AGL Gas Storage Pty Limited

Financial Assurance for PL 446

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Document Status

Version	Purpose of Document	Orig	Review	Review Date	QA Review	RPS Release Approval	Issue Date
Rev A	*For Internal Review*	*AC / LD*	*PW*	*10/11/10*	*PW*		
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Summary

AGL Energy Limited (AGL) is proposing to construct an underground gas storage facility on Petroleum Licence (PL) 446[1]. Under Sections 312O and 312P of the *Environmental Protection Act 1994* (EP Act), the holder of an Environmental Authority (Chapter 5A Activities) may be required to provide Financial Assurance. The purpose of the Financial Assurance is to ensure funds are available to the State Government should the company default on environmental requirements or become bankrupt. This document outlines the proposed amount of Financial Assurance for AGL's Silver Springs Gas Storage Facility in addition to all existing petroleum activities carried out on PL 446.

A Financial Assurance sum of $853,950 is currently held by DERM against the Integrated Authority, of which $468,000 is attributed to the rehabilitation of activities on PL 446. AGL do not intend to seek reimbursement of this money at this time.

AGL propose to lodge a new Financial Assurance for the Silver Springs project which will incorporate both the proposed and existing activities on PL 446. These activities will comprise a mix of Level 1 and Level 2 Activities (as defined in Section 23 and Schedule 5 of the *Environmental Protection Regulation 2008* (EP Reg).

Level 2 Activities include:

- Seismic Lines;
- Oil and gas wells or bores;
- Access tracks; and
- Where other level 2 Activities such as storage tanks occur in conjunction with Level 1 Activities, these have been captured in the site specific estimates provided.

Level 1 Activities include compressors and dams and site specific estimations have been provided for decommissioning and rehabilitation costs.

This Financial Assurance estimate has been calculated in two parts:

- Construction activities associated with the proposed gas storage facilities; and
- Decommissioning and removal of all proposed and existing infrastructure located on PL 446

The total cost of rehabilitating the entire construction infrastructure for the AGL gas storage project is figure of **$66,528.00**.

The total cost of decommissioning and rehabilitation of PL 446 infrastructure is **$2,728,739.20.**

The overall total Financial Assurance proposed for PL 446 activities is **$2,795,267.20**.

[1] Formerly Petroleum Lease (PL) 16

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Tables

1.0 Introduction

This document outlines the requirement for AGL Gas Storage Pty Ltd (AGL) to provide Financial Assurance for the construction and operation of their proposed Silver Springs Gas Storage Facility (SSSF) and the operation of existing activities on PL 446.

The following Financial Assurance has been prepared in accordance with the Department of Environment and Resource Management (DERM) *Guideline – Financial Assurance for Petroleum Activities* and *Addendum – Financial Assurance Calculations 16 04 09* (hereafter referred to as the 'DERM Gudieline'). This Financial Assurance is being submitted in concurrence with AGLs application for a new Environmental Authority (EA) for the SSSF pursuant to the *Environmental Protection Act 1994* (EP Act).

Information regarding the description of the SSSF and its associated infrastructure along with a description of their location and the existing environmental conditions is provided in the *Silver Springs Gas Storage Facility – Environmental Management Plan* (EM Plan).

Information regarding the description of existing PL 446 activities and infrastructure along with a description of their location and existing environmental conditions is provided in the Operational Environmental Management Plan (OEMP) *Petroleum Exploration and Production on PL 446 – Operational Environmental Management Plan (Existing PL 446 Activities)*.

2.0 Legislative Requirement for Financial Assurance

Under sections 312O and 312P of the *Environmental Protection Act 1994* (EP Act), the holder of an EA (Chapter 5A Activities) may be required to provide Financial Assurance. The purpose of the Financial Assurance is to ensure funds are available to the State Government should the company default on environmental requirements or become bankrupt.

In addition, Section 310D of the EP Act requires that an EM Plan includes a proposed amount of Financial Assurance for the EA. The DERM must decide the form and the level of Financial Assurance required under the EP Act and generally requires (as a standard condition of each EA) that the holder of the EA lodge the required amount of Financial Assurance before petroleum activities can commence.

