A Publication of the
**National Wildfire
Coordinating Group**

NWCG Task Book for the Position of:

INFRARED INTERPRETER (IRIN)

(POSITION PERFORMANCE REQUIRED ON A WILDFIRE ASSIGNMENT)

PMS 311-26 **October 2012**

Task Book Assigned To:

Trainee's Name: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____

Task Book Initiated By:

Official's Name: _____

Home Unit Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____

Home Unit Address: _____

Date Initiated: _____

The material contained in this book accurately defines the performance expected of the positions for which it was developed. Each position task book builds on tasks from previous prerequisite position task books. This task book is approved for use as a position qualification document in accordance with the instructions contained herein.

Verification/Certification of Completed Task Book
for the Position of:

INFRARED INTERPRETER (IRIN)

Final Evaluator's Verification

*To be completed **ONLY** when you are recommending the trainee for certification.*

I verify that (trainee name) _____ has successfully performed as a trainee by demonstrating all tasks for the position listed above and should be considered for certification in this position. All tasks are documented with appropriate initials.

Final Evaluator's Signature: _____

Final Evaluator's Printed Name: _____

Home Unit Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____ Date: _____

Agency Certification

I certify that (trainee name) _____ has met all requirements for qualification in the above position and that such qualification has been issued.

Certifying Official's Signature: _____

Certifying Official's Printed Name: _____

Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____ Date: _____

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NWCG, Publications Management System at http://www.nwcg.gov/publications/position-taskbooks

NATIONAL WILDFIRE COORDINATING GROUP (NWCG)
POSITION TASK BOOK

NWCG Position Task Books (PTBs) have been developed for designated National Interagency Incident Management System (NIIMS) positions. Each PTB lists the competencies, behaviors and tasks required for successful performance in specific positions. Trainees must be observed completing all tasks and show knowledge and competency in their performance during the completion of this PTB.

Trainees are evaluated during this process by qualified evaluators, and the trainee's performance is documented in the PTB for each task by the evaluator's initials and date of completion. An Evaluation Record will be completed by all evaluators documenting the trainee's progress after each evaluation opportunity.

Successful performance of all tasks, as observed and recorded by an evaluator, will result in a recommendation to the agency that the trainee be certified in that position. Evaluation and confirmation of the trainee's performance while completing all tasks may occur on one or more training assignments and may involve more than one evaluator during any opportunity.

INCIDENT/EVENT CODING

Each task has a code associated with the type of training assignment where the task may be completed. The codes are: O = other, I = incident, W = wildfire, RX = prescribed fire, W/RX = wildfire OR prescribed fire and R = rare event. The codes are defined as:

O	=	Task can be completed in any situation (classroom, simulation, daily job, incident, prescribed fire, etc.).
I	=	Task must be performed on an incident managed under the Incident Command System (ICS). Examples include wildland fire, structural fire, oil spill, search and rescue, hazardous material, and an emergency or non-emergency (planned or unplanned) event.
W	=	Task must be performed on a wildfire incident.
RX	=	Task must be performed on a prescribed fire incident.
W/RX	=	Task must be performed on a wildfire OR prescribed fire incident.
R	=	Rare events such as accidents, injuries, vehicle or aircraft crashes occur infrequently and opportunities to evaluate performance in a real setting are limited. The evaluator should determine, through interview, if the trainee would be able to perform the task in a real situation.

While tasks can be performed in any situation, they must be evaluated on the specific type of incident/event for which they are coded. For example, tasks coded W must be evaluated on a wildfire; tasks coded RX must be evaluated on prescribed fire and so on. Performance of any task on other than the designated assignment is not valid for qualification.

Tasks within the PTB are numbered sequentially; however, the numbering does NOT indicate the order in which the tasks need to be performed or evaluated.

