



# ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

## WORKING PAPER

C/CAR/DCA/14 — WP/03  
20/03/15

**Fourteenth Directors of Civil Aviation of the Central Caribbean Meeting (C/CAR/DCA/14)**  
Kingston, Jamaica, 11 to 13 May 2015

**Agenda Item 3: Aviation Safety Management**  
**3.1 Regional Aviation Safety Group – Pan America (RASG-PA)**

**REGIONAL AVIATION SAFETY GROUP — PAN AMERICA**

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
<p>This working paper presents the Regional Aviation Safety Group — Pan America (RASG-PA) activities results.</p> <p>RASG-PA develops initiatives and projects to enhance aviation safety using the ICAO Global Aviation Safety Plan (GASP), as a guide to mitigate safety risks to reduce the fatal accident rate in the Pan American Region (NAM, CAR and SAM ICAO Regions).</p> <p>The participation by States/Territories, international organizations and industry in RASG-PA activities has proven fundamental to improving safety in the Pan American Region.</p>	
<b>Action:</b>	The suggested action is presented in Section 4.
<i>Strategic Objective:</i>	<ul style="list-style-type: none"><li>• Safety</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• ICAO Global Aviation Safety Plan (GASP)</li><li>• Annex 19 — <i>Safety Management</i></li><li>• Seventh Regional Aviation Safety Group — Pan America Annual Plenary Meeting (RASG-PA/7), Willemstad, Curaçao, 11 – 12 September 2014</li><li>• RASG-PA website: <a href="http://www.icao.int/rasgpa">www.icao.int/rasgpa</a></li></ul>

## **1. Introduction**

1.1 RASG-PA was established in November 2008 to support the development and operation of a performance-based safety system in Pan America.

1.2 RASG-PA's mission is to enhance civil aviation safety and efficiency in Pan America through coordination and collaboration by all aviation stakeholders under ICAO's leadership.

1.3 RASG-PA's vision involves all aviation stakeholders working to reduce aviation safety risks in North America, Central America, Caribbean and South America through harmonized and coordinated mitigation efforts aimed at promoting implementation of safety initiatives.

1.4 RASG-PA uses the ICAO Global Aviation Safety Plan (GASP) as a guide to develop its work programme using a regional perspective.

1.5 RASG-PA membership includes representatives from all ICAO NAM/CAR and SAM States/Territories, international organizations and industry such as: Air Safety Support International (ASSI), United Kingdom; Airports Council International (ACI); Airbus; Latin American and Caribbean Air Transport Association (ALTA); Boeing; Civil Aviation Navigation Services Organization (CANSO); Caribbean Aviation Safety and Security Oversight System (CASSOS); Corporación Centroamericana de Servicios de Navegación Aérea (COCESNA); Eastern Caribbean Civil Aviation Authority (ECCAA); Embraer; Flight Safety Foundation (FSF); International Air Transport Association (IATA); International Federation of Airline Pilots Association (IFALPA); International Federation of Air Traffic Controllers Association (IFATCA); and Latin American Civil Aviation Commission (LACAC); and the Latin America Regional Safety Oversight Organization (SRVSOP).

1.6 RASG-PA Executive Steering Committee (ESC) is composed by two Co-Chairpersons representing States/Territories and international organizations/industry, respectively; four Vice-Chairpersons representing States; and representatives from international organizations. Currently, the Co-Chairpersons are Curacao and Boeing, and the four Vice-Chairpersons are Brazil, Chile, Costa Rica, and United States. ICAO is represented by the ICAO NACC (Secretariat) and SAM Regional Offices.