3.0 Scope of this Financial Assurance

The current EA application comprises the development and operation of an underground gas storage facility and the operation of producing gas and oil fields located on PL 446. Construction of the SSSF is anticipated to begin in April 2011 and be completed by May 2011 with the design life of the facility being 30 years.

Integrated Authority (IA) No. 150 120 is the existing authority for PL 446. A Financial Assurance sum of $853,950 is currently held by DERM against this IA, of which $468,000 is attributed to the rehabilitation of activities on PL 446. AGL do not intend to seek reimbursement of this money at this time. AGL propose to lodge a new Financial Assurance for the SSSF which will incorporate both proposed and existing activities on PL 446.

This Financial Assurance estimate has been calculated in two parts:

- Rehabilitation of construction related disturbance associated with the proposed gas storage facilities; and
- Decommissioning and removal of all proposed and existing infrastructure located on PL 446 and rehabilitation of the infrastructure sites.

The Financial Assurance amount for construction related rehabilitation has been calculated for a two year period. Two years is the anticipated time period required for completion of construction and construction related rehabilitation activities. Additionally, after two years, it is commonly found that areas disturbed during construction generally reach stability. It is considered that once ground stability is demonstrated, the Financial Assurance required to be held by DERM should be discharged. Once successful rehabilitation is demonstrated, AGL proposes to apply for a discharge of the FA for construction related rehabilitation.

The Financial Assurance amount for decommissioning and subsequent rehabilitation has also been calculated in accordance with the DERM Guideline, but for a four year period (in line with the work program as detailed in AGLs Later Development Plan for PL 446). This is to coincide with the four year proposed Later Development Plan and on the basis that revised Financial Assurances will be provided as required for each Later Development Plan period thereafter.

4.0 Rehabilitation Estimates

The proposed amount of Financial Assurance is estimated using a schedule of disturbance in the format presented in the DERM guideline.

4.1 Rehabilitation of Construction Activities

This covers the rehabilitation of the temporary facilities and disturbances as part of the construction phase of the gas storage facility. Construction related disturbances and facilities include the following:

- Construction of one new compressor housing;
- One temporary concrete batching plant; and
- One temporary construction camp site
- Drilling of up to 15 new wells, five at Silver Springs, five at Taylor and five elsewhere across PL 446

Table 1 summarises the costs associated with the rehabilitation each of the disturbances identified above.

Table 1: Costs Associated with Rehabilitation of Construction Related Disturbances

Infrastructure	Area	Unit Cost	Total
Compressor	1 ha	$3,840/ha	$3,840
Concrete batching plant	0.25 ha	$3,840/ha	$960
New Silver Springs Wells[2] (5)	2.5 ha	$3,840/ha	$9,600
Remaining New Wells (10)	10 ha	3,840/ha	$38,400
		Total	**$52,800**

A unit cost of $3,840/ha has been estimated for the rehabilitation of construction related disturbances. All infrastructure associated with the proposed SSSF is to be located in previously disturbed and predominantly cleared areas and as such rehabilitation costs will be minimal to return the site to the pre-disturbance condition.

Unit cost estimates are based on the following:

- Operators and machines undertaking earthworks required to restore the sites after construction, including:
  - Re-spreading of topsoil;
  - Alleviating compaction;
  - Returning the land to stable contours; and
- Preparation, loading and transport of minimal waste materials.

[2] New Silver Springs wells will only be drilled where existing wells are deemed unsuitable for use as part of the proposed SSSF. Where required these will be located as close as possible to the existing well minimising disturbance. As such an area of 0.5 ha per well has been used.

Following the inclusion of maintenance and monitoring costs and 3% CPI calculated over the two year construction period (see Table 15), the total cost of rehabilitating the entire construction infrastructure for the proposed SSSF project is **$66,528**.

Upon demonstration of successful rehabilitation AGL will apply for a discharge of the Financial Assurance associated with construction. Construction is anticipated to be completed within approximately 6 months and the site rehabilitated within a further 18 months.

4.2 Decommissioning and Rehabilitation Activities

This section outlines the costs calculated for the abandonment, removal and rehabilitation of all existing and proposed infrastructure located on PL 446. A summary of these costs is provided below in Table 2.

