

## CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

Customs and Border Protection

ADDRESS

1300 Pennsylvania Ave. NW  
Room 6.4A  
Washington D.C. 20229

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Operation of the Predator UAS in (b) (7)(E) airspace while transiting to/from (b) (7)(E) (b) (7)(E) Operations will occur under the jurisdiction of (b) (7)(E) (b) (7)(E) (b) (7)(E) See Special Provisions.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

### STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

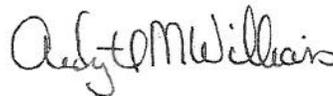
Note-This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

### SPECIAL PROVISIONS

Special Provisions are set forth and attached.

This certificate (2008-AHQ-2) is effective from September 6, 2008, through September 5, 2009, and is subject to cancellation at any time upon notice by the Administrator or his/her authorized representative.

BY DIRECTION OF THE ADMINISTRATOR



FAA Headquarters, AJR-36  
(Region)

Ardyth Williams  
(Signature)

August 22, 2008  
(Date)

Air Traffic Manager, Unmanned Aircraft Systems  
(Title)

**ATTACHMENT to FAA FORM 7711-1****ISSUED TO:** Customs and Border Protection**ADDRESS:** 1300 Pennsylvania Ave. NW  
Room 6.4A  
Washington D.C. 20229**NAME:** Federal Aviation Administration (FAA) Certificate of Authorization (COA) for Predator Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) outside of restricted/warning area airspace.**ACTIVITY:** Operation of the Predator UAS in (b) (7)(E) airspace while transiting to/from (b) (7)(E) as depicted in attachment 1 and 3 as well as Special Provisions paragraph 3. Operations will occur under the jurisdiction of (b) (7)(E) (b) (7)(E)**PURPOSE:** To prescribe operating requirements in the NAS (outside of restricted and/or warning area airspace) for the purpose of transit flights. The provisions contained in this COA supersede any written agreements between the Department of the Army and Customs and Border Protection concerning the use and application of Air Traffic Control (ATC) procedures where such procedures conflict with this COA or FAA Order 7110.65, Air Traffic Control.**DATES OF USE:** This COA (2008-AHQ-2) is valid from September 6, 2008, through September 5, 2009. CBP will also provide 5 business days notice before the transit flight. Should a renewal become necessary, the proponent shall advise the FAA, in writing, no later than 60 days prior to the requested effective date.**GENERAL PROVISIONS:**

- The review of this activity is based on our current understanding of the UAS operations, and the impact of such operations in the NAS, and therefore should not be considered a precedent for future operations. As changes occur in the UAS industry, or in our understanding of it, there may be changes to the limitations and conditions for similar operations.
- All personnel connected with the UAS operation must comply with the contents of this authorization and its special provisions.
- This COA will be reviewed and amended as necessary to conform to changing UAS policy and guidance.
- Use of the Transit COA will not routinely be used. The intent is to transfer aircraft from (b) (7)(E)

(b) (7)(E) [REDACTED] for the purpose of re-positioning aircraft (b) (7)(E) [REDACTED]

### **SAFETY PROVISIONS:**

Unmanned aircraft (UA) have no on-board pilot to perform see-and-avoid responsibilities, and therefore, when operating outside of restricted/warning/Class A airspace areas, special provisions must be made to ensure an equivalent level of safety exists for operations had a pilot been on board. In accordance with 14 CFR Part 91, General Operating and Flight Rules, Subpart J-Waivers, 91.903, Policy and Procedures, the following provisions provide acceptable mitigation of 14 CFR Part 91.113 and must be complied with:

- Visual Observers, either ground-based or airborne, must be used.
- The applicant and/or its representatives are responsible for collision avoidance with all aircraft, other aviation operations, and the safety of persons or property on the surface.

### **AIRWORTHINESS CERTIFICATION PROVISIONS:**

- UA must be shown to be airworthy to conduct flight operations in the NAS.
- Public Use Aircraft applications must contain one of the following:
  - A civil airworthiness certification from the FAA, or
  - A statement specifying that the Department of Defense Handbook "Airworthiness Certification Criteria" (MIL-HDBK-516), as amended, was used to certify the aircraft or equivalent method of certification.

### **PILOT / OBSERVER PROVISIONS:**

- **Pilot Qualifications:** UA pilots interacting with Air Traffic Control (ATC) shall have sufficient expertise to perform that task readily. Pilots must have an understanding of and comply with Federal Aviation Regulations and Military Regulations applicable to the airspace where the UAS will operate. Pilots must have in their possession a current second class (or higher) airman medical certificate that has been issued under 14 CFR 67, Medical Standards and Certification, or a military equivalent. 14 CFR 91.17, Alcohol or Drugs, applies to UA pilots.
- **Observer Qualifications:** Observers must have been provided with sufficient training to communicate clearly to the pilot any turning instructions required to stay clear of conflicting traffic. Observers will receive training on rules and responsibilities described in 14 CFR 91.111, *Operating Near Other Aircraft*, and 14 CFR 91.113, *Right-of-Way Rules*. Observers must have in their possession a current second class (or higher) airman medical certificate that has been issued under 14 CFR 67, Medical Standards and Certification, or a military equivalent. 14 CFR 91.17, Alcohol or Drugs, applies to UA observers.

- **Pilot-in-Command (PIC) – Visual Flight Rules (VFR):**
  - The PIC is the person directly responsible for the operation of the UA. The responsibility and authority of the pilot in command as described by 14 CFR 91.3 (or military equivalent), applies to the UAS PIC.
  - The PIC must pass the required knowledge test for a private pilot certificate, or military equivalent, as stated in 14 CFR 61.105, and must keep their aeronautical knowledge up to date.
  - There is no intent to suggest that there is any requirement for the UAS PIC to be qualified as a crewmember of a manned aircraft.
  
- **Pilot-in-Command (PIC) – Instrument Flight Rules (IFR):**
  - The PIC is the person directly responsible for the operation of the UA. The responsibility and authority of the pilot in command as described by 14 CFR 91.3 (or military equivalent), applies to the UAS PIC.
  - The PIC must be a certified pilot of manned aircraft (FAA or military equivalent) in category and class of aircraft flown.
  - The PIC must also have an appropriate instrument rating (manned aircraft, FAA or military equivalent) for the category and class of aircraft flown.

#### **Pilot Proficiency – VFR/IFR:**

- Pilots will not act as a VFR/ IFR PIC unless they have had three qualified proficiency events within the preceding 90 days.
  - The term “qualified proficiency event” is a UAS-specific term necessary due to the diversity of UAS types and control systems.
  - A qualified proficiency event is an event requiring the pilot to exercise the training and skills unique to the UAS in which proficiency is maintained.
- Pilots will not act as an IFR PIC unless they have had six instrument qualifying events in the preceding six calendar months (an event that requires the PIC to exercise instrument flight skills unique to the UAS).
- Pilots flying UA on other than instrument flight plans must pass the required knowledge test for a private pilot certificate, or military equivalent, as stated in 14 CFR 61.105.

#### **PIC Responsibilities:**

- Pilots are responsible for a thorough preflight inspection of the UAS. Flight operations will not be undertaken unless the UAS is airworthy. The airworthiness provisions of 14 CFR 91.7, Civil Aircraft Airworthiness, or the military equivalent, apply.
- One PIC must be designated at all times and is responsible for the safety of the UA and persons and property along the UA flight path.

- The UAS pilot will be held accountable for controlling their aircraft to the same standards as the pilot of a manned aircraft. The provisions of 14 CFR 91.13, *Careless and Reckless Operation*, apply to UAS pilots.

**Pilot/ATC Instructions:** The PIC will maintain direct two-way communications with ATC and have the ability to maneuver the UA per their instructions as applicable.

**SPECIAL PROVISIONS:**

The FAA recognizes that, by nature, UAS have no on-board pilot to perform see-and-avoid responsibilities. Therefore, when operating outside of Restricted Airspace, special provisions must be made to ensure an equivalent level of safety exists for operations had a pilot been on board. Listed below are the special provisions that must be complied with. All personnel connected with this UAS operation shall comply with the contents of this authorization and its special provisions.

1. Aircraft flight plan will be filed as (b) (7)(E) [redacted]  
return leg. CBP will request (b) (7)(E) [redacted]
2. Operations under this COA will occur (b) (7)(E) [redacted]
3. For the purpose of see-and-avoid, visual observers must be utilized at all times when operating outside of restricted, prohibited, or warning area airspace. Visual observers may be either ground based or in a chase aircraft. The visual observers must remain within 2.5 nautical miles laterally and a maximum of 3,000 feet (must remain within the assigned block altitude) vertically of the UAS during all operations. Pilots must not operate the Predator at a distance beyond that at which see-and-avoid responsibilities can be exercised by the observer. The observer(s) must keep the UAS in sight at all times. CBP must ensure that the proper number of visual observers are in place to allow compliance with any departure/arrival options that (b) (7)(E) [redacted]. The UA operator will not request special handling in order to meet the observer requirements.
4. The (b) (7)(E) [redacted] procedures:
  - (b) (7)(E) [redacted]
  - (b) (7)(E) [redacted]
  - (b) (7)(E) [redacted]

- (b) (7)(E)

5. (b) (7)(E)

6. (b) (7)(E)

- (b) (7)(E)

7. (b) (7)(E)

8. (b) (7)(E)

9. Lost Link Procedures: Will be in accordance with attachment 2.

- In the event of lost link in the (b) (7)(E) procedures contained in the Letter of Agreement between the U.S. Army and the Customs and Border Protection (dated 14 April, 2008) shall be used.

