

### JBS&G 64112 | 156551

### L11 (0503 2307 SWC USC AWRC Pipelines RAP) Rev 0

20 March 2024

Cheryl Cahill Environment Lead, Major Projects Sydney Water Via email: CHERYL.CAHILL@sydneywater.com.au

# L11 Interim Audit Advice (0503-2307-11) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Updated Remedial Action Plan for Pipelines Alignment

Dear Cheryl,

### 1. Introduction and Background

Andrew Lau of JBS&G Australia Pty Ltd (JBS&G), has been engaged by Sydney Water Corporation (SWC, the client) to conduct a site audit(s) related to the Upper South Creek Advanced Water Recycling Centre (USC AWRC) and associated pipelines. The USC AWRC is located in Clifton Avenue Kemps Creek and occupies approx. 78 ha.

The pipelines occupy lands between the USC AWRC and Lansdowne Reserve in Lansdowne for approx. 24 km ("the brine pipeline") and land between the USC AWRC and the Nepean River in Wallacia for approx. 16.7 km ("the treated water pipeline") collectively referred to as the "Pipelines Alignment" (the site).

The Pipelines Alignment comprises the following zoning:

- AGB Agribusiness
- C2 Environmental Conservation
- ENT Enterprise
- ENZ Environment and Recreation
- R1, R2, R3 and R4, general, low density, medium density and high density, respectively
- RE1 Public Recreation
- RU1 Primary production
- RU2 Rural landscape
- RU4 Primary production small lots
- RU5 Village
- RE1 Public recreation
- SP2 infrastructure





SWC holds easements for the Pipelines Alignment along their length and the land is owned by multiple owners. Figures relating to the site and surrounds are shown in **Attachment 2.** 

SWC received Ministerial approval for the USC AWRC project on 28<sup>th</sup> November 2022 as a state significant infrastructure project (Application Number SSI-8609189) ("the consent").

**Table 1** shows previously reviewed documents for the audit and relevant interim audit advice correspondence.

Table	1: Previous	Interim	Audit A	Advice	Corres	ondence
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Document Reviewed	Previous Interim Audit Advice Correspondence	
Unexpected Finds Procedure for Contamination, John Holland, issued 07/12/2022, document number USCP-POL-G-002.	L02 Interim Audit Advice (0503-2307-02) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Unexpected Finds Protocol, to Cheryl Cahill of Sydney Water, 9 December 2022.	
Upper South Creek Advanced Water Recycling Centre - Soils and Contaminated Land Impact Assessment, Aurecon ARUP, 27 July 2021 ('the SCLI document")	L03 Interim Audit Advice (0503-2307-03) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Upper South Creek	
Upper South Creek Wastewater Treatment Plant Options Assessment, Preliminary Site Investigation (Contamination) Aurecon, 2019	Advanced Water Recycling Centre - Soils and Contaminated Land Impact Assessment to Cheryl Cahill of Sydney Water, 17 March 2023.	
<i>Upper South Creek Advanced Water Recycling Centre and Pipelines Detailed Site Investigation,</i> Aurecon ARP, 12 March 2021 ("the DSI")	L03 provided review of the four documents as related to the AWRC parcel of land, only.	
Memorandum re Hazardous Materials Survey – Upper South Creek Advanced Water Recycling Centre, Aurecon to Sydney Water, 18 May 2021		
Upper South Creek Advanced Water Recycling Centre and Pipelines Soils & Contamination Construction Environmental Management Plan ("the CEMP") John Holland, 01/03/2023, USCP-JHG-MPL-ENV-0008 Rev 4, some portions, only.	L04 Interim Audit Advice (0503-2307-04) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Upper South Creek Advanced Water Recycling Centre – Soils and Contamination Construction Environmental Management	
Upper South Creek Advanced Water Recycling Centre and Pipelines Soils & Contamination Construction Environmental Management Plan (CEMP) Sub-plan (S&C CEMP sub-plan), John Holland, issued 10/05/2023 and earlier drafts (11/03/23, 14/04/2023) (uncontrolled copy) Document No: USCP-JHG-MPL-ENV-0003.	Plan Sub-Plan to Cheryl Cahill of Sydney Water, 12 May 2023.	
The SCLI Assessment and the DSI, as they relate to the pipelines site only.	L05 Interim Audit Advice (0503-2307-05) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Upper South Creek Advanced Water Recycling Centre - Soils and Contaminated Land Impact Assessment – Pipelines to Cheryl Cahill of Sydney Water, 16 May 2023.	
Upper South Creek Water Factory Pipeline Alignments Option Concept Design, Preliminary Site Investigation (Contamination) Aurecon, 2020		
Sampling and Analysis Quality Plan, Upper South Creek Advanced Water Recycling Centre, ERM 6 June 2023.	L06 Interim Audit Advice (0503-2307-06) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the USC AWRC Plant Sampling and Analysis Quality Plan, to Cheryl Cahill of Sydney Water, 22 June 2023	
Sampling and Analysis Quality Plan, Upper South Creek Advanced Water Recycling Centre, Pipeline Alignment, ERM, 8 August 2023	L07 Interim Audit Advice (0503-2307-07) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Pipelines Sampling and	



