



## **Cadia Community Sustainability Network**

### **OBJECTIONS To Cadia Valley Operations Modification 16**

30 March 2026

Please find below a summary of CCSN's concerns in regard to the potential approval of Mod 16. In summary CCSN supports the ongoing operation of CVO subject to compliance with all environmental and statutory regulations.

This modification appears to be in effect a backdoor approval of hydrocyclone sands technology which is proposed for CCOP. If Mod 16 goes ahead CVO will place a significant volume of hydrocyclone sands on the STSF, if subsequent analysis conducted for CCOP identifies a problem such as AMD the tailings deposition plan under Mod 16 can't be undone. Mod 16 is a high risk strategy which has not received the level of technical analysis and scrutiny the community expects.

CVO is one of the largest gold and copper mines in the southern hemisphere. The sheer scale of the operation means that any technical failure (there have been several in the last few years alone) or contamination issue can have very significant impacts over a widespread area.

We believe the following issues need to be addressed *before consideration* of any approval:

- A geochemical analysis is required, based on kinetic testing, to conclusively prove that the coarse sand particles will *never* become an ongoing source of AMD.
- Existing extensive contamination of ground water and surface water on site and in surrounding creeks (Flyers, Cadiangullong, Swallow) and the Belubula River must be fully investigated and publicly monitored, remediation / rehabilitation plans developed.
- Hydrobiology recommended that groundwater testing be conducted south of the STSF. CVO has tested this area in prior years but withheld the data in 2025. Several bores which in the past reported either very low pH or very high pH have been omitted from the Engeny FY25 Ground and Surface Water Assessment. Data for the most southerly sample location on Cadiangullong Creek has also been omitted. Data for these monitoring points must be released to the Department. In the absence of evidence to the contrary regulators can only assume this data indicates an ongoing contamination issue and cannot responsibly approve the Modification.
- The Airen dust predictions should be corrected to accurately predict the proposed number of vehicles and dust expected from the sands stock pile / dump.
- There is no information in Mod 16 about how or when this tailings dump on the STSF will be integrated into final rehabilitation.

Subject to the outcome of the additional information requested above, we believe, at a minimum, the following additional conditions are required in the Project Approval:

- The recommendations of the Hydrobiology Report commissioned by the EPA be implemented and made a condition of approval. Every monitoring location should include as a minimum PFAS, all metals, pH, sulphate /chloride ratios, TDS and EC.
- In addition to the Hydrobiology recommendations CCSN requests:
  - upstream monitoring locations be established on the Belubula River at Burnt Yards Road Bridge and Ashburtons Bridge.
  - flow metres be installed on Cadiangullong Creek and Flyers Creek (north of mine operations, Panuara Rd bridge and Errowanbang weir and prior to the confluence with the Belubula River).
- All resulting monitoring data must be made publicly available, in real time, consistent with CVO's obligations under the Project Approval to warn its neighbours of contamination risk.
- Genuine community engagement be re-established before any further consideration of CCOP. Small (4-6 attendees) meetings and "drop in" sessions are designed to intimidate the community and limit sharing of important information. Reinstatement of the previous program of quarterly community meetings should be a condition of approval.
- In accordance with GISTM Section 10.7 a fully costed rehabilitation plan, meeting the requirements of independent consultants GHD and Blackrock Mining Solutions.

## **Social Licence Objections**

### **1. Community Consultation**

Under Newmont ownership CVO has adopted a policy of minimising community consultation and reducing community meetings and engagement at all levels. On multiple occasions CVO has told CCSN it will deal with the community only through the CCC. The CCC has in the past been tightly controlled by CVO and has been ineffective at dealing or engaging with issues such as dust contamination raised by the community. The Department has taken active steps to change the balance of communication and control of the CCC. CCSN is hopeful this will improve matters going forward, however it does not address the hopeless lack of community engagement in regard to Mod 16 and CCOP which are both currently under consideration.