10. AMOC's will radar monitor the UAS (b) (7)(E)

11. (b) (7)(E)

- (b) (7)(E)
- 
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**NOTAM:** A (b) (7)(E) Notice to Airman (b) (7)(E)  
(b) (7)(E)

- Name and Address of the Using Facility
- Location, Altitude or the operating Area
- Time and nature of the activity

**INCIDENT / ACCIDENT REPORTING:** The following information is required to document unusual occurrences associated with UAS activities in the NAS.

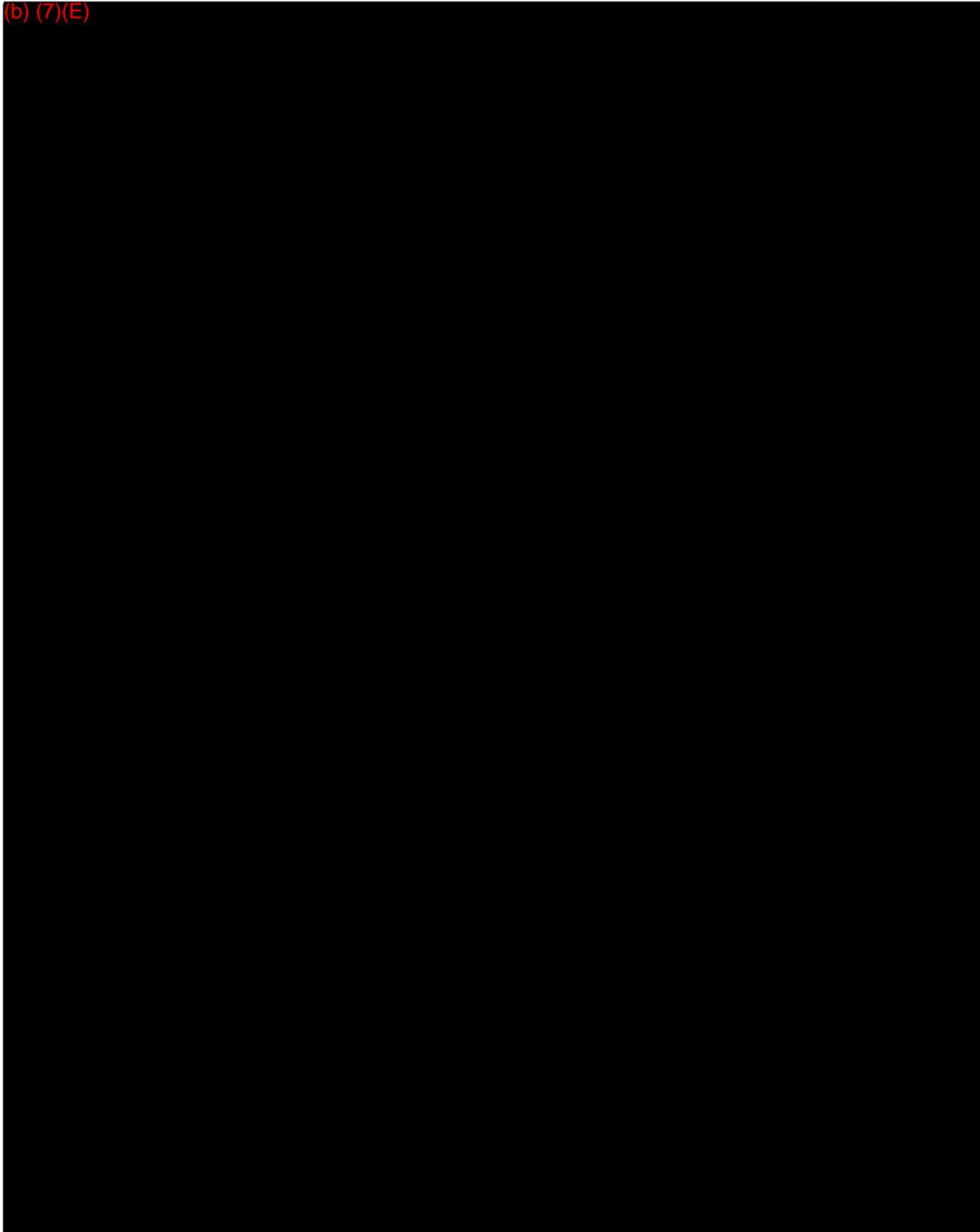
- The proponent for the COA shall provide the following information to [Donald.E.Grampp@faa.gov](mailto:Donald.E.Grampp@faa.gov) on a monthly/annual basis:
  - Number of flights conducted under this COA.
  - Pilot duty time per flight.
  - Unusual equipment malfunctions (hardware/software).
  - Deviations from ATC instructions.
  - Operational/coordination issues.
  - All periods of Loss of Communications.
- **INCIDENT/ACCIDENT REPORTING:** The following shall be submitted via email or phone (202-385-4542, cell 443-569-1732) to [Donald.E.Grampp@faa.gov](mailto:Donald.E.Grampp@faa.gov) within 24 hours:
  - All accidents or incidents involving UAS activities
  - Deviations from the "Special Provisions" contained in the COA

This COA does not, in itself, waive any Federal Aviation Regulation (FAR) nor any state law or local ordinance. Should the proposed operation conflict with any state law or local ordinance, or require permission of local authorities or property owners, it is the responsibility of the Customs and Border Protection to resolve the matter. (b) (7)(E)

(b) (7)(E)

(b) (7)(E) The Customs and Border Protection is hereby authorized to operate the Predator UAS in the operations area depicted in "Activity" above and attachment 1 and 3 below.

(b) (7)(E)



