SPCB

STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE APPLICATOR PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

BUSINESS, CONSUMER SERVICES AND HOUSING AGENCY • GAVIN NEWSOM, GOVERNOR

Office of Professional Examination Services
2420 Del Paso Road, Suite 265
P 916-575-7240 | F 916-419-1697 |

MEMORANDUM

DATE	March 9, 2023
TO	Sophia Cornejo, Executive Officer Structural Pest Control Board
FROM	Heidi Lincer, Ph.D., Chief Office of Professional Examination Services
SUBJECT	**Occupational Analysis of the Applicator Profession**

EXECUTIVE SUMMARY

As required by Business and Professions Code (BPC) § 139, the Structural Pest Control Board (Board) requested that the Department of Consumer Affairs' Office of Professional Examination Services (OPES) conduct an occupational analysis (OA) of the Applicator profession. The results of this OA provide an examination outline for the Applicator profession and the basis for developing a valid and legally defensible California Applicator Examination. The project was conducted between October 2019 and December 2022. Due to the COVID-19 pandemic, some steps of the project were delayed.

In October 2019, in response to interest expressed by the pest control industry, the Board held an in-person stakeholder town hall meeting, facilitated by OPES, to gather information about the Applicator profession.

Based on the feedback received from the participants in the town hall meeting, OPES test specialists developed new content areas, tasks, and knowledge statements to be further reviewed by Applicator and Field Representative subject matter experts (SMEs) participating in in-person workshops.

During 4 subsequent examination development workshops, 18 SMEs evaluated and made edits to the Applicator examination outline. The final examination outline is structured into 6 content areas and identifies the tasks and knowledge critical for safe and competent Applicator practice in California at the time of licensure

Use of the California Applicator examination outline attached to this memo to develop the California Applicator examination ensures that the Board is compliant with BPC § 139.

2022 Applicator Examination
Outline Content Details

1. **Site Preparation and Understanding Label Information:** This area assesses the candidate's knowledge of site preparation, understanding of pesticide label information, and ability to apply pesticide label information to treat residential and commercial sites. **(15%)**

2. **Equipment Selection, Calibration, and Usage:** This area assesses the candidate's knowledge of methods for selecting pesticide application equipment, calibrating it, and using it at residential and commercial sites. **(14%)**

3. **Pesticide Application, Monitoring, and Maintenance:** This area assesses the candidate's knowledge of methods for applying pesticide, monitoring, and conducting the follow-up process at residential and commercial sites. **(23%)**

4. **Environmental Protection Standards and Safety Procedures for Handling Pesticides, Materials, and Equipment:** This area assesses the candidate's knowledge of work methods, laws, and regulations for the safe handling of pesticides, pest control materials, and equipment to protect the environment. **(20%)**

5. **Personal Protection and Safety:** This area assesses the candidate's knowledge of personal protection and safety measures to follow during pesticide treatment, while using pesticide application equipment and personal protective equipment. **(16%)**

6. **Consumer Notification and Safety:** This area assesses the candidate's knowledge of work methods, laws, and regulations for pesticide application notice requirements to consumers, of factors involved in the treatment process, and of integrated pest management at residential and commercial sites. (**12%)**

1. **Site Preparation and Understanding Label Information (15%) -** This area assesses the candidate's knowledge of site preparation, understanding of pesticide label information, and ability to apply pesticide label information to treat residential and commercial sites.

Tasks	*Associated Knowledge Statements*
T1. Perform visual inspection of treatment area to identify objects and areas that could be damaged or become health or fire hazards if treated with pesticides.	**K1.** Knowledge of interior and exterior objects and areas subject to potential property damage, health risks, or fire hazards from the pesticide applied. **K2.** Knowledge of objects or conditions in or around structures that could be hazardous to applicators and others during pesticide treatment.
T2. Identify structural conditions (e.g., location of air conditioner, protruding nails) that could cause injury to self and others during pesticide treatment.	**K2.** Knowledge of objects or conditions in or around structures that could be hazardous to applicators and others during pesticide treatment.
T3. Prepare area for pesticide treatment by removing hazardous objects and remedying adverse conditions.	**K3.** Knowledge of methods to remove hazardous objects and to remedy adverse conditions in pesticide treatment area. **K4.** Knowledge of methods to prepare target area for various pesticide applications.
T4. Locate gas and water lines that could cause personal injury or property damage.	**K5.** Knowledge of methods to locate gas and water lines and their shutoff valves in different structures.
T5. Locate drainage elements and water sources.	**K6.** Knowledge of methods to locate drainage patterns, lines, and drains. **K7.** Knowledge of methods to locate groundwater and surface water sources.
T6. Locate electrical power sources that could be used in pesticide treatment.	**K8.** Knowledge of methods to locate electrical power sources and circuit breaker boxes.
T7. Prepare area for safe and effective pesticide treatment based on the label and Safety Data Sheet specifications.	**K9.** Knowledge of methods to review and follow the directions on pesticide label and Safety Data Sheet to prepare site for safe and effective pesticide treatment.

T8. Select pesticide formulation by reading the label requirements and verifying the treatment area for moisture, temperature, ventilation, wind conditions, and type (e.g., carpet, soil, wood, concrete).	**K10**. Knowledge of procedures to select pesticide formulation by label requirement for different types of structures, treatment areas, and conditions.
T9. Follow rate of application and pesticide dilution ratio by reading label information and by unit of area/volume (e.g., linear/square/cubic feet) for pesticide treatment.	**K11.** Knowledge of procedures for determining rates of application and pesticide dilution ratios by using label information and calculating the size of the area for pesticide treatment.
T10. Follow alternative application methods based on area, temperature, humidity, wind conditions and product label restrictions.	**K12.** Knowledge of alternative pesticide application methods and preparation requirements for different treatment conditions.

2. Equipment Selection, Calibration, and Usage (14%) - This area assesses the candidate's knowledge of methods for selecting pesticide application equipment, calibrating it, and using it at residential and commercial sites.

