U.S. Department
of Transportation
**Federal Aviation
Administration**

Aviation Safety

800 Independence Ave
Washington, DC 20591

August 21, 2025

Exemption No. 24432
Regulatory Docket No. FAA-2025-1860

Mr. Harry Benson Nuttall
Director Aerial Services
Southern Company
30 Ivan Allen Jr Boulevard NW
Atlanta, GA 30308

Dear Mr. Nuttall:

This letter is to inform you that the Federal Aviation Administration (FAA) has granted your request for an exemption. This letter transmits the FAA's decision, explains the FAA's basis, and provides the conditions and limitations of the exemption, including the date it ends.

The Basis for the FAA's Decision

By letters dated March 27, 2025[1], and April 30, 2025[2], you petitioned the FAA on behalf of Southern Company (Southern) for an amendment to Exemption No. 22932. That exemption from §§ 61.3(a)(1)(i), 61.3(c)(1), 61.23(a)(2), 91.7(a), 91.113(b), 91.119(c), 91.121, 91.151(b), 91.403(b), 91.405(a), 91.407(a)(1), 91.409(a)(1), 91.409(a)(2), 91.417(a), and 91.417(b) of Title 14, Code of Federal Regulations (14 CFR) allows Southern to operate the SwissDrones SDO 50 V2 and V3 unmanned aircraft systems (UAS) for the purposes of linear infrastructure operations. The amendment you request would allow Southern to: increase the operational altitude; operate across the full lateral extent of a right-of-way (ROW); and use of local Automatic Dependent Surveillance-Broadcast (ADS-B) surveillance systems and onboard ADS-B In equipment, replacing the subscription-based national feeds.

[1] The FAA issued Exemption No. 22932A, in response to Southern Company's amendment request to conduct operations for purposes of research and development (R&D), crew training, familiarization flights and Operational Suitability Evaluations (OSE), available at https://www.regulations.gov/document/FAA-2024-1959-0005 .
[2] The FAA separated this amendment request into another docket (Docket No. FAA-2025-1860) due to differences in the requested operations.

Materially Similar Decisions

The FAA has issued a grant of exemption in circumstances similar in material respects to those presented in your petition. In Grant of Exemption No. 20973B[3], the FAA found that a grant of exemption was in the public interest, that the proposed operations' UAS safety features and the limitations under which the Exemption Holder would operate were sufficient mitigations that ensured the proposed linear infrastructure inspection operations would not adversely affect safety.

Having reviewed your reasons for requesting an exemption, I find that:

- They are similar in all material respects to relief previously requested in Grant of Exemption No. 20973B;
- The reasons stated by the FAA for Exemption No. 20973B also apply to the situation presented in your petition; and
- A grant of exemption is in the public interest.

Petition for Exemption

Southern Company asserts their current Grant of Exemption No. 22932 requires them to utilize a subscription-based surveillance feed from FAA national sensor networks, including ADS-B NextGen, ASSC, ASDE-X surface data, En Route and terminal radars, and Wide Area Multilateration systems, all of which correspond to the requirements found in Grant of Exemption No. 20973B. Southern Company asserts that these surveillance methods are deployed in the context of shielded operations which leverage the protection of terrain and infrastructure, further reducing low-altitude manned aircraft traffic that can, in most cases, be contrary to regulations. Southern Company proposes to modernize the surveillance requirements, previously required by Grant of Exemption Nos. 22932 and 20973B, by replacing data sources that will soon be discontinued with functionally equivalent tools already in use. Southern Company states that they do not propose to eliminate airspace surveillance or weaken its risk mitigations. Southern Company proposes to utilize a locally deployed ADS-B surveillance network that receives and displays cooperative aircraft positions in real-time within the operational corridor that consists of an onboard ADS-B system (uAvionix PingRX Pro) that will be installed on the UAS. Southern Company states this system will provide direct traffic awareness during flight.

