



WASTEWATER APPLICATION FORM 2CG

PERMIT TO DISCHARGE PROCESS WASTEWATER
FROM NEW OR EXISTING
INDUSTRIAL WASTEWATER FACILITIES
TO GROUND WATER

INSTRUCTIONS - FORM 2CG

This form must be completed by all applicants who check "yes" to Item II-D in DEP Form 62-620.910(1) (Form 1).

Public Availability of Submitted Information.

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request. Any information you submit to the Department which goes beyond that required by this form or Form 1 you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you. Claims of confidentiality must be in accordance with Rule 62-620.302, Florida Administrative Code.

Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question. Also, you may need a Ground Water Monitoring Plan (GWMP) required by Rule 62-522.600, Florida Administrative Code. Please contact the Department for more information.

Follow-up Requirements (for New or Substantially Modified Facilities)

Although you are now required to submit estimated data on this form, please note that no later than six months after you begin discharging from the proposed or substantially modified facility, you must complete and submit items V and VI of this Form 2CG. However, you need not complete those portions of Item V requiring test which you have already performed under the discharge monitoring requirements of your permit.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

DEP ID Number

If you are applying for a renewal of an existing permit or for a substantial revision to an existing permit, fill in your DEP Identification Number at the top of each page of Form 2CG. You may copy this number directly from Item 1 of Form 1. If you are applying for a permit for a proposed facility, leave the DEP Identification Number blank. The Department will assign a number.

Item I

You may use the map you provided for Item XI of Form 1 to determine the latitude and longitude of each of your discharge locations.

Item II

Describe any land application of effluent.

Item III

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in Item III B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. You should use actual measurements whenever available; otherwise, use your best estimate.

B. List all sources of wastewater to each discharge point. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). You may estimate the flow contributed by each source if no data are available. For stormwater discharges you may estimate the average flow, but you must indicate the rainfall event upon which the estimate is based and the method of estimation. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table 2CG-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list.

C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shut-downs for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Max. Daily" columns (columns 4-a and 4-b). Report the average of all daily values measured during days when the discharge occurred within the last year in the "Long Term Avg." columns (columns 4-a and 4-b).

Item IV

A. If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to the Department containing the same information.

B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item V (A, B, C, and D, including Tables V-A, V-B, and V-C)

This item requires you to collect and report data on the pollutants discharged from each of your discharge points. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants, you may be required to mark "X" in the "Testing Required" column (*column 2-a, Part C*), and test (*sample and analyze*) and report the levels of the pollutants in your discharge whether or not you expect them to be present in your discharge. For all other, you must mark "X" in either the "Believe Present" column or the "Believe Absent" column (*columns 2-a or 2-b, Part B, and Columns 2-b or 2-c, Part C*) based on your best estimate, and test for those which you believe to be present. (*See specific instructions on the form and below for Parts A through D.*) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and by-products, and any previous analyses known to you of your effluent or similar effluent. (*For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated stormwater runoff.*) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

A. Reporting

All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages V-1 to V-10 if the separate sheets contain all the required information in a format which is consistent with pages V-1 to V-10 in spacing and in identification of pollutants and columns. *(For example, the data systems used in your GC/MS analysis may be able to print data in the proper format.)* Use the following abbreviations in the columns headed "Units" (*column 3, Part A, and Column 4, Parts B and C*).

Concentration
ppm - parts per million
mg/l - milligrams per liter
ppb - parts per billion
ug/l - micrograms per liter

Mass
lbs - pounds
ton - tons (English tons)
mg - milligrams
g - grams
kg - kilograms
T - tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless (1) an applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or (2) all approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium). If you measure only one daily value, complete only "Max. Daily Values" columns and insert "1" into the "Number of Analyses" column (*columns 2-a and 2-d, Part A, and column 3-a, 3-d, Parts B and C*). The Department may require you to conduct additional analyses to further characterize your discharges. For composite sample, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period. If you measure more than one daily value for a pollutant and those values are representative of your waste stream, you must report them. You must describe your method of testing and data analysis. You also must determine

the average of all values within the last year and report the concentration and mass under the "Long Term Avg. Values" columns (*column 2-c, Part A, and column 3-c, Parts B and C*), and the total number of daily values under the "Number of Analyses" columns (*column 2-d, Part A, and columns 3-d, Parts B and C*). Also determine the average of all daily values taken during each calendar month, and report the highest average under the "Max. 30-day Values" columns (*column 2-c, Part A, and column 3-b, Parts B and C*).

B. Sampling

The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample. Sampling for metals that are hardness-dependent shall also include sampling for hardness.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples must be used. For all other pollutants 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds, or other impoundments with a retention period of greater than 24 hours. For stormwater discharges a minimum of one to four grab samples may be taken, depending on the duration of the discharge. One grab must be taken in the first hour (*or less*) of discharge, with one additional grab (*up to a minimum of four*) taken in each succeeding hour of discharge for discharges lasting four or more hours. The Department may waive composite sampling for any discharge point for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples will be representative of your discharge.

Grab and composite samples¹ are defined as follows:

Grab sample: An individual sample or at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

Composite sample: A combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For GC/MS Volatile Organic Analysis (VOA), aliquots must be combined in the laboratory immediately before analysis. Four (4) (*rather than eight*) aliquots or grab samples should be collected for VOA. These four samples should be collected during actual hours of discharge over a 24-hour period and need not be flow proportioned. Only one analysis is required.

Data from samples taken in the past may be used if all data requirements are met; sampling was done no more than three years before submission; and all data are representative of the present discharge. Among the factors which would cause the data to be unrepresentative are significant changes in production level; changes in raw materials, processes, or final products; and changes in wastewater treatment. When EPA promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. The Department may promulgate new methods in Chapter 160, Florida Administrative Code, with the date when the new methods are to be used. Always be sure you have current copies of these two documents before you take samples or submit sampling data to the Department. If you have submitted data from past sampling, the Department may request additional information, including current quantitative data, if it is determined to be necessary to assess your discharges.

C. Analysis

You must use test methods promulgated in 40 CFR Part 136 or Chapter 160, Florida Administrative Code; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge if you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical discharge points, you may request permission from the Department to sample and analyze only one point and submit the results of the analysis for other substantially identical points. If your request is granted by the Department, or a separate sheet attached to the application form identify which point you did test, and describe why the other points you did not test are substantially identical to the point which you did test.

D. Reporting of Intake Data

You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses on your intake water (*If your water is treated before use, test the water after it is treated.*), and discuss the requirements for a new limitation with the appropriate district office.