1.7 In order to conduct its activities, RASG-PA has established the following teams (See **Appendix A**):

- a) Annual Safety Report Team (ASRT)
- b) Aviation Safety Training Team (ASTT)
- c) Information Analysis Team (IAT)
- d) Pan America — Regional Aviation Safety Team (PA-RAST)

## 2. Analysis

### 2.1 Regional Safety Priorities and Targets

2.1.1 The safety regional priorities and targets set by the NAM/CAR and SAM Regions are based in the GASP and are set forth in two documents. For the SAM Region, the Thirteenth Meeting of the Civil Aviation Authorities of the SAM Region (RAAC/13, Colombia) approved the targets within the *Bogota Declaration* dated December 2013 (refer to **Appendix B**). Sometime later the targets for the NAM and CAR Regions were set through the *Port-of-Spain Declaration*, which was approved by the Fifth Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/5) held in Trinidad and Tobago in April 2014 (refer to **Appendix C**).

2.1.2 The Fifth Edition of the RASG-PA Annual Safety Report (ASR) reveals that the top three risk areas in the Pan American Region continue to be Runway Excursion (RE), Controlled Flight Into Terrain (CFIT), and Loss of Control In-Flight (LOC-I). Recently, Mid-Air Collision (MAC) was added to the list as the fourth risk area in the Region.

2.1.3 These four risk areas are considered among the highest priorities of the RASG-PA work programme through development of Safety Enhancement Initiatives (SEIs) and corresponding Detailed Implementation Plans (DIPs) and its deliverable results.

2.1.4 The RASG-PA safety goal is “using as reference the year 2010” reduce the operations fatality risk Part 121 or equivalent to 50% for 2020 in Latin America and the Caribbean, considering the following:

- a) the fatality risk is the full loss passenger load equivalents per million departures
- b) the baseline (five years average fatality risk) in 2010 was 0.6 in Latin America and the Caribbean
- c) the RASG-PA goal is to reach a fatality risk of 0.3 in 2020 in Latin America and the Caribbean;
- d) it is calculated that the SEIs implemented in the period 2009 – 2013 allowed to reduce the fatality risk in a 24% in Latin America and the Caribbean; and
- e) the fatality risk calculated through 2013 is 0.4 in Latin America and the Caribbean.

### 2.2 RASG-PA Activities and Initiatives to Enhance Safety

2.2.1 RASG-PA, even with restricted resources and limited participation by Civil Aviation Authorities in its activities and projects has been able to successfully perform its tasks through great commitment and dedication. See **Appendix D**.

2.2.2 RASG-PA training material and documentation are available on the RASG-PA webpage: [www.icao.int/rasgpa](http://www.icao.int/rasgpa).

## **2.3 RASG-PA Regional Challenges**

2.3.1 Pan America faces many challenges to improve safety levels such as improving the levels of effective implementation (EI) of the eight critical elements (CEs) according to results from the ICAO Universal Safety Oversight Audit Programme (USOAP); increasing State human and financial resources; and expediting the implementation of the ICAO State safety programme (SSP) and safety management systems (SMS) by States and service providers, respectively.

## **3. Conclusion**

3.1 RASG-PA is fulfilling its objective to enhance safety in Pan America by reducing duplication of efforts as well as human and financial resource expenditures.

3.2 RASG-PA serves as the focal point for safety in Pan America to ensure harmonization and coordination of efforts to collaboratively reduce aviation safety risk by stakeholders.

3.3 Coordination of activities and information sharing with ICAO Headquarters, the CAR/SAM Regional Planning and Implementation Group (GREPECAS), and respective Regional Safety Oversight Organizations (RSOOs) are conducted at the Secretariat level in order to avoid redundancy and to optimize the use of resources.

3.4 The success and continuity of RASG-PA and the subsequent enhancement of aviation safety in Pan America will depend on the commitment, participation and contributions of its members.

## **4. Suggested Action**

4.1 The Meeting is invited to:

- a) take note of the progress on safety reached by RASG-PA;
- b) support RASG-PA work through major effective participation in its activities;
- c) inform RASG-PA Secretariat of your organization's RASG-PA focal point (See **Appendix E**);
- d) participate in the Sixth Pan American Aviation Safety Summit and Eighth Regional Aviation Safety Group – Pan America Annual Plenary Meeting (RASG-PA/8) to be held in Medellin, Colombia, from 23 to 26 June 2015.

