

State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

February 6, 2026

Taylor Pearson
Benjamin Warms
Jessica Anderson
Christopher Knop
Clayton Sanders

VIA EFILE TEXAS

RE: SOAH Docket Number 582-25-08210; TCEQ No. 2024-1222-MSW-E; *The Executive Director of the Texas Commission on Environmental Quality v. Carbon Sequestration, Inc.*

Dear Parties:

Please find attached a Proposal for Decision in this case.

Any party may, within 20 days after the date of issuance of the PFD, file exceptions or briefs. Any replies to exceptions, briefs, or proposed findings of fact shall be filed within 30 days after the date of issuance on the PFD. 30 Tex. Admin. Code § 80.257.

All documents to be filed must clearly reference these assigned docket numbers. Exceptions, briefs, and replies along with certification of service to the above parties and the ALJ shall be filed with the Chief Clerk of the TCEQ electronically at <http://www14.tceq.texas.gov/epic/eFiling/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

CC: Service List

**BEFORE THE
STATE OFFICE OF ADMINISTRATIVE
HEARINGS**

**EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY,
PETITIONER**

v.

**CARBON SEQUESTRATION, INC.,
RESPONDENT**

TABLE OF CONTENTS

I.	Jurisdiction, Notice, and Procedural History	2
II.	Alleged Violations.....	3
III.	Applicable Law	4
	A. Municipal Solid Waste Disposal	4
	B. Recycling and Recyclable Material.....	5
	C. Enforcement	7

IV.	Stipulations Regarding Calculation of Administrative Penalties	8
V.	Evidence	8
A.	Background.....	9
1.	NOI Application Process	9
2.	CSI’s Recycling NOI	9
3.	Investigation	11
4.	Amended NOI Application	13
B.	Testimony of Charles Cullens, Jr.	13
1.	Credentials	13
2.	Investigation and Site Visit of the Facility	14
3.	Unauthorized Disposal of MSW Violation.....	16
4.	Failure to Notify Violation	19
C.	Testimony of Dr. James Gooding.....	20
1.	Credentials	20
2.	Geotechnical Analysis of the Facility	21
3.	Distinguishing the Facility from a Landfill	23
4.	Puro.Earth and Terrestrial Storage of Biomass	23
5.	Carbon Offsets and CORCs	24
D.	Testimony of Tiffany Chu	26
1.	Credentials	26
2.	Recommended Technical Requirements for CSI	26
E.	Deposition Testimony of Courtney Gooris	28

VI.	Analysis	29
A.	Unauthorized Disposal of MSW Violation.....	30
1.	Arguments of the Parties.....	30
2.	Analysis	32
B.	Notice Violation.....	33
1.	Arguments of the Parties.....	34
2.	Analysis	35
C.	Proposed Penalty and Corrective Actions	36
VII.	Recommendation.....	38
I.	Findings of Fact	2
II.	Conclusions of Law.....	5

TABLE OF ABBREVIATIONS

ABBREVIATION	MEANING
ALJ	Administrative Law Judge
Commission	Texas Commission on Environmental Quality
CORC	Carbon Dioxide Removal Certificate
CSI	Carbon Sequestration, Inc.
ED	Executive Director of the Texas Commission on Environmental Quality
EDPRP	Executive Director's Preliminary Report and Petition
Facility	Carbon Sequestration, Inc's Hardin Facility
MSW	Municipal Solid Waste
NOI	Notice of Intent
OPIC	Office of Public Interest Counsel
SOAH	State Office of Administrative Hearings
TSB	Terrestrial Storage of Biomass

SOAH Docket No. 582-25-08210

TCEQ Docket No. 2024-1222-MSW-E

**BEFORE THE
STATE OFFICE OF ADMINISTRATIVE
HEARINGS**

**EXECUTIVE DIRECTOR OF THE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY,
PETITIONER**

v.

**CARBON SEQUESTRATION, INC.,
RESPONDENT**

PROPOSAL FOR DECISION

The Executive Director (ED) of the Texas Commission on Environmental Quality (Commission) alleges that Carbon Sequestration, Inc. (CSI) caused, suffered, allowed, or permitted the unauthorized disposal of municipal solid waste (MSW) – in the form of wood waste – and failed to provide written notice to the ED of changes to the waste management methods utilized at CSI’s Hardin Facility (Facility). The ED requests that the Commission assess an administrative penalty of \$5,625 for these violations and order CSI to take certain corrective actions.

Based on the evidence presented at the hearing, the Administrative Law Judge (ALJ) recommends the Commission (1) find that CSI committed the alleged violations and that the proposed penalty is just and in accordance with applicable law and the Commission's penalty policy; and (2) order CSI to pay the proposed administrative penalty and implement the ED's proposed corrective actions.

I. JURISDICTION, NOTICE, AND PROCEDURAL HISTORY

At the preliminary hearing, CSI argued that the State Office of Administrative Hearings (SOAH) did not have jurisdiction over this case because CSI filed suit against the Commission in Travis County District Court.¹ Upon review of the arguments of the parties, the ALJ found SOAH had jurisdiction over this enforcement proceeding.² CSI's jurisdictional argument was not renewed during the hearing on the merits.

As to notice, CSI contends the ED alleged a new violation during the hearing – specifically that CSI was not composting despite having authorization to do so. The ALJ finds this contention without merit. As described below, the ED alleged, in part, that CSI failed to provide written notice of changes to its waste management methods at the Facility by conducting activities not authorized under CSI's Notice of Intent (NOI). Though the NOI indicated that CSI's primary business was biochar production resulting from composting and mulching, the violation was not based on

¹ ED Ex. 2. The copy of CSI's original petition filed in Travis County District Court did not include the cause number of that proceeding or complete court information. In that matter, CSI sought monetary relief and alleged that the Commission's recommendation to cease operations threatened CSI's future earnings. No further documentation regarding this matter was provided, and its current status is unknown.

² Tex. Water Code §§ 5.013, 7.002.

CSI's failure to compost but rather its failure to notify the Commission that it was engaged in a completely different, unauthorized waste management activity.³ The record demonstrates that CSI was on notice as to the allegation regarding CSI's failure to notify the ED of changes to the waste management methods at the Facility.⁴ Accordingly, the ALJ finds notice was sufficient in this matter.

SOAH ALJ Whitney L. Stoenner convened the hearing on the merits via Zoom videoconference on October 16, 2025. The ED was represented by attorneys Taylor Pearson and Benjamin Warms. CSI appeared through its Chief Executive Officer/attorney Christopher Knop and attorney Clayton Sanders. Attorney Jessica Anderson represented the Office of Public Interest Counsel (OPIC). The record closed December 17, 2025, with the filing of reply briefs.

II. ALLEGED VIOLATIONS

The Commission alleges CSI committed the following violations:⁵

- CSI caused, suffered, allowed or permitted the unauthorized disposal of MSW in violation of 30 Texas Administrative Code section 330.15(a), (c); and
- CSI failed to provide written notice to the ED of any changes concerning waste management methods by conducting activities not authorized under its NOI in violation of 30 Texas Administrative Code section 330.11(b).

³ ED Ex. 8; CSI Ex. A.

⁴ ED Exs. 1, 5.

⁵ ED Ex. 1.

III. APPLICABLE LAW

A. MUNICIPAL SOLID WASTE DISPOSAL

The Commission has enforcement authority over violations of the state’s solid waste disposal programs.⁶ MSW is defined as solid waste resulting from, or incidental to, municipal, community, commercial, institutional, and recreational activities, including garbage, rubbish, ashes, street cleanings, dead animals, abandoned automobiles, and all other solid waste other than industrial solid waste.⁷ With certain exceptions not applicable here, no person may cause, suffer, allow, or permit any activity of storage, processing, removal, or disposal of any solid waste unless such activity is authorized by permit or other authorization from the Commission.⁸ Under the rules adopted by the Commission regarding the management of MSW, a person⁹ may not, in part:

- cause, suffer, allow, or permit the collection, storage,¹⁰ transportation, processing, or disposal¹¹ of MSW in violation of the Texas Health and

⁶ Tex. Water Code §§ 5.013(a)(11), 7.002. Unless otherwise noted, the ALJ has cited the substantive law in effect at the time the investigation occurred on May 21, 2024, and the current procedural rules.

⁷ Tex. Health & Safety Code § 361.003(20); 30 Tex. Admin. Code § 330.3(90).

⁸ Tex. Admin. Code § 330.7(a).

⁹ A person is “an individual, corporation, organization, government or governmental subdivision or agency, business trust, partnership, association, or any other legal entity.” Tex. Health & Safety Code § 361.003(23).

¹⁰ Storage is the “keeping, holding, accumulating, or aggregating of solid waste for a temporary period, at the end of which the solid waste is processed, disposed, or stored elsewhere.” 30 Tex. Admin. Code § 330.3(156). The Texas Health and Safety Code defines storage as “the temporary holding of solid waste, after which the solid waste is processed, disposed of, or stored elsewhere.” Tex. Health & Safety Code § 361.003(38).

