



CALLIDE DAM

EMERGENCY EVENT REPORT

8TH JAN to 31ST JAN 2011



QFCI

Date:

27/05/11

JM

Exhibit Number:

518

SunWater
179 Turbot St., Brisbane
PO Box 15536
City East QLD 4002

CALLIDE DAM - EMERGENCY EVENT REPORT

Emergency Event Recording Sheets

- **Description of the Event**
- **Instrument Readings and Level Data**
- **Description of Damage**
- **Photos during and after the Event**
- **Details of Communication**
- **General Comments and/or EAP recommendations**

Note: These sheets must be completed for all Emergency Event Scenarios and be included in the emergency Event Report

CALLIDE DAM - EMERGENCY EVENT REPORT

Emergency Event Recording Sheets

- **Description of the Event**

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CALLIDE DAM - EMERGENCY EVENT REPORT

SUMMARY

Callide Dam was approximately 25% full in early December 2010. A series of rain events increased the storage level throughout late December and early January 2011. The EAP was activated on the 2nd January – Flood Preparedness.

The storage reached 100% capacity on the 8th of January, and began spilling at 11am on that day.

This was the first time the spillway gates had been operated. The storage level was 216.26m when the centre pair of gates began to open. The maximum gate opening was 0.175m. Peak discharge was relatively small at approximately 1750ML/d.

EMERGENCY ACTION PLAN - CALLIDE DAM



EMERGENCY EVENT RECORD

COMPLETE THIS COVER SHEET AND ATTACH RELEVANT RECORDING SHEETS FROM SECTION 6.

1. NATURE OF THE EVENT (circle the event)

Spillway discharge Earthquake Piping Water Quality Terrorist Activity/Hoax/Other

Commencing: Time 11:00 am/pm; Date 8/1/2011 Finishing: Time ___:___ am/pm; Date 31/1/2011

2. DESCRIPTION OF THE EVENT

Attach relevant sheets from Section 6.

3. STATISTICS

Total inflow	116,000	Megalitres
Total discharge	15,000	Megalitres
Capacity of Storage prior to inflow	25	%
Volume prior to inflow	35,300	Megalitres
Maximum inflow	33,500	ML/d
Maximum discharge	1,750	ML/d

4. EVENT PROGRESS

Attach copies of the Spillway Level versus Time Graph, the Record of Communication, the Log of Events / Actions, and Rainfall during a Flood Event (Section 6A).

5. GENERAL COMMENTS

Include in this section any observations or comments regarding the Event, such as Equipment malfunctions, improved Reporting, Safety issues, or any suggestions which may improve monitoring of the Event

6. DAMAGE REPORT

Detail any damage to the Dam wall (or Embankment), Spillway, Abutments or Stream bank in the downstream area of the Dam. **Attach photos.**

Nil Damage experienced to Dam infrastructure.

Name: Daryl Conway .Signed: 

