Request for Additional Information

[CapturePoint CCS1 Wilcox (R06-LA-0005)] - [Request #1]

Instructions: Populate the "Response" column with answers/responses to each comment/question below, then upload the completed responses to Field #3 in the "Information Requests" reporting module of the GSDT. If necessary, upload attachments or references in Field #4 of the module and/or update information within other GSDT modules. ***To allow reviewers to quickly locate and review changes/updates, clearly identify the location within the application where edits for each response were made (e.g., Site Characterization, Section 2.7.4, p. 53, updated paragraph 2).***

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General			
1	40 CFR 146.82(a)(21)	**Comment:** Please provide a digital copy of all references cited throughout the application. One folder/zip file containing references for all application sections/modules is acceptable. For books or similar hardcopy references, a scanned copy of the data or referenced section (e.g., a specific table, a single chapter) along with a copy of the cover and title/copyright pages is sufficient.	
Project Information/Site Characterization			
2	40 CFR 146.82(a)(2)	**Background:** Figures 2-22 and 2-24 (pdf p. 22/66 and 24/66, respectively) of the Project Info "Figures.pdf" file appear to be the most complete maps of the project area, including the injection wells and AOR. Both maps contain artificial penetrations (APs) with unique identifiers tied to the various tables of wells (e.g., Table 2-3, 2-10, and 33), and APs are differentiated based on type and status. However, symbols for oil/gas and project wells are different sizes, with project wells and APs requiring corrective action (i.e., AP[redacted]) being larger and easier to see, while symbols for APs not requiring corrective action (e.g., AP[redacted]) are smaller and more difficult to see. Additionally, other features (e.g., water bodies, parish or other boundaries, major roads) are not labeled, or labels are not possible to read because the background resolution of the basemap is too low (Fig. 2-22). Lastly, no subsurface cleanup sites (e.g., Superfund/CERCLA, hazardous waste/RCRA, brownfields, leaking underground storage tanks) are depicted, and no narrative discussion is included indicating that searches for such sites have been conducted and no sites located. **Comment:** Please provide at least one complete map of the project area that contains all elements as required in the referenced regulation. Ensure all	

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		required features are accurately labeled, adequately sized, and legible and the map is of sufficient detail and resolution to permit delineation of individual features. Also update the narrative and map (if necessary) to include details of searches for subsurface cleanup sites and the results of those searches, including if no such sites were identified.	
3	40 CFR 146.82(a)(2)	**Background:** There is no mention of mines or quarries in the narrative, but Project Information Figure 2-56 (p. 57/66) contains two symbols – a crossed pick and shovel – in [redacted] part of the AOR circle. This symbol is typically used to represent mines or similar features. However, these symbols are not shown on Fig. 2-22 or Fig. 2-24. **Comment:** Please explain the meaning of the two symbols identified on Fig. 2-56. If the symbols denote a mine or quarry, please add symbology to identify these features on Figures 2-22 and 2-24 and provide information about the mines/quarries in the appropriate narrative(s) and tables.	
4	40 CFR 146.82(a)(3)(i), 40 CFR 146.82(a)(21)	**Background:** Project Information Fig. 2-22 only shows the project's AOR, while Fig. 2-24 shows both the AOR and larger Area of Interest (AOI). However, well tables (Project Information Table 2-3, pdf p. 3/19) and AOR/CAP Plan Table 33, p. 45/64)) list wells included in both the AOR and AOI. **Comment:** While not required, it is recommended that the map chosen as the primary basemap (see Comment #2) also include the AOI in addition to the AOR so that wells identified in both tables may be easily located.	
AOR/Corrective Action			
5	N/A	**Background:** The last paragraph of the AOR/CAP Plan narrative (p. 43/64) indicates that, "The Cone of Influence and AOR are illustrated for both the Sparta Rapides site, and site [redacted], in the image below." However, no image is presented, and no reference is made to a figure or image found elsewhere. **Comment:** Please update the text to reference the correct figure/image elsewhere or include the figure/image within the text as indicated.	
6	40 CFR 146.82(a)(3)(i), 40 CFR 146.82(a)(13),	**Background:** Model figures show individual pressure and plume boundaries on model grids (AOR/CAP Appendices 5.1-5.3, 7.1-7.3, and 8.1-8.3), but these individual boundaries are never shown on a basemap of the project area. Only	

