ATTACHMENT H - FINANCIAL RESPONSIBILITY DEMONSTRATION

CLASS VI EMERGENCY AND REMEDIAL RESPONSE INSURANCE 40 CFR 146.85

Emergency and Remedial Response Insurance

Carbon TerraVault Holding LLC (CTV) will provide financial assurance for Emergency and Remedial Response by procuring an environmental insurance policy. The limits will be re-determined by a reasonable estimate of the cost of these activities prior to the commencement of injection operations. The project environmental insurance policy will be placed with an A.M. Best A or higher rated carrier and will cover all emergency and remedial response activities arising from the assets. The selected insurance carrier will issue a financial assurance certificate in compliance with state and federal regulations.

FINANCIAL RESPONSIBILITY CTV IV

CLASS VI INJECTION WELL PLUGGING, CORRECTIVE ACTION AND POST-INJECTION SITE CARE AND CLOSURE LETTER OF CREDIT
40 CFR 146.85

Letter of Credit Description

Carbon TerraVault Holdings LLC (CTV) will provide financial assurance for Injection Well Plugging, Corrective Action and Post-injection Site Care and Site Closure by posting a letter of credit. The amount of each letter of credit would be determined by a reasonable estimate of the cost of these activities. CTV will provide an updated estimate from a third party prior to project approval.

The letter of credit will be backed by California Resources Corporation's (CRC) Credit Agreement with Citibank, N.A., as administrative agent, and certain other lenders as participants. This credit agreement consists of a senior revolving loan facility (Revolving Credit Facility) with an aggregate commitment of $492 million, which CRC is permitted to increase if CRC obtains additional commitments from new or existing lenders. The Revolving Credit Facility also includes a sub-limit of $200 million for the issuance of letters of credit. The letters of credit were issued to support ordinary course marketing, insurance, regulatory and other matters.

As of June 30, 2021, CRC had an undrawn Revolving Credit Facility, approximately $75 million available in letter of credit issuance capacity and $151 million of cash. CRC is currently making efforts to add to the aggregate commitment and the sub-limit for letters of credit.

CLASS VI FINANCIAL RESPONSIBILITY DEMONSTRATION

COST ESTIMATE

CTV IV

Carbon TerraVault Holdings LLC (CTV) had the following cost estimate prepared by third party contractor, Daniel B. Stephens & Associates, Inc., completed on 4/06/2023.

Table 1. Financial Responsibility Cost Summary

Activity	Estimated Cost	Reference
Corrective Action	$ 1,713,132	Table 2
Injection Well Abandonment	$ 1,548,291	Table 3
Post-Injection Site Care	$ 3,264,160	Table 4
Site Closure	$ 1,295,475	Table 5
Emergency and Remedial Response	$ 16,594,500	Table 6
Total	**$**	**24,415,558**

All values in 2023 dollars

Table 2. Costs, Corrective Action Total

Activity	Unit		Unit Cost	Total	Reference
Revise Numerical Model	400	hrs	$ 222	$ 88,800	-
Review CalGEM Well Database	40	hrs	$ 222	$ 8,880	-
Plug Deficient Wells	6	wells	$ 232,000	$ 1,392,000	A
Project Management	1	each		$ 223,452	B
			Total	**$ 1,713,132**	

Notes

A: Driltek, 2021

B: 15% of project costs

Table 3. Costs, Injection Well Abandonment

Location	Unit Cost		Depth (ft)	Cost	Reference
CTV S-1	30	$/ft	5,370	$ 161,100	A
CTV S-3	30	$/ft	5,638	$ 169,140	A
CTV S-4	30	$/ft	5,634	$ 169,020	A
CTV S-6	30	$/ft	5,439	$ 163,170	A
CTV S-7	30	$/ft	5,908	$ 177,240	A
CTV M-1	30	$/ft	5,428	$ 162,840	A
CTV M-2	30	$/ft	5,703	$ 171,090	A
CTV M-3	30	$/ft	5,758	$ 172,740	A
Documentation, project management	1	each	-	$ 201,951	B
			TOTAL	**$ 1,548,291**	

Notes

A: Abandonment costs from Driltek, 2021; plug depths from Attachment G documents Table 5