Designation: Service Manager ..Date.....7/3/2011

CALLIDE DAM - EMERGENCY EVENT REPORT

Emergency Event Recording Sheets

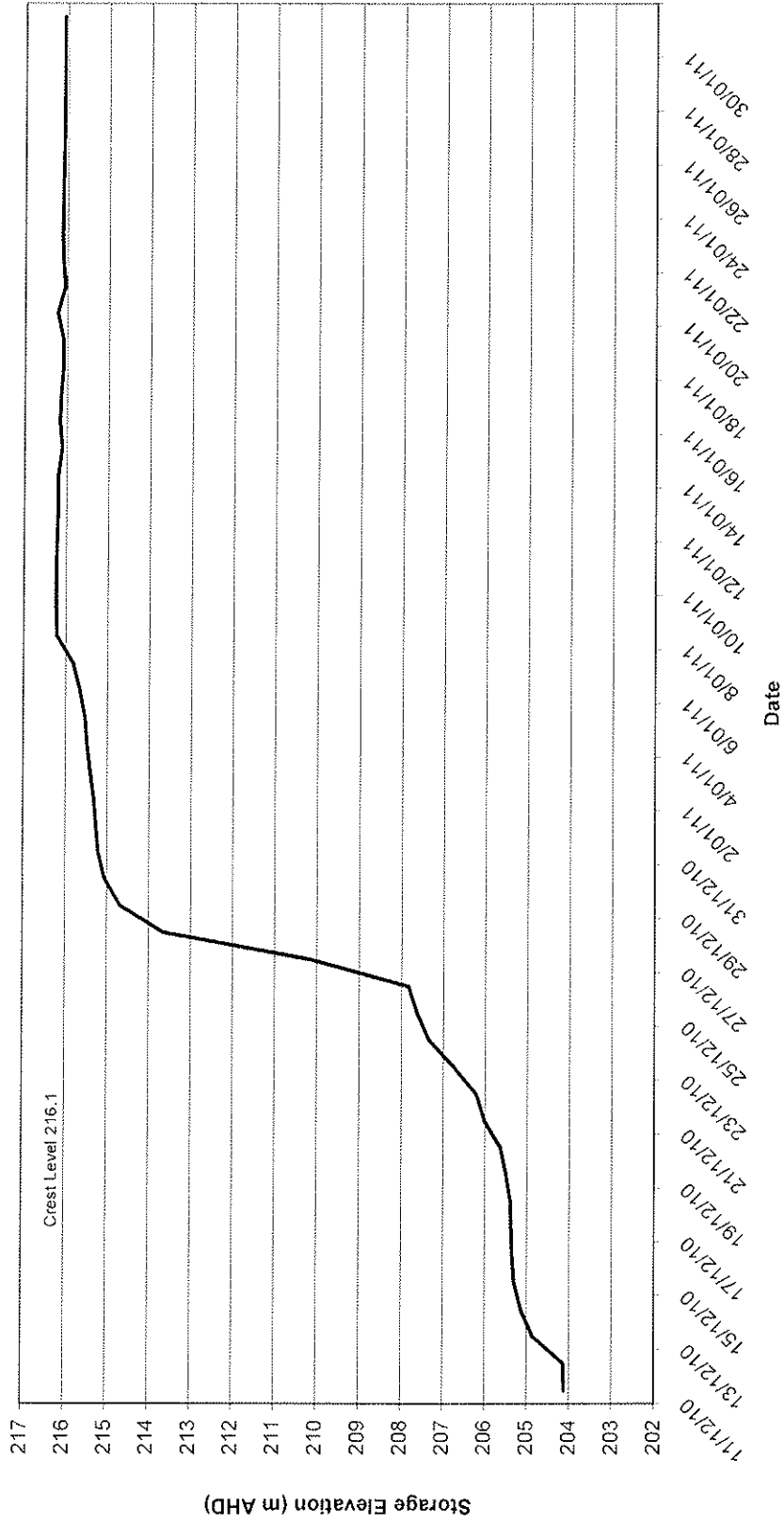
- **Instrument Readings and Level Data**

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and be included in the emergency Event Report**

Daily Storage Readings - Callide Dam

Date	Storage Elevation m AHD	Storage Volume (ML)	Rainfall (mm)	Release (ML/day)
31/01/11	216.07	135997	0	51
30/01/11	216.07	135997	0	51
29/01/11	216.07	135997	0	51
28/01/11	216.08	136121	0	51
27/01/11	216.08	136121	0	85
26/01/11	216.09	136246	0	85
25/01/11	216.1	136300	0	85
24/01/11	216.11	136300	0	152
23/01/11	216.12	136300	0	150
22/01/11	216.1	136300	0	150
21/01/11	216.05	135748	16	223
20/01/11	216.23	136300	0.5	223
19/01/11	216.09	136246	5	474
18/01/11	216.09	136246	0	533
17/01/11	216.14	136300	0	594
16/01/11	216.16	136300	0	578.3
15/01/11	216.11	136300	0	723.9
14/01/11	216.19	136300	1	975.6
13/01/11	216.19	136300	0	1700
12/01/11	216.21	136300	0	1750
11/01/11	216.22	136300	0	1750
10/01/11	216.23	136300	0	1750
9/01/11	216.23	136300	16	1750
8/01/11	216.21	136300	0	1000
7/01/11	215.82	132917	3	0
6/01/11	215.65	130850	34.5	0
5/01/11	215.53	129402	1	0
4/01/11	215.48	128801	23	0
3/01/11	215.41	127959	49	0
2/01/11	215.32	126888	4	0
1/01/11	215.27	126294	0	0
31/12/10	215.21	125580	0	0
30/12/10	215.06	123816	2	0
29/12/10	214.69	119524	4	0
28/12/10	213.66	108040	0	0
27/12/10	210.14	74525	0	0
26/12/10	207.83	57141	0	0
25/12/10	207.63	55786	6	0
24/12/10	207.35	53923	0	0
23/12/10	206.75	50070	57.5	0
22/12/10	206.21	46770	3	0
21/12/10	206.01	45584	0	0
20/12/10	205.63	43380	32	0
19/12/10	205.5	42640	30	0
18/12/10	205.39	42018	0	0
17/12/10	205.37	41906	0	0
16/12/10	205.35	41795	0	0
15/12/10	205.3	41516	17	0
14/12/10	205.14	40628	0	0
13/12/10	204.86	39101	10	0
12/12/10	204.14	35328	0	0
11/12/10	204.12	35227	21	0