The FAA's Analysis

The FAA notes that while Southern Company's petition request is not identical to Exemption No. 20973B, it is substantially similar. In Grant of Exemption No. 20973B, the FAA determined that electronic observers (EO) must use a situational awareness tool that provides

[3] Exemption No. 20973B, issued to Phoenix Air Unmanned, LLC, available at https://www.regulations.gov/document/FAA-2023-1827-0027

surveillance in real-time and the components of which included local and FAA National Airspace System (NAS)-wide surveillance sensors, data processing with alerting algorithms and system health monitoring as well as visualization display software. The FAA determined that those feeds included ADS-B NextGen surveillance network; the Airport Surface Surveillance Capability (ASSC) and Airport Surface Detection Equipment, Model X (ASDE-X) surface data; En Route and terminal radars; and the Wide Area Multilateration systems. Those feeds combined an aircraft's positioning source, aircraft avionics, and ground infrastructure to create an accurate surveillance interface between cooperative aircraft (ADS-B equipped) and Air Traffic Control (ATC), which provide EO's with the exact location of equipped aircraft as well as its spatial relationship to other aircraft. Further, the software was capable of highlighting potential incursions at different distances for EO awareness. Finally, the FAA found that the Detect and Avoid (DAA) altering algorithms in Grant of Exemption No. 20973B were compliant with the Terminal Radar Control Area (TRCA) DAA MOPS and based on well clear criteria for UAS.

In Grant of Exemption No. 20973, the FAA rationalized that the proposed DAA technology was an acceptable situational awareness tool and that there are no current certification standards for situational awareness tools. Regarding Southern Company's proposed situational awareness tool, the uAvionix PingRX Pro, the FAA again acknowledges there are no certification standards for situational awareness tools. While there are no established standards for this DAA technology, this situational awareness tool accompanied with the requirements for the operator to remain in a shielded environment as referenced in Condition and Limitation Nos. 21, 26, and 37, the FAA finds that the uAvionix PingRX Pro is an acceptable situational awareness tool for operations under this exemption.

Part of the requirement for the situational awareness tool in Grant of Exemption No. 20973B was that the tool must use subscription-based surveillance data feeds from the FAA's national sensor networks such as ADS-B NextGen surveillance network, the Airport Surface Surveillance Capability (ASSC) and ASDE-X surface data, En Route and terminal radars and the Wide area multiliterate systems and augment them with locally deployed infrastructure including Local ADS-B sensors, Ground primary radars and UAS GCS telemetry radar. Since Southern Company will utilize an ADS-B In system that does not receive data feeds from the FAA's national sensor networks, the FAA revised Condition and Limitation No. 43 to remove that requirement.

Because the operator in Grant of Exemption No. 20973 used a situational awareness tool that was ground-based, the FAA revised Condition and Limitation No. 43 to require that the UAs must have an onboard ADS-B In system installed, providing the aircraft with direct traffic awareness during flight operations. The FAA revised Condition and Limitation No. 43 in this exemption to require that operations must utilize locally deployed ADS-B surveillance networks that receive and display cooperative, accurate, and real-time aircraft positions within the operational corridor.

Condition and Limitation No. 21 was updated and included in Phoenix Air Unmanned, LLC (PAU) Exemption No. 20973B. This condition and limitation outlines the operational environment for BVLOS UAS operations with SwissDrones SDO 50 V2 and V3. It permits

operations in Class G airspace, over sparsely populated areas, over pre-planned paths avoiding obstacles, with flights up to 100 feet above overhead infrastructure, 200 feet above ground-based/underground assets, within full ROW lateral boundaries, and not exceeding 400 feet AGL. The FAA is incorporating this same Condition and Limitation into this exemption as requested in Southern Company's petition.

Southern's operations mirror PAU's, using identical UAS for linear infrastructure inspections in shielded environments. As a utility operator, Southern inspects its Southeast network, akin to PAU's utility contracts. The FAA's amendment to PAU's 20973B exemption applies here: mitigations like shielding, EO monitoring with ADS-B, Class G restrictions below 400 feet AGL, and NOTAMs sufficiently mitigate risks for expanded parameters. The analysis included in PAU's exemption discussed an unmitigated collision risk of 2.2×10^{-8}, with zero well-clear losses over 287.4 BVLOS hours. Southern has operated 150+ hours under Exemption No. 22932. Southern did not report any incidents during this period. Additionally, their operations primarily take place in rural areas, reflecting less risk than operations in more populated areas. Core mitigations remain in this exemption, including EO surveillance (updated to local ADS-B/onboard PingRX Pro), employing a shielding technique whereby the existence of infrastructure lines encourages other low-flying aircraft to avoid the area, and well-clear enforcement. Further, Southern's utility ownership enhances coordination.

