

## **FINANCIAL RESPONSIBILITY DEMONSTRATION 40 CFR 146.85**

### **RUSSELL CO<sub>2</sub> CAPTURE AND SEQUESTRATION**

#### **Facility Information**

Facility name: Russell CO<sub>2</sub> Storage Complex  
CSS #1

Facility contact: Aaron Buettner, Chief Executive Officer  
13632 W 95<sup>th</sup> St  
Lenexa, KS 66215  
Phone: (785) 261-0355  
Email: Aaron.Buettner@PureField.com

Well location: Un-incorporated, Russell County, Kansas  
Lat: 38.8855219472 Long: -98.7504253861 NAD 83 (2011)  
Sec 27 T 13 S R 13 W 0' FSL – 2005' FEL

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## Partial List of Acronyms and Abbreviations

AoR = Area of Review	UIC = Underground Injection Control
GSDT = Geologic Sequestration Data Tool	USDW = Underground Source of Drinking
PCC = PureField Carbon Capture, LLC	Water
PISC = Post-Injection Site Care	US EPA = United States Environmental Protection Agency

## C.1. Summary

PureField Carbon Capture, LLC (PCC) provides a demonstration of financial responsibility pursuant to 40 CFR 146.82(a)(14) and 146.85. A combination of instruments (i.e., surety bonds and insurance) from qualified institutions are utilized to demonstrate financial responsibilities for corrective action, well plugging and abandonment, post-injection site care (PISC) and site closure, and emergency and remedial response, which when considered as a whole sufficiently addresses the potential endangerment of underground sources of drinking water (USDW) per 40 CFR 146.85(a)(3).

Table C.1-1 summarizes the estimated costs for performing each activity, and the financial instrument used to demonstrate financial responsibility for each activity. The estimated costs are based on the work being performed by a qualified independent third-party, where per 40 CFR 146.85(c)(1) the independent third party is neither a parent nor a subsidiary of the owner or operator. The coverage amounts will be adjusted annually for inflation per 40 CFR 146.85(c)(2). The Director must approve any decrease or increase to the initial cost estimates resulting from updates to the corrective action plan, the well plugging plan, the PISC and site closure plan, and the emergency and remedial response plan per 40 CFR 146.85(c)(3). Per 40 CFR 146.85(c)(4), financial instrument coverages must be at least equal to current costs to perform the work, and any reduction in financial instrument coverage requires written approval from the Director.

PCC will work collaboratively with US EPA during the technical review period to finalize the financial instrument contracts, then enter into binding coverage prior to issuance of the Permit-to-Construct. The contracts will provide, at a minimum, the protective conditions of coverage required in 40 CFR 146.85(a)(4)(i).

**Table C.1-1. Summary of Financial Responsibility Demonstration**

Activity	Estimated Cost to Perform Work, \$2023		Financial Instruments	
			Coverage, Current \$	Type
Corrective Action	F. Sibrava #1	\$523K	F. Sibrava #1	\$610K
	Reinhardt 'D' 1	\$413K	Reinhardt 'D' 1	\$481K
	Olson #1	\$545K	Olson #1	\$636K
Well Plugging and Abandonment	CSS #1	\$396K	CSS #1	\$462K
	MW #1	\$397K	MW #1	\$463K
PISC and Site Closure	PISC	\$12.4MM	PISC	\$13.6MM
	Site Closure	\$248K	Site Closure	\$273K
Emergency and Remedial Response	\$7.7MM		\$15MM	

## C.2. Corrective Action

The Area of Review and Corrective Action Plan identifies all natural and artificial confining zone penetrations within the area of review (AoR), evaluates the potential for each penetration to serve as a conduit for fluid movement, and defines corrective actions (as needed) for each penetration. Four legacy oil and gas wellbores that penetrate the confining zone have been identified within the AoR. Corrective action for one of these wellbores (D. Reinhardt 27-1) has already been performed thus no financial instrument is needed to satisfy the financial responsibility requirement of 40 CFR 146.85(a)(2)(i) for this wellbore. Phased corrective action is planned for the other three wellbores within the AoR (F. Sibrava #1, Reinhardt 'D' 1, Olson #1), thus the financial responsibility requirement of 40 CFR 146.85(a)(2)(i) applies for these wellbores

