



## Annual Audit Compliance Report Form

*Environmental Protection Act 1986, Part V*

### Section A – Licence Details

|                     |  |                      |                |
|---------------------|--|----------------------|----------------|
| Licence number:     | L9240/2020/1   | Licence file number: | DER2020/000039 |
| Licence holder:     | Tellus Holdings Ltd  |                      |                |
| Trading as:         | Tellus Holdings Ltd  |                      |                |
| ACN:                | 138 119 829  |                      |                |
| Registered address: | Suite 2, level 10, 151 Castlereagh Street<br>SYDNEY NSW 2000 |                      |                |
| Reporting period:   | 01/07/2021 to 30/06/2022                                     |                      |                |

### Section B – Statement of Compliance with Licence Conditions

Did you comply with all of your licence conditions during the reporting period?  
(please tick the appropriate box)

- ☐ Yes – please complete:
- section C;
  - section D if required; and
  - sign the declaration in Section F.
- ☒ No – please complete:
- section C;
  - section D if required;
  - section E; and
  - sign the declaration at Section F.

### Section C – Statement of Actual Production

Provide the actual production quantity for this reporting period. Supporting documentation is to be attached.

| Prescribed Premises Category   | Actual Production Quantity  |
|--|---|
| Category 61: Liquid Waste Facility<br>Category 61A: Solid Waste Facility<br>Category 65: Class IV secure landfill site<br>Category 66: Class V intractable landfill site | Total waste received – 30,053 t<br>Treated liquid waste disposed to cell – 7111 t |

### Section D – Statement of Actual Part 2 Waste Discharge Quantity

Provide the actual Part 2 waste discharge quantity for this reporting period. Supporting documentation is to be attached.

| Prescribed Premises Category | Actual Part 2 Waste Discharge Quantity |
|------------------------------|--|
| Not applicable               |  |



## Section E – Details of Non-Compliance with Licence Condition

Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.

|               |    |                            |            |
|---------------|----|----------------------------|------------|
| Condition no: | 15 | Date(s) of non-compliance: | 25/08/2021 |
|---------------|----|----------------------------|------------|

### Details of non-compliance:

Liquid wastes are being progressively treated through the Waste Isolation Plant (WIP) to solidify and immobilise the liquid waste so that no leachate will be generated. Condition 15 of the licence specifies that liquid waste shall be stabilised and solidified to meet an unconfined compressive strength of 0.5 MPa and a free liquid limit of <0.1%. In addition, solidified PFAS waste must have a maximum PFAS concentration of 50 mg/kg.

Available results from analysis of the treated material indicate full compliance with the free liquid limit and the licence limit of 50 mg/kg of PFAS; however, Unconfined Compressive Strength (UCS) records indicate that the compaction density of 0.5 MPa was not always being achieved prior to placement in the cell.

Studies by Tellus have demonstrated that the solidified PFAS contaminated wastewater will generally meet the required UCS criteria in situ within 7 days; however, the AFFF concentrate has been found to behave differently when processed through the WIP and UCS criteria in test blocks has consistently failed over extended timeframes.

The disposal of unconsolidated material was first reported to DWER in the 2021 AER.

### What was the actual (or suspected) environmental impact of the non-compliance?

**NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

It is believed that there is no environmental impact because all treated material is contained within the cell as a dry (no free liquid under compression) and compactable material.

### Cause (or suspected cause) of non-compliance:

Samples of the concentrated PFAS have reacted differently to the PFAS contaminated water when processed through the WIP and results from UCS testing indicate that this material has not formed a contiguous solid with a >0.5 MPa UCS.

### Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Tellus has provided information to DWER regarding studies on the curing rate curve for stabilized and solidified PFAS liquid waste being treated through the WIP that demonstrate the behaviour of Unconfined Compressive Strength (UCS) over the curing period time for PFAS contaminated water samples is in line with a modelled curve of curing rate, which indicates the treated material will comply with the 0.5 MPa UCS criteria.

Tellus is currently collating data to support a licence amendment application to remove the 0.5 MPa UCS testing limit and replace it with an in-situ compaction (confined) testing method and target criteria. The 0.5 MPa UCS measurement is not a useful measurement as it is measuring at the extreme low-end range of the

testing equipment, and an unconfined compressive strength measurement is not analogous to the required material properties (no free liquids, compactable to a high density) once placed in the waste cell.

The material once placed in the cell and roll-compacted forms a dense and strong solid. The unsuitability of laboratory UCS testing arises from it not catering for the bubbly nature (from the PFAS / AFFF chemicals) of the mixture, which cannot de-aerate and be sufficiently compacted in the confines of a test mould.

Was this non-compliance previously reported to DWER?

