APPENDIX B.2

Modeling Support Data

Tables presented in this Appendix are as follows:

B.2-1	Operations Impact Summary
B.2-2	Construction Impact Summary - See Appendix B.5, Table B.5-10
B.2-3	Blythe Regional Climate Summary
B.2-4	Mohave Desert Air Basin Historical Air Quality Data
B.2-5	Building Dimensions and Height Data

In addition, this appendix contains the following Figures:

B.2-1a,b,c	Proposed Facility Plot Plans
B.2-2	Expanded View of Process Area
B.2-3	BPIP Modeling Structures
B.2-4	Receptor Grid
B.2-5	Mohave Desert Air District Monitoring Stations

Modeling input/output files are included in the enclosed CD's.

Table B.2-1 Air Quality Impact Summary (2 Pages)

Pollutant	Avg. Period	Maximum Concentration ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total ($\mu g/m^3$)	Class II Significance Level ($\mu g/m^3$)	SIL ($\mu g/m^3$)	Ambient Air Quality CAAQS/NAAQS	
							($\mu g/m^3$)	($\mu g/m^3$)
NO_2	1-hr	189.7	149	338.7	-	19	339	-
	Annual	0.029	38.0	38.03	1	1	57	100
PM_{10}	24-hr	0.346	88	88.35	5	5	50	150
	Annual	0.027	31.0	31.03	1	1	20	-
$PM_{2.5}$	24- hr	0.346	28	28.35	5	5	-	35
	Annual	0.027	10.4	10.43	1	1	12	15.0
CO	1- hr	12.1	2530	2542	2000	2000	23,000	40,000
	8- hr	2.39	1789	1791	500	500	10,000	10,000
SO_2	1- hr	0.183	47.2	47.4	-	-	655	-
	3- hr	0.100	31.2	31.3	25	25		1,300
	24- hr	0.007	13.1	13.11	5	5	105	365
	Annual	0.0001	2.7	2.7	1	1	-	80

Table B.2-1 (cont'd) Stack Parameters and Emission Rates for Refined AERMOD Modeling

Each Emissions Source or Device*	Stack Height (m)	Stack Temp. (Kelvins)	Exhaust Velocity (m/s)	Stack Diameter (m)	Emission Rates (g/s)			
					NO_X	SO_2	CO	$PM_{10/2.5}$
Averaging Period: 1-hour for Normal Operating Conditions								
Aux. Boiler	12.192	422.0	18.288	0.7620	4.158E-2	1.008E-3	7.094E-2	-
Emergency Generator	10.668	807.0	117.128	0.2042	1.835E+0	1.260E-3	4.788E-2	-
Fire Pump	7.620	789.3	36.221	0.1524	2.356E-1	3.780E-4	3.906E-2	-
Averaging Period: 3-hours for Normal Operating Conditions								
Aux Boiler	12.192	422.0	18.288	0.7620	-	1.008E-3	-	-
Emergency Generator	10.668	807.0	117.128	0.2042	-	4.200E-4	-	-
Fire Pump	7.620	789.3	36.221	0.1524	-	1.260E-4	-	-
Averaging Period: 8-hours for Normal Operating Conditions								
Aux Boiler	12.192	422.0	18.288	0.7620	-	-	7.094E-2	-
Emergency Generator	10.668	807.0	117.128	0.2042	-	-	5.985E-3	-
Fire Pump	7.620	789.3	36.221	0.1524	-	-	4.883E-3	-
Averaging Period: 24-hours for Normal Operating Conditions								
Aux Boiler	12.192	422.0	18.288	0.7620	-	5.880E-4	-	1.103E-2
Emergency Generator	10.668	807.0	117.128	0.2042	-	5.250E-5	-	2.625E-4
Fire Pump	7.620	789.3	36.221	0.1524	-	1.575E-5	-	2.100E-4
Cooling Tower (per cell)	13.820	318.1	7.102	9.6387	-	-	-	1.330E-2
Averaging Period: Annual for Normal Operating Conditions								
Aux Boiler	12.192	422.0	18.288	0.7620	2.373E-3	5.753E-5	-	1.077E-3
Emergency Generator	10.668	807.0	117.128	0.2042	1.089E-2	1.108E-5	-	3.970E-5
Fire Pump	7.620	789.3	36.221	0.1524	1.396E-3	2.301E-6	-	2.848E-5
Cooling Tower (per cell)	13.820	318.1	7.102	9.6387	-	-	-	7.767E-3

*Each boiler, each IC engine, and each cooling tower cell.

Table B.2-2 Construction Modeling Impact Statement

See Appendix B.5, Table B.5-10

BLYTHE CAA AIRPORT, CALIFORNIA (040927)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1948 to 12/31/2008

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.7	72.0	78.5	86.4	95.2	104.6	108.4	106.6	101.3	89.8	75.9	66.6	87.7
Average Min. Temperature (F)	41.5	45.4	50.2	56.5	64.4	72.7	81.0	80.2	73.0	60.9	48.6	41.2	59.7
Average Total Precipitation (in.)	0.47	0.43	0.36	0.16	0.02	0.02	0.24	0.63	0.36	0.26	0.20	0.40	3.56
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 98.4% Min. Temp.: 98.5% Precipitation: 98.5% Snowfall: 98.5% Snow Depth: 98.3%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

BLYTHE CAA AIRPORT, CALIFORNIA

NCDC 1971-2000 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Monthly
Mean Max. Temperature (F)	66.6	72.0	77.6	85.7	93.9	104.1	107.2	105.4	99.6	88.0	74.7	66.0	86.7
Highest Mean Max. Temperature (F)	73.5	77.9	86.2	92.7	102.2	109.7	111.1	109.5	104.1	95.4	82.1	74.9	111.1
Year Highest Occurred	1981	1977	1997	1989	1997	1981	1980	1995	1979	1999	1995	1980	1980
Lowest Mean Max. Temperature (F)	56.8	66.4	70.2	75.0	86.0	98.9	103.0	101.7	90.7	79.7	68.5	59.3	56.8
Year Lowest Occurred	1979	1998	1991	1975	1977	1991	1976	1971	1976	1971	1994	1978	1979
Mean Temperature (F)	54.2	58.9	63.9	71.0	78.9	88.4	93.7	92.5	86.0	74.0	61.1	53.5	73.0
Highest Mean Temperature (F)	60.8	64.1	69.2	77.2	86.8	94.3	97.5	96.4	89.8	78.8	66.3	60.1	97.5
Year Highest Occurred	1981	1995	1997	1989	1997	1981	1980	1995	1979	1988	1995	1980	1980
Lowest Mean Temperature (F)	47.5	55.0	59.2	62.5	72.3	83.1	88.8	88.3	78.6	66.3	55.0	47.6	47.5
Year Lowest Occurred	1972	1990	1991	1975	1977	1998	1987	1976	1986	1971	1994	1971	1972
Mean Min. Temperature (F)	41.7	45.7	50.2	56.2	63.9	72.6	80.2	79.5	72.4	60.0	47.4	40.9	59.2
Highest Mean Min. Temperature (F)	48.0	50.9	54.7	61.7	71.4	78.9	84.8	83.4	77.5	64.9	50.5	45.8	84.8
Year Highest Occurred	1981	1995	1978	1989	1997	1981	1981	1998	1997	1978	1995	1977	1981
Lowest Mean Min. Temperature (F)	32.3	39.9	45.5	50.1	58.3	66.7	72.2	73.7	64.9	53.0	41.4	35.9	32.3
Year Lowest Occurred	1972	1972	1977	1975	1971	1998	1987	1976	1985	1971	1994	1971	1972
Mean Precipitation (in.)	0.46	0.55	0.45	0.14	0.03	0.01	0.32	0.66	0.50	0.23	0.19	0.48	4.02
Highest Precipitation (in.)	2.33	3.03	2.15	1.00	0.22	0.10	2.44	2.09	2.14	1.89	1.84	3.33	3.33
Year Highest Occurred	1993	1998	1992	1999	1996	1972	1984	1979	1976	1972	1985	1984	1984
Lowest Precipitation (in.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Year Lowest Occurred	2000	1997	1999	2000	2000	1999	2000	1999	1994	2000	2000	2000	2000
Heating Degree Days (F)	343.	184.	108.	40.	7.	0.	0.	0.	0.	17.	164.	363.	1226.
Cooling Degree Days (F)	7.	13.	72.	217.	438.	701.	890.	851.	631.	296.	45.	5.	4166.

