Appendix A-1

Proposed Regulation Order

Proposed Regulation for the California Carbon Capture, Removal, Utilization and Storage Program

[Note: The entire text of sections 95700 through 95706 set forth below is new language in “normal type” proposed to be added to title 17, California Code of Regulations]

Chapter 1. Air Resources Board

Subchapter 10. Climate Change

Article 4.5. Carbon Capture, Removal, Utilization, and Storage Program

Section 95700. Purpose.

Section 95701. Definitions.

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Proposed Regulation Order

Title 17, California Code of Regulations

Adopt Section(s) 95700, 95701, 95702, 95703, 95704, 95704.1, 95704.2, 95704.3, 95704.4, 95704.5, 95704.6, 95704.7, 95705, 95705.1, 95705.2, and 95706 of Title 17, California Code of Regulations, to read as follows:

§ 95700. Purpose.

The purpose of this article is to establish the California Carbon Capture, Removal, Utilization, and Storage Program (CCUS Program) to support safe, effective, and viable deployment of carbon management technologies, including CO_2 capture, removal, utilization and storage.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.4, 39741.5, 41510, 41511, and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, 39741.4, and 39741.5 of the Health and Safety Code, and sections 71463 and 71464 of the Public Resources Code.

§ 95701. Definitions.

(a) Definitions. For the purpose of this article, the following definitions shall apply:

"Abandoned Well" means a well whose use has been permanently discontinued.

"Additional" means greenhouse gas removals that exceed any greenhouse gas removals otherwise required by law, regulation or legally binding mandate, and that exceed any greenhouse gas removals that would otherwise occur in a conservative business-as-usual scenario.

"Advanced Market Commitment" or "AMC" means a contractual obligation to purchase a specified amount of verified carbon dioxide (CO_2) capture or removal at a predetermined price upon delivery at a future date.

"Background Seismicity Rate" means the stable and long-term rate of earthquakes, excluding foreshock and aftershock events, occurring in a specific area prior to beginning of the injection of CO_2 into a storage complex.

"Bandwidth" means, in relation to the physical property of the seismic sensor (seismometer), the range of frequencies that the sensor can accurately measure and reproduce a signal, measured in the unit of hertz (Hz).

"Bioenergy" means converting carbon from biomass and waste streams into alternative fuels, chemicals, and other products.

“Bioenergy with Carbon Capture” means CO_2 is captured from bioenergy emissions and permanently stored.

“Biomass” means non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms, including: products, by-products, residues and waste from agriculture, forestry, and related industries; the non-fossilized and biodegradable organic fractions of industrial and municipal wastes; and gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material. For the purpose of this article, biomass includes both California Renewable Portfolio Standard (RPS) eligible and non-eligible biomass as defined by the California Energy Commission.

“Carbon Capture Utilization” means the use of captured CO_2 in products or materials that result in either long-term chemical or physical storage or the displacement of fossil-derived resources or mined CO_2.

“Carbon Dioxide” or “CO_2” means the most common of the primary greenhouse gases, consisting on a molecular level of a single carbon atom and two oxygen atoms.

“Carbon Dioxide Capture” or “Carbon Capture” means the process of concentrating CO_2 present in flue or exhaust gases, or air, via chemical or physical separation methods.

“Carbon Dioxide Flux” or “CO_2 Flux” means the rate of transfer of CO_2 across a unit area.

“Carbon Dioxide Leakage” or “CO_2 Leakage” means any movement of stored CO_2 out of the storage complex, or any point down-stream of the injection site, to the atmosphere or surrounding subsurface.

“Carbon Dioxide Plume” or “CO_2 Plume” means the physical extent underground, in three dimensions, of all phases of the injected CO_2.

“Combustion Emissions” means greenhouse gas emissions occurring during the exothermic reaction of a fuel with oxygen.

“Continuous” means the temporal frequency that statistically demonstrates the accurate representation of a variable taking into account any variability over a period of time.

“Criteria Air Pollutants” means those pollutants for which there is an established California Ambient Air Quality Standard or National Ambient Air Quality Standard, including their precursors, except as otherwise specified herein. These pollutants and precursors include total volatile organic compounds (VOCs) or total reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon monoxide (CO), particulate matter (PM), lead (Pb), and ammonia (NH_3). For the purposes of

this article, vinyl chloride, hydrogen sulfide, and sulfates are considered toxic air contaminants, and must be reported as such.

“Data Logger" means, in the context of seismic monitoring, a piece of electronic equipment which records signals from ground sensors and converts them into a digital format.

"Direct Air Capture" means any technology which implements CO_2 capture directly from the ambient air.

“Earthquake” means the sudden slip on a fault and the ground shaking that occurs from the radiated seismic energy during the slipping event. The sudden slip can be caused by stress changes in the earth or volcanic/magmatic activity, or by injection activities.

"Earthquake Catalog" means the database that contains earthquake source parameter information such as seismic event locations (i.e., latitude, longitude, and depth relative to Mean Sea Level) and magnitudes determined from seismic monitoring system.

“Earthquake magnitude” or “Magnitude” means a number that characterizes the relative size of an earthquake. Common earthquake magnitude scales include local magnitude (ML) and moment magnitude (Mw).

“Enforceable” means the authority for CARB to hold a particular party liable and to take appropriate action if any of the provisions of this article are violated.

“Executive Officer” means the Executive Officer of the California Air Resources Board or his or her delegate.

“Fault” means a surface or zone of rock fracture along which there has been displacement.

“First responder” means an employee of the state or a local public agency who provides emergency response services, including any of the following:

(1) A peace officer, as defined in Section 830 of the Penal Code.

(2) A firefighter, as defined in Section 50925 of the Government Code.

(3) A paramedic, as defined in Section 1797.84 of the Health and Safety Code.

(4) An emergency medical technician, as defined in Sections 1797.80 and 1797.82 of the Health and Safety Code.

(5) A public safety dispatcher or public safety telecommunicator, meaning an individual employed by a public safety agency whose primary

responsibility is to receive, process, transmit, or dispatch emergency and nonemergency calls for law enforcement, fire, emergency medical, and other public safety services by telephone, radio, or other communication device, or a supervisor thereof.

Formation Fluid" means any fluid that occupies pore space within a rock formation. Formation fluids occur as various saturations of oil, gas, and water, and are encountered in the process of drilling oil, gas, and injection wells.

"Geologic Carbon Storage" or "GCS" means the permanent containment of CO_2 deep underground within porous rock formations.

"Geologic Carbon Storage Site," "GCS site," or "storage site" means the storage complex, all injection, monitoring, and observation wells and plugged and abandoned wells that penetrate the storage complex, and any facilities or infrastructure inclusive of and downstream of the injection meter or wellhead of the injection well (whichever is further upstream from injection) and any other location that is identified as requiring in-situ monitoring to ensure permanent storage of injected CO_2.

"Geologic Storage Complex" or "Storage Complex" means the three-dimensional subsurface volume comprised of a storage zone used for the injection and permanent storage of CO_2, the primary confining layer, and may include other formations that dissipate pressure or impede CO_2 plume migration vertically or laterally.

"Ground Motion" means the movement of the earth's surface from earthquakes or man-made seismic sources. Ground motion is produced by waves that are generated by sudden slip on a fault or sudden pressure at the seismic source and travel through the earth and along its surface.

"Incidental Reductions" means decreases in air pollutant emissions that result from an industrial process whose primary function is unrelated to emissions control.

"Independent third-party verifier" means:

(1) An individual accredited under ISO 14065 who is accredited for project-level validation and/or verification within the applicable sector and who meets all competence and quality requirements established under ISO 14065, or

(2) An individual accredited by the California Air Resources Board to perform offset verification services pursuant to sections 95977.1 and 95977.2 of Title 17 of the California Code of Regulations.

"Induced Seismic Events" means the occurrence of earthquakes attributable to human activities.

“Local Air Districts” means any district created or continued in existence pursuant to the provisions of Part 3 (commencing with Section 40000) of Division 26 of the Health and Safety Code.

"Magnitude of Completeness” or “Mc" means the minimum magnitude above which we are reliably locating all earthquakes in a certain area.

"Metadata" means the known information about seismic stations and seismometers, such as geographic location, orientation, local site effects, and instrument type.

"Microseismicity” means an earthquake that is typically not “felt” by the public and has a low magnitude (M<2).

“Monitoring Well” means a well dedicated for the use of monitoring physical reservoir properties (e.g., pressure, fluid levels, etc.) related to CO_2 injection. Monitoring wells are designed to extract fluid samples to measure fluid compositions. "Above-zone monitoring well" means a well screened across a dissipation zone above the storage zone and below the lowest underground source of drinking water (USDW). "Shallow monitoring well" means a well drilled to a depth of several to a few hundred feet, typically screened across shallow groundwater aquifers and USDWs.

“Natural Lands” means lands consisting of forests, grasslands, deserts, freshwater and riparian systems, wetlands, coastal and estuarine areas, watersheds, wildlands, or wildlife habitat, or lands used for recreational purposes such as parks, urban and community forests, trails, greenbelts, and other similar open-space land. For purposes of this paragraph, “parks” includes, but is not limited to, areas that provide public green space.

“Nature-Based Carbon Removal” means activities, such as restoration, conservation, and land management actions, that increase net carbon sequestration or reduce greenhouse gas emissions in natural and working lands.

“Observation Well” means a well used to measure reservoir pressure and fluid levels and movement. An observation well is typically designed without the capability to extract fluid samples.

“Operating Condition” is a specific requirement developed by CARB that dictates operational changes and conditions, and how operational data/other information must be gathered, kept, reported, or calculated for a carbon management project under section 95705.

“Operator” means a person or entity owning or operating a project subject to this regulation pursuant to section 95702.

“Permanent” means that GHG removals are not reversible within a specified timeframe, or when GHG removals may be reversible, that mechanisms are in place to replace any reversed GHG removal.

“Pressure Front” means the zone of elevated pressure that is created by the injection of CO_2 into the subsurface. For the purpose of this article, the pressure front of a CO_2 plume refers to a zone where there is a pressure differential sufficient to cause the movement of injected fluids or formation fluids into a USDW.