Tasks	*Associated Knowledge Statements*
T11. Determine appropriate type of equipment and tools needed for pesticide treatments.	**K13.** Knowledge of selecting different types of equipment, its components, and the tools used in pesticide application. **K14.** Knowledge of advantages and limitations of pesticide application equipment and tools.
T12. Determine how to set up equipment and tools for pesticide treatments.	**K15.** Knowledge of methods of proper set up and use of equipment and tools for pesticide application. **K16.** Knowledge of factors (e.g., design, size, angles, output) to consider when selecting nozzles for pesticide application.
T13. Determine if equipment and tools used in pesticide treatment need to be adjusted based on the pesticide applied.	**K17.** Knowledge of methods to adjust pesticide application equipment and tools. **K18.** Knowledge of how pesticide application equipment can be switched or adjusted to accommodate changing formulations and treatment conditions.
T14. Calibrate pesticide application equipment for different formulations and treatment processes.	**K19.** Knowledge of tools needed for calibration activities. **K20.** Knowledge of the variables that must be measured to calibrate different pesticide application equipment (e.g., liquid sprayers, dry/granular applicators) for safe and effective pest control. **K21.** Knowledge of how to calibrate pesticide application equipment for varied formulation and treatment types (e.g., broadcast, space, spot), areas (e.g., carpet, grass) and conditions (e.g., wind, rain).
T15. Calibrate pesticide application equipment for different types of treatment areas and conditions.	**K19.** Knowledge of tools needed for calibration activities. **K20.** Knowledge of the variables that must be measured to calibrate different pesticide application equipment (e.g., liquid sprayers, dry/granular applicators) for safe and effective pest control. **K21.** Knowledge of how to calibrate pesticide application equipment for varied formulation and treatment types (e.g., broadcast, space, spot), areas (e.g., carpet, grass) and conditions (e.g., wind, rain).

T16. Calculate pesticide concentrations and dilution ratio based on formulas defined on the label for pesticide treatment.	**K22.** Knowledge of formulas used to calculate the active ingredient concentration and dilution ratio of pesticides. **K23.** Knowledge of formulas used to calculate speed, pressure, gallons per minute, and nozzle output.
T17. Analyze surface areas of different shapes to determine amount of pesticide needed for treatment.	**K24.** Knowledge of methods used to estimate the area of various shapes, including irregular shapes **K25.** Knowledge of methods used to determine the amount of pesticide to put into a tank to achieve a specific pesticide application rate over the total area of the treatment site. **K26.** Knowledge of how to change the output of pesticide application equipment and the consequence of each change.
T18. Monitor wear and tear of pesticide application equipment and components to determine if replacements or adjustments are needed.	**K27.** Knowledge of methods to recognize wear and tear in pesticide application equipment and components.
T19. Practice procedures for preventing malfunction, and maintain, clean, and store pesticide application equipment and tools as required by the manufacturer's instructions.	**K28.** Knowledge of safe and effective measures for preventing malfunction, and for maintaining, cleaning, and storing pesticide application equipment and tools.

3. **Pesticide Application, Monitoring, and Maintenance (23%) -** This area assesses the candidate's knowledge of methods for applying pesticide, monitoring, and conducting the follow-up process in residential and commercial sites.

Tasks	*Associated Knowledge Statements*
T20. Apply pesticide in residential and commercial sites in compliance with county/state/federal regulations.	**K29.** Knowledge of different types of pesticides used in structural pest control **K30.** Knowledge of standards for application of pesticide in residential and commercial sites. **K31.** Knowledge of pesticide application methods suitable for different treatment locations and pest infestations.
T21. Apply pesticide by evaluating label information, Safety Data Sheet specifications, and area to be treated in residential and commercial sites.	**K32.** Knowledge of understanding label information and Safety Data Sheet specifications (i.e., toxicity, target areas, target pests, active ingredients, dilution rate, etc.) for application of pesticide in residential and commercial sites. **K33.** Knowledge of standards for application of pesticides in target and non-target areas.
T22. Set traps, glue boards, and bait stations in areas of expected pest activity in residential and commercial sites.	**K34.** Knowledge of suitable conditions and procedures for setting up traps, glue boards, and bait stations in residential and commercial sites.
T23. Apply rodenticide and service its bait stations in both interior and exterior areas of residential and commercial sites.	**K35.** Knowledge of standards and regulations for proper application of rodenticide and service of its bait stations in residential and commercial sites.
T24. Distribute baits and apply pesticide in cracks and crevices with a gel gun, syringe, hand sprayer or other appropriate application equipment.	**K36**. Knowledge of baits, procedures and equipment needed for setting up baits, and for treating pest infestations in cracks and crevices.
T25. Apply pesticide into wall voids with a duster, aerosol, foam sprayer or other appropriate application equipment.	**K37.** Knowledge of pesticide, its application procedures and the equipment needed to treat pest infestations in wall voids.
T26. Apply pesticide with a compressed air hand, backpack, space sprayer, or other appropriate application equipment to treat pests in carpeted areas.	**K38.** Knowledge of pesticide, its application procedures and the equipment needed to treat pest infestations in carpeted areas.

T27. Apply pesticide around doorframes, thresholds, baseboards, entry points, and other areas using appropriate treatment methods.	**K39.** Knowledge of pesticide and its application procedures around doorframes, thresholds, baseboards, entry points, and other locations.
T28. Apply pesticide in kitchen, food pantry, dining room, bathroom, and other interior areas in residential and commercial sites.	**K40.** Knowledge of pesticide, its application procedures, and the equipment needed to treat pest infestations in cooking, dining, food storage, and other areas of residential and commercial sites.
T29. Apply pesticide to spot treat in both interior and exterior areas of residential and commercial sites.	**K41.** Knowledge of standards and methods to apply pesticide for spot treatment in both interior and exterior areas of residential and commercial sites.
T30. Apply pesticide to control infestation/infection of termite and non-termite wood-destroying insects or organisms.	**K42.** Knowledge of pesticide and application measures to control infestation/infection of termite and non-termite wood-destroying insects or organisms.
T31. Spread granules with a broadcaster around the exterior of a structure to treat pests in outdoor perimeter areas.	**K43.** Knowledge of pesticide and equipment types used for application around outdoor perimeter and exterior areas according to label guidelines.
T32. Apply pesticide with a power sprayer in exterior areas to control active pest infestation.	**K44.** Knowledge of pesticide and equipment types used for application around outdoor perimeter and exterior areas according to label guidelines.
T33. Apply periodic exterior pesticide treatment to provide a barrier against pest entry into the interior of residential and commercial sites.	**K45.** Knowledge of pesticides and formulations suitable for application of periodic exterior barrier pest control treatment.
T34. Determine pesticide treatment limitations near water, such as surface or groundwater.	**K46.** Knowledge of pesticide treatment procedures and protection standards in surface and groundwater areas. **K47.** Knowledge of treatment site features, including soil type, that influence the potential for a pesticide to reach surface water or groundwater.