CVO's policy appears to be driven by a culture of "what we don't know can't hurt us". However the community has been trying to raise very serious concerns about the human and environmental impacts in the Cadia district for several years. These impacts, discussed in greater detail below, must be addressed before there can be any change / development of CVO's operations. The lack of engagement and transparency by CVO and lack of enforcement of regulations by key regulators has led to the community taking the action of last resort and seeking legal relief in the NSW Supreme Court.

Without meaningful change in the corporate strategy and culture there appears to be no hope or opportunity for engagement to resolve the problems identified by the community. CVO has, by its actions, made it clear it has no interest in protecting the immediate neighbours from harm. No warnings have ever been given by CVO to the landowners downstream of the mine, when spikes of highly alkaline (pH10 and above) water are released are released from the site. Groundwater monitoring results are only partially published and worrisome results are attributed to improbable, non mining causes (such as, grout in the bores, weather and agriculture).

It has been sobering to be told on multiple occasions by local residents that they can no longer attend Cadia meetings because of the impact on their mental health. Many residents in the district feel "trapped", they cannot sell their properties for anything like their worth because of the mine impacts and are unable therefore to move to a similar property and continue their business.

CCSN is now set on a path to demonstrate to Newmont / Cadia, the mining industry, the wider community, regulators, politicians and the Minerals Council the risks of uncontrolled badly managed mining on a significant scale in a populated area. We are hopeful that the precedent we set will help all stakeholders to create change and require the mining industry to spend some of its extraordinary profits, which mostly benefit overseas shareholders, on protecting the health and environment for all Australians now and in the future.

**Consequently Newmont /CVO does not now have a social licence with its neighbours in the Cadia valley.**

2. Operating Hours

We object to Cadias unreasonable changes to operating hours and increased constant noise. Cadia has **not** discussed or disclosed this aspect of the proposal with nearby residents (the most affected neighbours), it has been mentioned almost in passing at a CCC meeting, there have been NO Residents Meetings where this proposal is discussed.

A change in operations to run 4 large tractors, excavator, bulldozers, booster pumps and associated lighting 24 hours per day, 365 days of the year (“anytime, any day”) in an exposed position with negligible buffer zone will have a significant detrimental impact on all neighbouring residents.

Claims that the incremental impact is negligible are irrelevant. The correct measure is not the incremental change from where this degraded landscape is today. Changes should be compared to what this community was experiencing before Cadia Operations began. This incremental creep in regard to fundamental issues such as noise and lighting has destroyed the last vestiges of amenity in this district. Prior to this proposal the only relief nearby residents got from the extraordinary imposition of Cadias operations was at night. As stated at a CCC meeting “at least at night you could close your eyes and in some way the mines impact was diminished” this proposal will mean that for some of the closest neighbours this last opportunity for relief has been taken away.

It is disingenuous to compare the operating hours of the proposed hydrocyclone operation to the existing operation underground and in the processing area as these are generally confined to isolated operating areas. The hydrocyclones dams are positioned relatively close to neighbours in an exposed windy position with no buffer zone or tree planting to protect the neighbours. The anticipated noise levels are either close to or exceed current allowable noise thresholds by a significant margin.

Mod 16 predicts that Cadias mining operations will impact privately owned land and result in an increase in predicted noise emissions, refer below.

	Current Noise Limit db(A)	Predicted Noise Limit db(A)
Daytime	50	53
Evening	45	48
Night	0	43

Hydrocyclone activities are currently restricted to operate between 7am to 10pm, the increase to 24hour operation, 365 days per year is a dramatic change. As only 3.5 million tonnes / year is actually used in buttressing and some 7 million tonnes / year are directed to the stockpile/ dump, it is not necessary to operate during the night on the buttress cells. The approved Mod 15 proposed material movements in Table 3.3 were planned to be carried out during daytime and evening operating hours with minimal negative impact on the community

What is the planned lighting regime to operate 24 hours /day? No information has been provided, light pollution is a significant additional disturbance to local residents and the environment.

