-4.05.
- Have there been any alterations to the plant since last permitted? [] Yes [X] No
 If minor alterations have occurred, describe on a separate sheet and attach.
- Attach the last compliance test report required per permit conditions if not submitted previously.
- 4. Have previous permit conditions been adhered to? [X] Yes [] No If no, explain on a separate sheet and attach.
- 5. Has there been any malfunction of the pollution control equipment during tenure of current permit? [] Yes [X] No If yes, and not previously reported, give brief details and what action was taken on a separate sheet and attach.
- 6. Has the pollution control equipment been maintained to preserve the collection efficiency last permitted by the Department? [X] Yes [] No
- 7. Has the annual operating report for the last calendar year been submitted? [X] Yes
 [] No If no, please attach.

DER Form 17-1.202(4) Effective November 30, 1982

Page 1 of 2

Please provide the following information if applicable:

Raw Materials and Chemical Used in Your Process:

Description	Contaminant Type %Wt	Utilization Rate lbs/hr
		,

B. Product Weight (lbs/hr): N/A

C. Fuels

Туре	Consump	tion*	Maximum Heat
(Be Specific)	Avg/hr*	Max/hr**	Input (MMBTU/hr)
Natural Gas	200 . 2	250	210
No. 2 fuel oil with an avo	erage 49.0	16255	_320
,2			7.56

D. Normal Equipment Operating Time: hrs/day	; days/wk; wks/yr;
hrs/yr (power plants only); if seaso	nal, describe
Peaking unit Average 4 hours/day whe	n needed

The undersigned owner or authorized representative*** of is fully aware that the statements made in this application for a renewal of a permit to operate an air pollution source are true, correct and complete to the best of his knowledge and belief. Further, the undersigned agrees to maintain and operate the pollution source and pollution control facilities in such a manner as to comply with the provisions of Chapter 403, Florida Statutes, and all the rules and regulations of the Department. He also understands that a permit, if granted by the Department, will be non-transferable and he will promptly notify the Department upon sale or legal transfer of the permitted facility.

`*During actual time of operation.

**Units: Natural Gas-MMCF/hr; Fuel Oils-barrels/hr; Coal-

***Attach letter of authorization if not previously submitted

ER Form 17-1.202(4) Effective November 30, 1982

-	Kon	also,	61.	7	02	Le		
5 i 1	gnature,	19 NWD	or Au	thor	ized	Rep	resen	tativ
	(1	Noteri	zatio	n is	m añ da	tor	y)	

Ron J. Foster. Superintendent Typed Name and Title

3030 East Lake Parker Drive Address Lakeland FL

> City 7/26/83 Date

Page 2 of 2

State (813)665-1556

33805

Zip

Telephone No.

STATE OF FLORIDA COUNTY OF POLK

Before me personally appeared

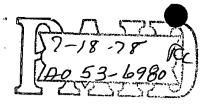
Ronald J. Foster to me well known and known to me to be the person described in and who executed the foregoing instrument, and acknowledged to and before me that

Ronald J. Foster executed said instrument for the purposes therein expressed.

WITNESS my hand and official seal, this 31st day of August, A.D., 1983.

Notary Public State of Florida My Commission Express October 1988.