“Process Emissions” means the emissions from industrial processes (e.g., cement production, ammonia production) involving chemical or physical transformations other than combustion emissions. For example, the calcination of carbonates in a kiln during cement production or the oxidation of methane in an ammonia process results in the release of process CO_2 emissions to the atmosphere. Combustion emissions from generating process heat are not part of process emissions, whether the combustion is internal or external to the process equipment.

"Quantifiable" means the ability to accurately measure and calculate GHG removal enhancements relative to a project baseline in a reliable and replicable manner for all GHG emission sources, GHG sinks, or GHG reservoirs included within the project boundary, while accounting for uncertainty and activity-shifting leakage and market-shifting leakage.

“Quantification Assessment Methodology” or “QAM” means a methodology that defines the quantification, monitoring, reporting, permanence, and verification requirements and procedures necessary to determine the net climate impact of a carbon management project.

“Real" means that greenhouse gas (GHG) removals result from a demonstrable action or set of actions, and are quantified using appropriate, accurate, and conservative methodologies that account for all GHG emissions sources, GHG sinks, and GHG reservoirs within the crediting project boundary and account for uncertainty and the potential for activity-shifting leakage and market-shifting leakage.

"Relevant Interest Holder” means any person or entity holding an interest in real property wholly or partially within, overlapping, abutting, underlying, or overlaying the GCS site.

“Reversal” means a GHG removal that is subsequently released or emitted back into the atmosphere, or that is later determined to have never occurred.

“Seismic Risk” means likelihood of occurrence of an earthquake and the associated severity of shaking that could result in CO_2 leakage or adverse impacts on public health, safety, or the environment. Seismic risk is a function of three elements: (1) the seismic hazard or likelihood of occurrence of an earthquake and the associated severity of shaking, (2) the seismic vulnerability or expected nuisance to people and damage to buildings and other structures given the occurrence of an earthquake, and (3) the expected consequences including public nuisance and losses resulting from the predicted damage.

"Seismic Sensors" means instruments that measure and record motions of the ground, including those of seismic waves generated by earthquakes, nuclear explosions, and other seismic sources.

"Seismic Station" means the location where specialized equipment has been installed to monitor and record seismic activity. It consists of a seismometer, data acquisition system, and communication equipment buried in a sealed, thermally insulated chamber, or vault, about six feet below the surface. The seismic station also includes a solar panel to power the batteries and a freestanding communications module to transmit real-time data via satellite, phone, or Internet.

“Seismicity” refers to the geographic and historical distribution of earthquakes.

"Seismicity Rate" means the rate of earthquakes that can be characterized by the empirical relationship of the Gutenberg-Richter (GR) law, $\log N = a - bM$, where over a given time period, N is the number of earthquakes $\geq M$, a is the number of $M \geq 0$, and b is a parameter that determines the ratio of larger to smaller earthquakes. Thus, seismicity rate is characterized by solving for both a and b.

“Sensitive Receptors” means any of the following:

(1) An education facility, including a preschool, school with transitional kindergarten, kindergarten, or any of grades 1 to 12, inclusive, daycare center, park, playground, college, or university.

(2) A community resource center, including a youth center.

(3) A health care facility, including a hospital, retirement home, or nursing home.

(4) Live-in housing, including a long-term care hospital, hospice, prison, detention center, or dormitory.

(5) A residence, including a private home, condominium, apartment, and living quarter.

(6) A building that is a business that is open to the public.

(7) A sensitive receptor does not include a facility or building set forth in (a) through (f) that is not certified for occupancy or has been abandoned.

“Storage Zone” means the reservoir into which CO_2 is injected for geologic storage.

"Strong Ground Motion" or “strong motion” means ground motion of sufficient amplitude and duration to be potentially damaging to a building or other structure.

"Strong Motion Recorder" means accelerometers that are designed to measure the large amplitude, high frequency seismic waves typical of large local earthquakes, and operate in the frequency band 0 Hz to 100+ Hz.

“Third-party carbon market registry” or “established registry” or “registry” means registry that has been approved by the Executive Officer pursuant to title 17, California Code of Regulations, Sections 95986 and 95987.

“Toxic Air Contaminants” means an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health (Health and Safety Code Section 39655a). Toxic air contaminants refers to the substances which have been listed as federal hazardous air pollutants pursuant to section 7412 of Title 42 of the United States Code and substances identified as toxic air contaminants under Title 17, CCR section 93000.

“Traffic Light System” means a framework to support a plan of control that guides actions toward risk mitigation for managing induced seismic events commonly using earthquake magnitude thresholds based on risks. Traffic Light System may have static or adaptive thresholds and maybe supplemented by probabilistic forecasting methods.

"Velocity Structure" means a generalized regional model of the earth's crust that represents crustal structure using layers having different seismic velocities.

"Verifiable" means that a project report assertion is well documented and transparent such that it lends itself to an objective review by an accredited verification body.

“Verification” means a systematic, independent, and documented process for the evaluation of reported data against the requirements specified in the QAM. Verification occurs after a project operator submits reports for crediting.

"Vertical Seismic Profiling” is a seismic-reflection method that records seismic arrivals from surface-activated sources with one or more receivers at depth in a borehole to determine in situ formation properties such as seismic-wave velocity, acoustic impedance, seismic anisotropy, and seismic attenuation.

“Wastewater Treatment Processes” means the processes used to treat fluids so they meet the required quality standards for use, reuse, discharge, and disposal.

"Wave Pattern Data" is also referred to as waveform data which means the type of data derived from the monitoring of seismic and acoustic waves that move through the Earth that are recorded by the seismic stations of an array. Typically, they are displayed as traces across a computer screen, with the x-axis showing time and the y-axis representing the movement of the medium that is monitored, i.e. ground, water or air.

"Working Lands" means lands used for farming, grazing, or the production of forest products.

(b) For the purposes of sections 95700 through 95705, the following acronyms apply:

"ATLS" means adaptive traffic light system.

"BACT" means best available control technology.

"CARB" means California Air Resources Board.

"CCUS" means carbon capture, utilization, and storage.

"CEQA" means California Environmental Quality Act.

"CFR" means Code of Federal Regulations.

"CGS" means California Geological Survey.

"CISN" means California Integrated Seismic Network.

"CO2" means carbon dioxide.

"ERRP" means emergency and remedial response plan.

"GCS" means geologic carbon storage.

"GHG" means greenhouse gas.

"GIS" means geographic information systems.

"HSC" means California Health and Safety Code.

"MSL" means mean sea level.

"PDF" means portable document format.

"PISC" means post-injection site care.

"PRC" means California Public Resources Code.

"QAM" means quantification assessment methodology.

"TLS" means traffic light system.

"UIC" means Underground Injection Control program.

"USDW" means underground storage drinking water.

"U.S. EPA" means the U.S. Environmental Protection Agency.

"ZIP" means Zone Improvement Plan.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.4, 39741.5, 41510, 41511 and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, 39741.4, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95702. Applicability.

This article applies to Operators of the following types of projects:

(a) Carbon capture projects, including:

(1) Carbon capture from combustion emissions sources;

(2) Carbon capture from process emissions sources; and

(3) Bioenergy with carbon capture.

(b) Direct air capture.

(c) Geologic carbon storage (GCS) sites.

(d) Nature-based, marine, biomass, and other CO_2 removal and storage.

(e) Carbon capture utilization.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.4, 39741.5, 41510, 41511, and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, 39741.4, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95703. Public Disclosure.

(a) Operators of applicable projects under sections 95702(a)-(c) shall develop and maintain a publicly accessible project webpage. This webpage shall be launched concurrently with the publication of the Notice of Exemption or Notice of Preparation for compliance with project-level CEQA requirements. Operators shall notify CARB electronically of the webpage launch and provide a link to the project webpage. For Operators of applicable projects under sections 95702(a)-(b), the project webpage shall be updated and maintained for the duration of carbon capture or direct air capture activities. For Operators of applicable projects under section 95702(c), the project webpage shall be updated and maintained for at least 100 years after the last date of injection. The project webpage shall include direct links or embedded documents to the following:

(1) *General Project Information*. Operators shall include a summary of project information that discloses and has titles that indicate the following:

(A) The project name;

(B) Operator name of record with the California Secretary of State;

(C) Project type as defined under section 95702;

(D) Project and operator contact address, including County;

(E) The air district in which the project is located;

(F) Physical description of project site and location, including, as applicable, street address, city, and ZIP code;

(G) If applicable, any public grants received by or awarded to the project;

(H) A description of the project activities that involve capture, removal, and/or storage of CO_2;

(I) The status of the project (for example, planning and permitting, under construction, operational, or decommissioned); and

(J) For carbon capture projects applicable under section 95702(a), operators must also disclose the following:

1. A description of the capture technology being implemented. The description shall include the specific capture technology type (e.g., amine-based solvent capture, adsorption, etc.), identification of the emission source(s) the technology is capturing from, and an explanation of the capture process; and

2. The manufacturer(s) of the capture technology.

(K) For applicable GCS sites, Operators shall also disclose the following:

1. The source(s) of the CO_2 to be injected;

2. The reservoir type (e.g., depleted oil and gas reservoir storage, saline aquifer storage, mafic and ultramafic reservoir storage);

3. The date of the issuance of the Class VI permit to construct or convert; and

4. The date of the issuance of the Class VI permit to operate.

(2) *Permitting and Regulatory Information*. Operators shall post on the project webpage a summary of and links to current documents and information related to project permits and regulatory actions taken directly related to the project. Only permits and regulatory actions that have been formally approved are required to be posted. Documents and information may be provided as downloadable PDFs or through a link to an existing public posting where the approved permit or regulatory information can be obtained. Documents completed for compliance with the California Environmental Quality Act (CEQA) shall be posted to the webpage with their public release. Permit information shall be posted to the project webpage within 30 calendar days following permit approval. Operators shall provide the following information, as applicable:

(A) All final documents completed for compliance with CEQA;

(B) Federal, state and local permits and authorizations related to:

1. Air resources and quality;

2. Water use and management;

3. Waste water handling and discharge; and

4. Injection well permits.

(C) All final documents which the Operator is required to prepare, compile, produce, or otherwise make available to satisfy a condition of a permit which the operator has been granted to carry out the project. Such documents may include, but are not necessarily limited to, documents related to land use, construction, operations, closure, and site care.