Callide Dam
Storage Performance - December 2010 - January 2011



CALLIDE DAM EAP

Flood Operation

Visual Inspection and Storage Report
 Note: Refer to Page 2 for recording instructions **

Date: 04/1/11

	SUN	MON	TUE	WED	THU	FRI	SAT
Stored Water Level FSL 216.10m			215.47				
Tail Water Level (m)							
Daily Rainfall (mm) Morning 9am							
Evening 3pm							
NORMAL FLOOD OPERATION EL m	STAGE 1 EL m		STAGE 2 EL m		STAGE 3 EL m		
Morning			Tick if Gates are Closed		/		
Evening			Tick if Gates are Closed		/		
Visual Inspection			First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)		
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive)							
Spillway Channel	Erosion, damage to concrete structure		NIL				
Irrigation Control Structure	Cracks, concrete deterioration		NIL				
Embankments	Cracks, subsidence in pavement		NIL				
Upstream Face	(Use binoculars)						
	Settlement		NIL				
	Displacement of riprap material		NIL				
Downstream face	Subsidence, slides, erosion		NIL				
	Sign of seepage		NIL				
Area Downstream of Dam	Seepage from any location apart from seepage point		NIL				
Seepage	Seepage water - Clear or Turbid (Tick for clear)		✓				
	Condition of river outlet		NIL GOOD		Discharge..... MLD		
Details of significant changes. New occurrences and issues warranting further attention							
.....							
.....							
.....							
.....							
Inspecting Officer's initials			[Redacted]		[Redacted]		
Fax to (tick if faxed)			[Redacted]		Asset Engineering Manager / Service Delivery Manager [Redacted]		
			[Redacted]		Principal Engineer (Dam Safety)		

CALLIDE DAM EAP

Flood Operation

Visual Inspection and Storage Report
 Note: Refer to Page 2 for recording instructions **

Date: 06/1/11

	SUN	MON	TUE	WED	THU	FRI	SAT
Stored Water Level FSL 216.10m					215.7		
Tail Water Level (m)							
Daily Rainfall (mm) Morning 9am					34.5		
Evening 3pm							
NORMAL FLOOD OPERATION EL m	STAGE 1 EL m		STAGE 2 EL m		STAGE 3 EL m		
Morning			Tick if Gates are Closed		✓		
Evening			Tick if Gates are Closed		✓		
Visual Inspection				First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)	
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive) W D							
Spillway Channel	Erosion, damage to concrete structure			NIL			
Irrigation Control Structure	Cracks, concrete deterioration			NIL			
Embankments	Cracks, subsidence in pavement			NIL			
Upstream Face	(Use binoculars) Settlement			NIL			
	Displacement of riprap material			NIL			
Downstream face	Subsidence, slides, erosion			NIL			
	Sign of seepage						
Area Downstream of Dam							
Seepage from any location apart from seepage point				NIL			
Seepage	Seepage water - Clear or Turbid (Tick for clear)			✓			
Condition of river outlet					Discharge..... MLD		
Details of significant changes. New occurrences and issues warranting further attention							
VALVE HOUSE GALLERY MINOR LEAK							
THROUGH THE ROOF AT FIRST POWER							
POINT ON THE ROOF HEADING UPSTREAM.							
Inspecting Officer's initials							
Fax to (tick if faxed)				Asset Engineering Manager / Service Delivery Manager			
				Principal Engineer (Dam Safety)			