¹¹ Disposal is the “discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste (whether containerized or uncontainerized) into any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwater.” Tex. Health & Safety Code § 361.003(7); 30 Tex. Admin. Code § 330.3(44).

Safety Code, or any regulations, rules, permit, license, or order of the Commission; or

- cause, suffer, allow, or permit the dumping or disposal of MSW without the written authorization of the Commission.¹²

Any person who intends to store, process, or dispose of MSW has a continuing obligation to provide prompt written notice to the ED of “any changes or additional information concerning waste type, waste management methods, facility engineering plans and specifications, and geology and hydrogeology at the facility ... authorized in any permit or registration, or stated in any application filed with the [ED].”¹³

B. RECYCLING AND RECYCLABLE MATERIAL

Recycling is defined as, “a process by which materials that have served their intended use or are scrapped, discarded, used, surplus, or obsolete are collected, separated, or processed and returned to use in the form of raw materials or feedstocks used in the manufacture of new products.”¹⁴ Recyclable material may become solid waste if it is abandoned or disposed of rather than recycled.¹⁵ By definition, recyclable material is material that has been recovered or diverted from the waste stream for purposes of reuse, recycling, or reclamation, a substantial

¹² 30 Tex. Admin. Code § 330.15(a), (c).

¹³ 30 Tex. Admin. Code § 330.11(b).

¹⁴ Tex. Health & Safety Code § 361.421(8); 30 Texas Admin. Code § 330.3(129).

¹⁵ 30 Tex. Admin. Code § 330.3(128).

portion of which is consistently used in the manufacture of products that may otherwise be produced using raw or virgin materials.¹⁶

The Commission has placed limitations on the storage of recyclable materials.¹⁷ A facility accumulating recyclable material must show the material is potentially recyclable and has an economically feasible means of being recycled.¹⁸ Within 270 days from the commencement of a new facility's operations, the amount of material recycled, or transferred to a different site for recycling, must equal at least 25% weight by volume of the material accumulated 90 days from the commencement of the new facility's operation.¹⁹ During each subsequent six-month period, the amount of material that is recycled or transferred to a different site for recycling, must equal at least 50% by weight or volume of the material accumulated at the beginning of the period.²⁰ A recycling facility that fails to comply with the limitations on the storage of recyclable materials shall be required, if directed by the ED, to obtain a permit or registration as a MSW facility.²¹

¹⁶ Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128). There are minor differences between the definitions of recyclable material contained in the Texas Health & Safety Code and Texas Administrative Code; however, the definitions are substantially similar. Pertinent to this case, both require that a substantial portion of the recyclable material is consistently used in the manufacture of products that may otherwise be produced using raw or virgin materials.

¹⁷ 30 Tex. Admin. Code § 328.4.

¹⁸ 30 Tex. Admin. Code § 328.4(b)(1).

¹⁹ 30 Tex. Admin. Code § 328.4(b)(2). The rule also provides timelines related to the effective date of the rule, which are not applicable to the instant case as the current version of the rule has been in effect since September 10, 2009.

²⁰ 30 Tex. Admin. Code § 328.4(b)(3).

²¹ 30 Tex. Admin. Code § 328.4(c).

C. ENFORCEMENT

Pursuant to Texas Water Code section 7.051, the Commission can assess administrative penalties for the violation of a provision of the Texas Health and Safety Code that is within the Commission’s jurisdiction or a rule, order, or permit issued by the Commission.²² With exceptions that are not applicable here, the amount of the penalty cannot exceed \$25,000 per day for each violation.²³ The Commission must consider certain factors when setting an administrative penalty.²⁴ The Commission may also order a person who has violated any statute or rule within the agency’s jurisdiction to take corrective action.²⁵

In an enforcement case, the ED has the burden of proving the occurrence of the alleged violations and the appropriateness of any proposed technical ordering provision.²⁶ CSI has the burden of proving all evidence of any affirmative defense asserted.²⁷ The burden of proof is by a preponderance of the evidence.²⁸

²² Tex. Water Code § 7.051(a)(1), .073(1).

²³ Tex. Water Code § 7.052(c).

²⁴ Tex. Water Code § 7.053. These factors include: (1) the nature, circumstances, extent, duration, and gravity of the prohibited act, with special emphasis on the impairment of existing water rights or the hazard or potential hazard created to the health or safety of the public; (2) the impact of the violation on air quality, receiving streams or underground water reservoirs, instream uses, water quality, aquatic and wildlife habitat, or beneficial freshwater inflows to bays and estuaries, or affected persons; (3) with respect to the alleged violator, the history and extent of previous violations, degree of culpability, demonstrated good faith, economic benefit gained through the violation, and amount necessary to deter future violations; and (4) any other matters that justice may require.

²⁵ Tex. Water Code § 7.073(2).

²⁶ 30 Tex. Admin. Code § 80.17(b).

²⁷ 30 Tex. Admin. Code § 80.17(b).

²⁸ 30 Tex. Admin. Code § 80.17(b).

IV. STIPULATIONS REGARDING CALCULATION OF ADMINISTRATIVE PENALTIES

On October 28, 2025, the parties filed the following written stipulations:²⁹

- The assessed penalty of \$5,625 was calculated in accordance with the Commission’s Penalty Policy, Revision 5, effective January 28, 2021.
- If the ALJ finds the ED has proven the violations, the proposed penalty of \$5,625 is the correct penalty to assess against CSI.

V. EVIDENCE

The ED offered sixteen exhibits, which were admitted, and presented the testimony of Commission environmental investigator Charles Cullens, Jr. and Tiffany Chu, who at the time of the underlying investigation served as Enforcement Coordinator with the Commission.³⁰ CSI offered thirteen exhibits, which were admitted, and provided the testimony of interdisciplinary geoscientist, Dr. James Gooding.³¹

²⁹ As discussed below, in its Reply Brief, CSI now contends that no administrative penalty should be imposed even if the violations are sustained.

³⁰ Ms. Chu now serves as the Team Leader in the Water Division. ED’s Exhibits ED-1 through ED-4 were admitted at the preliminary hearing. The ED’s exhibits included: Ex. 1 (Preliminary Report); Ex. 2 (Answer); Ex. 3 (Referral Letter); Ex. 4 (Notice of Hearing); Ex. 5 (Commission’s Investigation Report); Ex. 6 (Penalty Calculation Worksheet); Ex. 7 (Compliance History Report); Ex. 8 (CSI’s NOI Application 2021); Ex. 9 (NOI Acceptance Letter 2021); Ex. 10 (Carbon Removal Reference Price Indexes: Market Data); Ex. 11 (CSI’s NOI Application 2025); Ex. 12 (NOI Denial Letter 2025); Ex. 13 (CSI’s Correspondence 2025); Ex. 14 (Commission’s Response to CSI’s 2025 Correspondence); Ex. 15 (Terrestrial Storage of Biomass); and Ex. 16 (Penalty Policy).

³¹ CSI’s Exhibits included: Ex. A (Initial NOI and Acceptance); Ex. B (CSI Amended NOI); Ex. C (Email Correspondence September 9, 2024); Ex. D (Email Correspondence August 12, 2025); Ex. E (Geoclimate EIA-ERA-CSI Hardin County); Ex. F (Geotechnical Analysis); Ex. G (Puro.Earth TSB); Ex. H (Framework of Voluntary Carbon Markets and Carbon Accounting); Ex. I (Carbon Removal Tracking by Nasdaq); Ex. J (Market for Carbon Removal Credits backed by Physical Products); Ex. K (Deposition Transcript of Courtney Goorins); Ex. L (Blackrock x CSI Supplier Agreement and Supplier Framework); and Ex. M (CSI MRV Trust Agreement).

A. BACKGROUND

1. NOI Application Process

When an entity seeks to conduct a regulated activity at a given location, the entity submits an NOI to the Commission's MSW Permits Division for review.³² The Permits Division conducts an initial inspection of the facility to determine the type of activity that is occurring, whether any equipment referenced in the NOI is present on the site, and the feasibility of the proposed site as related to the activity identified in the NOI.³³ Once this inspection is complete, the Permits Division issues an acknowledgement to the entity concerning the acceptance of the NOI.³⁴

2. CSI's Recycling NOI

The Facility is located on 45.32 acres in an undeveloped area of Hardin County, Texas.³⁵ On December 9, 2021, CSI submitted an application for a recycling NOI for the Facility.³⁶ CSI indicated the Facility's primary business would

³² Rec. 1 (Cullens) at 00:47:34. A written transcript was not created for this hearing, and the audio recording was separated into two parts. Citations to the audio recording are referenced as "Rec," followed by the number of the recording (either part one or part two), the identity of the witness, and the approximate timestamp.

³³ Rec. 1 (Cullens) at 00:47:34.

³⁴ Rec. 1 (Cullens) at 00:47:34.

³⁵ Rec. 1 (Cullens) at 1:02:48, 2:25:09; ED Ex. 5 at 00008.