Table 2: Costs Associated with Decommissioning and Rehabilitation of PL 446 Infrastructure

Infrastructure	Existing Significant Disturbance	Unit Cost Proposed	Total
Seismic Survey	118.5 km	$1,000 km	$118,500
Flowlines	58.02	$700 / $900 km	$42,630
Oil Wells	5		$72,333
Gas Wells (including the 15 proposed new wells)	58		$516,057
Evaporation Dams	5		$826,000
Silver Springs Processing Plant	1		$436,100
Taylor Satellite Plant	1		$95,960
Beechwood Satellite Plant	1		$18,960
Sirrah Satellite Plant	1		$13,960
Landfarm	0.72 ha		$61,200
Silver Springs Office and Camp	0.67 ha		$51,960
Access tracks	147 km	$1,000/km	$147,000
		Total	**$2,40,650**

Following the inclusion of maintenance costs and 3% CPI calculated over four years (see Table 16), the total cost of decommissioning and rehabilitation of PL 446 infrastructure is **$2,728,739.2**.

The following sections provide the basis for the estimates for the individual activities presented in Table 2. Unless otherwise specified, all decommissioning and rehabilitation will include the following:

- Removal of all aboveground infrastructure associated with PL 446 activities;
- On all significantly disturbed land:
  - Re-contour all land to a stable landform similar to that of the surrounding undisturbed areas;
  - Re-establish surface drainage lines;
  - Alleviate soil compaction;
  - Reinstate the top layer of the soil profile; and

» Promote establishment of vegetation of the same species and density of cover to that of the surrounding undisturbed areas.

4.2.1 Seismic Lines

Substantial seismic surveys have been conducted on PL 446 throughout the life of the tenure, with a total of 818.5 km of seismic lines occurring on PL 446. The principal disturbance associated with each seismic line is a residual cleared track averaging 6 m in width.

Seismic surveys undertaken on PL 446 were completed between 20 to 30 years ago, and vegetation has been allowed to regenerate over the seismic lines. As such, a degree of natural rehabilitation will have occurred over the seismic lines during the period between the survey and the time of writing (December 2010). Given this, AGL are seeking Landowner consent for the standard of rehabilitation for approximately 700 km of seismic lines. For the remaining 118.5 km of seismic lines, AGL propose to undertake a ground truthing survey to identify any potential damage requiring rehabilitation and undertake appropriate rehabilitation works where required. Where seismic lines are deemed not in need of rehabilitation, or have been appropriately rehabilitated AGL will seek Landowner consent for the standard of rehabilitation and where Landowner sign-off is obtained, AGL will seek discharge of the FA held against seismic lines.

A unit cost of $1,000/km is proposed for the undertaking of the ground truthing survey and to rehabilitate disturbance where required.

Table 3: Decommissioning and Rehabilitation Costs for Seismic Survey

Seismic Survey Activities	Number	Units	Total
Earthworks to alleviate compaction, prevent erosion and seeding / revegetation of disturbed areas	118.5	$1,000/km	$118,500
		Total	**$118,500**

The total cost for decommissioning and rehabilitation of the seismic survey locations is **$118,500**.

4.2.2 Flowlines

All flowline abandonment will be undertaken in accordance with Australian Standard 2885.3. Flowline abandonment methodology is dependent on whether the line is buried or above ground, if the line has any potential future uses and the line location (e.g. proximity to road and watercourses). Flowlines are much smaller than gas transmission pipelines, typically possessing a nominal outside diameter of 80 mm and located in easements of approximately 20 m in width.

For the purposes of this calculation, AGL has assumed that all **buried flowlines** will be rehabilitated in the following manner:

- Clean and remove contaminants from flowline;
- Purge the pipe with nitrogen;
- Insert concrete plugs at major infrastructure crossings;
- Fill pipeline with nitrogen; and
- Abandon in place with cathodic protection to prevent pipe corrosion.

The DERM guideline value of **$700/km** is deemed appropriate for rehabilitation of buried flowlines, of which there is 58.02 km on PL 446.

An additional $200/km has been added to the proposed rehabilitation value for above ground flowlines to address the cost of dismantling and off-site removal; therefore a unit cost of **$900/km** for the decommissioning of **aboveground flowlines** is proposed.

