

Table  
2009/2010 Storm Wa

2008/2009 Storm Water Monitoring Plan Sample No:	Sampling Location:	Potential Source Area(s):	Sample Purpose/Objective:	TSS (mg/L)		1/12/2010
				1/18/2010	1/12/2010	
SL-BG-CR Sample discontinued	Upstream creek sample - Background	Upper Quarry Road	Assess runoff from Upper Quarry Road entering Quarry.	NS	NS	NS
SL-1-CR	Upstream creek sample south of Overburden Stockpile (NW corner of facility)	Upper Quarry Road	Assess runoff from Upper Quarry Road entering Quarry.	<5	9.0	<4.70
SL-2-RD	Upper Quarry Road before Pond 5	Runoff from Upper Quarry Road before Pond 5	Evaluate the sediment load in storm water runoff from Upper Quarry Road that is diverted into Pond 5 - the Quarry Settlement Pond.	970	12,100 J	<4.70
SL-3A-RD Sample discontinued	Inlet to Pond 5	Runoff from upper road before Pond 5	Evaluate the sediment load in storm water runoff from upper road that is diverted into Pond 5 - the Quarry Settlement Pond.	NS	NS	NS
SL-3-PD Sample discontinued	Outlet of Pond 5 - the Quarry Settlement Pond	Runoff from Upper Quarry Road	Evaluate the effectiveness of Pond 5 to reduce sediment load from Upper Quarry Road.	NS	NS	NS
SL-4-CR	Downstream of Overburden Stockpiles before concrete footing	Former Overburden Stockpiles	Evaluate the sediment contribution from natural erosion and the Overburden stockpiles prior to entering the operation portion of the property (Creek Sample).	NW	NW	NW
SL-4A1-RD	Inlet to Pond 4A (east end)	Runoff from Upper/Middle Quarry Road	Evaluate the sediment load in storm water runoff from Upper/Middle Quarry Road	NW	16	NW
SL-4A2-PD Sample discontinued	Inlet to Pond 4A (west end)	Runoff from Upper/Middle Quarry Road	Evaluate the sediment load in storm water runoff from Upper/Middle Quarry Road	NS	NS	NS
SL-4A3-PD	Outlet of Pond 4A <i>Downstream of c</i>	Runoff from Upper/Middle Quarry Road	Evaluate the sediment load in storm water runoff from Upper/Middle Quarry Road	12 J	<5	<4.70
SL-5-CR	Ore Feeder and the Primary Crusher	Natural Erosion and Runoff from Pond 4A	Determine the TSS in Permanente Creek before the runoff from the Ore Feeder and the Primary Crusher and after Pond 4A	NA	NA	NA



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				1/18/2010	1/12/2010	
SL-5A-CR Sample discontinued	Creek sample - downstream of Ponds 4A & 4B	Natural Erosion and Runoff from Ponds 4A & 4B	Determine the TSS in Permanente Creek before the runoff from the Ore Feeder and the Primary Crusher and after Pond 4A and 4B	NS	NS	NS
SL-6-RD	Upper Quarry Road before Quarry Pit	Runoff from Upper Quarry Road	Evaluate the sediment load in storm water runoff from Upper Quarry Road going into the Quarry Pit	460	47,200	<4.70
SL-11-CR	Inlet to Pond 13	Primary Crusher	Determine the TSS in Permanente Creek before Pond 13	<5	36	<4.70
SL-12-PD	Outlet (overflow) from Pond 13	Primary Crusher	Evaluate the effectiveness of Pond 13 at removing sediment from the storm	<5	9.0	<4.70
	Inlet to Pond 13 from Pond 13B (lower part of Pond 13B)	Primary Crusher	Evaluate the effectiveness of Pre-Settlement Pond 13B at removing sediment from storm water	NW	NW	NW
SL-13A-RD	Inlet to Pond 13A	Primary Crusher	Evaluate the sediment load in runoff from the primary crusher	NW	5,860	NW
SL-13B-PD Sample discontinued	Inlet to Pond 13B from Pond 13A	Primary Crusher	Evaluate the effectiveness of Pre-Settlement Pond 13A at removing sediment from storm water	NS	NS	NS
SL-14-CR	Screen Tower Number 4 (under bridge)	Upstream of Screen Tower Number 4	Determine the TSS in the creek before Screen Tower Number 4 and the adjacent creek embankment (Creek Sample).	<5	26	<4.70
SL-15-CR	Creek sample at creek embankment below Screen Tower 4	Downstream of Screen Tower Number 4	Determine the sediment contribution and potential increase from Screen Tower Number 4 and the creek embank runoff (Creek Sample).	5.0	22	<4.70
SL-16A-RD	Inlet to Pond 9 (from culvert off Screen Tower Road)	Runoff from Screen Tower Road	Evaluate the potential sediment load runoff from Screen Tower Road which is diverted into Pond 9.	48	11,900	<4.70

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**Water Sampling Results**

Oil & Grease (mg/L)		COD (mg/L)		pH		Conductivity (µmhos/cm)		Field Observations
1/10/2010	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010	
	NS	NS	NS	NS	NS	NS	NS	
	6.30	22	150	7.9	7.8	1,260	620	
	7.17	<10	<10	8.3	8.1	1,230	1,100	
	6.11	<10	<10	8.2	8.0	1,260	1,130	
	NW	NW	NW	NW	NW	NW	NW	
	8.60	NW	78	NW	8.3	NW	310	
	NS	NS	NS	NS	NS	NS	NS	
	6.32	<10	<10	8.3	8.2	1,260	1,140	
	7.36	<10	<10	8.0	7.9	1,290	1,160	
	8.44	15	30	8.1	8.2	910	510	

