



BLM task book for the position of:

**TERRA TORCH OPERATOR
(TTOP)**

**Note: This is agency-specific position task book
approved by BLM to meet agency requirements for the
Terra Torch Operator (TTOP) position.**

JANUARY 2024

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: _____

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

TERRA TORCH OPERATOR (TTOP)

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: _____

Additional copies of this publication are available through: Agency-specific Position Task Books webpage at <https://www.nwccg.gov/publications/agency-taskbooks>.

AGENCY-SPECIFIC POSITION TASK BOOK (PTB)

This agency-specific task book has been developed for the Terra Torch Operator (TTOP) position. The Federal Wildland Fire Qualifications Supplement outlines the required training and experience for this position and can be found at <https://iqcsweb.nwcg.gov/>.

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. 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. Performance of any task on other than the designated assignment is not valid for qualification. The codes are defined as:

O = Other: In any situation (classroom, simulation, daily job, incident, prescribed fire, etc.).

I = Incident: 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 = Wildfire: Task must be performed on a wildfire incident.

RX = Prescribed fire: Task must be performed on a prescribed fire incident.

W/RX = Wildfire OR prescribed fire: Task must be performed on a wildfire OR prescribed fire incident.

R = Rare event: 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.

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 *NWCG Standards for Wildland Fire Position Qualifications*, PMS 310-1, <https://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 *NWCG Standards for Wildland Fire Position Qualifications*, 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: Circle the kind of incident and specify if other (e.g., search and rescue, flood, etc.).

Location: Enter the geographic area, agency, and state.

Management Type or Prescribed Fire Complexity Level: Circle the ICS organization level or the prescribed fire complexity level.

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.

Comments: Additional information specific to the Evaluator's recommendation. The Evaluator should note any deficiencies, additional assignment needs, or additional focus areas that were identified. 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 the recommendation.

Date: Document the date the Evaluation Record is 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.

TERRA TORCH OPERATOR (TTOP)

COMPETENCY: ASSUME POSITION RESPONSIBILITIES.

Description: Successfully assume role of Terra Torch Operator and initiate position activities at the appropriate time according to the following behaviors.

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Oversees the overall operation of the terra torch.			
1. Demonstrate an understanding of manufacturer and agency procedures, policies, regulations, and guidance for terra torch operations as related to the Terra Torch Operator position through appropriate agency handbooks. <ul style="list-style-type: none"> • <i>NWCG Standards for Ground Ignition Equipment, PMS 443, CH 10.</i> • <i>OSHA 29 CFR 1910.151 and 1926.50.</i> • <i>Terra torch operation manuals provided by the manufacturer.</i> • <i>NWCG Standards for Transporting Fuel, PMS 442.</i> • <i>Interagency Standards for Fire and Fire Aviation Operations, NFES 2724.</i> 	O		
2. Conduct operations in a safe manner according to the 10 Standard Firefighting Orders, 18 Watch Out Situations, LCES principles, and agency-specific policies and standards. <ul style="list-style-type: none"> • <i>Spot check tactical operations to ensure compliance with safety guidelines.</i> • <i>Inspect the terra torch to ensure fire extinguishers, suppression tools, and burn kit are available.</i> • <i>Recognize personal fatigue symptoms and take corrective actions (rotating operators, adjusting rest periods, etc.).</i> 	W/RX		
3. Employ the concepts of the Incident Command System (ICS). <ul style="list-style-type: none"> • <i>Follow chain of command.</i> • <i>Maintain appropriate span of control.</i> 	W/RX		

Unless stated otherwise, evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
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Behavior: Ensures proper preparation, installation, operation, and maintenance of the terra torch.

4. Conduct a wand inspection. (Complete all bullets.) <ul style="list-style-type: none"> • <i>Check electrical connection.</i> • <i>Inspect wand hose and fittings for possible leaks.</i> • <i>Ensure wand tip is clear of debris.</i> 	W/RX/O		
5. Ensure the readiness of the pump package and maintain proper accountability of pump maintenance. <ul style="list-style-type: none"> • <i>Use the “Vehicle Maintenance Procedure and Record” to document periodic and post-fire inspections.</i> • <i>Maintain the pump package in accordance with guidelines as outlined in the operator’s manual and local standard operating procedures.</i> • <i>Inspect the pump head for leaks around the seals.</i> • <i>Maintain hoses and fittings for optimal performance.</i> • <i>Ensure the power pack and cords are in good condition.</i> • <i>Ensure the electrical system and switches are operational and in correct positions.</i> 	O		

Behavior: Provides for safe operation of the terra torch.

