

DOCKETED

Docket Number:	01-AFC-19C
Project Title:	SMUD Cosumnes Power Plant - Compliance
TN #:	244289-6
Document Title:	Supplement C - Exhibit No-1
Description:	*** This document supersedes TN 22389 filed 9/17/01 by CD-ROM in Docket No. 01-AFC-19, in addition to AFC Volumes 1 & 2, Supplements A, B, & D *** AFC Supplement C
Filer:	Patty Paul
Organization:	Ch2mhill/Carrier
Submitter Role:	Applicant Consultant
Submission Date:	8/1/2022 5:57:17 PM
Docketed Date:	8/1/2022

Exhibit NO-1

PLANT NOISE EMISSIONS MODEL - STEADY STATE BASE LOAD OPERATION

PROJECT: **Cosumnes Power Plant**
 LOCATION:
 CLIENT: **SMUD**

MODEL RUN: **3**
 RUN DATE: **7/12/2002**
 DESCRIPTION: **BASELINE PLANT NOISE EMISSIONS**
 RECEPTOR:

PRIME MOVER TYPE: GE 7FA

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
SOURCE NUMBER	SOURCE DESCRIPTION	SOURCE QTY	SOURCE HGT. m	SOURCE TYPE	LOCATION X_m	LOCATION Y_m	SOURCE Lw dBA re 1 pW	RECEPTOR DISTANCE m	EST. SHIELDING ATTENUATION	ESTIMATED DIRECTION	NEAR FIELD GROUND ABS	FAR FIELD GROUND ABS	ANOMAL. ATTENUATION	ADTL RECEPTOR ABATEMENT	DISTANCE CORRECTION	AIR ABSORP 15'/C/70% RH	QTY CORR	EXPECTED LEVEL AT RECEPTOR	Lp ₃₀
1	UNIT 1 GT TRANSFORMER	1	3	1	-105	13	102	1383	0	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	19	
2	UNIT 1 GT AIR INLET	1	15	1	-79	0	100	1404	0	-1	-3.4	-1.1	-5.2	0	-70.9	-3.0	0	15	
3	UNIT 1 GT AIR INLET PLENUM	1	5	1	-69	0	107	1414	-6	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	17	
4	UNIT 1 COMBUSTION TURBINE ENCL.	1	6	2	-63	0	106	1420	-10	0	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	15	
5	UNIT 1 TURB. ENCL. VENT FANS	2	10	1	-62	0	97	1421	-3	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	3	13	
6	UNIT 1 CT GENERATOR	1	5	1	-67	0	113	1416	-6	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	23	
7	UNIT 1 CT LOAD COMPARTMENT	1	5	1	-68	0	106	1415	-8	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	14	
8	UNIT 1 CT EXHAUST DIFFUSER	1	4	1	-59	0	108	1424	-14	0	-3.5	-1.1	-5.2	0	-71.1	-3.0	0	10	
9	UNIT 1 HRSG INLET SIDE	1	8	2	-50	0	108	1433	-4	-1	-3.5	-1.1	-5.3	0	-68.1	-3.0	0	22	
10	UNIT 1 HRSG SIDE WALL	1	12	2	-35	0	105	1447	-4	-2	-3.4	-1.1	-5.3	0	-68.2	-3.0	0	18	
11	UNIT 1 HRSG STACK (0° DIR.)	1	43	1	0	0	117	1481	0	0	-3.4	-1.1	-5.4	-5	-71.4	-3.1	0	21	
12	UNIT 1 HRSG STEAM LINES (EST.)	1	25	1	-38	0	100	1444	0	0	-3.4	-1.0	-5.3	0	-71.2	-3.0	0	16	
13	UNIT 1 BURNER CONTROL SKID	1	2	1	-10	8	110	1473	-17	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	0	9	
14	UNIT 1 PIPE RACK STEAM LINES (EST.)	1	18	1	-42	0	105	1441	-3	0	-3.4	-1.1	-5.3	0	-71.2	-3.0	0	18	
15	BOILER FEED PUMPS	3	2	1	-15	-173	109	1432	-16	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	5	14	
16	UNIT 2 GT TRANSFORMER	1	3	1	-105	-29	102	1372	0	0	-3.5	-1.0	-5.1	0	-70.7	-2.9	0	19	
17	UNIT 2 GT AIR INLET	1	15	1	-79	-43	100	1394	0	-1	-3.4	-1.0	-5.1	0	-70.9	-2.9	0	16	