(3) *Permit Compliance Status.* Operators shall update the compliance status of the project at least annually. Operators shall update the compliance

status within 30 calendar days of any notices of non-compliance, violation or other action altering, revoking, or proposing to alter or revoke a permit by a permitting agency. Operators shall provide links to public information regarding current permit compliance or non-compliance.

(4) *Information Required under this Regulation*: Operators shall make the following information available on the project webpage, as applicable:

(A) The surface CO_2 monitoring plan, the air monitoring plan, monitoring plan reviews, the air mitigation plan, and biennial summaries pursuant to section 95704.1;

(B) The subsurface plume and pressure front monitoring plan, U.S. EPA-approvals and demonstration of any alternative PISC timeframes, monitoring plan updates pursuant to section 95704.2;

(C) Seismic monitoring plans, the baseline seismic monitoring summary, seismic monitoring plan reviews, seismic summaries reported biennially and every five years pursuant to section 95704.3;

(D) The emergency and remedial response plan (ERRP) and incident notifications pursuant to section 95704.4;

(E) Required notifications related to financial responsibility pursuant to section 95704.5.

(b) *Existing Air and Water Monitoring and Mitigation Activities*. Operators of applicable projects under sections 95702(a)-(c) shall post to the project webpage information about all approved air and water monitoring and mitigation requirements established by local, state, and federal permitting authorities. Operators shall post all information required under this section to the project webpage within 30 calendar days of permit approval. This section of the project webpage shall include the following information:

(1) *Emissions Sources and Monitoring Activities*. Operators shall describe the project's emissions sources and any monitoring activities for potential toxic air contaminants and criteria air pollutants, as applicable. The following information shall be posted to the project webpage:

(A) The project's primary purpose and major activities;

(B) Sources of potential air emissions at the site as part of project operation;

(C) A description of the scope of monitoring activities and how they measure, track, and quantify potential emissions from the project;

(D) A description of the monitoring techniques employed;

(E) If toxic air contaminants, criterial air pollutants, volatile organic compounds, or reactive organic compound monitoring is not conducted, the operator must provide a public description explaining why such monitoring is not required by a public agency; and

(F) Identify any voluntary monitoring activities conducted in addition to required permit conditions, if applicable.

(2) *Project Operator Requirements Related to Air Impacts*. Operators shall describe all mitigation measures required by permitting authorities to minimize air pollutant emissions from project development and operations. The following information shall be posted to the project webpage, as applicable:

(A) A description of best available control technology (BACT) requirements applicable to the project as determined by the local air district;

(B) A table listing each emissions control measure implemented to minimize operational emissions, including the technology name and targeted pollutant(s);

(C) A description of any industrial processes associated with carbon capture systems implemented for operational purposes that provide incidental reductions in air pollutant emissions, if applicable. Operators may provide quantitative estimates of emissions reductions when such analyses are available; and

(D) A description of construction and transportation related mitigation measures aimed at reducing temporary air emissions associated with project development.

(3) *Community-Based Mitigation Measures*. If mitigation of impacts from criteria air pollutant emissions is not feasible to be achieved through on-site mitigation measures, Operators must describe any additional mitigation measures to be implemented, as applicable. These measures may be informed through local community engagement.

(4) *Mitigation Measures for Impacts to Water Resources*. Operators shall describe all mitigation measures required by permitting authorities to minimize impacts to water resources from project development and operations. The following information shall be posted to the project webpage, as applicable:

(A) A table summarizing wastewater treatment processes and the technology name; and

(B) A description of mitigation measures to reduce water use or water quality impacts associated with the project's construction, transportation, or operational activities and the permit or approval pursuant to which the mitigation measure has been adopted.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; section 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; section 71464, Public Resources Code.

§ 95704. Geologic Carbon Storage.

(a) Operators of GCS sites under section 95702(c) shall comply with the requirements of sections 95704-95704.7. For purposes of these sections, Operators of GCS sites will be referred to as GCS Operators.

(b) No GCS operator shall begin injection of a CO_2 stream into a storage complex until proof of a Class VI permit issued by U.S. Environmental Protection Agency (EPA) is submitted to CARB and posted on the project webpage, as provided under section 95703(a)(2)(B)(4).

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; section 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; section 71464, Public Resources Code.

§ 95704.1 Air Pollutant and Surface CO_2 Monitoring and Associated Requirements.

(a) *Surface CO_2 Monitoring Plan*. GCS operators shall conduct surface and/or near surface monitoring for CO_2 across the surface projection of the storage complex

to detect potential CO_2 leakage to the atmosphere. The CO_2 monitoring activities shall occur when CO_2 injection begins and shall not terminate earlier than the completion of the applicable post-injection site care and site closure (PISC) plan pursuant to 40 CFR section 146.93, hereby incorporated by reference. GCS Operators shall prepare, maintain, and implement a surface CO_2 monitoring plan that documents monitoring activities. The monitoring plan shall be posted to the project webpage at least 90 calendar days before injection begins pursuant to section 95703. The surface CO_2 monitoring plan shall include the following:

(1) *CO_2 Monitoring Network*. GCS Operators shall monitor CO_2 concentrations or fluxes in areas with potential risks of surface leakage. The surface CO_2 monitoring plan shall demonstrate that the monitoring network provides sufficient spatial coverage to detect CO_2 concentrations or fluxes in areas with potential risks of surface leakage. The necessary coverage distance may vary depending on local meteorology, topography, and the monitoring equipment used. The CO_2 monitoring network must be sufficient to detect CO_2 concentrations or fluxes in the following locations:

(A) Injection wells;

(B) Abandoned wells, monitoring wells, and observation wells within the surface projection of the storage complex that intersect the storage zone at depth; and

(C) Geologic features identified by the seismic risk assessment, pursuant to section 95704.3(a), as potential CO_2 migration pathways, including but not limited to faults and fractures.

(2) *Leakage Signal Identification*. GCS Operators shall develop a methodology to distinguish leakage signals from CO_2 monitoring data and natural variations in background CO_2 concentrations and fluxes, and provide a description of the methodology in the surface CO_2 monitoring plan. The methodology shall include indicators of surface leakage that would trigger the Emergency and Remedial Response Plan (ERRP) requirements defined under section 95704.4 or ERRP requirements under Class VI pursuant to 40 CFR section 146.94, hereby incorporated by reference. The methodology and leakage indicators shall be scientifically justified through peer reviewed literature, in-situ measurements, and site-specific assessments.

(3) *Technical Specifications for CO_2 Monitoring Equipment*. Monitoring equipment shall meet the following technical specifications:

(A) Suitable for quantitatively measuring and monitoring CO_2 concentrations in near surface air and CO_2 fluxes from the ground surface;

(B) Calibrated to the manufacturer's specifications and recalibrated as often as needed to ensure equipment is properly operating;

(C) Capable of collecting continuous CO_2 concentrations or fluxes; and

(D) Capable of measuring the full span of potential CO_2 concentrations or fluxes expected across the entire surface projection of the storage complex, including small perturbations above naturally occurring background concentrations.

(4) *Meteorological Monitoring*. GCS Operators shall install meteorological monitoring stations that provide enough spatial coverage to accurately represent conditions across the surface projection of the storage complex. As applicable, operators must install meteorological monitoring stations to ensure that CO_2 monitoring equipment functions according to the manufacturer's specifications. The meteorological monitoring stations shall include equipment that continuously measures the following parameters:

(A) Temperature;

(B) Wind speed;

(C) Wind direction;

(D) Relative humidity; and

(E) Atmospheric pressure.

(5) *Sensitive Receptors*. GCS Operators shall describe the proximity of nearby sensitive receptors to the surface projection of the storage complex that could be impacted by a surface leakage event. Sensitive receptors include any of the following:

(A) An education facility, including a preschool, school with transitional kindergarten, kindergarten, or any of grades 1 to 12, inclusive, daycare center, park, playground, college, or university;

(B) A community resource center, including a youth center;

(C) A health care facility, including a hospital, retirement home, or nursing home;

(D) Live-in housing, including a long-term care hospital, hospice, prison, detention center, or dormitory;

(E) A residence, including a private home, condominium, apartment, and living quarter;

(F) A building that is a business that is open to the public; and

(G) A sensitive receptor does not include a facility or building set forth in subsections (A)-(F) that is not certified for occupancy or has been abandoned.

(b) *Continuous Data Coverage*. GCS Operators shall ensure year-round continuous operation of all monitoring equipment associated with the CO_2 monitoring required under section 95704.1 by meeting the following requirements related to data coverage:

(1) Each piece of monitoring equipment must collect valid data for at least 90% of the calendar year.

(2) If monitoring equipment is damaged or sent to the manufacturer for repair, and data loss occurs due to repair-related delays, the Operator shall note this data corruption in their reported summaries pursuant to section 95704.1(d) and remove this data from any subsequent analysis.

(c) *Surface CO_2 Monitoring Plan Review*. GCS Operators shall review and update the surface CO_2 monitoring plan. The updated plan shall meet the requirements under section 95704.1(a) and GCS Operators shall post to the project webpage pursuant to section 95703 within 60 calendar days of implementation. The surface CO_2 monitoring plan shall be reassessed and updated within 60 calendar days if any of the following change:

(1) The storage complex extent;

(2) GCS site infrastructure or equipment, including the upgrading or removal of infrastructure or equipment, as well as the drilling or decommissioning of any well that intersects the storage complex and which was not accounted for in the existing plan; and

(3) CO_2 surface leakage pathways within the surface projection of the storage complex due to seismic events or detection of increased seismicity, or any other event that may have weakened or otherwise changed the storage integrity.