6. Ensure safety items are in working condition and available for use. <ul style="list-style-type: none"> • <i>Personal protective equipment (PPE)</i> • <i>Fire blanket</i> • <i>Fire extinguishers</i> • <i>Torch shut-off valve operation.</i> • <i>One portable eye wash station, if applicable for mixing operations (minimum 15-minute continuous flow)</i> 	W/RX/O		
7. Ensure the wand is ready for recirculation and the potential for ignition during recirculation is mitigated. (Complete all bullets.) <ul style="list-style-type: none"> • <i>Turn gas to off position on wand.</i> • <i>Make sure there is no flame/burning gel on wand tip.</i> • <i>Prepare for recirculation.</i> 	W/RX/O		

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TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
8. Follow safety guidelines. <ul style="list-style-type: none"> • <i>Inform subordinates of hazards.</i> • <i>Develop plans based on safety guidelines.</i> • <i>Ensure tactical operations maintain the principles of Lookouts, Communication, Escape Routes, Safety Zones (LCES).</i> • <i>Ensure work/rest guidelines are met.</i> 	W/RX		

Behavior: Determines whether malfunctions have occurred and acts accordingly.

9. Performs basic field repairs as needed. <ul style="list-style-type: none"> • <i>Identify problems using appropriate equipment troubleshooting guides.</i> • <i>See operating manual.</i> • <i>Determine if problem can be fixed in the field.</i> • <i>Fix problem or call for assistance.</i> 	W/RX/O		
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Behavior: Demonstrate the ability to fuel a terra torch, as well as handle and mix gelling agents and fuel.

10. Fill tank and pre-mix fuel. (Complete all bullets.) <ul style="list-style-type: none"> • <i>Ensure and confirm proper gelling agents and equipment are present.</i> • <i>Ensure fire extinguishers are deployed, ready to use, and staffed.</i> • <i>Ensure tanks and terra torch are grounded when filling.</i> • <i>Ensure proper PPE is being utilized.</i> • <i>Ensure vapor recovery hoses are in place and working properly, if applicable.</i> • <i>Keep flames away from mixing area.</i> • <i>Ensure resources in the vicinity are properly briefed and clear of the mixing area and personnel are upwind.</i> 	W/RX/O		
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Unless stated otherwise, evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
11. Ensure gelled fuel is mixed properly. <ul style="list-style-type: none"> • <i>Predetermine amount of gelling agent needed for batch.</i> • <i>Take account for variable mixing times due to fuel temperature and condition of gelling agents.</i> • <i>Use proper fuel ratios for weather conditions.</i> • <i>Mix gelling agents to ensure proper viscosity is attained.</i> 	W/RX		
Behavior: Ensures proper cleanout and long-term storage of batch mixers and terra torch.			
12. Ensure the terra torch tank/fuel line are flushed of gelled fuel. (Complete all bullets.) <ul style="list-style-type: none"> • <i>Apply enough diesel fuel to recirculate though the entire system, approximately to the top of the eye bolt or the plunger in bottom of tank.</i> • <i>Recirculate fuel through the system.</i> • <i>Recirculate fuel in wand back into tank until only fuel is being discharged.</i> • <i>Recirculate fuel from transfer hose back to tank.</i> • <i>Ensure there is enough fuel in the pump motor fuel tank.</i> • <i>Remove gas from wand.</i> 	W/RX/O		
13. Perform long-term storage of batch mixers and terra torch. (Complete all bullets.) <ul style="list-style-type: none"> • <i>Fill tank with fuel stabilizer, according to manufacturer's recommendation.</i> • <i>Recirculate fuel and stabilizer throughout the unit.</i> • <i>Pump fuel/stabilizer through transfer hose back into tank to ensure all gelled fuel and untreated fuel is purged from transfer hose.</i> • <i>Close all valves.</i> • <i>Grease shaft bearings.</i> • <i>Lubricate pump.</i> • <i>Drain or stabilize pump motor fuel.</i> • <i>Trip main breaker on batch mixers, if applicable.</i> 	W/RX/O		

Unless stated otherwise, evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
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Behavior: Ensures a qualified vehicle operator transports the terra torch during movement to/from the work site and during firing operations.