¹ Sampling requirements are periodically reviewed in light of recent research on testing methods. Upon completion of the review, changes to sampling requirements may be made. Before starting any required sampling or submitting past sampling to the Department, be sure that you have a current copy of 40 CFR Part 136 or Chapter 62-160, Florida Administrative Code.

Part V-A

Part V-A must be completed by all applicants for all discharge points including discharges of non-contact cooling water or storm runoff. However, at your request, the Department may waive the requirement to test for one or more of these pollutants, upon a determination that available information is adequate to support issuance of the permit with less stringent reporting requirements for these pollutants. Use composite samples for all pollutants in this Part, except use grab samples for pH and temperature. See the discussion in General Instructions to item V for definitions of the columns in Part A. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part V-B

Part V-B must be completed by all applicants for all discharge points, including points containing only non-contact cooling water or storm runoff. You must report quantitative data if the pollutant(s) in question is limited in an effluent limitation either directly or indirectly but expressly through a limitation on an indicator (*e.g., use of TSS as an indicator to control the discharge of iron and aluminum*). For other discharged pollutants you must provide quantitative data or explain their presence in your discharge. The Department will consider a request to eliminate the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representative of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in the category or subcategory discharge substantially identical levels of the pollutant or discharge the pollutant uniformly at sufficiently low levels. Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part V-C

Table 2CG-2 at the end of these instructions lists 34 primary industry categories. For each discharge point, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (*column 2-a*) and test for (1) all of the toxic metals, cyanide, and total phenols; and (2) the organic toxic pollutants contained in Table 2CG-3 as applicable to your category. The organic toxic pollutants are listed by GC/MS fractions on pages V-4 to V-10 in Part V-C. The inclusion of total phenols in Part V-C is not intended to classify total phenols as a toxic pollutant. When you determine which industry category you are in to find your testing requirements, you are not determining your category for any other purpose and you are not giving up your right to challenge your inclusion in that category before your permit is issued. For all other cases (*secondary industries, non-process wastewater discharge points, and GC/MS fractions that are not required*), you must mark "X" in either the "Believed Present" column or the "Believed Absent" column for each pollutant.

You must report quantitative data as follows:

For every pollutant you know or have reason to believe is present in your discharge in concentrations of 10 ppb or greater;

For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4,6 dinitrophenol where you expect these four pollutants to be discharged in concentrations of 100 ppb or greater; and

For every pollutant expected to be discharged in concentrations less than the thresholds specified above. For pollutants in this last category, in lieu of quantitative data, you may briefly describe the reasons the pollutant is expected to be discharged.

You are required to mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

- (a) 2,4,5-trichlorophenoxy acetic acid, (2,4,5-T);

- (b) 2-(2,4,5-trichlorophenoxy) propanoic acid, (Silvex, 2,4,5-TP);
- (c) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate, (Erbon);
- (d) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate, (Ronnell);
- (e) 2,4,5-trichlorophenol, (TCP); or
- (f) hexachlorophene, (HCP).

If you mark "testing Required" or "Believed Present," you must perform a screening analysis for dioxins, using gas chromatography with an electron capture detector. A TCDD standard for quantitation is not required. Describe the results of this analysis in the space provided: for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." The Department may require you to perform a quantitative analysis if you report a quantitative analysis if you report a positive result.

Part V-D

List any pollutants in Table 2CG-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it. Table 2CG-4 lists certain hazardous substances which may be exempt from reporting requirements contained in section 311 of the Clean Water Act. If you discharge any of these substances, please contact the Department for further information.

Item VI

This requirement applies to current use or manufacture of a toxic pollutant as an intermediate or final product or by-product. The Department may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Department has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item VII

This item is self explanatory.

Item VIII

There are severe penalties for submitting false information on this application form. Chapter 62-620, Florida Administrative Code, requires, in addition to the certification provided by a professional engineer, a certification from the owner or responsible authority of the facility as follows:

A. For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 person or have gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or a senior executive officer having the responsibility for the overall operations of a principal geographic unit of the agency, for example, a regional or district administrator.

**TABLE 2CG-1
CODES FOR TREATMENT UNITS**

PHYSICAL TREATMENT PROCESSES			
1-A	Ammonia Strippin	1-N	Microstraining
2-B	Dialysis	1-O	Mixing
1-C	Diatomaceous Earth Filtration	1-P	Moving Bed Filters
1-D	Distillation	1-Q	Multimedia Filtration
1-E	Electrodialysis	1-R	Rapid Sand Filtration
1-F	Evaporation	1-S	Reverse Osmosis (Hyperfiltration)
1-G	Flocculation	1-T	Screening
1-H	Flotation	1-U	Sedimentation (Settling)
1-I	Foam Fractionation	1-V	Slow Sand Filtration
1-J	Freezing	1-W	Solvent Extraction
1-K	Gas-Phase Separation	1-X	Sorption
1-L	Grinding (Comminutors)	1-Y	Percolation Pond
1-M	Grit Removal		
CHEMICAL TREATMENT PROCESSES			
2-A	Carbon Adsorption	2-G	Disinfection (<i>Ozone</i>)
2-B	Chemical Oxidation	2-H	Disinfection (<i>Other</i>)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (<i>Chlorine</i>)	2-L	Reduction
BIOLOGICAL TREATMENT PROCESSES			
3-A	Activated Slludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filter
OTHER PROCESSES			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

Table 2CG-1, Codes for Treatment Units Contd.

SLUDGE TREATMENT AND DISPOSAL PROCESSES			
5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TABLE 2CG-2
TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY

INDUSTRY CATEGORY	GC/MS FRACTION ²			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and sealants	X	X	X	
Aluminum forming	X	X	X	
auto and other laundries	X	X	X	X
Battery manufacturing	X		X	
Coal mining	X	X	X	X
Coil coating	X	X	X	
Copper forming	X	X	X	
Electric and electronic compounds	X	X	X	X
Electroplating	X	X	X	
Explosives manufacturing		X	X	
Foundries	X	X	X	
Gum and wood chemicals	X	X	X	X
Inorganic chemicals manufacturing	X	X	X	
Iron and steel manufacturing	X	X	X	
Leather tanning and finishing	X	X	X	X
Mechanical products manufacturing	X	X	X	
Nonferrous metals manufacturing	X	X	X	X

² The pollutants in each fraction are listed in Item V-C
X - Testing required.

Table 2CG-2, Testing Requirements for Organic Toxic Pollutants Industry Category, contd.

