# 

PROJECT LIBRA UPDATE

### CONTENTS

### **ABOUT LAPIS 3**

### **ABOUT CCS 4-6**

What is CCS?

CCS: A Tested Technology

Is CCS Safe?

### **ABOUT PROJECT LIBRA 7-11**

What is Project Libra?

Protective Top Seals and Injection Zone (Subsurface)

Project Status

Project Footprint

Where is the CO2 Coming From?

### **SAFETY 13-15**

Monitoring Plan

Well Specifications: CO2 vs. Oil

and Gas

CO2 Pipeline Safety and Satartia

# COMMUNITY BENEFITS AND ENGAGEMENT 17-19

Is CCS a Good Idea for Louisiana?

Project Libra Benefits to St. Charles Parish

Engagement in St. Charles Parish

### **PERMITS 21-25**

Permits in Process

Class VI Permit 101

Parts of a Class VI Permit

Project Libra Class VI Application Structure

Class VI FAQ

### OTHER COMMUNITY QUESTIONS 27-31

The purpose of this deck is to provide a one-stop shop for information about our Libra Project in St. Charles Parish. We will update these materials periodically, adding information based on community feedback. We will also post updates to our <a href="Project Libra Facebook page">Project Libra Facebook page</a>.

Please reach out if you have questions: <u>projectlibra@lapiscarbonsolutions.com</u>. We'd love to hear from you!



### WHAT WE DO

Lapis develops, constructs, and operates Carbon Capture, Utilization, and Storage (CCUS) projects, providing solutions for emitters looking to decarbonize industrial operations. Our technical expertise allows Lapis to utilize a dual approach for CCUS project development:

- Identifying strategic sites for sequestration
- Providing custom carbon solutions tailored to emitters' needs

### CAPTURE

CO<sub>2</sub> capture solutions customized to each industry partner

### TRANSPORT

Safe movement of compressed CO<sub>2</sub> to storage sites or utilization partners

### UTILIZE

Utilization services to provide CO<sub>2</sub> to food and beverage industry partners

### STORE

Permanent CO<sub>2</sub> storage, monitoring, and site closure in line with Class VI EPA/LDENR standards

# WHAT IS CCS?

Carbon Capture and Storage (CCS) is the process of separating, then permanently and safely storing, CO2.

1

### **CAPTURE**

Separate CO2 from other gases produced at large industrial process facilities.

2

### **TRANSPORT**

Compress and transport CO2 to a suitable site for geological storage.



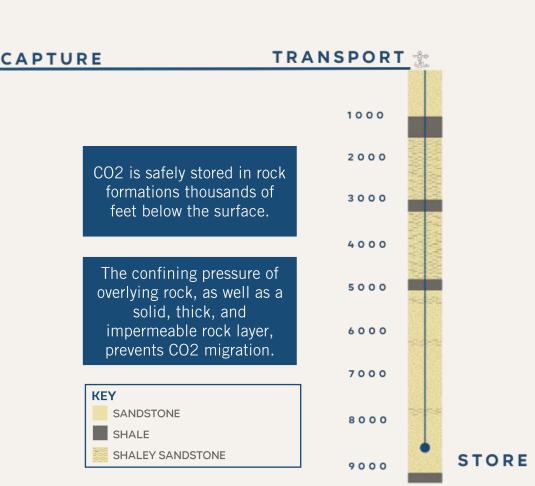
### **OPERATE**

Inject and rigorously monitor in accordance with Class VI and industry standards.



### SAFE, PERMANENT STORAGE

CO2 is stored deep underground in sandstone rock formations thousands of feet below the surface. The site is monitored 24/7 throughout operations and for more than a decade post-operations per EPA and/or LDENR standards.



Note: This is a simplified illustration.

# **CCS: A TESTED TECHNOLOGY**

### **CAPTURE**

- Capture technology BEGAN IN THE 1930S.
- At least **160 MILLION METRIC TONS** of CO<sub>2</sub> are captured every year for use in industries such as food, beverage, and fertilizers.

### **TRANSPORT**

- There are **5,000+ MILES** of CO2 pipelines in the U.S.
- In the last 50 years, pipelines have transported OVER 500 MILLION metric tons of CO2.
- During the **ENTIRE PERIOD** of CO2 pipeline operation there have been **NO RELATED FATALITIES**.