Document Reviewed	Previous Interim Audit Advice Correspondence
	Analysis Quality Plan, to Cheryl Cahill of Sydney Water, 14 August 2023
Remedial Action Plan, Upper South Creek Advanced Water Recycling Centre, ERM, 29 August 2023	L08 Interim Audit Advice (0503-2307-08) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Remedial Action Plan – Plant Site, to Cheryl Cahill of Sydney Water, 30 August 2023
Detailed Site Investigation, Upper South Creek Advanced Water Recycling Centre, ERM, 16 August 2023	L09 Interim Audit Advice (0503-2307-09) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Detailed Site Investigation – Plant site, to Cheryl Cahill of Sydney Water, 6 September 2023
Remedial Action Plan, Upper South Creek Advanced Water Recycling Centre, ERM, 15 November 2023	L10 Interim Audit Advice (0503-2307-10) – Sydney Water Corporation – Upper South Creek Advanced Water Recycling Centre – Review of the Remedial Action Plan for Pipelines Alignment, to Cheryl Cahill of Sydney Water, 22 December 2023

# 2. Document Reviewed

The following document was reviewed in preparation of this Interim Audit Advice (IAA):

• Remedial Action Plan, Upper South Creek Advanced Water Recycling Centre, ERM, 6 March 2024, ('the RAP', ERM, 2024)

### 3. Objective of this Interim Advice

The objective of this interim advice is to provide an auditor review of the RAP for the Pipelines Alignment. This is required under Conditions E74 (e), E83 and E84 of the consent.

- E74 "...The Site Auditor is to review all relevant documentation and provide a written opinion on the contamination risk and the appropriateness of the reports and any proposed management measures of the site, including.... (e) Remedial Action Plans in Condition E83...".
- E83 "Where remediation is required to make land suitable for the final intended land use, a Remedial Action Plan must be prepared and/or reviewed and approved by consultants certified under ... the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme...."

"The Remedial Action Plan must be prepared in accordance with relevant guidelines made or approved by the EPA under section 105 of the CLM Act and must include measures to remediate the contamination at the site to ensure the site will be made suitable for the final intended land use."

• E84 "If remediation is required to make land suitable for the final intended land use, then prior to commencing with the remediation, the Proponent must submit the Remedial Action Plan(s) and an interim audit advice from a NSW EPA accredited Site Auditor to the Planning Secretary for information, which considers that the Remedial Action Plan is appropriate and that the site can be made suitable for the proposed land use. The Remedial Action Plan must be implemented and any changes to the Remedial Action Plan must be approved in writing by the NSW EPA accredited Site Auditor."