CALLIDE DAM EAP

Flood Operation

Visual Inspection and Storage Report
 Note: Refer to Page 2 for recording instructions **

Date: 07/1/11

	SUN	MON	TUE	WED	THU	FRI	SAT
Stored Water Level FSL 216.10m						215.86	
Tail Water Level (m)							
Daily Rainfall (mm) Morning 9am						3	
Evening 3pm							
NORMAL FLOOD OPERATION 215.86 EL m ?	STAGE 1 EL m		STAGE 2 EL m		STAGE 3 EL m		
Morning			Tick if Gates are Closed		✓		
Evening			Tick if Gates are Closed		✓		
Visual Inspection				First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)	
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive)							
Spillway Channel							
Erosion, damage to concrete structure				NIL			
Irrigation Control Structure							
Cracks, concrete deterioration				NIL			
Embankments							
Cracks, subsidence in pavement				NIL			
Upstream Face							
(Use binoculars)							
Settlement							
Displacement of riprap material				NIL			
Downstream face							
Subsidence, slides, erosion				NIL			
Sign of seepage				NIL			
Area Downstream of Dam							
Seepage from any location apart from seepage point				NIL			
Seepage							
Seepage water - Clear or Turbid (Tick for clear)				✓			
Condition of river outlet				GOOD	Discharge..... MLD		
Details of significant changes. New occurrences and issues warranting further attention							
EL TAKEN OFF GB ON DAM WALL							
LEAK IN VALVE HOUSE AROUND FIRST POWERPOINT							
APPEARS TO HAVE CLEARED UP (REDUCED)							
Inspecting Officer's initials							
Fax to (tick if faxed)					Asset Engineering Manager / Service Delivery Manager		
					Principal Engineer (Dam Safety)		

CALLIDE DAM EAP

Flood Operation

Visual Inspection and Storage Report
 Note: Refer to Page 2 for recording instructions **

Date: 10/1/11

	SUN	MON	TUE	WED	THU	FRI	SAT
Stored Water Level FSL 216.10m		<u>216.27</u>					
Tail Water Level (m)							
Daily Rainfall (mm) Morning 9am							
Evening 3pm							
NORMAL FLOOD OPERATION <u>216.27 EL m GB</u>	STAGE 1 EL m		STAGE 2 EL m		STAGE 3 EL m		
	Morning		Tick if Gates are Closed				
	Evening		Tick if Gates are Closed				
Visual Inspection				First Inspection	Second Inspection (+6 hrs)	Third Inspection (+12 hrs)	
(Walk OR Drive at 10 km/hour. Write 'W' for walk and 'D' for Drive) <u>D x N</u>							
Spillway Channel	Erosion, damage to concrete structure			<u>NIL</u>			
Irrigation Control Structure	Cracks, concrete deterioration			<u>NIL</u>			
Embankments	Cracks, subsidence in pavement			<u>NIL</u>			
Upstream Face	(Use binoculars) Settlement			<u>NIL</u>			
	Displacement of riprap material			<u>NIL</u>			
Downstream face	Subsidence, slides, erosion			<u>NIL</u>			
	Sign of seepage			<u>NIL</u>			
Area Downstream of Dam	Seepage from any location apart from seepage point			<u>NIL</u>			
Seepage	Seepage water - Clear or Turbid (Tick for clear)			<input checked="" type="checkbox"/>			
	Condition of river outlet			<u>GOOD</u>	Discharge..... MLD		
Details of significant changes. New occurrences and issues warranting further attention							
.....							
.....							
.....							
.....							
Inspecting Officer's initials							
Fax to (tick if faxed)				Asset Engineering Manager / Service Delivery Manager			
				Principal Engineer (Dam Safety)			