FLIGHT TERMINATION, LOST LINK, LOST COMMUNICATION PROCEDURES

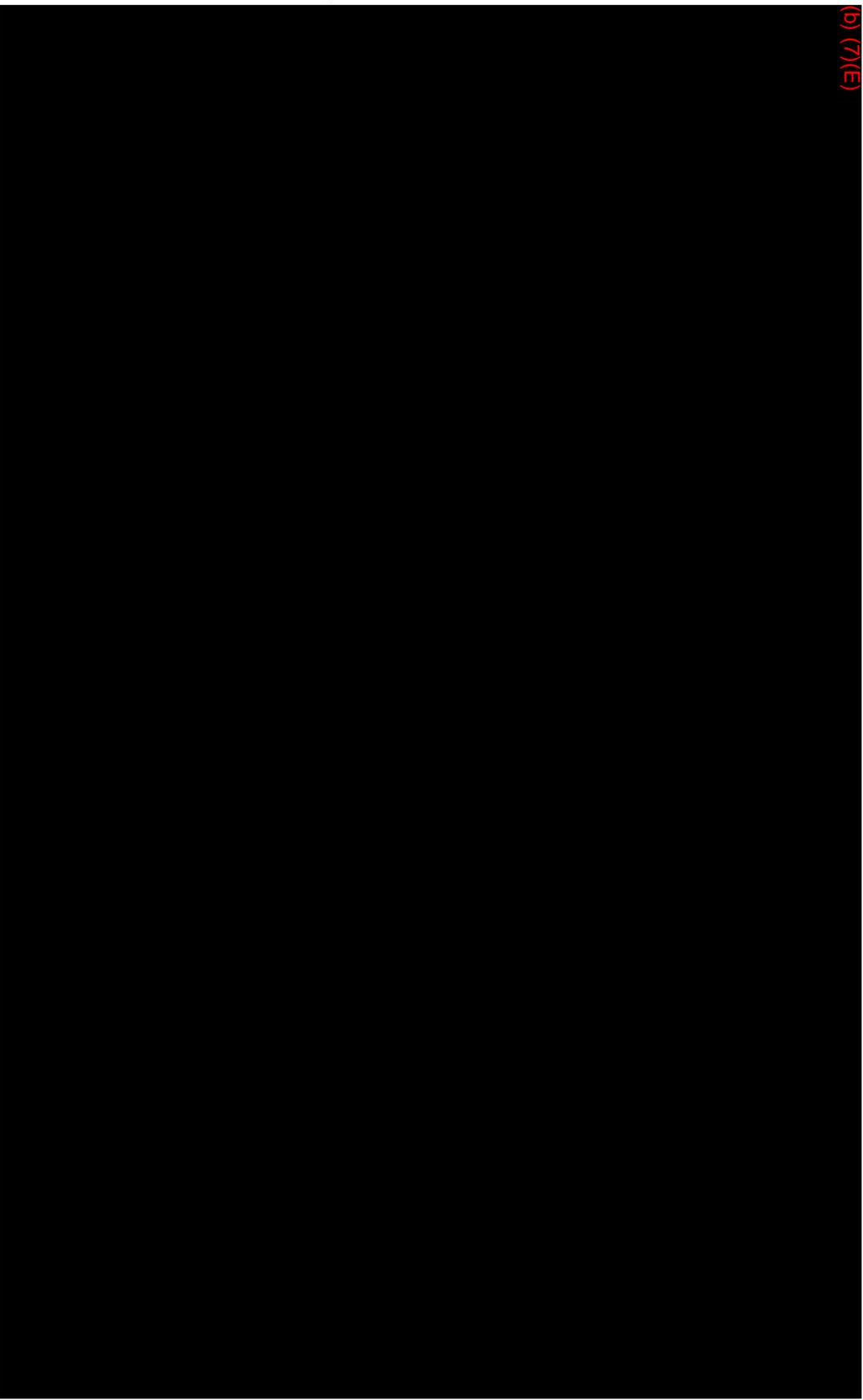
Attachment 2

| Event                    | Flight Termination   | Lost Link  | Loss Communications  |
|--------------------------|--|--|--|
| <p><b>Conditions</b></p> | <ul style="list-style-type: none"> <li>- Emergency situation</li> <li>- Unable to sustain flight and return to base</li> </ul>   | <ul style="list-style-type: none"> <li>- Emergency situation</li> <li>- Loss of command uplink, downlink, or both links between the ground control station and the UA</li> </ul> | <ul style="list-style-type: none"> <li>- Loss of radio communications between the PIC and ATC</li> </ul> |
|                          | <p>In the event of Flight Termination, the PIC</p>   | <p>In the event of a lost link condition, the PIC</p>  | <p>In the event of Lost Radio Communications between the PIC and ATC, the PIC</p>                        |
| <p><b>Procedures</b></p> | <p>Note: As with manned aircraft operations, the UA may not be able to proceed in a controlled fashion to the flight termination location.</p> <p>Inform ATC of the following as soon as possible:</p> | <p>Inform ATC of the following as soon as possible:</p>  |  |
|                          | <p>(b) (7)(E)</p>  | <p>(b) (7)(E)</p>  |  |
|                          | <p>(b) (7)(E)</p>  | <p>(b) (7)(E) the PIC shall coordinate with ATC (and AMOC as required)</p>   |  |

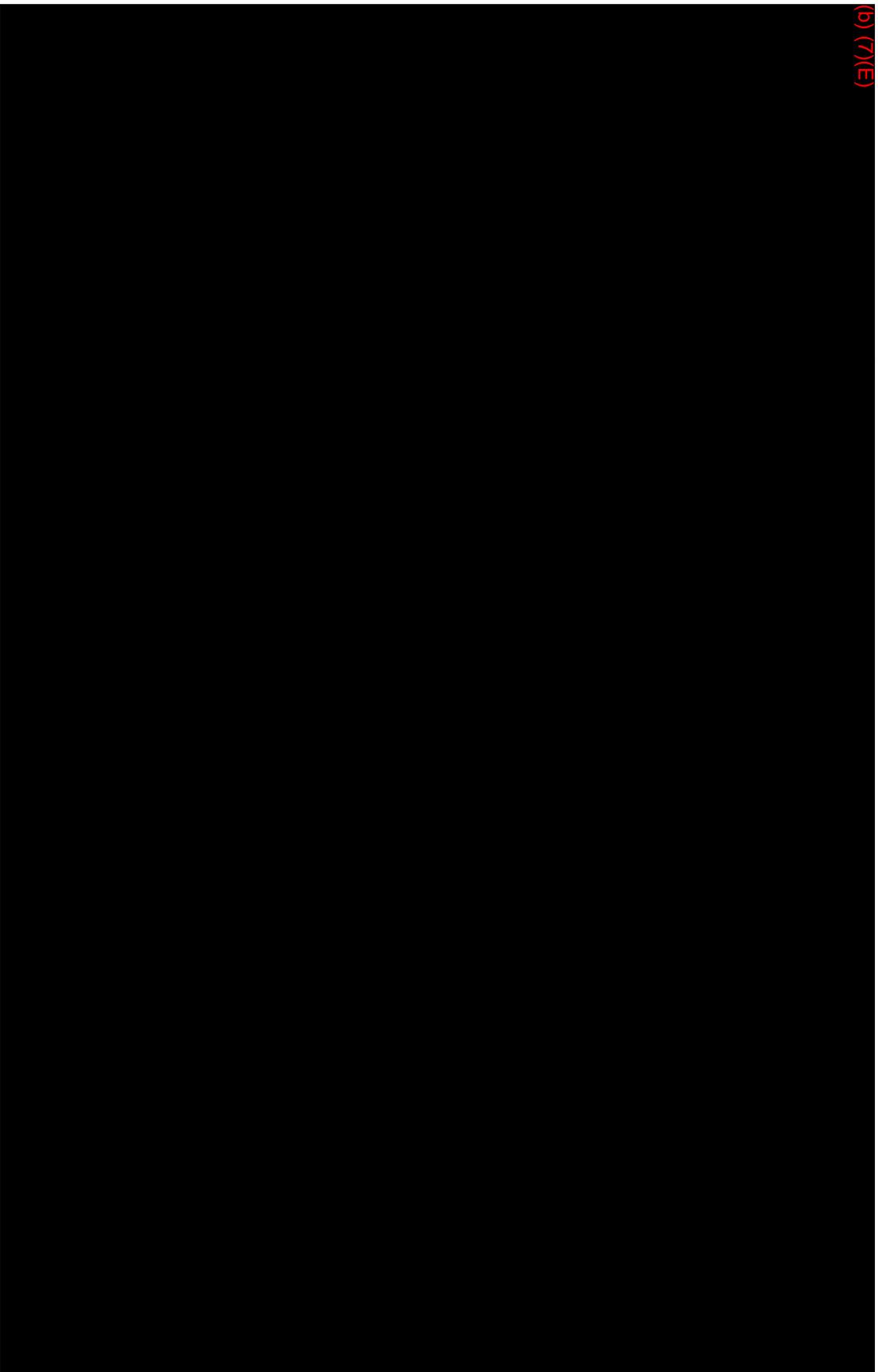
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|-------------------|-------------------|-------------------|--|
| <p>(b) (7)(E)</p> | <p>(b) (7)(E)</p> | <p>(b) (7)(E)</p> |  |
| <p>(b) (7)(E)</p> | <p>(b) (7)(E)</p> | <p>(b) (7)(E)</p> |  |