The flowline easements for both aboveground and buried pipes will be subject to ongoing rehabilitation over the operational life of the field. Therefore remediation works at any time of abandonment are likely to be minimal. The total cost of flowline removal is presented in Table 4.

Table 4: Decommissioning and Rehabilitation Costs for Flowlines

Flowline	Kilometres	Units	Total
Buried	58.02	$700/km	$40,614
Aboveground	2.42	$900/km	$2016
		Total	**$42,630**

The total cost for decommissioning and rehabilitation of flowlines is **$42,630**

4.2.3 Wells

Operational well sites on PL 446 typically possess footprints of approximately 0.04 ha. Aboveground infrastructure including piping, well head and telemetry is present at each site. The new injection well, proposed as part of the gas storage activities has been accounted for as a gas well.

There are a total of five existing oil wells and 43 existing gas wells which have not already been plugged and abandoned or sold present on PL 446. Additionally, there will be a maximum of another 15 wells drilled on PL 446 (five potential replacement wells for the proposed SSSF, five wells at Taylor and five elsewhere on PL 446). A total of nine wells have been plugged and abandoned; these wells have previously been rehabilitated and it is considered that no further rehabilitation is required.

The DERM guideline values for decommissioning and rehabilitation of oil and gas wells has been deemed appropriate for wells on PL 446 and the costs associated with undertaking this work are provided in Table 5 and Table 6 respectively.

Table 5: Decommissioning and Rehabilitation Costs for Oil Wells

Actions	Number	Units	Total
All abandonment and restoration activities, including sealing, plugging, marking and rendering safe	5	$11,000 per well	$55,000
Removal of beam pumps, pipes and telemetry	5	$5,000	$15,000
Filling in of flare and mud pits (25 m x 25 m)	5	$5,000/ha or $313 each	$1,563
Operators and machines undertaking earthworks required to restore the site including re-spreading of topsoil, alleviating compaction and returning the land to stable contours.	5	$3,840/ha or $154 each	$770
		Total	**$72,333**

The total cost for decommissioning and rehabilitation of the oil well sites is **$72,333.**

Table 6: Decommissioning and Rehabilitation Costs for Gas Wells

Actions	Number	Units	Total
All abandonment and restoration activities, including sealing, plugging, marking and rendering safe	58	$10,000 per well 1-5 and $5,000 thereafter	$315,000
Removal of piping and telemetry	58	$3,000	$174,000
Filling in of flare and mud pits (based on 25 m x 25 m)	58	$5,000/ha or $312.50 each	$18,125
Operators and machines undertaking earthworks required to restore the site including re-spreading of topsoil, alleviating compaction and returning the land to stable contours.	58	$3,840/ha or $154 each	$8,932
		Total	**$516,057**

The total cost for decommissioning and rehabilitation of the gas well sites is $**516,057**

4.2.4 Dams

Nine evaporation dams exist on PL 446 with a total area of 28 ha. Of these, one dam and one interceptor pit with a total area of approximately 15 ha were constructed at Glenmore but have never been used to store produced water and have therefore been costed separately for rehabilitation. This leaves a remaining evaporation dam area of 13 ha which may require decommissioning and rehabilitation. Where this is required, it is proposed that influx of produced water would cease, water in the dam would be allowed to evaporate and any residual contaminated material in the base of the dams will be encapsulated and buried at the site of each dam.

The two interceptor ponds present on PL 446 (with a total area of 0.46 ha) and the evaporation pond located at Boggo Creek (covering an area of 1 ha) will be rehabilitated during the four year period of the proposed financial assurance; therefore, rehabilitation costs for these facilities have not been included in this financial assurance calculation.

The proposed costs for decommissioning and rehabilitating the PL 446 dams (excluding Boggo Creek evaporation pond and the two interceptor ponds) are detailed in Table 7.

