

**Appendix 5.15E**  
**Draft Waste Discharge Permit Application**

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**APPLICATION/REPORT OF WASTE DISCHARGE  
GENERAL INFORMATION FORM FOR  
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT**



**I. FACILITY INFORMATION**

**A. Facility:**

Name: Huntington Beach Energy Project			
Address: 21730 Newland Street			
City: Huntington Beach	County: Orange	State: CA	Zip Code: 92646
Contact Person: Stephen O'Kane		Telephone Number: (562) 493-7840	

**B. Facility Owner:**

Name: AES Southland Development, LLC			Owner Type (Check One)	
Address: 690 North Studebaker Road			1. <input type="checkbox"/> Individual	2. <input checked="" type="checkbox"/> Corporation
City: Long Beach	State: CA	Zip Code: 90803	3. <input type="checkbox"/> Governmental Agency	4. <input type="checkbox"/> Partnership
Contact Person: Stephen O'Kane			5. <input type="checkbox"/> Other: _____	Federal Tax ID:
			Telephone Number: (562) 493-7840	

**C. Facility Operator (The agency or business, not the person):**

Name: same as owner			Operator Type (Check One)	
Address:			1. <input type="checkbox"/> Individual	2. <input type="checkbox"/> Corporation
City:	State:	Zip Code:	3. <input type="checkbox"/> Governmental Agency	4. <input type="checkbox"/> Partnership
Contact Person:			5. <input type="checkbox"/> Other: _____	
			Telephone Number:	

**D. Owner of the Land:**

Name: same as owner			Owner Type (Check One)	
Address:			1. <input type="checkbox"/> Individual	2. <input type="checkbox"/> Corporation
City:	State:	Zip Code:	3. <input type="checkbox"/> Governmental Agency	4. <input type="checkbox"/> Partnership
Contact Person:			5. <input type="checkbox"/> Other: _____	
			Telephone Number:	

**E. Address Where Legal Notice May Be Served:**

Address: same as owner		
City:	State:	Zip Code:
Contact Person:		Telephone Number:

**F. Billing Address:**

Address: same as owner		
City:	State:	Zip Code:
Contact Person:		Telephone Number:



APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT



II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

A. WASTE DISCHARGE TO LAND

B. WASTE DISCHARGE TO SURFACE WATER

Check all that apply:

- Domestic/Municipal Wastewater Treatment and Disposal
Cooling Water
Mining
Waste Pile
Wastewater Reclamation
Other, please describe:

- Animal Waste Solids
Land Treatment Unit
Dredge Material Disposal
Surface Impoundment
Industrial Process Wastewater

- Animal or Aquacultural Wastewater
Biosolids/Residual
Hazardous Waste (see instructions)
Landfill (see instructions)
Storm Water

III. LOCATION OF THE FACILITY

Describe the physical location of the facility.

1. Assessor's Parcel Number(s)
Facility: 114-150-082
Discharge Point: N/A

2. Latitude
Facility: 33°, 38', 39"
Discharge Point: 33°, 18', 19"

3. Longitude
Facility: 117°, 58', 30"
Discharge Point: 117°, 58', 57"

IV. REASON FOR FILING

- New Discharge or Facility
Changes in Ownership/Operator (see instructions)
Change in Design or Operation
Waste Discharge Requirements Update or NPDES Permit Reissuance
Change in Quantity/Type of Discharge
Other:

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: California Energy Commission (functionally equivalent process)
Has a public agency determined that the proposed project is exempt from CEQA? No
Basis for Exemption/Agency:
Has a "Notice of Determination" been filed under CEQA? No
Expected CEQA Documents: EIR
Expected CEQA Completion Date: Q1 2014



APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT



VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

- Site Location Map (CH2M HILL, 2012)
Industrial Process Waste Characterization (Power Engineers Collaborative LLC, 2012)
Huntington Beach Generating Station Monitoring Data (AFS Huntington Beach LLC, 2012)
Developed Drainage Basins (Power Engineers Collaborative LLC, 2012)

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

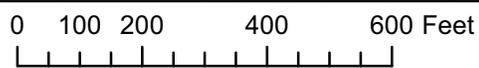
VIII. CERTIFICATION

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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."

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

FOR OFFICE USE ONLY

Table with 4 columns: Date Form 200 Received, Letter to Discharger, Fee Amount Received, Check #



