Attachment 4.1H - Environmental Monitoring Worksheet

Period: 16/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	

Site: Albion Park Quarry

Environment Protection Licence No.	122
Site Name (As it appears on the licence)	Albion Park Quarry
Site Address (As it appears on the licence)	Albion Park Quarry Woollybutt Drive ALBION PARK RAIL NSW 2527
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=54925&SYSUID=1&LICID=122

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Water												
Point 1	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Point 2	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Point 1	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Point 2	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Point 1	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Point 2	pH	After 90mm rain	6.5	8.5	pH		Y				**NRR**	
	Oil and Grease	After 90mm rain	0	0	Visible		Y				**NRR**	
	TSS	After 90mm rain		50	mg/L		Y				**NRR**	
Air												
Point 1	Ash	Monthly		90		6/12/2018	Y				**59**	
Point 2	Ash	Monthly		90		6/12/2018	Y				**18**	
Point 3	Ash	Monthly		90		6/12/2018	Y				**50**	
Point 4	Ash	Monthly		90		6/12/2018	Y				**36**	
Blasting								**Time of Blast**				
LWR		Per Blast		5	mm/s		Y				**0.33**	
		Per Blast		115	dB		Y				**106.7**	
		Per Blast		5	mm/s		Y				**NRR**	
		Per Blast		115	dB		Y				**NRR**	
		Per Blast		5	mm/s		Y				**NRR**	
		Per Blast		115	dB		Y				**NRR**	
		Per Blast		5	mm/s		Y				**NRR**	
		Per Blast		115	dB		Y				**NRR**	
		Per Blast		5	mm/s		Y				**NRR**	

Site: "Johhniefelds" Marulan Quarry

Environment Protection Licence No.	1371
Site Name (As it appears on the licence)	Marulan Quarry
Site Address (As it appears on the licence)	Marulan Quarry Brayton Road MARULAN NSW 2579

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
							Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=32923&SYSUID=1&LICID=1371				
Blasting								Time of Blast				
Underdowns	Overpressure	Per Blast		115	dB		Y				**NRR**	
	Vibration	Per Blast		5	mm/s		Y				**NRR**	
Underdowns	Overpressure	Per Blast		115	dB		Y				**NRR**	
	Vibration	Per Blast		5	mm/s		Y				**NRR**	
Underdowns	Overpressure	Per Blast		115	dB		Y				**NRR**	
	Vibration	Per Blast		5	mm/s		Y				**NRR**	
Underdowns	Overpressure	Per Blast		115	dB		Y				**NRR**	
	Vibration	Per Blast		5	mm/s		Y				**NRR**	
Underdowns	Overpressure	Per Blast		115	dB		Y				**NRR**	

Site: Lynwood Quarry

Environment Protection Licence No.	**12939**
Site Name (As it appears on the licence)	Lynwood Quarry
Site Address (As it appears on the licence)	Lynwood Quarry 278 Stoney Creek Road, MARULAN NSW 2579
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=105521&SYSUID=1&LICID=12939

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Air												
DD 5	Insoluble Solids	Monthly	0	4	mg/m2/month	28/12/18	Y	31/12/18	12:00:00 AM		**1/1/1900**	
DD 8	Insoluble Solids	Monthly	0	4	mg/m2/month	28/12/18	Y	31/12/18	12:00:00 AM		**1/1/1900**	
DD 11	Insoluble Solids	Monthly	0	4	mg/m2/month	28/12/18	Y	31/12/18	12:00:00 AM		**1/1/1900**	
DD 12	Insoluble Solids	Monthly	0	4	mg/m2/month	28/12/18	Y	31/12/18	12:00:00 AM		**12/31/1899**	
DD 13	Insoluble Solids	Monthly	0	4	mg/m2/month	28/12/18	Y	31/12/18	12:00:00 AM		**0.80**	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	21/12/2018	Y				**8.10**	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	15/12/18	Y				**57.20**	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	28/12/18	Y	31/12/18	24/1/19		**19.50**	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	21/12/2018	Y				**-**	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	15/12/18	Y				**-**	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	28/12/18	Y	31/12/18	24/1/19		**-**	
Blasting								Time of Blast				
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	17/12/2018	Y	12:51:01 PM			**0.00**	
B4 - Resident	Overpressure	Per Blast	0	115	dB	17/12/2018	Y	12:51:01 PM			**0.00**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	17/12/2018	Y	12:51:01 PM			**0.00**	
B5 - Resident	Overpressure	Per Blast	0	115	dB	17/12/2018	Y	12:51:01 PM			**0.00**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	17/12/2018	Y	12:51:01 PM			**1.53**	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	17/12/2018	Y	12:51:01 PM			**1.53**	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	19/12/2018	Y	1:21:00 PM			**0.00**	
B4 - Resident	Overpressure	Per Blast	0	115	dB	19/12/2018	Y	1:21:00 PM			**0.00**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec	19/12/2018	Y	1:21:00 PM			**0.00**	
B5 - Resident	Overpressure	Per Blast	0	115	dB	19/12/2018	Y	1:21:00 PM			**0.00**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec	19/12/2018	Y	1:21:00 PM			**0.70**	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec	19/12/2018	Y	1:21:00 PM			**0.70**	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B4 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B5 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec		Y				**NRR**	