³⁶ ED Ex. 8; CSI Exs. A-B.

be the production of biochar.³⁷ Specifically, CSI stated it would compost³⁸ and/or mulch³⁹ clean wood materials, which would be stored outside prior to recycling and then buried in an anaerobic pit.⁴⁰ After sufficient decomposition of the wood, CSI would exhume the material and burn it in a biochar kiln to create biochar.⁴¹ CSI specified that an excavator to bury and exhume materials and a biochar kiln would be used for the operations at the Facility.⁴² Further, CSI stated that, within 270 days from the commencement of the operation, the amount of material recycled by the Facility or transferred to a different site for recycling would equal at least 25% by weight or volume of the material accumulated within 90 days of the commencement of operations.⁴³ In addition, CSI stated the Facility would recycle and/or transfer at least 50% by weight or volume of each type of material stored at the beginning of each six-month period by the end of that period.⁴⁴

³⁷ ED Ex. 8 at 00049; CSI Ex. A at 000002. Biochar is created through the process of pyrolysis which involves the heating of wood in a special oven that gradually increases the temperature in a non-chemically reactive atmosphere, so that biopolymers decompose and are converted into a material that is less likely to decay. Biochar may subsequently be used as a soil amendment because it is beneficial for plant growth. Rec. 2 (Gooding) at 2:18:33.

³⁸ Composting is the controlled biological decomposition of organic materials through microbial activity. Tex. Health & Safety Code § 361.421(2); 30 Tex. Admin. Code § 330.3(31).

³⁹ Mr. Cullens described mulching as the process of grinding wood waste or allowing it to partially decompose and then enriching the wood waste with soil. Rec. 1 (Cullens) at 1:16:28.

⁴⁰ ED Ex. 8; CSI Ex. A at 000005.

⁴¹ ED Ex. 8 at 00052-53; CSI Ex. A at 000005-06.

⁴² ED Ex. 8 at 00053; CSI Ex. A at 000005.

⁴³ ED Ex. 8 at 00052; CSI Ex. A at 000005. The time limits detailed by CSI are consistent with the requirements of 30 Texas Administrative Code section 328.4(b) detailed above.

⁴⁴ ED Ex. 8 at 00052; CSI Ex. A at 000005.

On February 23, 2022, Commission Inspector Michael Grubbs conducted an initial NOI investigation of the Facility, in order to review the NOI and any activity occurring at the site.⁴⁵ At that time, Mr. Grubbs did not document any potential violations or concerns.⁴⁶ On June 3, 2022, the ED approved CSI to operate as a recycling facility that accepts clean wood materials to be recycled into biochar.⁴⁷

3. Investigation

On May 21, 2024, Commission investigators conducted an investigation of the Facility.⁴⁸ During the investigation, the investigators determined CSI failed to comply with prohibitions regarding the collection, storage, transportation, processing, or disposal of MSW and failed to notify the ED of changes to the activities being conducted at the Facility.⁴⁹ Specifically, rather than engaging in the activities identified in the NOI, CSI placed wood waste in subterranean vaults where, according to CSI, it would remain buried for at least 100 years.⁵⁰ CSI contended the buried wood constituted recycled material, which would eventually produce carbon credits used to offset carbon emissions.⁵¹ These credits are sold as Carbon Dioxide

⁴⁵ Rec. 1 (Cullens) at 2:23:58.

⁴⁶ Rec. 1 (Cullens) at 2:23:58.

⁴⁷ ED Ex. 9 at 00061-62; CSI Ex. A at 000014-15.

⁴⁸ ED Ex. 5.

⁴⁹ ED Ex. 5.

⁵⁰ Rec. 1 (Cullens) at 1:04:56, 1:31:09.

⁵¹ Rec. 1 (Cullens) at 1:32:03.

Removal Certificates (CORCs).⁵² A CORC is a tradable digital asset that represents a tonne⁵³ of carbon dioxide that has been removed from the atmosphere.⁵⁴

On July 26, 2024, the ED issued a Notice of Violation citing two violations, including: (1) failure to comply with general provisions for the collection, storage, transportation, processing, or disposal of MSW; and (2) failure to provide prompt written notice to the ED of any changes to facility plans, waste management methods, and specifications regarding an authorized registration or stated in any application filed with the ED.⁵⁵ The ED assessed an administrative penalty and recommended corrective action.⁵⁶ Specifically, the corrective action would require CSI to: (1) immediately cease disposal of any MSW at the Facility; (2) within 30 days, remove all MSW from the Facility, dispose of it at an authorized facility, and submit a notice to cancel authorization to the Commission; (3) within 45 days,

⁵² Rec. 2 (Gooding) at 2:11:15.

⁵³ A tonne is a unit of mass equivalent to 1,000 kilograms, which is also known as a “metric tonne.” CSI Ex. G at 000161.

⁵⁴ ED Ex. 10. The ED contends a CORC is a digital asset, while CSI contends it is a physical asset. The issue of whether a CORC is a digital or physical asset is not dispositive. As discussed below, because the waste material is not consistently used in the manufacture of products that may otherwise be produced using raw or virgin materials and because CSI did not meet the time limits regarding the storage of recyclable materials, the material is not recyclable.

⁵⁵ ED Ex. 5 at 00002.

⁵⁶ ED Ex. 6. The penalty calculation worksheet states the final subtotaled penalty as \$5,625 and the final assessed penalty and “payable penalty” as \$6,250. The penalty calculation worksheet reflects that the ED applied a 10% reduction for a high performer classification, reducing the final subtotal to \$5,625. However, the ED also recommended an 11.1% increase of the final subtotal to offset the high performer reduction, which, according to the penalty worksheet, resulted in a final penalty amount of \$6,250. The discrepancy between these calculations was not explained; however, the parties have stipulated that the proper penalty amount, should the violations be sustained, is \$5,625.

submit a written certification including supporting documentation to demonstrate compliance with the first two provisions.⁵⁷

4. Amended NOI Application

In 2025, CSI submitted an amended NOI application.⁵⁸ The amended NOI listed the primary business of CSI as biochar production.⁵⁹ The NOI further stated that the wood materials would be utilized as a “physical CORC” for the duration of the CORC contract and then would become recyclable materials and feedstock for biochar.⁶⁰ The ED determined the process detailed in CSI’s amended NOI application did not meet the definition of recycling.⁶¹

B. TESTIMONY OF CHARLES CULLENS, JR.

1. Credentials

Mr. Cullens is an expert in the Texas statutes and rules related to MSW, and the Commission’s policies and procedures as related to investigations and the enforcement of those statutes and rules. He has a bachelor’s degree in environmental science and has worked for the Commission as an environmental investigator since 2022. In that capacity, Mr. Cullens is responsible for conducting environmental

⁵⁷ ED Ex. 1 at 0006 (Corrective Action Ordering Provisions 13.a-c).

⁵⁸ ED Ex. 11; CSI Ex. B.

⁵⁹ ED Ex. 11 at 00069; CSI Ex. B at 000018.

⁶⁰ ED Ex. 11 at 00073; CIS Ex. B at 000022.

⁶¹ ED Ex. 12.

investigations of MSW facilities in the Beaumont region. He has completed investigation training and the MSW Solid Waste Class A License course.⁶² Mr. Cullens conducts approximately three to five investigations per month, in addition to facilitating complaint investigations and assisting other investigators. The majority of the investigations he has conducted are MSW investigations.

2. Investigation and Site Visit of the Facility

Mr. Cullens and Commission investigator Emily Crouch conducted an inspection of the Facility on May 21, 2024.⁶³ The investigators confirmed CSI's ownership of the Facility through the Hardin County Appraisal District. CSI did not contest ownership of the property. As owner, CSI is responsible for violations cited during the investigation. The investigators conducted a site visit to identify activities specified in the NOI, which included composting operations, the temporary burial⁶⁴ and removal of material, and the creation of biochar.

Mr. Cullens entered the Facility through an unimproved road. At the entrance, he observed a scale used for the intake of wood waste; however, no other structures or equipment were present on the property, which was flat and had been cleared with some standing water located adjacent to a large dome of soil or clay. He

⁶² This course is required for individuals who operate permitted MSW facilities.

⁶³ Mr. Cullens testified that Ms. Crouch no longer works for the Commission and was unavailable to testify at the hearing. According to Mr. Cullens, though Ms. Crouch wrote the investigative report, he was present for the investigation and assisted Ms. Crouch.

⁶⁴ According to Mr. Cullens, temporary burial would refer to a storage method rather than a process method.

observed wood waste that had been deposited in the standing water.⁶⁵ According to Mr. Cullens, none of the wood on the property, either buried or on the surface, was being put to beneficial use.

The investigators met with Mr. Knop, who explained that CSI had constructed wood vaults on the site, placed wood waste in these vaults, and covered the wood with a layer of soil. Mr. Cullens acknowledged that wood burial was listed in the NOI and agreed that, during the investigation, Mr. Knop was forthright about the use of wood burial on the Facility. According to Mr. Cullens, Mr. Knop identified a flat area as Wood Vault No. 1 and the dome as Wood Vault No. 2;⁶⁶ both wood vaults had PVC piping installed, which Mr. Knop stated was used to monitor gas emissions generated by the buried wood.⁶⁷ Mr. Cullens observed some erosion on the cover of Wood Vault No. 2.⁶⁸

Mr. Knop stated that approximately 4,682 tons of wood waste was present on the site.⁶⁹ According to Mr. Cullens, the investigation demonstrated that CSI was

⁶⁵ ED Ex. 5 at 00035.

