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Australian Government
Department of Defence
Security and Estate Group

Date: 3rd/4th October 2023
Time: 1530 both days
Location: Virtual and in person

MEETING BRIEF

Meeting participants:

1. Wagga Wagga City Council meeting Tues 3rd Oct 1530 – virtual MS Teams

s47F – Wagga Wagga City Council Lord Mayor

s47F – Wagga Wagga City Council General Manager

s47F – Wagga Wagga City Council Director Community Services

Kate Leane - ASPFASIM

2. Riverina Water Country Council (RWCC) – Wednesday 4th Oct 1530 – in person

Address: 91 Hammond Ave, Wagga Wagga, NSW 2650

s47F – RWCC CEO

s47F – RWCC Director of Engineering

s47F – RWCC Operations Manager

What do we want:

The purpose of the two meetings is to discuss recent PFAS detections at Wagga Wagga and Defences involvement and support to RWCC.

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. Discuss that Defence will work with the NSW Agencies including at the forum on the 6th Oct where a management strategy and community engagement approach will be discussed. s47E(d)

What they want:

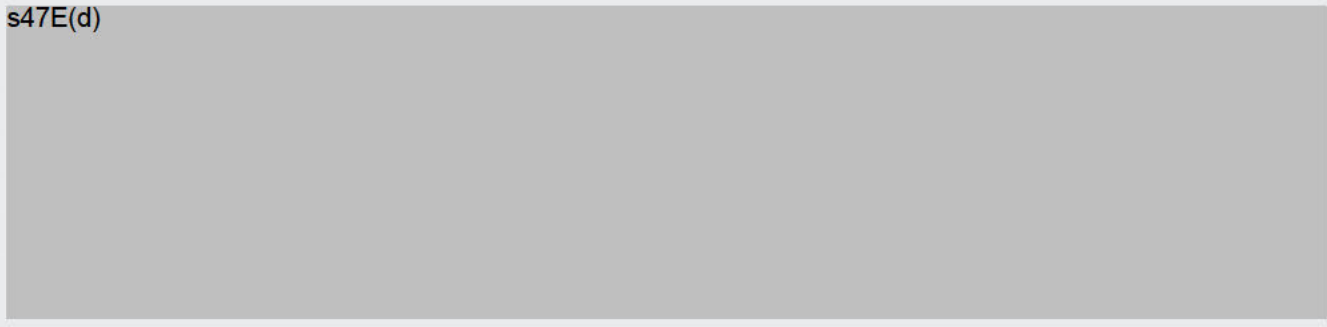
- Discuss the results of Defence's Ongoing monitoring program and recent sampling/detections at both East monitoring wells s22

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Talking points

PFAS Detections at Wagga Wagga

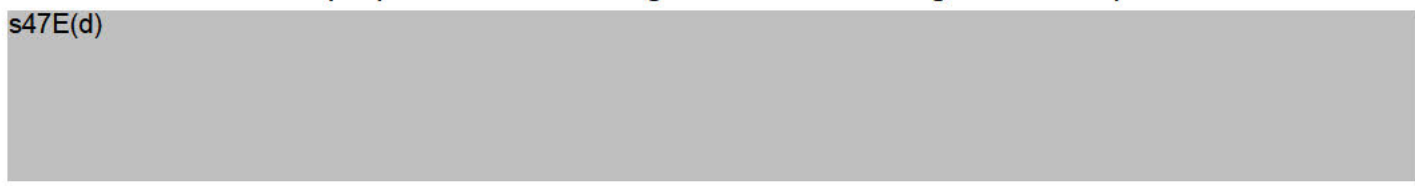
- Defence continues to undertake sampling on and off RAAF Base Wagga and Kapooka Military Training Area as part of the Ongoing Monitoring Program.
- Defence detected PFAS at two groundwater monitoring wells approximately 650m from the East Wagga borefields. Additional testing has confirmed that PFAS was not detected at the East Wagga borefield.

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- Defence will attend a multi-agency meeting on 6 October led by NSW Planning and Environment. The purpose of this meeting is to discuss and agree next steps.

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- The detections of PFAS highlights the importance of the regular sampling, which Defence undertakes as part of the ongoing monitoring program.
- Defence will continue to share information about the ongoing monitoring program and continue to provide updates on how the contamination is being managed.