Attachment 3

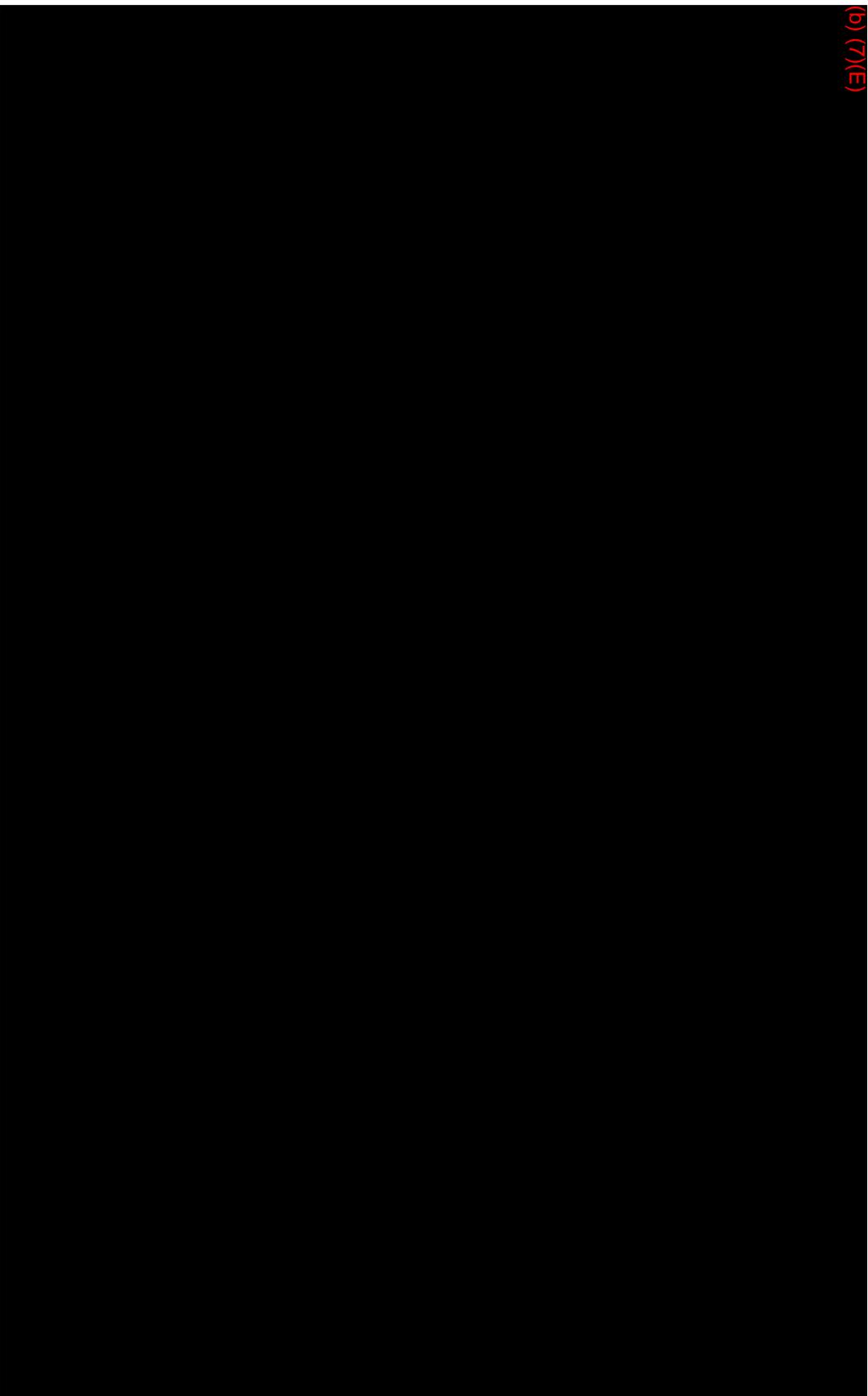
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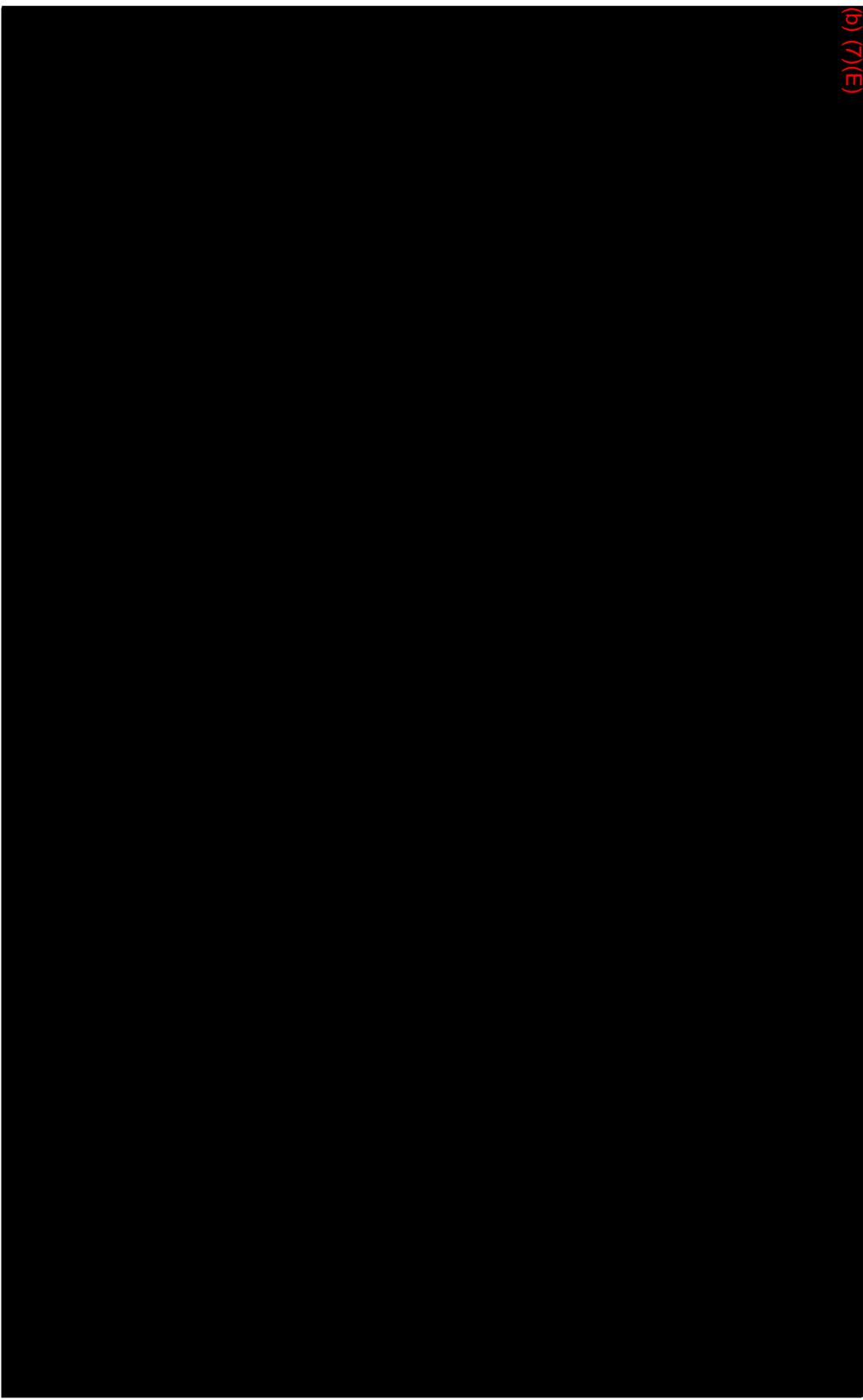
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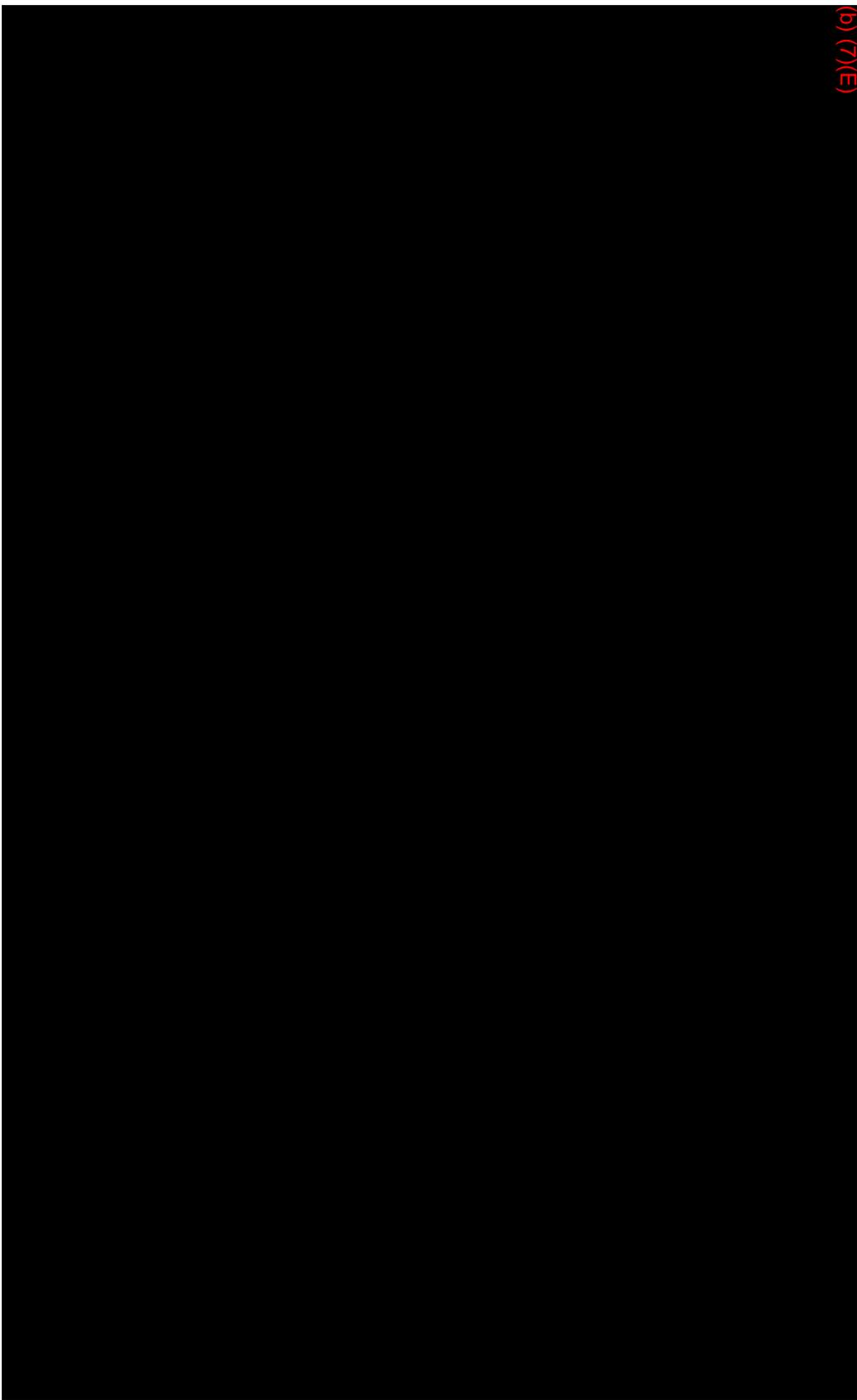