INDUSTRY CATEGORY	GC/MS FRACTION ³			
	Volatile	Acid	Base/Neutral	Pesticide
Ore mining	X	X	X	X
Organic chemicals manufacturing	X	X	X	X
Paint and ink formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum refining	X	X	X	X
Pharmaceutical preparations	X	X	X	
Photographic equipment and supplies	X	X	X	X
Plastic and synthetic materials manufacturing	X	X	X	X
Plastic processing	X			
Porcelain enameling	X		X	X
Printing and publishing	X	X	X	X
Pulp and paperboard mills	X	X	X	X
Rubber processing	X	X	X	
Soap and detergent manufacturing	X	X	X	
Steam electric power plants	X	X	X	
Textile mills	X	X	X	X
Timber products processing	X	X	X	X

¹The pollutants in each fraction are listed in Item V-C
X = Testing required.

³ The pollutants in each fraction are listed in Item V-C.
X + Testing required.

TABLE 2CG-3
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED
BY APPLICANTS IF EXPECTED TO BE PRESENT

<u>Toxic Pollutant</u>	<u>Hazardous Substances</u>	<u>Hazardous Substances</u>
Asbestos	2,2 Dichloropropionic acid	Monomethyl amine
	Dichlorvos	Naled
<u>Hazardous Substances</u>	Diethyl amine	Naphthenic acid
Acetaldehyde	Dimethyl amine	Nitrotoluene
Allyl alcohol	Dinitrobenzene	Parathion
Allylchloride	Diquat	Phenolsulfonate
Amyl acetate	Disulfoton	Phosgene
Aniline	Diuron	Propargite
Benzonitrile	Epichlorohydrin	Propylene oxide
Benzyl chloride	Ethion	Pyrethrins
Butyl acetate	Ethylene diamine	Quinoline
Butylamine	Formaldehyde	Resorcinol
Captan	Furfural	Strontium
Carbaryl	Guthion	Strychnine
	Isoprene	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Carbofuran	Isopropanolamine dodecylbenzenesulfonate	TDE (Terochlorodiphenyl ethane)
Carbon disulfide	Kelthane	2,4,5-TP [2-(2,4,5-Trichlorophenosyl) pro-panic acide]
Chlopyrifos	Kepone	Trichlorofon
Coumpahos	Malathion	Triethanolamine
Cresol	Mercaptodimethur	dodecylbenzenesulfonate
		Triethylamine
Crotonaldehyde	Methoxychlor	Uranium
Cyclohexane	Methyl mercaptan	Vanadium
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methyl methacrylate	Vinyl acetate
Diazinon	Methyl parathion	Xylene
Dicamba	Mevinphos	Xylenol
Dichlobenil	Mexacarbate	Zirconium
Dichlone	Monoethyl amine	

TABLE 2CG-4 HAZARDOUS SUBSTANCES

1. Acetaldehyde	64. Cadmium bromide	126. Dodecylbenzenesulfonic acid
2. Acetic acid	65. Cadmium chloride	127. Endosulfan
3. Acetic anhydride	66. Calcium arsenate	128. Endrin
4. Acetone cyanohydrin	67. Calcium arsenite	129. Epichlorohydrin
5. Acetyl bromide	68. Calcium carbide	130. Ethion
6. Acetyl chloride	69. Calcium chromate	131. Ethylbenzene
7. Acrolein	70. Calcium cyanide	132. Ethylenediamine
8. Acrylonitrile	71. Calcium dodecylbenzenesulfonate	133. Ethylene dibromide
9. Adipic acid	72. Calcium hypochlorite	134. Ethylene dichloride
10. Aldrin	73. Captan	135. Ethylene Diaminetetracetic acid (EDTA)
11. Allyl alcohol	74. Carbaryl	136. Ferric ammonium citrate
12. Allyl chloride	75. Carbofuran	137. Ferric ammonium oxalate
13. Aluminum sulfate	76. Carbon disulfide	138. Ferric chloride
14. Ammonia	77. Carbon tetrachloride	139. Ferric fluoride
15. Ammonium acetate	78. Chlordane	140. Ferric nitrate
16. Ammonium benzoate	79. Chlorine	141. Ferric sulfate
17. Ammonium bicarbonate	80. Chlorobenzene	142. Ferrous ammonium sulfate
18. Ammonium bichromate	81. Chloroform	143. Ferrous chloride
19. Ammonium bifluoride	82. Chloropyrifos	144. Ferrous sulfate
20. Ammonium bisulfite	83. Chlorosulfonic acid	145. Formaldehyde
21. Ammonium carbamate	84. Chromic acetate	146. Formic acid
22. Ammonium carbonate	85. Chromic acid	147. Fumaric acid
23. Ammonium chloride	86. Chromic sulfate	148. Furfural
24. Ammonium chromate	87. Chromous chloride	149. Guthion
25. Ammonium citrate	88. Cobaltous bromide	150. Heptachlor
26. Ammonium fluoroborate	89. Cobaltous formate	151. Hexachlorocyclopentadiene
27. Ammonium fluoride	90. Cobaltous sulfamate	152. Hydrochloric acid
28. Ammonium hydroxide	91. Coumaphos	153. Hydrofluoric acid
29. Ammonium oxalate	92. Cresol	154. Hydrogen cyanide
30. Ammonium silicofluoride	93. Crotonaldehyde	155. Hydrogen sulfide
31. Ammonium sulfamate	94. Cupric acetate	156. Isoprene
32. Ammonium sulfide	95. Cupric acetoarsenite	157. Isopropanolamine dodecylbenzenesulfonate
33. Ammonium sulfite	96. Cupric chloride	158. Kelthane
34. Ammonium tartrate	97. Cupric nitrate	159. Kepone
35. Ammonium thiocyanate	98. Cupric oxalate	160. Lead acetate
36. Ammonium thiosulfate	99. Cupric sulfate	161. Lead arsenate
37. Amyl acetate	100. Cupric sulfate ammoniated	162. Lead chloride
38. Aniline	101. Cupric tartrate	163. Lead fluoborate
39. Antimony pentachloride	102. Cyanogen chloride	164. Lead fluorite
40. Antimony potassium tartrate	103. Cyclohexane	165. Lead iodide
41. Antimony tribromide	104. 2,4-D acid (2,4-Dichlorophenoxyacetic acid)	166. Lead nitrate
42. Antimony trichloride	105. 2,4-D esters (2,4-Dichlorophenoxyacetic acid esters)	167. Lead stearate
43. Antimony trifluoride		168. Lead sulfate
44. Antimony trioxide	106. DDT	169. Lead sulfide
45. Arsenic disulfide	107. Diazinon	170. Lead thiocyanate
46. Arsenic pentoxide	108. Dicamba	171. Lindane
47. Arsenic trichloride	109. Dichlobenil	172. Lithium chromate
48. Arsenic trioxide	110. Dichlone	173. Malathion
49. Arsenic trisulfide	111. Dichlorobenzene	174. Maleic acid
50. Barium cyanide	112. Dichloropropane	175. Maleic anhydride
51. Benzene	113. Dichloropropene	176. Mercaptodimethur
52. Benzoic acid	114. Dichloropropene-Dichloropropane mix	177. Mercuric cyanide
53. Benzonitrile	115. 2,2-Dichloropropionic acid	178. Mercuric nitrate
54. Benzoyl chloride	116. Dichlorvos	179. Mercuric sulfate
55. Benzyl chloride	117. Dieldrin	180. Mercuric thiocyanate
56. Beryllium chloride	118. Diethylamine	181. Mercurous nitrate
57. Beryllium fluoride	119. Dimethylamine	182. Methoxychlor
58. Beryllium nitrate	120. Dinitrobenzene	183. Methyl mercaptan
59. Butylacetate	121. Dinitrophenol	184. Methyl methacrylate
60. n-Butylphthalate	122. Dinitrotoluene	185. Methyl parathion
61. Butylamine	123. Diquat	186. Mevinphos
62. Butyric acid	124. Disulfoton	187. Mexacarbate
63. Cadmium acetate	125. Diuron	188. Monoethylamine