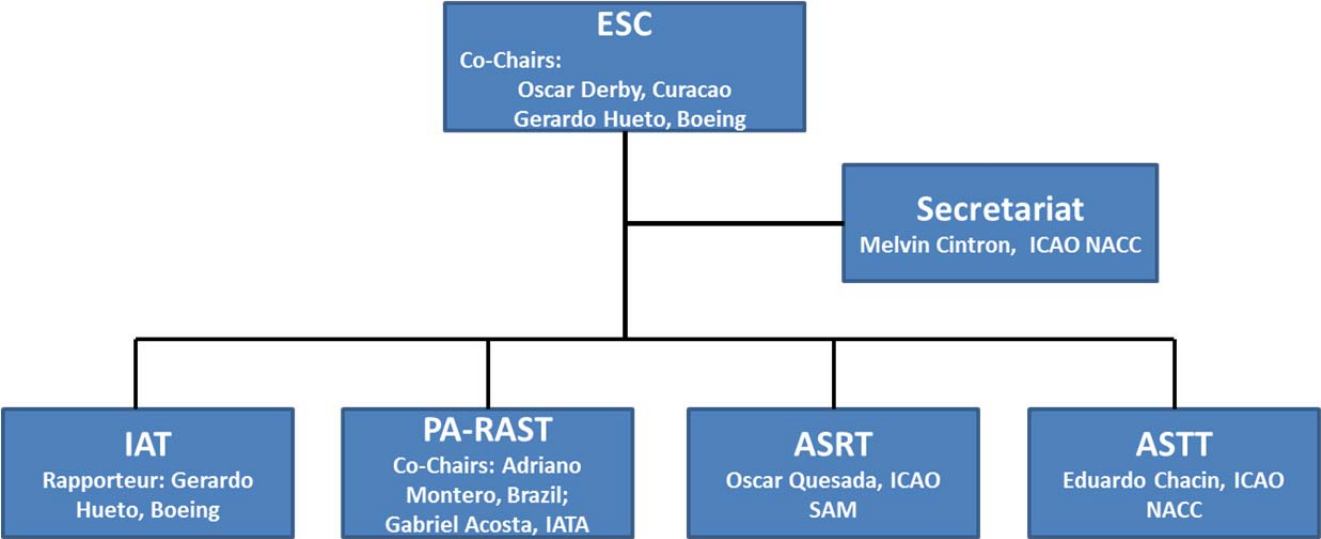
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APPENDIX A

RASG-PA ORGANIZATION CHART

# RASG-PA

**(Pan American States/Territories, International Organizations and Industry)**



**ESC: Executive Steering Committee; IAT: Information Analysis Team; PA-RAST: Pan America – Regional Aviation Safety Team  
ASRT: Aviation Safety Report Team; ASTT: Aviation Safety Training Team**

**APPENDIX****INTERNATIONAL CIVIL AVIATION ORGANIZATION  
South American Regional Office****BOGOTA DECLARATION**

The thirteenth meeting of Civil Aviation Authorities of the SAM Region held in Bogota, Colombia, from 4 to 6 December 2013, convened by the ICAO South American Regional Office, and counting with the participation of high level officials representing 13 States and 8 international organizations and industry:

*Considering* that, in accordance with Article 37 of the International Civil Aviation Convention, each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation;

*Noting* the objectives to be achieved through the Global Air Navigation and Safety Plans, recently approved by the Thirty-eighth Session of the ICAO Assembly;

*Taking* into account the paramount role civil aviation performs in the socio-economical, exchange and commerce development for regional integration;

*Aware* that the constant air transport growth in the region and the great worldwide events to be developed in the next years require additional efforts to improve even more the aviation safety, efficiency and security indicators;

*Aware* that the air transport growth poses additional challenges for the infrastructure of both airports and air navigation;

*Aware* that the management of regional processes towards the implementation of air navigation, safety and security operational improvements require the establishment of clear indicators and goals;

*Recognizing* that the South American Region has successfully implemented regional technical cooperation mechanisms adopting a joint approach in the solution of problems of common interest;