The bullets under each numbered task are examples or indicators of items or actions related to the task. The purpose of the bullets is to assist the evaluator in evaluating the trainee; the bullets are not all-inclusive. Evaluate and initial ONLY the numbered tasks. DO NOT evaluate and initial each individual bullet.

A more detailed description of this process and definitions of terms are included in the *Wildland Fire Qualification System Guide*, PMS 310-1. This document can be found at http://www.nwcg.gov/publications/310-1.

RESPONSIBILITIES

The responsibilities of the Home Unit/Agency, Trainee, Coach, Training Specialist, Evaluator, Final Evaluator and Certifying Official are identified in the *Wildland Fire Qualification System Guide*, PMS 310-1. It is incumbent upon each of these individuals to ensure their responsibilities are met.

INSTRUCTIONS FOR THE POSITION TASK BOOK EVALUATION RECORD

Evaluation Record #

Each evaluator will need to complete an evaluation record. Each evaluation record should be numbered sequentially. Place this number at the top of the evaluation record page and also use it in the column labeled "Evaluation Record #" for each numbered task the trainee has satisfactorily performed.

Trainee Information

Print the trainee's name, position on the incident/event, home unit/agency, and the home unit/agency address and phone number.

Evaluator Information

Print the Evaluator's name, position on the incident/event, home unit/agency, and the home unit/agency address and phone number.

Incident/Event Information

Incident/Event Name: Print the incident/event name.
Reference: Enter the incident code and/or fire code.
Duration: Enter inclusive dates during which the trainee was evaluated.
Incident Kind: Enter the kind of incident (wildfire, prescribed fire, search and rescue, flood, hurricane, etc.).
Location: Enter the geographic area, agency, and state.
Management Type or Prescribed Fire Complexity Level: Circle the ICS organization level (Type 5, Type 4, Type 3, Type 2, Type 1, Area Command) <u>or</u> the prescribed fire complexity level (Low, Moderate, High).

Fire Behavior Prediction System (FBPS) Fuel Model Group: Circle the Fuel Model Group letter that corresponds to the predominant fuel type in which the incident/event occurred.

G = Grass Group (includes FBPS Fuel Models 1 – 3):
1 = short grass (1 foot); 2 = timber with grass understory; 3 = tall grass (1½ - 2 feet)

B = Brush Group (includes FBPS Fuel Models 4 – 6):
4 = Chaparral (6 feet); 5 = Brush (2 feet); 6 = dormant brush/hardwood slash;
7 = Southern rough

T = Timber Group (includes FBPS Fuel Models 8 – 10)
8 = closed timber litter; 9 = hardwood litter; 10 = timber (with litter understory)

S = Slash Group (includes FBPS Fuel Models 11 – 13)
11 = light logging slash; 12 = medium logging slash; 13 = heavy logging slash

Evaluator's Recommendation
For 1 – 4, initial only one line as appropriate; this will allow for comparison with your initials in the Qualifications Record.

Record additional remarks/recommendations on an Individual Performance Evaluation, or by attaching an additional sheet to the evaluation record.

Evaluator's Signature
Sign here to authenticate your recommendations.

Date
Document the date the Evaluation Record is being completed.

Evaluator's Relevant Qualification (or agency certification)
List your qualification or certification relevant to the trainee position you supervised.
Note: Evaluators must be either qualified in the position being evaluated or supervise the trainee; Final Evaluators must be qualified in the trainee position they are evaluating.

INFRARED INTERPRETER (IRIN)

Competency: Assume position responsibilities.

Description: Successfully assume role of Infrared Interpreter and initiate position activities at the appropriate time according to the following behaviors.