The costs for corrective action of the three wellbores were estimated by a third-party industry expert using the scope of work defined in the Area of Review and Corrective Plan, combined with their knowledge of current costs for comparable goods and services, and guided by the methodology provided in Appendix C of the United States Environmental Protection Agency (US EPA) Underground Injection Control (UIC) Program Class VI Financial Responsibility Guidance document (EPA 2011). The cost estimates were originally established in 2023 dollars and will be adjusted annually for inflation per 40 CFR 146.85(c)(2). The cost estimate basis assumes an independent third party is contracted to perform the work, where per 40 CFR 146.85(c)(1) the independent third party is neither a parent nor a subsidiary of the owner or operator.

PCC proposes the use of three financial surety bonds with standby trust to guarantee performance of corrective actions (one bond per wellbore). These instruments meet the following required specifications given in Section 5. "Conditions of Coverage and Specifications for Financial Responsibility Demonstrations C. Surety bond guaranteeing performance of injection well plugging and abandonment" of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011):

1. Under 40 CFR 146.85(a)(6)(ii), PCC provides proof the surety passes financial strength requirements based on the surety's bond capacities and an A.M. Best Credit Rating of A- (Excellent) and a Financial Size Category of XV per the letter of support submitted through the Geologic Sequestration Data Tool (GSDT) Financial Responsibility Demonstration module. Furthermore, the surety is listed in the current revision of the U.S. Department of Treasury Circular 570 as a company that holds a Certificate of Authority as Acceptable Sureties on Federal Bonds and as an Acceptable Reinsuring Company<sup>1</sup>.
2. Under 40 CFR 146.85(a)(6)(iii), PCC establishes a standby trust per the terms of the surety contract that enables the US EPA to be party to the financial responsibility agreement without the US EPA being the beneficiary of any funds.

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<sup>1</sup> See Department Circular 570: 2023 Revision at: <https://www.fiscal.treasury.gov/surety-bonds/circular-570.html>

3. As specified at 40 CFR 146.85(a)(2), the penal sum (aka coverage) of the bond will be in an amount at least equal to the current cost estimate, except as provided in Section H. “Use of multiple financial instruments” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). Table C.1-1 summarizes the coverage for the instrument, which is initially set at the anticipated cost for performing the work in 2028, as computed from the 2023 cost estimate adjusted using a forward projection for inflation based on the past five year average inflation rate for the Oil & Gas Field Machinery and Equipment Producer Price Index as published by the U.S. Bureau of Labor Statistics<sup>2</sup>. The coverage of the surety bond will be adjusted as needed over time to ensure the coverage always meets/exceeds the estimated cost for performing the work over the lifetime of the project.

PCC will work collaboratively with US EPA during the technical review period to finalize the surety contracts, then enter into binding coverage prior to issuance of the Permit-to-Construct. The contracts will provide, at a minimum, the protective conditions of coverage required in 40 CFR 146.85(a)(4)(i). The recommended specifications for the financial instrument given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations C. Surety bond guaranteeing performance of injection well plugging and abandonment” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011) will also be taken into consideration as PCC works with US EPA to finalize the surety contracts.

### **C.3. Well Plugging and Abandonment**

The costs for plugging and abandonment of the injection well (CSS #1) and injection zone monitoring well (MW #1) are estimated by a third-party industry expert using the scope of work defined in the Injection Well Plugging Plan and Post-Injection Site Care and Site Closure Plan, combined with their knowledge of current costs for comparable goods and services, and guided by the methodology and checklist provided in Appendix C and Appendix D of the United States Environmental Protection Agency (US EPA) Underground Injection Control (UIC) Program Class VI Financial Responsibility Guidance document (EPA 2011). The cost estimates were originally established in 2023 dollars and will be adjusted annually for inflation per 40 CFR 146.85(c)(2). The cost estimate basis assumes an independent third party is contracted to perform the work, where per 40 CFR 146.85(c)(1) the independent third party is neither a parent nor a subsidiary of the owner or operator.