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec		Y				**NRR**	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B4 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B5 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec		Y				**NRR**	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec		Y				**NRR**	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B4 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B5 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec		Y				**NRR**	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec		Y				**NRR**	
B4 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B4 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B5 - Resident	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				**NRR**	
B5 - Resident	Overpressure	Per Blast	0	115	dB		Y				**NRR**	
B6 - Rail	Peak Particle Velocity	Per Blast	0	25	mm/sec		Y				**NRR**	
B6 - Pipeline	Peak Particle Velocity	Per Blast	0	100	mm/sec		Y				**NRR**	
		Per Blast	0				Y				**NRR**	
		Per Blast	0				Y				**NRR**	
		Per Blast	0				Y				**NRR**	
		Per Blast	0				Y				**NRR**	

Site: Cooma Road Quarry

Environment Protection Licence No.	**1453**
Site Name (As it appears on the licence)	Cooma Road Quarry
Site Address (As it appears on the licence)	Cooma Road Quarry Cooma Road Queanbeyan NSW 2620
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=32932&SYSUID=1&LICID=1453

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Water												
Barracks Creek	pH	Monthly	6.5	8.5	pH		Y				**NRR**	
	Total O&G	Monthly	0	10	mg/L		Y				**NRR**	
	Susp. Solids	Monthly	0	50	mg/L		Y				**NRR**	
Blasting								**Time of Blast**				
Heffernans House	Overpressure	Per blast	0	115	dB	19/12/18	Y	12/30/1899			**NRR**	Nill Trigger
	Vibration	Per blast	0	5	mm/s	19/12/18	Y	12/30/1899			**NRR**	Nill Trigger
Heffernans House	Overpressure	Per blast	0	115	dB		Y				**NRR**	
	Vibration	Per blast	0	5	mm/s		Y				**NRR**	
Heffernans House	Overpressure	Per blast	0	115	dB		Y				**NRR**	
	Vibration	Per blast	0	5	mm/s		Y				**NRR**	
Heffernans House	Overpressure	Per blast	0	115	dB		Y				**NRR**	
	Vibration	Per blast	0	5	mm/s		Y				**NRR**	

Site: Dubbo Quarry

Environment Protection Licence No.	**2212**

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	

Site Name (As it appears on the licence)	Dubbo Quarry
Site Address (As it appears on the licence)	Sheraton Road, Dubbo, NSW,2830
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=42179&SYSUID=1&LICID=2212

Blasting

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Time of Blast	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	
WARRENS HOUSE	Overpressure	Per blast		120	dB		Y				NRR	
	Vibration	Per blast		10	mm/s		Y				NRR	

Site: Dunloe Sands Quarry

Environment Protection Licence No.	**13077**
Site Name (As it appears on the licence)	Dunloe Sands Quarry
Site Address (As it appears on the licence)	Pottsville-Mooball Road, Mooball NSW 2483
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=134905&SYSUID=1&LICID=13077

Water - *Frequency is as per 'Special Frequency 1' referred to in Condition M2.3 of EPL