My commission expires





JUL 18 1978

SOUTHWEST DISTRICT TAMPA

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

			•				
Турс	rce Type 2 application: rce Status:	Air Pollution [X] X] Operation] New	Incinerator [[] Constru [X] Existin	uction	[] Modificati	on	
		McINTOSH JR. GAS TURI rect NORTH EAST	BINE	•	County POLK LAKEL	AND	·
Sour		JTM: East <u>17409</u> .		North	3106.5		
Appl Appl	Name and Titl	e CITY OF LAKE	ELAND DEPT	. OF ELEC	TRIC AND WATE	R UTILIT	'IES
		STAT	EMENTS BY API	LICANT AND	ENGINEER	 	•
	is fully aware true, correct a operate the po Chapter 403, stands that a p	ed owner or authorized that the statements mad not complete to the bestution control source as Florida Statutes, and altermit, if granted by the gal transfer of the perminal control to the perminal	le in this application of his knowled and pollution control the rules and reduced Department, will itted establishment.	on for a ge and belief. ol facilities in si gulations of the be non-transfer nt.	OPERATING Further, the undersigne uch a manner as to com Department or revision	ed agrees to m ply with the p as thereof. He ly notify the l	rovisions of also under- Department
		D	Pate: 7/-	178	Telephone No	_{o.:} (813) 6	82-8163
	*Attach a lett application. Thassee, Florida	er of authorization. If a his may be obtained, for	pplicant is a corp	oration, a Certi	ificate of Good Standin	g must be sub	mitted with
В.	This is to cert found to be in characterized in control facilities statutes of the will furnish the	AL ENGINEER REGIS ify that the engineering in conformity with mode in the permit application es, when properly main State of Florida and to applicant a set of instru- ple, pollution sources.	features of this pern engineering pern. There is reasontained and operate rules and regu	ollution control orinciples applic onable assurance ted, will discha lations of the D	able to the treatment a e, in my profesional judg rge an effluent that con repartment. It is also ag	and disposal of gment, that the mplies with al reed that the t	f pollutants e pollution I applicable undersigned
	Signature Name ACK	A. LIBEY (Please Type)		Mailing Addi Lakel	$\frac{P}{A} = \frac{P}{A} = \frac{P}$		
	Configuração de la confidência de la configuração de la configuração de la configuração d	CITY OF LAK		Telephone N	o.: (813) 682-8	163	• •
00000000	MEENAMES S		741	Date			
12 - 1	Page I of 6						

DETAILED DESCRIPTION OF SOURCE

The gas turbine	is a 20 MW peaking unit th	at can burn No. 2
fuel oil with an	n average sulfur content of	0.10%
The unit is	s used when needed to meet	peak demands or supply
temperary emerge	ency power due to based loa	d unit malfunction.
		<u> </u>
		<u> </u>
		· · · · · · · · · · · · · · · · · · ·
		·
	 	•••
Sala adula of Basicat Coursed i	in this Amplication (Construction Permit Applica	ation Only)
Schedule of Project Covered	in this Application (Construction Permit Application	ation Only).
Start of Construction_	. NA	
Completion of Constru		
· Completion of Constru		
	a breakdown of costs for individual component ion on actual costs shall be furnished with the a	
trol purpose only). Informat	ion on actual costs shall be furnished with the a	pplication for operation permit.
NA		·
	•	
· 		
		•
		
For this source indicate any p	previous DER permit: issuance dates, and expira	ation dates; and orders and notices.
	•	ation dates; and orders and notices.
PERMIT	ISSUED	
	•	EXPIRES
PERMIT	ISSUED	EXPIRES

AIR POLLUTION SOURCES & CONTROL DEVICES (other than incinerators)

Α.	Identification of Air 1) [X] Particula a) [] Dust	tes		sh	c) [] Smoke	d) [] O	ther (Identify)		
	2) X Sulfur Compounds a) a) X SOx as SO2 b) Reduced Sulfur as H ₂ S c) Other (Identify) 3) X Nitrogen Compounds a) X NO _x as NO ₂ b) NH ₃ c) Other (Identify)								
	4) [] Flourides	S			5) [] Acid Mist 6) [] Odor				
	7) [] Hydrocar	bons			8) [] Volatile	Organic Compou	nds		
	9)] Other (S	pecify)	_						
В.	Raw Materials and C	hemicals Us	ed (Be Sp	pecific)	1				
	Description		Utilization Rate Ibs./hr.		Approximate Contaminant Content		Relate to Flow Diagram		
					Туре	% Wt.			
	NA						<u>.</u>		
					<u></u> ,- :				
C .	Process Rate: 1) Total Process inp 2) Product Weight* 3) Normal Operating hrs./day WHEN	Time PE	NA AKING	SERV		seasonal describe	Units. AVERAGE DAILY USE 4 _wks/yr		
D.	Airborne Contamina	nts Discharg	ged:			•			
Na	me of Contaminant	Actu (1) Disch Ibs./hr.			Discharge Criteria Rate*	Allowable Discharge Lbs./hr.	Flow Diagram		
	LFUR DIOXIDE	29.7	1.8	NA O O D		NA 0.00	ITEM C		
.0P	ACITY			% OP	PACITY	20%	ITEM C		
*Refe	er to Chapter 17-2.04(2) Florida	Administ	rative Co	nde (1.) 0	average co	onditions		

(Discharge Criteria: Rate=#/ton P2O5, #/M BTU/hr., etc.)