## 4. Auditor's Assessment

The auditor previously reviewed the RAP dated 15 November 2023 as documented in interim audit advice correspondence (0503-2307-10). It is understood that the RAP was subsequently updated to address a request for information (RFI) received from the Department of Planning, Housing and Infrastructure (DPHI<sup>1</sup>) in addition to incorporating new investigation findings. On this basis, the auditor completed a review of the updated RAP (ERM 2024) as documented herein.

The auditor notes that the RAP (ERM, 2024) complies with the requirement that it be prepared/reviewed by a Certified Contaminated Land Consultant. The report has been signed by Mr Peter Lavelle of ERM and his seal as a CEnvP SC (EIANZ) is on the title page of the RAP.

The auditor has considered the RAP (ERM, 2024) against the requirements of the requirements for RAPs in accordance with the relevant Guidelines as shown in **Table 2**.

<sup>&</sup>lt;sup>1</sup> Subject: Upper South Creek Advanced Water Recycling Centre (SSI-8609189) – Remediation Action Plan – Pipelines – Request for Additional Information, Department of Planning, Housing and Infrastructure, 2 February 2024 (DPHI 2024)



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Report Section	Required Information	Addressed within the RAP	Audit Opinion
Document control	Date, version number, author and reviewer (including certification details) and who commissioned the report	Inside Cover	Adequate
Ohiostiuss		<ul> <li>Section 1.2 states that the objectives of the RAP are to:         <ul> <li>In the event that contamination requiring remediation is identified: detail the required remediation processes and procedures to be implemented within the Pipelines Alignment to enable the Pipelines Alignment to be made suitable for the proposed commercial / industrial USC AWRC development; and</li> </ul> </li> </ul>	Adequate. ASC AWRC site RAP has been subject to auditor review (Interim Audit Advice – L08).
Objectives	The objectives of the remediation	Regardless of whether contamination which requires remediation is identified: detail the procedures for classifying materials to be excavated within the Pipelines Alignment. <u>Section 8.1</u> states that the overall remediation objective is to effectively manage identified contamination within soils to render the site suitable for the proposed commercial/industrial use.	
Scope of work	Summary of scope of work	Section 1.4 notes the interface with the ASC AWRC site RAP. Section 1.3 describes the works completed to prepare the RAP (ERM, 2024). These included a review of previous reports and defined remedial goals, based on the conceptual site model (CSM) and proposed future land use. From this the preferred remedial strategy was developed, together with the specific requirements of the recommended remedial approach.	Adequate
Site identification, site history, site condition and surrounding environment	Street number, street name and suburb, Lot/DP, zoning, locality map, neighbouring site uses. Summaries of site history, site condition and surrounding environment. Topography, Geology, hydrogeology and hydrology.	<u>Section 3</u> provides the site identification details, as well as a summary of the site history. <u>Table 3-2</u> provides the site environmental settings and background details, including topography, geology, hydrology and hydrogeological details. These are summarised from previous reports that the auditor has reviewed as described in <b>Table 1</b> , above.	Adequate

<sup>2</sup> Consultants Reporting on Contaminated Land - Contaminated Land Guidelines, NSW Environmental Protection Authority, April 2020.



Report Section	Required Information	Addressed within the RAP	Audit Opinion
Remediation criteria	A list of criteria and rationale for the criteria, including references.	Section 9: Reference is made to the soil remediation acceptance criteria as being adopted from the NEPM <sup>3</sup> and CRC Care (2011 <sup>4</sup> ) as applicable to the planned future use of the Pipelines alignment for commercial/industrial use. In addition, the following statistical criteria is to be adopted with respect to the validation criteria: 95% Upper Confidence Limit (UCL) of the arithmetic mean for chemical contaminants does not exceed the validation criteria; the individual contaminant concentration does not exceed the validation criterion by more than 250%; and the standard deviation of individual contaminants does not exceed 50% of the validation criteria. The RAP (ERM, 2024) states that consideration of aesthetic issues arising from soil within the Pipeline Alignment will be undertaken in accordance with aesthetic criteria adopted from the NEPM. The RAP (ERM, 2024) states that material for offsite disposal will be classified in accordance with EPA (2014a <sup>5</sup> ), (EPA 2014b <sup>6</sup> ) or other relevant resource recovery orders, resource recovery exemptions and approvals issued by the NSW EPA. The RAP (ERM, 2024) states that imported material will be assessed for suitability as Virgin Excavated Natural Material (VENM) in accordance with EPA (2014a), Excavated Natural Material (ENM) as defined in EPA (2014b) or resource recovery material as per an EPA order/exemption.	Adequate.
Results	Summary of previous results or reference to previous report(s).	<u>Section 4</u> of the RAP (ERM, 2024) references a number of previous investigations. Based on information provided in the previous reports, the following areas of concern (AEC) have been identified with moderate potential for contamination.	Adequate. The investigation of identified AECs are required to be undertaken in

