



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L9268/2020/1
Licence Holder	Cleanaway Co Pty Ltd
ACN	127 853 561
File Number	DER2020/000545
Premises	Cleanaway Port Hedland Resource Recovery Centre 20 Schillaman Street, Wedgefield WA 6724 Legal description – Lot 5857 on Deposited Plan 191016 As defined by the coordinates in Schedule 2 of the Revised Licence
Date of Report	25 May 2022
Decision	Revised licence granted

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REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L9268/2020/1 is held by Cleanaway Co Pty Ltd (Licence Holder) for the Cleanaway Port Hedland Resource Recovery Centre (the Premises), located at 20 Schillaman Street, Wedgefield.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during operation of the Premises. As a result of this assessment, Revised Licence L9268/2020/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 15 November 2021, the Licence Holder submitted an application to the department to amend Licence L9268/2020/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The Licence Holder is seeking the addition of waste code M270 to the existing Licence to facilitate the acceptance of liquid wastes contaminated with Per- and polyfluoroalkyl substances (PFAS) at the premises. As such, the amendment is limited only to changes to Category 61 and 61A activities from the Existing Licence and no changes to the aspects of Category 39 have been requested by the Licence Holder. The acceptance of PFAS contaminated material will not increase current premises throughput as the waste will be accepted as a component of the current Category 61 and 61A permissible throughputs of 30,000 and 20,000 tonnes per annual period respectively.

The waste code M270 came into effect via the *PFAS National Environmental Management Plan* (PFAS NEMP). This waste type may have historically been accepted under waste code L150 (industrial wastewater contaminated with a controlled waste) or waste code M160 (organohalogen compounds not elsewhere listed). To ensure ongoing compliance with waste acceptance specifications on the Licence, the Licence Holder seeks to incorporate the acceptance of PFAS contaminated wastes onto the existing Licence. Throughput volumes of PFAS contaminated wastes are expected to be up to 1000 tonnes per annual period, however this will be dependent upon market conditions.

PFAS contaminated liquid wastes accepted to the premises will be stored at the premises within the storage bays, which are bunded with a concrete hardstand. Spills of environmentally hazardous materials outside of the bunded area drains to a first flush system that includes the onsite evaporation ponds.

Additionally, the Licence Holder is seeking to further treat accepted liquid PFAS contaminated waste using the process of absorption to ensure that PFAS wastes can be disposed of to an appropriately authorised landfill facility. Absorption is a practice in current use at the premises, by which liquid wastes are mixed with soil to create a spadable consistency (as defined by the *Landfill Waste Classification and Waste Definitions 2019*) which is then considered acceptable for landfill disposal.

Key finding: The Delegated Officer notes the use of the term ‘fixation’ in the Existing Licence to describe the absorption practice in current use at the premises, by which liquid wastes are mixed with soil to create a spadable consistency (as defined by the *Landfill Waste Classification and Waste Definitions 2019*) which is then considered acceptable for landfill disposal.

The Delegated Officer considers the term ‘fixation’ to represent the treatment of waste to chemically immobilize harmful contaminants as to prevent the leaching of these contaminants to the environment when disposed of to landfill. As the Licence Holder’s treatment of liquid waste with soil to create a solid does not act to immobilize contaminants within the waste, the Delegated Officer does not consider the use of the term ‘fixation’ appropriate and as such, will refer to the Licence Holders waste treatment process and treatment areas by the term ‘absorption’.

PFAS contaminated waste to be accepted at the premises will be analysed by the on-site chemist to determine its PFAS concentration. Based on this determination, the waste will be treated as follows:

- Liquid wastes will undergo pretreatment with Rembind™, which is an activated carbon product and acts as an adsorbent for the remediation of contaminated soil and groundwater.
- Once treated with Rembind™, the waste will undergo absorption with soil prior to disposal at an appropriately licenced facility. Absorption will be undertaken at the premises fixation bay. The licence holder proposes to analyse every batch of PFAS contaminated waste following absorption to determine the final PFAS concentration prior to disposal

An updated site layout outline PFAS treatment and storage areas (the storage bays) is provided in Figure 1.