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Silt Pond discharge monitoring point	Discharge pH	<24 hours prior to overflow event*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH		Y				NRR	
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L		Y				NRR	
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L		Y				NRR	
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L		Y				NRR	
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L		Y				NRR	
	Discharge TSS	Overflow (Day 4)*	0	50	mg/L		Y				NRR	
	Discharge TSS	Overflow (Day 5)*	0	50	mg/L		Y				NRR	
	Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible		Y				NRR	
	Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible		Y				NRR	
	Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible		Y				NRR	
	Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible		Y				NRR	
	Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible		Y				NRR	
	Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible		Y				NRR	
Dredge Pond discharge monitoring point	Discharge pH	<24 hours prior to overflow event*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 1)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 2)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 3)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 4)*	6.5	8.5	pH		Y				NRR	
	Discharge pH	Overflow (Day 5)*	6.5	8.5	pH		Y				NRR	

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
	Discharge TSS	<24 hours prior to overflow event*	0	50	mg/L		Y				**NRR**	
	Discharge TSS	Overflow (Day 1)*	0	50	mg/L		Y				**NRR**	
	Discharge TSS	Overflow (Day 2)*	0	50	mg/L		Y				**NRR**	
	Discharge TSS	Overflow (Day 3)*	0	50	mg/L		Y				**NRR**	
	Discharge TSS	Overflow (Day 4)*	0	50	mg/L		Y				**NRR**	
	Discharge TSS	Overflow (Day 5)*	0	50	mg/L		Y				**NRR**	
	Oil and Grease	<24 hours prior to overflow event*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
	Oil and Grease	Overflow (Day 1)*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
	Oil and Grease	Overflow (Day 2)*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
	Oil and Grease	Overflow (Day 3)*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
	Oil and Grease	Overflow (Day 4)*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
	Oil and Grease	Overflow (Day 5)*	0	0	0=Not Visible; 1=Visible		Y				**NRR**	
Groundwater												
DLP1	Ammonia	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**12/30/1899**	
	Chloride	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/16/1900**	
	Electrical conductivity	Yearly	-	-	µm/cm		Y		7/12/2019	16/01/2019	**4/29/1900**	
	Oil and Grease	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**<5**	
	pH	Yearly	-	-	pH		Y		7/12/2019	16/01/2019	**1/3/1900**	
	Standing Water Level	Yearly	-	-	m		Y		7/12/2019	16/01/2019	**12/31/1899**	
	Sulfate	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**2/4/1900**	
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
#REF!	#REF!	#REF!	-	-	#REF!	#REF!	Y		#REF!	#REF!	**#REF!**	#REF!
DLP3	Ammonia	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/1/1900**	
	Chloride	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**10/5/1906**	
	Electrical conductivity	Yearly	-	-	µm/cm		Y		7/12/2019	16/01/2019	**8/2/1920**	
	Oil and Grease	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**<5**	
	pH	Yearly	-	-	pH		Y		7/12/2019	16/01/2019	**1/4/1900**	
	Standing Water Level	Yearly	-	-	m		Y		7/12/2019	16/01/2019	**12/31/1899**	
	Sulfate	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**6/6/1900**	
DLP5	Ammonia	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**12/30/1899**	
	Chloride	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**6/4/1900**	
	Electrical conductivity	Yearly	-	-	µm/cm		Y		7/12/2019	16/01/2019	**3/12/1901**	
	Oil and Grease	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**<5**	
	pH	Yearly	-	-	pH		Y		7/12/2019	16/01/2019	**1/3/1900**	
	Standing Water Level	Yearly	-	-	m		Y		7/12/2019	16/01/2019	**12/31/1899**	
	Sulfate	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/19/1900**	
DLP6	Ammonia	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**12/30/1899**	
	Chloride	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/16/1900**	
	Electrical conductivity	Yearly	-	-	µm/cm		Y		7/12/2019	16/01/2019	**9/9/1901**	
	Oil and Grease	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**<5**	
	pH	Yearly	-	-	pH		Y		7/12/2019	16/01/2019	**1/3/1900**	
	Standing Water Level	Yearly	-	-	m		Y		7/12/2019	16/01/2019	**12/31/1899**	
	Sulfate	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**11/23/1900**	
DLP7	Ammonia	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/1/1900**	