189. Monomethylamine	244. Sodium nitrate
190. Naled	245. Sodium phosphate (dibasic)
191. Naphthalene	246. Sodium phosphate (tribasic)
192. Naphthenic acid	247. Sodium selenite
193. Nickel ammonium sulfate	248. Strontium chromate
194. Nickel chloride	249. Strychnine
195. Nickel hydroxide	250. Styrene
196. Nickel nitrate	251. Sulfuric acid
197. Nickel sulfate	252. Sulfur monochloride
198. Nitric acid	253. 2,4,5-T acid (2,4,5-Trichlorophenoxy acetic acid)
199. Nitrobenzene	254. 2,4,5-T amines (2,4,5-Trichlorophenoxy acetic acid amines)
200. Nitrogen dioxide	255. 2,4,5-T esters (2,4,5-Trichlorophenoxy acetic acid esters)
201. Nitrophenil	256. 2,4,5-T salts (2,4,5-Trichlorophenoxy acetic acid salts)
202. Nitrotoluene	257. 2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)
203. Paraformaldehyde	258. 2,4,5-TP acid esters (2,4,5-Trichlorophenoxy propanoic acid esters)
204. Parathion	259. TDE (Tetrachlorodiphenyl ethane)
205. Pentachlorophenol	260. Tetraethyl lead
206. Phenol	261. Tetraethyl pyrophosphate
207. Phosgene	262. Thallium sulfate
208. Phosphoric acid	263. Toluene
209. Phosphorus	264. Toxaphene
210. Phosphorus oxychloride	265. Trichlorofon
211. Phosphorus pentasulfide	266. Trichloroethylene
212. Phosphorus trichloride	267. Trichlorophenol
213. Polychlorinated biphenyls (PCB)	268. Triethanolamine dodecylbenzenesulfonate
214. Potassium arsenate	269. Triethylamine
215. Potassium arsenite	270. Trimethylamine
216. Potassium bichromate	271. Uranyl acetate
217. Potassium chromate	272. Uranyl nitrate
218. Potassium cyanide	273. Vanadium pentoxide
219. Potassium hydroxide	274. Vanadyl sulfate
220. Potassium permanganate	275. Vinyl acetate
221. Propargite	276. Vinylidene chloride
222. Propionic acid	277. Xylene
223. Propionic anhydride	278. Xylenol
224. Propylene oxide	279. Zinc acetate
225. Pyrethrins	280. Zinc ammonium chloride
226. Quinoline	281. Zinc borate
227. Resorcinol	282. Zinc bromide
228. Selenium oxide	283. Zinc carbonate
229. Silver nitrate	284. Zinc chloride
230. Sodium	285. Zinc cyanide
231. Sodium arsenate	286. Zinc fluoride
232. Sodium arsenite	287. Zinc formate
233. Sodium bichromate	288. Zinc hydrosulfite
234. Sodium bifluoride	289. Zinc nitrate
235. Sodium bisulfite	290. Zinc phenolsulfonate
236. Sodium chromate	291. Zinc phosphide
237. Sodium cyanide	292. Zinc silcofluoride
238. Sodium dodecylbenzenesulfonate	293. Zinc sulfate
239. Sodium fluoride	294. Zirconium nitrate
240. Sodium hydrosulfide	295. Zirconium potassium fluoride
241. Sodium hydroxide	296. Zirconium sulfate
242. Sodium hypochlorite	297. Zirconium tetrachloride
243. Sodium methylate	

FORM 2CG



WASTEWATER APPLICATION FOR PERMIT TO DISCHARGE PROCESS WASTEWATER FROM NEW OR EXISTING INDUSTRIAL WASTEWATER FACILITIES TO GROUND WATER

Facility I.D. Number: _____

Please print or type information in the appropriate areas.

I DISCHARGE LOCATION For each location, list the X,Y coordinates and, where applicable, the name of the land application site.

(latitude/longitude to the nearest 15 seconds)

A. Discharge Location No. (list)	B. Latitude			C. Longitude			D. Name of Land Application
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
G002	28	16	49.53	81	32	12.86	Percolation Pond (onsite)

II LAND APPLICATION DESIGN

A. Discharge No.	B. Design Configuration and Construction Materials	C. Cover Crop	D. Application Rate	E. Land Application Area	F. Ground Water
G002	Single cell, above-grade, earthen pond	Grass	22,000 gpd	16,200 sq ft	G-II
	See Attachment A for Project Description				

III FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and discharge points. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each discharge location, provide a description of:

1. All operations contributing wastewater to the effluent; including process wastewater, sanitary wastewater, cooling water, and storm water runoff;
2. The average flow contributed by each operation; and
3. The treatment received by the wastewater.

Use the space below. Continue on additional sheets, if necessary.