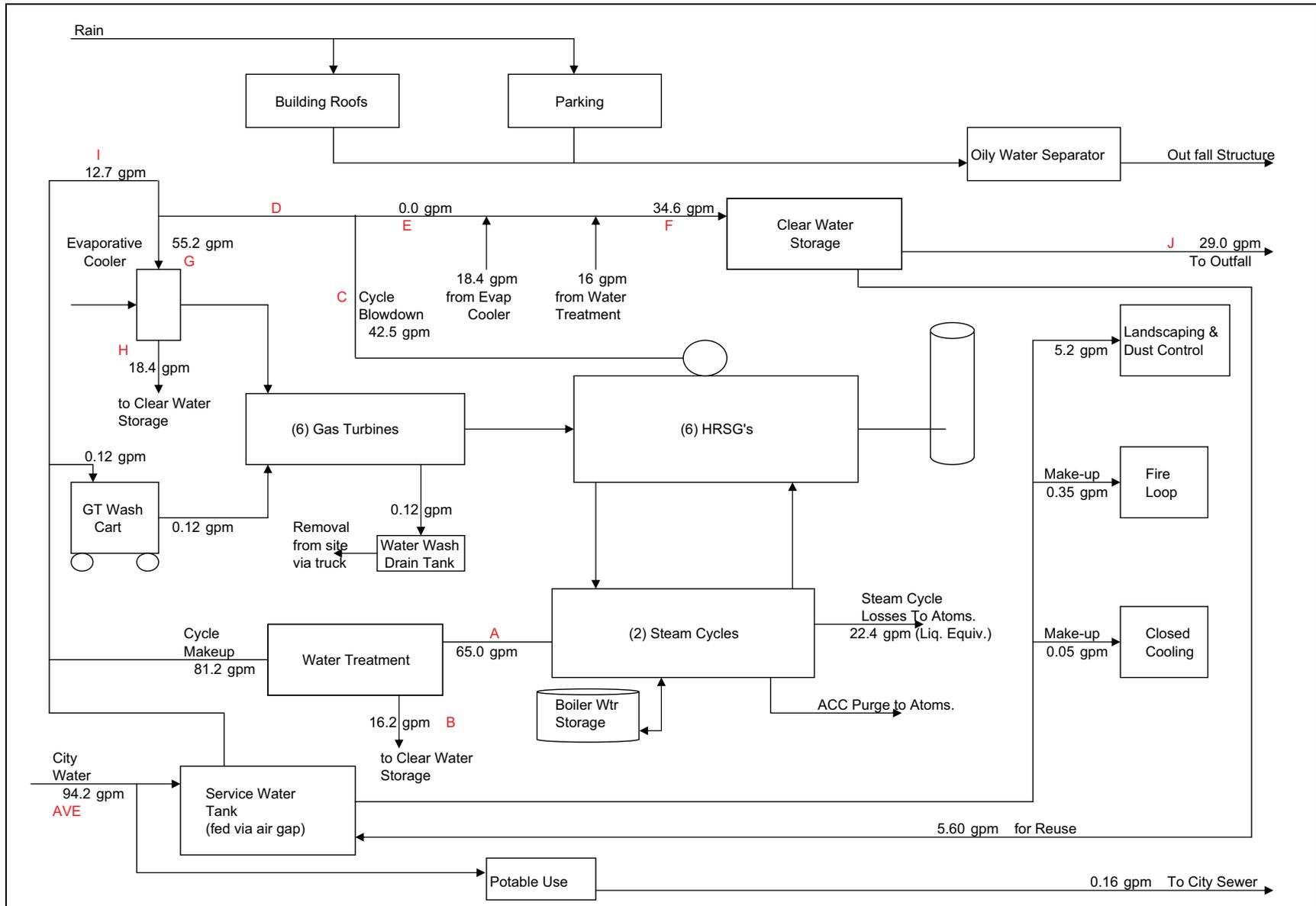
**Legend**

-  Onsite Construction Parking
-  AES Huntington Beach Generating Station
-  Huntington Beach Energy Project
-  Southern California Edison (SCE)



**FIGURE 1**  
**Site Location Map**

AES Huntington Beach Energy Project  
Los Angeles, California



**AES Southland**  
**Huntington Beach Energy Project**  
**Ave Monthly Temp Water Balance (SMMAAT)**

Date: 1/13/2012  
 Rev. 1  
 Designed: JS Coons  
 Calcs: JS Coons  
 Checked: M Henderson  
 Approved:



**Power Engineers Collaborative, LLC.**

Misc Input Data  
 RO Machine Ion Rejection % 99.98%

Stipulated HRSG Chemistry  
 Phosphate in HRSG (PPM as PO4) 6.0  
 NaOH (PPM as NaOH) 1.0  
 Total Sodium (PPM as Na) 5.0  
 Ph 10.0

\* EDI output Stipulated Chemistry  
 pH 5.4  
 Specific Cond 0.5  
 Assume portable bottles that are regenerated offsite. No sodium or sulfate added.