Table 7: Decommissioning and Rehabilitation Costs for Dams

Infrastructure	Area (ha)	Units	Total
Dam rehabilitation including water disposal and earthworks	13	$50,000/ha	$650,000
Contaminated land survey	13	$2,000/ha	$26,000
Dam rehabilitation of unused evaporation dam (Glenmore)	15	$10,000/ha	$150,000
		Total	**$826,000**

The total cost of decommissioning and rehabilitating all the dams is **$826,000.**

4.2.5 Silver Springs Processing Plant

The Silver Springs Processing Plant (SSPP) is approximately 7.5 ha in size. This facility is where the gas and oil / condensates are extracted from the well stream and processed into a marketable product. A range of infrastructure is associated with the processing plant including pressure vessels, condensate

storage tanks, fuel storage and oil / water separators. There are also five compressors (four existing and one proposed) and associated piping, skids, valves, aftercoolers and supports on-site and a diesel generator.

The majority of the components comprising the SSPP are all similar in nature and size and as such it has been assumed that similar time and effort will be taken to dismantle and remove from site. The unit cost of $5,000 for decommissioning and rehabilitation of these components has been based on the DERM guideline figure for similar infrastructure.

Costs associated with the decommissioning and rehabilitation of the SSPP are shown in Table 8.

Table 8: Decommissioning and Rehabilitation Costs for Silver Springs Processing Plant

Infrastructure	Number	Units	Total
Separators	2	$5,000	$10,000
TEG Dehydration Unit	1	$5,000	$5,000
Pressure Vessels (inc. Separators, dehydrators)	23	$5,000	$115,000
Fired Heater Vessels	3	$5,000	$15,000
Gas Compressors (including removal of associated infrastructure)	5	$10,000	$50,000
Condensate Tank Storage	2	$5,000	10,000
Generator	3	$5,000	$15,000
Liquid Fuel Storage	10	$5,000	$50,000
Oily Water Tanks	22	$5,000	$110,000
Water Skimming Tank	2	$5,000	$10,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	7.5	$3,480	$26,100
Preparation, loading and transport of waste material (number of truck loads)	10	$2,000	20,000
		Total	**$436,100**

The total cost of decommissioning and rehabilitating the Silver Springs Processing Plant is **$436,100**.

4.2.6 Taylor Satellite Plant

The Taylor Satellite Plant is approximately 2 ha in size and contains significantly less infrastructure than Silver Springs. The Taylor plant operates in a minor capacity for well testing activities. Oil / water mixture is separated at this plant with the water being manually conveyed to the on-site evaporation pond and the oil being pumped into an oil storage tank.

There is a range of infrastructure associated with the Taylor Plant including evaporation ponds, a decommissioned compressor unit, a production separator, a condensate tank, and a site office. The majority of this infrastructure is no longer used, however decommissioning and rehabilitation costs have still been proposed and are presented in Table 9.

Table 9: Decommissioning and Rehabilitation Costs for the Taylor Satellite Plant

Infrastructure	Number	Units	Total
Separators	2	$5,000	$10,000
Pressure Vessels (inc. Separators, dehydrators)	10	$5,000	$50,000
Gas Compressors (including removal of associated infrastructure)	1	$10,000	$10,000
Condensate Tank Storage	1	$5,000	$5,000
Water Skimming Tank	1	$5,000	$5,000
Liquid Fuel Storage	1	$5,000	$5,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	2	3,480/ha	$6,960
Preparation, loading and transport of waste material (number of truck loads).	2	$2,000	$4,000
		Total	**$95,960**

The total cost of decommissioning and rehabilitating the Taylor Satellite Plant is **$95,960**.

4.2.7 Beechwood Satellite Plant

The Beechwood Satellite Plant is approximately 2 ha in size but is no longer operational and has been abandoned. However, some infrastructure comprising a pig receiver and launcher, decommissioned water bath heater, gravel pad and a fenced pond still remains on site. Rehabilitation costs for the pond have been provided in Section 4.2.4, with the costs for rehabilitation of the abandoned infrastructure presented in Table 10.

Table 10: Decommissioning and Rehabilitation Costs for the Beechwood Satellite Plant

Actions	Number	Units	Total
Pig launcher / receiver	1	$5,000	$5,000
Water bath Heater	1	$5,000	$5,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	2	3,480/ha	$6,960
Preparation, loading and transport of waste material. (number of truck loads)	1	$2000	$2,000
		Total	**$18,960**

The total cost of decommissioning and rehabilitating the Beechwood Satellite Plant is **$18,960**.