(1) Discharge Location No.	(2) Operation(s) Contributing Flow		(3) Treatment		
	(a) Operation (list)	(b) Avg. Flow & Units	(a) Description	(b) List Code from Table 2CG-1	
G002	Misc. Plant & Eqpmt Drains	20,000 gpd	Oil Water Separation & Perc. Pond	xx	1-Y
	Oil Containment Areas - Precip	2,000 gpd avg.	Oil Water Separation & Perc. Pond	xx	1-Y

III Contd.

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ Yes (complete the following table)

☐ No (go to D. below)

(1) Outfall # (List)	(2) Operations(s) Contributing Flow (List)	(3) Frequency		(4) Flow				(c) Duration (in days)
		(a) Days per Week (specify avg.)	(b) Months per Yr. (specify avg.)	(a) Flow Rate (in mgd)		(b) Total Volume (specify with units)		
				Long Term Avg	Max. Daily	Long Term Avg.	Max. Daily	
G002	Misc. Plant & Equip Drains	7	12	0.022	0.050	22,000 g	(later) g	0.5

*For land application systems, also include the Rest Period.

D. Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

E. List the method(s) and location(s) of flow measurement.

IV IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ Yes (complete the following table)

☒ No (go to Item VI-B)

1. Identification of Condition, Agreement, Etc.	2. Affected Discharge Locations		3. Brief Description of Project	4. Final Compliance Date	
	a. No.	b. Source of Discharge		a. Required	b. Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ Mark "X" if description of additional control programs is attached.

V INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding--Complete one set of tables for each discharge location -- Annotate the location number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-10.

D. Use the space below to list any of the pollutants listed in Table 2CG-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. Pollutant	2. Source	1. Pollutant	2. Source
N/A			

VI POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or by-product?

☐ YES (list all such pollutants below) ☒ NO (go to VII)

--

VII CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ YES (list the name, address, telephone number, and certification number of, and pollutants analyzed by each such laboratory or firm below)

☒ NO (go to Section VIII)

[illegible]

VIII CONNECTION TO REGIONAL POTW

A. Indicate the relationship between this project and area regional planning for wastewater treatment. List steps to be taken for this industrial wastewater facility to become part of an area-wide wastewater treatment system.

The Cane Island Power Park is a combustion turbine power plant jointly owned by KUA and FMFA, and operated by KUA. Bulk electricity is generated and sold to KUA and FMFA customers. Unit 4 at the Power Park is proposed and will use similar wastewater treatment and disposal methods as previously permitted for Units 1, 2 & 3. An agreement exists between KUA and Toho Water Authority for delivery and return of reuse water.

IX-A CERTIFICATIONS FOR NEW OR MODIFIED FACILITIES

This is to certify the engineering features of this pollution control project have been designed by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

_____ Signature	_____ Company Name
_____ Name (please type)	_____ Address
_____ (Affix Seal)	_____ Florida Registration No.:
	Telephone No.: _____ Date _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ Name (type or print)	_____ Signature
_____ Title	_____ Date Signed
_____ Telephone No. (area code & No.)	

Facility I.D. Number: _____

IX-B CERTIFICATIONS FOR PERMIT RENEWALS

This is to certify the engineering features of this pollution control project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department.

_____ Signature	_____ Company Name
_____ Name (please type)	_____ Address
_____ (Affix Seal)	_____ Florida Registration No.:
	Telephone No.: _____ Date _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ Name (type or print)	_____ Signature
_____ Title	_____ Date Signed
_____ Telephone No. (area code & No.)	

Facility ID. Number: _____ Outfall No. G002

PLEASE PRINT OR TYPE ONLY: You may report some or all of this information on separate sheets instead of completing these pages. Use the same format. SEE INSTRUCTIONS.

V. INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. Pollutant	2. Effluent							3.. Units		4. Intake (optional)		
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. BOD, Carbonaceous , 5-day, 20 Deg. C.	10	6						ppm	lbs			
b. Chemical Oxygen Demand (COD)	20	12						ppm	lbs			
c. Total Organic Carbon (TOC)	20	12						ppm	lbs			
d. Total Suspended Solids (TSS)	100	60						ppm	lbs			
e. Total Nitrogen (as N)	0.01	0.006						ppm	lbs			
f. Total Phosphorus (as P)	0.02	0.012						ppm	lbs			
g. Ammonia (as N)	0.01	.006						ppm	lbs			
h. Flow - actual or projected	Value 50,000		Value		Value			gpd		Value		
i. Flow - design	Value 50,000		Value		Value			gpd		Value		
j. Specific Conductivity	Value 160		Value		Value			umhos/cm		Value		
k. Temperature (winter)	Value10		Value		Value			°C		Value		
l. Temperature (summer)	Value32		Value		Value			°C		Value		
m. pH	Min. 6	Max 8.5	Min.	Max.				STANDARD UNITS				

*Conc. = Concentration

PART B - Mark "X" in column 2a for each pollutant you know or have reason to believe is present. Mark "X" in column 2b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. be- lieved present	b. be lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. Bromide (24949-67-9)	☐	☒												
b. Chlorine, Total Residual	☒	☐	0.2	0.2						ppm	lbs			
c. Color	☒	☐	<5	-						ppm	lbs			
d. Fecal Coliform	☐	☒												
e. Fluoride (16984-48-8)	☒	☐	0.2	0.2						ppm	lbs			
f. Nitrate-Nitrite (as N)	☐	☒												

Item V-B Contd

Facility ID. Number: _____ Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. believed present	b. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
g. Nitrogen, Total Organic (as N)	☐	☒												
h. Oil and grease	☒	☐	10	1.2						ppm	lbs			
i. Phosphorus, Total (as P) (7723-14-0)	☒	☐	0.03	0.004						ppm	lbs			
j. Radioactivity														
(1) Alpha, Total	☒	☐	3.2	-						pCi/l	-			
(2) Beta, Total	☐	☒												
(3) Radium, Total	☐	☒												
(4) Radium 226, Total	☐	☒												
k. Sulfate (as SO ₄) (14808-79-8)	☒	☐	19	2.2						ppm	lbs			
l. Sulfide (as S)	☐	☒												
m. Sulfite (as SO ₃) (14265-45-3)	☐	☒												
n. Surfactants	☐	☒												
o. Aluminum, Total (7429-90-5)	☐	☒												
p. Barium, Total (7440-39-3)	☒	☐	0.02	0.002						ppm	lbs			
q. Boron, Total (7440-42-8)	☐	☒												
r. Cobalt, Total (7440-48-4)	☐	☒												
s. Iron, Total (7439-89-6)	☒	☐	0.1	0.02						ppm	lbs			
t. Magnesium, Total (7439-95-4)	☒	☐	7	0.9						ppm	lbs			
u. Molybdenum, Total (7439-98-7)	☐	☒												
v. Manganese, Total (7439-96-5)	☐	☒												
w. Tin, Total (7440-31-5)	☐	☒												
x. Titanium, Total (7440-32-6)	☐	☒												

