

Appendix R.1

**Summary of Underdrain Pond
Concrete Test Results**

**Cripple Creek & Victor Mining Company
Squaw Gulch VLF Pregnant Solution Storage Area
Underdrain Pond Concrete Testing Summary**



SPECIMEN NO.	DATE PLACED	TIME BATCHED	TIME SAMPLED	LOCATION	MIX DESIGN NUMBER	FIELD TEST RESULTS				LABORATORY TEST RESULTS						
						SLUMP (in)	AIR CONTENT (%)	UNIT WEIGHT (pcf)	SAMPLE TEMP. (°F)	CURING AGE AT TIME OF TEST (days)	LOAD (pounds)	AREA (in ²)	DESIGN STRENGTH (psi)	COMPRESSIVE STRENGTH (psi)	PERCENT OF DESIGN (%)	FRACTURE TYPE
UD-1	5/14/2013	11:53 AM	2:00 PM	Underdrain Ponds	6409 2110	3.75	7.5	138.4	74	7	40,188	12.57	4,000	3,200	80%	3
UD-2										14	48,880	12.57	4,000	3,890	97%	2
UD-3										28	60,675	12.57	4,000	4,830	121%	2
UD-4										28	62,295	12.57	4,000	4,960	124%	3
UD-5										H						
UD-6										H						
UD-7	5/16/2013	7:50 AM	9:40 AM	Underdrain Ponds	6409 2110	1.00	4.0	144.0	72	7	31,770	12.57	4,000	2,530	63%	2
UD-8										14	67,675	12.57	4,000	5,390	135%	3
UD-9										28	74,960	12.57	4,000	5,970	149%	1
UD-10										28	76,445	12.57	4,000	6,080	152%	1
UD-11										H						
UD-12										H						
UD-13	5/16/2013	9:15 AM	10:50 AM	Underdrain Ponds	6409 2110	4.00	8.0	134.0	76	7	31,770	12.57	4,000	2,530	63%	3
UD-14										14	39,425	12.57	4,000	3,140	79%	2
UD-15										28	44,395	12.57	4,000	3,530	88%	2
UD-16										28	50,165	12.57	4,000	3,990	100%	2
UD-17										H						
UD-18										H						
UD-19	5/17/2013	5:00 AM	6:37 AM	Underdrain Ponds	6409 2110	4.50	7.5	138.4	69	7	50,095	12.57	4,000	3,990	100%	3
UD-20										14	57,400	12.57	4,000	4,570	114%	2
UD-21										28	64,505	12.57	4,000	5,130	128%	1
UD-22										28	66,665	12.57	4,000	5,310	133%	1
UD-23										H						
UD-24										H						
UD-25	5/17/2013	11:40 AM	1:54 PM	Underdrain Ponds	6409 2110	1.50	4.5	143.2	80	7	51,590	12.57	4,000	4,110	103%	3
UD-26										14	59,030	12.57	4,000	4,700	118%	2
UD-27										28	62,530	12.57	4,000	4,980	125%	1
UD-28										28	62,515	12.57	4,000	4,970	124%	1
UD-29										H						
UD-30										H						
UD-31	5/17/2013	1:04 AM	3:45 PM	Underdrain Ponds	6409 2110	2.50	2.5	140.8	78	7	52,090	12.57	4,000	4,150	104%	3
UD-32										14	54,100	12.57	4,000	4,310	108%	3
UD-33										28	66,040	12.57	4,000	5,260	132%	1
UD-34										28	67,395	12.57	4,000	5,360	134%	1
UD-35										H						
UD-36										H						

Appendix R.2

**Underdrain Pond Individual
Concrete Test Reports**

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 1

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/14/2013

Time Sampled: 2:00 pm

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 058

Mix Number: 64092110

Design Strength: 4000

Batch Size: 10 yds

Slump: 3.75"

Concrete Temp: 74

Water Added: 10 gal

Initial Curing:

Max Field Curing Temp.:

Ticket Number: 175074

Time Placed: 1:24 pm

Time Batched: 11:53 am

Air Content: 7.5%

Unit Weight: 138.4

Ambient Temp: 53

Technician: DK

Final Curing:

Min Field Curing Temp.:

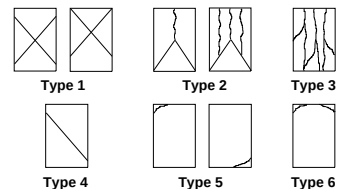
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-1	5/21/2013	7	40188	4.00	12.57	3200	80%	3
UD-2	5/28/2013	14	48880	4.00	12.57	3890	97%	2
UD-3	6/11/2013	28	60675	4.00	12.57	4830	121%	2
UD-4	6/11/2013	28	62295	4.00	12.57	4960	124%	3
UD-5		H	Discard					
UD-6		H	Discard					

Remarks:

Copies to:

TYPES OF FRACTURE



Reported by:

Thorne Clark
Project Resident

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 2

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/16/2013

Time Sampled: 9:40 am

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 022

Mix Number: 64092110

Design Strength: 4000

Batch Size: 8 yds

Slump: 1.00"

Concrete Temp: 72

Water Added: 5 gal

Initial Curing:

Max Field Curing Temp.:

Ticket Number: 175167

Time Placed: 9:15 am

Time Batched: 7:50 am

Air Content: 4.0%

Unit Weight: 144.0

Ambient Temp: 59

Technician: RF

Final Curing:

Min Field Curing Temp.:

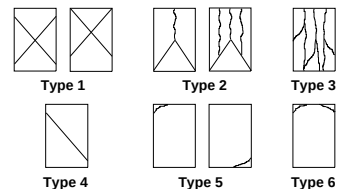
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-7	5/23/2013	7	31770	4.00	12.57	2530	63%	2
UD-8	5/30/2013	14	67675	4.00	12.57	5390	135%	3
UD-9	6/13/2013	28	74960	4.00	12.57	5970	149%	1
UD-10	6/13/2013	28	76445	4.00	12.57	6080	152%	1
UD-11		H	Discard					
UD-12		H	Discard					

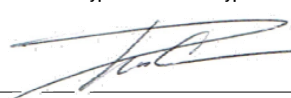
Remarks:

Copies to:

TYPES OF FRACTURE



Reported by:


Thorne Clark
Project Resident

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 3

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/16/2013

Time Sampled: 11:00 am

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 007

Ticket Number: 175173

Mix Number: 64092110

Time Placed: 10:50 am

Design Strength: 4000

Time Batched: 9:15 am

Batch Size: 7 yds

Slump: 4.00"

Air Content: 8.0%

Unit Weight: 134.0

Concrete Temp: 76

Ambient Temp: 63

Water Added: 3 gal

Technician: RF

Initial Curing:

Final Curing:

Max Field Curing Temp.:

Min Field Curing Temp.:

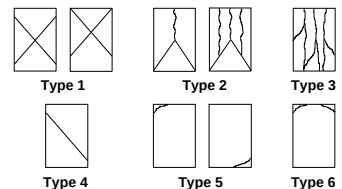
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-13	5/23/2013	7	31770	4.00	12.57	2530	63%	3
UD-14	5/30/2013	14	39425	4.00	12.57	3140	79%	2
UD-15	6/13/2013	28	44395	4.00	12.57	3530	88%	2
UD-16	6/13/2013	28	50165	4.00	12.57	3990	100%	2
UD-17		H	Discard					
UD-18		H	Discard					

Remarks:

Copies to:

TYPES OF FRACTURE



Reported by:

Tim Burkhard
Project Resident

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 4

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/17/2013

Time Sampled: 6:37 am

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 007

Ticket Number: 175213

Mix Number: 64092110

Time Placed: 6:25 am

Design Strength: 4000

Time Batched: 5:00 am

Batch Size: 8 yds

Slump: 4.50"