(d) *Biennial Summaries*. GCS Operators shall evaluate and summarize the results of the CO_2 monitoring activities on a biennial basis. Biennial summaries shall be posted to the project webpage no later than March 31 of each two-year monitoring period and must include all monitoring conducted during that period. The biennial summaries shall include the following information:

(1) A high-level description of the CO_2 monitoring activities required under section 95704.1(a);

(2) A detailed map, in PDF form and in a form compatible with geographic information systems (GIS) that is geo-rectified, showing the location of CO_2 monitoring equipment and areas with potential risks of surface leakage, as identified under section 95704.1(a)(1);

(3) A description and interpretation of the CO_2 monitoring data collected over the previous two calendar years, aided with charts, graphs, and maps, where applicable;

(4) A summary of actions taken in response to surface leakage under the ERRP pursuant to section 95704.4 or other ERRP regulatory requirements, where applicable;

(5) Records of any instrument maintenance that occurred over the past two calendar years, including dates of equipment inspections and documentation showing that all monitoring equipment was calibrated to manufacturer specifications;

(6) Any identified necessary changes to the surface CO_2 monitoring plan and justification for those changes; and

(7) A summary of the quality assurance methods used to ensure data accuracy, reliability, and consistency.

(e) *Air Pollutant Monitoring System.* GCS Operators shall monitor ambient concentrations of criteria pollutants and toxic air contaminants at one or more locations at the GCS site. At least one monitoring station shall be installed at the boundary of the surface projection of the storage complex in the upwind direction of any potentially impacted sensitive receptors. The air pollutant monitoring activities must occur when construction begins and must not terminate earlier than the completion of the applicable PISC plan pursuant to 40 CFR section 146.93. The GCS operator may refer to activities required by other federal, state, or local government agencies in support of compliance with this requirement.

(f) *Air Monitoring Plan*. GCS Operators shall prepare, maintain, submit to CARB, and implement an air monitoring plan that documents air pollutant monitoring

activities. The monitoring plan shall be posted to the project webpage at least 60 calendar days before construction commences pursuant to section 95703. The air monitoring plan shall include the following information:

(1) Equipment to be used to continuously monitor and record criteria and relevant toxic air contaminant concentrations;

(2) Siting and equipment specifications; and

(3) Procedures for implementing the air monitoring plan, including information pertaining to the installation, operation, maintenance, and quality assurance, for the air pollutant monitoring system.

(g) *Air Monitoring Plan Review*. The GCS Operator shall review and update the air monitoring plan within 60 calendar days of any unplanned equipment or process modification that could affect operational emissions. The updated plan shall be posted to the project webpage pursuant to section 95703 within 60 calendar days of implementation.

(h) *Air Mitigation Plan.* The GCS Operator shall identify any potential adverse air quality impacts to public health resulting from project activities. If potential air pollution emissions are identified, the GCS Operator shall implement strategies that minimize such air quality impacts to the maximum extent technologically feasible. The GCS operator shall prepare, maintain, and submit to CARB an air mitigation plan that describes minimization strategies and approaches for evaluating minimization strategy effectiveness. The GCS operator may refer to plans prepared for other federal, state, or local government agencies in support of compliance with this requirement.

(i) *Data Retention*. GCS Operators shall retain all air pollutant and CO_2 monitoring records and documentation, including raw monitoring data, the active surface CO_2 monitoring plan, updates to the surface CO_2 monitoring plan, the active air monitoring plan, updates to the air monitoring plan, biennial summaries, and the air mitigation plan for at least 100 years after injection ends, and make those records available to CARB upon request.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; section 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; section 71464, Public Resources Code.

§ 95704.2. Subsurface CO_2 Plume and Pressure Front Monitoring.

(a) *Subsurface CO_2 Plume and Pressure Front Monitoring Plan*. GCS Operators shall monitor the extent of the CO_2 plume and the presence or absence of elevated pressure as approved in the GCS operator's Class VI operating permit and ensure no loss of CO_2 containment for 100 years after injection ends. All monitoring methods used to meet these requirements must be described in a subsurface CO_2 plume and pressure front monitoring plan that shall be posted to the project webpage pursuant to section 95703 at least 90 calendar days prior to the start of CO_2 injection. Any updates to the subsurface CO_2 plume and pressure front monitoring plans shall be posted to the project webpage within 60 calendar days of implementation.

(b) *Subsurface CO_2 Plume and Pressure Front Monitoring Retirement*. At the end of the U.S. EPA-approved PISC timeframe pursuant to 40 CFR section 146.93, the GCS Operator may reduce the frequency of or retire the subsurface CO_2 plume and pressure front monitoring. GCS Operators shall post the U.S. EPA-approval and demonstration of the alternative PISC timeframe required under 40 CFR section 146.93(c) to the project webpage within 30 calendar days of approval.

(c) *Subsurface CO_2 Plume and Pressure Front Monitoring Reinstatement*. If the GCS Operator detects a seismic event that triggers a yellow-light TLS threshold pursuant to section 95704.4 or CO_2 or formation fluid leakage after the U.S. EPA-approved PISC timeframe, the GCS Operator shall take actions required under section 95704.4(a), and within 60 calendar days:

(1) Reinstate the subsurface CO_2 plume and pressure front monitoring plan required under section 95704.2(a) and post the plan to the project webpage pursuant to section 95703, if the plan is not already posted;

(2) Review the storage complex extent using existing site characterization from the approved Class VI permit, subsurface and pressure front monitoring data, and computational modeling, the projected lateral and vertical migration of the CO_2 plume and formation fluids in the subsurface until the plume movement ceases, until pressure differentials sufficient to cause the movement of injected fluids or formation fluids which could potentially cause to harm to public health, safety, or the environment are no longer present. The model shall:

(A) Be based on detailed geologic data collected to characterize the storage zone(s), confining zone(s) and any additional zones; and total injected volumes through 100 years after the last date of injection;

(B) Take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and

(C) Consider potential migration through faults, fractures, and artificial penetrations.

(d) *Subsurface CO_2 Plume and Pressure Front Monitoring Reinstatement Review.* Every five years following reinstatement, GCS Operators shall review and update the subsurface CO2 plume and pressure front monitoring plan and the storage complex extent. The review shall incorporate all monitoring data, any revisions to the storage complex extent, changes in monitoring technologies, and any other updates necessary to ensure coverage of all potential leakage pathways. GCS operators shall post all updates to the project webpage pursuant to section 95703.

(e) *Subsurface CO_2 Plume and Pressure Front Reinstatement Summary.* GCS Operators shall evaluate and summarize the results of the subsurface CO_2 plume and pressure front monitoring activities and retain those results pursuant to section 95704.2(g).

(f) *Subsurface CO_2 Plume and Pressure Front Monitoring Retirement after Reinstatement*. Five years after reinstating the subsurface CO_2 plume and pressure front monitoring plan, GCS Operators may apply to reduce or retire their subsurface CO_2 plume and pressure front monitoring by demonstrating that the site conditions no longer pose an endangerment to public health, safety, or the environment with substantial evidence, considering and documenting all information in 40 CFR section 146.93(c)(1)(i)-(x) which meets criteria in 40 CFR section 146.93(c)(2)(i)-(vii). If the demonstration is approved by the Executive Officer based on the criteria in 40 CFR section 146.93(c)(2)(i)-(vii), the GCS operator is authorized to reduce the frequency of or retire the subsurface CO_2 plume and pressure front monitoring plan as approved.

(g) *Data Retention*. GCS Operators shall retain all subsurface CO_2 plume and pressure front monitoring records and documentation, including raw data, the active subsurface CO_2 plume and pressure front monitoring plan, updates to the subsurface CO_2 plume and pressure front monitoring plan, storage complex extent review(s), and five-year summaries for at least 100 years after injection ends and make those records available to CARB upon request.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; section 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; section 71464, Public Resources Code.

§ 95704.3. Seismic Monitoring Requirements.

(a) *Seismic Risk Assessment*. GCS Operators shall prepare a site-specific seismic risk assessment that evaluates the seismic risk at the GCS site and the potential consequences of an earthquake on public health, safety, and the environment.

(1) GCS Operators shall evaluate the following expected consequences given the occurrence of an earthquake:

(A) Damage to GCS site infrastructure;

(B) Harm to nearby populations;

(C) Damage to public structures;

(D) Public nuisance;

(E) Compromise integrity of well bores and confining system; and

(F) Activation of nearby faults.

(2) The results of the seismic risk assessment must inform the development and implementation of all seismic monitoring plans, including the seismic monitoring system, required in section 95704.3 and the Traffic Light System (TLS) within the ERRP as required in section 95704.4.

(3) GCS Operators shall electronically send the seismic risk assessment to California Geological Survey (CGS) for independent evaluation of its accuracy and completeness prior to the start of baseline monitoring.

(b) *Seismic Monitoring System.* GCS Operators shall install a seismic monitoring system that includes surface or downhole seismic sensors and strong motion recorders. Seismic sensors or strong motion recorders within the California Integrated Seismic Network (CISN) may be included in the seismic monitoring system. The seismic monitoring system shall:

(1) Monitor microseismicity with a magnitude of completeness between -0.5 to 0.5 within the storage complex and the pressure front;

(2) Locate microseismic events with an accuracy of approximately 100 meters horizontally and 500 meters vertically within the storage complex and the pressure front;

(3) Be calibrated using check-shots at depth or vertical seismic profiling;

(4) Be connected to the CISN with continuous wave pattern data and metadata; and

(5) Be capable of detecting seismic events that could potentially cause any of the consequences listed in section 95704.3(a)(1).

(c) *Baseline Seismic Monitoring Plan*. Prior to the start of injection, GCS Operators shall conduct at least one year of baseline monitoring to characterize the background seismicity at the GCS site. GCS Operators shall prepare, maintain, and implement a baseline seismic monitoring plan that documents baseline monitoring activities. The plan shall be posted to the project webpage pursuant to section 95703 at least 90 calendar days before CO_2 injection begins. The baseline seismic monitoring plan shall include the following:

(1) *Seismic Monitoring System Demonstration*. GCS Operators shall describe the seismic monitoring system and demonstrate that it meets the system requirements described in sections 95704.3(b)(1)-(4).