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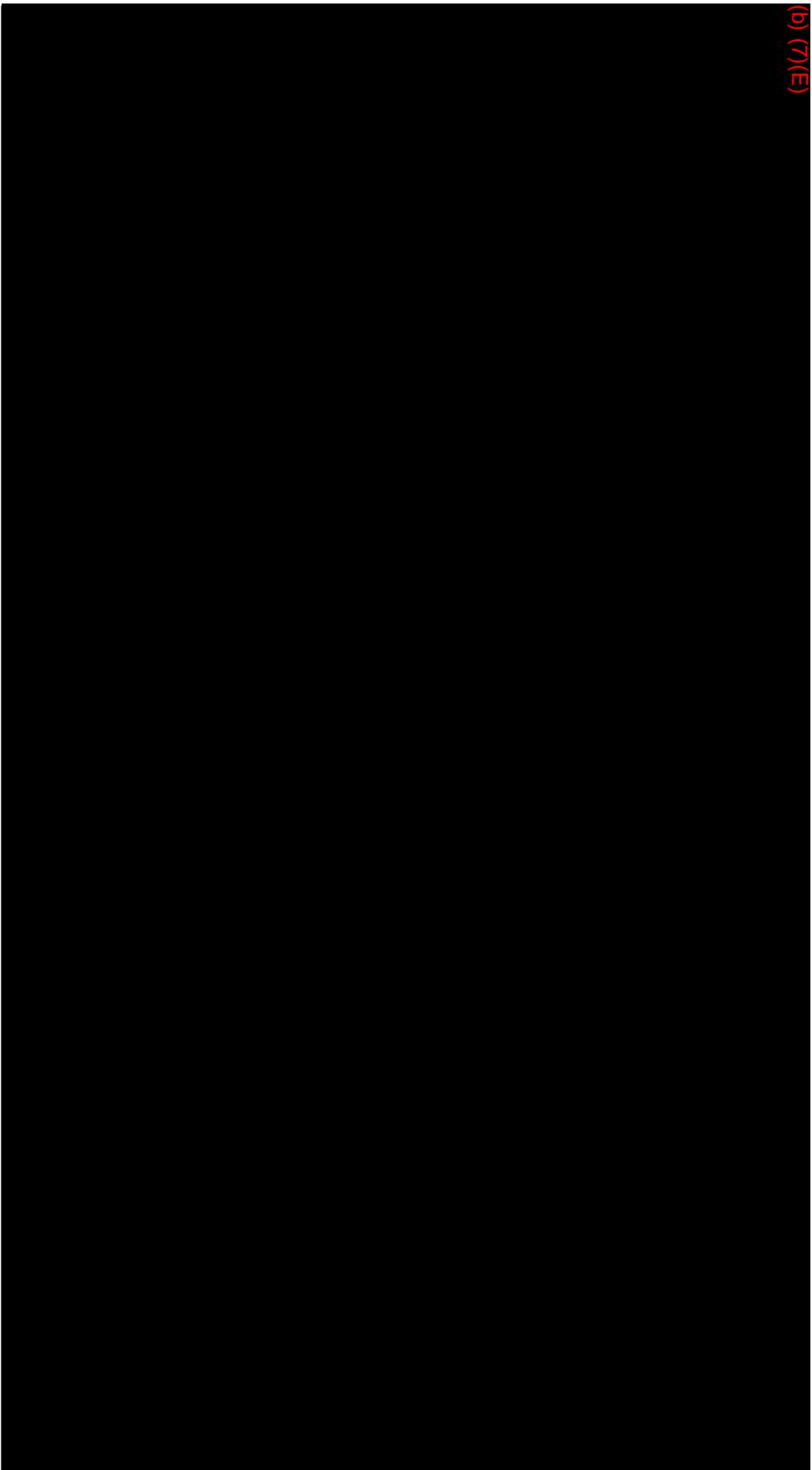
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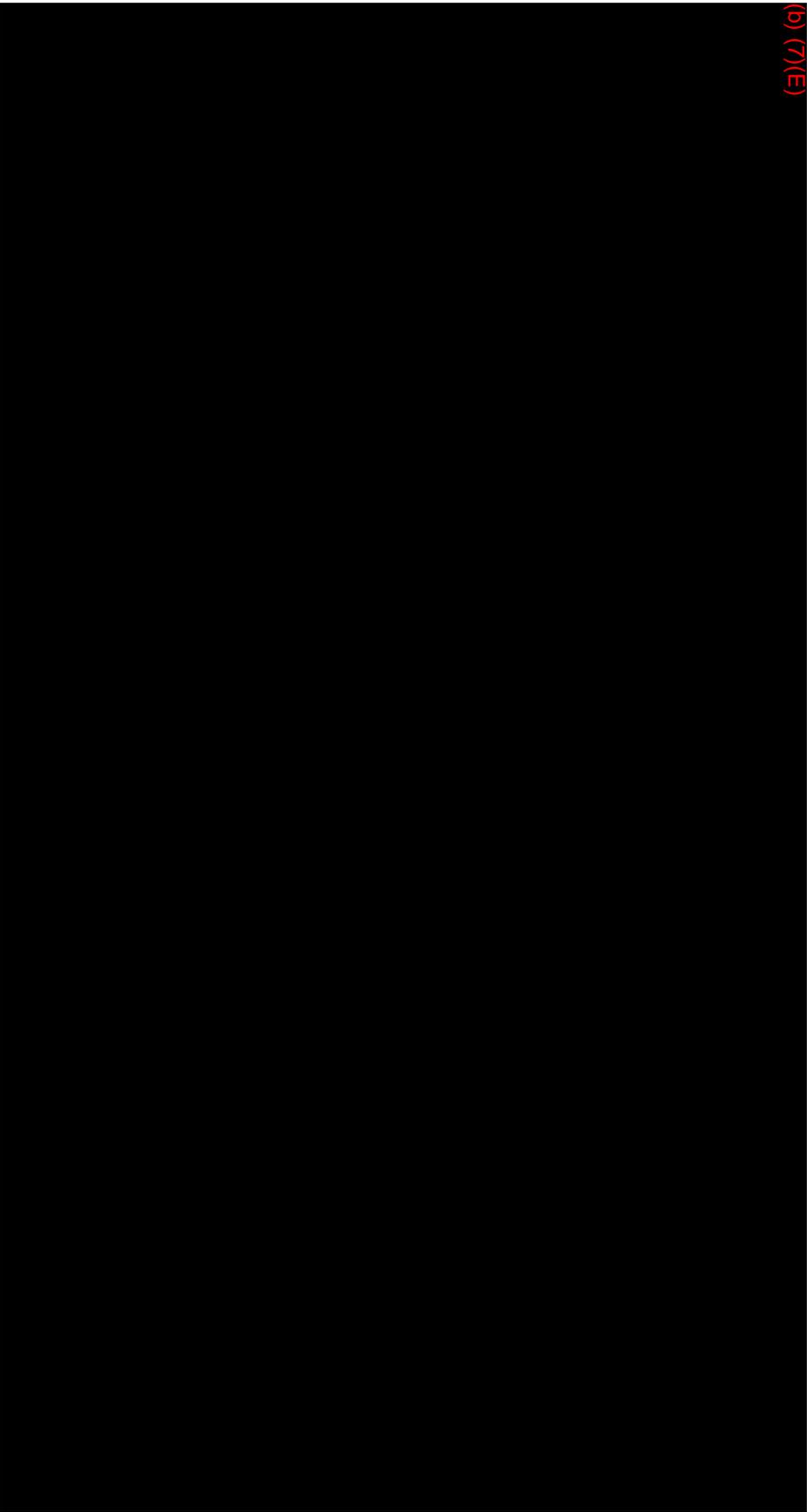
(b) (7)(E)