*Aware* that the harmonization of regional standards and procedures will facilitate a collaborative environment among States, guaranteeing an increase in the levels of air operations safety in the region and the achievement of joint goals;

*Aware* that regional air navigation operational improvements are more productive, and that delays from one State can negatively affect the remainder States;

*Recognizing* that legislation on the protection of sources of information is necessary for a better regional State Safety Programme (SSP) and Safety Management Implementation (SMS) implementation;

*Aware* that the safety objectives achieved to date require specific actions for their sustainment;

*Recognizing* the importance of developing air safety intelligence using reactive, proactive and predictive information to accompany the taking of decisions, mitigation of safety risks and continuous improvement;

*Recognizing* the collaborative working potential of the runway safety teams (RST) as a risk management tool; and

*Considering* the action plan agreed upon during the Meeting of Air Navigation and Flight Safety Directors of the South American (SAM) Region.

The thirteenth meeting of Civil Aviation Authorities of the SAM Region (RAAC/13):

DECLARES its commitment in achieving the following goals by 2016:

1. **Safety oversight**

*Have 80% of effective implementation (EI) in the SAM Region.*

2. **Accidents**

*Reduce the SAM regional accident rate gap in 50% with regard to the global accident rate.*

3. **Runway excursions**

*Reduce runway excursions in 20% with regard to the average rate of the Region (2007 – 2012).*

4. **Aerodrome certification**

*Have 20% of the international aerodromes certified.*

5. **State Safety Programmes (SSP) and Safety Management System (SMS) Implementation**

- *Reach 67% of SSP implementation.*
- *Reach 100% of the service providers SMS oversight capacity.*

6. **PBN terminal**

*Full compliance with goals established in ICAO Assembly Resolution A37-11 regarding approach procedure with vertical guidance (APV).*

7. **PBN enroute**

- *60% of the international aerodromes with standard instrument departure (SID) / standard instrument arrival (STAR) PBN.*
- *60% of the routes/airspace with performance based navigation (PBN).*

8. **CDO**

*40% of the international aerodromes / terminal control areas (TMA) with continuous descent operation (CDO).*

9. **CCO**

*40% of the international aerodromes / TMAs with continuous climb operations (CCO).*

10. **Estimated fuel savings/ CO2 emissions reduction based on the ICAO fuel savings estimation tool (IFSET)**

*Reach 40,000 tons of regional CO2 emissions reduction per year in en-route PBN implementation.*

11. **ATFM**

*100% of the area control centre (ACCs) providing air traffic flow management (ATFM).*

12. **AIM**

*100% of the required elements in PHASE I (aeronautical information services (AIS) to aeronautical information management (AIM) Roadmap).*

13. **AMHS interconnection**

*100% of the Air Traffic Services Message Handling Services (AMHS) regionally interconnected.*

14. **Interconnection of automated systems (ATS interfacility data communications (AIDC) exchange)**

*100% of the automated systems interconnected.*

15. **Implementation of national Internet protocol (IP) networks**

*80% of the States with national IP communications networks implemented.*

Issued in Bogota, Colombia, 6 December 2013





## *Port-of-Spain Declaration*

1. The Fifth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/5), held in Port-of-Spain, Trinidad and Tobago, from 28 to 30 April 2014, convened by the ICAO North American, Central American and Caribbean Regional Office, and with the participation of high-level officials representing **22** States and **9** international organizations/industry:
2. Considering that, in accordance with Article 37 of the International Civil Aviation Convention, each contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in that such uniformity will facilitate and improve air navigation;
3. Noting the objectives to be achieved through the Global Aviation Safety Plan and Global Air Navigation Plan, recently approved by the ICAO 38th Session of the Assembly;
4. Taking into account the paramount role that civil aviation performs in socio-economic and trade development for regional integration;
5. Aware that air transport growth will continue in the region, and that all-encompassing worldwide events will be developed in upcoming years requiring additional efforts to further improve aviation safety, efficiency and security indicators;
6. Aware that air transport growth poses additional challenges for both airports and air navigation infrastructure;
7. Aware that management of regional processes for implementation of air navigation, safety and security operational improvements require the establishment of clear indicators and goals;
8. Recognizing that the NAM/CAR Regions have successfully implemented regional technical cooperation mechanisms adopting a joint approach to problem resolution of common interest;