We note that the underdrainage and covering of the hydrocyclone buttressing is to be carried out by using NAF rock sourced from the waste rock dump. CVO claims that Mod 16 is more efficient in this regard than Mod 15. The proposal possibly uses a greater quantity of NAF waste rock than anticipated in Mod 15 as the buttressing drainage pad area is increased from a normal 1.3V : 1H to 1.7V : 1H and there is an extensive 1m thick surface rock barrier. Any suggestion that Mod 16 is more efficient in terms of material or labour is dubious.

## Environmental Objections

### 1. AMD

There is currently considerable evidence of impact from acid mine drainage on neighbouring properties, in ground water, local springs and streams and the Belubula River. We believe that any proposal to modify the tailings storage area should carefully consider the potential to correct the current situation and avoid the long term generation of Acid Mine Drainage.

It is noted that Mod 15 is presented as a buttressing design using NAF material there is no mention in the Mod 16 proposal of the acid forming potential of the hydrocyclone sands, or any reference to Geochemical studies.

It is noted that the Cadia Operations Tailings Assessment Feb 2023, University of Queensland S3.6.2 reports MLA results indicate the +425µm fraction would be considered PAF due to the higher content of sulphide minerals and lower proportion of carbonate materials to neutralise and potential acid produced.

Experience on Chilean Hydrocyclone dams even in extremely dry climates demonstrates considerable AMD particularly at the foot of the Hydrocyclone wall where the largest particles exist. Dold, B. (2014). Evolution of Acid Mine Drainage Formation in Sulphidic Mine Tailings. *Minerals*, 4(3), 621-641. <https://doi.org/10.3390/min4030621>. The fact that the coarse particles are PAF is due to the fact that the buffering materials (carbonates) are relatively soft compared to the sulphide pyrite mineralisation and are concentrated in the fine particles cyclone stream hence the buffering is more effective for the finer size fraction.

It is noted that both the QUT report and the Golder Geochemical report recommend further Kinetic testing of the hydrocyclone sands is necessary to understand the long term geochemical stability and acid forming potential. There is no indication in Mod 16 that any of this work has been completed.

The Golder Report was submitted on 25/9/2021 and the QUT report on 14/2/2023. Kinetic testing requires a 3-4 year dynamic cell testing regime so this work should now be complete and is an essential part of the geochemical assessment of the proposal.

The long term mounding of “stock piles” of highly permeable PAF hydrocyclone sands subject to constant wetting and drying provides the ideal environment for the development of AMD. It is well recognised (GARD) that the elimination / minimisation of water and oxygen on tailings is essential to minimise long term AMD in a high rainfall temperate environment.

The Modification report, S7.1 claims that recovered sand is consistent with Leading Practice Tailings Management (2020 NSW Resource Regulator *This is blatantly incorrect*. This report is a short Q&A

summary (only 6 pages) which makes no mention of Hydrocyclone sands and strongly recommends the implementation of dewatered tailings and a combination of dewatered tailings and waste rock.

This NSW Resource Regulator Q&A refers to the 2016 Department of Industry [Tailings Management, Leading Practice Sustainable Development Program for the Mining Industry](#) (Department of Industry, September 2016). Key elements are, design for closure, Dewatered Tailings management, Progressive Rehabilitation, Integrated waste management and stringent governance regulation. None of these elements are adequately addressed, if at all, in the Mod 16 proposal.

The report states that seepage and drainage from the highly permeable sands (stock pile and buttressing will be collected and directed to the existing tailings water collection ponds and then returned by pumps to the main process water storage area. There are no details provided in regard to the drainage and seepage collection around the sand dumps and rock buttressing.

The report states rehabilitation of the buttress would occur by capping (approx. 1m thick) and seeding with native grasses (S3.2.6). The report then states that the whole buttress would be subsumed by the southern tailings dam. Why is the buttressing necessary if the whole will be subsumed by the southern tailings dam? GHD advises the capping is necessary to reduce dust and erosion of the buttress base but ignores the dust emissions and erosion risks of the much larger sand dumps.