⁶⁶ The evidence demonstrated some confusion regarding the design of Wood Vault No. 2. Based on his discussions with Mr. Knop at the time of the site visit, it was Mr. Cullens's understanding that the wood vault was inside the dome. Mr. Cullens, however, acknowledged he did not review the geotechnical vault design and contended the structure of the wood vault was not pertinent to this investigation. CSI argues that what Mr. Cullens perceived to be the cover to the vault was merely excess fill dirt and was not actually the cap for Wood Vault No. 2. Rather, according to CSI's argument, the wood was buried at surface level, beneath the pile of fill dirt and underground. The ALJ does not find this discrepancy to be relevant to the instant matter. It is uncontested that wood was buried at the Facility and this serves as the basis for the violations.

⁶⁷ ED Ex. 5 at 00033.

⁶⁸ ED Ex. 5 at 00034. As discussed below, erosion is one of the environmental concerns arising from CSI's activity at the Facility.

⁶⁹ ED Ex. 5 at 00008.

not recycling at least 25% of weight or volume of the wood waste brought to the site within the first 90 days of the Facility's operation, nor was it recycling at least 50% of the weight or volume of the wood waste accumulated at the Facility at the beginning of any six month period following the initial 270 days of operation.⁷⁰

Though CSI indicated in its recycling NOI that the Facility was conducting composting and/or mulching, Mr. Cullens did not identify any operations on the site that indicated these activities were occurring.⁷¹ He opined that the wood vaults were not creating mulch, and CSI never indicated that the vaults were being used for that purpose. According to Mr. Cullens, the burial of wood alone does not constitute composting. In addition, Mr. Cullens did not observe any sign that the Facility was engaged in the ongoing production of biochar.

3. Unauthorized Disposal of MSW Violation

Mr. Cullens explained that state law prohibits the unauthorized disposal of MSW, which he described as any waste that is created from municipal activity that is not considered to be industrial, hazardous waste.⁷² Depositing material in the ground is a form of disposal. According to Mr. Cullens, wood becomes waste when the generator of the material offers it as waste. Phrased another way, when the generator of wood decides there is no longer a viable use for the wood on their

⁷⁰ 30 Tex. Admin. Code § 328.4(b)(2)-(3).

⁷¹ Tex. Health & Safety Code § 361.421(2); 30 Tex. Admin. Code § 330.3(31).

⁷² 30 Tex. Admin. Code § 330.15(a), (c). According to Mr. Cullens, individuals may dispose of a limited amount of wood waste on their own property without acquiring a MSW permit, through burial or burning. Here, however, the volume of the wood at issue is an important factor in considering the environmental impact and potential harm.

property, the wood is deemed waste. For example, wood debris from land clearing operations is MSW, but if wood is cut down for firewood, it is no longer considered waste. If wood is left to rot, the subsequent degradation may leave the property and enter nearby watersheds. Mr. Cullens stated that the issue of whether wood is clean is not dispositive of whether it is waste. Here, the investigation determined CSI was disposing of or storing MSW at the Facility without a permit.

Mr. Cullens equated CSI's activity as analogous to a landfill. Like a landfill, CSI buried the wood and capped it. While CSI claims it has implemented measures and controls regarding the decomposition of the wood, Mr. Cullens contends landfills also have measures to monitor buried MSW. In addition, while Mr. Cullens acknowledged that CSI screens the wood, he explained that landfills also screen the waste that is deposited.

There are various environmental harms that may result from long-term storage of MSW on a property and any buried material can have negative impacts. Specifically, as wood decomposes, tannins may be released, methane gas may be emitted, and subsidence⁷³ may occur. Additionally, if wood is buried under a dome that is not stabilized by vegetation, sediment may be transported to nearby streams and negatively impact surrounding ecosystems. Mr. Cullens stated that the erosion trench on Wood Vault No. 2 demonstrated environmental harm was occurring onsite.⁷⁴ According to Mr. Cullens, the Commission would not authorize erosion on

⁷³ According to Mr. Cullens, as material breaks down over time, it becomes compacted and creates a void, which may result in subsidence.

⁷⁴ The investigators did not issue a citation for the erosion but noted it as an issue observed during the investigation.

the cover of a landfill, even in a permitted facility. Additionally, Mr. Cullens noted concerns related to the stagnant water on the property as well as wood waste that was not protected from the elements.⁷⁵ In order to protect future buyers who may purchase a property where MSW is buried, deed recordation is required. However, recycling NOIs lack similar controls for long-term storage of waste.

Mr. Cullens did not take soil or groundwater samples as part of his investigation, nor did he take measurements of air quality, toxic emissions, or leachate⁷⁶ production. Additionally, Mr. Cullens did not assess the amount of rainfall in the vicinity or how much of the trenching onsite was caused by rain. He did not conduct any subsequent inspections regarding the erosion issue, nor did he check to see whether CSI remediated any sedimentation that was transferred from the property. According to Mr. Cullens, the violation in this case was based on the unauthorized nature of CSI's activity rather than on the environmental impact of that activity. He opined that any unauthorized activity may have environmental impacts that need to be reviewed by the Commission.

According to Mr. Cullens, the ED has not taken the position that CSI cannot operate under any circumstances. Rather, CSI must obtain a MSW permit from the Commission in order to conduct this activity.

⁷⁵ ED Ex. 5 at 00035.

⁷⁶ Leachate is a liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste. 30 Tex. Admin. Code § 330.3(80).

4. Failure to Notify Violation

According to Mr. Cullens, any change to the activity conducted on a site after a facility commences operations requires an update to the ED.⁷⁷ At the conclusion of the investigation, the Commission cited CSI for its failure to provide written notice to the ED of changes to the waste management methods used at the Facility. Specifically, Mr. Cullens contended that CSI was not conducting recycling activities as authorized by the NOI.

Of particular concern, CSI was not adhering to the processing timelines mandated by the recycling NOI because the wood was not being removed from the Facility and would remain buried in the vaults for at least 100 years.⁷⁸ According to Mr. Cullens, the processing timelines exist to mitigate the potential harms caused by long-term storage of waste. He described recycling as a “constant churn” of materials both entering and being transported from a given facility. When waste is stored for an extended time at a given location, it can break down into other substances that can harm the soil or water. Here, though the wood is converted into a CORC, the buried wood remains on the property. If the vaults were opened, one would still find wood waste.

During the investigation, Mr. Knop explained to the investigators that if the wood waste were not brought to the Facility, it would be disposed of by burning. Instead, CSI buries the wood waste and sells a carbon credit based on the differential

⁷⁷ 30 Tex. Admin. Code § 330.11(b).

⁷⁸ 30 Tex. Admin. Code § 328.4(b)(2).

between the carbon that would be emitted if the wood were burned versus the carbon that is emitted by the wood when it is buried using specific criteria. Though CSI claims that this process constitutes recycling, Mr. Cullens opined this activity is not contemplated by CSI's recycling NOI.

According to Mr. Cullens, recycling is not merely the diversion of waste from the waste stream; rather, it requires the displacement of raw or virgin materials so that these products are conserved.⁷⁹ For example, discarded paper that is recycled is initially waste, which is processed and reused as recycled paper. The processed material displaces trees that would otherwise be cut down to create new paper. Mr. Cullens contends that the wood waste at the Facility is not substituting a raw or virgin material because it is still wood. Phrased another way, the creation of a carbon credit from the wood waste does not substitute a raw or virgin material and, accordingly, is not recycling.

C. TESTIMONY OF DR. JAMES GOODING

1. Credentials

Dr. Gooding is an expert on carbon lifecycle and geotechnical analyses, carbon markets, and wood burial. As an interdisciplinary geoscientist, he has training and experience in numerous areas related to earth and planetary science, including geology, geochemistry, soil sediments, surface water, and groundwater. Dr. Gooding has a Bachelor of Science in chemistry, a Master of Science in environmental

⁷⁹ Tex. Health & Safety Code § 361.421(5); 30 Texas Admin. Code § 330.3(128).

chemistry, and a Ph.D. in geology. In 2023, he published a peer-reviewed scientific paper regarding geologic constraints on terrestrial storage of biomass (TBS) as a carbon sequestration method. He also authored a paper regarding underground chemistry and decay rates that has passed peer review and is awaiting publication. Dr. Gooding has worked extensively in both government service and the private sector since 1979. While he has not worked for the Commission, he is familiar with the importance of following the Commission's regulations when conducting ground and soil operations. Much of his work has involved companies engaged in the underground storage of natural gas. He has conducted carbon lifecycle analyses and environmental impact assessments.

He first became involved with CSI when he met Mr. Knop in 2019. While CSI is the only project Dr. Gooding has worked on related to wood burial, he has also participated in preliminary desktop studies to assess the potential for wood biomass burial on other projects. Dr. Gooding did not direct or perform coring or any other laboratory operations for CSI. Instead, he completed an environmental assessment and used digital data and software to complete an analysis of the site.⁸⁰

2. Geotechnical Analysis of the Facility

The Facility is located atop a thick sequence of poorly consolidated sediments, which include the Beaumont and Lissie Formations. The Lissie Formation is distinguished by tight, expansive clay layers that are naturally impermeable to fluid flow. By using Lissie clay as a containment material for the wood vault, Dr. Gooding

⁸⁰ CSI Ex. E.

opined, “communication” between the groundwater and the wood vaults is highly unlikely.

