

Commission of Inquiry

PARADISE DAM

Counsel Assisting - Tender List 9

12 March 2020

Exhibit No	Description	DOC ID
124.	Article by Dr Ernest Schrader 'Shear strength and lift joint quality of RCC' – 1999	PDI.040.0001
125.	Article by Dr Ernest Schrader - 'Extension Shearing Testing for Saluda Dam Roller Compacted Concrete'	PDI.047.0001
126.	Transcript of Interview with Dr Ernest Schrader, 26 February 2020	TRA.510.023.0001
127.	Transcript of Interview with Dr Ernest Schrader, 10 March 2020	TRA.510.006.0001
128.	Email: Questions Regarding Design Parameters for Lift Joints	SUN.129.001.0133
129.	Note to File: Design Criteria – Dam Stability Analysis	DNR.005.4886 (at p.5056)
130.	Supplemental Statement of Dr Ernest Schrader, 11 March 2020	SCE.022.0001
131.	Nuclear gauge density testing	DNR.005.6570 (at p.6593)
132.	Density and nuclear gauge calibration	DNR.005.6570 (at p.6594)
133.	Density continued	DNR.005.6570 (at p.6595)
134.	Nuclear gauge accuracy	DNR.005.6570 (at p.6596)
135.	Density and nuclear gauge continued	DNR.005.6570 (at p.6598)
136.	Compaction/ density gauge calibration problem	DNR.005.6570 (at p.6599)
137.	Nuclear gauge calibration block	DNR.005.6570 (at p.6602)
138.	Carpi, misc (email)	DNR.005.4886 (at p.5143)

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139.	Carpi membrane issues	DNR.005.4886 (at p. 5146)
140.	Plinth – excavation and RCC start	SUN.010.002.0200
141.	RH email: Questions re Design Parameters for Lift Joints	SUN.021.001.8406
142.	Blend sand – RCC aggregate	DNR.011.1234
143.	Goodnight in aggregate	DNR.011.1345
144.	Conveyor issues	DNR.011.1265
145.	Conveyor - mixer hopper and sampling	SUN.010.002.0200 (at p. 1274)
146.	Material property and thermal update	DNR.011.1361
147.	Example of poor pozzolan performance with lean RCC and basalt	DNR.010.8241
148.	Cofferdam comments for RCC dams	DNR.010.8237
149.	Density meter calibration issues	DNR.005.6570 (at p.6587)
150.	Thermal couples	DNR.010.8245
151.	Interior peak temperatures, start RCC October 18 = Day 0	DNR.010.8245 (at p.8247)
152.	Specification – permeability testing	DNR.010.8235
153.	Specification – aggregate gradation	DNR.010.8233
154.	Density test requirements and clarification	DNR.010.8239 (at p.8240)
155.	Cement and ash comparison to Theiss [sic] mix results	DNR.010.8236
156.	Material property and Thermal update	DNR.007.2295
157.	RCC mix water	DNR.011.1472
158.	RCC aggregate and mix verification tests	DNR.007.2295 (at p.2356)
159.	Nuclear gauge Geiger counter	DNR.011.1413

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160.	Brief comments and reminders for Jose Lopez	DNR.011.1238 (at p.1240)
161.	Thermal update – for ES Schedule as of May 2004	DNR.011.1556 (at p.1557)
162.	Thermal properties, analysis and detailed schedule	DNR.011.1585
163.	Email – 60kg mix thermal results	DNR.011.1201
164.	Updated table of material properties	SUN.010.002.0356
165.	Aggregate gradation and handling	DNR.011.1204
166.	Potential change of cement	SUN.010.002.0205
167.	Potential GERCC – Schrader comments to date	SUN.010.002.0208
168.	Misc comments	DNR.011.1204 (at p.1206)
169.	Waterstop protection	DNR.010.8221
170.	Bedding issues	DNR.011.1228
171.	Bedding issues	DNR.006.4207 (at p.4288)
172.	Bedding issues supplement	DNR.011.1231
173.	Upstream face and options & trial placement monolith joint	SUN.010.002.0382
174.	Dental concrete	DNR.011.1284
175.	Use new aggregate in current RCC	SUN.010.002.0384
176.	Foundation seeps at dental and RCC	DNR.011.1338
177.	RCC related tests and frequency	DNR.011.1501
178.	Cement storage and silos	DNR.011.1246
179.	RCC density – testing – achieving density - gauge	DNR.011.1452
180.	GERCC Schrader summary comments	DNR.011.1340

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181.	Bedding mix supplemental clarifications and recommendations	DNR.011.1232
182.	Bedding fillet at panels	DNR.011.1227
183.	More on GERCC – Schrader response to Tim Griggs summary	DNR.011.1405
184.	Carpi membrane at monolith joints	DNR.011.1244
185.	Top of conduit to RCC contact	DNR.011.1614
186.	Monolith joint former	SUN.010.002.0187
187.	RCC moisture	DNR.011.1475
188.	Rolled down edge – upstream to downstream	DNR.011.1513
189.	Non-linear FEM stress analysis	DNR.011.1412
190.	Grout and treatment of pimple	DNR.014.3416 (at p.3475)
191.	Email – cleanup and steps to apron	DNR.011.1336
192.	Stockpile management	DNR.011.1572
193.	Cofferdam – Access - Diversion	DNR.011.1252
194.	Conveyor covers	DNR.011.1263
195.	Strain gauge instrumentation	DNR.011.1575
196.	Monolith joint former	DNR.011.1398
197.	Misc comments – production – membrane punctures – strain gauges	DNR.011.1381
198.	Misc comments wet weather RCC	DNR.011.1379
199.	Conveyor modifications – chute and upstream area – and allowed time to compaction (retarder)	DNR.011.1271
200.	Spillway crest top-out	DNR.011.1570
201.	RCC to abutment contact	DNR.011.1511
202.	RCC lift surface cleaning	DNR.011.1459

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203.	Email – set time and time to compaction	DNR.011.1565
204.	RCC time of compaction -again	SUN.010.002.0286
205.	RCC quality control testing	SUN.126.001.0167
206.	RCC quality control testing – additional comment	SUN.010.002.0275
207.	Email – low density top of spillway	DNR.011.1360
208.	RCC dam - thermal	DNR.011.1448
209.	RCC dam issues	DNR.011.1442
210.	RCC dam - Right abutment and apron	DNR.011.1444
211.	Grout contacts	DNR.011.1248
212.	Left abutment extra joint	SUN.010.002.0142 (at p.0143)
213.	RCC cores	ALC.002.001.0936 (at p.0937)
214.	Roller Compacted Concrete Cores and Coring – Mexico	SUN.126.002.0049 (at p.0050)