

APPENDIX C
PHYSICAL ENGINEERING DATA

Preliminary Mix Designs

Fly Ash ID	Fly Ash Source	Fly Ash	Bottom Ash ID	Bottom Ash Source	Bottom Ash	Soil	Moisture (%)	Dry Density (pcf)	7-Day Strength (psi)	14-Day Strength (psi)
00-002	Stanton	20%				80%	10.30	105.1	121	
00-002	Stanton	20%				80%	9.98	106.4		141
00-002	Stanton	20%				80%	11.90	108.4	195	
00-002	Stanton	20%				80%	12.32	109.5		227
00-004	Coyote	15%				85%	10.11	102.4	119	
00-004	Coyote	15%				85%	10.39	101.7		173
00-004	Coyote	15%				85%	12.28	103.3	133	
00-004	Coyote	15%				85%	12.30	104.1		213
00-006	Hoot Lake	15%				85%	9.40	119.3	239	
00-006	Hoot Lake	15%				85%	9.41	117.8		279
00-006	Hoot Lake	15%				85%	10.44	118.7	249	
00-006	Hoot Lake	15%				85%	10.65	119.3		285
00-008	Coal Creek	20%				80%	8.12	115.6	90	
00-008	Coal Creek	20%				80%	8.24	115.2		94
00-008	Coal Creek	20%				80%	9.65	116.8	94	
00-008	Coal Creek	20%				80%	9.49	117.5		104
00-002	Stanton	20%	00-003	Stanton	25%	55%	8.83	101.9	123	
00-002	Stanton	20%	00-003	Stanton	25%	55%	9.17	102.3		221
00-002	Stanton	20%	00-003	Stanton	25%	55%	11.33	107.0	119	
00-002	Stanton	20%	00-003	Stanton	25%	55%	10.58	103.6		456
00-004	Coyote	15%	00-005	Coyote	25%	60%	8.62	105.9	96	
00-004	Coyote	15%	00-005	Coyote	25%	60%	8.70	105.5		123
00-004	Coyote	15%	00-005	Coyote	25%	60%	10.33	107.1	131	
00-004	Coyote	15%	00-005	Coyote	25%	60%	10.48	106.5		139
00-006	Hoot Lake	15%	00-007	Hoot Lake	25%	60%	6.83	102.6	86	
00-006	Hoot Lake	15%	00-007	Hoot Lake	25%	60%	7.03	102.7		100
00-006	Hoot Lake	15%	00-007	Hoot Lake	25%	60%	8.05	104.5	123	
00-006	Hoot Lake	15%	00-007	Hoot Lake	25%	60%	8.06	105.5		171
00-008	Coal Creek	20%	00-009	Coal Creek	25%	55%	6.27	108.9	64	
00-008	Coal Creek	20%	00-009	Coal Creek	25%	55%	6.41	109.3		68
00-008	Coal Creek	20%	00-009	Coal Creek	25%	55%	7.68	112.2	76	
00-008	Coal Creek	20%	00-009	Coal Creek	25%	55%	7.79	112.6		84

March 2000

Grab Sample Compressive Strength

Plant		Coal Creek	Coal Creek	Hoot Lake	Hoot Lake	Hoot Lake	Stanton	Stanton	Stanton
Date		Sept 2000	Sept 2000	June 2000	June 2000	June 2000	July 2000	July 2000	July 2000
Ash Addition		18%	25%	12%	16%	22%	14%	28%	18%
Pen(s)	Unit	B3	B4	B9,B10	B11	B12	B13,B14	B15	B16
14-Day									
Compressive									
Strength	psi	250	240	171	143	131	270	150	210
28-Day									
Compressive									
Strength	psi	284	297	179	183	183	296	179	228
Dry Density	pcf	110.4	112.3	112.3	110.2	110.8	117.1	111.4	116.1

**Laboratory vs. Field
14- Day Strengths (psi)**

Lab Ash Ratio Field Ash Ratio Ash Type	20% 14–18% Stanton		15% 0% Coyote		15% 12–22% Hoot Lake		20% 12–25% Coal Creek	
	Lab	Field	Lab	Field	Lab	Field	Lab	Field
Average % of Laboratory	141	210	173	NA	279	143	94	250
	227	270	213	NA	285	131	104	240
	184	240	193	NA	282	137	99	245
	130.43%				48.58%		247.47%	