(2) *Seismic Station Attributes*. The baseline monitoring plan shall include a detailed map, in PDF form and in a form compatible with GIS that is geo-rectified, showing sensor locations. This map shall be accompanied by a table containing the following information for each sensor:

(A) Unique identification number;

(B) Latitude and longitude;

(C) Depth;

(D) Bandwidth;

(E) Model type;

(F) Data logger type; and

(G) Sampling rate for data logger.

(d) *Baseline Summary*. GCS Operators shall evaluate and summarize the results of the seismic risk assessment and baseline seismic monitoring conducted pursuant to section 95704.3(a) and 95704.3(c) respectively. This summary shall be posted to the project webpage pursuant to section 95703 at least 90 calendar days prior to the start of CO_2 injection. The baseline seismic summary shall include:

(1) *An earthquake catalog*. GCS Operators shall catalog natural earthquakes detected by the seismic monitoring system and publicly available earthquake catalogs and provide the following information for each seismic event:

(A) Date and time;

(B) Earthquake magnitude; and

(C) Location, including, latitude, longitude, and depth relative to Mean Sea Level (MSL);

(2) A velocity structure of the storage complex and pressure front using either natural or manmade acoustic events;

(3) Background seismicity rates and the methods and analysis used to establish these rates; and

(4) A summary of the quality assurance methods used to ensure data accuracy, reliability, and consistency.

(e) *Operational Seismic Monitoring Plan*. GCS Operators shall prepare, maintain, and implement an operational seismic monitoring plan that documents operational seismic monitoring activities. GCS Operators shall implement Operational seismic monitoring plans when CO_2 injection begins. The plan shall be posted to the project webpage pursuant to section 95703 at least 90 calendar days prior to the start of injection. The operational seismic monitoring plan shall include seismic monitoring within the storage complex and pressure front to monitor for induced and natural seismic events and any seismic events that trigger the yellow-light TLS threshold or higher pursuant to section 95704.4(a)(1). The operational seismic monitoring plan shall include the following:

(1) *Seismic Monitoring System Update for Active Injection*. GCS Operators shall use the baseline monitoring results to design an operational monitoring system and configuration that will be deployed before active injection begins. GCS Operators shall describe the operational seismic monitoring system and demonstrate that it meets the system requirements described in sections 95704.3(b)(1)-(4) in the operational seismic monitoring plan.

(2) *Seismic Data Analysis.* GCS Operators shall describe the evaluation methods that will be used to evaluate seismic data during injection in the operational seismic monitoring plan. During injection, GCS Operators shall continuously collect seismic data, evaluate the seismic data, and use the evaluation to perform the following tasks:

(A) Determine seismic event locations, including microseismicity and their magnitudes within the storage complex and pressure front;

(B) Maintain an earthquake catalog as described in section 95704.3(d)(1);

(C) Identify any previously unknown faults; and

(D) Determine whether TLS thresholds have been exceeded.

(3) *Operational Data Analysis.* GCS Operators shall determine whether anomalous subsurface pressure changes or seismic activity are correlated with injection operations by analyzing seismic data. The operational seismic monitoring plan shall document the methods used to evaluate the following operational data:

(A) Injection rate;

(B) Injection pressure (wellhead and bottomhole);

(C) Cumulative injection volume within the storage complex; and

(D) Reservoir pressure.

(f) *Operational Seismic Monitoring Plan Review.* GCS Operators shall review and update the operational seismic monitoring plan every five years or within 60 calendar days of a review-triggering change. The updated plan shall meet the requirements under section 95704.3(e) and shall be posted to the project webpage pursuant to section 95703 within 60 calendar days of implementation. Changes to any of the following shall constitute a review-triggering change:

(1) Seismic monitoring system as outlined in section 95704.3(b);

(2) Storage complex extent;

(3) Newly identified faults and fractures observed through evaluation of microseismicity; and

(4) TLS and ERRP as outlined in section 95704.4.

(g) *Operational Seismic Annual Summary.* GCS Operators shall evaluate and summarize the results of operational seismic monitoring activities on an annual basis. GCS Operators shall disclose the annual summaries on a biennial schedule, including the two summaries prepared during each biennial reporting period, pursuant to section 95703(a)(4). GCS Operators shall retain the annual

summaries pursuant to section 95704.4(f) and include the following, as applicable:

(1) An earthquake catalog, as defined in section 95704.3(d)(1);

(2) A summary of operational data as outlined in section 95704.3(e)(3);

(3) A summary of potential links between injection operations and seismic events supported by operational and seismic monitoring data;

(4) A summary of any faults and fractures observed through evaluation of all seismic activity as required in section 95704.3(e)(2)(C), including their locations and seismic risk as determined in section 95704.3(a);

(5) A summary of any seismic activity detected above the green-light threshold and any remedial action taken in accordance with the TLS and ERRP outlined in section 95704.4;

(6) A summary of the quality assurance methods used to ensure data accuracy, reliability, and consistency; and

(7) A summary of any updates to the operational seismic monitoring plan in accordance with section 95704.3(f).

(h) *Post-injection Seismic Monitoring Plan.* GCS Operators shall continue conducting seismic monitoring within the storage complex and pressure front associated with CO_2 plume migration and any seismic events that trigger the yellow-light TLS threshold or higher pursuant to section 95704.4. GCS Operators shall prepare, maintain, and implement a post-injection seismic monitoring plan that documents post-injection seismic monitoring activities. The post-injection seismic monitoring plan shall be initiated on or before the last date of injection and not terminate before 100 years after the last date of injection. The post-injection seismic monitoring plan shall be complete and posted to the project webpage pursuant to section 95703 at least 90 calendar days before the last date of injection. The post-injection seismic monitoring plan shall include:

(1) *Seismic Monitoring System Updates for Post-Injection Conditions*. GCS Operators shall describe the seismic monitoring system that will be used from the last date of injection to 100 years after the last date of injection and demonstrate that it meets the system requirements described in sections 95704.3(b)(1)-(4) in the post-injection seismic monitoring plan. GCS Operators shall use the annual monitoring evaluations required under section 95704.3(g) to design the monitoring system and configuration that will be deployed from the last date of injection to 100 years after the last date of injection.

(2) *Seismic Data Analysis*. GCS Operators shall continuously collect and evaluate seismic data within the storage complex and pressure front. The post-injection seismic monitoring plan shall describe the methods to evaluate seismic data as outlined in sections 95704.3(e)(2)(A)-(D).

(i) *Post-Injection Seismic Monitoring Plan Review.* GCS Operators shall review and update the post-injection seismic monitoring plan every five years or within 60 calendar days of a review-triggering change. The updated plan shall meet the requirements under section 95704.3(h) and shall be posted to the project webpage pursuant to section 95703 within 60 calendar days of implementation. Changes to any of the following constitute a review-triggering change:

(1) Seismic monitoring system as outlined in section 95704.3(b);

(2) Storage complex extent;

(3) Newly identified faults and fractures observed through evaluation of microseismicity; and

(4) TLS and ERRP as outlined in section 95704.4.

(j) *Seismic Monitoring System Retirement*. At the end of the U.S. EPA-approved PISC timeframe pursuant to 40 CFR section 146.93, the GCS Operator may propose a full or partial retirement of the seismic monitoring system. The Executive Officer shall consider the proposed retirement, and, after consultation with CGS, approve the proposed retirement if the Executive Officer finds the following:

(1) Seismic monitoring data indicates no seismic events meet or exceed the yellow-light TLS threshold within the most recent five-year period; and

(2) Seismic monitoring data indicates no fracture or fault activation within the storage complex and pressure front that presents loss of CO_2 containment.

(k) *Seismic Monitoring Obligations After Full or Partial System Retirement*. If the Executive Officer approves full or partial retirement of the seismic monitoring system, the GCS Operator shall meet the following requirements for at least 100 years after injection ends:

(1) The GCS Operator shall continue monitoring through the CISN;

(2) The GCS Operator shall evaluate and summarize the results of the seismic monitoring activities every five years as required in section 95704.3(n); and

(3) GCS Operators with a partially retired seismic monitoring system shall also continue to meet section 95704.3(h).

(l) *Seismic Monitoring Reinstatement*. If a seismic event occurs after full or partial retirement of the seismic monitoring system that meets or exceeds the yellow-light threshold, GCS Operators shall reinstate a post-injection seismic monitoring plan that meets the requirements under section 95704.3(h).

(m) *Seismic Monitoring Retirement after Reinstatement*. After five years of reinstating the seismic monitoring system, GCS Operators may propose, and the Executive Officer shall consider, partial or full retirement pursuant to section 95704.3(j).

(n) *Post-Injection Seismic Summary*. GCS Operators shall evaluate, summarize, and disclose pursuant to section 95703(a)(4) the results of the post-injection seismic monitoring activities every five years. These summaries shall include the following:

(1) An earthquake catalog, as defined in section 95704.3(d)(1), that includes seismic events located within the storage complex and pressure front;

(2) A summary assessment of potential links between CO_2 plume migration and seismic events;

(3) A summary of any faults and fractures observed through evaluation of all seismic activity as required in section 95704.3(e)(2)(C), including their locations and seismic risks as determined in section 95704.3(a);

(4) A summary of any seismic activity detected meeting or exceeding the yellow-light threshold and any remedial action taken in accordance with the TLS and ERRP outlined in section 95704.4;

(5) A summary of the quality assurance methods used to ensure data accuracy, reliability, and consistency; and

(6) A summary of any updates to the post-injection seismic monitoring plan in accordance with section 95704.3(i).

(o) *Data retention*. GCS Operators shall retain all monitoring records and documentation, including raw monitoring data, all seismic monitoring plans, updates to the monitoring plans, and five-year and annual summaries for at least 100 years after injection ends. GCS Operators shall make those records and documentation available to CARB upon request. Annual summaries shall be completed and made available upon CARB's request no later than March 31 of each calendar year for monitoring conducted in the previous calendar year. Five-year monitoring summaries shall be completed and made available upon

CARB's request by March 31 following the end of each five-year monitoring period.