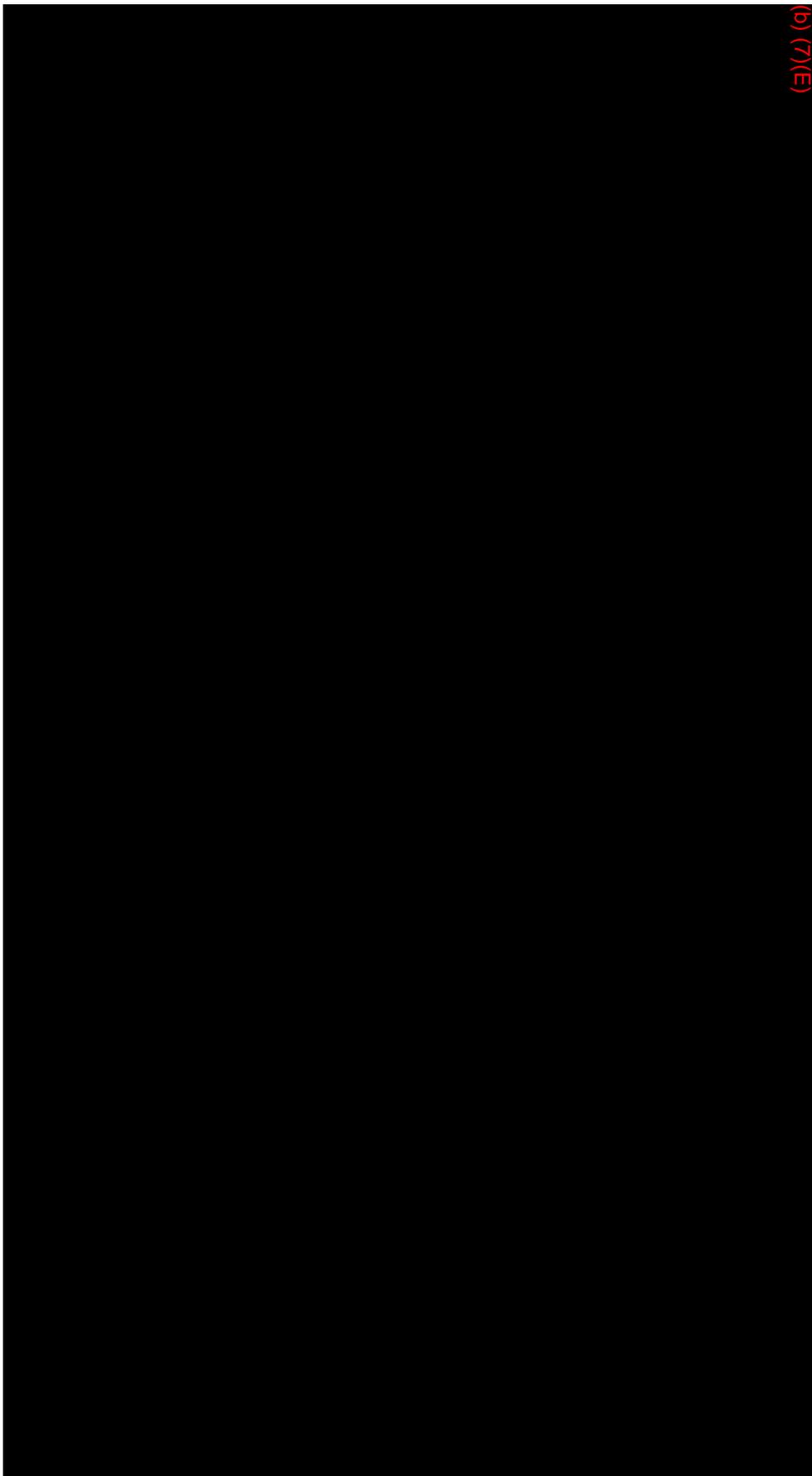
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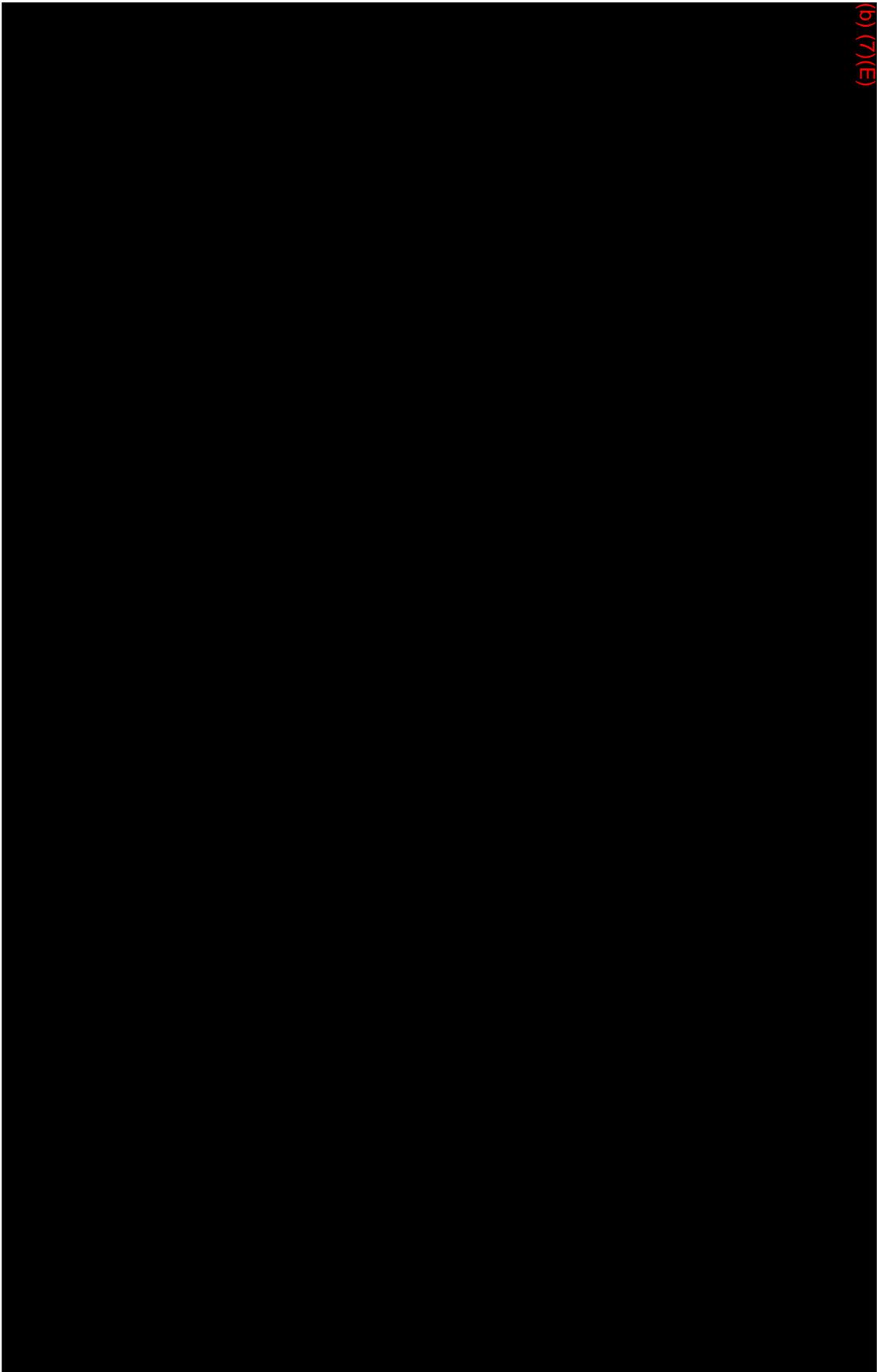
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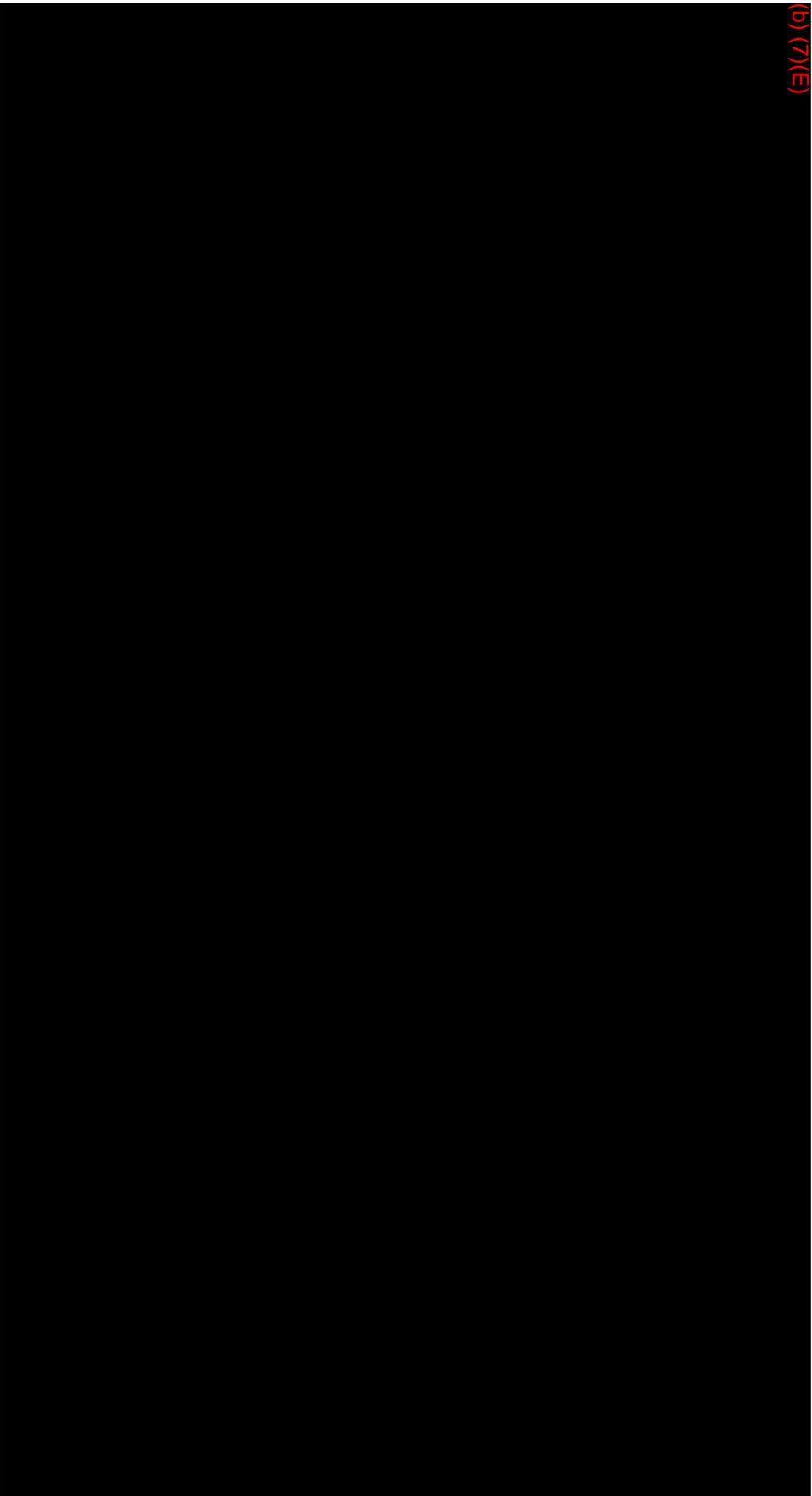