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Location	Test	Freq	Limit		Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
	Chloride	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**1/18/1902**	
	Electrical conductivity	Yearly	-	-	µm/cm		Y		7/12/2019	16/01/2019	**1/22/1909**	
	Oil and Grease	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**<5**	
	pH	Yearly	-	-	pH		Y		7/12/2019	16/01/2019	**1/5/1900**	
	Standing Water Level	Yearly	-	-	m		Y		7/12/2019	16/01/2019	**12/31/1899**	
	Sulfate	Yearly	-	-	mg/L		Y		7/12/2019	16/01/2019	**10/4/1900**	

Site: Humes - Blacktown

Environment Protection Licence No.	**1310**
Site Name (As it appears on the licence)	Humes Blacktown
Site Address (As it appears on the licence)	Humes Blacktown Lot 1 Woodstock Ave ROOTY HILL NSW 2766
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=35038&SYSUID=1&LICID=1310

Water

Location	Test	Freq	min	max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	
Sediment Basin	TSS	Daily During Discharge		50	mg/L		Y				**NRR**	
	pH	Daily During Discharge	6.5	8.5	pH		Y				**NRR**	

Site: Teven Quarry

Environment Protection Licence No.	**3293**
Site Name (As it appears on the licence)	Readymix Teven Quarry
Site Address (As it appears on the licence)	Stokers Lane Teven NSW 2478
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=85921&SYSUID=1&LICID=3293

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit		Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
Water												
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH	21-12-18	Y				1/6/1900	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Licenced Discharge Point	pH	Special Frequency 1	6.5	8.5	pH		Y				NRR	
Licenced Discharge Point	Oil&Grease	Special Frequency 1	0	1	Visible		Y				NRR	
Licenced Discharge Point	TSS	Special Frequency 1	0	50	mg/L		Y				NRR	
Noise												
168 Weller's Road, Teven (or Receiver No. 2 in Consent)	Daytime - LAeq (15 min)	Yearly	0	37	dB (A)		Y				NRR	
168 Weller's Road, Teven (or Receiver No. 2 in Consent)	Evening (6am-10pm Mon - Sun) - LAeq (15 min)	Yearly	0	35	dB (A)		Y				NRR	
Blasting							Time of Blast					
Any point <1 metre of any affected residential property boundary or other sensitive noise location.	Overpressure	Per Blast	0	115	dB		Y				NRR	
Any point <1 metre of any affected residential property boundary or other sensitive noise location.	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				NRR	
Any point <1 metre of any affected residential property boundary or other sensitive noise location.	Overpressure	Per Blast	0	115	dB		Y				NRR	
Any point <1 metre of any affected residential property boundary or other sensitive noise location.	Peak Particle Velocity	Per Blast	0	5	mm/sec		Y				NRR	

Site: **Boambee Quarry**

Environment Protection Licence No.	7094
Site Name (As it appears on the licence)	Boambee Quarry

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
							Site Address (As it appears on the licence)	Boambee Quarry North Boambee Road BOAMBE NSW 2450				
							Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=108484&SYSUID=1&LICID=7094				
Blasting (M4 & L2.1 - To determine compliance with L3, measurements to be taken at any point within 1 metre of residential boundary)								Time of Blast				
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	

Site: Tuncurry Sand

Environment Protection Licence No.	13359
Site Name (As it appears on the licence)	Tuncurry Sand Quarry
Site Address (As it appears on the licence)	Tip Road Tuncurry NSW 2428
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=47350&SYSUID=1&LICID=13359