<sup>&</sup>lt;sup>3</sup> National Environment Protection (Assessment of Site Contamination Measure), 1999. National Environment Council, revised 2013.

<sup>&</sup>lt;sup>4</sup> Health screening levels for petroleum hydrocarbons in soil and groundwater, Part 2: Application document, CRC CARE Technical Report no. 10

<sup>&</sup>lt;sup>5</sup> Waste Classification Guidelines: Part 1: Classifying Waste, NSW EPA, 2014.

<sup>&</sup>lt;sup>6</sup> The excavated natural material order 2014, NSW EPA, 2014.



Report Section	Required Information	Addressed within the RAP	Audit Opinion
		<ul> <li>AEC-6: SUEZ Kemps Creek Resource Recovery Park (now Cleanaway) relating to landfill gas and leachate within soil/groundwater</li> <li>AEC-8: Corner of Elizabeth Drive and Range Road, Kemps Creek relating to uncontrolled fill containing asbestos</li> <li>AEC-16: petroleum releases from petrol stations.</li> <li>It is noted that an SAQP (ERM, 2023b<sup>7</sup>) was developed to investigate the AECs, however, the RAP has been prepared prior to completion of investigation works due to the logistical requirements of the Project. It is further noted that any remediation works resulting from the investigation undertaken will be undertaken in accordance with the RAP.</li> </ul>	accordance with the investigation program outlined in the SAQP (ERM, 2023b) which was subject to auditor review (Interim Audit Advice – L07).
Summary of site Characterisation	Assessment of all types of environmental contamination and assessment of extent of all identified contamination, including off site areas	Not addressed within the RAP. The RAP makes reference to the SAQP (ERM, 2023b) which outlines requirements for investigation of AECs. In addition, <u>Section 6</u> of the RAP outlines requirements for classification of material proposed to be excavated during development works within the Pipeline Alignment.	Adequate. AEC investigation works have not yet been completed due to the logistical requirements of the Project. Investigation of identified AECs is required to be undertaken in accordance with the investigation program outlined in the SAQP (ERM, 2023b) which was subject to auditor review (Interim Audit Advice – L07).
Conceptual Site Model (CSM)	Identification of the CoPC. Identification of potential and known sources of contamination, affected media, potential and actual pathways and human and ecological receptors.	<u>Table 5.1</u> presents a preliminary CSM for the site. The following COPCs were identified:	Adequate.

<sup>7</sup> Sampling and Analysis Quality Plan, Upper South Creek Advanced Water Recycling Centre, Pipeline Alignment, ERM, 8 August 2023