Western Regional Climate Center, wrcc@dri.edu

BLYTHE CAA AIRPORT, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(040927) BLYTHE CAA AIRPORT														
From Year=1948 To Year=2008														
	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		T
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Day
January	66.7	41.5	54.1	89	25/1951	20	08/1971	61.1	1981	44.1	1949	0.0	0.0	2
February	72.0	45.4	58.7	93	18/1981	22	16/1990	64.9	1963	52.8	1949	0.2	0.0	0
March	78.5	50.2	64.3	100	30/1971	30	13/1956	72.9	2004	58.9	1952	3.1	0.0	0
April	86.4	56.5	71.5	107	08/1989	38	10/1975	77.8	1989	62.7	1975	11.6	0.0	0
May	95.2	64.4	79.8	114	27/1951	43	29/1971	87.4	1997	72.7	1977	23.8	0.0	0
June	104.6	72.7	88.7	123	28/1994	46	01/1980	95.0	1981	82.9	1965	29.0	0.0	0
July	108.4	81.0	94.7	123	28/1995	62	01/1982	98.2	1980	90.0	1987	30.9	0.0	0
August	106.6	80.2	93.4	120	01/1972	62	30/1957	98.8	1969	88.8	1976	30.6	0.0	0
September	101.3	73.0	87.2	121	01/1950	53	20/1971	91.2	1956	80.1	1986	28.4	0.0	0
October	89.8	60.9	75.3	111	01/1980	27	30/1971	81.3	2003	66.4	1971	17.6	0.0	0
November	75.9	48.6	62.3	95	01/1997	27	20/1994	67.0	1995	55.6	1971	0.8	0.0	0
December	66.6	41.2	53.9	87	29/1980	24	22/1968	60.5	1980	47.2	1971	0.0	0.0	1
Annual	87.7	59.7	73.7	123	19940628	20	19710108	75.5	1997	70.2	1971	175.9	0.0	5
Winter	68.4	42.7	55.6	93	19810218	20	19710108	61.2	1981	49.2	1949	0.2	0.0	5
Spring	86.7	57.0	71.9	114	19510527	30	19560313	76.7	1997	66.6	1975	38.4	0.0	0
Summer	106.5	78.0	92.3	123	19940628	46	19800601	96.3	1981	89.4	1976	90.6	0.0	0
Fall	89.0	60.8	74.9	121	19500901	27	19711030	78.0	2001	68.9	1971	46.8	0.0	0

Table updated on Apr 28, 2009

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons
Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May
Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Table B.2-4 (5 pages)

MOJAVE DESERT AQMD

EXCEEDANCES OF STANDARDS AND MAXIMUM CONCENTRATIONS 2006

STATION	OZONE					CARBON MONOXIDE					NITROGEN DIOXIDE			SULFUR DIOXIDE			
	days over state std	days over federal 1hr/8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state 1hr/8hr	days over federal 1hr/8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state std	max 1hr ppm	avg 1hr ppm	days over state 24h/1h	max 24hr ppm	max 1hr ppm	avg 1hr ppm
29P ADOBE	na	na/na	inc	inc	inc	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
BARSTOW	4	0 / 6	0.094	0.112	0.031	0/0	0/0	1.1	3.5	0.2	0	0.082	0.022	na/na	na	na	na
HESPERIA	22	2 / 18	0.124	0.148	0.038	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
PHELAN	25	2 / 19	0.111	0.137	0.045	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
TRONA	0	0 / 0	0.084	0.091	0.038	NM	NM	NM	NM	NM	0	0.050	0.005	0/0	0.004	0.033	0.001
VICTORVILLE	9	1 / 6	0.105	0.136	0.032	0/0	0/0	1.5	2.2	0.3	0	0.079	0.020	0/0	0.005	0.018	0.001
LANCASTER AVAQMD	22	2 / 16	0.105	0.132	0.036	0/0	0/0	1.6	3.2	0.2	0	0.066	0.015	na/na	na	na	na
Apple Valley	na	na/na	na	na	na	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
29P MARINES	4	0 / 0	0.084	0.100	0.041	0/0	0/0	inc	inc	inc	inc	inc	Inc	0/0	inc	inc	inc
MCLB	na	na/na	na	na	na	na/na	na/na	na	na	na	inc	inc	inc	na/na	na	na	na
MDAQMD Totals	36	3 / 30	0.124	0.148	0.037	0/0	0/0	1.5	3.5	0.3	0	0.082	0.015	0	0.005	0.033	0.001

STATION	WIND SPEED (MPH)					TEOM (PM10) (ug/m3)				TEMP (deg F)			HUMIDITY (%)			SOLAR RAD
	PEAK SPEED		AVERAGE SPEED													
	days w/1hr >40mph	max peak mph	days 24hr avg >30mph	max 1hr avg mph	avg hourly mph	max 1hr pm10 avg	max daily pm10 avg	days avg over 50ug/m3	monthly avg pm10	max 1hr tmp	min 1hr tmp	monthly avg tmp	max 1hr RH %	min 1hr RH %	monthly avg RH %	Avg daily solar Radiation
29P ADOBE	na	na	na	na	na	NM	NM	NM	NM	na	na	na	na	na	na	NM
BARSTOW	12	47	0	28	7.2	NM	NM	NM	NM	112	21	65	94	1	32	NM
HESPERIA	6	48	0	29	7.1	NM	NM	NM	NM	101	28	62	NM	NM	NM	NM
PHELAN	6	50	1	34	7.4	NM	NM	NM	NM	97	28	59	NM	NM	NM	NM
TRONA	20	52	6	35	5.5	882	184	11	23	112	24	68	NM	NM	NM	NM
VICTORVILLE	8	65	2	36	7.2	940	168	34	32	103	24	62	NM	NM	NM	0.328
LANCASTER AVAQMD	1	44	0	23	4.8	198	66	0	24	105	24	62	100	9	40	NM
Apple Valley	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	NM
29P MARINES	4	47	0	28	6.1	909	208	24	28	114	27	70	96	3	28	NM
MCLB	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	NM
LUCERNE	na	na	na	na	na	NM	NM	NM	NM	na	na	na	NM	NM	NM	NM
MDAQMD Totals	30	65	8	36	6.9	940	184	41	27	112	21	63	94	1	32	0.328

NM: Never Monitored
na: not active

Note: Included in MDAQMD totals are Barstow, Hesperia, Phelan, 29Palms, Trona, and Victorville.

06/14
2007

Air Quality Management District

EXCEEDANCES OF STANDARDS AND MAXIMUM CONCENTRATIONS 2007

STATION	OZONE					CARBON MONOXIDE					NITROGEN DIOXIDE			SULFUR DIOXIDE			
	days over state std	days over federal 1hr/8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state 1hr/8hr	days over federal 1hr/8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state std	max 1hr ppm	avg 1hr ppm	days over state 24h/1h	max 24hr ppm	max 1hr ppm	avg 1hr ppm
BARSTOW	2	0 / 3	0.088	0.099	0.032	0/0	0/0	0.7	1.4	0.126	0	0.073	0.020	na/na	na	na	na
HESPERIA	24	2 / 21	0.109	0.132	0.040	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
PHELAN	18	0 / 8	0.095	0.119	0.046	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
TRONA	0	0 / 0	0.084	0.094	0.040	NM	NM	NM	NM	NM	0	0.055	0.004	0/0	0.005	0.014	0.001
VICTORVILLE	7	0 / 6	0.090	0.107	0.033	0/0	0/0	1.6	2.1	0.237	0	0.071	0.018	0/0	0.005	0.009	0.001
LANCASTER AVAQMD	16	0 / 14	0.101	0.118	0.038	0/0	0/0	1.2	2.5	0.202	0	0.064	0.014	na/na	na	na	na
29P MARINES	0	0 / 0	0.083	0.094	0.042	0/0	0/0	inc	inc	inc	inc	inc	inc	0/0	inc	inc	inc
MDAQMD Totals	**29**	**2 / 26**	**0.109**	**0.132**	**0.038**	**0/0**	**0/0**	**1.6**	**2.1**	**0.181**	**0**	**0.073**	**0.014**	**0**	**0.005**	**0.014**	**0.001**