14. Inspect the vehicle and ensure the operator's qualifications and ability are commensurate with the assignment. <ul style="list-style-type: none"> • <i>Verify qualifications.</i> • <i>Ensure safety equipment and personal gear meet policy.</i> • <i>Assess capabilities of personnel to safely complete the assignment.</i> • <i>Ensure clean and orderly appearance of vehicle and equipment are maintained.</i> • <i>Ensure the use of spotters, when appropriate, due to terrain.</i> 	W/RX/O		
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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	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
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Behavior: Coordinates ignition actions closely with the vehicle operator and additional fire personnel.

15. Coordinate with the firing/burn boss regarding of the ignition process, conditions affecting fire behavior, equipment problems, and assigned safety personnel. <ul style="list-style-type: none"> • <i>Request assistance from firing boss or other personnel to meet ignition objectives, as needed.</i> • <i>Advise crewmembers of potential or impending safety hazards.</i> • <i>Establish appropriate mitigation actions and identify safety zones and escape routes.</i> • <i>Communicate effectively.</i> • <i>Check in when out of view of firing boss or other ignition crewmembers.</i> • <i>Communicate changes in fire behavior associated with your ignition operation.</i> 	W/RX		
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TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
16. Establish and maintain positive interpersonal and interagency working relationships. <ul style="list-style-type: none"> • <i>Demonstrate communication skills as they relate to supervision.</i> • <i>Articulate performance requirements to subordinates.</i> • <i>Brief subordinates on operational procedures, objectives, and hazards.</i> • <i>Identify additional staffing needs.</i> 	W/RX		

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	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
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Behavior: Review the firing plan prior to implementation.

17. Scout the burn unit/area of assigned responsibility. <ul style="list-style-type: none"> • <i>Review the kind, number, and placement of equipment and personnel.</i> • <i>Review the availability of scheduled resources.</i> • <i>Set priorities.</i> • <i>Communicate concerns to burn boss.</i> • <i>Review and evaluate the ignition plan with consideration of expected fire behavior and resource needs.</i> 	W/RX		
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Unless stated otherwise, evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

TERRA TORCH OPERATOR (TTOP)

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
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Behavior: Follow established procedures and/or safety procedures relevant to given assignment.

18. Conduct ignition operations according to implementation plan and agency-specific policies and standards (e.g., 10 Standard Firefighting Orders, 18 Watch Out Situations, and LCES principles). <ul style="list-style-type: none"> • <i>Ensure safety guidelines are followed.</i> • <i>Inspect mechanical equipment and ignition devices.</i> • <i>Advise ignition crew members of potential/impending safety hazards and appropriate mitigation actions (e.g., posting look-outs, identifying safety zones and escape routes).</i> 	W/RX		
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Behavior: Verifies, in coordination with the firing boss, desired ignition tactics are being used, are effective and adjusts ignition patterns as required.

19. Ignite fuel according to ignition plan. <ul style="list-style-type: none"> • <i>Coordinate with the holding function and other site supervisors regarding firing operations.</i> • <i>Provide for safety of assigned personnel.</i> • <i>Evaluate fire behavior and ongoing ignition for their impacts on control and desired fire effects. Make needed adjustments.</i> • <i>Predict rates of spread and look for developing extreme fire behavior.</i> • <i>Complete test fire according to burn plan and firing boss.</i> • <i>Recognize and respond to fire behavior and weather changes.</i> • <i>Change or adjust the firing plan to meet the dynamics of the situation.</i> • <i>Maintain accountability for assigned terra torch, including inspection, and return.</i> 	W/RX		
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Behavior: Anticipate, recognize, and mitigate unsafe situations.

20. Identify and correct unsafe actions or conditions. <ul style="list-style-type: none"> • <i>Maintain situational awareness and adjust tactics as necessary.</i> 	W/RX		
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Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

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, Complex Incident Management, 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.

Comments: _____

Evaluator's Signature: _____ Date: _____

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

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

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, Complex Incident Management, 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
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- _____ 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.

Comments: _____

Evaluator's Signature: _____ Date: _____

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

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