4.2.8 Sirrah Satellite Plant

The Sirrah Satellite Plant is approximately 2 ha in size but is no longer operational and has been abandoned; however, a pig launcher still remains on site. The costs associated with removal of infrastructure and rehabilitation of the Sirrah Satellite Plant site are presented in Table 11.

Table 11: Decommissioning and Rehabilitation Costs for the Sirrah Satellite Plant

Actions	Number	Units	Total
Pig Launcher	1	$5,000	$5,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	2	3,480/ha	6,960
Preparation, loading and transport of waste material. (number of truck loads)	1	$2,000	$2,000
		Total	**$13,960**

The total cost of decommissioning and rehabilitating the Sirrah Satellite Plant is **$13,960**.

4.2.9 Landfarm

Two landfarms are present on PL 446, one at Taylor Satellite Plant and one at the SSPP. These are used for the bioremediation of hydrocarbon contaminated sludges and soils generated by PL 446 activities. The Silver Springs landfarm covers an area of approximately 1 ha and is fully bunded. The Taylor landfarm covers an area of 0.06 ha and is also fully bunded.

Costs associated with the decommissioning of the landfarms are largely associated with the treatment of contaminated soils from site. The costs proposed for the rehabilitation of landfarms have been based on the following assumptions:

- Contaminated soils, including bund walls, being treated in the landfarm would be carted off-site and disposed of at a suitably licensed facility.
- The volume of soil in the Silver Springs landfarm at any one time has been assumed to be 2,000 m^3 (90 m x 80 m x 0.3 m).
- The volume of soil in the Taylor landfarm at any one time has been assumed to be 180 m^3 (60 m x 10 m x 0.3 m)
- Any residual contamination of soils in the floor of the landfarms would be treated in-situ through ongoing bio-remediation techniques.

The costs associated with decommissioning and rehabilitating the landfarms is presented in Table 12.

Table 12: Decommissioning and Rehabilitation Costs for Landfarms

Actions	Number	Units	Total
Removal and disposal of contaminated soils (including bunding) in the landfarm	1.06	$10,000	$10,600
Contaminated land survey (per site)	2	$10,000	$20,000
Ongoing bio-remediation works for residual contamination (per annum over 4 years.	4	$5,000	$20,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	1.06	$10,000/ha	$10,600
		Total	**$61,200**

The total cost of decommissioning and rehabilitating the landfarms is **$66,200**.

4.2.10 Main Camp

The campsite has an approximate area of 0.67 ha and consists of a kitchen and dining room, a recreation room, a number of accommodation units, office unit and several sheds for maintenance of equipment and vehicles and storage of equipment and spare parts. The costs associated with decommissioning and rehabilitation of the camp site are presented in Table 13.

Table 13: Decommissioning and Rehabilitation Costs for the Main Camp

Actions	Number	Units	Total
Demolition and removal of buildings (number of buildings)	15	$2,000	$30,000
Removal of septic tank	1	$5,000	$5,000
Demolition and removal of hardstand areas (ha)	1	$10,000	$10,000
Earthworks required to restore existing contour and landscape to the site and to alleviate compaction.	2	$3,480/ha	$6,960
		Total	**$51,960**

The total cost of decommissioning and rehabilitating the main camp is **$51,960**.

4.2.11 Access Tracks

Access tracks are needed to access all construction and operational areas on PL 446. Tracks are approximately 3 m wide, with 147 km of access tracks having been created on PL 446.

The DERM guideline figure of **$1000/km** rehabilitation of access tracks has been deemed appropriate for access tracks on PL 446 and the total cost for decommissioning and rehabilitating land used for access tracks is provided in Table 14.

Table 14: Decommissioning and Restoration Costs for Access Tracks

Seismic Survey Activities	Kilometres	Units	Total
Access tracks	147	$1,000/km	$147,000
		Total	**$147,000**

The total cost of decommissioning and rehabilitating all access tracks is **$147,000.**