Mod 16 does not explain how the sand buttressing then integrates with the rock buttressing on the failed section of the wall. It appears that the proposal is less about stabilising the NTSF which is likely well consolidated and drained, and fundamentally more about dumping approximately 30% of the tailings in heaps on the existing STSF because CVO is running out of tailings storage. Mod 16 is essentially an excuse to elicit approval to utilize hydrocyclone sands for tailings storage.

It is intended that this tailings dump will be built over the water at the base of the NTSF and adjacent to the water around the slump area. It should be remembered that:

- In the previous repair attempts CVO was unable to pump out the water and slurry at the slump location and failed to find a firm foundation for the repair of the NTSF– (the water was unending). That indicates water is refilling the void as it is pumped out.
- The ITRB identified an alluvial channel under the slump and the Cadiangullong fault line runs north to south in this location.
- Hydrobiology has identified an increase in water flow and contamination in Cadiangullong Creek (including copper) as the Creek flows past the tailings dams
- Hydrobiology has identified tailings pore water in monitoring bores to the south and west of the STSF

There is a growing body of evidence that the tailings water is already contaminating the ground and surface water both on site and off site. There is already evidence of AMD developing in the Cadia district, and CCSN has shared this evidence with CVO and the EPA, noting that Hydrobiology did not (contrary to its scope of engagement) consider any off site locations, nor conduct any fresh testing. It seems incomprehensible that this high risk strategy would be acceptable.

There is a clear risk that the high permeability sand deposits will ultimately become a PAF impregnated water reservoir embedded within the STSF with the potential to seep AMD into the environment, ground and surface water for ever.

## **2. Dust Objections**

The Mod 16 comparison with Mod 15 dust emissions are misleading. Mod 16 buttressing includes all of the TSFs (80million tonnes of NAF rock) and Mod 16 only applies to a relatively small section of the STSF.

The dust emissions from the coarse tailings cannot be compared to the dust emissions from the NAF waste rock. The hydrocyclone sand is much finer and contains toxic residual mine processing chemicals and crushed metals.

The dust model presented in App C Table D2 predicts dust impact from compaction and shaping the dry hydrocyclone sands. The model is based on a single dozer operating 2920-6280 hours/year working on the cells on construction and operation plus shaping the stock pile but Mod 16 actually proposes 4 John Deer tractors operating 24 hours per day plus an excavator as well as a dozer (which may be used only during the day). This actually equates to some 50,000 hours per year of activity. The dust estimates on which the dispersion model is based appears to be materially under estimating the fugitive emissions.

Whilst the Mod states its purpose is to strengthen the poorly designed buttress on the NTSF most of the sand is actually planned to be stockpiled. Total sands is projected to be 10.5 M tonnes/year of which approximately 7 M tonnes/year will be placed in the stock pile/ dump.

GHD AppA S9.1.2 stresses the importance of the rock cover stating:

“As soon as cell operation is completed, part of the downstream shell will need to be protected to reduce dust emissions and minimise the risk of erosion. To address this, a cover layer is proposed over the exposed downstream embankment, consisting of a 1m layer of general fill placed over the final recovered sand surface. This cover should be placed as early as practical following cell completion, rather than waiting for full buttress construction, to limit dust emissions and provide erosion protection. As its primary function is to suppress dust and reduce emission risk in the long term.”

We note that whilst concern is raised over the dust from the buttressing the majority (75%) of the hydrocyclone sand is actually sitting unprotected in the dump with no dust mitigation. It will be decades before this dump is subsumed by the planned STSF. Mod 16 refers to top of the sand dump ultimately being bulldozed level with the final height of the combined southern and northern dams. That suggests the dump will be taller than the current northern dam ie >50m. How will the dust from a dump on this scale in an exposed location be controlled?

The experience of the community following the 2018 NTSF wall collapse was that the most toxic dust was the superfine efflorescent salts that resulted from evaporation and were drawn by capillary action to the surface of the tailings. This dust consists of soluble metal salts and is sub PM<sub>2.5</sub>. The Aeron report does not consider this form of dust in the TSP analysis.

The dust model criteria uses the outdated pre 2025 NEPM criteria. This should be updated as Australia's PM<sub>10</sub> 24 hour criteria has been reduced from 25µg/m<sup>3</sup> to 20µg/m<sup>3</sup>.