PCC proposes the use of a surety bond with standby trust to guarantee performance of well plugging and abandonment for both CSS #1 and MW #1. This instrument meets the following required specifications given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations C. Surety bond guaranteeing performance of injection well plugging and abandonment” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011):

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<sup>2</sup> See: <https://beta.bls.gov/dataViewer/view/timeseries/PCU333132333132>

1. Under 40 CFR 146.85(a)(6)(ii), PCC provides proof the surety passes financial strength requirements based on the surety's bond capacities and an A.M. Best Credit Rating of A- (Excellent) and a Financial Size Category of XV per the letter of support submitted through the Geologic Sequestration Data Tool (GSDT) Financial Responsibility Demonstration module. Furthermore, the surety is listed in the current revision of the U.S. Department of Treasury Circular 570 as a company that holds a Certificate of Authority as Acceptable Sureties on Federal Bonds and as an Acceptable Reinsuring Company<sup>3</sup>.
2. Under 40 CFR 146.85(a)(6)(iii), PCC establishes a standby trust per the terms of the surety contract that enables the US EPA to be party to the financial responsibility agreement without the US EPA being the beneficiary of any funds.
3. As specified at 40 CFR 146.85(a)(2), the penal sum (aka coverage) of the bond will be in an amount at least equal to the current cost estimate, except as provided in Section H. "Use of multiple financial instruments" of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). Table C.1-1 summarizes the coverage for the instrument, which is initially set at the anticipated cost for performing the work in 2028, as computed from the 2023 cost estimate adjusted using a forward projection for inflation based on the past five year average inflation rate for the Oil & Gas Field Machinery and Equipment Producer Price Index as published by the U.S. Bureau of Labor Statistics<sup>4</sup>. The coverage of the surety bond will be adjusted as needed over time to ensure the coverage always meets/exceeds the estimated cost for performing the work over the lifetime of the project.

PCC will work collaboratively with US EPA during the technical review period to finalize the surety contracts, then enter into binding coverage prior to issuance of the Permit-to-Construct. The contracts will provide, at a minimum, the protective conditions of coverage required in 40 CFR 146.85(a)(4)(i). The recommended specifications for the financial instrument given in Section 5. "Conditions of Coverage and Specifications for Financial Responsibility Demonstrations C. Surety bond guaranteeing performance of injection well plugging and abandonment" of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011) will also be taken into consideration as PCC works with US EPA to finalize the surety contracts.

#### **C.4. Post-Injection Site Care and Site Closure**

The costs for PISC and site closure were estimated by a third-party industry expert using the scope of work defined in the Post-Injection Site Care and Site Closure Plan, combined with their knowledge of current costs for comparable goods and services, and guided by the methodology provided in Appendix C of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). The cost estimate was originally established in 2023 dollars and will be adjusted annually for inflation per 40 CFR 146.85(c)(2). The cost estimate basis assumes an independent third-party is contracted to perform the work, where per

<sup>3</sup> See Department Circular 570: 2023 Revision at: <https://www.fiscal.treasury.gov/surety-bonds/circular-570.html>

<sup>4</sup> See: <https://beta.bls.gov/dataViewer/view/timeseries/PCU333132333132>

40 CFR 146.85(c)(1) the independent third party is neither a parent nor a subsidiary of the owner or operator.

PCC proposes the use of a surety bond with standby trust that guarantees payments for PISC and site closure costs. This instrument meets the following required specifications given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations B. Surety bond guaranteeing payment into a trust fund” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011):

1. Under 40 CFR 146.85(a)(6)(ii), PCC provides proof the surety passes financial strength requirements based on the surety’s bond capacities and an A.M. Best Credit Rating of A- (Excellent) and a Financial Size Category of XV per the letter of support submitted through the GSDF Financial Responsibility Demonstration module. Furthermore, the surety is listed in the current revision of the U.S. Department of Treasury Circular 570 as a company that holds a Certificate of Authority as Acceptable Sureties on Federal Bonds and as an Acceptable Reinsuring Company<sup>5</sup>.
2. Under 40 CFR 146.85(a)(6)(iii), PCC establishes a standby trust per the terms of the surety contract that enables the US EPA to be party to the financial responsibility agreement without the US EPA being the beneficiary of any funds.
3. As specified at 40 CFR 146.85(a)(2), the penal sum (aka coverage) of the bond will be in an amount at least equal to the current cost estimate, except as provided in Section H. “Use of multiple financial instruments” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). Table C.1-1 summarizes the coverage for the instrument, which is initially set at the anticipated cost for performing the work in 2028, as computed from the 2023 cost estimate adjusted using a forward projection for inflation based on the past five year average inflation rate for the Oil & Gas Field Machinery and Equipment Producer Price Index as published by the U.S. Bureau of Labor Statistics<sup>6</sup>. The coverage of the surety bond will be adjusted as needed over time to ensure the coverage always meets/exceeds the estimated cost for performing the work over the lifetime of the project.