Flow (GPM)				CMU	RO only	RO/EDI *	B	C	D	E	F	G	H	I	J
	Well	Surface	Average	A	A										
				81.19377	64.96	64.96	16.24	42.51	42.51	0.00	34.65	55.22	18.41	12.72	34.65
Calcium (PPM as Ca)	57	66	61.5	0.015	0.000	307.423	0.000	0.000			166.661	14.163	42.488	61.500	166.661
Magnesium (PPM as Mg)	8.7	27	17.85	0.004	0.000	89.228	0.000	0.000			48.372	4.111	12.332	17.850	48.372
Sodium (PPM as Na)	49	95	72	0.018	0.001	359.910	4.960	4.960			201.200	20.398	61.195	72.000	201.200
Potassium (PPM as K)	2.5	4.7	3.6	0.001	0.000	17.996	0.000	0.000			9.756	0.829	2.487	3.600	9.756
Total Alkalinity (PPM as CaCO3)	154	110	132	0.033	0.000	659.835	0.000	0.000			357.710	30.398	91.193	132.000	357.710
Bicarbonate (PPM as HCO3)															
Chloride (PPM as Cl)	52	93	72.5	0.018	0.002	362.409	0.002	0.002			196.472	16.697	50.092	72.500	196.472
Sulfate (PPM as SO4)	52	230	141	0.035	0.000	704.824	0.000	0.000			382.100	32.470	97.410	141.000	382.100
Nitrate (PPM as NO3)	2	0	1	0.000	0.000	4.999	0.000	0.000			2.710	0.230	0.691	1.000	2.710
Nitrite (PPM as N)	0.4	0	0.2	0.000	0.000	1.000	0.000	0.000			0.542	0.046	0.138	0.200	0.542
Silica (PPM as SiO2) Plant Data			15	0.150	0.003	74.250	0.003	0.003			40.310	3.457	10.370	15.000	40.310
pH	8	7.9	7.95	5.800	5.400	8.460	10.000	10.000				9.528		7.950	
Phosphorous (PPM as P)				0.000	0.000	0.000	1.980	1.980			2.429	1.524	4.572	0.000	2.429
Phosphate (PPM as PO4)				0.000	0.000	0.000	6.000	6.000			7.361	4.618	13.855	0.000	7.361
Conductivity (u seimans/cm)	558	970	764	0.191	0.500	3819.045	0.000	0.000			2070.385	175.938	527.813	764.000	2070.385
Total Organic Carbon (PPM)	0.3	2.2	1.25	0.000	0.000	6.248	0.000	0.000			3.387	0.288	0.864	1.250	3.387
Total Dissolved Solids (PPM)	328	590	459	0.115	0.000	2294.426	0.000	0.000			1243.857	105.701	317.102	459.000	1243.857
Aluminum (PPM as Al)		0.17	0.17	0.000	0.000	0.850	0.000	0.000			0.461	0.039	0.117	0.170	0.461
Arsenic (PPB as As)	2	2.3	2.15	0.001	0.000	10.747	0.000	0.000			5.826	0.495	1.485	2.150	5.826
Barium (PPB as Ba)	0.1	0.11	0.105	0.000	0.000	0.525	0.000	0.000			0.285	0.024	0.073	0.105	0.285
Boron (PPB)		120	120	0.030	0.000	599.850	0.000	0.000			325.191	27.634	82.903	120.000	325.191
Cadmium (PPB as Cd)															
Chromium (PPB as Cr)															
Copper (PPB as Cu)															
Fluoride (PPM)	0.8	0.8	0.8	0.000	0.000	3.999	0.000	0.000			2.168	0.184	0.553	0.800	2.168
Iron (PPB as Fe)															
Lead (PPB as Pb)															
Manganese (PPB as Mn)															
Mercury (PPB as Hg)															
Molybdiium (PPB as Mo)															
Nickel (PPB as Ni)															
Selenium (PPB as Se)															
Vanadium (PPB)	3	3	3	0.001	0.000	14.996	0.000	0.000			8.130	0.691	2.073	3.000	8.130
Antimony (PPB as Sb)															
Zinc (PPB as Zn)															
Calcium Hardness (PPM as CaCO3)															
Total Hardness (PPM as CaCO3)	180	270	225	0.056	0.000	1124.719	0.000	0.000			609.734	51.814	155.442	225.000	609.734
Alpha Radiation (pCi/L)		5.6	5.6	0.001	0.000	27.993	0.000	0.000			15.176	1.290	3.869	5.600	15.176
Beta Radiation (pCi/L)		4.3	4.3	0.001	0.000	21.495	0.000	0.000			11.653	0.990	2.971	4.300	11.653
Uranium (pCi/L)	3.9	3.3	3.6	0.001	0.000	17.996	0.000	0.000			9.756	0.829	2.487	3.600	9.756

**2011 Monitoring and Reporting Program**  
**No. R8-2006-0011**  
**AES Huntington Beach, L.L.C.**  
**NPDES No. CA 0001163**