As such, Condition and Limitation No. 21 is amended to enhance Southern's capabilities: 200-foot AGL improves sensor efficacy for underground pipelines (e.g., methane detection), reducing false negatives. Additionally, full ROW access simplifies paths and minimizes maneuvers and obstacle risks in 100-300-foot corridors.

The FAA believes it is in the public interest to allow the use of the uAvionix PingRX Pro to provide detect functions, as enabling its use helps the FAA to gain valuable insight into developing effective operational mitigations to better ensure safety and inform the development of appropriate standards. Additional public interest benefits include enabling proactive inspections, preventing failures, outages, and environmental risks like gas leaks, averting disruptions, and societal costs. UAS lowers expenses and emissions by replacing manned operations, as supported by the FAA's IPP Final Report (2021) showing public approval for efficient, low-disturbance inspections.

The FAA's Decision

The FAA has determined that good cause exists for not publishing a summary of the petition in the *Federal Register*. The FAA has determined that good cause exists because the requested exemption would not set a precedent and any delay in acting on this petition would be detrimental to Southern.

Under the authority contained in 49 U.S.C. §§ 106(f), 40113, 44701, and 44807, which the FAA Administrator has delegated to me, I hereby grant Southern Company an exemption from 14 CFR §§ 61.3(a)(1)(i), 61.3(c)(1), 61.23(a)(2), 91.7(a), 91.113(b), 91.119(c), 91.121, 91.151(b), 91.403(b), 91.405(a), 91.407(a)(1), 91.409(a)(1), 91.409(a)(2), 91.417(a), and

91.417(b) to the extent necessary to allow Southern Company to conduct linear infrastructure inspections subject to the conditions and limitations described below.

Conditions and Limitations

In this grant of exemption, Southern Company is hereinafter referred to as "the Operator."

General:

1. Operations authorized by this exemption are limited to the SwissDrones SDO 50 V2 and the SDO 50 V3 unmanned aircraft systems (UAS) conducted by the Operator and are limited to linear infrastructure operations. The aircrafts maximum takeoff weight (MTOW) must not exceed 191.8 pounds (lbs.). Proposed operations of any other UAs require a new petition or a petition to amend this grant.

2. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The Operator must follow the procedures as outlined in its operating documents. The operating documents, the applicable Federal Communications Commission (FCC) license, and a copy of this exemption must be accessible to the PIC at the control station during all UAS operations that occur under this exemption. They must be made available to the Administrator upon request. Where a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in any of the aforementioned documents, the most restrictive provision must be followed.

3. The Operator may update or revise its operating documents. It is the Operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The Operator must also present the most current documents if petitioning for extension of or amendment to this grant of exemption. If the Operator determines that any update or revision would affect the Operator's ability to comply with any requirement of this exemption, then the Operator must petition for an amendment to its grant of exemption. If questions arise regarding updates or revisions to the operating documents, the Operator may contact the FAA's Flight Standards Service, Emerging Technologies Division General Aviation and Commercial Branch, (AFS-750), 800 Independence Avenue SW, Washington, DC 20591. Telephone: 202-267-1100, Email: 9-AVS-AFS-750-Correspondence@faa.gov.

4. The PIC and electronic observer (EO) must present his or her remote pilot certificate, Title 14, Code of Federal Regulations (14 CFR) Part 61 certificate or part 61 pilot knowledge test results (as applicable), proof of current flight review (as applicable), and photo identification if requested from: an authorized representative of the Administrator; an authorized representative of the National Transportation Safety

Board (NTSB); any Federal, State, or local law enforcement officer; and any authorized representative of the Transportation Security Administration (TSA).