### STORE

- In the U.S., over **850 MILLION METRIC TONS** of CO2 have been safely injected since the 1970s for a process known as enhanced oil recovery.
- OVER 20 MILLION metric tons of CO2 have been injected into dedicated geological storage sites for climate purposes since 1996.

SOURCE: CLEAN AIR TASK FORCE

**SOURCE: CARBON ACTION ALLIANCE** 

# IS CCS SAFE?

CCS is a safe, proven way to prevent CO2 from entering the atmosphere.

### CCS HAS EXISTED SAFELY FOR YEARS.

CCS is not a new technology and is heavily regulated by the State of Louisiana based on EPA rules and regulations.

CO2 injection for enhanced oil recovery has existed safely across the U.S. and in coastal Louisiana for decades.

# OPERATORS ARE REQUIRED TO DEVELOP ROBUST, 24/7 MONITORING PROCESSES.

Our Class VI application details the many monitoring mechanisms we will use to keep people safe. This includes multiple monitoring wells, water wells, and seismic monitoring devices.

### CO2 PIPELINES HAVE AN EXEMPLARY SAFETY RECORD.

About 5,000 miles of CO2 pipelines already exist across the U.S.

These pipelines have an average incident rate of 0.001 per mile per year.

Since the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) began overseeing CO2 pipeline safety in 1988, only one incident reached the threshold of a serious incident.

No fatalities associated with CO2 pipelines have ever been reported.

READ MORE ABOUT CCS SAFETY

READ MORE ABOUT CO2 PIPELINE SAFETY

READ MORE ABOUT MONITORING PROCESSES

READ MORE ABOUT LAPIS' SAFETY COMMITMENTS

# WHAT IS PROJECT LIBRA?

SERVICE
TRANSPORTATION AND
STORAGE

ESTIMATED VOLUME

1-4 MILLION METRIC TONS
OF CO2 PER YEAR

PARTNERS
LAPIS (OPERATOR)
EXXON (NON-OPERATOR)

CLASS VI STATUS SUBMITTED

PROJECT TYPE

SINGLE PRIVATE

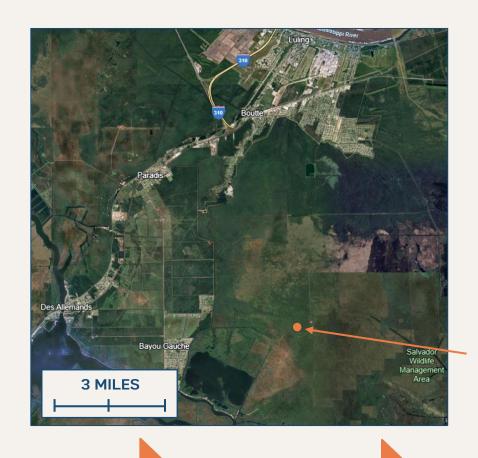
LANDOWNER, MULTIPLE

EMITTER REGIONAL HUB

Project Libra is a 14,000-acre CO2 storage site located in St. Charles Parish, about 20 miles from New Orleans.

We currently estimate that the site has capacity to hold 80 million metric tons of CO2 and has the potential to become a regional hub for decarbonization.

The project helps Louisiana grow its economy and stay competitive in a global market that demands lower-carbon products.



2022

Acquired pore space

2024

Submitted Class VI permit application

2025

Advance project and deepen local engagement

2027

Final Investment Decision expected and start of construction

2028

First injection target



# PROTECTIVE TOP SEALS AND **INJECTION ZONES**



### **SHALES: SEAL**

Shales protect Underground Sources of Drinking Water (USDW) from CO2 migration. These rocks are impermeable—CO2 cannot move through them. For Libra, multiple layers of thick (hundreds of feet thick) shale act as seals that prevent CO2 movement.