(p) *Continuous Data Coverage*. GCS Operators shall ensure year-round continuous operation of all equipment associated with the seismic monitoring system required under section 95704.3 by meeting the following requirements related to data coverage:

(1) Each piece of monitoring equipment must collect valid data for at least 90% of the calendar year.

(2) If monitoring equipment is damaged or sent to the manufacturer for repair, and data is not collected due to repair-related delays, GCS Operators shall note the time period during which data was not collected in their reported summaries pursuant to sections 95704.3(g) and 95704.3(n) and not include this period in any subsequent analysis.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95704.4. Emergency and Remedial Response Plan.

(a) *Emergency and Remedial Response Plan*. GCS Operators shall identify potential risks from seismicity and injected CO_2 or formation fluids that may cause endangerment to public health, safety, and the environment. GCS Operators shall develop an emergency and remedial response plan (ERRP) that documents mitigation measures and remediation activities. GCS Operators shall prepare, maintain, and implement an ERRP starting before CO_2 injection begins and terminating not before 100 years after the last date of injection. The ERRP shall be posted to the project webpage pursuant to section 95703 at least 90 calendar days prior to the start of injection. The ERRP shall include the following:

(1) *Traffic Light System*. GCS Operators shall develop a traffic light system (TLS) that is informed by the site-specific risk assessment as described in section 95704.3(a) and the seismic monitoring system pursuant to section 95704.3(b).

(A) The site-specific risk assessment must support establishing TLS thresholds. GCS Operators shall include at least three risk-based threshold levels in the TLS. Each threshold level, with the exception

of the green-light threshold, must include a minimum magnitude at which the level is triggered:

1. Green-light: Represents normal operational conditions;

2. Yellow-light: Triggered when seismicity exceeds the established threshold set at least two magnitude steps below the red-light threshold, at which point increased seismic monitoring and potential operational modifications must be evaluated and implemented; and

3. Red-light: Triggered when earthquakes cause any consequence provided in section 95704.3(a)(1), at which point operations must be suspended as provided in section 95704.4(d).

(B) If utilizing ATLS, GCS Operators shall incorporate the following data and information into the system:

1. Operational data as outlined in section 95704.3(e)(3);

2. Earthquake catalog as outlined in section 95704.3(d)(1);

3. Seismic station attributes as outlined in section 95704.3(c)(2); and

4. Background seismicity rate as required in section 95704.3(d)(3).

(C) GCS Operators shall submit the TLS thresholds electronically as PDFs to CGS for independent evaluation that the TLS is accurate and complete. GCS Operators shall include the site-specific seismic risk assessment required under section 95704.3(a)(3) and describe how that assessment was used to develop the TLS thresholds.

(2) *Leakage Mitigation Measures.* GCS Operators shall describe the site-specific CO_2 or formation-fluid leakage mitigation measures implemented in accordance with 40 CFR section 146.94 in the ERRP. After the end of the U.S. EPA-approved PISC period required by 40 CFR section 146.93, GCS Operators shall continue applying these mitigation measures for the remaining 100 years after CO_2 injection ends if any CO_2 or formation-fluid leakage from the storage complex is detected.

(b) *Emergency and Remedial Response Plan Review*. GCS Operators shall review and update the ERRP every five years starting from the last date of injection to 100 years after the last date of injection to maintain compliance with section 95704.4(a). If a GCS Operator detects CO_2 or formation fluid leakage from the storage complex or a red-light TLS threshold is triggered, they must update the ERRP and submit within 90 calendar days of the incident for approval by the Executive Officer. The ERRP update shall include the following:

(1) An impact analysis of public health, safety, and the environment addressing consequences described in section 95704.3(a)(1), as applicable; and

(2) An evaluation of the effectiveness of the TLS thresholds and the associated mitigation measures in minimizing potential impacts to public health, safety, and the environment.

(c) *Incident Notification*. GCS Operators shall notify CARB and CGS electronically within 24 hours of detecting CO_2 or formation fluid leakage from the storage complex or the yellow-light TLS threshold or higher is triggered.

(1) Within 24 hours of an incident notification, GCS Operators shall post the incident to the project webpage pursuant to section 95703 and provide CARB and CGS with an initial report that includes the following information:

(A) Date, time, and location of any seismic event(s) or of any suspected or confirmed CO_2 leak;

(B) Distance of the epicenter or leak from the injection well(s);

(C) Magnitude of seismic event(s);

(D) Initial assessment of the potential link between CO_2 injection and seismic or the leakage event(s);

(E) Initial estimate of any CO_2 or formation fluid leakage; and

(F) Notifications issued to the U.S. EPA Regional Director, first responders having jurisdiction over the area encompassing the storage complex.

(2) Within 60 calendar days of an incident notification, GCS Operators shall provide CARB with a final report that includes the following, as applicable:

(A) The root cause(s) of the seismic event(s) or CO_2 leakage event(s), as informed by operator-, government-, or third party- collected data, as applicable;

(B) The measured and quantified, if feasible, or else estimated total mass of leaked CO_2;

(C) Description of the number of earthquakes felt reports and a description of reported damage;

(D) Description of completed remedial actions under the ERRP;

(E) Any modifications to the current seismic monitoring plan pursuant to section 95704.3 and subsurface CO_2 plume and pressure front monitoring plan pursuant to section 95704.2; and

(F) Summary of the quality assurance methods used to ensure data accuracy, reliability, and consistency.

(d) *Emergency Injection Operation Shutdown*. GCS Operators shall immediately cease injection operations in all wells and must not resume injections without approval from the Executive Officer if any of the following incidents occur:

(1) GCS Operator identifies any evidence of injected CO_2 or formation fluid leaking outside of the storage complex; or

(2) GCS Operator detects a red-light seismic event within the storage complex or pressure front.

(e) *Approval to Restart Injection Operations.* The Executive Officer shall approve restarting injection operation if the GCS Operator demonstrates the following:

(1) Seismicity has remained below the yellow-light threshold for 30 consecutive calendar days; and

(2) CO_2 and formation fluid leakage has been remediated pursuant to section 95704.4(a)(2) and no longer poses a risk of further migration.

(f) *Data retention*. GCS Operators shall retain the active ERRP, updates to the ERRP, and a copy of any notifications submitted to CARB for at least 100 years after injection ends and make those records available to CARB upon request.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95704.5. Financial Responsibility.

(a) *Financial Responsibility Plan.* GCS Operators shall uphold obligations to pay the short and long-term costs associated with monitoring and remediation activities that ensure the risk of CO_2 leakage poses no material threat to public health, safety, and the environment for no less than 100 years after injection ends. GCS Operators shall prepare, maintain, and implement a financial responsibility plan that demonstrates how they will meet the requirements of 40 CFR section 146.85, hereby incorporated by reference, and the monitoring and remedial activities required under sections 95704.1 through 95704.3. The financial responsibility plan shall be submitted to CARB prior to the start of injection and include the following:

(1) *U.S. EPA-Approved Financial Responsibility Instruments*. GCS Operators shall document all financial responsibility instrument(s) approved by U.S. EPA pursuant to 40 CFR section 146.85(a)(5)(i).

(2) *Demonstration of Coverage*. GCS Operators shall demonstrate that the U.S. EPA-approved financial responsibility instrument(s) sufficiently cover the following costs:

(A) All required U.S. EPA project phases listed under 40 CFR section 146.85(a)(2);

(B) Emergency and remedial response activities pursuant to section 95704.4;

(C) Air pollutant and surface CO_2 monitoring and related requirements pursuant to section 95704.1;

(D) Subsurface CO_2 plume monitoring pursuant to section 95704.2; and

(E) Seismic monitoring pursuant to section 95704.3.

(3) *Instruments to Meet CCUS Program Requirements*. If the U.S. EPA-approved financial responsibility instrument(s) are insufficient to cover the costs of activities described under sections 95704.5(a)(2)(B)-(D), GCS Operators shall obtain financial responsibility instrument(s) that qualify under 40 CFR section 146.85(a)(1)(i)-(vi) to cover such costs. GCS Operators shall demonstrate in the financial responsibility plan that these financial responsibility instrument(s) meet the following:

(A) The instruments cover the required cost for each activity under section 95704.5(a)(2)(B)-(D), and follow annual cost estimate requirements under section 95704.5(b)(3) throughout the full project duration, including the duration of the PISC period.

1. The financial mechanism may not cancel, terminate or fail to renew except for failure to pay such financial instrument. In the case of cancellation, the operator must, no later than 60 calendar days prior to the date that cancellation is effective, provide an alternate financial responsibility demonstration to CARB or notify CARB that an alternate financial responsibility demonstration is not possible. If an alternate financial responsibility demonstration is not possible, any funds from the instrument being cancelled must be released prior to or upon cancellation.

2. GCS Operators shall renew all financial instruments, if an instrument expires, for a term expiring no sooner than 100 years after the last date of injection. The instrument may be automatically renewed as long as the GCS Operator has the option of renewal at the face amount of the expiring instrument.

3. Cancellation, termination, or failure to renew may not occur and the financial instrument will remain in full force and effect in the event that on or before the date of expiration: The U.S. EPA Regional Director deems the facility abandoned; or the permit is terminated or revoked or a new permit is denied; or closure is ordered by the U.S. EPA Regional Director or a U.S. district court or other court of competent jurisdiction; or the operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or the amount due is paid.

(B) If a GCS Operator uses more than one instrument to assure a single monitoring or remediation activity specified in subsection (a)(2)(B)-(C) of this section, selected instruments shall not be self-insurance or performance bonds.

(C) If a GCS Operator uses third-party instrument(s), they shall demonstrate that the financial institution providing the instrument(s) has also provided instruments approved by the U.S. EPA Regional Director to cover subsection (a)(2)(A) of this section. Alternatively, the provider must meet financial strength requirements based on

credit ratings; or has met a minimum rating, minimum capitalization, and ability to pass the bond rating as applicable, such that the provider is of equal or great financial strength as compared to the provider of instruments approved by the U.S. EPA Regional Director to cover (a)(2)(A) of this section.

(D) A GCS Operator who fulfills the requirements of subsection(a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy.