B: 15% of project costs

Table 4. Post Injection Site Care Costs

Activity	Unit		Events, 20 years	Unit Cost	Total	Reference
USDW geochemical monitoring/fluid sampling	2	well	20	$ 6,100	$ 244,000	A
Above Confining zone geochemical, pressure monitoring	1	well	20	$ 5,700	$ 114,000	A
Injection zone geochemical, pressure monitoring	4	well	20	$ 5,700	$ 456,000	A
Monitoring well O&M, Above confining zone	1	well	2	$ 18,000	$ 36,000	B
Injection zone monitoring well O&M	4	wells	4	$ 84,800	$ 1,356,800	-
Indirect Plume Monitoring (Pulsed neutron)	1	survey	4	$ 37,900	$ 151,600	C
Mechanical Integrity Test, Injection zone	4	well	4	$ 30,000	$ 480,000	B
Reporting/Project Management	1	each	-	$ 425,760	$ 425,760	D
				Total	**$**	**3,264,160**

A: Assumes 1 geochemical monitoring event per year per well and continuous pressure monitoring with automated gage
B: Patrick Engineering, 2013; assumes $2,000 base cost + $4.25/ft (+13%)
C: Zaluski et al., 2016; assumes 8 well survey (inflation adjusted); technology and frequency from PISC plan Table 4
D: 15% of project costs

Assumes (from Attachment C, Attachment E):
4 Injection Zone Monitoring Wells (M-M-1, M-M-2, M-S-1, M-S-2)
2 USDW Monitoring Well (USDW-1, USDW-2)
1 Above Confining Zone Monitoring Well (M-D-1)

Table 5. Costs, Site Closure

Activity	Unit		Unit Cost	Total	Reference
Non-endangerment report	1	each	$ 45,500	$ 45,500	-
Injection zone monitoring well plugging	4	wells	$ 202,000	$ 808,000	A
Above-confining zone monitoring well plugging	1	wells	$ 172,000	$ 172,000	A
USDW Monitoring well plugging	2	well	$ 50,500	$ 101,000	-
Plugging documentation, project management	1	each		$ 168,975	B
			Total	**$**	**1,295,475**

Notes

A: Abandonment costs from Driltek, 2021

B: 15% of project costs

Assumes (from Attachment C, Attachment E):

4 Injection Zone Monitoring Wells (M-M-1, M-M-2, M-S-1, M-S-2)

2 USDW Monitoring Well (USDW-1, USDW-2)

1 Above Confining Zone Monitoring Well (M-D-1)

Table 6. Emergency Response

Groundwater Contamination Causal Investigation

Activity	Unit		Unit Cost	Total	Reference
Planning/permitting	1	each	$ 843,900	$ 843,900	B
Monitoring wells, depth 1,000 ft	5	well	$ 389,000	$ 1,945,000	A
Monitoring wells, depth 3,000 ft	3	well	$ 1,167,000	$ 3,501,000	A
Abandoned well investigation	1	well	$ 30,000	$ 30,000	-
Former Injection Well Investigation	5	well	$ 30,000	$ 150,000	-
Reporting/Project Management	1	each	$ 843,900	$ 843,900	C
Total				**$ 7,313,800**	

Groundwater Contamination Remediation

Activity	Unit		Unit Cost	Total	Reference
Planning/permitting	1	each	$ 1,070,850	$ 1,070,850	B
Pumping well, depth 1,000 ft	4	well	$ 389,000	$ 1,556,000	A
Pumping well, depth 3,000 ft	4	well	$ 1,167,000	$ 4,668,000	A
Groundwater extraction	1	year	$ 303,000	$ 303,000	-
Above-ground CO_2 removal (aeration)	1	unit	$ 152,000	$ 152,000	-
Former injection well repair	2	well	$ 230,000	$ 460,000	-
Reporting/Project Management	1	each	$ 1,070,850	$ 1,070,850	C
Total				**$ 9,280,700**	

Total, Causal Investigation and Remediation	**$ 16,594,500**

Notes

A: Assumes $350/ft for permitting, installation, field oversight, logging drilling, and waste

B: 15% of project costs

C: 15% of project costs separate from Planning/permitting

References

Driltek, 2021: Personal communication with Driltek regarding well abandonment costs, California

Patrick Engineering, 2013: Third Party Cost Estimate for FutureGen Alliance UIC Class VI Permit Application

Zaluski et al., 2016. Monitoring technology ranking methodology for CO2-EOR sites using the Weyburn-Midale Field as a case study, IJGGC v.54, p.466 - 478