STATION	WIND SPEED (MPH)					TEOM (PM10) (ug/m3)				TEMP (deg F)			HUMIDITY (%)			R RAD
	PEAK SPEED		AVERAGE SPEED													
	days w/1hr >40mph	max peak mph	days 24hr avg >30mph	max 1hr avg mph	avg hourly mph	max 1hr pm10 ug/m3	max daily pm10 ug/m3	days avg over 50ug/m3	monthly avg pm10 ug/m3	max 1hr tmp Deg F	min 1hr tmp Deg F	monthly avg tmp Deg F	max 1hr RH %	min 1hr RH %	monthly avg RH %	Avg Daily Solar Radiation Langleys
BARSTOW	13	52	0	28	7.4	NM	NM	NM	NM	111	12	66	97	0	28	NM
HESPERIA	7	50	0	30	7.6	NM	NM	NM	NM	107	18	62	NM	NM	NM	NM
PHELAN	4	45	0	29	7.4	NM	NM	NM	NM	99	14	60	NM	NM	NM	NM
TRONA	7	46	5	35	6.5	865	133	11	19	114	8	69	NM	NM	NM	NM
VICTORVILLE	15	52	2	32	7.2	950	239	35	35	107	16	63	NM	NM	NM	0.337
LANCASTER AVAQMD	2	42	0	26	4.9	267	86	8	24	109	15	63	97	8	36	NM
29P MARINES	8	55	1	31	6.4	732	251	17	29	117	18	70	100	3	27	NM
MDAQMD Totals	**28**	**52**	**6**	**35**	**7.2**	**950**	**239**	**40**	**27**	**114**	**0**	**64**	**97**	**0**	**28**	**0.337**

NM: Never Monitored
na: not active
inc: incomplete

Note: Included in MDAQMD totals are Barstow, Hesperia, Phelan, 29Palms, Trona, and Victorville.

01/14
2008

Air Quality Management District

EXCEEDANCES OF STANDARDS AND MAXIMUM CONCENTRATIONS 2008

STATION	OZONE					CARBON MONOXIDE					NITROGEN DIOXIDE			SULFUR DIOXIDE			
	days over state 1hr/8hr	days over federal 8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state 1hr/8hr	days over federal 1hr/8hr	max 8hr ppm	max 1hr ppm	avg 1hr ppm	days over state std	max 1hr ppm	avg 1hr ppm	days over state 24h/1h	max 24hr ppm	max 1hr ppm	avg 1hr ppm
BARSTOW	5 / 23	7	0.097	0.104	0.033	0/0	0/0	1.2	1.4	0.111	0	0.081	0.019	na/na	na	na	na
HESPERIA	29 / 80	58	0.107	0.132	0.041	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
PHELAN	32 / 73	50	0.106	0.130	0.046	na/na	na/na	na	na	na	na	na	na	na/na	na	na	na
TRONA	3 / 23	7	0.094	0.100	0.037	NM	NM	NM	NM	NM	0	0.062	0.004	0/0	0.004	0.036	0.001
VICTORVILLE	16 / 58	32	0.098	0.109	0.035	0/0	0/0	1.0	1.4	0.215	0	0.074	0.016	0/0	0.002	0.006	0.001
LANCASTER AVAQMD	18 / 59	39	0.103	0.116	0.038	0/0	0/0	1.0	2.2	0.167	0	0.062	0.013	na/na	na	na	na
29P MARINES	0 / 15	8	0.085	0.093	0.039	0/0	0/0	inc	inc	inc	inc	inc	inc	0/0	inc	inc	inc
MDAQMD Totals	**47 / 89**	**72**	**0.107**	**0.132**	**0.038**	**0/0**	**0/0**	**1.2**	**1.4**	**0.163**	**0**	**0.081**	**0.013**	**0**	**0.004**	**0.036**	**0.001**

STATION	WIND SPEED (MPH)					TEOM (PM10) (ug/m3)				TEMP (deg F)			HUMIDITY (%)			SOLAR RAD
	PEAK SPEED		AVERAGE SPEED													
	days w/1hr >40mph	max peak mph	days 24hr avg >30mph	max 1hr avg mph	avg hourly mph	max 1hr pm10 ug/m3	max daily pm10 ug/m3	days avg over 50ug/m3	monthly avg pm10 ug/m3	max 1hr tmp Deg F	min 1hr tmp Deg F	monthly avg tmp Deg F	max 1hr RH %	min 1hr RH %	monthly avg RH %	Avg Daily Solar Radiation Langleys
BARSTOW	40	84	8	48	8.3	NM	NM	NM	NM	107	28	66	95	0	31	NM
HESPERIA	12	53	1	33	7.4	NM	NM	NM	NM	103	28	62	NM	NM	NM	NM
PHELAN	10	58	2	36	7.4	NM	NM	NM	NM	97	26	60	NM	NM	NM	NM
TRONA	20	53	4	32	5.7	886	157	22	23	123	28	69	NM	NM	NM	NM
VICTORVILLE	20	59	1	34	7.2	927	286	23	31	103	23	62	NM	NM	NM	0.337
LANCASTER AVAQMD	0	40	0	23	4.9	690	153	16	25	108	27	64	104	8	39	NM
29P MARINES	7	55	2	32	6.3	951	368	44	32	112	28	70	100	3	31	NM

Mojave Desert Air Basin

County: Riverside

OZONE (ppm)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Peak 8-Hour Indicator (State)	0.117	0.119	0.109	0.115	0.118	0.119										0.076	0.070	0.073	0.070	0.072
Avg. of 4th High 8-Hr. in 3 Yrs (Nat)	0.103	0.102	0.096	0.099	0.101	0.101												0.063	0.061	0.063
Peak 1-Hour Indicator (State)	0.149	0.147	0.135	0.140	0.143	0.144										0.079	0.077	0.079	0.076	0.080
4th High 1-Hr. in 3 Yrs2	0.148	0.147	0.134	0.130	0.130	0.131										0.077	0.077	0.077	0.077	0.084
Max. 8-Hr. Concentration	0.105	0.117	0.102	0.115	0.115	0.108										0.071	0.067	0.072	0.059	0.075
Maximum 1-Hr. Concentration	0.140	0.140	0.130	0.130	0.138	0.140										0.077	0.078	0.084	0.078	0.092
Days Above State 8-Hr. Std.	48	49	45	81	79	39										1	0	1	0	1
Days Above Nat. 8-Hr. Std.	40	39	31	63	59	30										0	0	0	0	0
Days Above State 1-Hr. Std.	32	31	23	33	44	8										0	0	0	0	0

PM_{10} ($\mu g/m^3$)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Max. 24-Hr. Concentration (State)																				
Max. 24-Hr. Concentration (Nat)																				
Max. Annual Average (State)																				
Max. Annual Average (Nat)																				
Calc Days Above State 24-Hr Std																				
Calc Days Above Nat 24-Hr Std																				

No Monitoring Data Available

$PM_{2.5}$ ($\mu g/m^3$)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Max. 24-Hr. Concentration (State)																				
Max. 24-Hr. Concentration (Nat)																				
98th Percentile of 24-Hr Conc.																				
Annual Average (State)																				
Avg. of Qtrly. Means (Nat)																				

No Monitoring Data Available

CARBON MONOXIDE (ppm)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Peak 8-Hr. Indicator																				
Max. 1-Hr. Concentration																				
Max. 8-Hr. Concentration																				
Days Above State 8-Hr. Std.																				
Days Above Nat. 8-Hr. Std.																				

No Monitoring Data Available

NITROGEN DIOXIDE (ppm)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Peak 1-Hr. Indicator																				
Max. 1-Hr. Concentration																				
Max. Annual Average (Nat)																				
Max. Annual Average (State)																				

No Monitoring Data Available

SULFUR DIOXIDE (ppm)	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Peak 1-Hr. Indicator																				
Max. Annual Average																				
Max. 24-Hr. Concentration																				

No Monitoring Data Available

Table A-43

Portions of Riverside County lie within the Salton Sea and South Coast Air Basins.