T35. Examine bait stations and traps periodically to determine effectiveness of bait and placement locations.	**K48.** Knowledge of methods for using monitoring devices to estimate level of pest infestation and activity. **K49.** Knowledge of how frequently bait stations and traps must be monitored. **K50.** Knowledge of conditions indicating ineffective bait and trap placement.
T36. Perform visual inspection for evidence of pest activity to determine follow-up treatment.	**K51.** Knowledge of procedures for performing follow-up pesticide treatments **K52.** Knowledge of evidence of pest harborage (e.g., egg casings, fecal matter, nesting material) or other pest activity that could cause re-infestation.
T37. Determine sites for follow-up pesticide treatment by gathering information from consumers about remaining pest activity.	**K53.** Knowledge of methods for gathering information from consumers about remaining pest activity. **K54.** Knowledge of mechanical, non-chemical, and pesticide application methods suitable for different treatment locations and pest activity patterns.

4. **Environmental Protection Standards and Safety Procedures for Handling Pesticides, Materials, and Equipment (20%) -** This area assesses the candidate's knowledge of work methods, laws, and regulations for the safe handling of pesticides, pest control materials, and equipment to protect the environment.

Tasks	*Associated Knowledge Statements*
T38. Practice safety procedures for mixing, loading, and using pesticides to prevent injury and to avoid nontarget exposure of pesticides into the environment.	**K55.** Knowledge of safety procedures for mixing, loading, and using pesticide treatments to prevent injury and to avoid nontarget pesticide exposure to beneficial pests, organisms, vegetation, and wildlife. **K56.** Knowledge of unintended exposure from different sources (point, nonpoint, direct) of pesticide contamination and its harmful impact on the environment.
T39. Practice safety procedures for handling pesticides and treatment materials to prevent, contain, and, if necessary, report pesticide spills.	**K56**. Knowledge of unintended exposure from different sources (point, nonpoint, direct) of pesticide contamination and its harmful impact on the environment. **K57.** Knowledge of procedures for preventing, containing, and removing all types of pesticide (e.g., liquid, dry) spills. **K58.** Knowledge of required spill kit contents and the methods for using them. **K59.** Knowledge of procedures used to dispose of absorbent material used to soak up pesticide spills. **K60.** Knowledge of laws and regulations related to reporting pesticide spills in accordance with regulations from county/state/federal agencies (e.g., EPA, OSHA, DOT, DPR, SPCB).
T40. Use and label service and secondary containers in accordance with regulations from county/state/federal agencies (e.g., EPA, DPR, SPCB).	**K61.** Knowledge of laws and regulations related to the use and labeling of service and secondary containers.
T41. Use and label bait stations as required by county/state/federal regulations. (e.g., EPA, DPR, SPCB).	**K62.** Knowledge of laws and regulations related to use and labeling of bait stations.

T42. Perform visual inspections of service vehicles and their contents to ensure that pesticide application devices and containers are closed, labeled, kept safe, and properly locked for transportation by following manufacturer's recommendations and county/state/federal regulations (e.g., EPA, OSHA, DOT, DPR, SPCB).	**K63.** Knowledge of laws and regulations related to transporting pesticide containers, application equipment, and materials safely. **K64.** Knowledge of procedures for inspecting service vehicles, pesticide containers, application equipment, personal protective equipment, and materials for safe transportation.
T43. Perform visual inspections of service vehicles before departing to ensure that required pesticide-related paperwork, personal protective equipment, change of clothing, soap, water, towels, and spill kit are present, and that the name of an emergency medical facility is posted.	**K65.** Knowledge of required pesticide paperwork (e.g., SDS, shipping paper/vehicle manifest, etc.) and contents of service vehicles according to county/state/federal regulations. (e.g., EPA, OSHA, DOT, DPR, SPCB).
T44. Perform visual inspection to ensure service vehicles, pesticides, application devices, containers, materials, and personal protective equipment are stored and secured properly, and that their storage areas are labeled and locked according to manufacturer's recommendations and county/ state/federal regulations. (e.g., EPA, OSHA, DOT, DPR, SPCB).	**K66.** Knowledge of laws and regulations for storing service vehicles, pesticide, application equipment, materials, containers, and personal protective equipment at properly labeled and locked storage area. **K67.** Knowledge of procedures for storing service vehicles, pesticide, application equipment, materials, containers, and personal protective equipment safely and securely.
T45. Dispose of pesticide (unwanted/unused) and empty pesticide containers according to manufacturer's specifications and county/state/federal regulations to prevent contamination of surface and groundwater and nontarget exposure to pesticides in the environment.	**K68.** Knowledge of laws and regulations related to disposal of pesticide and containers. **K69.** Knowledge of procedures for disposal of pesticide containers using the triple rinsing process.
T46. Practice safety procedures for handling and discarding pest carcasses/remains.	**K70.** Knowledge of procedures for safe handling and disposal of pest carcasses/remains.
T47. Maintain pesticide application devices and pesticide transport/service vehicles and verify before use whether they are in good working order to prevent potential accidents, spills, injury, and possible contamination of the environment.	**K71.** Knowledge of procedures for maintaining and checking pesticide application equipment for structural defects (e.g., cracks, punctures) and checking transport/service vehicles for safety and control components (e.g., brakes, tires) to ensure that all are in working order before use.

5. Personal Protection and Safety (16%) - This area assesses the candidate's knowledge of personal protection and safety measures to follow during pesticide treatment, while using pesticide application equipment and personal protective equipment.

Tasks	*Associated Knowledge Statements*
T48. Read and follow each pesticide label's safety instructions before every use.	**K72.** Knowledge of application of safety precautions on pesticide labels to prevent overexposure to pesticides. **K73.** Knowledge of methods to review pesticide labels to understand level of toxicity and specific hazards of the pesticide used.
T49. Maintain awareness of adverse reactions to pesticides and potential exposures of pesticide to self and others.	**K74.** Knowledge of routes of pesticide entry/exposure and transfer of pesticide residues from one part of the body to another. **K75.** Knowledge of signs and symptoms of ocular(eye), oral, dermal(skin), and respiratory(breathing) overexposure to pesticides applied. **K76.** Knowledge of short-term (acute) and long-term (chronic) adverse health effects that can occur because of pesticide exposure.
T50. Read and follow pesticide label statements to provide emergency first aid and seek medical attention in the event of overexposure to a pesticide.	**K77.** Knowledge of reference sources for first-aid procedures in case of overexposure of humans or animals to pesticides. **K78.** Knowledge of methods to review and follow first-aid procedures on pesticide labels in event of overexposure to a pesticide.
T51. Select personal protective equipment for use in compliance with county/state/federal regulations to prevent exposure to pesticides and materials.	**K79.** Knowledge of laws and regulations related to selection and use of personal protective equipment. **K80.** Knowledge of types of personal protective equipment and procedures for use to prevent exposure to pesticides.
T52. Comply with pesticide label requirements and manufacturer's instructions for the selection and use of personal protective equipment.	**K81.** Knowledge of types of personal protective equipment and procedures to use to prevent exposure to pesticides. **K82.** Knowledge of methods to follow pesticide label guidelines and manufacturer's instructions on selecting and using personal protective equipment for pesticide treatment.