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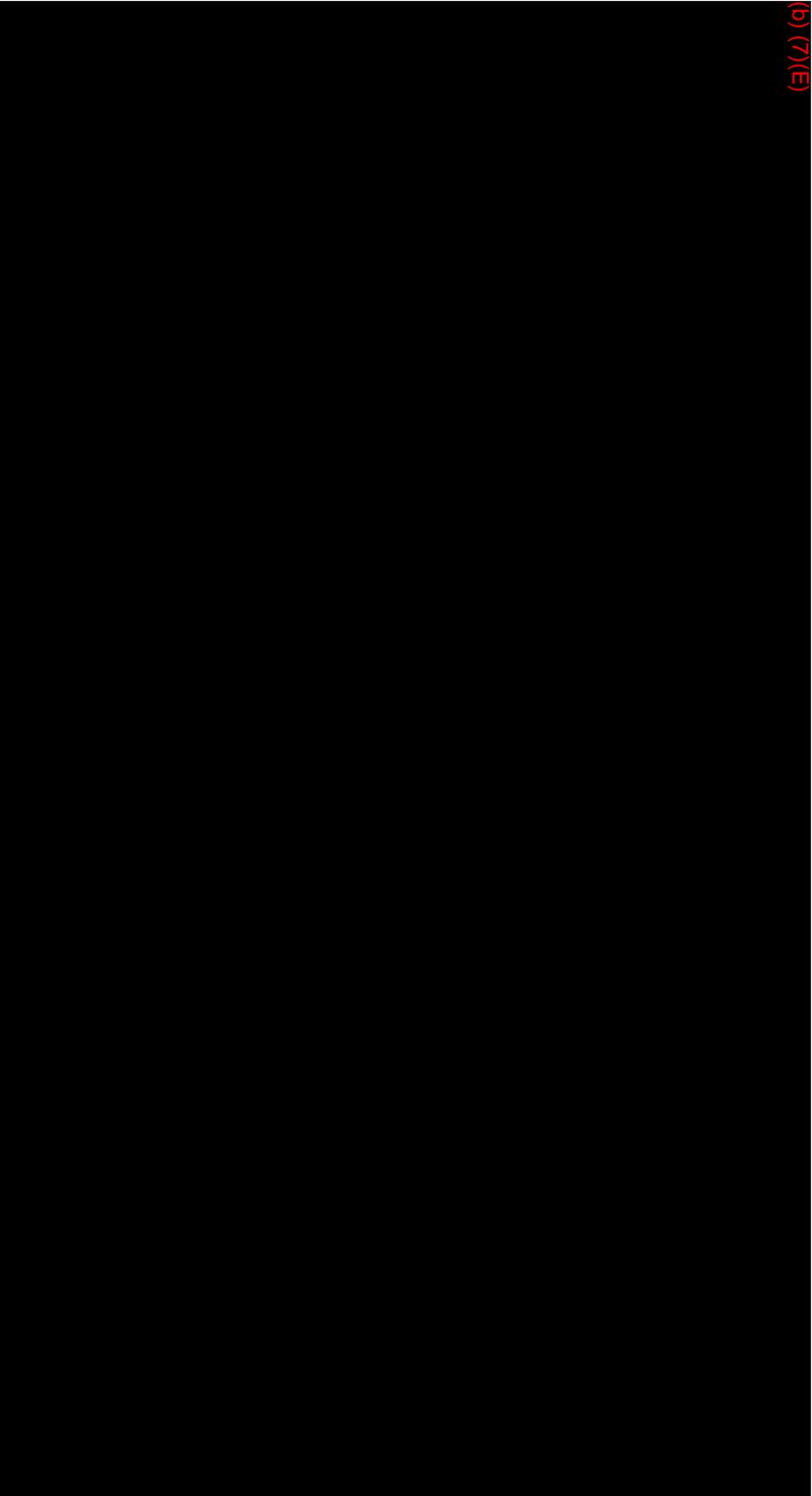
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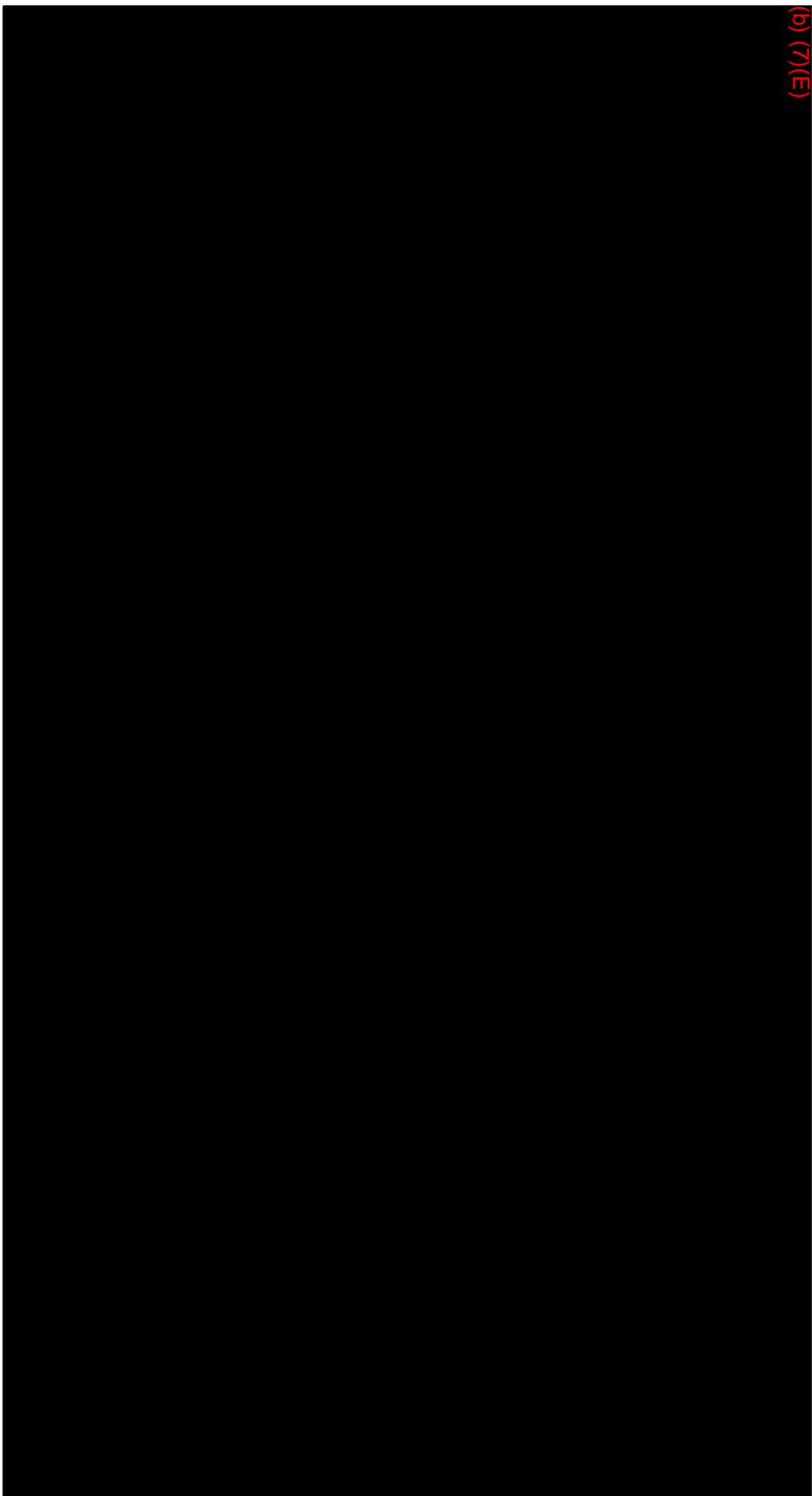