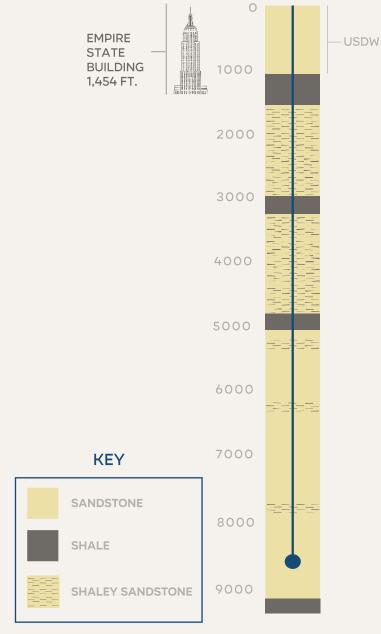
### SANDSTONES: INJECTION ZONE

Sandstone is a highly porous rock—imagine a sponge—with tiny gaps between sand grains filled with saline (non-potable water, i.e., not safe for drinking). During injection, CO<sub>2</sub> displaces this salty water and enters the sandstone. Libra's subsurface features sandstone with excellent porosity and connectivity, allowing pressure to dissipate more easily than in tighter rock.



### **CO2 STORAGE ZONE**

For Libra, we're targeting an injection interval that is more than 5,000 feet below the surface and 3,300+ feet below the USDW. We plan to inject at a depth that's similar to stacking more than three Empire State Buildings underground.



# WHAT IS PROJECT LIBRA'S STATUS?

# WE ARE IN THE **EARLY STAGES** OF DEVELOPING A 14,000-ACRE STORAGE SITE IN ST. CHARLES PARISH.

Our world-class technical team selected this site based on extensive analysis of the area and subsurface qualities.

Lapis is in the process of permitting the site with multiple agencies.

It takes years to obtain a Class VI permit—the type of permit required to inject CO2 underground for safe, permanent storage.

We submitted our Class VI permit application in late 2024. As we continue to confirm the site's feasibility and obtain technical data, we are engaging with many stakeholders.

### APPROXIMATE SITE LOCATION

~6 miles from Lake Salvador ~2.25 miles from the nearest building





# PROJECT LIBRA FOOTPRINT

### MONITORING

We will monitor reservoir pressure 24/7 using downhole gauges in the injection wells. We will also install two water wells to monitor water quality.

### **EXISTING OIL AND GAS INFRASTRUCTURE**

We screened the area for oil and gas wells before we moved forward with the project. While there is no active production in the area relevant to our permit, there is old infrastructure associated with oil and gas, which will be properly remediated.

### ► REMEDIATING FORMER OIL AND GAS WELLS

We will follow established procedures to safely and permanently plug and abandon wells formerly used for oil and gas. This process requires us to use corrosion-resistant cement around all well casings—including confining zones—to prevent potential CO2 migration.



# WHERE IS THE CO2 COMING FROM? IS THERE A PIPELINE?

# THE ONLY PIPELINE LAPIS IS CURRENTLY PERMITTING IS FROM THE INJECTION SITE TO THE EDGE OF THE PRIVATE PROPERTY.

We don't yet have an emitting partner, so we don't have details about additional pipelines, routes, or specific CO<sub>2</sub> sources. Any additional pipelines must go through a separate permitting process.

The only pipeline currently being permitted through our coastal use permit application is a  $\sim 3.56$ -mile flowline located entirely within the private property project site that will run from the injection site to a tie-in point.

# WHAT'S THE DIFFERENCE BETWEEN A PIPELINE AND A FLOWLINE?

Flowlines: on-site, within-lease transport.

Pipelines: off-site, interstate or intrastate transport.

# ANY ADDITIONAL PIPELINES OR INFRASTRUCTURE MUST GO THROUGH A SEPARATE PERMITTING PROCESS.

Pipelines cannot be built without going through a separate permitting process. This process would include permitting at the federal and state level, dependent on the pipeline's location.

If any additional infrastructure is proposed, the public will weigh in through a separate permitting process.



# 

SAFETY

# **HOW WILL LAPIS MONITOR INJECTION?**

Class VI wells must have *comprehensive*, *real-time monitoring* in place *before injection begins*. We plan to monitor through four primary mechanisms:

1 SEISMIC MONITORING

24/7, real-time seismic monitoring using remotely controlled seismic devices, which will monitor CO2 movement and seismic activity underground.

2 PRESSURE MONITORING

Gauges on injection wells will enable us to detect pressure changes within the wells in real-time.