T53. Clean, maintain, and store personal protective equipment as required by manufacturer's instructions.	**K83.** Knowledge of procedures for cleaning, maintaining, and storing personal protective equipment.
T54. Identify and manage hazards that could impact job site safety.	**K84.** Knowledge of potential safety hazards on job sites. **K85.** Knowledge of the effect of weather conditions (e.g., wind speed, humidity, temperature, etc.) on pesticide application and performance.
T55. Follow safety procedures when working on heights, roofs, closed/open spaces, and with ladders.	**K86.** Knowledge of personal safety procedures for working on heights, roofs, attics, basements, and crawl spaces. **K87.** Knowledge of how people develop and exhibit heat/cold stress in both closed and open spaces. **K88.** Knowledge of ladder safety and attic entry procedures.
T56. Complete annual pesticide safety training as described in county/state/federal regulations	**K89.** Knowledge of the laws and regulations related to completing annual pesticide safety training.

6. Consumer Notification and Safety (12%) - This area assesses the candidate's knowledge of work methods, laws, and regulations for pesticide application notice requirements to consumers, of factors involved in the treatment process, and of integrated pest management at residential and commercial sites.

Tasks	*Associated Knowledge Statements*
T57. Provide consumers with pesticide application notification and pesticide information stating potential adverse reactions to pesticides and agencies to contact in case of emergency.	**K90.** Knowledge of laws and regulations related to consumer pre- and post-application notifications of pesticide treatment. **K91.** Knowledge of contents (e.g., product name, active ingredient, emergency contact, etc.) and procedures to notify consumers on pre- and post-application of pesticide treatment.
T58. Inform or communicate with consumers about safety procedures and protocols for application of pesticides.	**K92.** Knowledge of safety procedures and protocols to be followed (e.g., turning off machines, motors, boilers, fans, HVAC, etc.) by consumers in commercial/industrial/residential complexes for pesticide treatment. **K93.** Knowledge of occupants and conditions (e.g., pets, children, age, health) that potentially increase the risk of sensitivity to pesticide, pesticide residue, and odor.
T59. Inform consumers of procedures to be followed before and after treatment to maintain treatment effectiveness.	**K94.** Knowledge of principles and practices of Integrated Pest Management (IPM). **K95** Knowledge of consumer actions that reduce the effectiveness of pesticide treatment. (e.g., using over- the-counter products). **K96.** Knowledge of sanitation conditions that reduce the effectiveness of pesticide treatment. **K97.** Knowledge of conditions (e.g., weather, moisture, temperature) that reduce the effectiveness of pesticide treatment.
T60. Explain to consumers the potential for noticeable residue and odor associated with application of pesticides to different surfaces.	**K98.** Knowledge of attributes of pesticides used for structural pest control. **K99.** Knowledge of pesticide residual associated with different surfaces and treatment formulations. **K100.** Knowledge of the effects of temperature, rate of dilution, and ventilation on pesticide odor.

T61. Provide consumers with re-entry time after pesticide application by following product label information and the time treatment is applied.	**K101.** Knowledge of methods to review product label to notify consumers about re-entry time based on the pesticides applied.
T62. Inform consumers of the time span required for the reduction of pest activity.	**K102.** Knowledge of estimated time span required for pest control using different treatment methods.
T63. Inform consumers of pest activity requiring notification to the pest control company.	**K103.** Knowledge of pest activity level expected in response to different treatment methods.
T64. Inform consumer of structure points that should be repaired to exclude pests in compliance with Integrated Pest Management (IPM)	**K104.** Knowledge of mechanical and non-chemical methods of pest control related to the practice of Integrated Pest Management (IPM).
T65. Maintain daily work record of treatment performed indicating application site, pest treated, and details of pesticide applied.	**K105.** Knowledge of the procedures and content necessary to maintain records (e.g., service ticket) of daily treatments performed.

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STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 1 FIELD REPRESENTATIVE PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 10 – EXAMINATION OUTLINE FOR THE BRANCH 1 FIELD REPRESENTATIVE PROFESSION

1. Fumigation Preparation (29%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T1. Verify that signed copy of Occupants Fumigation Notice is on site before starting fumigation preparation.	K1. Knowledge of required documents to be on site prior to fumigation.
T53. Determine adjacent properties that may be affected by fumigation.	K80. Knowledge of written authorization requirements to access neighboring properties affected by fumigation.
T2. Identify construction elements, conduits, or drains that could allow passage of fumigant to adjoining or connecting structures.	K2. Knowledge of methods and procedures for determining if adjoining or connecting structures could be exposed during fumigation. K3. Knowledge of methods to prevent passage of fumigants through connecting structures or conduits.
T3. Inspect areas of property to verify that landscaping is prepared to optimize ground seal.	K4. Knowledge of landscaping and other items that could be harmed by fumigation. K5. Knowledge of types of landscaping that could impede the ground seal.
T4. Inspect areas to be fumigated to ensure all people, pets, and plants have been removed.	K6. Knowledge of areas that need to be inspected to verify readiness for fumigation.
T5. Inspect indoor areas to be fumigated to ensure all ingestible and medicinal items have been double-bagged or removed.	K7. Knowledge of methods and procedures to prevent exposure of ingestible and medicinal items during fumigation.

1. Fumigation Preparation (29%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T6. Open interior subarea accesses, attic accesses, cabinets, drawers, closets, and appliances.	K8. Knowledge of methods and procedures to prepare interior areas for aeration. K9. Knowledge of methods and procedures to prepare attic for fumigation and aeration.
T7. Determine number and location of introduction sites and warning agent pans.	K10. Knowledge of placement of fumigant introduction sites. K11. Knowledge of methods and procedures to prepare structure for distribution of fumigant.
T8. Determine number and placement of fans.	K11. Knowledge of methods and procedures to prepare structure for distribution of fumigant. K12. Knowledge of air circulation requirements for disbursement of fumigants and warning agents. K13. Knowledge of factors that affect the circulation of air in structures. K14. Knowledge of type, size, and capacity of aeration fans.
T9. Set up monitoring equipment.	K15. Knowledge of methods and procedures for setting up monitoring equipment.
T10. Install secondary locks or barricade exterior entrances to prevent entry.	K16. Knowledge of laws and regulations requiring vacating, locking, and barricading structures and adjoining structures. K17. Knowledge of methods and procedures for barricading and securing doors against entry.