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Background

PFAS Detections at Wagga

1. In July 2023, new groundwater monitoring wells were established between the East Wagga borefield and Marshalls Creek at 13 Forge Street, East Wagga Wagga. These wells were established to address a groundwater data gap, as previously there were no monitoring locations between the East Wagga borefield, Marshalls Creek and RAAF Base Wagga.
2. On 10 August 2023, Defence detected PFAS at levels below health based guideline values for drinking water at the new groundwater monitoring wells. These monitoring wells are located approximately 650 meters from the East Wagga borefield (one drinking water supply bore).
3. Following the initial detection and resampling, Defence alerted relevant NSW Government agencies (NSW Department of Planning and Environment, NSW Health, NSW Environment Protection Agency and Riverina Water County Council, Wagga City Council) to the results. The immediate course of action was to retest the East Wagga borefields (drinking water supply bores) and surrounding groundwater monitoring wells. The East Wagga borefield is closest to the PFAS plume from RAAF Base Wagga.
4. The first retest of the groundwater monitoring wells and the East Wagga borefield confirmed that while there was PFAS detected in the nearby groundwater monitoring wells, PFAS was not detected in the East Wagga borefield (one drinking water bore).
5. Subsequent advice was provided to Riverina Water and NSW Government agencies to confirm that the East Wagga borefield did not have detectable levels of PFAS. s22

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8. The recent detections were not anticipated. Modelling conducted as part of the PFAS investigation in 2018 estimated that PFAS in groundwater could reach Wagga's town water bores in approximately 50 years. Models are not 100% accurate as they make an

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estimation based on assumption and data available at the time of development. As assumptions and data change continuously, these detections demonstrate the importance of Defence's approach to continuously monitor and test the predictions made by the model.

9. Despite the model's assumptions, Defence installed groundwater monitoring wells and an ongoing monitoring program to monitor the movement of PFAS from RAAF Base Wagga. These detections were picked up as part of this program demonstrating the efficacy of the monitoring system.

Next steps

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17. Defence has conducted seven information sessions for the community around RAAF Base Wagga and Kapooka Military Area since PFAS contamination was made public in 2016. The most recent event was a walk-in session in April 2023.

Contact Officer: s47E(d) Director PFAS Investigation and Management Branch, Tel: s47E(d)

Cleared by: Kate Leane, Assistant Secretary PFAS Investigation and Management Branch, Tel: s47E(d)

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From: s47F
Sent: Monday, 23 October 2023 7:33 AM
To: s47F
s47E(d); s47F
Cc: s47F
Subject: RE: 1st Project Governance Group Meeting - Water Supply Risks for East Wagga Borefield

⚠ EXTERNAL EMAIL: Do not click any links or open any attachments unless you trust the sender and know the content is safe. **⚠**

Good morning all and thanks for the minutes s47F,

I have this morning emailed our Board, our staff and our Audit Risk and Improvement Committee providing them with the MR and our FAQ paper (attached)

Copies of both documents have also been provided to s47F and s47F

We will release the MR to the media around 9am this morning and I have created time at 11am for

interviews onsite.

Regards
s47F



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SEG Brief - PFAS Investigation and Management

Handling Note:

- Deputy Secretary Security and Estate, Ms Celia Perkins, to lead on overall PFAS investigation and management; and
- Acting First Assistant Secretary Infrastructure, Mr Pat Sowry, to lead on community engagement and site specific issues.

Key Messages

- Defence is committed to supporting local communities near Defence establishments affected by PFAS contamination.
- Defence does this by providing drinking water where required, remediating to minimise the further movement of PFAS from Defence establishments, and by providing communities with timely and relevant information.
- Defence works closely with other stakeholders – particularly State, Territory and local governments – in responding to PFAS contamination.
- Given current available technologies, completely stopping the movement of PFAS from a base is not possible, and remediation of low-levels of contamination across large areas is generally not feasible.
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Recent detections at RAAF Base Wagga

- There is no current threat to Wagga Wagga's water supply from PFAS contamination from RAAF Base Wagga.
- A PFAS plume is projected to reach a water supply bore in the medium to long term.

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Budget Estimates June 2024

Last updated: 30 April 2024

Key witnesses: Celia Perkins, Pat Sowry

SEG Brief- PFAS Investigation and Management

- Defence will continue to work with the NSW Government, Wagga Wagga City Council and Riverina Water County Council to monitor the movement of PFAS in groundwater, and ensure the integrity of Wagga Wagga's water supply in relation to the potential for PFAS contamination from Defence establishments.
- In April 2024, PFAS remediation works at RAAF Base Wagga commenced. Works include removal and replacement of infrastructure and treating impacted soil.
- Defence is committed to ensuring the integrity of the Wagga water supply in relation to the potential for PFAS contamination emanating from Defence establishments.