(E) If a GCS operator uses surety bonds or letters of credit, they must establish a standby trust. The standby trust fund must be used to provide a location to place funds if needed and may not be cancelled so long as these instruments are used. The GCS operator must notify CARB within 30 calendar days when any payment is made from the standby trust.

(F) If a GCS Operator or its guarantor uses self-insurance, their Tangible Net Worth and net working capital must be at least 6 times the total estimated financial liability of (a)(2) of this section. GCS Operators shall meet the financial strength and rating requirements specified in 40 CFR section 146.85(a)(6)(v), shall submit a report of its bond rating and financial information annually to CARB, and may arrange a corporate guarantee as specified under 40 CFR section 146.85(a)(6)(vi).

(G) If the GCS Operator uses a trust fund or escrow account with pay-in-periods, they shall provide justification for such use as well as for the length of pay-in-period. Additionally, use of an escrow account requires segregation of funds from other accounts and uses.

(4) *Statement of assurance*. GCS Operators shall confirm and state that financial responsibility will be maintained with no lapse in coverage, including under conditions of change in ownership, or cancellation or renewal of qualifying financial instruments, along with a description of the steps taken to prevent such a lapse.

(b) *Continuation of Financial Responsibility*. U.S. EPA approval for a GCS Operator to be released from financial responsibility instrument(s) pursuant to 40 CFR

section 146.85(b)(2) does not terminate the GCS Operator's financial responsibility obligations under this section, which extend to 100 years after injection ends. After GCS Operators receive U.S. EPA approval pursuant to 40 CFR section 146.85(b)(2), GCS Operators shall do the following:

(1) *Update Financial Responsibility Plan*. Within 60 calendar days of receiving U.S. EPA approval pursuant to 40 CFR section 146.85(b)(2), GCS Operators shall update their financial responsibility plan to ensure compliance with section 95704.5(a) and provide the updated plan to CARB;

(2) *Update Standby Trust Fund*. Within 120 calendar days of receiving U.S. EPA approval pursuant to 40 CFR section 146.85(b)(2), GCS Operators using surety bonds, letters of credit, or escrow accounts shall establish or modify a standby trust fund. The standby trust fund must be used to provide a location to place funds if needed; and may not be cancelled so long as these instruments are used.

(3) *Annual Cost Estimate.* GCS Operators shall perform an annual review of their financial responsibility plan by March 31 of each calendar year. The annual review shall determine any necessary adjustments to costs associated with performing the activities described under section 95704.5(a)(2). GCS Operators shall perform a cost adjustment for each activity, in real dollars, and based on the costs of CARB hiring a third party to perform the required activities. A third party is a party who is not within the corporate structure of the operator of the GCS site.

(c) *Notification of Change to Financial Coverage or Condition.* Beginning at the start of CO_2 injection and until 100 years after the last injection, GCS Operators shall notify CARB of any of the reportable events listed below. The notification must describe the event and explain the steps the GCS Operator will take to continue meeting the obligations pursuant to section 95704.5. Notices required under section 95704(c)(2)-(5) shall be submitted electronically to CARB and posted to the project webpage within 30 calendar days of any such event:

(1) *Change in Coverage*. GCS operators shall report any change in coverage, including the renewal or replacement of an instrument(s), or an adjustment to its face amount. This notification shall explain the cause for the change, the effective date, and include any relevant supporting documentation such as annual cost estimates that explain why the change in coverage is necessary or permissible;

(2) *Cancellation, Termination, Failure to Renew*. GCS Operators shall report receipt of any notice from a financial instrument provider indicating

cancellation; termination, or failure to renew any financial responsibility instruments, or upon the actual cancellation, termination, or lapse in coverage period. The notification shall include a plan to correct the lapse within 60 calendar days of the lapse date.

(3) *Adverse Financial Conditions*. GCS Operators shall report when either the GCS operator or a third-party provider of a financial responsibility instrument files for Chapter 7 or Chapter 11 bankruptcy; or

(4) *Transfer of Ownership*. GCS Operators shall report transfer of ownership of the GCS site. The notice shall include the effective date of transfer.

(d) *Data Retention*. GCS Operators shall retain the financial responsibility plan, updates to the financial responsibility plan, annual cost estimates, and updated standby trust documentation, if applicable, for at least 100 years after injection ends and make those records available to CARB upon request.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95704.6. Legal Demonstration.

(a) Prior to the start of CO_2 injection, GCS Operators shall submit an electronic record of proof to CARB demonstrating legally binding agreement among all relevant interest holders that prohibits any drilling into or extraction activity from the storage reservoir. The agreement must not terminate until the following have occurred:

(1) The GCS Operator has completed their U.S. EPA-approved PISC timeframe and has received approval for their PISC plan pursuant to 40 CFR section 146.93(b)(2)-(3);

(2) The GCS Operator has demonstrated that seismicity rates are consistent with background seismicity rates as described in section 95704.3(d)(3); and

(3) No less than 100 years have elapsed since the last date of injection.

(b) The agreement shall be binding upon each successive relevant interest holder and, if such agreement is established through creation of one or more real

covenant, the real covenant(s) shall meet the requirements of Civil Code section 1468.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; section 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; section 71464, Public Resources Code.

§ 95704.7 Community Communication.

(a) *Community Communication Related to GCS sites.* GCS Operators shall keep communities adjacent to proposed and operating GCS sites, as well as any other interested party, informed through direct communications of project development milestones and project operations.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511 and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95705. Carbon Management Projects and Quantification Assessment Methodologies.

(a) *Applicability.* Operators with carbon management project types applicable under section 95702(a)-(e) may submit projects for certification pursuant to this section. Project types not covered by a CARB-approved compliance offset or other protocol, or that are ineligible for compliance obligation reduction pursuant to section 95852.3, may seek certification under this section. Projects covered by a CARB-approved protocol must use the corresponding approved protocol. Projects utilizing GCS to store carbon in super critical form in a Class VI reservoir must receive permanence certification pursuant to the Geologic Carbon Sequestration Protocol, (GCS Protocol, California Air Resources Board, [date]) incorporated herein by reference. Class II UIC projects are not eligible for certification under this section.

(b) *Eligibility Requirements for Submission*. A project applicant shall submit a project application package for review to the Executive Officer. The applicant must demonstrate that the project conforms with the criteria in subsection 95705(d) below and has either: (1) an associated quantification assessment methodology

(QAM) that has been approved, issued, or published by a third-party carbon market registry such that it can at the time of application be used to generate credits through that registry; (2) a QAM that has been approved, issued, or published for the carbon capture portion of the project in combination with the GCS protocol before project submission; or (3) a QAM developed by the applicant based on sufficient verified, real, and existing operational data, with most recent measurements collected within 24 months of application submission, to demonstrate and quantify the full GHG benefits of this specific project and a financial viability demonstration including but not limited to an advanced market commitment for the CO_2 capture or removals that will result from this project.

(c) Documents Required.

(1) *Documentation Required for Carbon Management Projects*. All documentation submitted must be prepared in accordance with the requirements of the QAM identified by the applicant. The applicant will ensure that all documentation needed to evaluate the project is provided to the Executive Officer.

(2) *Carbon Management Project*. The applicant shall submit a description of the project sufficient for the Executive Office to evaluate project activities and outcomes. The applicant will provide labeled maps, in a non-proprietary vector format that can be read by GIS programs, that show the physical location of the various components of the project.

(3) *QAM*. The applicant shall submit the entire QAM version that the project was developed under, the name of the registry, if applicable, that approved the QAM, and all relevant links to, or copies of, any guidance, formal public comments, and any other relevant documents that explain or describe the QAM. The QAM must either (1) already be approved by a third-party carbon market registry that has also credits issued under this QAM; or (2) be developed using sufficient verified, real, and existing operational data, with most recent measurements collected within 24 months of application submission, to demonstrate and quantify the full GHG benefits of this specific project. For projects utilizing a QAM developed by a third-party carbon market registry, the QAM must have been approved or updated by the third-party carbon market registry within 5 years of the submittal date of the application. For projects that require permanence certification under the GCS protocol, these projects may use an established QAM from a third-party carbon market registry for the carbon capture portion of the project.

(4) *Demonstration of Project and QAM Conformance*. The applicant shall demonstrate that the project conforms with an existing QAM and is either

(1) verified, approved, recognized, or otherwise can be used for crediting by a third-party carbon market registry, including identification of the registry, QAM and QAM version, and recognition of conformance by the applicable administering entity; or (2) relies on sufficient independently verified, real, and existing operational data to demonstrate and quantify the full GHG benefits of this specific project, with most recent measurements collected within 24 months of application submission. A project shall demonstrate conformance through providing the following:

(A) *Credit issuance*. A project shall be considered to conform with a QAM when the registry has issued carbon credits to the project under the identified protocol and protocol version. The applicant shall provide documentation of credit issuance, including issuance date, and quantity; or

(B) *GCS permanence certification and carbon capture QAM.* A project that captures carbon and injects it into saline or depleted oil and gas reservoirs and are pursuing, or possess, a U.S. EPA Underground Injection Control program permit must utilize a GCS site with an existing permanence certification issued pursuant to CARB's GCS protocol. The carbon capture portion of the project application shall be assessed under a QAM already approved by a third-party carbon market registry. Credit issuance is not required; however, the project must use a GCS site with a CARB-certified permanence determination, and the associated third-party carbon market registry must have reviewed and approved the capture component through an associated QAM. When a single QAM covers both carbon capture and storage, the project must still rely on a GCS site with permanence certification under CARB's GCS protocol; the capture component of the QAM may be used if the Executive Officer determines that it is compatible with the GCS protocol; or

(C) *QAM Developed with operational data:* A project that follows a QAM that meets each of the criteria specific in subsection 95705(d); has been measuring the GHG benefits of this project within the last 24 months prior to submission of the application; is based on sufficient verified, real, and existing operational data to demonstrate and quantify the entire GHG benefits of the specific project; and has a financial viability demonstration including committed purchasers of the projects product(s) or intended programs. The applicant shall provide:

1. The operational data used to develop the QAM electronically and able to be evaluated by the Executive Officer to replicate all requirements, criteria, and QAM development;

2. A QAM that reflects formatting, writing style, organization, level of detail, objective criteria, and information to that within similar QAMs approved by a third-party carbon market registry;

3. The registry QAM that was used as a basis for QAM development pursuant to 97505(c)(4)(c)(2); and

4. Financial viability documentation that shows future financial projections, and a demonstration of specific off-takers of this project, or a demonstration of intended programs in which this project shall enroll for which it is qualified, to ensure the long-term financial viability of this project.