1. Fumigation Preparation (29%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T11. Post fumigation warning signs on structures at entrances and on each side of structures.	K18. Knowledge of rules and regulations related to fumigation warning signs.
T12. Determine placement of tarps and install tarps to cover structures.	K19. Knowledge of methods and procedures to install tarps around perimeter of structure.
T13. Seal tarp seams and ensure ground seals.	K20. Knowledge of methods and procedures for sealing tarp seams. K21. Knowledge of methods and procedures for sealing perimeter of tarps.
T14. Install aeration ducting and inlet devices.	K22. Knowledge of methods and procedures for installing aeration ducting and inlet devices. K23. Knowledge of placement of aeration ducting and inlet devices in accordance with California Aeration Plan (CAP) requirements.
T15. Post fumigation warning signs on exterior of tarps and joint seams.	K18. Knowledge of rules and regulations related to fumigation warning signs.

2. Fumigation (17%) – This area assesses the candidate's knowledge of determining amounts of warning agents and fumigants to be released; measuring and releasing warning agents and fumigants; and monitoring the fumigation process to prevent leaks and ensure the efficacy of the fumigation.

Tasks	*Associated Knowledge Statements*
T16. Verify that natural gas to property has been shut off.	K24. Knowledge of procedures to confirm that natural gas is turned off.
T17. Determine amount of warning agent to be used according to manufacturer label.	K25. Knowledge of laws and regulations related to compliance with fumigant and warning agent label requirements. K26. Knowledge of regulations for measuring fumigants and warning agents. K27. Knowledge of methods and procedures for use of warning agents.
T18. Calculate volume of area to be fumigated.	K28. Knowledge of methods to calculate volume of area to be fumigated.
T19. Calculate dosage of fumigant to be used according to manufacturer label.	K29. Knowledge of methods to calculate dosages of fumigants for target pests. K30. Knowledge of methods to determine exposure time for fumigants.
T20. Dispense warning agent into pans before introducing fumigant.	K27. Knowledge of methods and procedures for use of warning agents.
T21. Introduce fumigant into structure through introduction lines.	K31. Knowledge of regulations for releasing fumigants into structures. K32. Knowledge of methods and procedures for releasing fumigants into structures. K33. Knowledge of techniques for using fumigation instruments, tools, and equipment.
T22. Visually inspect structure for leaks during fumigation.	K34. Knowledge of methods and procedures to detect leaks during fumigations.

2. Fumigation (17%) – This area assesses the candidate's knowledge of determining amounts of warning agents and fumigants to be released; measuring and releasing warning agents and fumigants; and monitoring the fumigation process to prevent leaks and ensure the efficacy of the fumigation.

Tasks	*Associated Knowledge Statements*
T23. Monitor concentration level of fumigant to determine actual half-loss time.	K35. Knowledge of factors that affect half-loss time of fumigants. K36. Knowledge of methods and procedures to monitor concentrations of fumigants. K37. Knowledge of methods to calculate half-loss time.
T24. Calculate amount of additional fumigant to be introduced into structures when excessive leakage occurs.	K38. Knowledge of methods to determine additional fumigant in case of excessive leakage.
T25. Manage "blow opens" during fumigation.	K39. Knowledge of procedures to follow if tarp is displaced from structures ("blow opens").

3. Aeration (12%) – This area assesses the candidate's knowledge of methods and procedures to facilitate the ventilation of structures after fumigation.

Tasks	*Associated Knowledge Statements*
T26. Take terminal reading to confirm efficacy of the fumigation.	K40. Knowledge of methods and procedures for measuring fumigant levels.
T27. Turn on aeration fans to facilitate ventilation of structures.	K41. Knowledge of procedures to turn on aeration fans to ventilate structures.
T28. Remove aeration duct covers from aeration ducting to facilitate ventilation of structures.	K42. Knowledge of methods and procedures to remove aeration duct covers.
T39. Open fresh air intake inlets in tarps to facilitate ventilation of structures.	K43. Knowledge of methods and procedures to open fresh air intake inlets in tarps.
T30. Inspect the fumigation to ensure that aeration has not been compromised.	K44. Knowledge of California Aeration Plan (CAP) procedures.
T31. Follow fumigant label aeration procedures.	K45. Knowledge of conditions under which fumigant label aeration procedures should be used instead of California Aeration Plan (CAP) procedures. K46. Knowledge of methods and procedures for aeration in accordance with fumigant manufacturer label.

4. Certification (17%) – This area assesses the candidate's knowledge of verifying that active aeration time has been achieved; removing tarps and warning agent pans; ensuring that structures are safe for re-entry; removing and posting required signage; and completing fumigation logs.

Tasks	*Associated Knowledge Statements*
T32. Verify that active aeration time has been achieved, and then turn off aeration fans.	K47. Knowledge of minimum time required for aeration of structures. K48. Knowledge of factors that affect aeration time.
T33. Remove ground seal and take down tarps.	K49. Knowledge of methods and procedures to remove tarps from structures. K50. Knowledge of regulations for tarp removal and aeration.
T34. Ventilate the forced air ducts using HVAC system or circulation fans.	K51. Knowledge of procedures to turn on HVAC systems in fan-only mode.
T35. Remove warning agent pans.	K52. Knowledge of methods to remove warning agent pans.
T36. Test breathing zones throughout structures to confirm fumigant concentration is at safe level.	K53. Knowledge of required fumigant concentration levels for safe re-entry into structures after aeration. K54. Knowledge of identification of safe breathing zones in accordance with manufacturer labels. K81. Knowledge of calibration requirements for clearance devices.
T37. Remove secondary locks and barricades.	K55. Knowledge of methods and procedures to remove secondary locks and barricades.
T38. Remove fumigation warning signs and post NOTICE OF RE-ENTRY sign.	K56. Knowledge of laws and regulations for removal of posted fumigation warning signs. K57. Knowledge of laws and regulations for posting NOTICE OF RE-ENTRY signs.

4. Certification (17%) – This area assesses the candidate's knowledge of verifying that active aeration time has been achieved; removing tarps and warning agent pans; ensuring that structures are safe for re-entry; removing and posting required signage; and completing fumigation logs.

Tasks	*Associated Knowledge Statements*
T39. Post fumigation tags in accordance with regulations.	K58. Knowledge of laws and regulations for posting fumigation tags.
T40. Complete fumigation logs in accordance with Structural Pest Control Board requirements.	K59. Knowledge of information and requirements for completing fumigation logs.

5. Safety (25%) – This area assesses the candidate's knowledge of worksite safety procedures, including the use of self-contained breathing apparatus, CPR, pesticide labels, and personal protective equipment, as well as the safe handling, storage, and transportation of fumigants and warning agents.