Consideration should be given to a risk management approach based on the WHO Guidelines.

	WHO µg/m <sup>3</sup>	NEPM µg/m <sup>3</sup>	CVO µg/m <sup>3</sup>
PM <sub>2.5</sub> - annual	5	8	8
- 24 hr	15	25	25
PM <sub>10</sub> - annual	15	20	25
- 24 hr	45	50	50

This community has, based upon Cadia's own data, and as evidenced by EPA legal action in relation to both the vent shafts and the tailings dam emissions lived through years of excessive dust emissions from Cadia. It is not unreasonable to expect the regulators to now ensure the community has clean air.

Based on the precautionary principle, ethically the WHO guidelines should be implemented to protect the community.

In regard to specific dust from metalliferous mining, consideration should be given to the EPA SA guidelines which were developed with the department of health (SA) based on RCS and requires a limit of 3µg/m<sup>3</sup> annual average for respirable PM<sub>10</sub> in ambient air.

### 3. PFAS Contamination

In 2024 / 2025 the community began testing local water courses for PFAS after the detection of highly concentrated foam enriched with metals and hydrocarbons in the creeks and rivers near to the Cadia mine. This led the EPA to commence a testing program in the Belubula River and on site at CVO and eventually to require CVO to conduct a PFAS audit. Prior to the community's efforts, the EPA had not conducted any testing for PFAS chemicals despite assuring the community in 2023 that rainwater tanks were safe.

AECOM delivered its report, Investigation of PFAS Use and Occurrence, Cadia Valley Operations, to the EPA in September 2025. It was initially not provided to the community, who only obtained a copy by GIPA 5 months later in February 2026. The AECOM report only considered PFAS chemicals which might be used in AFFF firefighting foam, primarily in the Cadia East underground mine, and suggested this usage stopped in 2016. AECOM did not consider that PFAS chemicals are widely used in gold and copper mining as part of the processing of the ore and separation of minerals (ore leaching, flotation, acid mist suppression) (see for example Gluge et al 2020, An overview of the uses of PFAS, Environ, Sci : Processes Impacts 2020,22,2345-2373). Nor did AECOM attempt to explain the apparent anomaly between usage said to have stopped 10 years ago and the widespread detection of PFAS on and off the site as summarised below.

PFAS has been found at CVO by the EPA and CVO testing in:

- The PTSF and Rodds Creek dam, that is it is in the process water
- In multiple groundwater monitoring bores, which suggests PFAS is not being contained and is likely forming groundwater plumes (similar to those at Defence bases, where AECOM has also worked).
- In leach ponds which are hydraulically connected
- The Belubula River

PFAS has been identified by CCSN in:

- Flyers Creek and Cadiangullong Creek, as well as the Belubula River (where PFAS concentrations have been found to significantly increase downstream of fault lines)
- Dams and ponds (in particular close to fault line)
- CVO concentrate, this suggests that PFAS chemicals appear to have been or are being used as part of the ore processing. (Attachment 1. Extract from NMI lab report)

It is reasonable to assume therefore that there is PFAS in the tailings and if the tailings are mobilised through seepage, dust or other pathways, this will be contributing to PFAS contamination in the region.

In November / December 2025 CCSN tested some local water tanks for PFAS and discovered not only do we have PFAS chemicals in our water courses, but also in our water tanks.

This discovery has led Assoc Professor Ian Wright to conduct further sampling in the Cadia district and commence studying a control group in the Southern Highlands. The research is ongoing and is summarised as follows:

Notes from Assoc Professor Ian Wright 30 March 2026

A current research project is comparing water quality across NSW regional water tanks. This project has been under way since 2023. Currently this project is conducting a detailed comparison of Cadia district water tanks with water tanks from a non-mining area (NSW Southern Highlands). The project is expected to be completed over the next few months.