5. The operator must report all accidents and incidents to the Flight Standards District Office (FSDO) having jurisdiction over the area of the demonstration operation, to law enforcement as required by local law, and National Transportation Safety Board (NTSB) if the occurrence meets the criteria stated in 49 CFR Part 830. All documentation and equipment associated with the operation shall be preserved and presented to the examining authorities at their request.

UAS:

6. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the aircraft is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, such as inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed, and the aircraft is found to be in a condition for safe flight.

7. The operator must follow the original equipment manufacturers (OEM) operating limitations, maintenance, service bulletins, overhaul, replacement, inspection, and life limit requirements for the UAS and its components as well as operator supplemental manuals.

8. Maintenance must be performed by qualified individuals who have been trained by the manufacturer in proper techniques and procedures for these UAS and all maintenance must be recorded in the aircraft records including a brief description of the work performed, date of completion and the name of the person performing the work.

9. Any maintenance or alterations that affect the UAS operation or flight characteristics, such as replacement of a flight critical component, must undergo a functional operational check test flight prior to conducting further operations under this exemption. Functional operational check flights must be conducted in visual line of sight by a PIC and other personnel required to conduct the functional operational check test (such as a mechanic or technician) and must remain at least 500 ft. from all other people. The functional operational check flight must be conducted in such a manner to not pose an undue hazard to persons and property. The operator must permit the FAA Administrator and his representative to observe functional test flights upon the request.

10. The PIC is prohibited from beginning a flight unless, considering wind and forecast weather conditions, there is enough available fuel for the UA to conduct the intended operation with sufficient reserves such that the PIC can land the UA without posing

an undue risk to aircraft or people and property on the ground, or the reserve power recommended by the manufacturer, if greater, is satisfied.

11. All altitude must be reported in ft. Above Ground Level (AGL).

Qualifications, certifications and training:

12. The PIC has final responsibility and authority for the safe operation and flight of the aircraft in accordance with relevant regulations and company policies and procedures. Executes vehicle commands through the ground control station and monitors system health status information. Responsible for flight conduct and contingency management. Their qualifications must include:

    a. Successful completion of the operator's training program for PICs;
    b. Hold a remote Pilot Certificate with a small UAS rating issued in accordance with 14 CFR Part 107 and be in compliance with § 107.65;
    c. Pass either a sport, recreational, or private pilot FAA airman knowledge test before acting as PIC, or, in the alternative, hold any part 61 pilot certificate (other than a student pilot certificate) and meet the flight review requirements of § 61.56; and
    d. Hold at least a third-class medical certificate.

13. The PIC may not conduct the operation if the PIC knows or has reason to know of any medical condition that would make the PIC unable to meet the requirements for at least a third-class medical certificate or is taking medicine or receiving treatment for a medical condition that results in the PIC being unable to meet the requirements for at least a third-class medical certificate.

14. Each EO must hold a valid remote pilot certificate with a small UAS rating issued under part 107 and be in compliance with § 107.65.

15. Each visual observer (VO) and EO must satisfactorily complete the operator's training and qualification program before conducting operations under this exemption.

16. The PIC must demonstrate to the operator that they are able to operate the UA safely, including fluency in conducting evasive and emergency maneuvers and maintaining appropriate distances from people, vessels, vehicles, and structures.

17. Each VO and EO must comply with the following vision requirements:

    a. Each VO must have adequate visual abilities that enable them to see the UA clearly, recognize terrain and obstructions, and see and avoid aerial or ground hazards and other aircraft without undue hesitation. Each VO must be able to establish and maintain by unaided vision, except vision that is corrected by the

use of corrective lenses, a normal field of vision allowing them to see all potential hazards without hesitation.

b. Each EO must have adequate visual abilities that enable them to observe the electronic display which displays the airspace awareness as described in the petition.

18. The VO and EO and any other direct participant may not participate in the operation if they know or have reason to know of any physical or mental condition that would interfere with the safe operation of the aircraft.

19. The PIC is prohibited from initiating a flight unless all direct participants are fit for duty, are at their stations, and are committed to being at their stations for the duration of the flight.

20. All training operations must be conducted only during dedicated training sessions for the petitioner's employees and must be conducted in accordance with the operating training program described in operator's training program.