**Table D. Monthly Retention Basin (M-INTB) Effluent Limitation and Monitoring Results**

Parameter	Units	Test Method	Limitations				Results													rolling 6-mo. Median of lbs/day
			30 Day Average	6-Month Median	Daily Max	Instant Max	Each entry below is obtained from the Calscience Lab's M-INTB Retention Basin Monthly Results [NOTE: Be sure to enter data using the same units (ug/L, mg/L, etc.) as the Limitations. Report ND as 0.000]													
							Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Flow (avg daily)	mgd	Log	--	--	--	--	0.040	0.040	0.035	0.038	0.033	0.0318	0.0804	0.026	0.028	0.017	0.017	0.026		
Flow (max daily)	mgd	Log	--	--	--	--	0.156	0.144	0.118	0.199	0.125	0.111	0.574	0.0748	0.0761	0.117	0.0679	0.143		
pH	pH units	Meter	--	--	--	6 to 9	7.05	8.53	7.35	7.29	8.03	7.45	7.42	7.71	7.25	7.04	7.01	7.32		
TSS	mg/L	SM2540D	30	--	100	--	2.900	4.100	4.200	3.000	3.500	1.200	1.000	1.000	1.500	3.300	1.100	1.200		
	lbs/day	Calc	--	<b>36</b>	<b>119</b>	--	<b>3.773</b>	<b>4.924</b>	<b>4.133</b>	<b>3.128</b>	<b>3.649</b>	<b>1.111</b>	<b>4.787</b>	<b>0.624</b>	<b>0.952</b>	<b>3.220</b>	<b>0.623</b>	<b>1.431</b>	1.1916	
Oil & Grease	mg/L	1664A	15	--	20	--	0.000	1.400	3.800	2.300	2.200	1.200	2.900	5.100	2.200	1.100	4.100	1.100		
	lbs/day	Calc	--	<b>18</b>	<b>24</b>	--	<b>0.000</b>	<b>1.681</b>	<b>3.740</b>	<b>2.398</b>	<b>2.294</b>	<b>1.111</b>	<b>13.883</b>	<b>3.182</b>	<b>1.396</b>	<b>1.073</b>	<b>2.322</b>	<b>1.312</b>	1.8590	
Arsenic	ug/L	200.8	--	--	--	--	0.6760	0.0000	0.2130	0.2110	0.7350	0.4450	0.0000	0.0000	0.0000	0.0000	0.5150	0.0000		
	lbs/day	Calc	--	<b>97</b>	<b>529</b>	<b>1391</b>	<b>0.0009</b>	<b>0.0000</b>	<b>0.0002</b>	<b>0.0002</b>	<b>0.0008</b>	<b>0.0004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0003</b>	<b>0.0000</b>	0.0000	
Cadmium	ug/L	200.8	--	--	--	--	0.2130	0.1120	0.2240	0.2830	0.1220	0.2090	0.1850	0.1140	0.3980	0.2860	0.4120	0.4650		
	lbs/day	Calc	--	<b>19</b>	<b>72</b>	<b>180</b>	<b>0.0003</b>	<b>0.0001</b>	<b>0.0002</b>	<b>0.0003</b>	<b>0.0001</b>	<b>0.0002</b>	<b>0.0009</b>	<b>0.0001</b>	<b>0.0003</b>	<b>0.0003</b>	<b>0.0003</b>	<b>0.0002</b>	<b>0.0006</b>	0.0003
Chromium (VI)	ug/L	7199	--	--	--	--	0.0000	0.0000	0.0000	0.0000	0.4700	0.5000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
	lbs/day	Calc	--	<b>36</b>	<b>144</b>	<b>359</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0005</b>	<b>0.0005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Copper	ug/L	200.8	--	--	--	--	17.5000	30.2000	26.2000	36.9000	14.7000	64.3000	19.9000	15.0000	30.4000	10.5000	25.7000	31.1000		
	lbs/day	Calc	--	<b>23</b>	<b>184</b>	<b>507</b>	<b>0.0228</b>	<b>0.0363</b>	<b>0.0258</b>	<b>0.0385</b>	<b>0.0153</b>	<b>0.0596</b>	<b>0.0953</b>	<b>0.0094</b>	<b>0.0193</b>	<b>0.0103</b>	<b>0.0146</b>	<b>0.0371</b>	0.0169	
Lead	ug/L	200.8	--	--	--	--	1.5400	1.0000	1.9200	1.5400	0.8460	1.1500	0.9160	1.1600	1.9200	1.1600	1.0400	1.2300		