Mojave Desert Air Basin

County: Riverside

OZONE (ppm)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Peak 1-Hour Indicator					0.143	0.138	0.144	0.142	0.141	0.132	0.140	0.146	0.146							
National 1-Hr. Design Value					0.110	0.140	0.147	0.147	0.140	0.131	0.130	0.130	0.131							
Nat. 8-Hr. Design Value					0.092	0.096	0.101	0.103	0.102	0.096	0.099	0.101	0.101							
Maximum 1-Hr. Concentration					0.140	0.160	0.148	0.140	0.140	0.130	0.130	0.138	0.140							
Max. 8-Hr. Concentration					0.102	0.105	0.127	0.105	0.117	0.102	0.115	0.115	0.108							
Days Above State Standard					19	39	65	32	31	23	33	44	18							
Days Above Nat. 1-Hr. Std.					3	3	10	4	2	1	6	7	1							
Days Above Nat. 8-Hr. Std.					8	30	49	16	20	18	37	39	16							

PM_{10} (ug/m3)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Max. 24-Hour Concentration											112	242								
Max. Annual Geometric Mean																				
Calc Days Above State 24-Hr Std											54	42								
Calc Days Above Nat 24-Hr Std											0	6								

CARBON MONOXIDE (ppm)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Peak 8-Hr. Indicator																				
Max. 1-Hr. Concentration																				
Max. 8-Hr. Concentration																				
Days Above State 8-Hr. Std.																				
Days Above Nat. 8-Hr. Std.																				

No Monitoring Data Available

NITROGEN DIOXIDE (ppm)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Peak 1-Hr. Indicator																				
Max. 1-Hr. Concentration																				
Max. Annual Average																				

No Monitoring Data Available

SULFUR DIOXIDE (ppm)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Peak 1-Hr. Indicator																				
Max. 24-Hr. Concentration																				
Max. Annual Average																				

No Monitoring Data Available

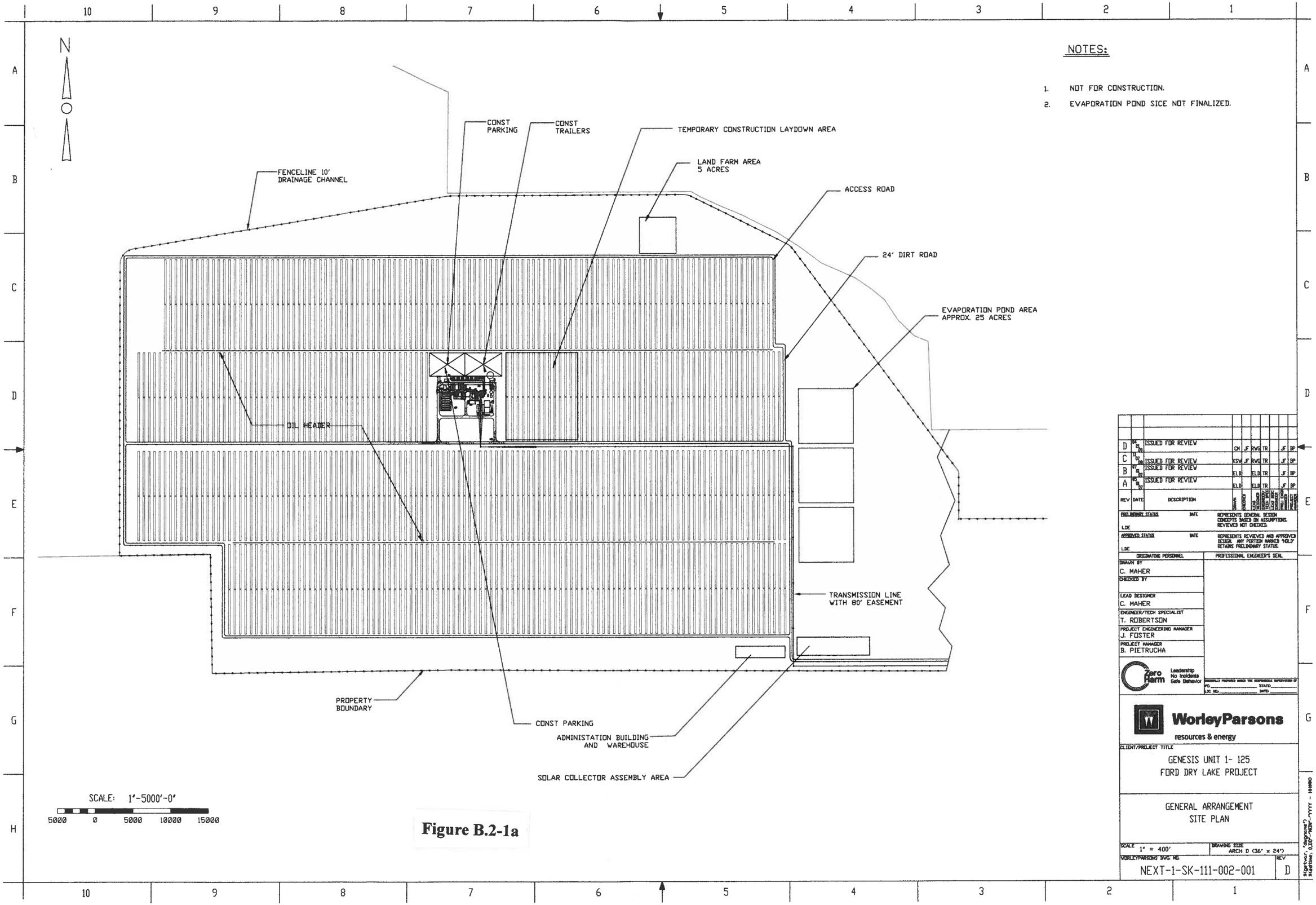
Table A-39

Portions of Riverside County lie within the Salton Sea and South Coast Air Basins.

Table B.2-5

Building and Structure Dimensions

Structure/Building	Height, ft.	Length, ft.	Width or Diameter, ft.
Control Bldg.	50	135	60
Reheaters	20	40	4.83
STG	30	100	30
Demin Water Tank	20	-	26
Treated Water Tank	36	-	32
Process/Firewater Tank	75	-	75
HTF Expansion Tanks	25	50	14
Aux Boiler	13	26	11.2
Deaerator	50	24	8
Diesel Fire Pump	25	33	11
Electric Fire Pump	25	33	11
Generator SUT	25	26	20
Aux Unit Transformers	15	21	13
Cooling Tower Chemical Feed Bldg.	20	50	25
Major Electrical Bldg.	20	60	40
Cooling Tower Electrical Bldg.	12	60	20
Emergency Generator Bldg	37	32	12
Cooling Tower	31,59	356	42.67



NOTES:
1. NOT FOR CONSTRUCTION.
2. EVAPORATION POND SICE NOT FINALIZED.
N
CONST PARKING
CONST TRAILERS
TEMPORARY CONSTRUCTION LAYDOWN AREA
LAND FARM AREA 5 ACRES
FENCELINE 10' DRAINAGE CHANNEL
ACCESS ROAD
24' DIRT ROAD
EVAPORATION POND AREA APPROX. 25 ACRES
OIL HEADER
TRANSMISSION LINE WITH 80' EASEMENT
PROPERTY BOUNDARY
CONST PARKING
ADMINISTATION BUILDING AND WAREHOUSE
SOLAR COLLECTOR ASSEMBLY AREA
SCALE: 1"-5000'-0"
5000 0 5000 10000 15000
D 04 21 09 ISSUED FOR REVIEW CM JF RWG TR JF BP
C 11 07 08 ISSUED FOR REVIEW KSW JF RWG TR JF BP
B 07 01 07 ISSUED FOR REVIEW ELD ELD TR JF BP
A 05 01 07 ISSUED FOR REVIEW ELD ELD TR JF BP
REV DATE DESCRIPTION DRAWN CHECKED LEAD DESIGNER ENGINEER/TECH SPEC. LEAD DESIGN ENGINEER PROJECT MANAGER PROJECT ENGINEER
PRELIMINARY STATUS DATE REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
LDE
APPROVED STATUS DATE REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
LDE
ORIGINATING PERSONNEL
PROFESSIONAL ENGINEER'S SEAL
DRAWN BY C. MAHER
CHECKED BY
LEAD DESIGNER C. MAHER
ENGINEER/TECH SPECIALIST T. ROBERTSON
PROJECT ENGINEERING MANAGER J. FOSTER
PROJECT MANAGER B. PIETRUCHA
Zero Harm Leadership No Incidents Safe Behavior
WorleyParsons resources & energy
CLIENT/PROJECT TITLE
GENESIS UNIT 1- 125
FORD DRY LAKE PROJECT
GENERAL ARRANGEMENT
SITE PLAN
SCALE 1" = 400'
DRAWING SIZE ARCH D (36" x 24")
WORLEYPARSONS DWG. NO. NEXT-1-SK-111-002-001
REV D