Operating environment:

21. Operations conducted under this exemption are authorized in the National Airspace System (NAS). The operations must occur:

    a. In Class G airspace;
    b. In sparsely populated areas;
    c. Over pre-planned flight paths designed to avoid any known obstacles;
    d. Over linear infrastructure with right-of-way, except for takeoff and landing; and
    e. Within 100 ft. above overhead infrastructure (powerlines) being inspected;
    f. Within 200 ft. above ground-based and underground infrastructure (e.g., pipelines, canals, and railroads) being inspected;
    g. Within the lateral boundaries of the right-of-way; and
    h. In no case higher than 400 ft. AGL.

22. Beyond visual line of sight (BVLOS) operations must be beyond the following distances from the airport reference point (ARP) of a public use airport, heliport, gliderport, or seaport listed in the Digital - Chart Supplement (d-CS), Chart Supplement of the U.S. Government Flight Information Publications:

    a. 5 nautical miles (NM) from an airport having an operational control tower;
    b. 3 NM from an airport having a published instrument flight procedure, but not having an operational control tower;
    c. 2 NM from an airport not having a published instrument flight procedure or an operational control tower; and
    d. 2 NM from a heliport.

23. This exemption does not authorize flight within UAS flight restricted areas. It is the operator's responsibility to ensure that proposed UAS operating area does not enter a UAS flight restricted areas as described under § 99.7, Temporary Flight Restriction (TFR), Special Security Instruction (SSI) Location and contact information for the TFR SSI is provided in the relevant Notice to Airmen (NOTAM) and depicted on the FAA website: https://udds-faa.opendata.arcgis.com. Anyone seeking to enter a TFR SSI must request permission and receive advance authorization via the contacts listed on the website (https://udds-faa.opendata.arcgis.com).

24. The UA may not be operated less than 500 ft. below or less than 2,000 ft. horizontally from a cloud or when visibility is less than 3 statute miles (SM) from the PIC.

25. Operations are limited to daytime, visual flight rules (VFR) conditions, and when weather is within the UA system limitations described in the operating documents.

26. The PIC may conduct BVLOS operations whereby when the UA is not within the visual line of sight (VLOS) of the PIC, the UA is monitored by electronic means by one of the two EOs and is reliant on the infrastructure to shield the operations. Shielded Operations are defined as operations conducted in the radial airspace surrounding an obstruction or infrastructure in which a manned aircraft is not expected to operate. In such situations, under § 91.113 the PIC is operating the aircraft and is, therefore, responsible for maintaining vigilance so as to avoid and remain clear of other aircraft.

27. The PIC must brief all participants involved in the operation on safety of flight, hazards, risks, mitigations, and the contents of this exemption.

28. Except in emergency situations, the SDO 50 V2 and the SDO 50 V3 must be in flown in automatic mode for BVLOS operations.

29. Operational area boundaries, obstacles and other ground risks must be identified, located and factored into the flight planning.

30. Prior to conducting operations under this Exemption, the PIC must determine all control links used for the operation have signal that is strong enough to control the UA at the maximum planned distance for the operation.

31. The PIC must prepare for a lost Command and Control (C2) link by programing lost link procedures so that the UAS will remain within the operational corridor and proceed to a pre-determined landing area. This contingency procedure must avoid unexpected turn-around and altitude changes and must provide the PIC with sufficient time to communicate with FAA's Air Traffic Control (ATC), if necessary.

32. The operator must employ an outreach strategy and coordinate with other potentially affected aircraft operators prior to conducting any BVLOS operations. In addition, the

operator must coordinate with other utilities whose assets intersect the UA's flight path to ensure they will not be conducting operations in the same area.

33. Prior to conducting operations under this exemption, a NOTAM must be filed by contacting the NOTAM Flight Service Station at 1-877-4-US-NTMS (1-877-487-6867) not more than 72 hours in advance, but not less than 24 hours prior to the operation.

34. Beyond visual line of sight operations may proceed without limitation of time or distance so long as the aircraft has been proven to be reliable, durable, and fit-for-purpose; the C2 link is maintained; and the PIC could effectively move the aircraft out of the way of known traffic.