**Table 1  
2009/2010 Storm Water Monitoring**

2008/2009 Storm Water Monitoring Plan Sample No:	Sampling Location:	Potential Source Area(s):	Sample Purpose/Objective:	TSS (mg/L)		O 1/12/20
				1/12/2010	1/18/2010	
SL-16B-RD	Inlet to Pond 9 (from culvert under Lower Quarry Road)	Runoff from Lower Quarry Road originating after the Primary Crusher	Evaluate the potential sediment load runoff from Lower Quarry Road originating after the Primary Crusher which is diverted into Pond 9.	340	9,880	<4.7
		Runoff from Lower Quarry Road originating after the Primary Crusher	Evaluate the effectiveness of Pond 9 in removing sediment from the runoff from Lower Quarry Road.	9.0	2,300	<4.7
SL-18-RD	Lower Quarry Road	Runoff from Lower Quarry Road after the drop inlet to Pond 9	Evaluate the sediment load from Lower Quarry Road that is not captured by Pond 9 and the potential contribution of the sand pile flowing into Dinky Shed Pond.	NW	10,400	NW
SL-19-PD Sample discontinued	Effluent from Dinky Shed Basin	Effluent from the Dinky Shed Basin	Evaluate the effectiveness at removing sediment from the runoff entering the Dinky Shed Basin from the Lower Quarry Road after Pond 9. Dinky Shed Basin replaces a filtration system removed in Oct. 2000.	NS	NS	NS
SL-20-RD	Inlet to Pond 17 at Rockplant 2	Screen Tower Number 4	Evaluate the effectiveness of Pond 17 at removing sediment from storm water	25,700	3,530	<4.7
	7 at Rockplant 2 (from the last point near effluent pipe if no discharge)	Screen Tower Number 4	Evaluate the effectiveness of Pond 17 at removing sediment from storm water	8.0	280	<4.7
SL-22A-CR	Downstream of Dinky Shed Basin. Upstream of hillside runoff	Effluent from the Dinky Shed Basin if Dinky Shed Basin is discharging.	Evaluate the cleanout effectiveness of the new Dinky Shed Basin.	<5	2,610	<4.7
SL-22B-CR	Downstream of Dinky Shed Basin and downstream of hillside runoff behind the shed.	Hillside runoff observed on 11/19/99	Evaluate the impact of hillside runoff if present	6.0	2,400	<4.7
SL-23-CR	Creek Sample along Railroad tracks	KACC	Evaluate the impact of the cement plant and the former KACC property on the creek between Pond 9 and the rail road tracks	5.0	1,600	<4.7

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**Water Sampling Results**

Oil & Grease (mg/L)		COD (mg/L)		pH		Conductivity (µmhos/cm)		Field Observations
1/10/2010	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010	
	6.40	22	13	8.1	8.7	1,170	230	
	9.50	<10	74	7.6	8.0	1,310	600	
	7.10	NW	22	NW	8.9	NW	140	
	NS	NS	NS	NS	NS	NS	NS	
	7.00	15	43	8.0	8.1	2,030	710	
	6.50	<10	22	7.8	8.0	1,870	1,040	
	7.10	<10	50	8.1	7.9	1,320	710	
	7.90	<10	91	8.1	7.9	1,310	710	
	18.8	<10	83	8.1	7.9	1,360	860	

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				1/12/2010	1/18/2010	1/12/2010
SL-24-PD Sample discontinued	Outlet of Pond 21 along railroad tracks	KACC	Evaluate the effectiveness of Pond 21 at removing sediment from storm water	NS	NS	NS
SL-25-CR	Inlet to Pond 22	Runoff from the main plant area, parking lot, car wash.	Assess the quality of the creek downstream of Ponds 18, 19, 20, and 21, as well as the impact of storm water from the former KACC property.	<5.0	2,240	<4.70
SL-D25-CR	Duplicate of SL-25-CR		QA/QC	15	2,250	<4.70
SL-26-PD	Outlet of Pond 22	Treatment of all sources that originate either upstream or from the Lehigh property	Determine the effectiveness of the in-stream Pond 22 at reducing sediment load before leaving the Lehigh property (Creek Sample).	<5	2,500	<4.70
SL-D26-PD	Duplicate of SL-26-PD		QA/QC	<5	2,420	6.42
SL-27-PD	Outlet from Pond 14		Evaluate the effectiveness of Pond 14 at removing sediment from stormwater.	15	740	<4.70
SL-D27-PD	Duplicate of SL-27-PD		QA/QC	13	740	6.23

NW: Sample not collected because there was no water at the sampling location.

NS: Not sampled because the sampling location has been discontinued.

NA: Not accessible

TSS = Total Suspended Solids by EPA 160.2

COD = Chemical Oxygen Demand by EPA 410.4

Oil and Grease by EPA 1664A

pH by EPA 9040B

Conductivity by EPA 120.1

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**Water Sampling Results**

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ID	Oil & Grease (mg/L)		COD (mg/L)		pH		Conductivity (µmhos/cm)		Field Observations
	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010	1/12/2010	1/18/2010		
	NS	NS	NS	NS	NS	NS	NS		
	7.80	<10	70	8.3	9.3	1,330	680		
	6.30	<10	91	8.3	9.1	1,340	680		
JJ	6.70	<10	91	7.3	8.6	1,470	670		
	8.10	<10	120	7.3	8.6	1,470	660		
J	7.30	<10	70	8.2	8.3	1,280	890		
	5.70	<10	54	8.2	8.3	1,290	890		