18	UNIT 2 GT AIR INLET PLENUM	1	5	1	-69	-43	107	1404	-6	0	-3.5	-1.0	-5.2	0	-70.9	-3.0	0	17	
19	UNIT 2 COMBUSTION TURBINE ENCL.	1	6	2	-63	-43	106	1410	-10	0	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	15	
20	UNIT 2 TURB. ENCL. VENT FANS	1	10	1	-62	-43	97	1411	-3	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	10	
21	UNIT 2 CT GENERATOR	1	5	1	-67	-43	113	1406	-6	0	-3.5	-1.1	-5.2	0	-70.9	-3.0	0	23	
22	UNIT 2 CT LOAD COMPARTMENT	1	5	1	-68	-43	106	1405	-8	0	-3.5	-1.1	-5.2	0	-70.9	-3.0	0	14	
23	UNIT 2 CT EXHAUST DIFFUSER	1	4	1	-59	-43	108	1413	-14	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	10	
24	UNIT 2 HRSG INLET SIDE	1	8	2	-50	-43	108	1422	-4	-1	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	22	
25	UNIT 2 HRSG SIDE WALL	1	12	2	-35	-43	105	1437	-4	-2	-3.4	-1.1	-5.3	0	-68.1	-3.0	0	18	
26	UNIT 2 HRSG STACK (0° DIR.)	1	43	1	0	-43	117	1471	0	-6	-3.3	-1.1	-5.4	-5	-71.3	-3.1	0	22	
27	UNIT 2 HRSG STEAM LINES (EST.)	1	25	1	-38	-43	100	1434	0	0	-3.4	-1.1	-5.3	0	-71.1	-3.0	0	16	
28	UNIT 2 BURNER CONTROL SKID	1	2	1	-10	34	110	1480	-17	0	-3.5	-1.1	-5.4	0	-71.4	-3.1	0	8	
29	UNIT 2 PIPE RACK STEAM LINES (EST.)	1	18	1	-42	-42	105	1431	-3	0	-3.4	-1.1	-5.3	0	-71.1	-3.0	0	18	
30	BOILER FEED PUMPS	3	2	1	-15	-130	109	1439	-16	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	5	14	
31	UNIT 3 GT TRANSFORMER	1	3	1	-105	-103	102	1356	0	0	-3.5	-1.0	-5.0	0	-70.6	-2.9	0	19	
32	UNIT 3 GT AIR INLET	1	14	1	-79	-116	100	1378	0	-1	-3.4	-1.0	-5.1	0	-70.8	-2.9	0	16	
33	UNIT 3 GT AIR INLET PLENUM	1	5	1	-69	-116	107	1388	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	20	
34	UNIT 3 COMBUSTION TURBINE ENCL.	1	6	2	-63	-116	106	1394	-5	0	-3.5	-1.0	-5.1	0	-67.9	-2.9	0	21	
35	UNIT 3 TURB. ENCL. VENT FANS	2	10	1	-62	-116	97	1395	-3	0	-3.4	-1.0	-5.1	0	-70.9	-3.0	3	14	
36	UNIT 3 CT GENERATOR	1	5	1	-67	-116	113	1390	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	26	
37	UNIT 3 CT LOAD COMPARTMENT	1	5	1	-68	-116	106	1389	-5	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	18	
38	UNIT 3 CT EXHAUST DIFFUSER	1	4	1	-59	-116	108	1398	-6	0	-3.5	-1.0	-5.1	0	-70.9	-3.0	0	18	
39	UNIT 3 HRSG INLET SIDE	1	8	2	-50	-116	108	1407	0	-1	-3.5	-1.1	-5.2	0	-67.9	-3.0	0	26	
40	UNIT 3 HRSG SIDE WALL	1	12	2	-35	-116	105	1422	0	-2	-3.4	-1.1	-5.2	0	-68.0	-3.0	0	22	
41	UNIT 3 HRSG STACK (0° DIR.)	1	43	1	0	-116	117	1456	0	-6	-3.3	-1.1	-5.4	-5	-71.2	-3.1	0	22	
42	UNIT 3 HRSG STEAM LINES (EST.)	1	25	1	-38	-116	100	1419	0	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	16	
43	UNIT 3 BURNER CONTROL SKID	1	2	1	-10	124	110	1445	-15	0	-3.5	-1.1	-5.3	0	-71.2	-3.0	0	11	
44	UNIT 3 PIPE RACK STEAM LINES (EST.)	1	18	1	-42	-116	105	1416	-1	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	20	
45	BOILER FEED PUMPS	3	2	1	-15	-29	109	1459	-16	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	5	14	
46	Unit 4 GT TRANSFORMER	1	3	1	-105	-145	102	1348	0	0	-3.5	-1.0	-5.0	0	-70.6	-2.9	0	19	