In conducting the geotechnical analysis of the Facility, Dr. Gooding completed surface water surveys to ensure that the project did not fundamentally alter the surface run-off. The data demonstrated that the surface water had not been impeded nor had the run-off been deflected. Dr. Gooding was unaware of any state law or Commission rule that provides an exemption to the general requirement to obtain a MSW permit for the storage or disposal of waste that is contingent on the geological characteristics or an analysis of water run-off at the site where the waste is stored or disposed.

In Hardin County, there are instances of naturally buried wood, which are the result of ancient, catastrophic flooding. According to Dr. Gooding, the conditions at the Facility are analogous to natural wood burial. Specifically, CSI uses wood from the general vicinity of the Facility, and the wood vaults are created solely from natural materials, avoiding the use of metal, concrete, or chemicals. However, Dr. Gooding acknowledged that natural wood burials are not identical to situations where humans bury wood, and the impact on the environment would be different between these two scenarios.

According to Dr. Gooding, CSI took precautions to ensure stabilization of the clay cap atop the wood vault. CSI inspected the completed vault for signs of subsidence and then backfilled and recompacted the material.

3. Distinguishing the Facility from a Landfill

The intake, acceptance criteria, construction design, and longevity of the Facility demonstrate fundamental differences between landfills and the wood vaults. A wide variety of materials are deposited in landfills, creating a potentially “toxic brew.” Accordingly, a landfill must be designed to prevent the escape of noxious material. In the case of wood burial, however, the main objective is to keep resulting decay products, such as carbon dioxide or methane, from escaping into the environment. In addition, most landfills do not last for 100 years. The 100-year lifespan of the Facility, imposed by its registrar Puro.Earth, which is discussed further below, is stringent and requires diligent attention to the integrity of the material to verify that no environmental harm is occurring, including monitoring of erosion, cracking, other disturbances, and evidence of gas escape.

4. Puro.Earth and Terrestrial Storage of Biomass

According to Dr. Gooding, Puro.Earth is a reputable carbon removal validator that is considered to be the leading registrar and standard-bearer for carbon removal credits. CSI complies with specific standards related to TBS established by Puro.Earth. Under the Puro.Earth TBS methodology, only clean woody biomass may be placed in a wood vault. Trees with high lignin⁸¹ content are preferred for burial.⁸² The wood utilized in the vaults at the Facility must be naturally occurring

⁸¹ Lignin is an amorphous polymer related to cellulose that provides rigidity and, together with cellulose, forms the wood cell walls of plants and the cementing of material between them. *Lignin* Definition, <https://www.merriam-webster.com/dictionary/lignin> (last visited January 23, 2026).

⁸² Dr. Gooding explained that because photosynthesis occurs in the leaves, many chemical reactions occur in leaves that do not occur in other parts of trees. Elimination of leaves enhances the stability of the biomass.

and cannot include treated timber. Preference is given to specific species of trees and to certain trunk or limb sizes. Small branches and leaves are excluded, thereby reducing the nitrogen content and discouraging decay. Dr. Gooding explained that there is also a requirement for additionality, meaning that the carbon sequestration pathway cannot be incentivized in any way, nor can it be already required by law.

5. Carbon Offsets and CORCs

The reduction of carbon in CSI's process is based on the differential between the carbon dioxide that would be released if the wood were burned versus the wood being placed in wood vaults. In voluntary carbon markets, credits are used against debits. Greenhouse gases are debits. Credits may be avoidance credits—for example, purchasing electricity from renewable services or capturing emissions from an industrial process and injecting them underground—which are means of avoiding emissions. However, a true offset decreases the amount of carbon already in the atmosphere.

Dr. Gooding agrees with the ED's assessment that most avoidance credits are promises without a physical component. If, for example, one purchases electricity from a renewable source, the purchaser has a contract or certificate with the seller. In this scenario, there is no way to ascertain the source of any specific electron, and a physical product is lacking. However, according to Dr. Gooding, in the case of CORCs, there must be a physical product that can be seen, touched, verified, and assured to be in the same location over a prescribed period of time. Once the buried wood becomes a CORC, he opined, it is a physical product. After the CORC product expires, that material is recyclable as biochar or another substance. Dr. Gooding

acknowledged that the wood used in connection with the sale of CORCs is not substituting any raw or virgin material.

A CORC is a valuable asset. The buyer of the CORC requires the physical wood component to remain at an agreed location for a specified period of time without loss of integrity or other disturbance. Dr. Gooding compared the purchase of CORCs to individuals who trade in petroleum markets. If an individual purchases a barrel of oil, that is a physical product. However, the buyer may not take physical possession of the barrel and receives a contract document acknowledging they own the product, and it exists somewhere.

There is a market for the purchase of CORCs. Here, CSI sold CORCs to an independent purchaser for \$155 per CORC with a total volume of 3,000 CORCs. CORCs are recognized by Nasdaq. Dr. Gooding stated that Nasdaq's recognition of CORCs as a product supports the position that there is a physical product involved. The reversal of the physical product that creates the CORC has negative impacts, including a loss of money and reputation for the buyer and seller; harm to the standing of the registrar in the market community; and physical, environmental impacts.⁸³

⁸³ Dr. Gooding did not explain the nature of the physical, environmental impacts.

D. TESTIMONY OF TIFFANY CHU

1. Credentials

Ms. Chu is an expert in the policies and procedures of the Commission's Enforcement Division. At the time of this investigation, she was an Enforcement Coordinator in the Waste Division. In that capacity, she screened enforcement action referrals to ascertain whether an enforcement case could be brought and drafted, and she developed case documents for initial proposed agreed orders, which included the penalty calculation worksheet, compliance history, and agreed order. Ms. Chu also worked with respondents toward settlements and tracked for compliance as related to technical requirements or ordering provisions. Additionally, she worked with her team to ascertain what technical requirements were necessary for violations.

Ms. Chu has received training on MSW. She has worked on over 200 enforcement cases, and the majority of those cases have involved technical requirements. She is familiar with state laws and Commission rules regarding MSW regulation, enforcement, and administrative penalties. She is also familiar with the ED's procedures and policies regarding these same matters.

2. Recommended Technical Requirements for CSI

Ms. Chu participated in the determination and evaluation of the technical requirements in this case, which were deemed necessary based on the cited violations. She explained that, generally, the immediate response is to cease operations, which in this case would require the cessation of disposal of additional

MSW at the Facility. Additionally, there are corrective actions recommended to bring CSI into full compliance. This is followed by a certification statement to ensure the documentation that CSI provides to the ED is accurate.

According to Ms. Chu, the ED is requesting CSI remove all waste from the Facility because CSI is not an authorized MSW disposal facility and, therefore, the waste must be transported to an authorized location. Additionally, the ED requests that CSI submit a notice to cancel the NOI. The burial of wood waste for 100 years, as described by CSI, cannot be authorized under a recycling NOI. If CSI wants to engage in different operations, it will need to submit new documentation to the Permitting Division.

In Ms. Chu's tenure with the Commission, she has been assigned to other cases where there was no evidence of actual environmental impact but rather a potential for an environmental impact arising out of the violations. The Commission has previously approved orders with technical requirements addressing these violations solely on the basis of the potential environmental impacts. According to Ms. Chu, this occurs often.

Ms. Chu was unaware of the potential consequences to the buyers of the CORCs if the waste were removed from the Facility. She explained the Commission completes an economic benefit analysis regarding the potential cost for compliance. In this analysis, the ED considered the amount of the waste to be removed, distance to the removal facility, and the vehicle rental fee to relocate the waste. However, the ED did not estimate the costs of excavation, loading, or cleaning/sorting. According

to Ms. Chu, the ED does not calculate the remediation cost but rather the administrative penalty and whether economic benefits would factor into that penalty based on the Commission's penalty policy. Here, the delayed costs did not increase the penalty amount.

E. DEPOSITION TESTIMONY OF COURTNEY GOORIS

Courtney Gooris is the Team Leader for the Waste Section of the Commission's Enforcement Division. She has a bachelor's degree in environmental studies and has worked for the Commission for five years. In her current position, she conducts reviews of enforcement cases. Ms. Gooris does not make the initial determination of whether material is recyclable, nor does she approve NOI applications. Her job is to determine whether the violations cited by the regional investigator are valid and meet enforcement criteria, and she estimated that she reviews approximately ten enforcement cases each week. While she has reviewed other enforcement cases involving recycling facilities, she was unsure whether she has reviewed cases involving wood waste. According to Ms. Gooris she has opposed the recommendations of field inspectors in other cases and has not proceeded with enforcement action in those instances.