	lbs/day	Calc	--	<b>36</b>	<b>144</b>	<b>359</b>	<b>0.0020</b>	<b>0.0012</b>	<b>0.0019</b>	<b>0.0016</b>	<b>0.0009</b>	<b>0.0011</b>	<b>0.0044</b>	<b>0.0007</b>	<b>0.0012</b>	<b>0.0011</b>	<b>0.0006</b>	<b>0.0015</b>	0.0012	
Mercury	ug/L	7470A	--	--	--	--	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0568	0.0702	0.0562	0.1520	0.0380	0.1270		
	lbs/day	Calc	--	<b>1</b>	<b>3</b>	<b>7</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0001</b>	<b>0.0000</b>	<b>0.0002</b>	0.0001	
Nickel	ug/L	200.8	--	--	--	--	5.5900	4.7400	10.3000	7.5600	5.0300	11.5000	7.0300	4.6600	10.4000	13.3000	16.1000	19.8000		
	lbs/day	Calc	--	<b>91</b>	<b>359</b>	<b>898</b>	<b>0.0073</b>	<b>0.0057</b>	<b>0.0101</b>	<b>0.0079</b>	<b>0.0052</b>	<b>0.0107</b>	<b>0.0337</b>	<b>0.0029</b>	<b>0.0066</b>	<b>0.0130</b>	<b>0.0091</b>	<b>0.0236</b>	0.0111	
Selenium	ug/L	200.8	--	--	--	--	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
	lbs/day	Calc	--	<b>271</b>	<b>1078</b>	<b>2695</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Silver	ug/L	200.8	--	--	--	--	0.0000	0.0000	0.0000	0.0000	0.3640	0.0697	0.0000	0.0000	0.1220	0.0000	0.0000	0.0000		
	lbs/day	Calc	--	<b>10</b>	<b>49</b>	<b>123</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0004</b>	<b>0.0001</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0001</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Zinc	ug/L	200.8	--	--	--	--	76.5	15.9	39.4	39.5	20.2	36.2	21.5	14.2	46.2	50.4	94.8	99.2		
	lbs/day	Calc	--	<b>233</b>	<b>1311</b>	<b>3467</b>	<b>0.0996</b>	<b>0.0191</b>	<b>0.0388</b>	<b>0.0412</b>	<b>0.0211</b>	<b>0.0335</b>	<b>0.1030</b>	<b>0.0089</b>	<b>0.0293</b>	<b>0.0492</b>	<b>0.0537</b>	<b>0.1184</b>	0.0515	
Cyanide	ug/L	335.2	--	--	--	--	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
	lbs/day	Calc	--	<b>19</b>	<b>72</b>	<b>180</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Ammonia (as Nitrogen)	ug/L	SM4500B/E	--	--	--	--	220	77,000	170	590	38,000	13,000	670	500	560	450	3,200	140		
	lbs/day	Calc	--	<b>31923</b>	<b>43128</b>	<b>107819</b>	<b>0.2864</b>	<b>92.5294</b>	<b>0.1674</b>	<b>0.6154</b>	<b>39.6388</b>	<b>12.0418</b>	<b>3.2093</b>	<b>0.3121</b>	<b>0.3556</b>	<b>0.4394</b>	<b>1.8132</b>	<b>0.1671</b>	0.3975	
Non-Chlorinated Phenolic Compounds	ug/L	8270	--	--	--	--	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	lbs/day	Calc	--	<b>539</b>	<b>2156</b>	<b>5391</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Chlorinated Phenolic Compounds	ug/L	8270	--	--	--	--	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	lbs/day	Calc	--	<b>18</b>	<b>72</b>	<b>180</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	0.0000	
Endosulfan	ug/L	8081A	--	--	--	--	0	0	0	0	0	0	0	0	0	0	0	0		
Endrin	ug/L	8081A	--	--	--	--	0	0	0	0	0	0	0	0	0	0	0	0		
HCH	ug/L	8081A	--	--	--	--	0	0	0	0	0	0	0	0	0	0	0	0		
Total Coliform	Density (#/100 mL)	9221A-E	--	--	--	--	<20	1,100	170	<20	20	20	<20	40	<20	<20	<20	<20		
Fecal Coliform	Density (#/100 mL)	9221A-E	--	--	--	--	<20	<20	<20	<20	20	20	<20	<20	<20	<20	<20	<20		
Enterococcus	Density (#/100 mL)	9230A-B	--	--	--	--	80	800	<20	230	<20	<20	<20	20	<20	<20	<20	<20		