Based on water samples that have been collected from the bottom of water tanks - where dust and other contaminants settle, water quality results for water tanks in the Cadia area have substantially higher metal and PFAS content. The comparison is based on results from samples collected from 70 to 80 water tanks in the Cadia area compared to 30 tanks in the Southern Highlands. The research is incomplete, but contrasting trends are emerging.

Several metals that can be harmful for human health have been measured at greater concentrations in Cadia tanks. These include arsenic, cadmium, manganese, lead, nickel, and mercury. The average concentration of lead collected from the bottom of Cadia tanks is more than 6 times greater than Southern Highlands tanks.

For the first time, the current project is also examining the hazardous 'forever chemicals' per- and polyfluoroalkyl substances (PFAS). Water samples for PFAS analysis have been collected from 43 Cadia tanks and 20 Southern Highlands water tanks. The majority (76%) of Cadia water tank samples contain PFAS. This compares to 10 % of Southern highlands water tanks. Further water tanks samples will be collected for PFAS analysis.

The highest PFOS reading in the Cadia tanks was 18ng/L which contrasts with the two tanks which reported PFAS in the Southern Highlands, both recorded <1ng/L.

The discovery of PFAS in our water tanks has led CCSN to commence further blood tests within the affected community. To date we have tested a small cohort of 9 residents, results have been compared to ABS research: Information on serum levels of per- and polyfluoroalkyl substances for people aged 12 years and over, released on 27/5/2025. Some early trends are emerging:

- All residents had PFAS / PFHxS and PFOA chemicals at above average for their age
- Excluding the highest result the average for the group was > 3X their age adjusted average per ABS
- The highest recorded result reported total PFAS of 51ng/ml, 11.3X the age adjusted average
  - This result compares to 95% of participants in the ABS study reporting 8.05ng/ml or less.

CCSN is now working on further community blood testing and building the data set.

### **Business Considerations**

CCSN recognises the importance of developing our sovereign wealth for the benefit of society and supports government efforts to facilitate this.

The Cadia Hill chalcopyrite deposit has been a missed opportunity, with more than 40% of the resource either mismanaged or sterilized by the current operation. In addition recovery rates, primarily due to lack of investment in communitation and suboptimal particle size flotation has resulted in historical recovery in the range 70-80% for gold and copper, where industry practice is closer to 95%. Further investment in coarse particle flotation may improve the recovery rate by approximately 5%, but at the expense of concentrate degradation. The Queensland University report advises that a finer particle size (ideally

40µm) is necessary to recover Critical Minerals such as Magnetite and Vanadium and to optimise copper production.

It has been CVOs management strategy to adopt a cheap high volume production methodology, prioritising higher grade ore, and maximising short term returns. This strategy comes at a significant environmental cost and minimizes long term sustainable production. The current strategy of using sub-processed ore to construct a TSF is a false economy.

High rates of production and a lack of investment in tailings dams have made the mine high risk and almost impossible to manage safely. A lower sustainable production rate would provide opportunities for safer tailings consolidation, better communitation by tertiary grinding and higher recovery, progressive rehabilitation, long term sustainable employment.

The mine should be able to sustainably operate till the end of this century, but now is unlikely to be operating beyond 2050. It is not clear whether rehabilitation is possible or that the damage to neighbouring ground and surface water can ever be rectified. There is no viable rehabilitation plan.

A 1997 report by the Australian Government (Harries 1997 Acid Mine Drainage in Australia) identified the rehabilitation costs for Acid Drainage to be in excess of \$100,000 / hectare. This is a risk that must be avoided if at all possible. Hydrocyclone sands is a high risk strategy. After only 25 years of operation, alongside multiple other problems we have evidence of AMD developing in creeks, groundwater and the Belubula River in the vicinity of CVO. Adopting a tailings storage technology today which could require rehabilitation of 5000ha of disturbed ground and tailings dams would suggest a rehabilitation deposit / fund is required in excess of \$1billion.

The Global Industry Standard on Tailings Management Requirement 10.7 states:

The amount of estimated costs for planned closure, early closure, reclamation, and post-closure of the tailings facility and its appurtenant structures shall be reviewed periodically to confirm that adequate financial capacity (including insurance, to the extent commercially reasonable) is available for such purposes throughout the tailings facility lifecycle, and the conclusions of the review shall be publicly disclosed annually. Disclosure may be made in audited financial statements or in public regulatory filings.