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Ensure readiness for assignment.			
1. Obtain and assemble information and materials needed for kit. Suggested items: • *Adequate software and hardware for infrared interpretation and product production.* • *List of pertinent websites/passwords.* • *List of local/regional contacts to obtain base data for the incident (e.g., GISS, Information Technology Specialist).* • *Methods of data transfer.* • *Adequate office supplies (red and black permanent markers, pocket magnifying glass/loop, rubber bands, ruler/scale, calculator).* • *PMS 410-1, Fireline Handbook.* • *Infrared Operations Manual.* • *S-443 DVD*	O		
2. Obtain complete information from dispatch upon assignment. • *Incident name* • *Order number* • *Request number* • *Financial codes* • *Approvals (rental car, hotel, cell phone, laptop, remote work, and others, depending on assignment.* • *Reporting location* • *Reporting time* • *Transportation arrangements/travel routes* • *Contact procedures during travel (telephone/radio)* • *Current situation* • *Expected duration of assignment* • *Whether working alone or as part of a "pod."*	O		
3. Arrive at incident and check in. • *Arrive properly equipped at assigned location within acceptable time limits.* • *Notify Situation Unit Leader or alternate supervisor of arrival and location.*	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

INFRARED INTERPRETER (IRIN)

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Ensure availability, qualifications, and capabilities of resources to complete assignment.			
4. Obtain work materials, data, and equipment necessary to accomplish assigned tasks within specified time frames. • *Order additional materials, data (including digital background files and incident data files), and equipment according to established incident specific guidelines.* • *Obtain transportation to and from airport, local office and Incident Command Posts, or designated areas (if applicable).* • *Obtain place to stay near airport and local office (if applicable).*	I		
5. Organize work area. • *Ensure nighttime access to work location.* • *Ensure safe and efficient accomplishment of task.* • *Ensure acceptable internet access.* • *Recognize and meet priorities within established time frames.*	I		
Behavior: Gather, update, and apply situational information relevant to the assignment.			
6. Obtain initial briefing from Situation Unit Leader or supervisor. • *Understand schedule for planning section meeting.* • *Priorities, additional desired products (if time permits), time limits for completion, methods and timing of communication, and methods and timing of delivery of infrared products to accomplish role in assigned tasks.* • *Needs for personnel and facilities.* • *Location of work area.*	I		
7. Gather logistical information. • *Incident base facilities.* • *Equipment and supplies available (e.g., plotter, computers, network, fax/copy machines).*	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

8. Gather information necessary to assess incident assignment and determine immediate needs and actions. • *Local airport location, capability (runway length and condition), and nighttime access (if applicable).* • *Local office space available to work from.* • *Incident and local dispatch phone numbers* • *Fire location, latitude and longitude, elevation, fires within a complex (incident and local dispatch radio frequencies)* • *Concerns of incident including priority areas of incident (east flank, north flank), and management action points.* • *Weather forecast* • *Information sources include Situation Unit Leader, IAP, resource order, local dispatch, situation reports.*	I		
Behavior: Establish effective relationships with relevant personnel.			
9. Conduct self in a professional manner. • *Respectful and courteous.* • *Respectful of public and private property.*	I		
10. Establish and maintain positive interpersonal and interagency working relationships.	I		
Behavior: Understand and comply with ICS concepts and principles.			
11. Apply the ICS. • *Follow chain of command.* • *Maintain appropriate span of control.* • *Use appropriate ICS forms.* • *Use appropriate ICS terminology.*	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

INFRARED INTERPRETER (IRIN)

Competency: Communicate effectively.

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a rapidly changing, high-risk environment.

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Ensure relevant information is exchanged during briefings and debriefings.			
12. Participate in functional area briefings and After Action Reviews (AARs).	I		
13. Maintain direct communications with Infrared Coordinator Regional or National and/or flight crew.	W		
14. Prepare for and give briefing to SITL and/or others as determined by the incident.	I		
Behavior: Ensure documentation is complete and disposition is appropriate.			
15. Upload interpreted infrared maps, digital geospatial data, and IRIN logs to relevant FTP sites or other accessible location.	I		
16. Provide written documentation, digital data, and products developed during the incident to the Documentation Unit and others as requested.	I		
Behavior: Gather, produce and distribute information as required by established guidelines and ensure understanding by recipient.			
17. Interpret digital infrared data to produce infrared map using recommended map symbols and applicable cartographic principles and digital spatial data layers. • *STANDGL (scale, title, author, north arrow, date/time, lat/long grid, legend)*	W		
18. Gather data, complete and distribute the Infrared Interpreters Daily Log. • *Post and distribute the log and review with SITL.*	W		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

19. Utilize recommended data file structure and naming conventions.	I		

Competency: Ensure completion of assigned actions to meet identified objectives.