Lbs/day limits based on:  
M-INTB Flow (max) 0.143 MGD for Dec. 2011  
DP 001 Flow (max) 253.49 MGD for Dec. 2011

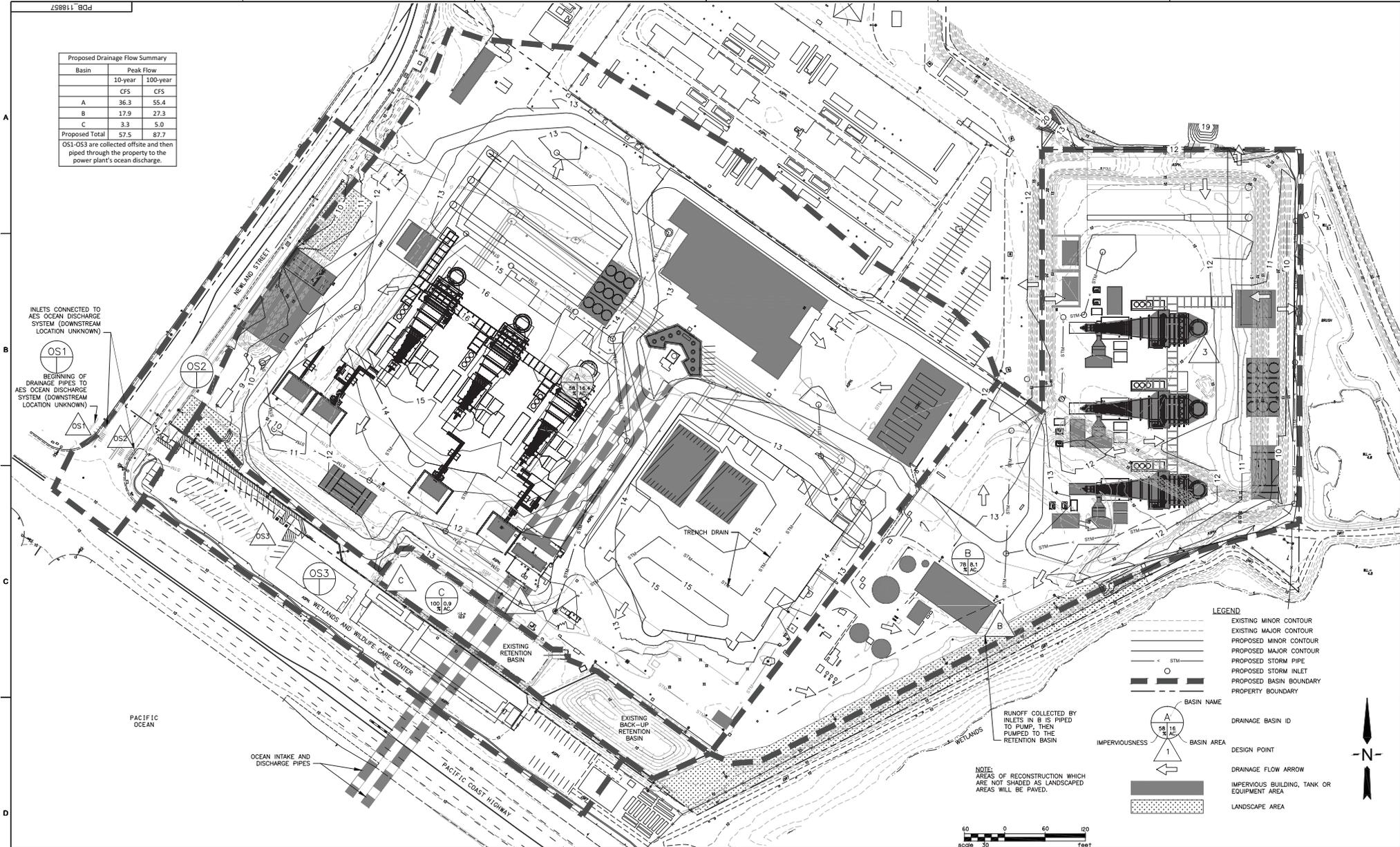
Note(s): -- for the test results above for Dec.'11, qualifiers of "J" were assigned for Hg and Cd by the lab

**Bolded values are calculated**

258811 80d

Basin	Peak Flow	
	10-year CFS	100-year CFS
A	36.3	55.4
B	17.9	27.3
C	3.3	5.0
Proposed Total	57.5	87.7

OS1-OS3 are collected offsite and then piped through the property to the power plant's ocean discharge.



INLETS CONNECTED TO AES OCEAN DISCHARGE SYSTEM (DOWNSTREAM LOCATION UNKNOWN)

OS1  
BEGINNING OF DRAINAGE PIPES TO AES OCEAN DISCHARGE SYSTEM (DOWNSTREAM LOCATION UNKNOWN)

OS2

OS3

- LEGEND**
- EXISTING MINOR CONTOUR
  - EXISTING MAJOR CONTOUR
  - PROPOSED MINOR CONTOUR
  - PROPOSED MAJOR CONTOUR
  - PROPOSED STORM PIPE
  - PROPOSED STORM INLET
  - PROPOSED BASIN BOUNDARY
  - PROPERTY BOUNDARY
- BASIN NAME**
- BASIN AREA**
- BASIN A  
58.16 AC
  - BASIN B  
17.9 AC
  - BASIN C  
3.3 AC
- DESIGN POINT**
- DRAINAGE FLOW ARROW**
- IMPERVIOUS BUILDING, TANK OR EQUIPMENT AREA
  - ▨ LANDSCAPE AREA

RUNOFF COLLECTED BY INLETS IN B IS PIPED TO PUMP, THEN PUMPED TO THE RETENTION BASIN

NOTE: AREAS OF RECONSTRUCTION WHICH ARE NOT SHADED AS LANDSCAPED AREAS WILL BE PAVED.

REV	DATE	DESCRIPTION	DWN	DGN	CHK	APP

SCALE: AS NOTED

WARNING: 0 1/2 1  
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

D SIZE 36"x24"

**Power Engineers Collaborative, L.L.C.**  
216 South Jefferson Street Suite 103 Chicago, Illinois 60661  
150 North Sunny Slope Road Suite 110 Brookfield, Wisconsin 53005  
WWW.PECLC.COM

**HUNTINGTON BEACH ENERGY PROJECT**  
HUNTINGTON BEACH, CA.

DWG#

**DEVELOPED DRAINAGE BASINS**

PDB\_118857

REV. A



B. 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 III-A. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. 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.