Figure B.2-1a

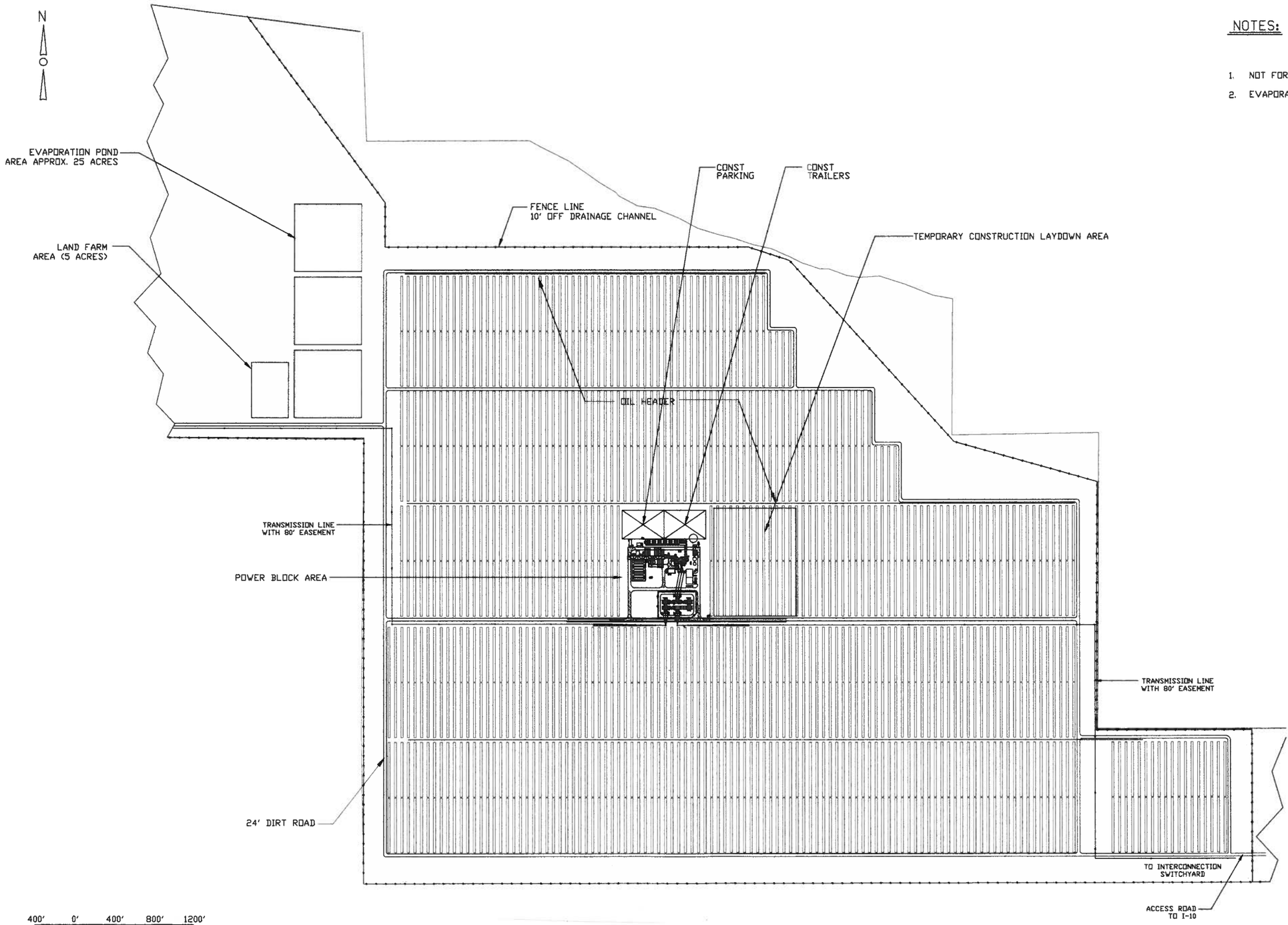


Figure B.2-1b

NOTES:

1. NOT FOR CONSTRUCTION.
2. EVAPORATION POND SIZE NOT FINALIZED

REV	DATE	DESCRIPTION	DRAWN	CHECKED	LEAD DESIGNER	ENGINEER/ TECH SPEC	LEAD DISC ENGINEER	PROJ ENGR MANAGER	PROJECT MANAGER
D	04 21 09	ISSUED FOR REVIEW	CM	JF	RVG	TR			BP
C	11 07 08	ISSUED FOR REVIEW	KSW	JF	RVG				GB
B	07 01 07	ISSUED FOR REVIEW	Edd		Edd				JB
A	05 01 07	ISSUED FOR REVIEW	Edd		Edd				JB

PRELIMINARY STATUS — DATE — L.DE
REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.

APPROVED STATUS — DATE — L.DE
REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.

ORIGINATING PERSONNEL
DRAWN BY: C. MAHER
CHECKED BY:
LEAD DESIGNER: C. MAHER
ENGINEER/TECH SPECIALIST: T. ROBERTSON
PROJECT ENGINEERING MANAGER: J. FOSTER
PROJECT MANAGER: B. PIETRUCHA

PROFESSIONAL ENGINEER'S SEAL

Zero Harm — Leadership, No Incidents, Safe Behavior

ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF
PE:..... STATE:.....
LIC NO:..... DATE:.....