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9. Aware that harmonization of regional standards and procedures will facilitate a collaborative environment among States, guaranteeing improved levels of aviation safety in the Regions and the achievement of joint goals;
10. Aware that regional air navigation operational improvements produce efficiency and safety, and that delays from one State can negatively affect surrounding States;
11. Aware that safety objectives achieved to-date require specific actions for sustainment; and
12. Considering the conclusion agreed upon during the First CAR Region Safety and Air Navigation Directors Meeting (CAR/DCA/OPSAN/1) held at the ICAO NACC Regional Office in Mexico City, Mexico, from 18 to 19 February 2014.

The Fifth Meeting of the North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/5) DECLARES its commitment to achieving the following goals:

### **Regional Safety Targets**

1. Safety Oversight
  - 80% Effective Implementation (EI) regional average by December 2016
  - No State in the Region to have EI of ICAO USOAP Critical Element 3 (CAA Staff) and Critical Element 4 (Inspector Competency) below 70% by December 2016
2. Accidents
  - Using 2010 as the baseline, reduce fatality risk for accidents in the CAR Region for Part 121 or like commercial air transport operations by 50% by the year 2020



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3. Runway Excursions

- Reduce runway excursions by 20% relative to the 2007-2012 regional average by December 2016

4. Aerodrome Certification

- 48% of international aerodromes in the CAR Region to be certified by December 2016

5. State Safety Programme (SSP)/ Safety Management System (SMS) Implementation

- 60% of States to have SSP - Phase 1 implemented, service provider SMS safety performance indicators accepted, and an initial Acceptable Level of Safety Performance (ALoSP) established by December 2016
- 60% of service providers to have Phase 1 of their SMS implemented with a minimum of Reactive Phase functional risk management procedures by December 2016

**Regional Air Navigation Targets**

1. Approach - Performance-Based Navigation (PBN)

- 80% of instrument approach runways to have Approach Procedures with Vertical Guidance (APV) with Barometric Vertical Navigation (Baro VNAV) implemented by service providers and users by December 2016





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2. Air Traffic Flow Management (ATFM)
  - 100% of Flight Information Regions (FIRs) within which all Area Control Centres (ACCs) to have ATFM measures available by December 2018
3. Aeronautical Information Management Transition (AIM)
  - 100% of Aeronautical Information Services (AIS) to implement AIM Roadmap - Phase I required elements by December 2016
4. Ground-Ground Digital Coordination/Transfer
  - 50% of FIRs within which all applicable ACCs to have implemented at least one interface to use Air Traffic Services Inter-Facility Data Communication (AIDC)/On-Line Data Interchange (OLDI) with neighbouring ACCs by December 2016
5. Environmental Benefit
  - Reduce regional CO<sub>2</sub> emissions by 40,000 tons per year through PBN implementation by December 2016

Signed in Port-of-Spain, Trinidad and Tobago, on 29 April 2014.



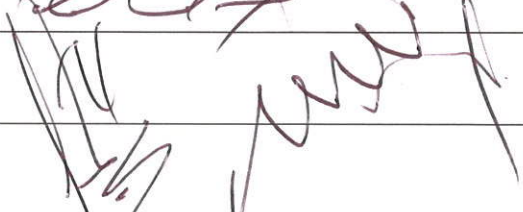

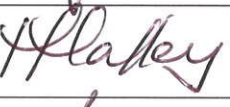

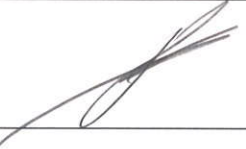

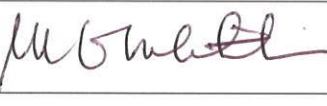



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State / Estado	Signature / Firma
<b>Bahamas</b>	
<b>Barbados</b>	
<b>Belize / Belice</b>	
<b>Bermuda</b>	
<b>Canada / Canadá</b>	
<b>Costa Rica</b>	
<b>Cuba</b>	
<b>Curaçao / Curazao</b>	
<b>Dominican Republic / República Dominicana</b>	
<b>El Salvador</b>	
<b>France / Francia</b> <i>for French Antilles / Antillas Francesas, Guadeloupe/Guadalupe, Martinique / Martinica, Saint Barthélemy / San Bartolomé and / y Saint Martin / San Martín</i>	
<b>Guatemala</b>	
<b>Haiti / Haití</b>	