Report Section	Required Information	Addressed within the RAP	Audit Opinion
	Data gap analysis.	<ul> <li>AEC-6: heavy metals, ammonia and nitrogen as related to landfill leachate; and methane and carbon dioxide as related to landfill gas.</li> <li>AEC-8: Asbestos, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes (BTEX), heavy metals, polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP) and organophosphorus pesticides (OPP).</li> </ul>	
		• AEC-16: TRH, BTEX, PAH.	
		Pathways were identified for both human and ecological receptors and included dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / groundwater / soil; transport of contamination through surface water / groundwater flows; transport of contamination to underlying groundwater aquifers; inhalation of landfill gases during soil disturbance works; and transport of contamination through mechanical means.	
		Receptors were identified as current and future Pipeline Alignment users, workers carrying out development, installation or maintenance works within the Pipeline Alignment, adjacent sensitive receptors and future potential users of groundwater within the Pipeline Alignment.	
		The CSM noted that the risk of complete linkages for identified potential sources were identified as low to moderate.	
Remedial Options Assessment and Remediation Strategy	Assessment of possible remedial options and how risk can be reduced	<u>Section 8.2</u> : a range of remedial options were presented involving different forms of onsite containment, offsite beneficial reuse or disposal to a licenced landfill facility.	Adequate
	Rationale for the selection of recommended remedial option, in accordance with the preferred hierarchy outlined in the NEPM	Section 8.3: The preferred remediation strategy is identified as excavation and on-site containment at the USC AWRC site for asbestos contaminated soil and offsite disposal for non-asbestos contaminated soil. It is noted that that groundwater has not been encountered during previous investigations and not anticipated to be encountered during the pipeline construction program. As such, groundwater remediation is not anticipated to be required. A contingency plan is provided in the	Adequate. If remediation of asbestos-contaminated soils from the Pipelines Alignment is required, it is expected that these soils will be placed within the USC AWRC site encapsulation area. A RAP has been separately



Report Section	Required Information	Addressed within the RAP	Audit Opinion
		RAP (ERM, 2024) in the event groundwater is encountered in significant amounts during the construction program.	developed by the consultant for the USC AWRC site which was subject to auditor review (Interim Audit Advice – L08) with respect to proposed placement of asbestos- contaminated soils within a purpose-designed encapsulation area located in the northern portion of the USC AWRC site.
	Description of the remediation works to be undertaken	<u>Section 7.1</u> provides a general overview on remediation required. It is noted that the nature and extent of remediation required across the Pipeline Alignment is not known at the time of preparing the RAP (ERM, 2024). It is anticipated that some contamination will be encountered as part of excavations to enable pipeline construction, excavated material classification and the Pipelines AEC investigation to be completed. The RAP sets out a framework to address potential contamination and to allow for management of unexpected finds. In addition, in <u>Section 7.2</u> it is noted that a limited area containing demolition waste including bonded ACM was identified in September 2023 in a portion of the treated water pipeline referred to as the 'Farm Dam' comprising an area of approx. 700 m <sup>2</sup> . Further it is noted that AEC8 located at the corner of Elizabeth Drive and Range Road in Kemps Creek, was confirmed to contain bonded ACM fragments on the ground surface over an area of approx. 2000 m <sup>2</sup> . following investigations in October and November 2023 in accordance with the investigation scope noted in the RAP. Remediation of these area is to be completed in accordance with the requirements of the RAP (ERM, 2024).	Adequate. Investigation of identified AECs is required to be undertaken in accordance with the investigation program outlined in the SAQP (ERM, 2023b) which was subject to auditor review (Interim Audit Advice – L07).
	Confirmation that waste imported onto the site is lawful.	<u>Section 9.7.1</u> requires that imported materials are VENM, ENM or a recycled material meeting the requirements of the applicable	Adequate.



Report Section	Required Information	Addressed within the RAP	Audit Opinion
		resource recovery order. This is discussed above, in Remediation Criteria. The environmental consultant is to observe all material being imported with the visual assessment to confirm that the imported material is consistent with the documentation provided by respective source sites and that the material does not contain building waste or foreign material (unless specifically allowed under a Resource Recovery Order and Exemption), asbestos, staining or discoloration, odours, evidence of potential or actual acid sulfate soil and other evidence of contamination. The Environmental Consultant is to prepare an Imported Material Review Record confirming suitability of the material to be used within the Pipelines Alignment.	
	Contingency plan if the selected remedial strategy fails	Section 12: provides the details for contingency planning. These include chemical spills, excessive rain/drainage/dust, excessive wet materials, equipment failures, release of fuel/oil from machinery, silt fence fails, excessive noise, asbestos contaminated soil from the Pipelines Alignment exceeding storage capacity at the USC AWRC containment area and excavated material failing classification requirements for beneficial reuse (either within the Project Boundary or off-site under Resource Recovery Orders). In addition, Section 12 provides contingencies related to remediation	Adequate.
	Interim Site Management plans before remediation	strategy, unexpected finds and groundwater. The RAP (ERM, 2024) does not provide any interim site management plans before remediation.	Adequate. The auditor notes that the site is currently being managed under a Construction Environmental Management Plan (CEMP) which was subject to auditor review (Interim Audit Advice – L04) with respect to site contamination.