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Emergency Event Recording Sheets

- **Description of Damage**

Nil Damage recorded

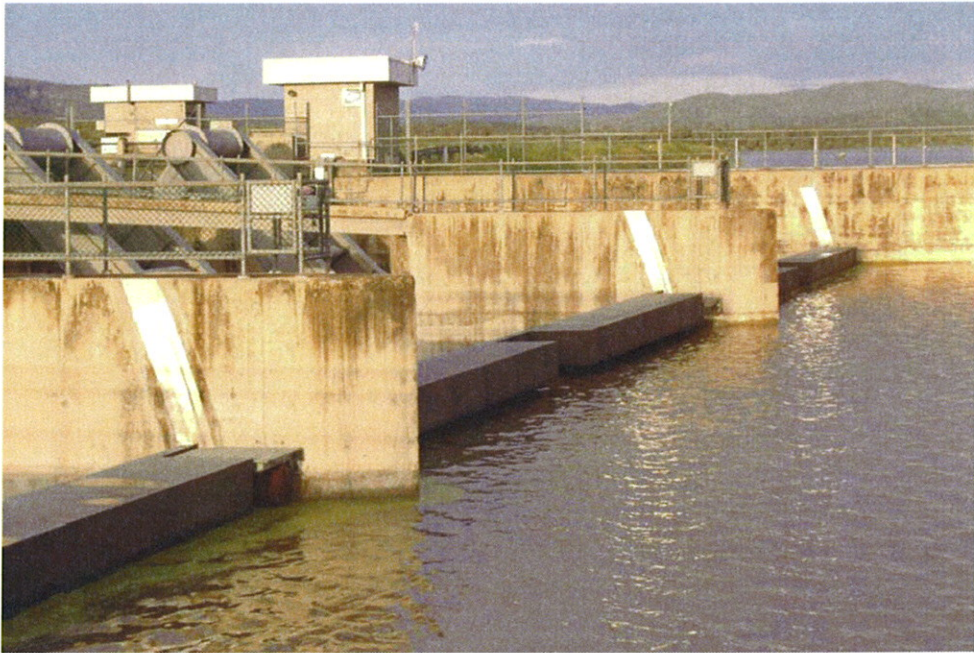
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- **Photos during and after the Event**

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- **Details of Communication**

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EMERGENCY ACTION PLAN

CALLIDE DAM



CALLIDE DAM - EMERGENCY ACTION PLAN
RECORD OF COMMUNICATION

DATE	TIME	CONTACT PERSON / TELEPHONE NO.	CALL IN / OUT	MESSAGE	RECORDED BY (INITIALS)
2-1-11	1730	N Wogendt	Out	Storage level	
2-1-11	1730	M Hallwala	Out	Storage level - BAP activated	
2-1-11	1730	Maureen Clancy (DPMG)	Out	Callide Dam Storage level	
2-1-11	1730	Sgt Brendan Halloran	Out	Callide Dam Storage	
7-1-11	19:35	N Hallwala	Out	Callide Storage level - spill in 24 hrs	
7-1-11	19:35	N Wogendt	Out	Callide should spill in 24 hrs.	
7-1-11	19:35	M. Clancy (DPMG)	Out	Callide to spill tomorrow.	
8-1-11	11:00	J. Barber	In	Callide Dam - Spilling Gate open.	
8-1-11	11:15	M Hallwala	Out	Callide Dam Spilling.	
8-1-11	11:20	G. Pfluger	Out	Callide Dam Spilling	

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- **General Comments and/or EAP recommendations**

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EAP Recommendations: *This was a very minor spill. The EAP was activated though use was only minimal. There were some minor recommendations recorded and these will be forwarded to the new Headworks group for their upcoming reviews and reissues of all of the EAPs for SunWater referable dams.*

The EAP was considered adequate, with no major issues noted during the event. A review of the EAP was completed after the event and several improvements identified.

These included:

- More information required on spillway gate flow rates for different openings
- Information on rate of gate opening versus storage increase
- Review contact list of downstream landholders to be contacted and when to be contacted