3 MONITORING

We will monitor CO2 pressure and movement both within the injection wells and through a monitoring well installed away from the injection wells but within the plume area.

4 WATER WELLS

Multiple water wells will be installed to continuously monitor water quality and ensure we protect Underground Sources of Drinking Water (USDWs).

Our monitoring program will be thorough, ongoing, and iterative in response to CO2 movement.



# WELL SPECIFICATIONS: CO2 INJECTION VS. OIL AND GAS

CCS wells are designed to exceptionally high standards—more so than a typical oil and gas well.

### CCS CO<sub>2</sub> INJECTION WELL TYPICAL OIL AND GAS WELL INJECTED CO2~ CEMENT TO SURFACE **CASING: SURFACE** CASING: INTERMEDIATE **LOWERMOST USDW BASE** All casing strings extend -CASING: LONG STRING **CASING:** to surface INTERMEDIATE All casing strings are cemented to surface -ANNULUS -BOREHOLE -INJECTION TUBING CONFINING Use of corrosion resistant LAYER alloy over injection interval INJECTION PACKER Use of highly corrosive INJECTION ZONE resistant cement over entirety **PERFORATIONS** of well bore surface vs. TOTAL DEPTH Portland cement and regular steel casing in an oil and gas 4-8X COST OF A REGULAR OIL AND GAS WELL well

# CO2 PIPELINE SAFETY AND SATARTIA, MISS.

### WHAT HAPPENED IN SATARTIA?

In Satartia, a pipeline ruptured after days of heavy rainfall that in turn caused landslides and shifting soil. The area's low-lying geography caused slow CO2 dissipation, impacting health and vehicle functioning. Lapis has no connection to the incident.

### COULD SOMETHING SIMILAR HAPPEN WITH LIBRA?

The St. Charles Parish Emergency Operations Center (EOC) modeled a worst-case scenario—a total flowline rupture with 20 mph winds—which showed that the maximum distance CO2 might travel would be ~500 yards. There are no buildings within 500 yards of the flowline. We will also conduct further, independent dispersion modeling once the project is more fully developed and communicate results publicly.

### WE WILL RIGOROUSLY MONITOR AND TEST PIPELINES.

We will have real-time, 24/7 monitoring to detect pressure changes, which would indicate a potential issue. We also routinely and rigorously inspect our pipeline to spot potential issues before they occur. To prevent corrosion, we will also ensure that the CO2 is *very*, *very dry*.

IS LAPIS USING NEW OR REPURPOSED NEW OR REPURPOSED PIPELINES?

Our flowline is new. The only existing infrastructure we are using is an existing pad to ensure we limit potential wetland impacts.

In Satartia, the pipeline rupture occurred at a higher elevation, then traveled downhill. Once the CO2 reached Satartia, it dissipated more slowly because of the area's low-lying topography.



### ST. CHARLES PARISH

Unlike Satartia, St.
Charles Parish is flat.
This means that CO2
would dissipate rapidly
in an emergency
response scenario,
preventing similar
impacts to health and
emergency responders.



READ MORE ABOUT CO2 PIPELINE SAFETY

READ THE PHMSA INCIDENT INVESTIGATION

# 

COMMUNITY BENEFITS AND ENGAGEMENT

# IS CCS A GOOD IDEA FOR LOUISIANA?

CCS WILL CREATE JOBS, ATTRACT INVESTMENT, AND KEEP LOUISIANA COMPETITIVE.

The Louisiana Department of Energy and Natural Resources and Louisiana Economic Development sum it up:

Increased investment means more jobs, more growth, and more community investment both short-and long-term.

CCS strengthens existing industries and keeps Louisiana at the forefront of innovation.

Louisiana has an established pipeline network, generational industry expertise, and natural geological formations that provide safe, permanent CO2 storage.



# **HOW DOES PROJECT LIBRA BENEFIT ST. CHARLES PARISH?**

AS A SERVICE PROVIDER, WE **ENABLE EMITTERS** TO STAY COMPETITIVE, MEET DEMAND FOR LOWER-CARBON PRODUCTS, AND ADD JOBS. WE ALSO CONTRIBUTE TO THE PARISH THROUGH:

**INCOME TAX** 

Through a revenue sharing plan with the state, Libra revenue is paid to St. Charles Parish based on population and number of homesteads.