Report Section	Required Information	Addressed within the RAP	Audit Opinion
	Site Management plan requirements (operational phase): - site stormwater management plan - soil management plan, including material tracking - noise control plan - dust control plan - odour control plan - work health and safety plan - remediation schedule hours of operation - contingency plans to respond to site incidents, to remove potential effects on surrounding environment and community	Section 11: provides a general site management plan including site access, personal protective equipment (PPE) requirements, erosion and sediment control, stockpile management, haulage of soil, noise, odour and dust controls, communication and complaints. It is further noted that the Principal Contractor is to prepare a remediation work method statements to address environmental, health and safety hazards and risks during remediation. The Principal Contractor is to prepare a project specific health and safety plan. An asbestos management plan (AMP) for the remediation works is to be prepared where asbestos is identified as a contaminant of concern that requires remediation.	Adequate. The auditor also notes that the site CEMP is in use. The auditor further notes that an AMP is required to be prepared based on asbestos impacted material identified on site to date within an area identified as the Farm Dam and AEC8.
	Description of regulatory compliance requirements such as licences and approvals or financial assurance	<u>Section 9.4</u> lists the planning permitting, approvals and procurement requirements for the RAP (ERM, 2024).	Adequate. The auditor has noted that the site is being developed under the SSI development consent described above in <b>Section 1</b> .
	Names and phone numbers of appropriate personnel to contact during remediation	Section 11.2.2 – Remediation stage contact details are provided.	Adequate
	Community relations plans (where applicable)	Not provided	Adequate. This is addressed by Sydney Water under the consent.
	Staged progress reporting (where appropriate)	Not applicable	N/A
	Outline of environmental management plan for ongoing management of contamination at the site (if needed)	Not applicable	Adequate. The auditor notes that onsite cap and containment within the Pipeline Alignment has not been proposed. The preferred remediation strategy outlined in the RAP



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			(ERM, 2024) includes excavation and on-site containment at the USC AWRC site for asbestos contaminated soil and offsite disposal for non-asbestos contaminated soil.
			Any asbestos impacted material transported to the USC AWRC site asbestos containment area will be subject to a long term environmental management plan (LTEMP) in accordance with the USC AWRC RAP which was subject to auditor review (Interim Audit Advice – L08).
Validation Plan	Data Quality Objectives (DQOs)	<u>Appendix B</u> the RAP (ERM, 2024) outlines the DQOs for the validation for the site, in accordance with the seven step process outlined in the NEPM.	The DQOs are adequate.
	Validation summary	<ul> <li><u>Section 8:</u> The RAP (ERM, 2024) has divided the validation requirements into the following:</li> <li>1. General soil excavation and validation</li> <li>2. ACM impacted fill material validation</li> <li>3. Areas beneath temporary stockpiled asbestos containing materials (outside of the placement location and haul roads)</li> <li>4. Stockpile footprint validation</li> </ul>	Adequate.
	Item 1 - General soil excavation and validation	Excavation base to be sampled at a rate of minimum 1 sample per 10 m grid. Excavation walls to be sampled at a rate of minimum 1 sample from each wall per 10 linear meters. Where the excavation is greater than 2 m depth, validation samples are to be collected from the upper	Adequate