Key findings: The Delegated Officer has reviewed the acceptance and processing specifications for PFAS contaminated waste proposed by the Licence Holder and considers the following:

1. DWER is under international obligation to implement the PFAS treatment, storage and disposal methodologies outlined in the PFAS NEMP.
The PFAS NEMP considers the dilution of PFAS contaminated waste as an unacceptable treatment strategy for the handling and disposal of PFAS waste. DWER has regard of the PFAS NEMP in assessing risk relating to emissions and discharges from premises that handle, treat and dispose of PFAS waste.
2. DWER considers that the act of absorption, being the mixing of PFAS contaminated wastes with another medium, constitutes the dilution of the PFAS wastes as defined by the PFAS NEMP.
3. It is DWER’s preference that wastes should be analysed for PFAS concentration immediately after liquid wastes are treated with Rembind™ and prior to mixing with woodchip for the purposes of landfill waste classification. This methodology of testing of waste prior to adsorption activities will provide a more accurate understanding of PFAS concentration within the waste (i.e. will prevent any uncertainty that may be apparent due to dilution that may occur during mixing of the liquid and solid waste types) for the purposes of understanding risk associated with any leachate generated from the waste in a landfill.

4. DWER considers that waste containing identified concentrations of PFAS is deemed to be Special Waste Type 3 (as defined in the *Landfill Waste Classification and Waste Definitions 1997*) and as such, will be required to be disposed of to a landfill facility that can accept Special Waste Type 3.
5. Concentration limits for accepted PFAS contaminated wastes will be conditioned so as to align with the contamination limits outlined in the PFAS NEMP.
6. Additional groundwater monitoring requirements for PFAS will be considered as part of the risk assessment.