35. The PIC must be accessible by the FAA, via phone number provided in NOTAM for direct real-time communication and coordination purposes for the duration of UAS operations.

36. Air Traffic Control may delay, limit, prohibit, or terminate UAS operations when it has concerns regarding the safety of manned aircraft operations in the area.

37. The PIC must ensure the UA remains well clear and gives way to all other aviation operations and activities at all times except as it relates to uncooperative traffic when relying on shielded operations. Well clear means 2000 ft. horizontally and 250 ft. vertically from other aircraft. Operations must not cause hazard to persons or property on the surface or in the air. If at any time safety of human beings or property on the surface or in the air is in jeopardy, the PIC must cease operations.

38. For all BVLOS operations, the UA must be equipped and operated with an anti-collision light. While BVLOS operations are limited to daytime operations under this exemption, the anti-collision light must meet the standard of visibility for at least 3 SM between the beginning of evening civil twilight and the end of morning civil twilight.

39. Operations over occupied roadways are limited to those roadways with a flow rate of 770 cars per hour or fewer. Roadways with greater than 770 cars/hour must be crossed within VLOS of the PIC. In such cases, overflight of people and vehicular traffic is prohibited. All roads must be crossed in minimal time necessary to safely complete a flight.

40. Sustained flights over people, vessels, vehicles, structures and roadways are prohibited. Only transient flights are permitted over people, vessels, vehicles, structures and roadways within the utility right-of-way.

41. Transient flight over open air assemblies of people is prohibited.

42. When conducting VLOS operations, the UA must remain within the visual line of sight of the PIC. VLOS means the PIC must be able to, with natural unaided vision except for corrective lenses, see the UA and determine its orientation, height above the surface, and direction of flight. The UA must be conspicuous to be obvious within the VLOS area. VOs must be used as an operational mitigation; however, the PIC must be able to see the UA throughout the flight.

43. All operations must utilize the services of at least one VO for VLOS operations and at least two EO for BVLOS operations. EOs must use a situational awareness tool that provides surveillance capability of the UA airspace in real-time. Additionally, operations must utilize locally deployed ADS-B surveillance networks that receive and display cooperative aircraft positions in real-time within the operational corridor. The UA must have an onboard ADS-B In system installed providing the aircraft with direct traffic awareness during flight operations. EOs and VOs must scan their area of responsibility and immediately notify the PIC when they observe any hazard to safety of flight. The PIC still retains the overall responsibility to avoid other aircraft.

44. All crew, including the PIC, EOs and VOs, must maintain two-way voice communications with each other during operations. If communication occurs by electronic device: the device must be continuous full-duplex; the PIC must be able to use the device hands-free; and the PIC must ensure that there is a reliable back-up communication method. Electronic messaging or texting is not permitted during flight operations. During operations, no person on whom the PIC relies for safe conduct of the operation may engage in communications not relevant to the operation.

Reporting:

45. The operator must report operational data for the prior month to the FAA by the 10th of each month, including the number of times the UA transgresses the lateral or vertical boundaries of the flight corridor. These reports must be made on the form entitled, *Unmanned Aircraft System (UAS) Monthly Flight Report, Unmanned Aircraft System (UAS) Basic Specifications Report, Unmanned Aircraft System (UAS) Corrective Maintenance Report, and Unmanned Aircraft System (UAS) Flight Anomaly Report* (OMB Form No. pending). Forms must be submitted to the FAA via Aeronautical Data Exchange at https://adx.faa.gov.

Failure to comply with any of the above conditions and limitations may result in the immediate suspension or rescission of this exemption.

The Effect of the FAA's Decision

This exemption terminates on August 31, 2027, unless sooner superseded or rescinded.

To request an extension or amendment to this exemption, please submit your request by using the Regulatory Docket No. FAA-2025-1860 (*http://www.regulations.gov*). In addition, you should submit your request for extension or amendment no later than 120 days prior to the expiration listed above, or the date you need the amendment, respectively.

Any extension or amendment request must meet the requirements of § 11.81.

Sincerely,

/s/
Hugh Thomas
Acting Deputy Executive Director, Flight Standards Service