☒ Yes, and

☐ Reported to DWER verbally

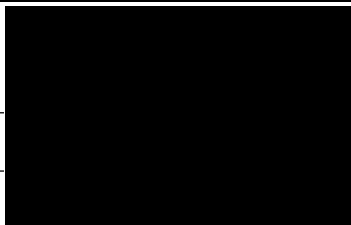
Date:

☒ Reported to DWER in writing

Date: 28 Sept 2021

## Section F – Declaration

I/We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>1</sup>. I/We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

|                               |  |                 |       |
|-------------------------------|--|-----------------|-------|
| Signature <sup>2</sup> :      |  | Signature:      |       |
| Name: (printed)               |  | Name: (printed) |       |
| Position:                     |  | Position:       |       |
| Date:                         |  | 29/08/2022      | Date: |
| Seal (if signing under seal): |  |                 |       |

<sup>1</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

<sup>2</sup> AACRs can only be signed by the licence holder or an authorised person with the legal authority to sign on behalf of the licence holder.



### Section E – Details of Non-Compliance with Licence Condition

Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.

|               |    |                            |                         |
|---------------|----|----------------------------|-------------------------|
| Condition no: | 16 | Date(s) of non-compliance: | 28/02/2022 – 05/03/2022 |
|---------------|----|----------------------------|-------------------------|

#### Details of non-compliance:

Condition 16 b) of the licence specifies that the Licence Holder must prepare and document the waste immobilisation and treatment process(es) and the quality assurance/quality control procedures to be applied to each liquid waste stream. A procedure for the chemical treatment of PFAS waste (SR-08.811) has been established; however, the annual licence compliance audit identified that there were no formal documented process control, sampling and testing or QA/QC procedures established specific to the pesticide liquid waste stream that was treated between the 28 February 2022 and 05 March 2022.

#### What was the actual (or suspected) environmental impact of the non-compliance?

**NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

This is an administrative non-compliance. It is believed that there is no environmental impact because all treated material is contained within the cell.

#### Cause (or suspected cause) of non-compliance:

Tellus consider that treatment of pesticide waste was conducted as a trial to identify the optimum treatment methodology and did not consider that procedure was required for a trial.

#### Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Tellus is preparing a procedure based on the findings of the trial for the treatment of future pesticide liquid waste streams.

#### Was this non-compliance previously reported to DWER?

☐ Yes, and

☐ Reported to DWER verbally

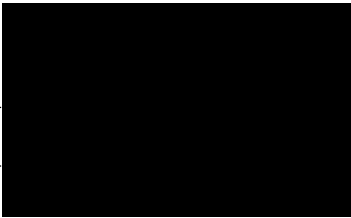
Date:

☐ Reported to DWER in writing

Date:

## Section F – Declaration

I/We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>3</sup>. I/We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

|                               |   |                 |  |
|-------------------------------|---|-----------------|--|
| Signature <sup>4</sup> :      |  | Signature:      |  |
| Name: (printed)               |   | Name: (printed) |  |
| Position:                     |   | Position:       |  |
| Date:                         | 29/08/2022  | Date:           |  |
| Seal (if signing under seal): |   |                 |  |

<sup>3</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

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Please use a separate page for each condition with which the licence holder was non-compliant at a time during the reporting period.

|               |    |                            |            |
|---------------|----|----------------------------|------------|
| Condition no: | 18 | Date(s) of non-compliance: | 25/08/2021 |
|---------------|----|----------------------------|------------|

### Details of non-compliance:

Condition 18 requires that the Licence Holder must ensure that where waste does not meet the specifications in Table 4 of the licence following processing in the Waste Isolation Plant (WIP), the waste is either reprocessed, or, stored in a Quarantined Storage Area or Container and removed to an appropriately authorised facility as soon as practicable.

The annual licence compliance audit identified that liquid wastes processed through the WIP are placed in the storage cell prior to verifying compliance with defined criteria. When results for the 0.5 MPa unconfined compressive strength tests were available indicating non-compliance, the material was rolled to increase the density, but no further testing was undertaken to confirm compliance and material was left in situ.

The disposal of unconsolidated material was first reported to DWER in the 2021 AER.

### What was the actual (or suspected) environmental impact of the non-compliance?

**NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

It is believed that there is no environmental impact because all treated material is a dry (no free liquid under compression) and compactable material contained within the cell.

### Cause (or suspected cause) of non-compliance:

The WIP operates on a batch basis and operational process requirements necessitate that the treated material is placed in skips for handling purposes. The skips must be emptied for reuse and based on trial results indicating that required compaction densities are achieved after several days of curing it was considered a lower risk option to place the material directly in the disposal cell prior to confirmation results being available, rather than store the material outside the cell and rehandle it after confirmation results were received.

### Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

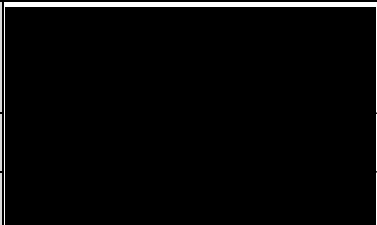
Tellus has provided information to DWER regarding the non-compliance and is seeking a licence amendment to remove the requirement to cure the treated waste prior to disposal within the cell. The licence amendment also includes a request to change from unconfined compressive strength testing to in-situ compaction measurement.