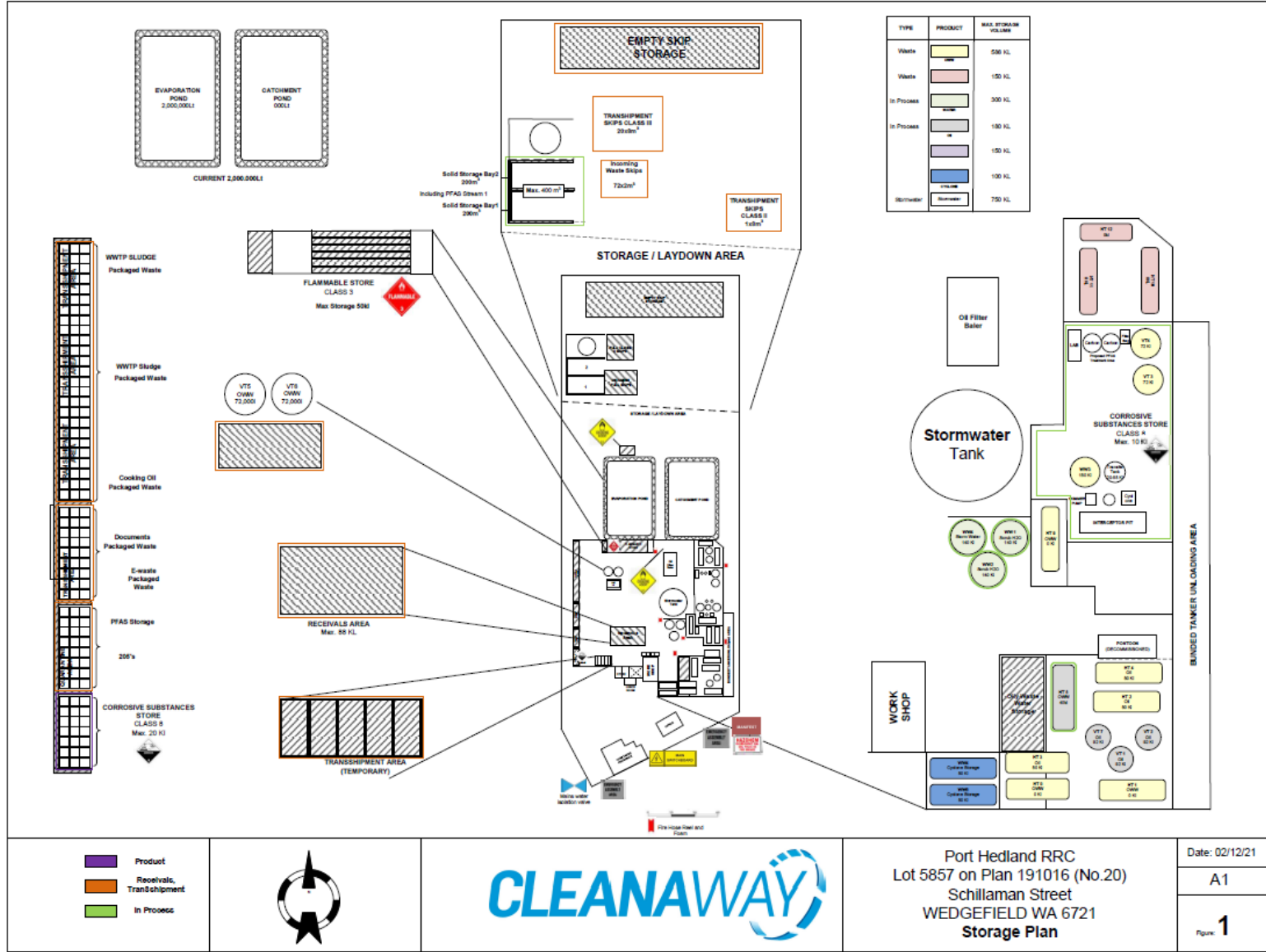


Figure 1: Updated premises layout

Licence: L9268/2020/1

IR-T15 Amendment report template v3.0 (May 2021)

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
PFAS contaminated material	Spills or leaks of environmentally hazardous material	Discharge to land or surface water	<ul style="list-style-type: none">• Stored within storage bays which consist of concrete hardstands and are bunded• Staff trained in handling and spill response• Waste concentration analysis and classification• Waste absorption, storage and disposal to other authorised facilities
	Treatment of liquid wastes by absorption	Discharge to land or surface water Seepage to groundwater	

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential Premises	2.6 km southeast of the Premises boundary 6.5 km northeast of the Premises boundary
Environmental receptors	Distance from prescribed activity
Threatened priority flora <ul style="list-style-type: none"> • <i>Tephrosia rosea</i> var. Port Hedland • <i>Gymnanthera cunninghamii</i> 	Species mapped within 1km of the Premises boundary
Threatened priority fauna <ul style="list-style-type: none"> • <i>Chlidonias leucopterus</i> – White-winged black tern • <i>Gallinago stenura</i> - Pin-tailed snipe • <i>Tringa glareola</i> - Wood sandpiper • <i>Glareola maldivarum</i> - Oriental pratincole • <i>Ctenotus angusticeps</i> - Airlie Island Ctenotus • <i>Numenius minutus</i> - Little curlew 	Species mapped within 2km of the Premises boundary
Surface water lines	Minor tributaries mapped 1.7 km to the west and 2.1 km to the east of the Premises boundary
Surface water body – Timor Sea	1.5 km north of the Premises boundary
Proclaimed surface water area <ul style="list-style-type: none"> • Pilbara Surface Water Area 	Premises mapped within area
Proclaimed groundwater area <ul style="list-style-type: none"> • Pilbara Groundwater Area 	Premises mapped within area