Report Section	Required Information	Addressed within the RAP	Audit Opinion
		2 m (i.e., 0-2 m) and the lower 2 m (i.e., 2-4 m) of each excavation wall. Samples are to be analysed for relevant chemical COPCs.	
	Items 2 and 3 – ACM impacted fill material and areas beneath temporary stockpiled asbestos containing materials (outside of the placement location and haul roads)	Where asbestos is a COPC, the following is proposed. Where remediation excavation is completed to expose natural material, visual assessment is to be completed by environmental consultant and licenced asbestos assessor (LAA). Where remediation excavation is completed with residual fill remaining insitu, sampling and analysis will be undertaken in accordance with NEPC 2013/WA DoH requirements. Validation samples following asbestos impacted fill removal to be undertaken at a density of 1 sample per 10 m grid and following removal of stockpiled material to be undertaken at a density of 1 sample per 50 m <sup>2</sup> .	Adequate
	Item 4 – Stockpile footprint validation	Where appropriate ground covering (geofabric and/or plastic) is not present, stockpile footprints will be validated through the collection and analysis of approximately 1 sample per 50 m <sup>2</sup> .	Adequate.
	DQIs	Appendix B: DQIs for the validation program have been prepared.	Adequate
Waste Management	Waste is to be classified in accordance with EPA Waste Classification Guidelines	Sections 6 and 10.5 indicate that waste will be classified in accordance with EPA Waste Classification Guidelines 2014.	Adequate
	Description of material handling and tracking plan	Section 6.3 and Section 9.7.2 indicates that a material tracking register will be maintained on site which will provide information regarding the source, characteristics, destination and quantities of material placed within the placement location, disposed offsite or imported to the site for capping/backfilling purposes.	Adequate The auditor notes that onsite cap and containment within the Pipeline Alignment has not been proposed. Cap and containment within the USC AWRC site is required to be undertaken in accordance with the USC AWRC RAP which was subject to auditor review (Interim Audit Advice – L08).



Report Section	Required Information	Addressed within the RAP	Audit Opinion
	Statement regarding materials being disposed via an appropriately licenced facility or re-used under an order or exemption	Table 6.5, Section 6.3 and 10.5: notes that offsite disposal to a suitably licenced receiving facility will be undertaken, after appropriate waste classification documents have been prepared.	Adequate.
	Waste disposal dockets or other waste documentation for any disposed waste	Section 9.7.4 notes that landfill disposal certificates will be provided in the validation report where material is transported offsite.	Adequate
Conclusions and Recommendations	Conclusions addressing the stated objectives	Section 13: The RAP (ERM, 2024) conclusions are appropriate.	Adequate
	Summary of activities and physical changes to the site	<u>Section 13:</u> notes that the RAP (ERM, 2024) provides a working plan that details the excavation, soil stockpiling, validation and management strategies for the remediation of the site.	Adequate
	A clear statement as to why the consultant considers the site can be made suitable for the proposed use if the RAP (ERM, 2024) is implemented	Section 13 states "ERM considers RAP is sufficient to provide a framework for remediation of impacted material within the Pipelines Alignment, if identified during the proposed investigation works or the construction program, which subsequently would render the Pipelines Alignment suitable for the proposed Upper South Creek Advanced Water Recycling Pipeline development following completion of remedial / validation works outlined within this RAP".	Adequate
	A summary of limitations and constraints on the use of the site post remediation and proposed environmental management plan.	Not applicable	Not applicable
	Recommendations for further work.	Not provided. However, requirements for investigations have been included within the SAQP (ERM, 2023b) as referenced in the RAP (ERM, 2024) and <u>Section 6</u> of the RAP.	Adequate



### 5. Auditor's Opinion

Based on a review of the information provided and subject to the limitations in **Attachment 1**, the following audit opinions are presented:

- The auditor considers that the RAP is appropriate for its stated purposes, namely to document remedial processes and procedures for the site to be made suitable for the proposed AWRC Pipeline development;
- The proposed remedial strategy of excavation of material exceeding criteria for on-site containment (subject to a LTEMP) at the USC AWRC site for asbestos contaminated soil and offsite disposal for non-asbestos contaminated soil is considered to be technically feasible, environmentally justifiable, consistent with relevant laws, policies and guidelines and sustainable. For these reasons, the auditor considers the RAP to be appropriate;
- The auditor is satisfied that the site can be made suitable for the proposed uses, subject to the successful implementation of the RAP (ERM, 2024).