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State / Estado	Signature / Firma
<b>Honduras</b>	
<b>Jamaica</b>	
<b>Mexico / México</b>	
<b>Nicaragua</b>	
<b>Sint Maarten</b>	
<b>Trinidad and Tobago / Trinidad y Tabago</b>	
<b>Turks and Caicos Islands / Islas Turcas y Caicos</b>	
<b>United Kingdom / Reino Unido</b> <i>for Anguilla; British Virgin Islands / Islas Virgenes Británicas, Cayman Islands / Islas Caimanes and / y Montserrat</i>	
<b>United States / Estados Unidos</b>	
<b>ECCAA</b> <i>for Antigua and Barbuda / Antigua y Barbuda, Granada, Saint Kitts and Nevis / San Kitts y Nevis, Saint Lucia/Santa Lucía and / y Saint Vincent and the Grenadines / San Vicente y las Granadinas</i>	

## APPENDIX D

### RASG-PA ACTIVITIES AND INITIATIVES TO ENHANCE SAFETY

- 1.1 The main RASG-PA activities deliverables include but are not limited to the following:
- a) five Pan American Aviation Safety Summits;
  - b) five editions of the RASG-PA annual safety report;
  - c) proposal for amendment to Aeronautical Legislation to Protect Safety Information Sources Framework Document;
  - d) *Runway Excursion Risk Reduction (RERR) Toolkit* (Version 2);
  - e) surveys to airlines on go-around and unstable approach policies in order to develop mitigation strategies;
  - f) *Advanced Manoeuvres Manual* distributed to all operators;
  - g) ten RASG-PA Aviation Safety Workshops/Seminars;
  - h) *Pilot Monitoring Toolkit*;
  - i) Manual on Guidance for Maintaining Runways in Accordance with ICAO Annex 14 — *Aerodromes*;
  - j) aviation safety training material available on the RASG-PA website;
  - k) Standardized operator CFIT training across the region;
  - l) Four RASG-PA Safety Advisories (RSAs);
  - m) Runway Safety Teams (RSTs) implemented at several airports in Cuba; pilot
  - n) delivered First Aeronautical Legislation Seminar for the Protection of Safety Information;
  - o) RASG-PA signed the first MOU with the United States Commercial Aviation Safety Team (U.S. CAST) on information sharing (ASIAS); and
  - p) RASG-PA signed a MOU with IATA on information sharing of Flight Data eXchange (FDX).
- 1.2 In collaboration with several RASG-PA members, the Group is also working on various projects to enhance safety such as:
- a) Consistent use of Standard Spanish and English Phraseology in accordance with the ICAO PANS-ATM – *Air Traffic Management* (Doc 4444)
  - b) Establishment of the Central American Accident and Incident Prevention Investigation Commission
  - c) Flight Information Quality Assurance (FOQA) Programme in Central America
  - d) Bird Strike Reduction Programme
  - e) Development of Metrics to Measure Institutional Strengths of the Civil Aviation Authorities

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**APPENDIX E**

**RASG-PA POINTS OF CONTACT (PoCs)**

State/Territory/International Organization \_\_\_\_\_

**1. Safety Director**

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**2. RASG-PA PoC**

\_\_\_\_\_

Name:

\_\_\_\_\_

Position/Department:

\_\_\_\_\_

Address:

\_\_\_\_\_

Telephone:

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Email:

\_\_\_\_\_

Signature: \_\_\_\_\_

Date:

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