Description: Identify, analyze, and apply relevant situational information and evaluate actions to complete assignments safely and meet identified objectives. Complete actions within established timeframe.

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Gather, analyze, and validate information pertinent to the incident or event and make recommendations for setting priorities.			
20. Place Infrared Scanner Order using incident information and IR Scanner Request website and following aircraft ordering procedures. • *Coordinate with SITL* • *A# from local dispatch* • *Scan box latitudes/longitudes* • *Incident elevation/size/weather* • *Contact information* • *Mission objective and description*	W		
21. Confirm that IR Scanner Request was received, time of scheduled flight, and time and method of data delivery. • *IR Scanner Request website, contact with flight crew and/or National or Regional Infrared Coordinator* • *Flight following (e.g., AFF or Flightaware, Google Earth*	I		
22. Identify and obtain background digital data from on-line or other data sources. • *Background (e.g., topographic maps, natural color or black and white orthoimagery)* • *Incident (e.g., incident perimeter, ICS points)*	I		
23. Access raw Infrared data from NIROPS data distribution or other site and/or by direct hand-off from flight crew.	W		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

INFRARED INTERPRETER (IRIN)

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
24. Review infrared imagery for imagery issues, note in Infrared Interpreters Log, and report severe problems to flight crew and/or Infrared Coordinator National/Regional. • *Fire pixels in noise* • *Super heated gas, bloom* • *Misalignment of ortho or poor georectification* • *Fire pixels where no actual heat is on the ground* • *Gaps due to clouds or areas not covered by imagery* • *Take into account any possible distortion on the edge of imagery, particularly in steep terrain*	W		
25. Accurately interpret infrared imagery. • *Identify heat perimeter* • *Check for fire pixels re-sampled out of the ortho image due to projection issues* • *Identify isolated heat sources inside and outside of heat perimeter* • *Identify areas of intense and/or scattered heat*	W		
26. Determine acreage. • *Calculate acreage inside heat perimeter* • *Document acreage on Infrared Interpreter Daily Log (and possibly on map as directed by SITL).*	I		
27. Review Infrared map and geospatial layers for accuracy, correcting any errors and notifying SITL/GISS of any errors immediately.	I		
Behavior: Utilize information to produce outputs.			
28. Create all applicable Infrared geospatial data layers, including Heat Perimeter (polygon), isolated Heat Sources (points), Intense Heat (polygon), and Scattered Heat Sources (polygon). • *Heat sources data layer may contain heat sources both inside and outside the heat perimeter* • *Complete all data layers applicable to the situation* • *Supply additional data layers and formats on request, as time allows*	W		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

INFRARED INTERPRETER (IRIN)