WorleyParsons resources & energy

CLIENT/PROJECT TITLE
GENESIS UNIT 2- 125
FORD DRY LAKE PROJECT

GENERAL ARRANGEMENT
SITE PLAN

SCALE 1" = 400'
DRAWING SIZE ARCH D (36" x 24")
WORLEYPARSONS DWG. NO. NEXT-2-SK-111-002-001
REV D

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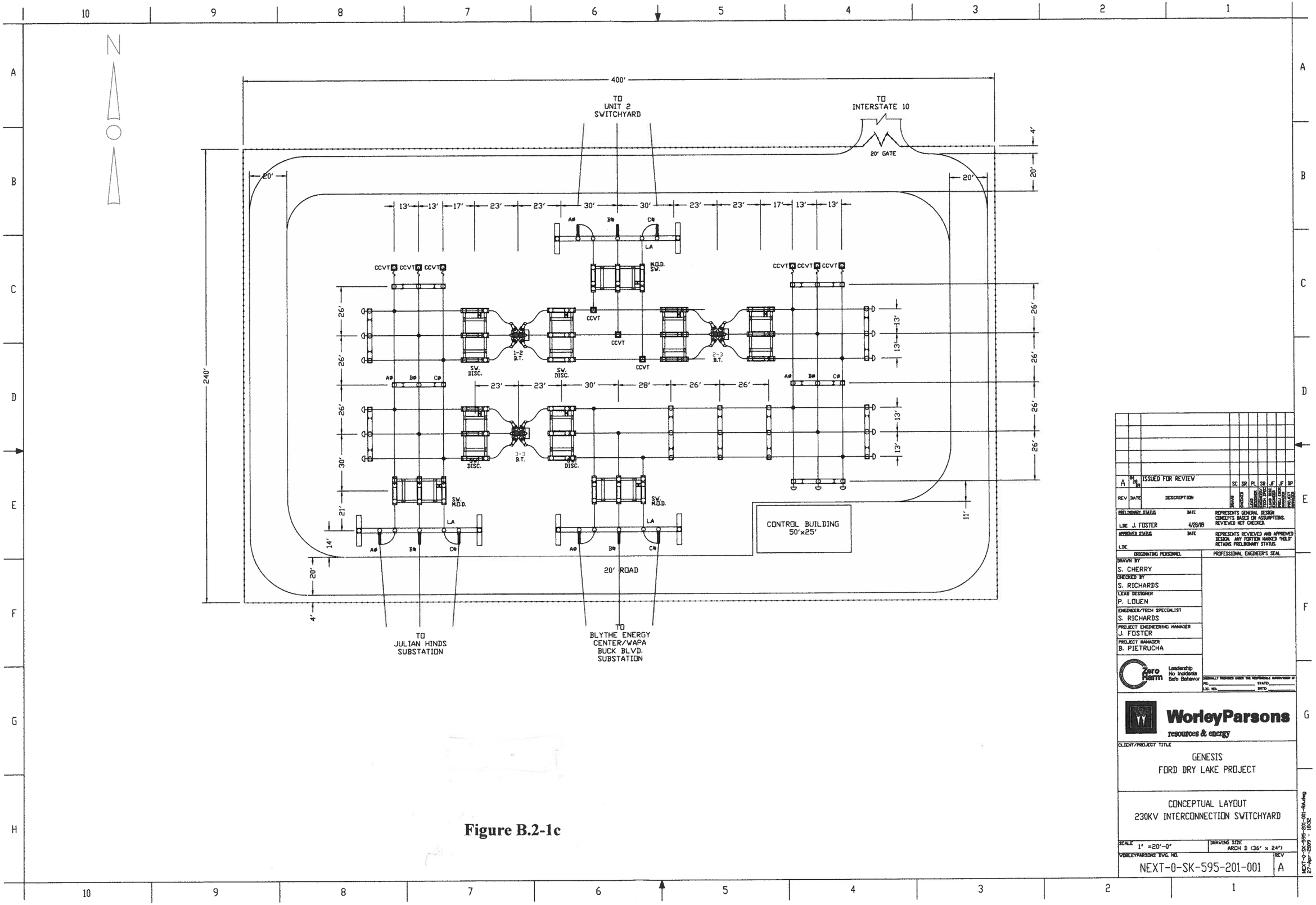
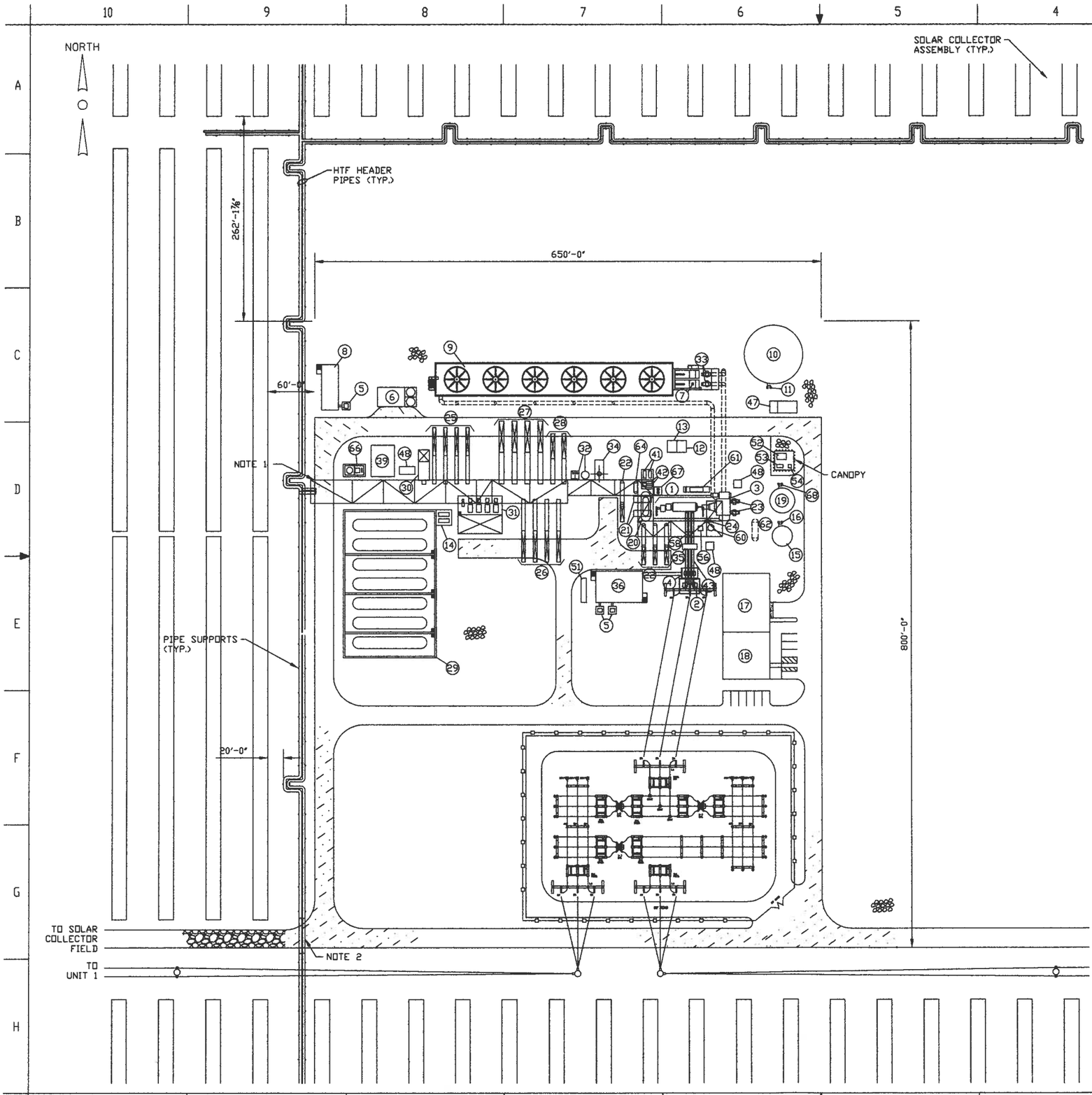
$(optvar, 'DATE')



N
400'
TO UNIT 2 SWITCHYARD
TO INTERSTATE 10
20' GATE
240'
CCVT
SW. DISC.
1-2 B.T.
2-3 B.T.
3-3 B.T.
M.O.D. SW.
SW. M.O.D.
LA
CONTROL BUILDING 50'x25'
20' ROAD
TO JULIAN HINDS SUBSTATION
TO BLYTHE ENERGY CENTER/WAPA BUCK BLVD. SUBSTATION
A
ISSUED FOR REVIEW
REV
DATE
DESCRIPTION
PRELIMINARY STATUS
LDE J. FOSTER
4/28/09
REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
APPROVED STATUS
REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
ORIGINATING PERSONNEL
PROFESSIONAL ENGINEER'S SEAL
DRAWN BY
S. CHERRY
CHECKED BY
S. RICHARDS
LEAD DESIGNER
P. LOUEN
ENGINEER/TECH SPECIALIST
S. RICHARDS
PROJECT ENGINEERING MANAGER
J. FOSTER
PROJECT MANAGER
B. PIETRUCHA
Zero Harm
Leadership
No Incidents
Safe Behavior
WorleyParsons
resources & energy
CLIENT/PROJECT TITLE
GENESIS
FORD DRY LAKE PROJECT
CONCEPTUAL LAYOUT
230KV INTERCONNECTION SWITCHYARD
SCALE 1" =20'-0"
DRAWING SIZE ARCH D (36" x 24")
WORLEYPARSONS DWG. NO.
NEXT-0-SK-595-201-001
REV A