SALES TAX

5% sales tax is paid to St. Charles Parish on equipment purchased by Lapis. Of that, 60% goes to parish public schools and 40% to the parish directly.

PROPERTY TAX

We estimate around ~\$18MM in property taxes will be paid to St. Charles Parish over 20 years (the life of the project).

JOBS

While the majority of jobs will be created by emitters, we will support temporary construction jobs and up to 6 full-time roles once injection begins.

COMMUNITY GIVING

Whether through our partnership with RJ Vial Elementary, supporting the Hahnville Tigers Touchdown Club, or participating in Battle for the Paddle, we're contributing to the current and future success of St. Charles Parish.

WE ESTIMATE THAT PROJECT LIBRA WILL DIRECTLY CONTRIBUTE MORE THAN \$30 MILLION TO ST. CHARLES PARISH. WE EXPECT THIS MODELED FIGURE WILL INCREASE AS WE GET MORE CLARITY ON OUR EMITTING PARTNER AND INDIRECT BENEFITS.

# **HOW ARE WE ENGAGING IN ST. CHARLES PARISH?**

### CCS & PROJECT EDUCATION

In August 2024, we sponsored our first CCS education session at the Des Allemands firehouse. We're now expanding our engagement, holding meetings and educational sessions with small groups of community members.

### COMMUNITY EVENTS

We are introducing our company to the community by attending events like the United Way's "Battle for the Paddle" jambalaya and gumbo cookoff.

### COMMUNITY PARTNERSHIPS

We are proud to serve as a Corporate partner to RJ Vial Elementary School, providing support for students and teachers.



On May 15, Lapis team members donated gift cards from local businesses for teacher appreciation week at RJ Vial Elementary School.

From left: Assistant Principal Shannon Madden, Lapis VP External Affairs Lauren Berry, Principal Christina Mullins, Lapis Director Communications Ellen Schultz.

# 

PERMITS

# WHAT PERMITS ARE IN PROCESS?

CCS is a highly regulated industry requiring state and federal permits that take several years to obtain.

GOVERNING ENTITY	PERMIT TYPE	STATUS AND TRACKING	TIMING
Louisiana Dept. of Energy and Natural Resources – Office of Conservation, Injection & Mining	Class VI Injection Permit Typically must receive Class V permit(s) before obtaining Class VI permit.  Coastal Use permits (below table) are required to construct the infrastructure needed to build a Class VI well (road, pad, etc.).	Submitted – view our <u>full</u> <u>Class VI application here</u> .	Estimated end of 2026
	Class V Permit(s)  Monitoring wells (to monitor CO2 once injected), water wells (to monitor water quality), stratigraphic well (to collect geological information).	Received Class V permit for stratigraphic test well – <u>view</u> <u>here</u> .	Received March 27, 2025

GOVERNING ENTITY	PERMIT TYPE	STATUS AND TRACKING	TIMING
Louisiana Dept. of Energy and Natural Resources – Office of Coastal Mgmt.	Coastal Use Permit; required for construction work (well pad, access road, receiving facility, 16-inch flowline) near proposed injection site, located entirely on private property.	Submitted – <u>view here.</u> Comments closed.	2025
U.S. Army Corps of Engineers (Commenting agencies: NOAA Fisheries, U.S. EPA, U.S. Dept. of Interior, U.S. Fish and Wildlife Service)	Section 404 (Clean Water Act) Permit; required for construction work (well pad, access road, receiving facility, 16-inch flowline) near proposed injection site, located entirely on private property.	Submitted – <u>view here.</u> Comments closed.	2025



# WHAT IS A CLASS VI PERMIT?

Class VI is the type of permit needed to inject CO2 underground.

# CLASS VI WELLS ARE SUBJECT TO A RIGOROUS PERMITTING PROCESS.

The time frame from application to injection typically takes years and a number of additional permits from various state and federal agencies.

Class VI wells—the type of well needed to inject CO2 underground for safe, permanent storage—are designed to rigorous standards, more so than oil and gas wells.

# THE LOUISIANA DEPARTMENT OF ENERGY AND NATURAL RESOURCES (LDENR) MANAGES CLASS VI PERMITS.

The state has a tracker where you can see all applications and their status here.