Tasks	*Associated Knowledge Statements*
T41. Complete self-contained breathing apparatus (SCBA) and respiratory protection program training in accordance with laws and regulations.	K60. Knowledge of laws and regulations related to self-contained breathing apparatus (SCBA) and respiratory protection program training.
T42. Complete CPR training in accordance with laws and regulations.	K61. Knowledge of laws and regulations related to CPR training.
T43. Complete pesticide safety, label, and stewardship training in accordance with laws and regulations.	K62. Knowledge of laws and regulations related to pesticide safety, label, and stewardship training. K82. Knowledge of information on pesticide labels and Safety Data Sheets.
T44. Comply with requirements for the use of personal protective equipment (PPE).	K63. Knowledge of the use of personal protective equipment (PPE) to prevent exposure to fumigants and warning agents. K64. Knowledge of procedures for providing, cleaning, storing, and maintenance of personal protective equipment (PPE).
T45. Comply with requirements for the use and inspection of self-contained breathing apparatus (SCBA).	K65. Knowledge of the use and maintenance of self-contained breathing apparatus (SCBA). K66. Knowledge of requirements for backup air bottles.
T46. Identify and manage hazards that could impact worksite safety.	K67. Knowledge of potential safety hazards on fumigation job sites. K68. Knowledge of the effect of weather and environmental conditions on fumigation. K69. Knowledge of methods to manage leaking fumigant cylinders. K70. Knowledge of symptoms of exposure to fumigants and warning agents. K71. Knowledge of conditions that may impair or prevent fumigation.

5. Safety (25%) – This area assesses the candidate's knowledge of worksite safety procedures, including the use of self-contained breathing apparatus, CPR, pesticide labels, and personal protective equipment, as well as the safe handling, storage, and transportation of fumigants and warning agents.

Tasks	*Associated Knowledge Statements*
T47. Follow safety procedures when working on roofs.	K73. Knowledge of safety procedures for working at heights. K74. Knowledge of ladder safety procedures.
T48. Inspect tarps for holes and tears to prevent fumigant leaks.	K75. Knowledge of procedures to inspect and repair tarps.
T49. Comply with laws and regulations for the handling and use of fumigants and warning agents.	K76. Knowledge of procedures for handling and use of fumigants and warning agents.
T50. Comply with requirements for fumigation safety kits.	K77. Knowledge of laws and regulations related to fumigation safety kits.
T51. Store fumigants and warning agents in accordance with laws and regulations.	K78. Knowledge of requirements for storage of fumigants and warning agents.
T52. Ensure vehicles contain required equipment and emergency medical information.	K79. Knowledge of regulations for posting emergency medical care information for employees handling fumigants.

SPCB

STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 2 FIELD REPRESENTATIVE PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 14 – BRANCH 2 FIELD REPRESENTATIVE EXAMINATION OUTLINE 2025

Content Area 1: Inspection, Monitoring, and Identification (25%)

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T1. Gather pest activity information from consumers.	K1. Knowledge of typical consumer indications of structural pest activity.
T2. Perform visual inspection of interior and exterior of structures to identify signs of pest entry and activity.	K2. Knowledge of methods for inspecting interior and exterior of structures to locate pest entry. K3. Knowledge of signs of pest activity. K4. Knowledge of tools and equipment to locate pests.
T3. Perform visual inspection of interior and exterior of structures to identify structural conditions that can lead to pest entry and infestation.	K5. Knowledge of structural vulnerabilities that can lead to pest entry and infestation.
T4. Perform visual inspection of interior and exterior of structures to identify potential pest food sources, harborage areas, and breeding grounds.	K6. Knowledge of pest dietary habits and preferences. K7. Knowledge of typical pest harborage areas and breeding grounds. K8. Knowledge of methods for inspecting interior and exterior of structure to identify pest food sources. K9. Knowledge of interior and exterior storage practices that can lead to pest entry, harborage, and breeding grounds.
T5. Perform visual inspection of perimeter and landscaping around structures to identify pest activity, food sources, harborage areas, breeding grounds, colonies, and habitats.	K10. Knowledge of methods for inspecting perimeter and landscaping around structures and neighboring structures. K11. Knowledge of vegetation, moisture, shelter areas, and other conditions around structures that can lead to pest habitation.

Content Area 1: Inspection, Monitoring, and Identification (25%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T6. Perform visual inspection of interior and exterior of structures to identify sanitation and waste management conditions that can lead to pest activity and infestation.	K12. Knowledge of sanitary conditions and practices in residential and commercial environments that can lead to pest infestation. K13. Knowledge of waste management conditions that are conducive to pest infestation.
T7. Identify pest sources of entry, nesting sites, and/or harborage areas by inspecting locations typically associated with pest life cycle stages.	K14. Knowledge of pest reproductive behavior and different life cycle stages. K15. Knowledge of effect of time, temperature, weather conditions, and seasonal variations on pest reproduction and activity. K16. Knowledge of pest life cycle stages related to typical harborage areas, nesting, colonies, and burrowing in or near structures.
T8. Determine type of monitoring devices to be used based on target pests and treatment site conditions.	K17. Knowledge of pest monitoring plans. K18. Knowledge of methods for monitoring interior and exterior of structures to estimate level of pest infestation and activity. K19. Knowledge of pest monitoring devices to be used for different target pests and treatment site conditions. K20. Knowledge of procedures for setting up monitoring devices in residential, commercial, and specialized facilities (e.g., hospitals, zoos).
T9. Set up monitoring for rodents, using toxic and nontoxic baits.	K21. Knowledge of laws and regulations for using different types of rodenticides and alternative control measures.

Content Area 1: Inspection, Monitoring, and Identification (25%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T10. Evaluate monitoring devices for effective placement and to determine level of pest infestation and range of pest activity.	K22. Knowledge of conditions that indicate ineffective bait and trap placement. K23. Knowledge of methods for evaluating monitoring devices for intensity of infestation and pest population density. K24. Knowledge of how frequently bait stations and traps must be monitored for pest activity.
T11. Identify species of pest by evaluating pest harborages, colonies, signs, and behavior patterns.	K25. Knowledge of evidence of pest harborage, activity, and signs of infestation (e.g., egg casings, nesting material, chew marks). K26. Knowledge of biology, anatomy and growth patterns of different pest species.
T12. Identify pest physical characteristics by viewing pests to distinguish between families.	K26. Knowledge of biology, anatomy, and growth patterns of different pest species. K27. Knowledge of distinct features of pests in different life cycle stages (e.g., wings, antennae).
T13. Examine characteristics of rodent and other pest droppings to identify pest species.	K28. Knowledge of characteristics of different rodents and pest fecal matter (e.g., size, shape, color, dryness) specific to the species.
T14. Evaluate pest droppings and other observations to determine if pest activity is recent.	K28. Knowledge of characteristics of different rodents and pest fecal matter (e.g., size, shape, color, dryness) specific to the species. K29. Knowledge of indications of recent pest activity.