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	40 CFR 146.82(a)(21)	a delineated AOR is ever shown on maps, e.g., Project Information Figs. 2-22 and 2-24. **Comment:** While not required, it would be helpful to see individual pressure front and plume boundaries, or at least their maximum extents for each injection interval, mapped on one or more basemaps to provide a better context of the extent of these boundaries with location.	
7	40 CFR 146.82(a)(3)(i), 40 CFR 146.82(a)(13), 40 CFR 146.84(c), 40 CFR 146.84(d)	**Background:** The AOR is shown on multiple maps (e.g., Project Information Figs. 2-22, 2-24, maps in Appendix A, maps in Appendix B; AOR/CAP Appendices 5.1-5.3, 7.1-7.3, 8.1-8.3; etc.) and is presumably composed of the combined plume and pressure front. However, no map containing artificial penetrations (APs) appears to show separately the maximum pressure front and maximum plume extent. **Comment:** Please show the maximum extent of the pressure front and maximum extent of the CO_2 plume separately on at least one map containing APs (e.g., Project Information Fig. 2-22 or 2-24). This allows for identification of wells in the combined plume and pressure front versus only the pressure front, which may have potential implications for corrective action requirements.	
8	40 CFR 146.82(a)(3)(i), 40 CFR 146.82(a)(13), 40 CFR 146.84(b)(1), 40 CFR 146.84(c)(1)	**Background:** Figs. 1 and 5 in Appendix 8.1, 8.2, and 8.3 all show the extent of the Cone of Influence (COI) at 20 years. The [redacted] interval (Appendix 8.1) appears to have the largest COI and, therefore, the largest delineated AOR. However, the AOR shown on Project Information Fig. 2-22, maps in Project Information Appendix A, etc. all appear to be smaller than the largest COI as measured manually on maps and figures by EPA staff. **Comment:** Please correct maps to show the largest extent of the delineated AOR based on the maximum extent of the COI over the project's lifespan. Otherwise, please provide an explanation for how the smaller AOR was chosen and why it is more appropriate. If the larger AOR encompasses additional APs beyond those previously identified, please also update other sections as needed to include those additional APs.	
9	40 CFR 146.82(a)(4), 40 CFR 146.82(a)(21),	**Background:** Regarding well records and information, the AOR/CAP narrative states that, "A thorough record search was conducted…" (pdf p. 44/64), and "Well location and completion data were acquired using IHS, SONRIS, and LADNR resources." (pdf p. 46/64). However, a detailed explanation of AP identification procedures and AP records searches is not provided, and there	

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	40 CFR 146.84(c)(2), 40 CFR 146.84(d)	appears to be no indication that an exhaustive AP records search was conducted, including searches of LDNR's microfiche library, other commercial maps, scout tickets, etc. Since LDNR has confirmed to EPA that well records exist outside of SONRIS, including a comprehensive library of microfilm/microfiche records kept at LDNR's offices, well records compiled solely from SONRIS are considered incomplete and do not satisfy 40 CFR 146.84(c)(2) and 40 CFR 146.84(d). EPA's Underground Injection Control (UIC) Program Class VI Well Area of Review Evaluation and Corrective Action Guidance document (EPA 816-R-13-005, May 2013), which supports 40 CFR 146.84, discusses two critical narratives that detail the technical efforts for: (1) identifying all APs in the area of review, and (2) the AP records data collection process associated with the AOR APs to assess their conditions concerning the impact of the proposed Class VI action. The procedures and protocols for this are discussed in Chapter 4 of the guidance document found at https://www.epa.gov/sites/default/files/201507/documents/epa816r13005.pdf. **Comment:** Please provide information for parts (1) and (2) above detailing how the AOR AP locations were found and how each AP's records were compiled. The updated information should include detailed steps taken to ensure the identification of all APs within the AOR, and it should include a detailed description of steps taken to conduct an exhaustive records search, including searches beyond IHS and SONRIS. Additionally, please explain which "LADNR resources" were used, and please define acronyms for any databases used (e.g., IHS).	
10	40 CFR 146.82(a)(13), 40 CFR 146.84(b)(1), 40 CFR 146.84(c)	**Background:** The text of section 6.1.1.1 of the AOR/CAP narrative (pdf p. 46/64) states that, "Wells that were within 3 miles of the injection site were identified. This resulted in the identification of 3 wells within the AOR." The "...3 wells within the AOR" portion refers to the 3 APs within the AOR identified as requiring corrective action, not to the total number of APs within the AOR, which includes [redacted] oil/gas wells and [redacted] water wells in addition to proposed project injection and monitoring wells. **Comment:** Please explain where the 3-mile radius comes from and why 3 miles is a more appropriate radius than using the maximum extent of the AOR. Additionally, please correct the text to indicate the total number of APs	