C. Except for storm runoff, leaks, or spills, will any of the discharges described in Items III-A be intermittent or seasonal?

YES (complete the following table)

NO (go to Section IV)

Outfall Number	1. Frequency		2. Flow		
	a. Days Per Week (specify average)	b. Months Per Year (specify average)	a. Maximum Daily Flow Rate (in mgd)	b. Maximum Total Volume (specify with units)	c. Duration (in days)

**IV. Production**

If there is an applicable production-based effluent guideline or NSPS, for each outfall list the estimated level of production (projection of actual production level, not design), expressed in the terms and units used in the applicable effluent guideline or NSPS, for each of the first 3 years of operation. If production is likely to vary, you may also submit alternative estimates (attach a separate sheet).

Year	A. Quantity Per Day	B. Units Of Measure	c. Operation, Product, Material, etc. (specify)
n/a	n/a	n/a	n/a

CONTINUED FROM THE FRONT	EPA I.D. NUMBER (copy from Item 1 of Form 1)	Outfall Number 001
--------------------------	--	-----------------------

**V. Effluent Characteristics**

A and B: These items require you to report estimated amounts (both concentration and mass) of the pollutants to be discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and should be completed in accordance with the specific instructions for that part. Data for each outfall should be on a separate page. Attach additional sheets of paper if necessary.

**General Instructions** (See table 2D-2 for Pollutants)  
 Each part of this item requests you to provide an estimated daily maximum and average for certain pollutants and the source of information. Data for all pollutants in Group A, for all outfalls, must be submitted unless waived by the permitting authority. For all outfalls, data for pollutants in Group B should be reported only for pollutants which you believe will be present or are limited directly by an effluent limitations guideline or NSPS or indirectly through limitations on an indicator pollutant.

1. Pollutant	2. Maximum Daily Value (include units)	3. Average Daily Value (include units)	4. Source (see instructions)
fluoride		2.168 ppm	HBEP Industrial Process Water Balance
nitrate		2.710 ppm	HBEP Industrial Process Water Balance
nitrite		0.542 ppm	HBEP Industrial Process Water Balance
phosphorus		2.429 ppm	HBEP Industrial Process Water Balance
alpha radiation		15.176 pCi/L	HBEP Industrial Process Water Balance
beta radiation		11.653 pCi/L	HBEP Industrial Process Water Balance
sulfate		382.100 ppm	HBEP Industrial Process Water Balance
aluminum		0.461 ppm	HBEP Industrial Process Water Balance
barium		0.285 ppb	HBEP Industrial Process Water Balance
boron		325.191 ppb	HBEP Industrial Process Water Balance
magnesium		48.372 ppm	HBEP Industrial Process Water Balance
arsenic		5.826 ppb	HBEP Industrial Process Water Balance
oil and grease		2.283 mg/L	HBGS Discharge Monitoring Report
total suspended solids		2.333 mg/L	HBGS Discharge Monitoring Report
pH		7.45 units	HBGS Discharge Monitoring Report
fecal coliform		<20 per mL	HBGS Discharge Monitoring Report
chlorinated phenolics		0 µg/L	HBGS Discharge Monitoring Report
non-chlorinated phenolics		0 µg/L	HBGS Discharge Monitoring Report

CONTINUED FROM THE FRONT	EPA I.D. NUMBER (copy from Item 1 of Form 1)	
--------------------------	--	--

C. Use the space below to list any of the pollutants listed in Table 2D-3 of the instructions which you know or have reason to believe will be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it will be present.

1. Pollutant	2. Reason for Discharge
n/a	

**VI. Engineering Report on Wastewater Treatment**

A. If there is any technical evaluation concerning your wastewater treatment, including engineering reports or pilot plant studies, check the appropriate box below.

Report Available                       No Report

B. Provide the name and location of any existing plant(s) which, to the best of your knowledge resembles this production facility with respect to production processes, wastewater constituents, or wastewater treatments.

<p>Name Huntington Beach Generating Station</p>	<p>Location 21730 Newland Street, Huntington Beach, CA</p>
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**VII. Other Information (Optional)**

Use the space below to expand upon any of the above questions or to bring to the attention of the reviewer any other information you feel should be considered in establishing permit limitations for the proposed facility. Attach additional sheets if necessary.

Effluent characteristics are from two sources: water quality calculations for the project's industrial process water balance diagram and data from the Huntington Beach Generation Station, which is located on the same site as the project. Both source documents comprise the waste characterization report, attached to Form 200.

Huntington Beach Energy Project water quality calculations are based on potable water influent flows (City of Huntington Beach) and show the boiler blowdown and RO reject wastewater streams.