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SEG Brief- PFAS Investigation and Management

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Relevant Media Reporting

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SEG Brief- PFAS Investigation and Management

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- On 25 October 2023, ABC published an article regarding PFAS detections at monitoring locations near a Riverina Water bore field which supply's drinking water to Wagga Wagga. [Defence says PFAS in groundwater travelling 'faster than predicted'](#)

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Division: Infrastructure Division	
PDR No: SB24-000462	
Prepared by: s47E(d) Director PFAS Policy Governance and Communication, PFAS Investigation and Management Branch Infrastructure Division Mob: s22 Ph: s47E(d) Date: 30 April 2024	Cleared by Division Head: Pat Sowry First Assistant Secretary Infrastructure Security and Estate Group Mob: s22 Ph: s47E(d) Date: 30 April 2024
Consultation:	
Michael Lysewysz Defence General Council – Dispute Resolution & Litigation	Date: 19 April 2024 Mob: s22 Ph: s47E(d)
Adrian Kovacs Assistant Secretary Property Management	Date: 19 April 2024 Mob: s22 Ph: s47E(d)
Cleared by CFO / DPG / DSR: N/A	
Cleared by Deputy Secretary (or equivalent Band 3/3*): Celia Perkins Deputy Secretary Security and Estate Group Date: 4 May 2024	

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RAAF Base Wagga - Groundwater Modelling, Scoping Assessment

Date:	10 May 2024	Level 4, 12 Stewart Avenue
Project name:	RAAF Base Wagga PMAP	Newcastle West, NSW 2302
Project no:	IS327200	PO Box 2147
Prepared by:	s47F	Dangar, NSW 2309
Location:	Newcastle	Australia
Participants:	s47F	T +61 2 4979 2600
		F +61 2 4979 2666
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Notes	Action
Jacobs Background to RAAF Wagga Model Jacobs provided an update on the basis for development of the existing groundwater model for RAAF Wagga. The model was based on the following key assumptions: 1. The starting point for “particles” in the Lachlan Formation was the approximate lateral extent of the Gumly Gumly wetland based on aerial images. 2. The starting time for the particles was 1970, ie we assumed PFAS was discharged from the Base and made it into the Lachlan Formation at the wetland about the time when Defence started using 3M Lightwater. 3. The pathway for PFAS to enter the Lachlan Formation was downward from the wetland only. There was no downward migration from Marshalls Creek to the Lachlan Formation. No other areas of connectivity between Cowra and Lachlan. No pathway from existing bores. The model recommended that the above key model assumptions be tested and validated as part of the RAAF Wagga, Ongoing Monitoring Program (OMP). The results of the OMP and the installation of additional monitoring wells (within the Lachlan Formation) has found that two of the key modelling assumptions were incorrect (assumption 1 and 3 above), but the underlying numerical modelling appears sound.	To Note
JBS&G Review of RAAF Wagga Model JBS&G confirmed that they had undertaken a basic review of the Jacobs Groundwater Modelling report for RAAF Wagga. In their assessment the numerical modelling was appropriate and acceptable, based on the	To Note

Minutes

model findings and measured levels; but that the model was based on incorrect key assumptions, as identified by Jacobs above.	
Further Modelling The detections of PFAS in newly installed groundwater wells (MW258 and MW259) are now only 600m from the Riverina Water supply bore on Koorringal St (MW212); in addition, the soil profile of the Gumly Gumly wetland, East Wagga area and Marshalls Creek area are very complex. It was agreed that currently further modelling of the East Wagga area is not needed.	To Note
Proposed Way Forward Surface water contaminated with PFAS is the likely source of PFAS detected in the Lachlan near East Wagga. Further investigations are required to refine the CSM and confirm this statement. Jacobs are therefore proposing that Defence installs three additional sets of nested groundwater wells within the Cowra, Upper Lachlan and Lower Lachlan formations, to fill data gaps on Copland St (between existing wells MW253 and MW258); and also between Riverina Water Bore and the recent detections adjacent Marshalls Creek detections (MW212 and MW258).	Defence/Jacobs
The pathway of vertical migration from PFAS impacted surface water into the Cowra is likely to be variable, as evidenced in the variable geology already encountered at drilled locations. Further to this, the hydraulic connectivity/separation between the Cowra and Lachlan is not well characterised in impacted areas. Further investigations are required to refine the Conceptual Site Model and confirm this statement. Therefore, in addition to the installation of the above new wells, JBS&G also requested that continuous water level loggers are installed into the new monitoring wells to assist in the understanding of hydraulic gradients between MW212 and MW258/MW261; and the connectivity between the aquifers.	Defence/Jacobs
Defence to consider updating the Conceptual Site Model as part of the current RAAF Wagga PMAP revision, to update the base assumptions and reflect the actual conditions observed within the OMP and recent additional well installations.	Defence/Jacobs