Once the Lapis Class VI permit has undergone further review, LDENR will hold a public hearing. This will likely occur in 2026.

### **KEY PERMITS NEEDED TO START INJECTION:**

- 1. Coastal use permit and section 404 (Clean Water Act) permit to construct the infrastructure needed for a Class VI well.
- 2. Class V permit(s) to conduct geotechnical tests and drill monitoring wells.
- 3. Class VI permit to inject.

- VIEW OUR CLASS VI PERMIT APPLICATION
- VIEW A MORE DETAILED LIST OF PERMITS
- LEARN MORE ABOUT LOUISIANA'S CCS REGULATORY PROCESS



# WHAT DOES A CLASS VI APPLICATION ENTAIL?

Class VI permits are designed to protect public health, the environment, and Underground Sources of Drinking Water (USDWs).

### **APPLICATION REQUIREMENTS:**

While Class VI applications can differ in structure and level of detail, they must cover the below areas:

- 1. Administrative information
- 2. Site characterization
- 3. Area of review and corrective action plan
- 4. Well construction and design
- 5. Testing and monitoring plans
- 6. Post-injection site care and closure
- 7. Emergency and remedial response
- 8. Financial responsibility

### **CLASS VI APPLICATION STEPS:**

- Identify a potential site location. Evaluate site geology, groundwater, and existing wells.
- Create a detailed Class VI application using regulatory guidance.
- Submit application to LDENR. LDENR reviews for completeness.
- Enter technical review. Provide LDENR with new or additional information as requested.
- Complete technical review. LDENR publishes draft permit and schedules public hearing.
- Following public hearing, LDENR issues final decision. If permit is approved, construction commences in line with permit conditions.



# **HOW IS LAPIS' CLASS VI APPLICATION STRUCTURED?**

1. SITE CHARACTERIZATION	Evaluates the site's geologic properties to make sure the proposed well is in a subsurface area well suited to permanent CO <sub>2</sub> storage.
2. PLUME MODEL	Depicts the area underground where $CO_2$ is projected to migrate over time.
3. AREA OF REVIEW AND CORRECTIVE ACTION PLAN	The Area of Review (AOR) defines the region around the injection wells where $CO_2$ might migrate or where the underground pressure is projected to change due to $CO_2$ injection (also known as the 'critical pressure front'). The AOR is created using plume and critical pressure front models. Corrective action plans identify and address risks in the AOR.
4. ENGINEERING DESIGN AND OPERATING STRATEGY	Specifies the parameters of well construction to ensure well integrity.
5. TESTING AND MONITORING PLAN	Defines how an operator will monitor well integrity, including information about monitoring wells, groundwater monitoring wells, and $CO_2$ plume and pressure front monitoring. These plans are in place throughout the life of the project, even after injection.
6. INJECTION WELL PLUGGING PLAN	Details how we will permanently plug the well to prevent fluid movement.
7. POST-INJECTION SITE CARE AND SITE CLOSURE PLAN	Outlines how we will care for and close the site after permanently plugging the well.
8. EMERGENCY AND REMEDIAL RESPONSE PLAN	Provides site-specific emergency response plans, including various risk scenarios, response timelines, and communication plans.
9. FINANCIAL ASSURANCE	Describes the financial instruments we have to cover the cost of corrective action, including plugging, post-injection site care, and emergency response.
10. ENVIRONMENTAL JUSTICE	Reviews the demographics of the communities near our project to evaluate potential impacts to vulnerable communities.
11. IT QUESTIONS	Specific LDENR requirement; details potential environmental impacts and alternatives.

# **CLASS VI FAQ**

### WHAT'S THE STATUS OF YOUR CLASS VI APPLICATION?

Our application has been marked administratively complete but has not started technical review. We submitted our application in Nov. 2024.

### HOW OFTEN IS THE CLASS VI APPLICATION EDITED?

Once the application goes into technical review, it is continuously iterated based on LDENR feedback. We don't anticipate LDENR posting updates until the application reaches the "draft permit" phase, but will post permit updates to our website periodically.

### WILL THE PUBLIC BE INFORMED OF APPLICATION EDITS?

We will regularly update the <u>permit on our website</u> once it reaches the technical review phase (timing TBD).

