



CLASS VI WELL PERMIT APPLICATION

OFFICE OF CONSERVATION
INJECTION & MINING DIVISION
617 N. Third St., 9th FLOOR
BATON ROUGE, LA 70802

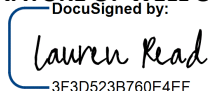
Injection-Mining@la.gov
(225) 342-5515

UIC-60 CCS

TYPE ONLY

APPLICATION NO.
(FOR OFFICE USE ONLY)

1. APPLICATION TYPE: (Check One) <input checked="" type="checkbox"/> DRILL AND COMPLETE NEW CLASS VI WELL <input type="checkbox"/> CONVERT AN EXISTING WELL TO CLASS VI				2. PROJECT NAME <h1>High West CCS Project</h1>						
3. OWNER/OPERATOR NAME High West Sequestration LLC								4. OPERATOR CODE H1166		
5. OWNER/OPERATOR MAILING ADDRESS 1200 17th Street Denver, CO 80202				6. FACILITY ADDRESS						
7. TELEPHONE NO (720) 375-9680				8. E-MAIL ADDRESS highwest@bkvcorp.com						
9. WELL NAME Spoonbill				10. WELL NO 004		11. WELL SERIAL NO (Well Conversions Only)				
WELL LOCATION INFORMATION										
12. FIELD NAME Wildcat								13. FIELD CODE		
14. PARISH NAME St. Charles				15. SECTION 19		16. TOWNSHIP 14s		17. RANGE 22E		
18. LOCATION COORDINATES (GCS, NAD 27) LATITUDE: 29 ° 50 MIN 40.49 SEC LONGITUDE: 90 ° 16 MIN 48.68 SEC				19. STATE PLANE COORDINATES (LAMBERT, NAD 27) <input type="checkbox"/> NORTH ZONE <input checked="" type="checkbox"/> SOUTH ZONE X: 2333875 Y: 429875						
20. LEGAL LOCATION DESCRIPTION (FROM LOCATION PLAT): N68°24'58"E 27,347.50' from NGS Mon. "BOUTTE", falling in Section 19, T14S-R22E, St. Charles Parish, Louisiana.										
21. WELL CONSTRUCTION INFORMATION										
CASING SIZE (IN)	HOLE DIAMETER (IN)	CASING WEIGHT (LB/FT)	CASING GRADE	CASING SETTING DEPTHS		TOTAL SACKS	SACKS CEMENT (Lead/Tail)	TYPE (Lead/Tail)	YIELD (CU FT/SACK) (Lead/Tail)	CEMENT TOP
				TOP	BOTTOM					
20"		106.5	X-42	0	100	N/A				
13 3/8"	17.5"	68	J-55	0	3000	3411	1748/1663	Class H	1.97/1.28	0
9 5/8"	12 1/4"	43.5	L-80	0	3898	693	693	Permaset Lite	1.94	0
9 5/8"	12 1/4"	43.5	25CR-80k	3898	4398	182	182	Permaset Ultra	1.12	3898
7"	9 7/8"	29	25CR-80k	4398	10204	1801	1801	Permaset Ultra	1.12	4398

OTHER INFORMATION	
38. IS THE WELL OR PROPOSED AOR BOUNDARY LOCATED ON INDIAN LANDS OR OTHER LANDS OWNED BY OR UNDER THE JURISDICTION OR PROTECTION OF THE FEDERAL GOVERNMENT?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
39. IS THE WELL OR PROPOSED PLUME LOCATED ON STATE WATER BOTTOMS OR OTHER LANDS OWNED BY OR UNDER THE JURISDICTION OR PROTECTION OF THE STATE OF LOUISIANA?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
40. IS THE WELL OR PROPOSED AOR BOUNDARY LOCATED ON LANDS OWNED BY OR UNDER THE JURISDICTION OR PROTECTION OF THE STATE OF ARKANSAS, THE STATE OF MISSISSIPPI, OR THE STATE OF TEXAS?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
41. AGENT OR CONTACT AUTHORIZED TO ACT ON BEHALF OF THE APPLICANT DURING THE PROCESSING OF THIS APPLICATION	
NAME: Andrew Borgan COMPANY: High West CCS LLC MAILING ADDRESS: 1200 17th Street Denver, CO 80202 PHONE: (720) 375-9680 EMAIL: andrewborgan@bkvcorp.com	
42. CERTIFICATION BY WELL OWNER/OPERATOR (LAC 43:XVII.3605.E)	
<p>I certify that as the owner/operator of the injection well, the person identified in Item No. 46 above is authorized to act on my behalf during the processing of this application, to submit additional information as requested, and to give oral statements in support of this application. I will grant an authorized agent of the Office of Conservation entry onto the property to inspect the injection well and related appurtenances as per LSA-R.S. 30:4. I agree to operate the well in accordance with Office of Conservation guidelines. I further certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment or both (LSA-R.S. 30:17).</p>	
PRINT NAME OF WELL OWNER/OPERATOR	TITLE OF COMPANY OFFICIAL
Lauren Read	Vice President Operations, dCarbon Ventures, LLC
DIGITAL SIGNATURE OF WELL OWNER/OPERATOR	
 <p>DocuSigned by: 3F3D523B760E4EF...</p>	

SUBMIT THE FOLLOW AS A COMPLETE APPLICATION FOR A CLASS VI WELL:

- All application materials must be prepared in accordance with LAC 43:XVII.Chapter 36 and should be submitted electronically following [LDENR Class VI Application Submittal Guidelines](#). Hard copy materials should not be submitted unless otherwise directed by the Office of Conservation. Redacted materials should be submitted while CBI rules are being developed within the Office of Conservation.
- Form UIC-60 CCS
 - The field designation will be based upon which Office of Conservation district the well is to be located in (click [here](#) to see the district outlines):
 - WILDCAT-SO LA LAFAYETTE DIST (9727)
 - WILDCAT-NO LA SHREVEPORT DIST (9715)
 - WILDCAT-NO LA MONROE DIST (9709)
 - USDW Information
 - The depth of the base of the Underground Source of Drinking Water (USDW) should be based on the e-log of the nearest offset well that shows the USDW. Please ensure that an annotated copy of this well log is included in the GSDT submission.
 - Conduct a search from the proposed well location to locate the closest well with an e-log that shows the lowermost USDW. The USDW can be determined from the deep induction curve on the e-log. Resistivity changes with temperature and depth, therefore the guidelines below are used to approximate the lowermost USDW in sands at the following depths:
 - i. Ground surface to 1,000 feet: 3 ohms or higher is considered USDW;
 - ii. 1,000 feet to 2,000 feet: 2 ½ ohms or higher is considered USDW; and
 - iii. 2,000 feet and deeper: 2 ohms or higher is considered USDW.
 - Clay or shale intervals with resistivity values higher than these are not considered USDW.
 - Proposed Well Information
 - Well construction depths and formation depths for the Class VI well should be based on projected subsurface information as indicated in the application rather than a single offset e-log.
 - The signature of the well owner/operator must be a verifiable digital signature rather than a scan.
- One Form MD-10-R-A for each existing well to be converted (only required if conversion is proposed)
- One original Certified Location Plat that complies with the requirements of the [IMD-GS-10 Policy](#);
- Freshwater Wells
 - Applicants must submit a tabulation of all freshwater wells within the area of review (AOR). A diligent search must be attempted to locate all freshwater wells within the AOR of the proposed injection well. You may use the attached Freshwater Well List example or make up your own list, so long as all the information is included.
 - **A DILIGENT SEARCH MUST BE ATTEMPTED TO LOCATE ALL REGISTERED FRESHWATER WELLS WITHIN THE AOR**, which involves conducting a foot search of the AOR and searching the water well registry on SONRIS.
 - Applicants must submit laboratory analyses of water samples from a representative sampling of the freshwater wells included on the Freshwater Well List. IMD should be consulted on the final list of wells to be sampled, otherwise additional sampling may be required during the application process. The laboratory analyses must be signed originals from a LDEQ LELAP [accredited laboratory](#). The analysis sheet(s) must identify the freshwater well sampled and, at minimum, include measurements of chlorides, TDS, pH, alkalinity, dissolved CO2, specific gravity, and temperature of the fluid sample when specific gravity was measured.

- Certification of geoscientific and engineering submittals
 - Per LAC 43:XVII.3603.H.2, all applications, reports, plans, requests, maps, cross-sections, drawings, opinions, recommendations, calculations, evaluations, or other submittals including or comprising geoscientific work as defined by La. R.S. 37:711.1 et seq. must be prepared, sealed, signed, and dated by a licensed Professional Geoscientist (P.G.) authorized to practice by and in good standing with the Louisiana Board of Professional Geoscientists.
 - Per LAC 43:XVII.3603.H.3, all applications, reports, plans, requests, specifications, details, calculations, drawings, opinions, recommendations, evaluations or other submittals including or comprising the practice of engineering as defined by La. R.S. 37:681 et seq. must be prepared, sealed, signed, and dated by a licensed Professional Engineer (P.E.) authorized to practice by and in good standing with the Louisiana Professional Engineering and Land Surveying Board.
 - For electronic submission, the seal, signature, and date of signature must be transmitted in a secure mode that reasonably precludes the seal, signature, and date being reproduced or modified. Examples of programs that provide a secure mode include DocuSign and Adobe Acrobat Pro. The seal must follow the same design as prescribed by the relevant professional board.
 - A signature page with the relevant seals, signatures, dates, and other information should be included immediately after the application cover page. A table identifying which attachments and portions of the application each professional is responsible for should be included. See attached example.
- Answer the following questions regarding the proposed permit activity as part of the environmental analysis required by La R.S. 30:1104. See attached guidance for additional information.
 - Have the potential and real adverse environmental effects of the proposed permit activity been avoided to the maximum extent possible?
 - Does a cost-benefit analysis of the environmental impact costs versus the social and economic benefits of the proposed activities demonstrate that the latter outweighs the former?
 - Are there alternative activities which would offer more protection to the environment than the proposed activity without unduly curtailing nonenvironmental benefits?
 - Are there alternative sites which would offer more protection to the environment than the proposed site without unduly curtailing nonenvironmental benefits?
 - Are there mitigating measures which would offer more protection to the environment than the proposed activity without unduly curtailing nonenvironmental benefits?
- Financial Responsibility
 - Applicants must submit documentation of active financial responsibility for plugging and abandonment of injection wells prior to issuance of the Permit to Construct.
 - Active financial responsibility instruments to cover the cost of corrective action, post-injection site care and site closure, and emergency and remedial response are not required prior to the issuance of the Permit to Construct but are required prior to the Authorization to Inject.

The Injection & Mining Division can be reached by telephone at 225-342-5515 or email Injection-Mining@la.gov.

