SECTION 11 – ENVIRONMENTAL JUSTICE ASSESSMENT

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11.1 Introduction

The purpose of this environmental justice (EJ) evaluation is to determine if the White Castle CO_2 Sequestration (White Castle) Project, which includes the proposed WC IW-A No. 001 Class VI injection well, could have a disproportionately high and adverse environmental impact on defined communities or populations. The White Castle Project will sequester CO_2 in the Louisiana area near the New Orleans/Baton Rouge industrial region.

Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (United States Environmental Protection Agency (USEPA) 1998). Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was published in the Federal Register (59 FR 7629) on February 11, 1994. Executive Order 12898 requires federal agencies to identify and address the potential for disproportionately high and adverse human health or environmental effects resulting from the implementation of their programs, policies, and activities on minority and low-income populations.

11.2 Environmental Justice Assessment

Identification of the EJ populations and assessment of the EJ impacts/burdens of the White Castle Project was performed by a third-party, Environmental Resources Management (ERM). The assessment, including methodology, analysis area, findings, and conclusions, is included as *Appendix J*.

ERM used USEPA (2016) guidance to identify block groups entirely or partially within a 1-mile radius of the White Castle Project area that are considered EJ communities. It was determined that [redacted], discussed in detail in *Appendix J*, to be considered EJ communities. To summarize the findings:

- [redacted] block groups (as well as Iberville Parish) meet the EJ criteria for nonwhite populations;
- [redacted] block groups meet the criteria for low-income populations;
- [redacted] block group is in the 80th percentile or higher for children under age 5 and 1 block group is in the 80th percentile or higher for residents aged 65 or older; and
- [redacted] block group (and Assumption and Iberia parishes) has limited English proficiency populations in the 80th percentile or higher.

Additionally, ERM used USEPA and U.S. Council on Environmental Quality (CEQ) data and tools to identify notable concentrations of populations with specific health risk factors that contribute to disproportionately high and adverse impacts on EJ populations, such as the prevalence of asthma, heart disease, and certain cancers. To summarize the findings:

- [redacted] block groups exceed the established threshold for heart disease;
- [redacted] block groups exceed the established threshold for asthma;
- [redacted] block groups exceed the established threshold for low life expectancy; and
- [redacted] block groups (and Assumption and Iberville parishes) exceed the established threshold for risk of cancer due to air toxics.

11.2.1 Environmental Justice Summary Data

Figure 11-1 summarizes the demographic data for each block group in the analysis area, as well as parish and state data, from ERM's EJ assessment report.

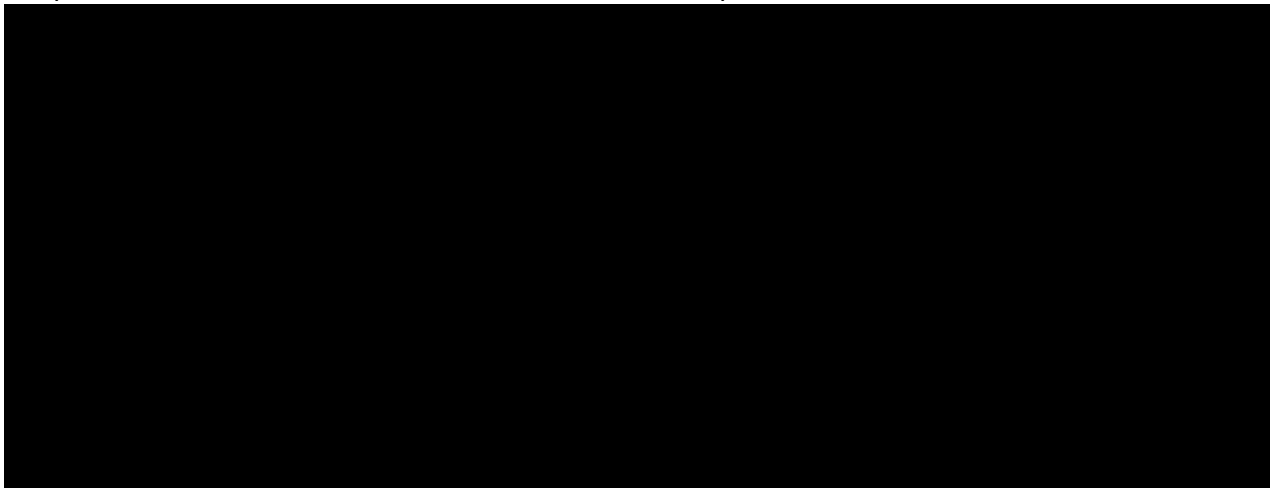

Figure 11-1 – EJ Demographic Summary Data

Figure 11-2 summarizes notable health risk factors for each block group in the analysis area, as well as parish and state data, from ERM's EJ assessment report.

