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FLINDERS POWER PARTNERSHIP
ABN 16 954 006 886
VOLUNTARY SITE CONTAMINATION ASSESSMENT
PROPOSAL (VSCAP)

1. Introduction

- 1.1. Flinders Power Partnership (FPP) currently owns and operates two coal-fired power stations (Playford A and B Power Station and Northern Power Station) in Port Augusta and the Leigh Creek Coalfields which deliver coal via a 260km railway. FPP is a wholly owned subsidiary of Alinta Energy and collectively the business is known as the Flinders Operations.
- 1.2. The sites have a long history of industrial use, and were privatised in 2000. Since 2000 FPP has undergone a series of successive ownership changes.
- 1.3. In June 2015 it was publicly announced that the closure of the Flinders business would occur at some time between March 2016 and March 2017. The cessation of mining operations at Leigh Creek Mine occurred on 17th November 2015. The cessation of power generation at the Northern Power Station occurred on the 9th May 2016.
- 1.4. This voluntary site contamination assessment proposal (VSCAP) forms the framework for conducting site contamination assessment works across the Flinders Operations sites. The scope of the VSCAP includes:
- The Augusta Power Stations (refer Annexure 1 – APS Site Map). Refer Lots 1, 2, 4, 7 and 8 in reference to:
 - CT5843/691
 - CT5843/692
 - CT6134/241
 - CT6134/240
 - The Leigh Creek to Port Augusta Railway (refer Annexure 2 – Railway Route Map)
 - The Leigh Creek Coalfields (refer Annexure 3 – Leigh Creek Coalfields Site Map), encompassing:
 - CL1067/36 Section 320
 - CL1234/37 Section 319

- CL1545/20 Sections 321, 324, 416, 417, 418, 419, 420, 485, 486, 489
- CL 6163/703 Sections 325, 535, 1255
- CT 5457/708/ A91 - 112
- CT 5457/897/ A91

- 1.5. This VSCAP is prepared pursuant to section 103I of the *Environment Protection Act 1993* ("Act") and relates to the proposed site contamination assessment only and not to any future remediation at the Flinders Operations. If the proposed site contamination assessment determines the presence of site contamination (as defined in section 5B of the Act) as requiring subsequent remediation, FPP will engage with the Environment Protection Authority (EPA) to prepare a voluntary site remediation proposal (VSRP), pursuant to section 103K of the Act in relation to the identified site contamination.
- 1.6. FPP will undertake to carry out the proposed site contamination assessment on receipt of approval of the VSCAP from the EPA pursuant to s103I of the Act.
- 1.7. FPP has engaged a suitable qualified and experienced site contamination consultant Coffey Environments Pty Ltd (Coffey) to carry out the site contamination assessment work set out in this proposal.
- 1.8. A site contamination audit has been initiated for the Augusta Power Stations site only, on the basis of its long and complex industrial site history and the early indications provided by the Preliminary Site Investigations (PSI).

2. Objective of the Site Contamination Assessment

- 2.1. The site contamination assessment is being undertaken to facilitate site closure and divestment of the Flinders Operations. FPP considers that following closure for each of the Flinders Operations localities:
- The Augusta Power Stations and surrounding land will continue to be utilised for commercial/industrial uses;
 - The Railway will continue to be utilised as an operational railway, following lease hand-back to the SA Government; and
 - The Coalfields and associated infrastructure may continue use as a mine, be re-purposed, or be closed following rehabilitation works.
- 2.2. The objective of the site contamination assessment is to determine the nature and extent of existing site contamination and the actual or potential risk to human health or the environment on-site (in relation to the land uses set out above) or off-site resulting from that contamination. While a full description of the potential receptors will be provided in the PSI for each location, the particular focus at each site is:
- Augusta Power Stations: - in accordance with the final land use set out in 2.1, the focus of the assessment will be applied to risks to the adjacent marine environment and any potential health risks for future industrial/commercial users of the site.