The stormwater waste stream is approximately characterized in monitoring reports prepared for the existing Huntington Beach Generating Station - located on the site of the proposed Huntington Beach Energy Project. Huntington Beach Generating Station internal discharges (i.e., to monitoring point M-INTB) are similar to the proposed ocean discharges from the Huntington Beach Energy Project. Pollutants associated with stormwater discharges are oil and grease, total suspended solids, fecal coliform, chlorinated phenolic compounds, and non-chlorinated phenolic compounds. All others are associated with the industrial process discharges, which are shown in the water balance calculations.

**VIII. CERTIFICATION**

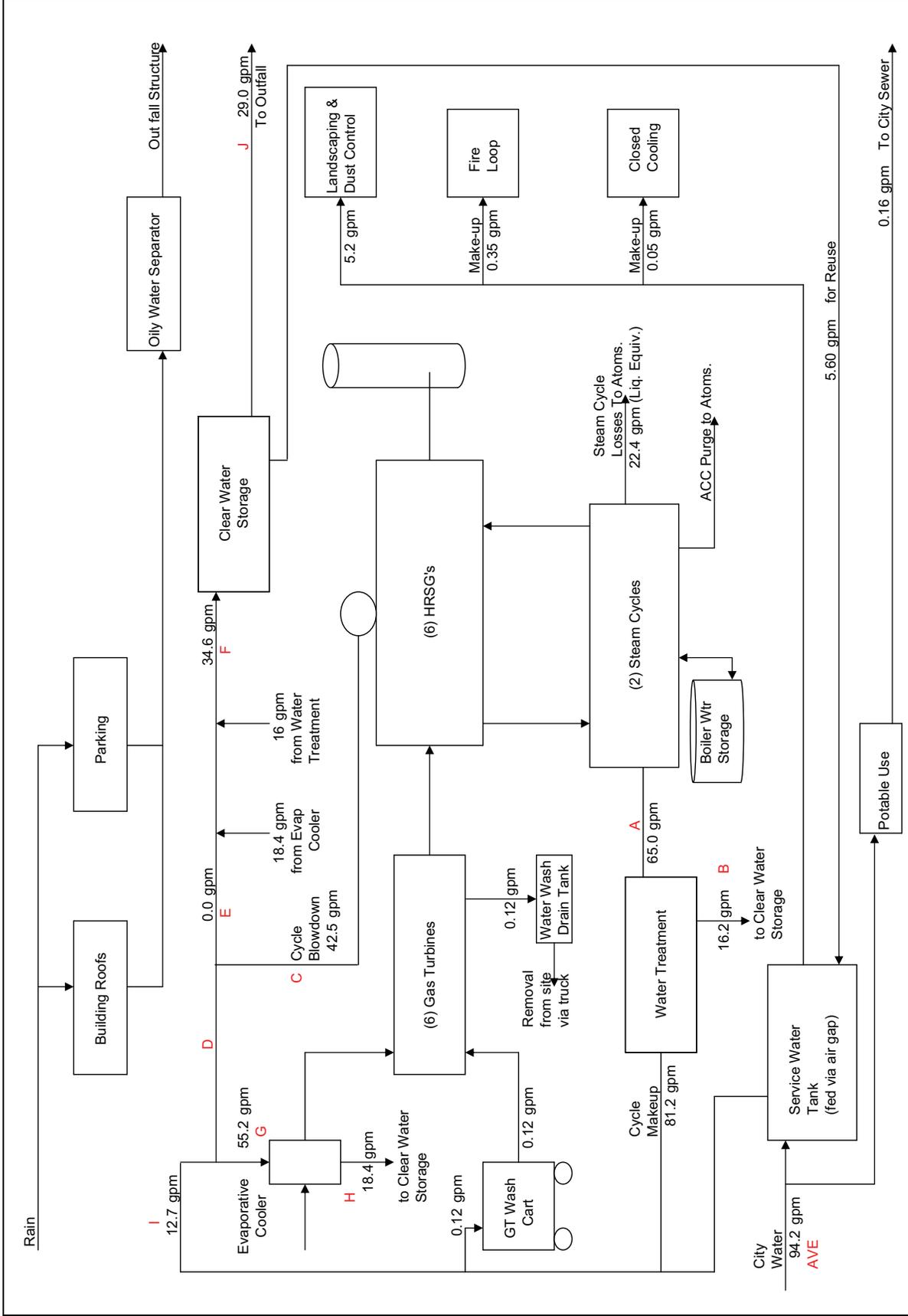
*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.*

A. Name and Official Title (type or print)

B. Phone No.

C. Signature

D. Date Signed



**PEC**

**Power Engineers Collaborative, LLC.**

Date: 1/13/2012  
 Rev. 1  
 Designed: JS Coons  
 Calcs: JS Coons  
 Checked: M Henderson  
 Approved:

**AES Southland**  
**Huntington Beach Energy Project**  
**Ave Monthly Temp Water Balance (SMMAAT)**