Facility ID. Number: _____ Outfall No. G002

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2a for all GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2a (secondary industries, non-process wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2b for each pollutant you know or have reason to believe is present. Mark "X" in column 2c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	☐	☐	☒												
2M. Arsenic, Total (7723-14-0)	☐	☐	☒												
3M. Beryllium, Total (7440-41-7)	☐	☐	☒												
4M. Cadmium, Total (7440-43-9)	☐	☐	☒												
5M. Chromium, Total (7440-47-3)	☐	☐	☒												
6M. Copper, Total (7440-50-8)	☐	☐	☒												
7M. Lead, Total (7439-92-1)	☐	☐	☒												
8M. Mercury, Total (7439-97-6)	☐	☐	☒												
9M. Nickel, Total (7440-02-0)	☐	☐	☒												
10M. Selenium, Total (7782-49-2)	☐	☐	☒												
11M. Silver, Total (7440-22-4)	☐	☐	☒												
12M. Thallium, Total (7440-28-0)	☐	☐	☒												
13M. Zinc, Total (7440-66-6)	☐	☐	☒												
14M. Cyanide, Total (57-12-5)	☐	☐	☒												
15M. Phenols, Total	☐	☐	☒												
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒												
GC/MS FRACTION -VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☐	☐	☒												
2V. Acrylonitrile (107-13-1)	☐	☐	☒												

Facility ID. Number: _____ Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
3V. Benzene (71-43-2)	☐	☐	☒												
4V. Bis (Chloromethyl) Ether (542-88-1)	☐	☐	☒												
5V. Bromoform (75-25-2)	☐	☐	☒												
6V. Carbon Tetrachloride (56-23-5)	☐	☐	☒												
7V. Chlorobenzene (108-90-7)	☐	☐	☒												
8V. Chlorodi-bromomethane (124-8-1)	☐	☐	☒												
9V. Chloroethane (74-00-3)	☐	☐	☒												
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	☐	☐	☒												
11V. Chloroform (67-86-3)	☐	☐	☒												
12V. Dichloro-bromomethane (75-24-4)	☐	☐	☒												
13V. Dichloro-difluoromethane (75-71-8)	☐	☐	☒												
14V. 1,1-Dichloroethane (75-34-3)	☐	☐	☒												
15V. 1,2-Dichloroethane (107-06-2)	☐	☐	☒												
16V. 1,1-Dichloroethylene (75-35-4)	☐	☐	☒												
17V. 1,2,-Dichloropropane (78-87-5)	☐	☐	☒												
18V. 1,3-Dichloropropylene (542-75-6)	☐	☐	☒												
19V. Ethylbenzene (100-41-4)	☐	☐	☒												
20V. Methyl Bromide (74-83-9)	☐	☐	☒												
21V. Methyl Chloride (74-87-3)	☐	☐	☒												
22V. Methylene Chloride (74-98-2)	☐	☐	☒												
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	☐	☐	☒												
24V. Tetrachloroethylene (127-18-4)	☐	☐	☒												

Facility ID. Number: _____ Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent								4. Units		5. Intake (optional)		
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses	
				(1) Conc.	(2) Mass	(1) Conc.	(2)	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass		
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)																
25V. Toluene (108-88-3)	☐	☐	☒													
26V. 1,2-Trans-Dichloroethylene (156-60-5)	☐	☐	☒													
27V. 1,1,2-Trichloroethane (71-55-6)	☐	☐	☒													
28V. 1,1,2-Trichloroethane (79-00-5)	☐	☐	☒													
29V. Trichloroethylene (79-01-6)	☐	☐	☒													
30V. Trichloro-fluoromethane (75-69-4)	☐	☐	☒													
31V. Vinyl Chloride (75-01-4)	☐	☐	☒													
GC/MS FRACTION - ACID COMPOUNDS																
1A. 2-Chlorophenol (95-57-8)	☐	☐	☒													
2A. 2,4-Dichlorophenol (120-83-2)	☐	☐	☒													
3A. 2,4-Dimethylphenol (105-67-9)	☐	☐	☒													
4A. 4,6-Dinitro-O-Cresol (534-53-1)	☐	☐	☒													
5A. 2,4-Dinitrophenol (51-28-5)	☐	☐	☒													
6A. 2-Nitrophenol (88-75-5)	☐	☐	☒													
7A. 4-Nitrophenol (100-02-7)	☐	☐	☒													
8A P-Chloro-M-Cresol (59-50-7)	☐	☐	☒													
9A Pentachlorophenol (87-86-5)	☐	☐	☒													
10A Phenol (108-95-2)	☐	☐	☒													
11A 2,4,5-Trichloro-phenol (88-06-2)	☐	☐	☒													
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS																
1B. Acenaphthene (63-32-9)	☐	☐	☒													
2B. Acenaphthylene (208-96-8)	☐	☐	☒													
3B. Anthracene (120-12-7)	☐	☐	☒													
4B. Benzidine (92-87-5)	☐	☐	☒													

Facility ID. Number: _____ Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
5B. Benzo (a) Anthracene (56-55-3)	☐	☐	☒												
6B. Benzo (a) Pyrene (50-32-8)	☐	☐	☒												
7B. 3,4-Benzo-fluoranthene (205-99-2)	☐	☐	☒												
8B. Benzo (ghi) Perylene (191-24-2)	☐	☐	☒												
9B. Benzo (k) Fluoranthene (207-08-9)	☐	☐	☒												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☐	☐	☒												
11B. Bis (2-chloroethyl) Ether (111-44-4)	☐	☐	☒												
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	☐	☐	☒												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☐	☐	☒												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☐	☐	☒												
15B Butyl Benzyl Phthalate (84-68-7)	☐	☐	☒												
16B. 2-Chloronaphthalene (91-58-7)	☐	☐	☒												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☐	☐	☒												
18B. Chrysene (218-01-9)	☐	☐	☒												
19B. Dibenzo (a,h) Anthracene (53-70-3)	☐	☐	☒												
20B. 1,2-Dichlorobenzene (95-50-1)	☐	☐	☒												
21B. 1,3-Dichlorobenzene (541-73-1)	☐	☐	☒												
22B. 1,4-Dichlorobenzene (106-46-7)	☐	☐	☒												
23B. 3,3'-Dichlorobenzidine (92-94-1)	☐	☐	☒												
24B. Diethyl Phthalate (84-66-2)	☐	☐	☒												
25B. Dimethyl Phthalate (131-11-3)	☐	☐	☒												
26B. Di-N-Butyl Phthalate (84-74-2)	☐	☐	☒												
27B. 2,4-Dinitrotoluene (121-14-2)	☐	☐	☒												
28B. 2,6-Dinitrotoluene (606-20-2)	☐	☐	☒												