### WHY IS SOME INFORMATION REDACTED IN YOUR APPLICATION?

We're committed to transparency. We have minimized redactions to copyrighted or proprietary commercial information. For example, we redacted proprietary seismic data because it reflects significant commercial investment and competitive subsurface insights. Revealing that information could undermine our ability to compete fairly and protect our project investments. Regulators have full access to all data to ensure project safety and integrity.

### WHEN WILL A PUBLIC HEARING BE HELD?

We do not yet have clarity on a potential public hearing date for our Class VI permit application. We will have a better idea once our application enters technical review. In the meantime, we will conduct additional information sessions and events, which will be announced on <a href="mailto:Facebook">Facebook</a>. If you have a question in the meantime, please reach out to <a href="mailto:info@lapiscarbonsolutions.com">info@lapiscarbonsolutions.com</a> — we'd love to hear from you.

### WHO IS INVOLVED WITH YOUR CLASS VI APPLICATION?

While Lapis internal experts completed the majority of our Class VI application, we also employed third-party firms to assist in preparing the application, as is common with Class VI applications. This includes Lonquist Sequestration, a third-party that helped us ensure our application was as comprehensive as possible. We also employ a local environmental firm which has extensive experience in the unique environmental conditions of St. Charles Parish.

### WHY ARE THERE DIFFERENT ENTITY NAMES LISTED ON YOUR APPLICATION?

We changed our name from Lapis Energy to Lapis Carbon Solutions in 2025 to better reflect what we do. The names listed on the application reflect our former name and our registered name in the state of Louisiana, as well as the project name.





# 

### RECENT COMMUNITY QUESTIONS

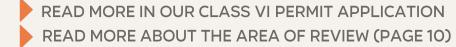
Most community questions are answered in the preceding slides. More specific and recent community questions can be found in the following slides.

# WHERE ARE NEARBY FORMER OIL AND GAS WELLS?

There are ~10 former oil and gas wells within the "Area of Review," which consists of the plume (the area where CO2 is projected to move once underground) and the critical pressure front (the area where underground pressure is projected to change as a result of injection).

We will re-plug and abandon wells within the plume in line with Class VI standards using CO2-resistant cement in line with the schedule on the right. Additional details are included in our Class VI application, starting on page 351.

WELL NAME	STATUS	PLANNED CORRECTIVE DATE
Lydia B. Simoneaux ET AL	Plugged	Within 10 years of injection initiation
Lydia B. Simoneaux ET AL	Plugged	Within 10 years of injection initiation
St. Charles LD & Trust Co.	Plugged	Within 10 years of injection initiation
Simoneaux Family Land LLC	Plugged	Within 10 years of injection initiation
Simoneaux Family Land LLC	Plugged	Within 10 years of injection initiation
Simoneaux Family Land LLC	Plugged	Within 10 years of injection initiation
SJ Simoneaux	Plugged	Within 5 years post-injection
Simoneaux	Plugged	Within 5 years post-injection
L B Simoneaux Et AL	Plugged	Within 30 years post-injection
L B Simoneaux	Plugged	Within 50 years post-injection



# IS LAPIS INJECTING ANYTHING OTHER THAN CO2?

# WE MUST INJECT A STREAM THAT IS MADE UP OF 97% OR MORE CO2 PER OUR CLASS VI APPLICATION.

Class VI permits require companies to detail the makeup of their "injectate" – the technical term for the CO2 that is injected underground for permanent storage. Our injectate **must always be 97% or more CO2**, with the other 3% representing trace amounts of allowable impurities. Our injectate quality specifications are provided on page 676 of our Class VI application.

# INJECTATE IS CONSTANTLY TESTED TO ENSURE WE ARE IN LINE WITH PERMITTED LIMITS.

Our CO2 stream is tested before injection to ensure it meets permitted standards. If at any point the CO2 stream is out of spec, injection automatically stops.



# WHAT HAPPENED IN LAKE NYOS, CAMEROON?

Lake Nyos was a limnic eruption, a rare occurrence caused by conditions unique to areas with volcanic activity.

### WHAT HAPPENED:

In 1986, Lake Nyos—a deep volcanic lake in Cameroon—exploded in what scientists believe was a limnic eruption.