The Commission's Enforcement Coordinator, which in this case was Ms. Chu, develops the case using the penalty calculation and the Commission's penalty policy. This ensures standardization, and no discretion is used. The case is then submitted to Ms. Gooris for review. After Ms. Gooris reviews the case, it is also reviewed by the section manager and potentially by the division or deputy director. Approval of enforcement actions usually comes from either the

section manager or the deputy director. The Commission does not have the legal authority to waive penalties.

In this case, Ms. Gooris reviewed the agreed order, compliance history, penalty calculation worksheet, enforcement action referral, investigation report, and the ED's Preliminary Petition and Report. Ultimately, the Enforcement Division did not find the Facility's operations to be engaged in recycling because the process utilized by CSI does not meet the recycling timelines in CSI's NOI. In addition, Ms. Gooris opined that the Facility takes a physical product (wood), places it in the ground, and sells a digital asset (CORC). While the CORC has value as a digital asset, CORCs are not physically present at the Facility. Upon review, the ED determined CSI's wood burial constituted disposal.

Ms. Gooris considers environmental impacts when making assessments. In this case, there was a potential for environmental harm. The Commission uses MSW permits to address environmental concerns. Here, CSI's NOI does not address the long-term storage of waste at the site that would otherwise be covered by a MSW permit. According to Ms. Gooris, CSI could become compliant by removing the wood waste from the site; updating the NOI and the processes so that there is no long-term storage on the premises; or securing a MSW permit.

VI. ANALYSIS

The ED established by a preponderance of the evidence that CSI violated 30 Texas Administrative Code sections 330.15(a), (c) and 330.11(b). The ALJ has addressed each of these violations below.

A. UNAUTHORIZED DISPOSAL OF MSW VIOLATION

MSW is solid waste resulting from, or incidental to, municipal, community, commercial, institutional, and recreational activities.⁸⁴ Recyclable material is material that can be or has been removed or diverted from the waste stream for purpose of reuse, recycling, or reclamation.⁸⁵ Significantly, to meet the definition of “recyclable material,” a substantial portion of the material must be consistently used in the manufacture of products which may otherwise be produced by using raw or virgin materials.⁸⁶ Commission rules place time limits on the storage of recyclable materials.⁸⁷ By rule, a person may not cause, suffer, allow, or permit the disposal of MSW in violation of the Texas Health and Safety Code, or any regulations, rules, permit, license, or order of the Commission.⁸⁸ In addition, a person may not cause, suffer, allow, or permit the dumping or disposal of MSW without written authorization of the Commission.⁸⁹

1. Arguments of the Parties

The ED contends that CSI’s burial of wood waste at the Facility constitutes disposal of MSW.⁹⁰ OPIC concurs with this position, noting that the accumulation

⁸⁴ Tex. Health & Safety Code § 361.003(20); 30 Tex. Admin. Code § 330.3(90).

⁸⁵ Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128).

⁸⁶ Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128).

⁸⁷ 30 Tex. Admin. Code § 328.4(b)(2), (3).

⁸⁸ 30 Tex. Admin. Code § 330.15(a).

⁸⁹ 30 Tex. Admin. Code § 330.15(c).

⁹⁰ ED Initial Brief at 4-5; ED Reply Brief at 4-7.

of wood on the site, absent evidence of mulching or composting, demonstrates CSI engaged in unauthorized disposal of MSW.⁹¹

CSI argues that it sources only clean wood, which is buried under controlled conditions resulting in CORCs; accordingly, CSI contends the buried wood constitutes recycled material, not MSW.⁹² Citing an amendment to Texas Health and Safety Code section 361.003,⁹³ CSI further argues that the concepts of recyclable material have been expanded in Texas to recognize products certified by third-party mass balance attribution systems. According to CSI, this recognition supports CSI's position that it is engaged in a documented beneficial-use "recycling-type" operation, rather than unauthorized MSW disposal.⁹⁴ Specifically, CSI argues that the CORCs generated at the Facility are backed by independent certification and, therefore, fit within this amended statutory framework, rather than the narrow definition of MSW.⁹⁵

⁹¹ OPIC Initial Brief at 8.

⁹² CSI Initial Brief at 4; *see generally* CSI Reply Brief.

⁹³ Texas Health and Safety Code section 361.003 is the definitional section for the Solid Waste Disposal Act. While CSI cited the bill underlying this amendment rather than the relevant statutory provision, the ALJ infers that CSI's references to "House Bill 3060" relates to the 2023 amendments to Texas Health & Safety Code section 361.003. In part, this amendment added a definition for "advanced recycling facility," which is defined as a manufacturing facility that "receives, stores, and converts post-use polymers and recoverable feedstocks using advanced recycling technologies and processes including pyrolysis, gasification, solvolysis, and depolymerization." Tex. Health & Safety Code § 361.003(1). Further, the amendment altered the definition of "post-use polymers," which are defined as plastics. Tex. Health & Safety Code § 361.003(24-a). While the amendments to this provision may reflect changes to the recycling of plastics, they are not relevant to the instant case, which involves the burial of wood waste.

⁹⁴ CSI Initial Brief at 4-5; CSI Reply Brief at 6.

⁹⁵ *See* CSI Initial Brief at 4-5.

2. Analysis

It is uncontested that CSI is the owner of the Facility. Further, it is uncontested that CSI buried a large quantity of wood waste in subterranean vaults at the site. While CSI contends that the buried wood is recyclable material because it has been diverted from the waste stream and is eventually converted into CORCs, the ALJ disagrees with this analysis.

Significantly, Dr. Gooding testified that wood waste used in connection with the sale of CORCs does not substitute any raw or virgin material, which is an essential component of recyclable material.⁹⁶ Further, the wood buried at CSI must remain buried at the Facility for at least 100 years, which far exceeds the time limits imposed on recycled material.⁹⁷ Mr. Cullens described recycling as a constant churn that moves material onto and away from the premises; no such churn occurs at the Facility. For these reasons, the ALJ finds the buried wood waste is MSW and not recycled material.

The ALJ further finds that, by burying the wood waste, CSI disposed of MSW. Specifically, the evidence demonstrated that CSI placed MSW in the land such that the waste or its constituents could enter the environment, be emitted into the air, or

⁹⁶ Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128).

⁹⁷ 30 Tex. Admin. Code § 328.4(b)(2), (3). With no citation to the record, CSI contends that the “physical mass of the carbon stored” is processed for recycling within the time period required by Texas Health and Safety Code section 328.4(b) and that CSI reaches “this status” for more than 99.00% of material within the first 270 days, and maintains more than 99.00% turnover every six months. The ALJ infers that CSI is arguing that the majority of the wood is converted to CORCs within the statutory timelines. However, even assuming this contention is accurate, the uncontroverted evidence demonstrated that the wood waste remains at the Facility for at least 100 years. CSI Reply Brief at 8.

be discharged into the waters of the state.⁹⁸ As attested by Mr. Cullens, by placing the wood waste in the ground at the Facility, there is a potential for an adverse environmental impact through the emission of methane gas, release of tannins, distribution of decomposed material into neighboring watersheds, and erosion/sedimentation.

It is uncontested that CSI does not have a MSW permit. Rather, as discussed further below, CSI is authorized only to operate a recycling facility and is not authorized to dispose of MSW at the Facility. By burying the wood waste, CSI disposed of MSW in violation of a license or permit of the Commission.⁹⁹ Further, CSI did not obtain written authorization from the Commission to dispose of the wood waste in this manner.¹⁰⁰ For these reasons, the ALJ finds CSI violated 30 Texas Administrative Code section 330.15(a) and (c).

B. NOTICE VIOLATION

Any person who stores, processes, or disposes of MSW has a continuing obligation to provide prompt written notice to the ED of any changes concerning, in part, waste management methods.¹⁰¹

⁹⁸ Significantly, the definition of disposal does not require actual proof that solid waste or its constituents entered the environment, were emitted into the air, or were discharged into waters. Tex. Health & Safety Code § 361.003(7); 30 Tex. Admin. Code § 330.3(44).

⁹⁹ 30 Tex. Admin. Code § 330.15(a).

¹⁰⁰ 30 Tex. Admin. Code § 330.15(c).

¹⁰¹ 30 Tex. Admin. Code § 330.11(b).

1. Arguments of the Parties

The ED contends that CSI's disposal of MSW at the Facility constituted a change from the waste management methods previously authorized by the Commission, which permitted composting and mulching in adherence with specific waste processing timeline limitations required by 30 Texas Administrative Code section 328.4.¹⁰²

OPIC argues that the eventual creation of CORCs does not satisfy the definition of recycling and, therefore, CSI is not in compliance with the terms of the NOI.¹⁰³

CSI contends that it is conducting a novel recycling process, which does not materially differ from that described in the NOI because it ultimately concludes in the production of biochar.¹⁰⁴ As to the processing time requirements, CSI argues that the fact that the wood must remain in place to preserve its value as a CORC does not convert the wood into unprocessed waste or negate its compliance with the turnover requirements.¹⁰⁵ CSI further argues it has made no attempt to conceal the activities conducted at the Facility.¹⁰⁶

¹⁰² ED Initial Brief at 1-4.

¹⁰³ OPIC Initial Brief at 8.

¹⁰⁴ CSI Initial Brief at 3; CSI Reply Brief at 5-6.