Facility ID. Number: _____ Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
29B. Di-N-Octyl Phthalate (117-84-0)	☐	☐	☒												
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☐	☐	☒												
31B. Fluoranthene (206-44-0)	☐	☐	☒												
32B. Fluorene (86-73-7)	☐	☐	☒												
33B. Hexachlorobenzene (118-74-1)	☐	☐	☒												
34B. Hexachlorobutadiene (87-68-3)	☐	☐	☒												
35B. Hexachloropentadiene (77-47-4)	☐	☐	☒												
36B. Hexachloroethane (67-72-1)	☐	☐	☒												
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	☐	☐	☒												
38B. Isophorone (78-59-1)	☐	☐	☒												
39B. Naphthalene (91-20-3)	☐	☐	☒												
40B. Nitrobenzene (98-95-9)	☐	☐	☒												
41B N-Nitrosodimethylamine (62-75-9)	☐	☐	☒												
42B. N-Nitrosodi-N-Propylamine (621-64-7)	☐	☐	☒												
43B. N-Nitro-sodiphenylamine (86-30-6)	☐	☐	☒												
44B Phenanthrene (85-01-8)	☐	☐	☒												
45B. Pyrene (129-00-0)	☐	☐	☒												
46B. 1,2,4-Trichlorobenzene (120-82-1)	☐	☐	☒												
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☒												
2P. -BHC (319-84-6)	☐	☐	☒												
3P -BHC (319-85-7)	☐	☐	☒												
4P. -BHC (58-89-9)	☐	☐	☒												
5P. -BHC (319-86-8)	☐	☐	☒												

Facility ID. Number:

Outfall No. G002

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a . testing required	b. be- lieved present	c. be- lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
6P. Chlordane (57-74-9)	☐	☐	☒												
7P. 4,4'-DDT (50-29-3)	☐	☐	☒												
8P. 4,4'-DDE (72-55-9)	☐	☐	☒												
9P. 4,4'-DDD (72-54-8)	☐	☐	☒												
10P. Dieldrin (60-57-1)	☐	☐	☒												
11P. -Endosulfan (115-29-7)	☐	☐	☒												
12P. -Endosulfan (115-29-7)	☐	☐	☒												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☒												
14P. Endrin (72-20-8)	☐	☐	☒												
15P. Endrin Aldehyde (7421-92-4)	☐	☐	☒												
16P. Heptachlor (76-44-8)	☐	☐	☒												
17P. Heptachlor Epoxide (1024-57-3)	☐	☐	☒												
18P. PCB-1242 (53469-21-9)	☐	☐	☒												
19P. PCB-1254 (11097-69-1)	☐	☐	☒												
20P. PCB-1221 (11104-28-2)	☐	☐	☒												
21P. PCB-1232 (11141-16-5)	☐	☐	☒												
22P. PCB-1248 (12672-29-6)	☐	☐	☒												
23P. PCB-1260 (11096-82-5)	☐	☐	☒												
24P. PCB-1016 (12674-11-2)	☐	☐	☒												
25P. Toxaphene (8001-35-2)	☐	☐	☒												

Attachment A

Cane Island Unit 4 Project Description

Cane Island Unit 4 is a natural gas-fired combined cycle power plant unit to be added to an existing 3-unit site. No fuel oil use is planned for this unit and no additional fuel oil storage or unloading facilities are included. Unit 4 has one F-Class combustion turbine generator. A heat recovery steam generator (HRSG) recovers waste heat from the combustion turbine exhaust by generating steam for use in a steam turbine power cycle. Power is generated by both the combustion turbine generator and the steam turbine generator. Unit 4 generates an average of 240 MW of power without applying supplemental gas firing to the HRSG. An additional approximately 60 MW of power may be generated with supplemental gas firing of the HRSG.

Flue gas in the HRSG is treated with selective catalytic reduction to remove NO_x . Treatment involves injection of anhydrous ammonia into the flue gas and subsequent NO_x removal in the presence of catalyst installed in a section of the HRSG. Treated exhaust gas is discharged from a stack into the atmosphere. A continuous emissions monitoring system (CEMS) is provided.

Steam cycle condensate is treated on an as needed basis with hydrazine and amine solution feed systems. Phosphate feed is provided to boiler drum water.