(5) *Demonstration of Criteria Conformance*. The applicant shall provide a demonstration of how the project meets each of the criteria specified in subsection 95705(d) below through the QAM. All required documentation, code, models, tools, and measurements used within the quantification methodology must be submitted in a way by which the numbers, figures, maps, and other data can be evaluated by the Executive Officer directly without needing to manually perform data entry or otherwise manipulate the data so that the quantification methodology can be replicated or edited.

(d) Criteria for Project Conformance.

(1) *Criteria*. A project must conform with the criteria through demonstrating the GHG reduction or removal enhancement is real, additional, quantifiable, permanent, verifiable, and enforceable. The following documentation shall be submitted to the Executive Officer to evaluate the project conformance:

(A) Projects must accurately determine the extent to which GHG emissions reductions and removal enhancements are achieved by the project. The applicant shall provide project documentation that conforms to the quantification assessment methodology that clearly identifies the project boundary and documents all project-related GHG emissions and removals included in the project, such as upstream feedstock production and/or capture processes, feedstock harvesting or collection where applicable, ecological or

soil carbon processes, transport, process emissions, downstream emissions and end-of-life impacts, and embodied emissions. The project and associated QAM shall include a project baseline that reflects a conservative estimate of business-as-usual performance or practices for the project type. This shall also include system boundaries, assumptions, data sources, exclusions, and conservative factors. The QAM's quantification methodology must be based on empirically measured carbon or GHG's as a result of the activity outlined by the project. The quantification methodology must rely on remeasurements of empirical data and not be solely based on modeled or theoretical data or methods.

(B) Projects must demonstrate permanence of CO_2 removal outcomes. This shall include describing the expected duration of carbon storage and providing evidence supporting the ability of the storage approach to maintain isolation of carbon from the atmosphere for the duration claimed. This shall include descriptions and quantification of risks of reversal or loss of stored carbon.

(C) Projects must demonstrate the ability to report and verify the CO_2 removal outcomes using an independent third-party verifier. Verifiers shall be able to review documentation of all monitoring, reporting, and record retention procedures for all GHG emission sources and sinks within the project boundary, with at least an annual reporting period and at least a triennial verification period. The project documentation must include all measurement, monitoring, recordkeeping, reporting, and verification methodologies and standards used. The documentation shall include procedures for interim data collection and for alternative monitoring and measurement methods. The documentation will also include quality assurance and quality control information including information regarding any measurement gaps, missing data substitution, calibrations or maintenance records for monitoring equipment, or models providing data for calculating project baseline emissions, project emissions, GHG emission reductions, and GHG removal enhancements.

(2) *Assessing Criteria Conformance*. To ensure that the project conforms with the criteria in subsection 95705(d), the QAM for the project shall include standards and metrics that ensure projects conform with all criteria. The Operator shall demonstrate that the QAM has these standards and metrics and that the project conforms with them as outlined in the QAM.

(e) Certification process.

(1) *Completeness Review*. The Executive Officer will evaluate all required documentation to confirm that the application includes all information required by subsections 95705(c) and 95705(d), and are sufficiently documented for the Executive Officer to replicate the QAM. The Executive Officer may request additional information from the project applicant for explanation of any data, inputs, methods and lack of information in the application or modifications. The Executive Officer may direct a revision to numbers or assumptions based upon the response to these questions. The applicant must respond and address the request within 30 calendar days.

(2) *Application Completeness Denial.* If the Executive Officer deems the application is not complete, and the applicant does not provide a satisfactory response to address the deficiencies within 30 calendar days, the Executive Officer may determine that the project does not meet the criteria for certification at this time. In such cases, the Executive Officer will notify the applicant that the project does not qualify for certification at this time and identify relevant deficiencies. If the applicant does not submit a revised application that addresses identified deficiencies and meets all eligibility requirements within 30 calendar days, the Executive Officer determination is final.

(3) *Comprehensive Technical Review.* The Executive Officer will conduct a comprehensive technical review of all submitted documentation and evaluate the application against the criteria included in 95705(c-d). This includes:

(A) The Executive Officer will evaluate the applicant's quantification results using equations, assumptions, system boundaries, and data provided in the application. This may include recalculation of all quantified GHG emissions and removals, verification of project-specific baselines, confirmation of GHG removal claims, duration of storage and risks of reversal, recalculation of avoided emissions, and evaluation of foreseeable emissions or removals occurring outside of the project's system boundary. The Executive Officer may evaluate and confirm that all data inputs, assumptions, and methodological choices included in the analysis reported are consistent and supported by the provided documentation. If the applicant is using operational data to develop a QAM within the application, The Executive Officer shall evaluate whether the operational data is verified, real, and sufficient to the QAM and project. For these applications, The Executive Officer may assess the credibility, assumptions, and expectations of the financial viability demonstration. The Executive Officer may request

operating conditions for a project regardless of application submission pathway. The Executive Officer, or designee, may visit and take measurements of any part of the project to confirm details throughout the application process. The Executive Officer may determine that the application does not meet the criteria for certification if:

1. The Executive Officer cannot confirm the applicant's results;

2. The Executive Officer determines that the inputs or assumptions are scientifically unsupported or incorrect;

3. The QAM does not sufficiently demonstrate that the project meets the criteria;

4. The project does not meet any one of the criteria;

5. The operational data does not meet the requirements necessary to develop a QAM for project review;

6. For projects using operational data to develop a QAM, the long-term financial viability demonstration is deemed not credible or realistic, or relies on unsubstantiated assumptions; or

7. The applicant is unresponsive within the given time period.

(B) Upon completing the Comprehensive Technical Review, the Executive Officer will make publicly available a summary containing the project-specific inputs, evaluated quantification results, and any applicable limitations or operating conditions. The summary, with confidential business information redacted, will be posted to the CARB website for public review.

(4) *Public Comment Period.* The application package, containing the Executive Officer's comprehensive technical review summary, the QAM, and the other documents prepared by the applicant, will be posted to the CARB website for public comment before the Executive Officer completes a final check of the project application to ensure it has met all requirements for certification.

(A) Comments will be accepted for 14 calendar days following the date on which the application was posted. Only comments related to potential factual or methodological errors will require responses from the project applicant. The Executive Officer will forward to the

applicant all comments identifying potential factual or methodological errors. In response, the applicant must:

1. Make revisions to the application responding to the comments received and submit those revisions to the Executive Officer. The revised application package must include detailed discussion of the revisions made. The discussion must clearly delineate how each comment is related to a responsive revision. The revisions submitted must be accepted by the Executive Officer before the application can be certified;

2. Submit a detailed written response to the Executive Officer explaining why no revisions are necessary. The revision submitted by the project applicant must be accepted by the Executive Office before the application can be certified;

3. As specified in subsection (d)(1)(A), revise portions of the application in response to a subset of the comments received, and, as specified in subsection (d)(1)(B), submit a written response explaining why the remaining comments do not warrant revisions; or

4. Withdraw the application.

(B) The Executive Officer will evaluate the project applicant's responses to the comments received and determine whether they have adequately addressed the potential factual or methodological errors identified in those comments. If deemed adequate, those responses shall be posted to the CARB website, and the project applicant's documents (revised as needed) will be certified and posted to the CARB website. The applicant must submit responses within 45 days. If the responses are deemed inadequate by the Executive Officer, the applicant may have an additional 30 days to revise and resubmit responses. If the applicant does not submit responses within the given timeframes or the responses are deemed inadequate after the revision period, the Executive Officer may determine that the application does not meet the criteria for certification.

(C) If no public comments are received, the project application will be certified and posted to CARB's website.

(5) *Certification.* The Executive Officer must certify a carbon management project if it meets the criteria specified in this section. CARB will post all projects that have been certified, withdrawn, or didn't meet criteria to the CARB website along with all final application materials.

(f) Recordkeeping. Applicants shall maintain monitoring, reporting, and recordkeeping that is sufficient to confirm permanent CO_2 removal in accordance with the QAM and make records available to CARB upon request.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38571, 38580, 39600, 39601, 39741.1, 39741.4, 39741.5, 41510, 41511, and 41513, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, 39741.4, and 39741.5, Health and Safety Code; sections 71463 and 71464, Public Resources Code.

§ 95706. Violations.

(a) Noncompliance with any requirement of this article is a violation that may result in penalties and injunctive relief pursuant to Health and Safety Code section 38580 and Chapters 1.5 and 4 of Part 4 of Division 26. Penalties may be assessed for each day of any violation of this article as a separate violation. Violations shall be subject to all other penalties and remedies permitted under State law.

(b) Each day or portion thereof that any action required to be taken by this article is not taken, or information or record required to be submitted, posted, or retained by this article remains unsubmitted, incomplete, or inaccurate, constitutes a separate violation.

(c) The Executive Officer may inspect any premises used, leased, or controlled by a regulated entity in order to investigate activities and documentation relevant to a determination of compliance.

NOTE: Authority cited: Sections 38501, 38510, 38560, 38562.2, 38565, 38580, 39600, 39601, 39741.1, 39741.5, 41510, 41511, 41513, 42402, 42402.1, 42402.2, 42402.3, and 42402.4 Health and Safety Code; sections 71463 and 71464, Public Resources Code.

Reference: Sections 38501, 38510, 38560, 38562.2, 38565, 39000, 39515, 39516, 39600, 39601, 39741.1, 39741.4, 39741.5, 42402, 42402.1, 42402.2, 42402.3, and 42402.4, Health and Safety Code; sections 71463 and 71464, Public Resources Code.