- Railway: - in accordance with the final land use set out in 2.1, the focus of the assessment will be applied to risks to the environment and any potential health risks for future operators/users of the railway. A particular focus will be applied to areas of refuelling and wagon maintenance.
- Leigh Creek Coalfields: - in accordance with the final land use set out in 2.1, the focus of the assessment will be applied to risks to the on-lease and off-lease environment and any potential health risks for future users of the mine.

3. Site Contamination Assessment Methodology

- 3.1. The site contamination assessment work will be undertaken in accordance with the relevant schedules of the National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM) as amended in 2013 and relevant guidelines issued by the EPA from time to time.
- 3.2. The site contamination assessment will follow a phased approach initially comprising PSI to develop preliminary conceptual site models for the Flinders Operations. This will be achieved through the following information sources:
 - Site walkovers by the Coffey Project Director and Coffey Senior Project Manager at the Augusta Power Stations, Leigh Creek Coalfields and key locations along the railway;
 - A review of historical reports available;
 - A review of additional relevant site documentation such as reports or drawings related to former or existing industrial and/or waste disposal processes, building construction, pollution incidents, underground services etc;
 - A review of historical aerial photographs, site plans, maps and other records such as current and/or historical Certificates of Title held by FPP to enhance understanding of the location of former infrastructure on the site;
 - SA EPA and local council searches at key areas to determine reported environmental incidents and notifications;
 - A Safe Work SA Dangerous Goods Search;
 - A review of available underground services information;
 - A review of published geological, topographical, hydrogeological and hydrological maps;
 - Initial assessment of likely background concentrations of chemicals in soil, groundwater and surface waters; and
 - Assessment of environmental values of groundwater and surface water
- 3.3. PSI reports will be compiled for each of the Flinders Operations localities which will set out the preliminary conceptual site models and data gaps requiring further Detailed Site Investigation (DSI) following a risk based approach.
- 3.4. The PSI information will be utilised to define data quality objects (DQOs), data quality indicators (DQIs) and design an appropriate DSI for each location. This will be documented in a Sampling Analytical Quality Plan (SAQP) for each of the

proposed DSIs.

- 3.5. The DSIs will be undertaken to refine the conceptual site models and identify complete or potentially complete exposure pathways requiring remediation (if any).

4. Site Contamination Audit – Augusta Power Stations

- 4.1. FPP have engaged an accredited site contamination auditor, Mr Steve Kirsanovs of Kirsa Environmental, in accordance with the Act to carry out a Site Contamination Audit within the meaning of the Act. The auditor has been engaged in accordance with the South Australian EPA guidelines (as amended from time to time). Given the complex site history and early indications from Preliminary Investigations, the scope of the audit shall be limited to the Augusta Power Stations, both FPP-leased and FPP-owned land.
- 4.2. The audit will be for the following purposes:
- o To determine the nature and extent of any contamination present or remaining on or below the surface; and
 - o To determine what remediation is or remains necessary for a specified use or a range of uses.
- 4.3. While a formal audit has been commenced, the specific scope of the audit will be refined once further information from the PSI is known. FPP reserves the right to terminate the audit in accordance with EPA Guidelines.

5. Community Engagement

- 5.1. FPP recognises that the site contamination assessment process encompasses multiple stakeholders, and will result in significant interest from neighbouring communities.
- 5.2. A Community Engagement Plan has been developed for the entirety of the closure program, and the site contamination assessment process is included within the remit of the Plan. The Plan is included within the Environment Closure & Post-Closure Plan for Augusta Power Stations and the Mine Closure Plan for the Leigh Creek Coalfields.
- 5.3. Community engagement has commenced and will be ongoing.
- 5.4. The findings of the PSI and DSI will be utilised by FPP as part of a continuing dialogue with stakeholders.

6. Timing of Works & Key Milestones

- 6.1. The indicative timing, including key milestones for each site, for the completion of each phase of the site contamination assessment is provided below. The proposed timing of works may be extended by Delay Events as set out in Clause 7.