This is an important requirement in assessing the viability of any project. Failure by the regulators to require enforcement of the GISTM results in an extraordinary financial risk to NSW and the local community.

GISTM Requirement 10.7 should be included in the Project Approval.

It is also noted that both consultants, GHD and Blackrock Mining Solutions, have recommended a rock and soil cover 1 m deep over the hydrocyclone sands tailings. This is a dramatic change from the current rehabilitation plan which assumes 20cm of biosolids. The cost of this rehabilitation requirement has not been properly considered.

- What is the cost and how will these materials be provided for rehabilitation?
- What are the implications of this requirement on the proposed use of Hydrocyclone sands technology for CCOP?

## REPORT OF ANALYSIS

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Report No. RN1486344

<b>Client</b> : William Roberts Lawyers Level 22/66 Geuburn St. Sydney NSW 2000	<b>Job No.</b> : WILL28/251217 <b>Quote No.</b> : QT-02344 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 17-DEC-2025 <b>Sampled By</b> : CLIENT
<b>Attention</b> : JAMES HANNON	<b>Phone</b> : 1300 722 845
<b>Project Name</b> :	
<b>For Follow up enquires</b> : ASB@measurement.gov.au	

Lab Reg No.	Sample Ref	Sample Description
N25/021629	CON001	SEDIMENT
N25/021630	CON002	SEDIMENT

Lab Reg No.		N25/021629	N25/021630	
Sample Reference	Units	CON001	CON002	Method
<b>Supplemental PFAS List</b>				
PFPrS (429-41-6)	mg/kg	<0.0001	<0.0001	NR70
PFDoS (79780-39-5)	mg/kg	<0.0001	<0.0001	NR70
FHxSA (41997-13-1)	mg/kg	<0.0001	<0.0001	NR70
3:3 FTCA (356-02-5)	mg/kg	<0.0001	<0.0001	NR70
6:3 FTCA (814637-48-3)	mg/kg	<0.0001	<0.0001	NR70
7:3 FTCA (812-70-4)	mg/kg	<0.0001	<0.0001	NR70
HFPO-DA (13252-13-6)	mg/kg	<0.0001	<0.0001	NR70
PFMPA (377-73-1)	mg/kg	<0.0001	<0.0001	NR70
PFMBA (863090-89-5)	mg/kg	<0.0001	<0.0001	NR70
NFDHA (151772-58-6)	mg/kg	<0.0001	<0.0001	NR70
6:2 diPAP (407582-79-0)	mg/kg	<0.0001	<0.0001	NR70
6:2/8:2 diPAP (943913-15-3)	mg/kg	<0.0001	<0.0001	NR70
PFECHS (335-24-0)	mg/kg	<0.0001	<0.0001	NR70
PFEESA (113507-82-7)	mg/kg	<0.0001	<0.0001	NR70
ADONA (819005-14-4)	mg/kg	<0.0001	<0.0001	NR70
9CI-PF3ONS (756426-58-1)	mg/kg	<0.0001	<0.0001	NR70
11CI-PF3OUds (763051-82-9)	mg/kg	<0.0001	<0.0001	NR70
6:2 FTAB (34455-29-3)	mg/kg	0.00049	0.00054	NR70
FBSA (30334-69-1)	mg/kg	<0.0001	<0.0001	NR70
<b>PFAS (per- and poly-fluoroalkyl substances) - Low Level</b>				
PFBA (375-22-4)	mg/kg	<0.0005	<0.0005	NR70
PFPeA (2706-90-3)	mg/kg	<0.0002	<0.0002	NR70
PFHxA (307-24-4)	mg/kg	0.00011	0.00011	NR70
PFHpA (375-85-9)	mg/kg	<0.0001	<0.0001	NR70
PFOA (335-67-1)	mg/kg	0.00027	0.00029	NR70
PFNA (375-85-1)	mg/kg	<0.0001	<0.0001	NR70
PFDA (335-76-2)	mg/kg	<0.0001	<0.0001	NR70
PFUdA (2058-94-8)	mg/kg	<0.0001	<0.0001	NR70
PFDoA (307-55-1)	mg/kg	<0.0001	<0.0001	NR70