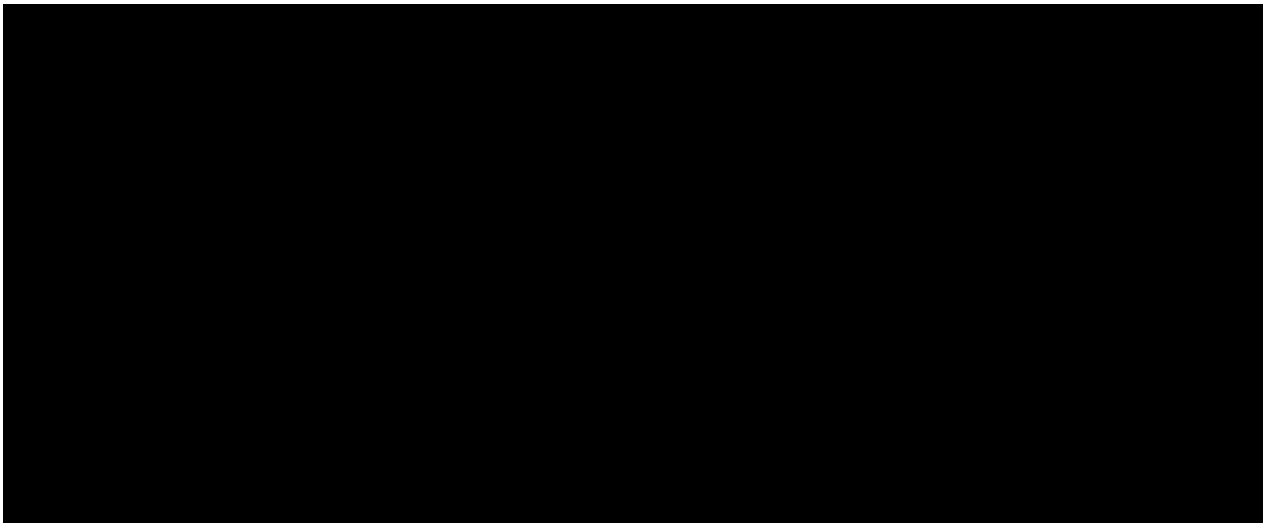

Figure 11-2 – EJ Health Risk Factor Summary Data (Percentiles)

11.3 Proposed Environmental Justice Efforts

Harvest Bend CCS LLC (Harvest Bend CCS) will emphasize engaging the community for education on the proposed White Castle Project.

- Key stakeholders will be identified and included in these efforts, such as community leaders, public officials, and residents located in the parishes.
- Communication and engagement activities will be held, such as open houses, individual meetings, and/or small group meetings to gather areas of interest, to inform materials to be distributed.
- English and bilingual informational materials will be developed and distributed, including but not limited to fact sheets, project overview, website, frequently asked questions (FAQs), and maps.
- Consistent project updates will be provided to interested parties through various channels.

11.4 Evaluation of Alternative Project Sites

Multiple potential CO_2 sequestration project sites were evaluated to ensure that adverse environmental effects are minimized. Compared to the other sites evaluated, the White Castle Project site was selected as the preferred site to develop for sequestration of regional CO_2 emissions for the following reasons:

- There are fewer abandoned oil and gas wells in the area that could act as a conduit for the migration of CO_2 injectate from the storage reservoir, either to Underground Sources of Drinking Water (USDWs) or to the surface.
- The remote area is further from residential housing, which decreases potential impact to the public.
- The site has existing roads, thus lessening not only the need for newly constructed roads but also environmental impact.
- The site is located in closer proximity to regional emission sources and existing pipelines that are planned for conversion to CO_2 service. Less pipeline will need to be constructed and fewer landowners will need to be impacted.

Evaluation of alternative project sites is discussed further in *Section 9 – IT Decision Questions*.

11.5 Mitigation of Adverse Environmental Effects

The White Castle Project will have both potential and real adverse environmental effects that require mitigating measures, to ensure that effects are minimized. Mitigation of these adverse environmental effects is discussed in detail in *Section 9*.

Potential adverse environmental effects include CO_2 release to or at the surface, CO_2 escape into a productive oil and gas reservoir, and CO_2 migration into USDWs. All potential adverse environmental effects are estimated to be of remote likelihood, or extremely unlikely to occur in this asset. Risk prevention efforts, including detailed site-reservoir characterization, dynamic geocellular reservoir modeling, well construction to industry standards with premium materials, and ongoing testing and monitoring programs, are comprehensively discussed in *Section 8 – Emergency and Remedial Response Plan* (ERRP). The ERRP incorporates the risk analysis for all applicable environmental-risk scenarios as well as response action plans in the event a risk scenario should ever occur.

The real, primary adverse environmental effect associated with the White Castle Project is the impact to the wetlands where the project is to be located. To minimize said impact, the following actions have been or will be taken:

- All environmental analysis and mitigation requirements of the applicable federal, state, and local permits will be addressed, as identified in Table 0-4, Anticipated Permits, in *Section 0 – Introduction*.
- Access to the site has been thoroughly evaluated to minimize road construction requirements.
- [redacted].
- It is anticipated that mitigation banking will be utilized to replace the loss of natural resources and compensate unavoidable impacts to wetlands through restoration or creation of wetlands at a separate location.
- Harvest Bend CCS will work constructively with the U.S. Army Corps of Engineers (USACE) to ensure proper permitting and mitigative efforts.