Please note that this interim advice does not constitute a Site Audit Statement or a Site Audit Report but is provided to assist in the assessment and management of contamination issues at the site in regard to requirements of the site audit. The information provided herein should not be considered pre-emptive of the final audit conclusions, but rather represent the findings of the audit based on a preliminary review of available site information. Furthermore, the interim advice should not be regarded as approval of any proposed investigations or remedial activities, as any such approval is beyond the scope of an independent auditor.

Should you require clarification, please contact the undersigned on 02 8245 0300 or by email <u>alau@jbsg.com.au</u>.

Yours sincerely:

Im Jan L.

Andrew Lau NSW EPA Accredited Site Auditor Accreditation Number 0503 JBS&G Australia Pty Ltd

Attachments

(1) Limitations(2) Site Figures





### Attachment 1 – Limitations

This audit was conducted with a reasonable level of scrutiny, care and diligence on behalf of the client for the purposes outlined in s.47 (1) of the *Contaminated Land Management Act 1997*. The data used to support the conclusions reached in this audit were obtained by other consultants and the limitations which apply to the consultant's report(s) apply equally to this audit report.

Every reasonable effort has been made to identify and obtain all relevant data, reports and other information that provide evidence about the condition of the site, and those that were held by the client and the client's consultants, or that were readily available. No liability can be accepted for unreported omissions, alterations or errors in the data collected and presented by other consultants. Accordingly, the data and information presented by others are taken and interpreted in good faith.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements. Limited sampling and laboratory analyses were undertaken as part of the investigations reviewed, as described herein. Ground conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

Changes to the subsurface conditions may occur subsequent to the investigations described herein, through natural processes or through the intentional or accidental addition of contaminants. The conclusions and recommendations reached in this audit are based on the information obtained at the time of the investigations.



Attachment 2 – Site Figures









Completed Pothole Location Trenchless Excavation

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+ Proposed SAQP Locations (ERM, 2023)

Data Source: NSW DFSI, DCDB/DTDB 2023 Esri World Imagery March 2023

0 50 100 150m

0

ERM







Proposed In-situ Sampling Location, Brine Proposed In-situ Sampling Location, Treatment Water + JH Proposed Pothole Location Completed Pothole Location + Proposed SAQP Locations (ERM, 2023)

Data Source: NSW DFSI, DCDB/DTDB 2023 Esri World Imagery March 2023



Drawing Size: A3

0

Reviewed By: MB Client John Holland Group

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant tilt accuracy.

ERM

Drawn By: GC

0 50 100 150m

Coordinate System: GDA 1994 MOA Zone 56







Completed Pothole Location

+ Proposed SAQP Locations (ERM, 2023)

Data Source: NSW DFSI, DCDB/DTDB 2023 Esri World Imagery March 2023



ing Locations	5		F4f
0677828_PLR/P_G004_R1.mxd 11/10/2023 Drawing Size: A3		Remedial Action Plan - Upper South Creek Advanced Recycling Centre, Kemps Creek, NSW	
GC	Reviewed By: MB	Client: John Holland Group	0
stem: GDA 1994 MCA Zone 5 100 150 m	Ň	This figure may be based on third party data or data which has not been writind by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.	ERM







Areas of Environmental Concern (AEC) - Moderate Completed Pothole Location

Trenchless Excavation

+ Proposed SAQP Locations (ERM, 2023)

Data Source: NSW DFSI, DCDB/DTDB 2023 Esri World Imagery March 2023



Reviewed By: MB Client John Holland Group 6 Coordinate System: GDA 1994 MOA Zone 56 This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant tilt accuracy. 0 50 100 150m 0 ERM