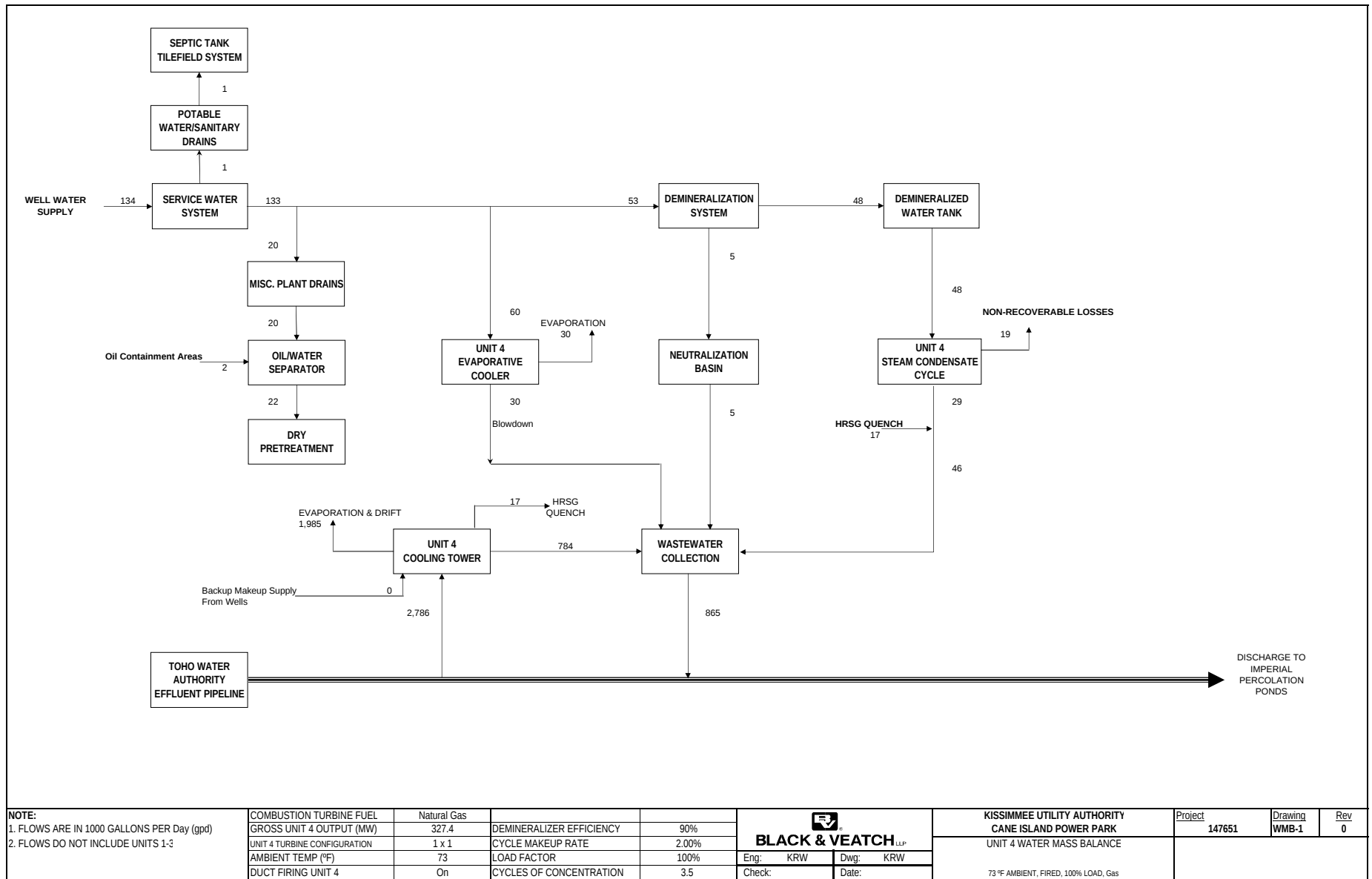
Steam that passes through the steam turbine is condensed in a water cooled surface condenser. Various plant condensate drains are also collected in the condenser for re-use. The cooling water used for heat removal in the condenser circulates through an evaporative cooling tower from which it is pumped back through the condenser. Makeup water for the cooling tower is drawn from the Toho Water Authority reuse pipeline as indicated in the water mass balance. The cooling tower circulating water system is treated on an as-required basis with sodium hypochlorite, acid, inhibitor and biocide feed systems.

Redundant condensate pumps and boiler feed water pumps return condensate from the condenser to the HRSG for generation of steam for the steam turbine cycle.

Various ancillary plant systems are provided. These include electrical systems, lighting, controls, condensate storage, plumbing, wash water, natural gas treatment, lube oil, compressed air, compressed gases, surface condenser air removal and auxiliary cooling water systems.

Water for use as plant service water, potable water or steam cycle makeup will be provided from existing and new wells as indicated in the water mass balance diagrams. Water intended for steam cycle makeup is treated by the existing demineralization system and stored for use in above ground storage tank(s). Boiler blowdown, combustion turbine air inlet evaporative cooler blowdown, demineralization wastewaters and cooling tower blowdown are combined in a collection sump for pumping to the Toho Water Authority reuse pipeline.

Miscellaneous plant drains and drains from oil containment areas (such as those for oil-filled transformers) are passed through an oil water separator and pumped to a grass covered percolation pond.



NOTE: 1. FLOWS ARE IN 1000 GALLONS PER Day (gpd) 2. FLOWS DO NOT INCLUDE UNITS 1-3	COMBUSTION TURBINE FUEL	Natural Gas			 BLACK & VEATCH LLP Eng: KRW Dwg: KRW Check: Date:	KISSIMMEE UTILITY AUTHORITY CANE ISLAND POWER PARK UNIT 4 WATER MASS BALANCE 73 °F AMBIENT, FIRED, 100% LOAD, Gas	Project 147651	Drawing WMB-1	Rev 0
	GROSS UNIT 4 OUTPUT (MW)	327.4	DEMINEALIZER EFFICIENCY	90%					
	UNIT 4 TURBINE CONFIGURATION	1 x 1	CYCLE MAKEUP RATE	2.00%					
	AMBIENT TEMP (°F)	73	LOAD FACTOR	100%					
	DUCT FIRING UNIT 4	On	CYCLES OF CONCENTRATION	3.5					

Attachment C

Form 2CG Additional Information

Item III.B.

As indicated on the water mass balance, the percolation pond receives effluent only from the oil/water separator. The separator will receive potentially contaminated (oily) waters from secondary containment areas, plant equipment drains and non-chemical floor drains. Oil collected in the separator is removed by a licensed hauler to a licensed facility for disposal.

A “valved” system controls the release of secondary containment area waters to the separator. An “un-valved” system directs waters from plant equipment drains and non-chemical area floor drains to the separator. The separator will be sized to contain the oil capacity of the largest piece of equipment discharging to the separator. Separator effluent is guaranteed to 10 ppm or less of oil and grease.

A new percolation pond dedicated to Unit 4 will be sized to contain the average daily flow of 22,000 gpd from the plant equipment and floor drains, and an average rainfall amount. Total storage capacity of the percolation pond, with a 12 inch design freeboard, is 621,618 gallons. Percolation time for the average daily flow is approximately 20 minutes. In the event of a 10 year-24 hour rainfall, the total flow into the pond would be 146,500 gallons, which would require 2.3 hours to percolate (48,800 gallons in flow, plus 97,700 gallons direct rainfall).

The percolation pond is cleaned as required to maintain operating efficiency. The removed materials are disposed of by a licensed hauler.

Item III.D.

In the event of a total power failure at the Power Park, the units will go off-line and would not produce wastewater. Should a particular wastewater lift station lose power or fail, a “High Level Alarm” will activate when the water level in the sump reaches the alarm elevation. Upon activation, a signal is transmitted to the Control Room which is manned 24 hours a day.

The power source associated with the alarm is independent of the sump, and originates from the Control Room. In the event that the pump and Control Room lose power simultaneously, battery back-up exists at the Control Room.

Item III.E.

The oily waste system is monitored for flow on the downstream side of the oil/water separator. Oil/water separator flow is discharged to the wastewater lift station which pumps the wastewater to the percolation pond. The flow meter is located in the discharge line associated with the lift station. The flow meter will be connected to the control panel in the Control Room.