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L9268/2020/1 that accompanies this Amendment Report authorises

emissions associated with the operation of the Premises i.e. PFAS waste acceptance, storage and treatment.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Acceptance, treatment with Rembind™ and/or by absorption with soil and storage of PFAS contaminated waste	Spills or leaks of PFAS contaminated material	Discharge to land or surface water	Underlying soils and groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium	Y	Conditions 1, 4, 5, 6, 16 and 17	Emissions will also be regulated under the general provisions of the EP Act.
	Seepage or surface water runoff of PFAS contaminated material	Discharge to land or surface water Seepage to groundwater	Underlying soils and groundwater, feeding into surrounding surface water lines and bodies Surrounding Priority Flora and Fauna Proclaimed surface and groundwater areas	Refer to Section 3.1	C = Moderate L = Unlikely Medium	Y	Conditions 4, 5, 6, 16, 17 and 24	The delegated officer considers it appropriate for additional groundwater monitoring requirements to be added to the licence for PFAS substances. The Delegated Officer considers that other proposed controls are adequate to mitigate potential emissions.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Town of Port Hedland advised of proposal 13 January 2022	The Town of Port Hedland responded to the proposal on 25 January 2022 outlining that they do not support the proposal. The proposal identified the disposal of PFAS contaminated waste to the Town's South Hedland Landfill Facility. Under the Town's landfill licence, the facility is not licenced to receive PFAS contaminated waste, and therefore the application cannot be supported.	Since referring the application for comment, DWER has advised Cleanaway that the treated PFAS wastes will be classified as Special Waste Type 3 for the purposes of disposal. The waste must therefore be disposed to facilities that are able to accept this waste. To further clarify this point DWER will place conditions on the licence that specifically states the treated PFAS wastes must only be disposed of to an appropriate facility
Licence holder provided with draft amendment on 12 May 2022	The licence holder provided comments on the draft licence on 24 May 2022. The licence holder stated that they use soil for fixation processing at the Port Hedland facility. They requested that the wording of the fixation process be amended to allow for absorption with woodchips, soil or other appropriate media, prior to disposal off site.	Condition 5, Table 2 has been updated to allow for greater flexibility. The changes do not alter the risk assessment undertaken.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 5: Summary of licence amendments

Condition no.	Proposed amendments
1	Inclusion of PFAS contaminated waste under the waste acceptance specifications
5	Inclusion of PFAS contaminated waste processing specifications
6	Inclusion of soli storage bay containment infrastructure specifications
16	Inclusion of stormwater treatment of PFAS impacted water

23	Inclusion of figure reference
35 and 36	Redundant improvement conditions deleted
N/A Schedule 1	Inclusion of new site layout map
N/A Schedule 3	Schedule 3 updated to reflect N1 reporting form reference

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)			
Application type			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L9268/2020/1
		Relevant works approval number:	N/A <input checked="" type="checkbox"/>
Date application received	15 November 2021		
Applicant and Premises details			
Applicant name/s (full legal name/s)	Cleanaway Co Pty Ltd		
Premises name	Cleanaway Port Hedland Resource Recovery Centre		
Premises location	20 Schillaman Street, Wedgefield WA 6724		
Local Government Authority	Town of Port Hedland		
Application documents			
HPCM file reference number:	DER20202/000545		
Key application documents (additional to application form):	N/A		
Scope of application/assessment			
Summary of proposed activities or changes to existing operations.	Amendment to accept up to 1000 tonnes per annum of PFAS contaminated solid and liquid wastes (M270) at the premises.		
Category number/s (activities that cause the premises to become prescribed premises)			
Table 1: Prescribed premises categories			
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)	
Category 39: Chemical or oil recycling	10,000 tonnes per annual period	No change.	
Category 61: Liquid waste facility	30,000 tonnes per annual period	No change.	
Category 61A: Solid waste facility	20,000 tonnes per annual period	No change.	
Legislative context and other approvals			
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:	

Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input checked="" type="checkbox"/> Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date:
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Pilbara Groundwater Area/Pilbara Surface Water Area Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: contaminated – remediation required (C-RR) Date of classification: 21 July 2016