¹⁰⁵ CSI Reply Brief at 8.

¹⁰⁶ CSI Initial Brief at 3.

2. Analysis

As discussed above, by burying wood waste at the Facility, CSI disposed of MSW. CSI is not authorized to conduct this activity. Rather the Commission authorized CSI to produce biochar through composting and/or mulching clean wood materials. During the investigation, the investigators did not observe any evidence of composting or mulching activities at the Facility. There is no evidence that a biochar kiln was present. While the NOI referenced CSI's plan to bury the clean wood waste in an anaerobic pit, the NOI also stated CSI would comply with the timelines mandated by 30 Texas Administrative Code section 328.4. Here, as discussed above, CSI intends to keep the wood waste buried for over 100 years, which far exceeds the time limits provided in the NOI and required by rule; further, the waste has now been buried onsite past the 270-day outside limit for recycling materials. These time limits are not arbitrary but exist to mitigate the potential harm caused by long-term storage of waste. The preponderant evidence demonstrates that waste management methods utilized by CSI at the Facility are different than those authorized by the Commission.

CSI was required to notify the ED in writing of the changes to its waste management methods.¹⁰⁷ However, it is uncontested that no such notification was provided. But for the investigation conducted in 2024, the ED would have been unaware that CSI had altered its waste management methods. CSI was bound by the constraints of the recycling NOI and failed to notify the ED as required. Accordingly,

¹⁰⁷ 30 Tex. Admin. Code § 330.11(b).

the ALJ finds the ED met its burden to establish CSI violated 30 Texas Administrative Code section 330.11(b).

C. PROPOSED PENALTY AND CORRECTIVE ACTIONS

The parties filed written stipulations stating that if the violations were sustained, the proposed administrative penalty was calculated in a manner consistent with the Commission's penalty policy. According to the penalty worksheet, the improper disposal of MSW is categorized as a minor violation on the Environmental, Property, and Human Health Matrix; the violation penalty is reduced to 15% of the base penalty of \$25,000 for a total of \$3,750.¹⁰⁸ The failure to notify violation is categorized as a major violation on the Programmatic Matrix; the violation penalty is reduced to 10% of the base penalty of \$25,000 for a total of \$2,500.¹⁰⁹ Combined, the total penalty would be \$6,250. A 10% reduction was recommended for a high-performer classification, resulting in a final subtotal of \$5,625.¹¹⁰ The parties stipulated that the proper penalty amount is \$5,625.

Though CSI stipulated that if the violations were sustained an administrative penalty of \$5,625 was the proper penalty to assess, CSI now contends that no such penalty is warranted because CSI relied upon the Commission's initial NOI authorization in conducting such activities and no actual environmental harm has

¹⁰⁸ ED Ex. 6 at 00044.

¹⁰⁹ ED Ex. 6 at 00042.

¹¹⁰ ED Ex. 6. at 00040.

occurred.¹¹¹ The Commission authorized CSI to engage in recycling based on CSI's assertion in its NOI that CSI would engage in recycling through composting and mulching to create biochar while adhering to specific, obligatory timelines. CSI engaged in unauthorized activities, and its claim of detrimental reliance is not supported by the evidentiary record. Further, at a minimum, the evidence demonstrated that CSI's activities had the potential to cause environmental harm.¹¹² For these reasons, the ALJ finds CSI's arguments are without merit.

The ED also seeks corrective action by requiring CSI to (1) immediately cease disposal of any MSW at the Facility; (2) remove all MSW from the Facility within 30 days, dispose of it at an authorized facility, and submit a notice to cancel authorization to the Commission; and (3) submit a written certification within 45 days with supporting documentation to demonstrate compliance with cessation of disposal, removal of all MSW, and submission of notification.¹¹³

CSI contends that the recommended corrective action would require excavation of buried wood, thereby reversing years of verified carbon removal and resulting in unnecessary emissions from exhumation and transport of the material.¹¹⁴ In addition, CSI argues that were these corrective actions to be imposed, they would prevent continuation of an innovative recycling and beneficial-use project.¹¹⁵

¹¹¹ CSI Reply Brief at 14.

¹¹² Evidence of erosion on one of the wood vaults may demonstrate such harm was actually occurring.

¹¹³ ED Ex. 1 at 0006 (Corrective Action Ordering Provisions 13.a-c).

¹¹⁴ CSI Reply Brief at 14.

¹¹⁵ CSI Reply Brief at 14.

Further, CSI argues that corrective action is not warranted, given that CSI relied on the Commission's initial approval of the NOI regarding the activities conducted at the Facility and that no actual environmental harm has resulted.

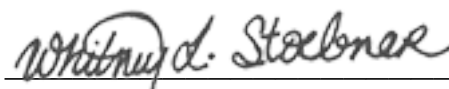
While the ALJ is mindful of CSI's concerns related to the exhumation of the wood waste, CSI has cited no authority to justify the continued burial of a significant quantity of MSW on the Facility absent a MSW permit. Further, as discussed above regarding the imposition of administrative penalties, the ALJ does not find these arguments have merit because CSI exceeded the scope of the NOI and the evidence demonstrated, at a minimum, the potential for environmental harm. Accordingly, the ALJ finds the corrective actions are appropriate and necessary to address CSI's violations.

VII. RECOMMENDATION

The ALJ recommends that the Commission adopt the attached proposed order assessing CSI a total of \$5,625 in administrative penalties for the violations proven in this case and requiring implementation of the ED's requested corrective actions.

Signed February 6, 2026.

ALJ Signature:



Whitney L. Stuebner

Presiding Administrative Law Judge



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**AN ORDER ASSESSING ADMINISTRATIVE PENALTIES AGAINST
AND REQUIRING CORRECTIVE ACTION BY
CARBON SEQUESTRATION, INC.
TCEQ DOCKET NO. 2024-1222-MSW-E;
SOAH DOCKET NO. 582-25-08210**

On _____, the Texas Commission on Environmental Quality (Commission) considered the Executive Director's (ED) Preliminary Report and Petition (EDPRP) recommending the Commission enter an enforcement order assessing administrative penalties against Carbon Sequestration, Inc. (CSI). A Proposal for Decision (PFD) was presented by Administrative Law Judge (ALJ) Whitney L. Stoebner with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing concerning the matter on October 16, 2025, via Zoom videoconference.

After considering the ALJ's PFD, the Commission adopts the following Findings of Fact and Conclusions of Law.

I. FINDINGS OF FACT

1. On December 9, 2021, CSI submitted an application for a recycling notice of intent (NOI) with the Commission in order to conduct activity at CSI's Hardin Facility (Facility) in Hardin County, Texas.
2. CSI is the owner of the Facility.
3. The Facility is located on 45.32 acres in an undeveloped area and contains two subterranean wood vaults in which CSI buries clean, untreated wood waste. The wood vaults are constructed from natural materials. CSI monitors the gas emissions from the wood vaults.
4. In its NOI, CSI stated the Facility's primary business would be the production of biochar. Specifically, CSI indicated it would compost and/or mulch clean wood materials, which would be buried underground in an anaerobic pit. CSI stated that after the wood decomposed, it would be exhumed and burned to create biochar.
5. The NOI included specific time requirements by which the waste would be recycled and removed from the Facility. These processing timelines are developed to mitigate the potential harms that may result from long-term storage of waste.
6. CSI did not obtain a municipal solid waste (MSW) permit from the Commission.
7. On June 3, 2022, the Commission approved CSI to operate as a recycling facility that accepts clean wood waste and recycles it into biochar.
8. The recycling NOI did not authorize CSI to dispose of MSW at the Facility.
9. On May 21, 2024, Commission investigators conducted an investigation of the Facility, which was flat and cleared of trees. At the time of the site visit, some standing, stagnant water was present on the property. Wood waste was present in the standing water. The Facility did not have any structures. The only equipment present was a scale used to weigh incoming wood waste. No biochar kiln was present at the Facility.

10. There were approximately 4,682 tons of wood waste present at the Facility.
11. Commission investigators did not identify any operations at the Facility that would be categorized as composting and/or mulching or biochar operations.
12. The wood vaults were not creating mulch, and the burial of wood waste alone does not constitute composting.
13. One of the wood vaults evidenced signs of erosion.
14. The investigation demonstrated that CSI had placed large quantities of wood waste in the vaults, where the material would remain buried for at least 100 years.
15. The buried wood eventually results in the production of carbon credits, which offset carbon emissions and are sold as Carbon Dioxide Removal Certificates (CORCs).
16. CORCs are marketable assets that represent a tonne of carbon dioxide that has been removed from the atmosphere.
17. CSI sold CORCs to an independent purchaser for \$155 per CORC with a total volume of 3,000 CORCs.
18. Wood waste used in connection with the sale of CORCs does not substitute any raw or virgin material.
19. The unauthorized disposal of wood waste may result in environmental harms, including the release of tannins, emission of methane gas, subsidence, erosion, and transport of sediment or decomposed material to nearby streams.
20. On July 26, 2024, the Commission issued a Notice of Violation letter to CSI identifying the following violations: (1) unauthorized disposal of MSW; and (2) failure to notify the ED of any changes concerning waste management methods by conducting activities not authorized under its NOI.
21. The ED assessed CSI an administrative penalty in the amount of \$5,625 and recommended corrective action, including requiring CSI to: immediately cease the disposal of any MSW at the Facility; within 30 days, remove all

MSW from the Facility, dispose of it at an authorized facility, and submit a notice to cancel authorization to the Commission; and within 45 days, submit a written certification including supporting documentation to demonstrate compliance with cessation of disposal, removal of all MSW, and submission of notification.