D.	Airborne	Contaminants	Discharged	(Cont'd)
D.	Airborne	Contaminants	Dischargeu.	(Cont u.)

Name of Contaminant	Hourly Emission (lb./hr.)	Daily Emission (lb./day)	Yearly Emission (T/yr.) (3)	Basis for Emission Estimate (Test Data, Material Balance)
SULFUR DIOXIDE	32.5	117.6	1.8	MATERIAL BALANCE
				<u> </u>
(1) @ maximum loa	d			tije of ee eegings.
(2) @ average loa	d, 4 hrs/da	y		
(3) based on 1977	,			

E. Control Devices:

Name and Type (Model and Serial No.)	Contaminant	Efficiency*	Conditions of Operations	Basis for Efficiency Operational Data, Test, Design, Data)
				·
		,		• •
		·;		
<u> </u>				- Caralle Comment of the Comment of

^{*}See required supplement. (Include any test data and/or design data for efficiency substantiation)

F. Fuels 0.10% sulfur No. 2 oil

Type (Be Specific, includes %S, etc.)	Daily Co	onsumption *	Maximum Heat Input MBTU/hr.		
	Avg./hr.	Max./hr.			
No. 2 oil	14686	16255	320		
			·, · · · · · · · · · · · · · · · · · ·		
			• • • •		

' Units: Natura	l Gas-MCF/hr.;	Fuel Oils,	Coal-lbs./hr.
-----------------	----------------	------------	---------------

Fuel Analysis:

Percent Sulfur 0.10 Percent Ash 0.01

Density 7.03 b./gal

Heat Capacity 19610 BTU/lb. 137283 BTU/gal.

Other Fuel Contaminants______

	Ambient air is compressed, mixed with atomized fuel oil, or						
	natural gas, and burned in combustors. The products of combustion						
	are directed against a two stage turbine driving a generator						
	to produce electric power						
Н.	Indicate liquid or solid wastes generated and method of disposal.						
	There are no solid or liquid wastes generated						
l	Emission Stack Geometry and Flow Characteristics, (Provide Date for each Stack).						
	Stack Height 35.6 ft, Stack Diameter 9.2 ft.						
	Gas Flow Rate 5095 ACFM, Gas Exit Temperature 965 oF						
١.	Required Supplements:						
	1. Total process input rate and product weight — show deviation.						
	2. Efficiency Estimation.						
	3. An 8½" x 11" flow diagram, which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate whether raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particulates are evolved and where finished products are obtained.						
	4. An 8½" x 11" plot plan showing the exact location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.						
	5. An 8½" x 11" plot plan showing the exact location of the establishment, and points of airborne emissions in relation						
	to the surrounding area, residences and other permanent structures and roadways.						

INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type II (Garbag	e) (F	pe IV Patho- gical)	(Liq	pe V . & Gas prod.)	Type VI (Solid By-prod.)
Lbs./Hr.	:	·						٠.	
Description of Waste									
Total Weight Inciner	ated lbs./hr	· .	Design Ca	pacity lbs./	hr				
Approximate Number	er of Hours of	Operation per [Day			, days,	/week_	•	•
Manufacturer				Model 1	No.:				·
Date Constructed:									
	· .	· · · · ·	,		****				
	•	Volume (ft. *)3		Release U/hr.)	Туре	Fuel BTU/	hr.	Tem	p. (° F)
Primary Chamber					_				<u> </u>
Secondary Chamber					•				· .
Stack Height:	·	ft. Stac	ck Diameter:			Stack	Temp.	:	oı
Type of Pollution Co	ontrol Device		[].V						·
Brief Description of	Operating Cha	racteristics of C	ontrol Device	e:	,				· .
				• ;	; ; ;		· 		
									•
Ultimate disposal of	any effluent of	her than that e	mitted from	the stack (so	crubber wa	ter, ash, e	etc.)		
,									
								,	
			•						