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National Measurement Institute

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Lab Reg No.		N25/021629	N25/021630	
Sample Reference	Units	CON001	CON002	Method
<b>PFAS (per- and poly-fluoroalkyl substances) - Low Level</b>				
PFTrDA (72629-94-8)	mg/kg	<0.0001	<0.0001	NR70
PFTeDA (376-06-7)	mg/kg	<0.0001	<0.0001	NR70
PFHxDA (67905-19-5)	mg/kg	<0.0001	<0.0001	NR70
PFODA (16517-11-6)	mg/kg	<0.0001	<0.0001	NR70
FOUEA (70867-84-2)	mg/kg	<0.0001	<0.0001	NR70
PFBS (375-73-5)	mg/kg	<0.0001	<0.0001	NR70
PFPeS (2706-91-4)	mg/kg	<0.0001	<0.0001	NR70
PFHxS (355-46-4)	mg/kg	<0.0001	<0.0001	NR70
PFHpS (375-92-8)	mg/kg	<0.0001	<0.0001	NR70
PFOS (1763-23-1)	mg/kg	<0.0001	<0.0001	NR70
PFNS (88259-12-1)	mg/kg	<0.0001	<0.0001	NR70
PFDS (335-77-3)	mg/kg	<0.0001	<0.0001	NR70
PFOSA (754-91-6)	mg/kg	<0.0001	<0.0001	NR70
N-MeFOSA (31506-32-8)	mg/kg	<0.0001	<0.0001	NR70
N-EtFOSA (4151-50-2)	mg/kg	<0.0001	<0.0001	NR70
N-MeFOSAA (2355-31-9)	mg/kg	<0.0001	<0.0001	NR70
N-EtFOSAA(2991-50-6)	mg/kg	<0.0001	<0.0001	NR70
N-MeFOSE (24448-08-7)	mg/kg	<0.0002	<0.0002	NR70
N-EtFOSE (1091-99-2)	mg/kg	<0.0002	<0.0002	NR70
4:2 FTS (757124-72-4)	mg/kg	<0.0001	<0.0001	NR70
6:2 FTS (27619-97-2)	mg/kg	0.00019	0.00019	NR70
8:2 FTS (39108-34-4)	mg/kg	<0.0001	<0.0001	NR70
10:2 FTS (120226-60-0)	mg/kg	<0.0001	<0.0001	NR70
8:2 diFAP (678-41-1)	mg/kg	<0.0001	<0.0001	NR70
PFBA (Surrogate Recovery)	%	102	111	NR70
PFPeA (Surrogate Recovery)	%	106	110	NR70
PFHxA (Surrogate Recovery)	%	96	112	NR70
PFHpA (Surrogate Recovery)	%	96	112	NR70
PFOA (Surrogate Recovery)	%	99	119	NR70
PFNA (Surrogate Recovery)	%	97	104	NR70
PFDA (Surrogate Recovery)	%	102	106	NR70
PFUdA (Surrogate Recovery)	%	104	109	NR70
PFDoA (Surrogate Recovery)	%	112	113	NR70
PFTeDA (Surrogate Recovery)	%	106	107	NR70
PFHxDA (Surrogate Recovery)	%	112	121	NR70
FOUEA (Surrogate Recovery)	%	130	140	NR70
PFBS (Surrogate Recovery)	%	89	115	NR70
PFHxS (Surrogate Recovery)	%	95	110	NR70
PFOS (Surrogate Recovery)	%	106	123	NR70
PFOSA (Surrogate Recovery)	%	98	108	NR70
N-MeFOSA (Surrogate Recovery)	%	95	110	NR70
N-EtFOSA (Surrogate Recovery)	%	98	112	NR70

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**National Measurement Institute**