47	Unit 4 GT AIR INLET	1	14	1	-79	-159	100	1371	0	-1	-3.4	-1.0	-5.1	0	-70.7	-2.9	0	16	
48	Unit 4 GT AIR INLET PLENUM	1	5	1	-69	-159	107	1381	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	20	
49	Unit 4 COMBUSTION TURBINE ENCL.	1	6	2	-63	-159	106	1387	-5	0	-3.5	-1.0	-5.1	0	-67.8	-2.9	0	21	
50	Unit 4 TURB. ENCL. VENT FANS	2	10	1	-62	-159	97	1388	-3	0	-3.4	-1.0	-5.1	0	-70.8	-2.9	3	14	
51	Unit 4 CT GENERATOR	1	5	1	-67	-159	113	1383	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	26	
52	Unit 4 CT LOAD COMPARTMENT	1	5	1	-68	-159	106	1382	-5	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	18	
53	Unit 4 CT EXHAUST DIFFUSER	1	4	1	-59	-159	108	1391	-6	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	19	
54	Unit 4 HRSG INLET SIDE	1	8	2	-50	-159	108	1400	0	-1	-3.5	-1.0	-5.2	0	-67.9	-3.0	0	26	
55	Unit 4 HRSG SIDE WALL	1	12	2	-35	-159	105	1415	0	-2	-3.4	-1.1	-5.2	0	-68.0	-3.0	0	22	
56	Unit 4 HRSG STACK (0° DIR.)	1	43	1	0	-159	117	1449	0	-6	-3.3	-1.1	-5.3	-5	-71.2	-3.1	0	22	
57	Unit 4 HRSG STEAM LINES (EST.)	1	25	1	-38	-159	100	1412	0	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	16	
58	Unit 4 BURNER CONTROL SKID	1	2	1	-10	-167	110	1438	-15	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	0	11	
59	Unit 4 PIPE RACK STEAM LINES (EST.)	1	18	1	-42	-158	105	1408	-1	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	20	
60	BOILER FEED PUMPS	3	2	1	-15	14	109	1470	-16	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	5	13	
61	ST 1 ENCLOSURE	1	13	1	-46	80	109	1454	0	0	-3.4	-1.1	-5.3	0	-71.2	-3.1	0	22	
62	STG 1 ENCLOSURE	1	13	1	-46	89	105	1456	0	-1	-3.4	-1.1	-5.4	0	-71.2	-3.1	0	20	
63	CONDENSER AREA 1 - E SIDE	1	9	2	-54	53	113	1444	-2	-20	-3.4	-1.1	-5.3	0	-68.2	-3.0	0	10	
64	CONDENSER AREA 1 - S SIDE	1	9	2	-61	43	111	1434	0	0	-3.4	-1.1	-5.3	-8	-68.1	-3.0	0	22	
65	CONDENSER AREA 1 - W SIDE	1	9	2	-69	53	116	1429	0	0	-3.4	-1.1	-5.3	-8	-68.1	-3.0	0	27	
66	CONDENSER AREA 1 - N SIDE	1	9	2	-61	67	113	1441	-4	-16	-3.4	-1.1	-5.3	0	-68.1	-3.0	0	12	
67	CONDENSATE PUMPS	3	4.6	1	-71	45	95	1402	0	0	-3.5	-1.0	-5.2	0	-70.9	-3.0	5	16	
68	ST TRANSFORMER 1	1	3	1	-77	65	102	1425	0	0	-3.5	-1.1	-5.2	0	-71.1	-3.0	0	18	
69	ST 2 ENCLOSURE	1	13	1	-46	219	109	1397	0	-3	-3.4	-1.0	-5.1	0	-70.9	-3.0	0	23	
70	STG 2 ENCLOSURE	1	13	1	-46	227	105	1396	0	-1	-3.4	-1.0	-5.1	0	-70.9	-3.0	0	21	
71	CONDENSER AREA 2 - E SIDE	1	9	2	-54	234	113	1387	-9	-20	-3.4	-1.0	-5.1	0	-67.8	-2.9	0	4	
72	CONDENSER AREA 2 - S SIDE	1	9	2	-61	244	111	1379	-4	0	-3.4	-1.0	-5.1	-8	-67.8	-2.9	0	19	
73	CONDENSER AREA 2 - W SIDE	1	9	2	-69	234	116	1372	-2	0	-3.4	-1.0	-5.1	-8	-67.7	-2.9	0	26	
74	CONDENSER AREA 2 - N SIDE	1	9	2	-61	220	113	1381	0	-16	-3.4	-1.0	-5.1	0	-67.8	-2.9	0	17	
75	CONDENSATE PUMPS	3	4.6	1	-71	213	95	1372	0	0	-3.5	-1.0	-5.1	0	-70.7	-2.9	5	17	
76	ST TRANSFORMER 2	1	3	1	-77	223	102	1364	0	0	-3.5	-1.0	-5.0	0	-70.7	-2.9	0	19	
77	AUX BOILER	1	3	1	-40	200	108	1404	-15	0	-3.5	-1.1	-5.2	0	-70.9	-3.0	0		