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
29. Create digital Infrared heat map within established guidelines and time frames, using recommended Infrared map symbols and standard ICS map symbols, depicting all applicable IR geospatial data layers (heat perimeter, isolated heat sources, intense heat, gaps in coverage etc.), conforming to recommended map elements STANDGL • *Use agreed upon size and background (usually a topographic map) for map and save in formats easily plotted.* • *Add interpreted acreage as directed by SITL.* • *May plot a paper version if giving briefing at camp or if requested by others and approved by SITL.*	W		
30. Complete daily log and supply to SITL, include calculated acres, imagery issues, location of heat, especially in relation to any management action points or other areas of concern. • *Use land features to describe heat locations.*	W		
Behavior: Follow established procedures and/or safety procedures relevant to given assignment.			
31. Follow recommended procedures for IRIN.	W		
32. Follow established safety procedures. • *Work/Rest, Length of Assignment and Days Off.* • *Incident Operations Driving* • *Airport/aircraft safety procedures*	W		
Behavior: Transfer position duties while ensuring continuity of authority and knowledge and taking into account the increasing or decreasing incident complexity.			
33. Coordinate an efficient transfer of position duties when mobilizing/demobilizing (e.g., incoming Incident Management Team (IMT), IRIN, IRCN/IRCR, host agency). • *Inform SITL, flight crew, Infrared Coordinator Regional/National.* • *Document follow-up action needed and submit to supervisor.*	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

INFRARED INTERPRETER (IRIN)

TASK	CODE	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Plan for demobilization and ensure demobilization procedures are followed.			
34. Demobilize and check out. • *Receive demobilization instructions from incident supervisor.* • *If required, complete ICS 221, Demobilization Checkout and submit completed form to the appropriate person.*	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

Evaluation Record # _____

Trainee Information

Printed Name:

Trainee Position on Incident/Event:

Home Unit/Agency:

Home Unit /Agency Address and Phone Number:

Evaluator Information

Printed Name:

Evaluator Position on Incident/Event:

Home Unit/Agency:

Home Unit /Agency Address and Phone Number:

Incident/Event Information

Incident/Event Name: Reference (Incident Number/Fire Code):

Duration:

Incident Kind: Wildfire, Prescribed Fire, All Hazard, Other (specify):

Location (include Geographic Area, Agency, and State):

Management Type (circle one): Type 5, Type 4, Type 3, Type 2, Type 1, Area Command
OR Prescribed Fire Complexity Level (circle one): Low, Moderate, High

FBPS Fuel Model Letter: G = Grass, B = Brush, T = Timber, S = Slash

Evaluator's Recommendation

(Initial only one line as appropriate)

_____ **1)** The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. The trainee has successfully performed all tasks in the PTB for the position. I have completed the Final Evaluator's Verification section and recommend the trainee be considered for agency certification.

_____ **2)** The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. However, opportunities were not available for all tasks (or all uncompleted tasks) to be performed and evaluated on this assignment. An additional assignment is needed to complete the evaluation.

_____ **3)** The trainee did not complete certain tasks in the PTB in a satisfactory manner and additional training, guidance, or experience is recommended.

_____ **4)** The individual is severely deficient in the performance of tasks in the PTB for the position and additional training, guidance, or experience is recommended prior to another training assignment.

Record additional remarks/recommendations on an Individual Performance Evaluation, or by attaching an additional sheet to the evaluation record.

Evaluator's Signature: _____ Date: _____

Evaluator's Relevant Qualification (or agency certification): _____

Additional Evaluation Record Sheets can be downloaded at http://www.nwcg.gov/publications/position-taskbooks

Evaluation Record # _____

Trainee Information

Printed Name:

Trainee Position on Incident/Event:

Home Unit/Agency:

Home Unit /Agency Address and Phone Number:

Evaluator Information

Printed Name:

Evaluator Position on Incident/Event:

Home Unit/Agency:

Home Unit /Agency Address and Phone Number:

Incident/Event Information

Incident/Event Name: Reference (Incident Number/Fire Code):

Duration:

Incident Kind: Wildfire, Prescribed Fire, All Hazard, Other (specify):

Location (include Geographic Area, Agency, and State):

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_____ **3)** The trainee did not complete certain tasks in the PTB in a satisfactory manner and additional training, guidance, or experience is recommended.

_____ **4)** The individual is severely deficient in the performance of tasks in the PTB for the position and additional training, guidance, or experience is recommended prior to another training assignment.

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Evaluator's Signature: _____ Date: _____

Evaluator's Relevant Qualification (or agency certification): _____

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