Figure B.2-1c



EQUIPMENT DESCRIPTIONS

1 STEAM TURBINE/GENERATOR
2 GSU TRANSFORMER
3 SURFACE CONDENSER
4 UNIT AUXILIARY TRANSFORMER
5 STATION SERVICE TRANSFORMERS
6 COOLING TOWER CHEMICAL FEED/STORAGE AREA
7 AUXILIARY COOLING PUMP (BACK-UP/START-UP)
8 COOLING TOWER ELECTRICAL ENCLOSURE
9 COOLING TOWER
10 RAW, FIRE, TANK (1.86 MILLION GAL)
11 SERVICE WATER PUMPS
12 CO2 BOTTLE STORAGE
13 H2 BOTTLE STORAGE
14 OVERFLOW TANK PUMPS
15 DEMIN WATER STORAGE TANK (60,000 GAL)
16 DEMIN WATER PUMP SKID
17 WATER TREATMENT AREA (CYCLE CHEM FEED, DEMIN TRAIN, MMF, RO, SAMPLE PANEL, LAB, AIR COMP)
18 ADMINISTRATION/WAREHOUSE BUILDING
19 TREATED WATER TANK (100,000 GAL)
20 DEAERATOR/STORAGE TANK/FEEDWATER HEATER
21 FEEDWATER PUMPS
22 FEEDWATER HEATERS
23 CONDENSATE PUMPS
24 GLAND STEAM CONDENSER
25 ECONOMIZERS
26 REHEATERS
27 EVAPORATORS
28 SUPERHEATERS
29 EXPANSION TANKS AND CONTAINMENT AREA
30 HTF FREEZE PROTECTION AND WARNUP HEATER (GAS-FIRED)
31 HTF CIRCULATING PUMPS AND CONTAINMENT AREA
32 BLOWDOWN TANK AND SUMP/PUMPS
33 CIRCULATING WATER PUMPS
34 AUXILIARY BOILER
35 GENERATOR CIRCUIT BREAKER
36 MAIN ELECTRICAL ENCLOSURE
37 NOT USED
38 NOT USED
39 ULLAGE SYSTEM AND CONTAINMENT AREA
40 NOT USED
41 CLOSED COOLING WATER HEAT EXCHANGERS
42 CLOSED COOLING WATER PUMPS
43 ISOLATED PHASE BUS DUCT
44 NOT USED
45 NOT USED
46 NOT USED
47 FIRE PUMP HOUSE
48 FIRE PROTECTION SPRINKLER HOUSE
49 NOT USED
50 NOT USED
51 10s-START DIESEL GENERATOR
52 ABOVE GROUND DIESEL FUEL STORAGE TANK (3,000 GAL)
53 DIESEL FUEL PUMP
54 WASH TRUCK DEMIN FILL STATION
55 NOT USED
56 STEAM JET AIR INJECTOR
57 NOT USED
58 EXCITATION TRANSFORMER
59 NOT USED
60 TURBINE AREA FLASH TANK
61 LUBE OIL AND EHC SKID
62 OIL/WATER SEPARATOR
63 NOT USED
64 CLOSED COOLING WATER EXPANSION TANK
65 NOT USED
66 NITROGEN BULK STORAGE AND VAPORIZER
67 EQUIPMENT DRAINS SUMP AND PUMPS
68 TREATED WATER PUMP SKID

NOTES:

1. NOT FOR CONSTRUCTION.

Figure B.2-2

LEGEND:

- YARD AGGREGATE
- ROAD AGGREGATE
- ASPHALT
- CONCRETE
- PIPE RACK
- PULL SPACE

60 0 60 120 180

SCALE: 1" = 60'

REV	DATE	DESCRIPTION	DRAWN	DESIGNED	LEAD DESIGNER	ENGINEER/TECH SPECIALIST	PROJECT ENGINEERING MANAGER	LEAD DISCIPLINE	PROJECT MANAGER
A	04/27/09	ISSUED FOR REVIEW	SC	SR	PL	SR	JF	JF	BP

PRELIMINARY STATUS — DATE — REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
LDE J. FOSTER 4/27/09

APPROVED STATUS — DATE — REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
LDE

ORIGINATING PERSONNEL
DRAWN BY: S. CHERRY
CHECKED BY: S. RICHARDS
LEAD DESIGNER: P. LOUEN
ENGINEER/TECH SPECIALIST: S. RICHARDS
PROJECT ENGINEERING MANAGER: J. FOSTER
PROJECT MANAGER: B. PIETRUCHA

PROFESSIONAL ENGINEER'S SEAL

Zero Harm — Leadership, No Incidents, Safe Behavior

ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF
PE: STATE:
LIC. NO.: DATE:

WorleyParsons resources & energy

CLIENT/PROJECT TITLE
GENESIS 125 MW
FORD DRY LAKE PROJECT

GENERAL ARRANGEMENT
CONCEPTUAL POWER BLOCK LAYOUT

SCALE 1"=60'
DRAWING SIZE ARCH D (36" x 24")
WORLEYPARSONS DWG. NO. NEXT-2-SK-111-002-002
REV A

NEXT-2-SK-111-002-RAdwg
27-Apr-2009 - 12:53

Figure B.2-3
BPIP Modeling Structures

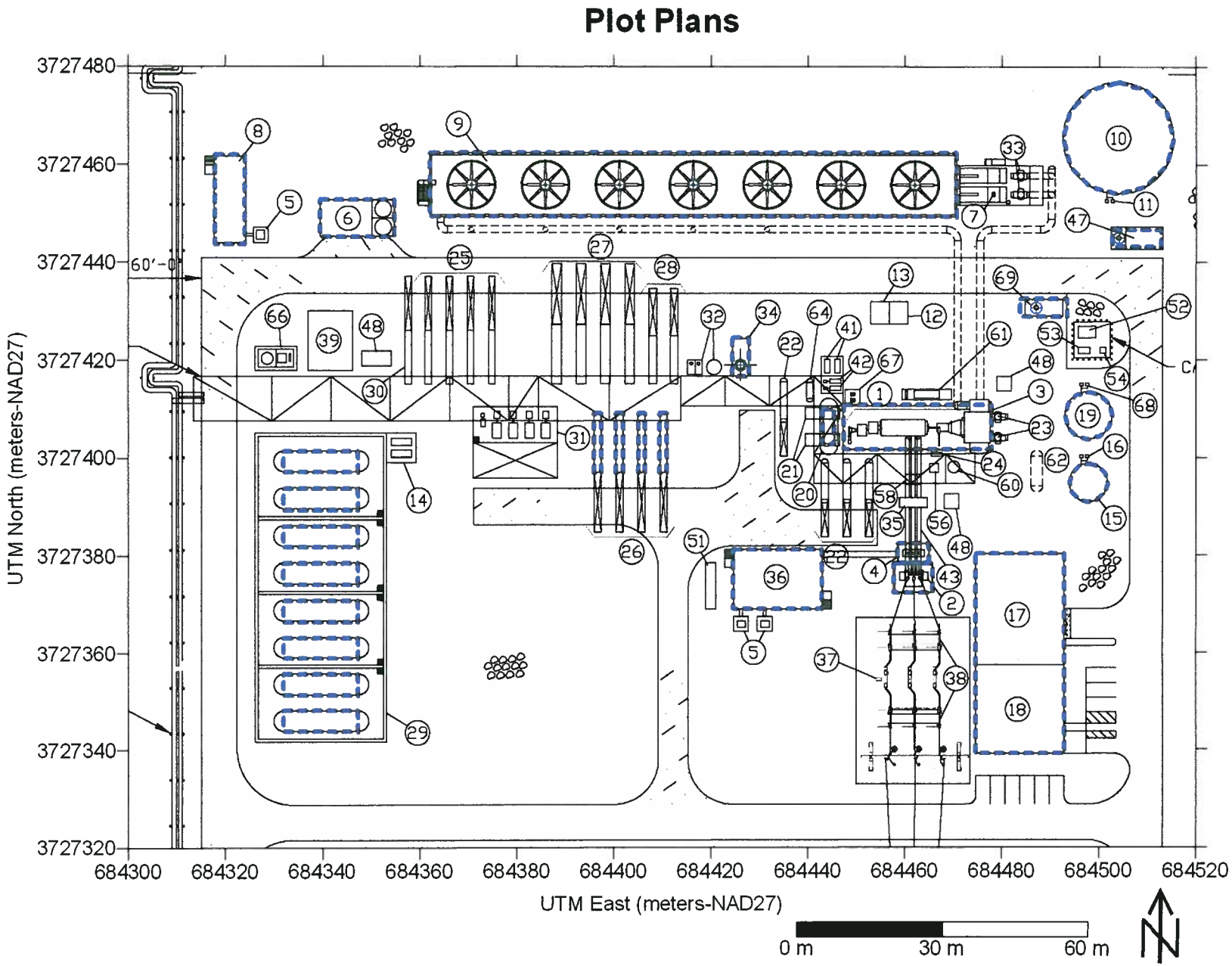
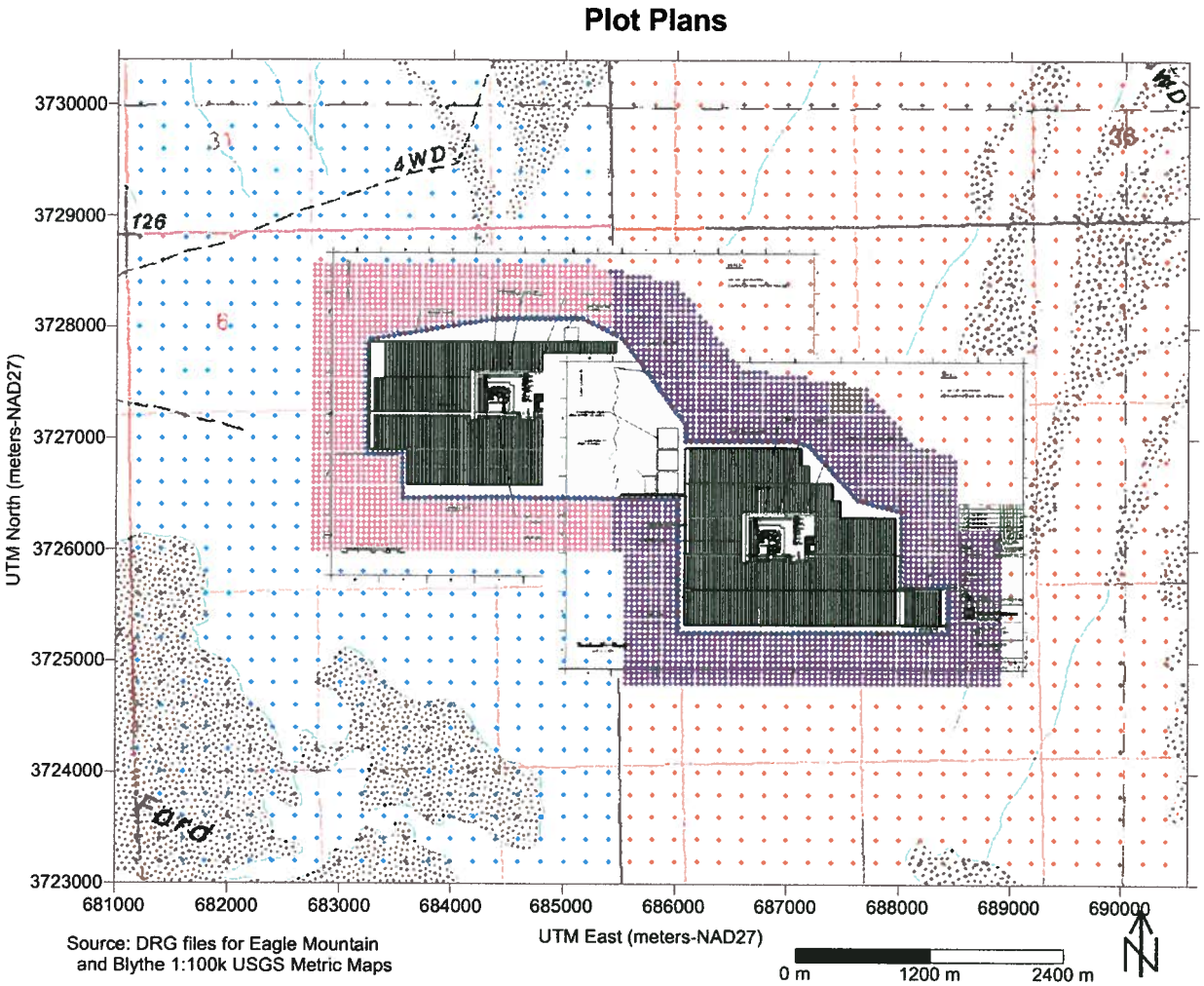
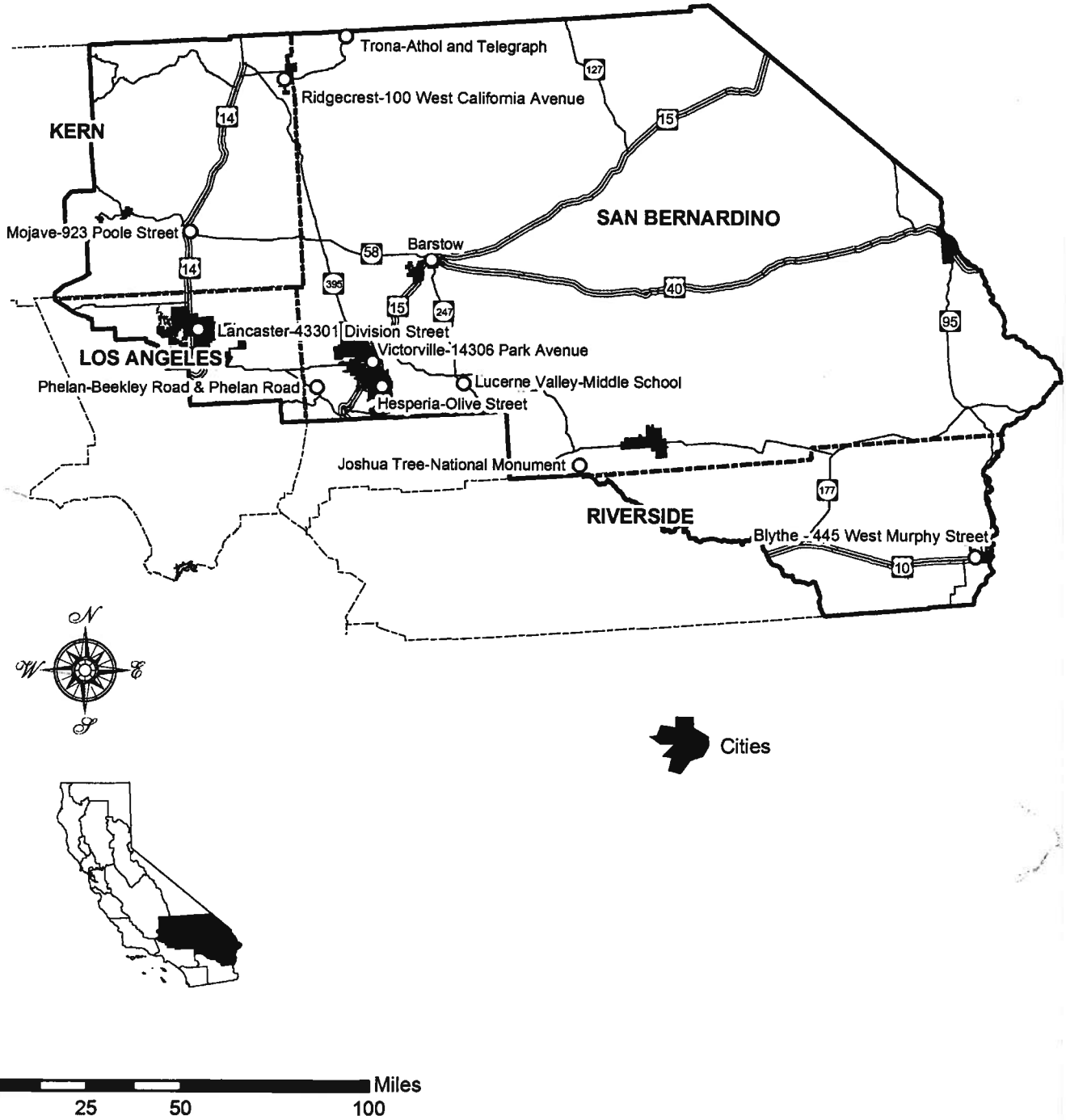


Figure B.2-4

Receptor Grid



Source: DRG files for Eagle Mountain and Blythe 1:100k USGS Metric Maps

Figure B.2-5

Mojave Desert Air Basin Monitoring Stations (2006-2008)