The limnic eruption was caused by the build-up of natural carbon dioxide from magma at the bottom of the lake. The CO2 eventually reached too high a concentration, and a still-unknown catalyst caused the CO2 to rise out of the lake and down into the nearby valley. (Source: NASA)

### COULD SOMETHING SIMILAR HAPPEN IN ST. CHARLES PARISH?

No. First, we're injecting underground, where CO2 has space to move and pressure dissipates over time. Second, Libra lacks the conditions (volcanic activity, little temperature variation, lake) that would lead to a limnic eruption. Third, we will have monitoring systems in place that enable us to see pressure build up and dissipation, as well as movement, and take action if needed.

### CONDITIONS NEEDED FOR LIMNIC REACTIONS:

A very deep lake, typically in a volcanic area, where CO2 released by magma accumulates at the bottom of the lake.

Warm to hot weather year-round with very little variation, which in turn means water stays stagnant and does not release gas.

A sudden disturbance, whether a landslide, heavy rainstorm, earthquake, volcanic eruption, or rapid temperature change.



# WHAT HAPPENED IN SULPHUR, LOUISIANA?

### WHAT HAPPENED:

In 2024, an estimated 2,548 barrels of CO2 leaked from a pipeline at a pump station in Sulphur, Louisiana. The leak triggered a shelter-in-place order for those within a quarter mile of the leak until it was repaired. No injuries or serious illnesses were reported and the cause of the leak has yet to be publicly announced.

### **HOW WOULD LAPIS RESPOND?**

In a similar situation, we would detect a pressure loss and be able to take action remotely. We would also activate our emergency response plan, alerting local emergency responders and community members. Once the immediate threat was passed, we would repair the pipeline and conduct a thorough analysis to determine the root cause. We would then share these findings publicly.

# WHAT CAN LAPIS DO TO PREVENT SOMETHING SIMILAR FROM HAPPENING?

We will have 24/7, real-time monitoring alerting us to pressure changes in the pipeline. We also routinely and rigorously inspect our pipeline to spot potential issues before they occur.



# IS LAPIS STORING CO2 UNDER LAKE SALVADOR?

### NO, PROJECT LIBRA IS ABOUT SIX MILES FROM LAKE SALVADOR.

The project is located completely on private property and designed to maximize use of existing infrastructure and minimize potential disruption.

The plume—the distance CO2 will travel once injected underground—is also not under Lake Salvador.

The U.S. Army Corps of Engineers (USACE) is responsible for waters of the U.S., including wetlands. Our project is located in wetlands that are considered by the USACE to be tied to the Lake Salvador System, which is why the USACE stated that our project will "affect the waters of Lake Salvador," meaning it is in scope of USACE review. In terms of its impact, the project is located six miles away and outside of the Salvador Wildlife Management Area and is not projected to have any impacts to Lake Salvador or the Lake Salvador Wildlife Management Area.





# **JUNE 2025 SUMMARY UPDATES**

We will maintain a list of significant updates so stakeholders can track changes month over month.

- Reordered presentation to more quickly answer frequently asked stakeholder questions.
- Page 4: Revised graphic to reflect the *specific* Libra subsurface, rather than a general subsurface graphic.
- Page 8: Revised graphic to use official USGS patterns.
- Page 10: Changed "pipeline" to "flowline," added receiving facility pad to map.
- Page 11: Changed "pipeline" to "flowline." Added definitions for pipelines and flowlines.
- Page 13: Added slide on monitoring.
- Page 15: Added elevation maps to demonstrate topographical differences between Satartia and St. Charles Parish, added information about pipeline monitoring and results of SCP EOC modeling.
- Page 18: Added slide on local benefits to St. Charles Parish.
- Page 19: Adjusted language about CCS and project education to reflect recent engagements and clarifying firehouse meeting date.
- Page 21: Changed "pipeline" to "flowline."
- Page 27: Added slide on former oil and gas wells and remediation.
- Page 28: Added slide on injectate in response to community questions about what's being injected.
- Page 29: Added slide on Lake Nyos in response to community questions about similarities between Project Libra and Lake Nyos.
- Page 30: Added slide on Sulphur, LA leak in response to community questions about how we would prevent something similar from happening.



© 2025 LAPIS CARBON SOLUTIONS