PCC will work collaboratively with US EPA during the technical review period to finalize the surety contract, then enter into binding coverage prior to issuance of the Permit-to-Construct. The contracts will provide, at a minimum, the protective conditions of coverage required in 40 CFR 146.85(a)(4)(i). The recommended specifications for the financial instrument given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations B. Surety bond guaranteeing payment into a trust fund” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011) will also be taken into consideration as PCC works with US EPA to finalize the surety contract.

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<sup>5</sup> See Department Circular 570: 2023 Revision at: <https://www.fiscal.treasury.gov/surety-bonds/circular-570.html>

<sup>6</sup> See: <https://beta.bls.gov/dataViewer/view/timeseries/PCU33132333132>

## C.5. Emergency and Remedial Response

The cost for emergency and remedial response was estimated by a third-party industry expert using the scope of work defined in the Emergency and Remedial Response Plan, combined with their knowledge of current costs for comparable goods and services, and guided by the methodology provided in Appendix C of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). The cost estimate was originally established in 2023 dollars and will be adjusted annually for inflation per 40 CFR 146.85(c)(2). The cost estimate basis assumes an independent third-party is contracted to perform the work, where per 40 CFR 146.85(c)(1) the independent third party is neither a parent nor a subsidiary of the owner or operator.

PCC proposes the use of an insurance policy with an independent third-party insurer to guarantee performance of emergency and remedial response (including endangerment to USDWs). This instrument meets the following required specifications given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations E. Insurance” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011):

1. Under 40 CFR 146.85(a)(6)(ii), PCC provides proof the insurer passes financial strength requirements based on an A.M. Best Credit Rating of A (Excellent) and a Financial Size Category of XV per the letter of support submitted through the GSDT Financial Responsibility Demonstration module. Furthermore, the insurer has a Standard and Poor's credit rating of A<sup>+</sup>, and is regulated by the State of Kansas – Kansas Insurance Department<sup>7</sup>.
2. Under 40 CFR 146.85(a)(6)(vii), PCC asserts the insurer is a third party.
3. As specified at 40 CFR 146.85(a)(2), the insurance policy is issued for a face amount at least equal to the current cost estimate, except as provided in Section H. “Use of multiple financial instruments” of the US EPA UIC Program Class VI Financial Responsibility Guidance document (EPA 2011). The term “face amount” means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer’s future liability Table C.1-1 summarizes the coverage for the instrument, which is initially set at ~2X the anticipated cost for performing the work in 2023. The coverage of the policy will be adjusted as needed over time to ensure the coverage always meets/exceeds the estimated cost for performing the work over the lifetime of the project.

PCC will work collaboratively with US EPA during the technical review period to finalize the insurance contract, then enter into binding coverage prior to issuance of the Permit-to-Construct. The contracts will provide, at a minimum, the protective conditions of coverage required in 40 CFR 146.85(a)(4)(i). The recommended specifications for the financial instrument given in Section 5. “Conditions of Coverage and Specifications for Financial Responsibility Demonstrations E. Insurance” of the US EPA UIC Program Class VI Financial Responsibility

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<sup>7</sup> See: The State of Kansas – Kansas Insurance Department at: <https://insurance.kansas.gov/#home|1> and the National Association of Insurance Commissioners State Based Systems database at: <https://sbs.naic.org/solar-external-lookup/>

Guidance document (EPA 2011) will also be taken into consideration as PCC works with US EPA to finalize the insurance contract.

## C.6. References

EPA 2011, Geologic Sequestration of Carbon Dioxide: Underground Injection Control (UIC) Program Class VI Financial Responsibility Guidance, Office of Water (4606M), EPA 816-R-11-005, July 2011. Available at:  
[https://www.epa.gov/system/files/documents/2022-11/uicfinancialresponsibilityguidancefinal072011v\\_0.pdf](https://www.epa.gov/system/files/documents/2022-11/uicfinancialresponsibilityguidancefinal072011v_0.pdf).