Content Area 1: Inspection, Monitoring, and Identification (25%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T15. Examine pest physical characteristics by visual inspection, using tools or resources.	K30. Knowledge of types of identification tools and resources used to identify pests.
T16. Inform consumers of pest identified and health risks from exposure to, or infestation of, target pest.	K31. Knowledge of diseases carried by pests and modes of transmission from pests to humans.
T17. Document observations and findings regarding pests identified and level of infestation.	K32. Knowledge of methods for documenting details of pests identified and level of infestation.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (22%)

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T18. Select treatment options depending on target pest tolerance level and active treatment threshold specific to the pest for corrective and preventive pest control.	K33. Knowledge of principles and procedures of Integrated Pest Management and Sustainable Pest Management practices (IPM/SPM). K34. Knowledge of different treatment options and methods used in structural pest control. K35. Knowledge of tolerable pest threshold levels for various pests and situations. K36. Knowledge of short-term (corrective) and long-term (preventive) treatment methods for pest control. K37. Knowledge of mechanical, chemical, non-chemical, and cultural treatment methods for controlling infestations.
T19. Select treatment options compatible to specific occupant and environmental conditions or concerns, target pest infestation level, and location.	K38. Knowledge of occupant conditions (e.g., age, health) with potential for increased risk of sensitivity to pesticides. K39. Knowledge of treatment options for avoiding pesticide exposure to non-target organisms, pets, beneficial insects, vegetation, and wildlife. K40. Knowledge of basic pesticide chemical classifications, their level of toxicity, and harmful effects to humans. K41. Knowledge of different sections on pesticide labels and reviewing their information (e.g., toxicity, target pest, target area, active ingredient) to determine treatment option. K42. Knowledge of using botanical pesticide alternatives (25b products) for pest control.
T20. Select treatment options depending on pet care practices and pet activity leading to pest entry and harborage.	K43. Knowledge of pet care practices and pet activity patterns that increase likelihood of pest entry and harborage.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (22%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T21. Explain to consumer the treatment option selected to control target pest infestation and potential pesticide exposure.	K44. Knowledge of methods to explain to consumer treatment option conducive for use based on pest infestation level, pets, occupant activity and site conditions.
T22. Select least toxic pesticide for treatment with limitations near water bodies, such as surface or Groundwater Protection Areas (GWPA).	K45. Knowledge of treatment limitations and pesticide selection for applications near water bodies. K46. Knowledge of treatment site features, including soil type, that influence the potential for a pesticide to reach surface water or groundwater.
T23. Select type of pesticide formulation by evaluating label requirements for target pest, consistency with treatment area for moisture, temperature, ventilation, and weather conditions.	K47. Knowledge of pesticides suitable for various treatments based on target pest, moisture, temperature, ventilation, and weather conditions. K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue.
T24. Select type of pesticide formulation by evaluating label information, target pest, and surface texture and type (e.g., carpet, soil, wood, concrete) to be treated.	K47. Knowledge of pesticides suitable for various treatments based on target pest, moisture, temperature, ventilation, and weather conditions. K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue. K49. Knowledge of different pesticide formulations, adjuvants, and their effects on target pest and surfaces.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (22%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T25. Evaluate pesticides to be used for noticeable residue or odor associated with its application and explain it to consumer.	K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue. K49. Knowledge of different pesticide formulations, adjuvants and their effects on target pest and surfaces. K50. Knowledge of residual and odor effects of various pesticides.
T26. Review active ingredients, mode of action, and pesticide rotation of previous treatments used to adjust treatment threshold.	K51. Knowledge of using different classifications or mode of action pesticides to prevent pest resistance. K52. Knowledge of methods to maintain threshold and avoid pesticide resistance. K53. Knowledge of different pesticides' mode of action and time span normally required to control various pests.
T27. Assess frequency of treatment requirements for reduction of pest activity based on label information, level of infestation, and target pest.	K53. Knowledge of different pesticides' mode of action and time span normally required to control various pests. K54. Knowledge of methods for assessing treatment frequency (one-time or periodic) requirements based on label information, level of infestation, and target pest.
T28. Select type of equipment and tools based on pesticide treatments.	K55. Knowledge of advantages and limitations of pesticide application equipment and tools. K56. Knowledge of different types of equipment, components, and tools used in pesticide application.
T29. Set up equipment and tools for pesticide treatments according to manufacturers' instructions.	K57. Knowledge of reviewing manufacturers' instructions for setting up and using equipment and tools for pesticide application.

Content Area 2. Treatment Planning, Application Equipment Selection, Calibration, and Usage (22%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T30. Adjust equipment and tools used in pesticide treatments based on pesticides applied.	K58. Knowledge of methods for adjusting pesticide application equipment and tools to accommodate varying output and treatment conditions (e.g., nozzles, Psi).
T31. Calibrate pesticide application equipment for different formulations, treatment conditions, and processes.	K59. Knowledge of current techniques, tools and equipment needed for calibration activities. K60. Knowledge of methods for calibrating pesticide application equipment for varied formulations and adjuvants (e.g., granular, encapsulate), treatment types (e.g., broadcast, spot), areas (e.g., carpet, grass), and conditions (e.g., wind, rain).
T32. Inspect pesticide application equipment and components for damage or malfunction.	K61. Knowledge of methods for inspecting application equipment and components for damage or malfunction.
T33. Maintain and store pesticide application equipment and tools according to manufacturers' instructions.	K62. Knowledge of methods for cleaning, maintaining, preventing malfunction, and storing pesticide application equipment and tools.
T34. Label pesticide application equipment during use and storage in accordance with legal requirements.	K63. Knowledge of procedures for labelling pesticide application equipment during use and storage according to laws and regulations.
T35. Inspect sites for objects and areas that could be damaged or become health or fire hazards if treated with pesticides.	K64. Knowledge of interior and exterior objects and areas subject to potential property damage, health risks, or fire hazards from pesticide application. K65. Knowledge of objects or conditions in or around structures that could be hazardous to self and others during pesticide treatment (e.g., location of air conditioner, protruding nails). K66. Knowledge of methods for removing hazardous objects and for remedying adverse conditions in pesticide treatment areas.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (23%)