Table 15: Schedule of Disturbance – Construction of Silver Springs Gas Storage Facility				EA number / Petroleum authority	PL 446	
This form is required to be lodged with an application for a new or amended environmental authority. It should be accompanied by the **Initial Work Program** or **Development Plan**. This form is required to be updated and submitted with **later and amended work programs or development plans.**				Plan / Program	Commencement date:	End date:
	(A)	**(B)**	**(C)**	**(D)**		**(B+C–D) x (A)**
Activity or disturbance type	**Unit cost (from Schedule of Rehabilitation Costs)**	**Existing significant disturbance at commencement of this Work Program/Development Plan**	**Maximum additional significant disturbance proposed during term of this Work Program/ Development Plan**	**Rehabilitation of significant disturbance proposed during term of this Work Program/Plan**		**Maximum rehabilitation cost**
Compressor	$3,840/ha	0	1 ha	0		$3,840
Concrete batching plant	$3,840/ha	0	0.25 ha	0		$960
New Silver Springs Wells	$3,840/ha	0	2.5 ha	0		$9,600
Remaining New Wells	$3,840/ha	0	10 ha	0		$38,400
Total rehabilitation liability for the term of the work program or development plan						**$52,800**
Maintenance and monitoring costs (20% of rehabilitation costs to a maximum amount of $40,000)						**$10,560**
CPI (3% of total rehabilitation costs x number of years (2 years) covered by work program/development plan)						**$3,168**
Financial Assurance required (Pay the difference between this amount and any Financial Assurance currently submitted for this project)						**$66,528**

Table 16: Schedule of Disturbance – PL 446 Decommissioning and Rehabilitation				EA number / Petroleum authority	PL 446	
This form is required to be lodged with an application for a new or amended environmental authority. It should be accompanied by the **Initial Work Program** or **Development Plan**. This form is required to be updated and submitted with **later and amended work programs or development plans.**				Plan / Program	Commencement date:	End date:
	(A)	**(B)**	**(C)**	**(D)**	**(B+C–D) x (A)**	
Activity or disturbance type	**Unit cost (from Schedule of Rehabilitation Costs)**	**Existing significant disturbance at commencement of this Work Program/Development Plan**	**Maximum additional significant disturbance proposed during term of this Work Program / Development Plan**	**Rehabilitation of significant disturbance proposed during term of this Work Program/Plan**	**Maximum rehabilitation cost**	
Seismic Lines	$1,000/km	118.5 km			$118,500	
Above Ground Flowlines	$900/km	2.42 km			$2,016	
Below Ground Flowlines	$700/km	58.02 km			$40,614	
Oil Wells		5			$72,333	
Gas Wells		58			$516,057	
Dams		9			$826,000	
Silver Springs Processing Plant (including proposed SSSF infrastructure)		1			$436,100	
Taylor Satellite Plant		1			$95,960	
Beechwood Satellite Plant		1			$18,960	
Sirrah Satellite Plant		1			$13,960	
Landfarms		1.06 ha			$61,200	
Main Camp		1			$51,960	
Access Tracks	$1,000/km	147 km			$147,000	
Total rehabilitation liability for the term of the work program or development plan					**$2,400,660**	

Maintenance and monitoring costs (20% of rehabilitation costs to a maximum amount of $40,000)	**40,000**
CPI (3% of total rehabilitation costs x number of years covered by work program/development plan)	**$288,079.20**
Financial Assurance required (Pay the difference between this amount and any Financial Assurance currently submitted for this project)	**$2,728,739.2**

Table 17: Total Financial Assurance

Activity	Cost
Pipeline Construction	**$66,528**
Pipeline Decommissioning and Rehabilitation	**$2,728,739.20**
TOTAL COST	**$2,795,267.20**

Certification

I/We (the current Environmental Authority holder) certify that: (select each to certify):

☒ The determination of this Financial Assurance is correct.

☒ The information I/we have provided on this form is accurate, complete and not misleading[1].

Environmental Authority Holder name / Company	**Please note:**
AGL GAS STORAGE PTY LIMITED	Where there is more than one holder, this *certification* may be signed by the holder authorised (in writing by all other holders) to sign on behalf of and to commit in all matters relevant to this environmental authority. Where the holder is a company, this form is to be signed by a person authorised (in writing) to sign for that company. [1] It is an offence, under the *Environmental Protection Act 1994*, to give the administering authority information that is false, misleading or incomplete in any material particular. The maximum penalty for such action is 165 penalty units for an individual, or 825 penalty units where the applicant is a corporation (section 181B(3) of the *Penalties and Sentences Act 1992*).