22. CSI caused, suffered, allowed, or permitted the unauthorized disposal of approximately 4,682 tons of MSW at the Facility.
23. CSI did not have written authorization from the Commission to dispose of MSW at the Facility.
24. The assessed penalty of \$5,625 was calculated in accordance with the Commission's Penalty Policy, Revision 5, effective January 28, 2021.
25. On September 27, 2024, the Executive Director (ED) of the Commission filed the EDPRP and mailed a copy to CSI at its last known address of record.
26. CSI requested a contested case hearing based on the allegations in the EDPRP.
27. On December 17, 2024, the ALJ issued an order setting a preliminary hearing.
28. On January 23, 2025, ALJ Stoebner convened the preliminary hearing, and jurisdictional exhibits were admitted into evidence.
29. On January 27, 2025, the ALJ entered an order memorializing the preliminary hearing and adopting an agreed procedural schedule.
30. On July 29, 2025, the ALJ issued an order setting a hearing on the merits on October 16, 2025, via Zoom videoconference.
31. Together, the EDPRP and July 29, 2025 order contained a statement of the time, place, and nature of the hearing; a statement of the legal authority and jurisdiction under which the hearing was to be held; a reference to the particular sections of the statutes and rules involved; and a short, plain statement of the factual matters asserted or an attachment that incorporated by reference the factual matters asserted in the complaint or petition filed with the state agency.

32. The hearing was convened on October 16, 2025, before ALJ Stuebner. CSI appeared through its Chief Executive Officer and attorney Christopher Knop and attorney Clayton Sanders. The ED was represented by attorneys Taylor Pearson and Benjamin Warms. Jessica Anderson represented the Office of Public Interest Counsel. The record closed on December 17, 2025, with the filing of reply briefs.

II. CONCLUSIONS OF LAW

1. The Commission has enforcement jurisdiction over violations of the state's municipal waste program. Tex. Water Code §§ 5.013, 7.002.
2. The Commission may assess an administrative penalty against any person who violates a provision of the Texas Water Code; Texas Health and Safety Code; or any rule, order, or permit adopted or issued thereunder within Commission jurisdiction. Tex. Water Code § 7.051(a).
3. The administrative penalty may not exceed \$25,000 per violation, per day, for the violations at issue in this case. Tex. Water Code § 7.052(c).
4. In determining the amount of an administrative penalty, Texas Water Code section 7.053 requires the Commission to consider several factors, and the Commission's penalty policy implements those factors.
5. The Commission may order a violator to take corrective action. Tex. Water Code § 7.073(2).
6. MSW is solid waste resulting from or incidental to municipal, commercial, institutional, and recreational activities, including garbage, rubbish, ashes, street cleanings, dead animals, abandoned automobiles, and all other solid waste other than industrial solid waste. Tex. Health & Safety Code § 361.003(20); 30 Tex. Admin. Code § 330.3(90).
7. No person may cause, suffer, allow, or permit any activity of storage, processing, removal, or disposal of any solid waste unless such activity is authorized by a permit or other authorization from the Commission. Tex. Admin. Code § 330.7(a).

8. A person may not cause, suffer, allow, or permit the collection, storage, transportation, processing, or disposal of MSW in violation of the Texas Health and Safety Code, or any regulations, rules, permit, license, or order of the Commission. 30 Tex. Admin. Code § 330.15(a).
9. A person may not cause, suffer, allow or permit the dumping or disposal of MSW without the written authorization of the Commission. 30 Tex. Admin. Code § 330.15(c).
10. Any person who stores, processes, or disposes of MSW has a continuing obligation to provide prompt written notice to the ED of any changes or additional information concerning waste type, waste management methods, facility engineering plans and specifications, and geology and hydrogeology at the facility authorized in any permit or registration, or stated in any application filed with the ED. 30 Tex. Admin. Code § 330.11(b).
11. Recyclable material is material that can be, or has been, recovered or diverted from the waste stream for purposes of reuse, recycling, or reclamation, a substantial portion of which is consistently used in the manufacture of products that may otherwise be produced using raw or virgin materials. Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128).
12. Recyclable material may be accumulated or stored at a recycling facility only under the following conditions: (1) the facility accumulating it can show that the material is potentially recyclable and has an economically feasible means of being recycled; (2) within 270 days from the commencement of a new facility's operations, the amount of material recycled, or transferred to a different site for recycling, equals at least 25% by weight or volume of the material accumulated 90 days from the commencement of a new facility's operation; and (3) during each subsequent six-month period, the amount of material that is recycled, or transferred to a different site for recycling, equals at least 50% by weight or volume of the material accumulated at the beginning of the period. 30 Tex. Admin. Code § 328.4(b).
13. The wood waste buried at the Facility is not recyclable material because a substantial portion of the wood waste is not consistently used in the manufacture of products that may otherwise be produced using raw or virgin

materials. Tex. Health & Safety Code § 361.421(5); 30 Tex. Admin. Code § 330.3(128).

14. The wood waste at the Facility is not being accumulated or stored as recyclable material, having not been processed within the time frame requirements for recycling. 30 Tex. Admin. Code § 328.4(b).
15. The wood waste buried at the Facility constitutes MSW. Tex. Health & Safety Code § 361.003(20); 30 Tex. Admin. Code § 330.3(90).
16. CSI violated 30 Texas Administrative Code section 330.15(a) by causing, suffering, allowing or permitting the collection, storage, transportation, processing, or disposal of MSW on the Facility in violation of the Texas Health and Safety Code, or any regulations, rules, permit, or order of the Commission.
17. CSI violated 30 Texas Administrative Code section 330.15(c) by causing, suffering, allowing, or permitting the dumping or disposal of MSW without the written authorization of the Commission.
18. CSI violated 30 Texas Administrative Code section 330.11(b) by failing to provide prompt written notice to the ED of any changes or additional information concerning waste management methods at the Facility as authorized by any permit or registration, or stated in any application filed with the ED.
19. CSI was properly notified of the hearing on the alleged violations and the proposed penalties and corrective action. Tex. Gov't Code §§ 2001.051-.052.
20. The ED has the burden of proof by a preponderance of the evidence in an enforcement proceeding. CSI has the burden of proving, by a preponderance of the evidence, all elements of any affirmative defense asserted. 30 Tex. Admin. Code § 80.17(b).
21. The administrative penalty and technical order provisions that the ED proposed for CSI's violations considered in this case conform to the requirements of Texas Water Code chapter 7 and the Commission's penalty policy.

22. CSI should be assessed a total of \$5,625 in administrative penalties for the violations considered in this case, and ordered to take the corrective action posed by the ED and described in the Ordering Provisions below.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. Within 30 days after the effective date of this Commission Order, CSI shall pay an administrative penalty in the amount of \$5,625 for its violations of 30 Texas Administrative Code sections 330.11(b) and .15(a) and (c).
2. Checks rendered to pay penalties imposed by this Order shall be made out to "TCEQ." Administrative penalty payments shall be sent with the notification "Re: Carbon Sequestration, Inc., TCEQ No. 2024-1222-MSW-E" and mailed to:

Financial Administration Division, Revenues Section
Attention: Cashier's Office, MC 214
Texas Commission on Environmental Quality
P.O. Box 13088
Austin, Texas 78711-3088

3. CSI shall also undertake the following technical requirements:
 - a. Immediately upon the effective date of the Commission Order, cease disposal of any additional MSW at the Facility.
 - b. Within 30 days after the effective date of the Commission Order:
 - i. remove all MSW from the Facility and dispose of it at an authorized facility, in accordance with 30 Texas Administrative Code section 330.15; and
 - ii. submit a notice to cancel authorization to the Commission, in accordance with 30 Texas Administrative Code section 330.11;

- c. Within 45 days after the effective date of the Commission Order, submit written certification, and include detailed supporting documentation including photographs, receipts, and/or other records to demonstrate compliance with the Ordering Provisions. This certification shall be signed by CSI and shall include the following certification language:

I certify under penalty of law that I have personally examined and am familiar with the information submitted and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

CSI shall submit the written certification and copies of documentation necessary to demonstrate compliance with the Corrective Action Ordering Provisions to:

Enforcement Division, MC 149A
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

and

Waste Section Manager
Beaumont Regional Office
Texas Commission on Environmental Quality
3870 Eastex Freeway
Beaumont, Texas 77003-1830

4. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

5. The effective date of this Order is the date the Order is final, as provided by Texas Government Code section 2001.144 and 30 Texas Administrative Code section 80.273.
6. The Commission's Chief Clerk shall forward a copy of this Order to all parties.
7. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**Brooke Paup,
Chair for the Commission**