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		identified within the AOR and/or that the "3 wells" refers only to the 3 APs requiring corrective action, not to the total number of wells within the AOR.	
11	40 CFR 146.84(c)(2)	**Background:** The text of section 6.1 of the AOR/CAP Narrative (bottom p. 44/66) also states that, "A total of 3 wells have been located within the delineated AoR…" **Comment:** Please also correct this text to indicate the total number of APs identified within the AOR and/or that the "total of 3 wells" refers only to the 3 APs requiring corrective action, not to the total number of wells within the AOR.	
12	40 CFR 146.82(a)(3)(i), 40 CFR 146.82(a)(21)	**Background:** Two folders of shapefiles are provided for the AOR in the "2. AoR CAP" folder – Shapefiles_June_2022 and Shapefiles_July_2022. Between the two folders there appear to be several duplicate files, but some files, particularly for the three sets of plumes, do not appear to be the same. **Comment:** Please clarify the difference(s) between, in particular, the three sets of plume files (June vs. July). Which set of files for each injection interval is considered the most up to date/accurate?	
13	40 CFR 146.82(a)(4), 40 CFR 146.84(c)(2)	**Background:** Project Information Table 2-3 (Wells within the AOR and AOI; p. 3/19) and AOR/CAP narrative Table 33 (List of Wells within the AOR; p. 45/64) both list APs contained within both the AOR and AOI, including future project wells (both monitoring and injection wells). However, the heading for Table 33 indicates that it only contains wells within the AOR, not the larger AOI, and neither table clearly states that APs listed in the table only consist of project and legacy oil/gas wells, not all wells (including water wells). Additionally, neither table differentiates which wells are in the AOR versus the AOI. Lastly, the line beneath Table 33 states that, "Note: Wells highlighted in yellow correspond to the artificial penetrations within the AoR that will require corrective action." However, no entries are highlighted. **Comment:** Please update the heading for Table 33 to indicate that it contains wells in both the AOR and AOI, and update both tables to clarify that only project and legacy oil/gas wells are contained in each table, not all wells. While not required, it is also advisable to indicate in Table 2-3 and Table 33 which wells are within the AOR, which wells are in the larger AOI, and which wells are project wells that have not yet been drilled. Wells requiring corrective action should also be highlighted as indicated in the Table 33 note, or else the note should be removed.	

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14	40 CFR 146.82(a)(4), 40 CFR 146.84(c)(2)	**Background:** Both Table 2-3 and Table 33 contain identical information on project and legacy oil/gas wells. However, Table 2-3 contains entries for proposed project wells [redacted] that are missing from Table 33. Table 33 is also missing proposed depths for project wells that are provided in Table 2-3. Both Table 2-3 and Table 33 are missing various pieces of information for AP[redacted]. **Comment:** Please update Table 2-3 and Table 33 to include all information for all wells within the AOR and AOI, including missing entries and missing information for both project and legacy wells.	
15	40 CFR 146.82(a)(5), 40 CFR 146.84(c)(2)	**Background:** Table 2-10 (Project Information Tables, p. 10/19) lists water wells within the project's AOR. However, AP[redacted] (water well [redacted]) is listed as having a total depth (TD) of "0". An actual depth is required to verify that the water well does not penetrate the primary confining zone. **Comment:** Please update the table to indicate the actual depth of this water well.	
16	40 CFR 146.82(a)(4), 40 CFR 146.84(c)(2)	**Background:** Project Information Table 2-3 and AOR/CAP Plan Table 33 both contain information for wells in the AOR and AOI. However, neither table contains date drilled or relevant construction information needed to evaluate wells penetrating the injection and/or confining zone(s). Such information includes, but is not limited to, length of casing and tubing strings, casing and hole sizes, plug lengths, plug depth ranges, sacks of cement used during drilling and plugging, and amount of casing/tubing pulled. **Comment:** Please update Table 2-3 and/or Table 33, or create a new table, to include date drilled and all relevant well construction information for all wells penetrating the injection and/or confining zone(s).	
17	40 CFR 146.82(a)(4), 40 CFR 146.82(a)(5), 40 CFR 146.82(a)(21), 40 CFR 146.84(c)(2)	**Background:** Records are provided for the 3 APs identified within the delineated AOR that penetrate the primary confining zone (AOR/CAP "Appendix 9 Supporting Documentation for wells in AoR.pdf), including 6 pdf pages of records per AP. However, a quick search of LDNR's SONRIS database by EPA staff reveals more than 6 pdf pages of records available for each of the 3 wells. Additionally, no hardcopy (pdf) records are provided for water wells or any other oil and gas wells within the AOR that do not penetrate the primary confining zone. To fully evaluate the AOR and Corrective Action plans, EPA must independently assess each AP, including whether it penetrates the injection and/or confining zone(s) along with the well construction details of	

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		all wells that do penetrate the injection and/or confining zone(s). To do so, the application must contain hardcopy (pdf) records for all APs located within the AOR regardless of the source of the records or the type, status, or TD of the APs. **Comment:** Please provide as hardcopies (pdfs) all available records for all APs within the AOR regardless of type, status, TD, or other circumstances. Additionally, please provide records for each AP in an individual pdf file (i.e., one AP's records per pdf) rather than combining records for multiple or all APs into one pdf file.	
Testing/Monitoring & QASP			
18	N/A	**Background:** The testing and monitoring plan narrative (E.1 Testing & Monitoring Plan – CPS.pdf), Section 5.2 p. 24/33, describes AP[redacted] as an in-zone monitoring well located within the approximate center of the injection site. However, Project Information Fig. 2-22 shows AP[redacted] as a dry and abandoned AP located to the [redacted] of the injection sites, and other references indicate that AP[redacted] is intended to be the in-zone monitoring well. **Comment:** Please correct the testing and monitoring plan narrative to indicate that AP[redacted] is the in-zone monitoring well located in the approximate center of the injection zone, not AP[redacted].	