Key Activity/Milestone	Responsible	Target Date
<u>Augusta Power Stations</u>		
1. Select and engage an EPA accredited site contamination auditor.	FPP	29/02/2016
2. Complete a PSI.	Coffey	29/02/2016
3. Auditor site visit and PSI review	Kirsa	15/04/2016
4. PSI lodgement to SA EPA	FPP	30/04/2016
5. Confirm audit scope	Kirsa/FPP/Coffey	
6. Agree SAPQ	FPP/Coffey/Kirsa	15/05/2016
7. Commence DSI	Coffey	1/06/2016
8. Auditor DSI fieldwork review	Kirsa	30/10/2016
9. Finalise DSI	Coffey	31/12/2016
10. Auditor report review	Kirsa/FPP	31/01/2017
11. Report submission to SA EPA (pending further investigation requirements)	FPP	28/02/2017
<u>Leigh Creek Mine</u>		
1. Complete a PSI	Coffey	29/02/2016
2. PSI lodgement to SA EPA	FPP	30/04/2016
3. Agree SAPQ	FPP/Coffey	15/05/2016
4. Commence DSI	Coffey	1/08/2016
5. Revise PSI to incorporate Lobe C and D. Submit to EPA	Coffey	30/09/2016
6. Finalise DSI, incorporating site-specific risk assessments (if required)	Coffey	28/02/2017
7. DSI report submission to SA EPA (pending further investigation requirements)	FPP	31/03/2017
<u>Railway</u>		
1. Complete a PSI	Coffey	29/02/2016
2. PSI lodgement to SA EPA	FPP	30/04/2016
3. Agree SAPQ	FPP/Coffey	15/05/2016
4. Commence DSI	Coffey	1/08/2016
5. Finalise DSI, incorporating site-specific risk assessments (if required)	Coffey	28/02/2017
6. DSI report submission to SA EPA	FPP	31/03/2017
<u>Progress Reporting</u>		
1. Develop progress report and quarterly review #1	FPP/Coffey/Kirsa/EPA	30/11/2016
2. Develop progress report and quarterly review #2	FPP/Coffey/Kirsa/EPA	28/02/2017
3. Develop progress report and quarterly review #3	FPP/Coffey/Kirsa/EPA	30/05/2017

4. Develop progress report and quarterly review #4	FPP/Coffey/Kirsa/EPA	30/08/2017
5. Develop progress report and quarterly review #5	FPP/Coffey/Kirsa/EPA	30/11/2017
6. Future progress reporting	FPP/Coffey/Kirsa/EPA	TBA

6.2. The SA EPA recognise that the timeframe to site closure is limited, and commit to providing timely review and feedback on submitted plans and reports. The nominal committed time to provide review and feedback is a maximum of 4 weeks.

6.3. FPP, its appointed site contamination consultant and auditor, and the SA EPA commit to quarterly progress reviews.

7. Delay Events

7.1. Any circumstances that may delay, defer, or prevent the commencement, continuance or completion of all or part of the proposed site contamination assessment, beyond the control of FPP (acting reasonably and diligently) that delay, defer or prevent the commencement, continuance or completion of all or part of the proposed site contamination assessment, (including, but not limited to, delays in obtaining endorsement of the site contamination auditor and/or other third parties as required or to be determined, or approval from EPA, delays arising due to compliance with State and/or Commonwealth law and regulations in relation to the site, and circumstances on the site, delays arising from the requirement to undertake additional assessment works above that is not identified in the original SAQP scope for the site), will be "Delay Events".

7.2. FPP agrees:

- o To notify the EPA of any Delay Events that will materially alter the timing of the works.
- o To seek the approval of the EPA to extend any of the completion dates for the key milestones outlined in Clause 6.

7.3. Following notification of a Delay Event to the EPA, FPP will propose to the EPA how it will resolve or manage the Delay Event to mitigate any impacts on the commencement, continuance or completion of the proposed site contamination assessment following the notification of the delay event.