Air Content: 7.5%

Unit Weight: 138.4

Concrete Temp: 69

Ambient Temp: 47

Water Added: 0

Technician: DK

Initial Curing:

Final Curing:

Max Field Curing Temp.:

Min Field Curing Temp.:

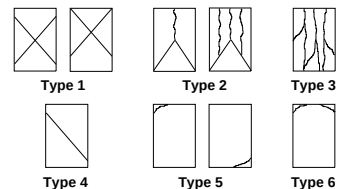
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-19	5/24/2013	7	50095	4.00	12.57	3990	100%	3
UD-20	5/31/2013	14	57400	4.00	12.57	4570	114%	2
UD-21	6/14/2013	28	64505	4.00	12.57	5130	128%	1
UD-22	6/14/2013	28	66665	4.00	12.57	5310	133%	1
UD-23		H	Discard					
UD-24		H	Discard					

Remarks:

Copies to:

TYPES OF FRACTURE



Reported by:

Thorne Clark
Project Resident

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 5

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/17/2013

Time Sampled: 1:54 pm

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 367

Mix Number: 64092110

Design Strength: 4000

Batch Size: 10 yds

Slump: 1.50"

Air Content: 4.5%

Unit Weight: 143.2

Concrete Temp: 80

Ambient Temp: 71

Water Added: 15 gal

Technician: DK

Initial Curing:

Final Curing:

Max Field Curing Temp.:

Min Field Curing Temp.:

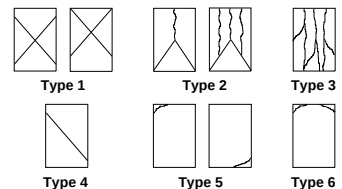
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-25	5/24/2013	7	51590	4.00	12.57	4110	103%	3
UD-26	5/31/2013	14	59030	4.00	12.57	4700	118%	2
UD-27	6/14/2013	28	62530	4.00	12.57	4980	125%	1
UD-28	6/14/2013	28	62515	4.00	12.57	4970	124%	1
UD-29		H	Discard					
UD-30		H	Discard					

Remarks:

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TYPES OF FRACTURE



Reported by:

Thorne Clark
Project Resident

REPORT OF CONCRETE CYLINDER TEST

AMEC Environment & Infrastructure

Licensee Address

Project Number: 74201125N0- Underdrain Ponds

Report Number: 6

Project: Underdrain Ponds

Client: CC&V

Address:

Attn:

FIELD TEST CONDITIONS AND RESULTS

Date Placed: 5/17/2013

Time Sampled: 3:45 pm

Location of Sample: Underdrain Ponds

Supplier: Transit Mix

Truck Number: 093

Ticket Number: 175263

Mix Number: 64092110

Time Placed: 2:43 pm

Design Strength: 4000

Time Batched: 1:04 pm

Batch Size: 10 yds

Slump: 2.50"

Air Content: 2.5%

Unit Weight: 140.8

Concrete Temp: 78

Ambient Temp: 67

Water Added: 15 gal

Technician: DK

Initial Curing:

Final Curing:

Max Field Curing Temp.:

Min Field Curing Temp.:

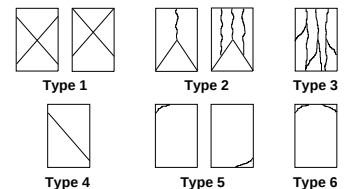
LABORATORY TEST RESULTS

Specimen	Test Date	Age	Load	Diameter	Area	Strength	Percent of Design	Type of Fracture
UD-31	5/24/2013	7	52090	4.00	12.57	4150	104%	3
UD-32	5/31/2013	14	54100	4.00	12.57	4310	108%	3
UD-33	6/14/2013	28	66040	4.00	12.57	5260	132%	1
UD-34	6/14/2013	28	67395	4.00	12.57	5360	134%	1
UD-35		H	Discard					
UD-36		H	Discard					

Remarks:

Copies to:

TYPES OF FRACTURE



Reported by:

Thorne Clark
Project Resident