

Our Ref: 212163.6Report40.1

2 July 2013

Country Fire Authority
8 Lakeside Drive
East Burwood Vic 3151

Attention: [REDACTED]

Cardno Lane Piper Pty Ltd
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Water Monitoring Results - Fiskville Date Received: 28 June 2013

Dear [REDACTED]

I am writing in relation to water quality data received 28 June 2013 from the CFA for Fiskville. Water used in training was sampled on 20 June 2013 from 2 locations: the 'Red Pipe – PG Tank'¹ and the 'Beige Pipe – BU Tank'². The test reports were issued on 28 June 2013.

These test reports are derived from the water monitoring program set out in CFA's water management plans with testing by independent laboratories certified by the National Association of Testing Authorities (NATA).

The pH measured in water from the 'Red Pipe – PG Tank' and the 'Beige Pipe – BU Tank' reported was 9.1 and 8.0 respectively. The pH value for the 'Red Pipe – PG Tank' is in slight exceedence of the water quality criterion range for pH (6.0 to 9.0), stated in the Water Management Plan for Fiskville (CFA 2012³).

High pH levels in water at Fiskville have previously been linked with water supply from Lal Lal Reservoir, leaching of alkaline material from concrete lined pipes and low water use at CFA Fiskville Training Ground (see previous water monitoring results from 07 May 2013 with Cardno-Lane Piper reference: 212163.6Report38.1&Append.pdf).

Criteria for pH are typically provided to minimise corrosion to infrastructure (low pH) and prevent scaly build up in pipes (high pH) or for aesthetic reasons (poor taste and odour). However, alkaline water with a pH greater than 10 may lead to gastrointestinal irritation in sensitive individuals and irritation of the eye, skin and mucous membranes at pH above 11. Therefore the pH of 9.1 is not considered a human health problem.

¹ Note that the Red Pipe – PG Tank is filled from town water supply and is located adjacent to the water supply pit. Water from the 'Water Supply Pit' is no longer used in fire-fighting training exercises.

² Note that the Beige Pipe – BU Tank is filled from town water supply and is located adjacent to Dam 2 and used as a secondary water source (or back-up). Water from Dam 2 is no longer used in fire-fighting training exercises.

³ CFA (2012). CFA Management Plan, Firefighting Water, CFA Fiskville College – Fiskville. May 2012. Country Fire Authority

The results have been reviewed by our team of water quality and health specialists and we can report that the results do not indicate any water quality issues that would make the water from the 'Red Pipe – PG Tank' or the 'Beige Pipe – BU Tank' unsuitable for use in fire-fighting training. Additional monitoring of pH should be considered to ensure pH levels do not approach 10.

Yours faithfully
Cardno Lane Piper



Senior Environmental Chemist

Approved:



Senior Principal

Enclosed:

NATA Certified Laboratory Reports:

- CHW Report number: 13/2949 – sample date 20 June 2013

CENTRAL HIGHLANDS WATER - LABORATORY SERVICES

7 Learmonth Rd. Wendouree, PO Box 152, Ballarat 3353 ABN: 75 224 340 348

Chemistry: 03 53203195 Microbiology: 03 53 203193 Email: laboratory@chw.net.au

TEST REPORT

Laboratory Report No: 13/2949

Client: CFA Training College - Fiskeville
Ballan - Geelong Road
FISKEVILLE VIC 3342

Attention: [REDACTED]

Date Received: 20/06/13

Job Description: CFA Training Centre Fiskville

LAB. No.	SAMPLE	SAMPLED
13/2949-1	Red Pipe - PG Tank	20/06/2013
13/2949-2	Beige Pipe - BU Tank	20/06/2013

Test Description	Method	Units	13/2949-1	13/2949-2
BOD ₅	CHW-BOD	mg/L	<5	<5
E. coli - Colilert	CHWM.08	MPN/100mL	0	0
Electrical Conductivity @ 25°C	CHW-EC	µS/cm	510	510
Oil & Grease at ALS		mg/L	<5	<5
pH	CHW-pH	Units	9.1	8.0
Ps. aeruginosa	CHWM.07	cfu/100mL	0	0
Phosphorus - Total (Low)	CHW-Tot P	mg/L	0.040	0.030
Suspended Solids	CHW-SS	mg/L	1	<1
Total Kjeldahl Nitrogen (as N)	CHW-TKN	mg/L	0.3	0.3
Total Oxidised Nitrogen (as N)	CHW-Ox.N	mg/L	0.91	1.2

Analytical methods for chemical analyses in accordance with Central Highlands Water Laboratory Chemistry Methods (2013).
Analytical methods for microbiological analyses in accordance with Central Highlands Water Microbiology Methods Manual (2013).
Volatile Acid analysis not covered by NATA Accreditation.

Comments

Samples as received.
Bacteriological analysis performed on day of receipt.
O&G analysis performed at ALS, Accreditation No. 992.
Refer ALS Report No. 379359.

Signed

Report Date: 28 June 2013

Name

Chemistry

Microbiology

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with ISO/IEC 17025

Accreditation No: 1935

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