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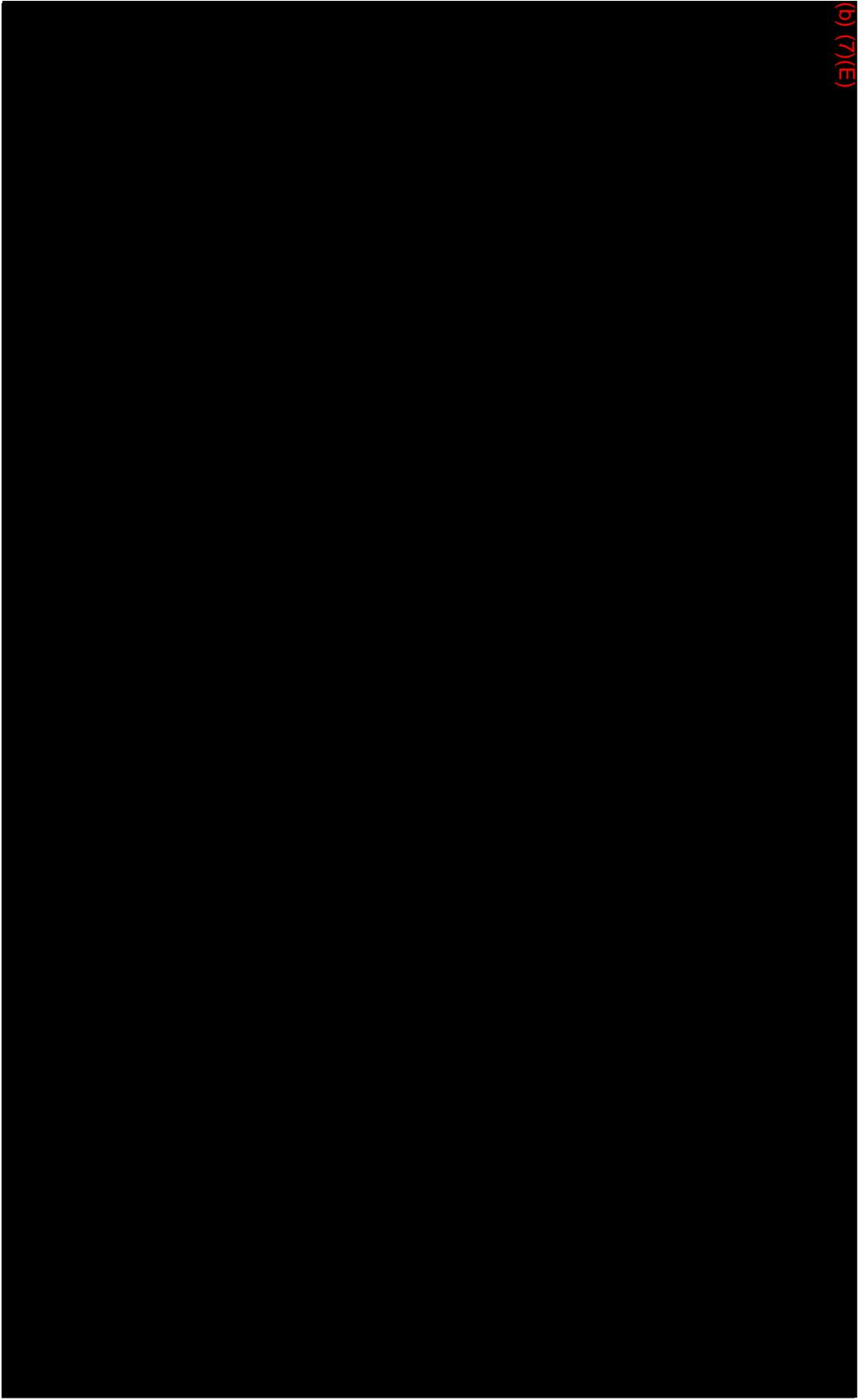
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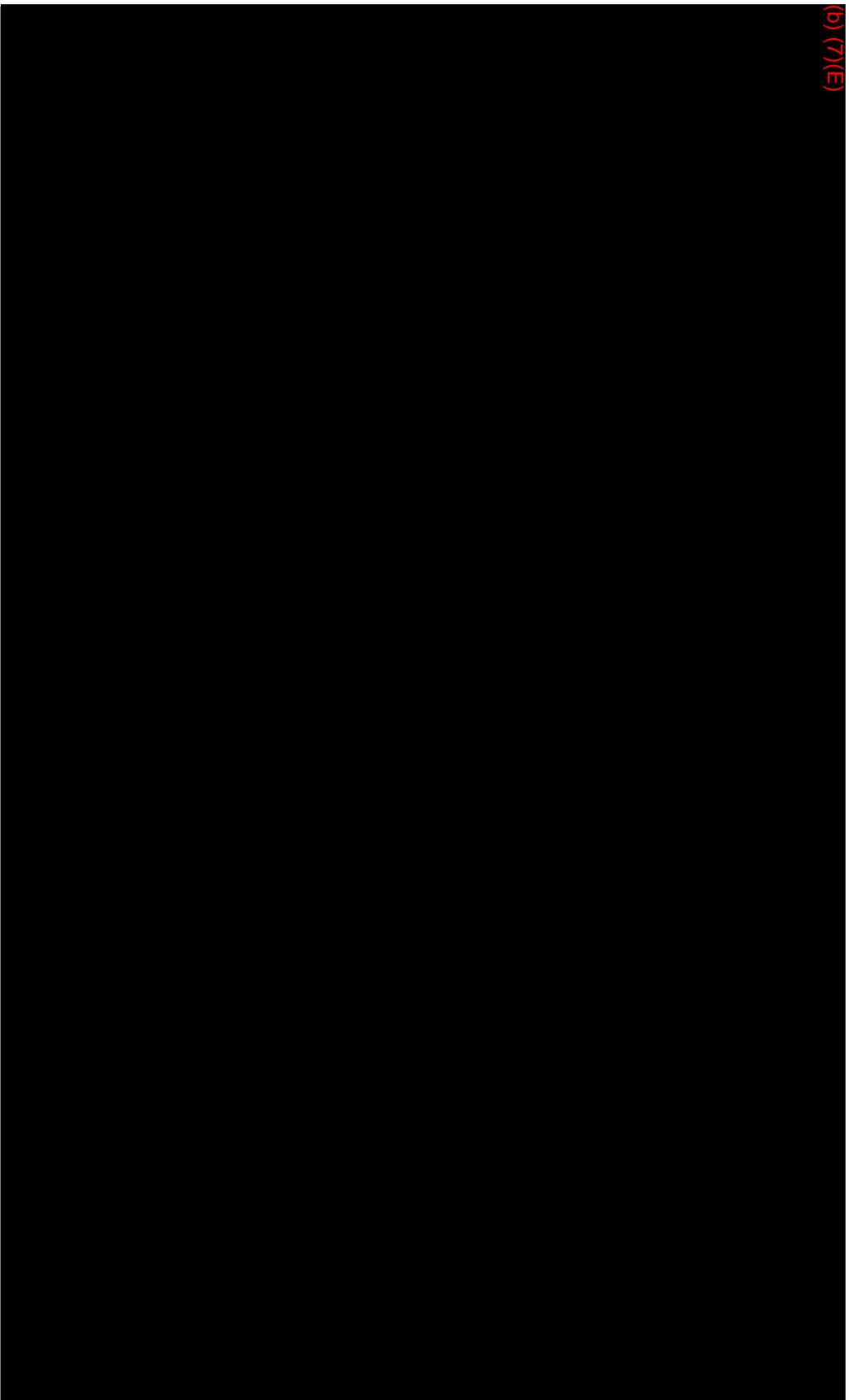
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