The material once placed in the cell and roll-compacted forms a dense and strong solid. The unsuitability of laboratory UCS testing arises from it not catering for the bubbly nature (from the PFAS / AFFF chemicals) of the mixture, which cannot de-aerate and be sufficiently compacted in the confines of a test mould.

### Was this non-compliance previously reported to DWER?

☒ Yes, and

|   |                    |
|---|--------------------|
| <input type="checkbox"/> Reported to DWER verbally              | Date:    /    /    |
| <input checked="" type="checkbox"/> Reported to DWER in writing | Date: 28 / 09 / 21 |
| <b>Section F – Declaration</b>                                  |                    |

|  |   |                 |       |
|--|---|-----------------|-------|
| I/We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular <sup>5</sup> . I/We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website. |   |                 |       |
| Signature <sup>6</sup> :   |  | Signature:      |       |
| Name: (printed)  |   | Name: (printed) |       |
| Position:  |   | Position:       |       |
| Date:  |   | 29/08/2022      | Date: |
| Seal (if signing under seal):  |   |                 |       |

<sup>5</sup> It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular.

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|               |    |                            |         |
|---------------|----|----------------------------|---------|
| Condition no: | 19 | Date(s) of non-compliance: | ongoing |
|---------------|----|----------------------------|---------|

### Details of non-compliance:

Condition 19 requires that the Licence Holder must manage ground waste disposal activities to ensure:

- where immobilised liquid wastes are disposed, these wastes have been subject to the requirements of condition 16;
- no waste is placed on top of any waste placed in the waste cell which has not cured and/or hardened;
- immobilised waste that does not cure or harden is to be removed from the waste cell, including any free liquid or slurry residue;

The annual licence compliance audit identified that AFFF concentrate processed through the WIP and disposed of to the cell did not achieve required unconfined compressive strength and therefore did not comply with condition 16. In addition, the treated waste, which continued to fail compaction tests after 28 days remains in the cell and additional wastes have been placed on top.

### What was the actual (or suspected) environmental impact of the non-compliance?

**NOTE** – please attach maps or diagrams to provide insight into the precise location of where the non-compliance took place.

It is believed that there is no environmental impact because all treated material is a dry (no free liquid under compaction) and compactible material contained within the cell. All such materials have passed the free liquid test criteria and have zero free liquid present.

### Cause (or suspected cause) of non-compliance:

The WIP operates on a batch basis and operational process requirements necessitate that the treated material is placed in skips for handling purposes. The skips must be emptied for reuse and based on trial results indicating that required compaction densities are achieved after several days of curing it was considered a lower risk option to place the material directly in the disposal cell prior to confirmation results being available, rather than store the material outside the cell and rehandle it after confirmation results were received.

### Action taken to mitigate any adverse effects of non-compliance and prevent recurrence of the non-compliance:

Tellus has provided information to DWER regarding the non-compliance and is seeking a licence amendment to remove the requirement to cure the treated waste prior to disposal within the cell. The licence amendment also includes a request to change from unconfined compressive strength testing to in-situ compaction measurement.

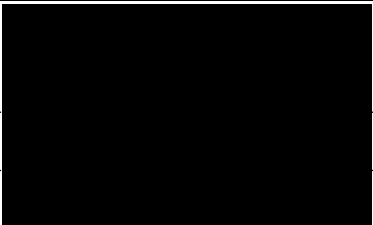
The material once placed in the cell and roll-compacted forms a dense and strong solid. The unsuitability of laboratory UCS testing arises from it not catering for the bubbly nature (from the PFAS / AFFF chemicals) of the mixture, which cannot de-aerate and be sufficiently compacted in the confines of a test mould.



|  |                 |
|--|-----------------|
| Was this non-compliance previously reported to DWER? |                 |
| <input type="checkbox"/> Yes, and                    |                 |
| <input type="checkbox"/> Reported to DWER verbally   | Date:    /    / |
| <input type="checkbox"/> Reported to DWER in writing | Date:    /    / |

## Section F – Declaration

I/We declare that the information in this Annual Audit Compliance Report is true and correct and is not false or misleading in a material particular<sup>7</sup>. I/We consent to the Annual Audit Compliance Report being published on the Department of Water and Environmental Regulation's (DWER) website.

|                               |   |                 |       |
|-------------------------------|---|-----------------|-------|
| Signature <sup>8</sup> :      |  | Signature:      |       |
| Name: (printed)               |   | Name: (printed) |       |
| Position:                     |   | Position:       |       |
| Date:                         |   | 29/08/2022      | Date: |
| Seal (if signing under seal): |   |                 |       |

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