7.4. FPP acknowledge that the EPA will give due consideration to any Delay Events notified by FPP before the EPA takes any regulatory action against FPP for failing to meet the proposed site contamination assessment or milestone contained within it.

8. Review and Variation

8.1. FPP may amend this proposal and re-submit to EPA for approval where:

- o There is a significant change to the scope or timeframe of the site closure program, resulting in a need to vary or terminate the VSCAP; or
- o The site contamination consultant and/or site contamination auditor makes written request to vary the scope, extent or nature of the assessment works, the stages of the assessment, or the areas of the sites which are the subject of this VSCAP; or

- As a result of a Delay Event notified in accordance with Clause 7.
- 8.2. If an amended VSCAP submission pursuant to Clause 8 is approved by the EPA, then this VSCAP will be deemed to be amended pursuant to that submission and the amendment will be deemed to be substituted for the existing relevant part of this VSCAP.
- 9. No Admission of Liability**
- 9.1. Nothing in this proposal, or FPP participation in this process, will constitute and admission of liability by FPP in respect of any known or suspected site contamination on, or emanating from or to, the site.
- 9.2. Nothing in this proposal prevents restricts or in any way limits FPP right to issue proceedings or defend any liability, proceedings, action or claim in respect of any known or suspected site contamination on, or emanating from or to, the site or the performance of this proposal.
- 10. Term**
- 10.1. In accordance with this proposal, FPP will undertake the site contamination assessment over a 15 month period that formally commences on the day when the EPA provides written confirmation that it approves the proposal.
- 11. Notices**
12. All written notices and communications to FPP and the EPA should be served on the nominee as set out below or as otherwise advised by FPP or the EPA from time to time:

Flinders Power Partnership
Mr Brad Williams
Program Manager
Alinta Energy
Level 1, 1868 Greenhill Road,
Parkside. SA 5063

EPA
Mr Andrew Pruszinski
Manager, Site Contamination
Environment Protection Authority
Level 9, 250 Victoria Square
GPO Box 2607
Adelaide. SA 5001

Signed by

Flinders Power Partnership

By their Authorised Representative:

Sign here

Signature of Authorised Representative

Print Name

MICHAEL RICHES

Signed by

Environment Protection Authority

By their Authorised Representative:

Sign here

Signature of Authorised Representative

Print Name

Andrew Puzoski

In the presence of

Sign here

Witness

Print Name

Brad Williams
a/a/2016

In the presence of

Sign here

Witness

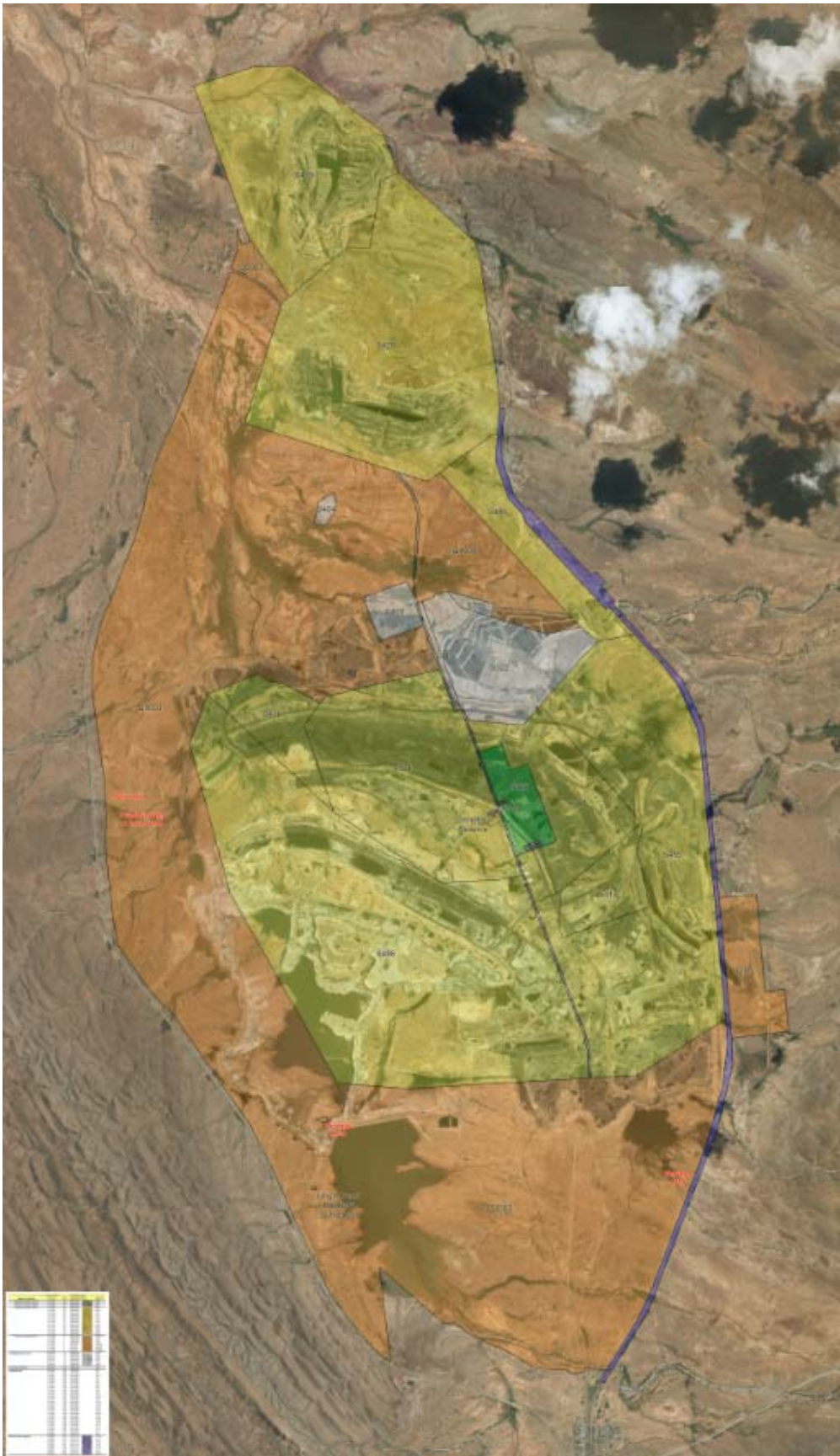
Print Name

MARK HASSAM

ANNEXURE 1 – APS Site Map



ANNEXURE 3 – Leigh Creek Coalfields Site Map



Leigh Creek Coal Mine Land breakdown

Covered by VSCAP

Description	Volume	Folio	Hundred, File or Deposited Plan	Section	notes	
Perpetual Lease 18578	CL1067	36	H833900	S320		
Perpetual Lease 19393	CL1234	37	H833900	S319		
Perpetual Lease 20239	CL1545	20	H833900	S321		
				S324		
				S416		
				S417		
				S418		
				S419		
				S420		
				S485		
				S486		
Perpetual Lease 20311	CL6163	703	H833900	S1255	ex CL1589_2	
				S325		
			D57039	S534		
				Q3003		
				Q5003		
Unallotted Crown Land	CR5751	15	H833900	S322		
				S404		
				S405		
				S444		
				S790		
Old Township	CR5978	779	H833900	S390		
Freehold Land	CT5457	708	F207508	A91		
				A92		
				A93		
				A94		
				A95		
				A96		
				A97		
				A98		
				A99		
				A100		
	CT5457	897	F207463	F207508	A101	
					A102	
					A103	
					A104	
					A105	
					A106	
					A107	
					A108	
					A109	
					A110	
Rail Corridor within mine area	CT5821	450	F218172	A111		
				A112		
				A126		
				A127		
				A128		
				A129		
A130						
				A131		
				A132		