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Water												
ID#2 Surface H20 "Lake 1"	Aresnic	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.001	
	Conductivity	Quarterly	0		µS/cm	12/19/2018	Y	12/20/2018	12/27/2018		135	
	Copper	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		<0.001	
	Iron	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.15	
	pH	Quarterly	0		pH	12/19/2018	Y	12/20/2018	12/27/2018		7.03	
	Zinc	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		<.005	
ID#3 Surface H20 "Lake 2"	Aresnic	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.003	
	Conductivity	Quarterly	0		µS/cm	12/19/2018	Y	12/20/2018	12/27/2018		257	
	Copper	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		<0.001	
	Iron	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.2	
	pH	Quarterly	0		pH	12/19/2018	Y	12/20/2018	12/27/2018		7.61	
	Zinc	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		<.005	
ID#4 Surface H20 "Lake 3"	Aresnic	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.009	
	Conductivity	Quarterly	0		µS/cm	12/19/2018	Y	12/20/2018	12/27/2018		295	
	Copper	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.002	
	Iron	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		2.44	
	pH	Quarterly	0		pH	12/19/2018	Y	12/20/2018	12/27/2018		7.78	
	Zinc	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.008	
ID#5 Surface H20 "Lake 4"	Aresnic	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.003	
	Conductivity	Quarterly	0		µS/cm	12/19/2018	Y	12/20/2018	12/27/2018		360	
	Copper	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.001	
	Iron	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		0.08	
	pH	Quarterly	0		pH	12/19/2018	Y	12/20/2018	12/27/2018		8.2	
	Zinc	Quarterly	0		mg/L	12/19/2018	Y	12/20/2018	12/27/2018		<0.005	
Air												

Attachment 4.1H - Environmental Monitoring Worksheet

Period: 01/12/2018 - 31/12/2018

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
			min	max							NRR = No Result Recorded	
ID #1	Depositied Matter	Monthly	0	4	g/m2/month	12/19/2018	Y	12/20/2018	12/27/2018		1.1	

Site: Jandra Quarry

Environment Protection Licence No.	2796
Site Name (As it appears on the licence)	Jandra Quarry
Site Address (As it appears on the licence)	Pacfic Highway Possum Brush NSW 2430
Link to Licence on EPA Website	http://app.epa.nsw.gov.au/prpoeoapp/ViewPOEOLicence.aspx?DOCID=87197&SYSUID=1&LICID=2796

Location	Test	Freq	Limit min	Limit max	Units	Sample Date	NSW Environment Protection Licence Requirement	Date Sample Transferred to Laboratory	Date Sample Results Received by Holcim	Date of Remote Data Download	Result	Comments
Water												
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR	
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR	
ID #1	Discharge TSS	2 X Daily during discharge	0	50	mg/L		Y				NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR	
ID #1	Discharge Turbidity	2 X Daily during discharge	0		ntu		Y				NRR	
ID #1	Discharge pH	Each overflow event	6.5	8.5	pH		Y				NRR	
DD 1	Insoluble Solids	Monthly	0	4								
DD 2	Insoluble Solids	Monthly	0	4	mg/m2/month	12/19/2018	Y	12/20/2018	12/27/2018		1.8	
DD 3	Insoluble Solids	Monthly	0	4	mg/m2/month	12/19/2018	Y	12/20/2018	12/27/2018		2.1	
DD 4	Insoluble Solids	Monthly	0	4	mg/m2/month	12/19/2018	Y	12/20/2018	12/27/2018		1.4	
HVAS 1	Insoluble Solids	Monthly	0	4	mg/m2/month	12/19/2018	Y	12/20/2018	12/27/2018		1.5	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	11/27/2018	Y	12/20/2018	12/27/2018		35.3	
HVAS 1	PM10	24hr (every 6 days)	0	50	µg/m3	12/3/2018	Y	12/20/2018	12/27/2018		42.4	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	12/9/2018	Y	12/20/2018	12/27/2018		27.1	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3	12/15/2018	Y	12/20/2018	12/27/2018		21.9	
HVAS 2	PM10	24hr (every 6 days)	0	50	µg/m3		Y				NRR	
Blasting (To determine compliance with L3, measurements to be taken at any point within 1 metre of residential boundary)								**Time of Blast**				
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
	Overpressure	Per blast	0	120	dB		Y				NRR	
	Vibration	Per blast	0	10	mm/s		Y				NRR	
Annual Blasting Requirements (Calculated each month on a cummulative basis)												
	Overpressure	Monthly (Cummulative)	115	120	dB		Y				NRR	
	Vibration	Monthly (Cummulative)	5	10	mm/s		Y				NRR	