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T36. Identify structural conditions that could cause injury to self and others during pesticide treatment.	K67. Knowledge of cameras, lighting, and other items that could cause personal injury or property damage during pesticide treatment.
T37. Locate drainage elements and water sources that could become polluted during pesticide treatment.	K68. Knowledge of methods for locating drainage patterns, lines, and drains. K69. Knowledge of methods for locating groundwater and surface water sources.
T38. Locate sprinkler valves, and gas and water lines that could cause personal injury or property damage.	K70. Knowledge of methods for locating sprinkler valves, gas and water lines, and their shutoff valves in different structures.
T39. Locate electrical power sources that could cause potential harm or hazard (e.g. open flame, pilot light).	K71. Knowledge of methods for locating electrical power sources that could cause potential harm or hazardous conditions during pesticide treatment.
T40. Prepare areas for treatment based on pesticide label directions and Safety Data Sheet specifications.	K72. Knowledge of methods for preparing target areas for various pesticide applications per label and Safety Data Sheet directions.
T41. Remove toys, water bowls, pet food, and other objects out of treatment areas in accordance with label directions.	K73. Knowledge of pesticide label requirements to remove toys, water bowls, pet food, and other objects out of treatment areas.
T42. Inform consumers to keep away persons and pets from treatment areas in accordance with label directions.	K74. Knowledge of requirements regarding the presence of persons and pets during treatment process at site per label directions.
T43. Provide consumers with pesticide pre-application notice in compliance with legal requirements.	K75. Knowledge of county, state, and federal laws and regulations regarding consumer pre-application notifications of pesticide treatment. K76. Knowledge of information to provide consumer on pre-application notification for pesticide treatment.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (23%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T44. Inform consumers about safety procedures and protocols to follow before pesticide applications.	K77. Knowledge of safety procedures and protocols to be followed by consumers for pesticide treatment (e.g., turning off machines, motors, boilers, fans, HVAC). K78. Knowledge of county, state, and federal regulations for application of pesticide in residential and commercial sites, and other specialized facilities.
T45. Inform consumers about procedures to be followed before pesticide application to maintain treatment effectiveness.	K79. Knowledge of procedures to be followed by consumers to prepare treatment areas before application to maintain treatment effectiveness (e.g., vacuuming, shutting off sprinklers).
T46. Apply pesticides in interior and exterior areas of residential, commercial, and specialized facilities by referring to label information and Safety Data Sheet specifications.	K80. Knowledge of following directions on pesticide label and Safety Data Sheet for application of pesticide. K81. Knowledge of pesticide, application procedures, and equipment used to treat different pest infestations in interior and exterior areas of residential, commercial sites, and specialized facilities (e.g., food storage, restaurant, hospitals).
T47. Apply pesticides in cracks, crevices, wall voids, and other similar areas using required equipment.	K82. Knowledge of procedures to apply baits in cracks, crevices, and other areas using a gel gun, syringe, and other application equipment. K83. Knowledge of procedures to apply pesticide using dusters, aerosols, foam or handheld sprayers in wall voids and other areas.
T48. Apply pesticides in carpeted areas; around doorframes, thresholds, baseboards, and entry points; and on other surfaces using required equipment.	K84. Knowledge of application procedures used to treat pest infestations in carpeted areas; around doorframes, thresholds, baseboards, and entry points; and on other surfaces. K85. Knowledge of procedures for using compressed air handheld, backpack and space sprayers, ULV foggers, and other application equipment.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (23%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T49. Apply pesticides to spot treat interior and exterior areas of residential and commercial sites, and specialized facilities.	K86. Knowledge of procedures for spot treatment in both interior and exterior areas of residential and commercial sites, and specialized facilities. K87. Knowledge of procedures for applying pesticides around indoor and outdoor plants or vegetable gardens.
T50. Apply pesticides in outdoor perimeter areas of structures to control active pest infestations and provide exterior barrier pest control treatment.	K88. Knowledge of procedures for application of pesticides in outdoor perimeter of target and non-target pest areas. K89. Knowledge of pesticides formulations and equipment used for application of periodic exterior barrier pest control treatments. K90. Knowledge of methods for spreading granules using a broadcaster in perimeter areas of structures to control active pest infestations.
T51. Apply rodenticide in bait stations of interior and exterior areas in residential and commercial sites, and specialized facilities.	K91. Knowledge of regulations and procedures for applying rodenticide in residential and commercial sites, and specialized facilities.
T52. Service rodent bait stations in interior and exterior areas of residential and commercial sites, and specialized facilities in accordance with regulations.	K92. Knowledge of regulations and procedures for servicing rodent bait stations in residential and commercial sites, and specialized facilities.
T53. Measure surface areas to determine amount of pesticide needed for various applications.	K93. Knowledge of how to calculate linear feet, square feet, and cubic feet measurements for various shapes and distances. K94. Knowledge of methods for estimating the area of various shapes, including irregular shapes. K95. Knowledge of conversion methods for various types of measurements used in pesticide treatment.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (23%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T54. Determine amount of pesticide concentrate needed for target pest treatment based on label directions.	K96. Knowledge of methods to review label requirements to determine amount of pesticide concentrate needed for treatment of target pest.
T55. Calculate pesticide concentrations and dilution ratios based on label directions.	K97. Knowledge of formulas used to calculate the active ingredient concentration and dilution ratio of pesticides.
T56. Calculate rate of application and pesticide dilution ratios for different pesticide applications.	K98. Knowledge of methods to calculate application rate and dilution dosage of pesticides for various formulations and treatments. K99. Knowledge of formulas used to calculate rate of flow, pressure, gallons per minute, and nozzle output.
T57. Modify application methods based on area, weather conditions, and label restrictions.	K100. Knowledge of alternate application methods based on area, weather conditions (e.g., temperature, humidity, wind), target pest activity and label restrictions.
T58. Provide consumers with re-entry time after pesticide applications by following product label information and the time treatment is applied.	K101. Knowledge of methods to determine re-entry times for various pesticides based on label recommendations.
T59. Provide consumers with pesticide post-application notices in compliance with legal requirements.	K102. Knowledge of county, state, and federal laws and regulations regarding consumer post-application notifications of pesticide treatment. K103. Knowledge of information to provide consumers on post-application notification for pesticide applied.
T60. Inform consumers of procedures to follow after pesticide application to maintain treatment effectiveness.	K104. Knowledge of consumer guidelines to follow after application to maintain treatment effectiveness. K105. Knowledge of sanitation conditions that reduce the effectiveness of pesticide treatment. K106. Knowledge of consumer actions that reduce the effectiveness of pesticide treatment (e.g., using over-the-counter products).

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (23%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T61. Inform consumers of structure points that should be repaired to exclude pests and prevent re-infestation.	K107. Knowledge of structural deficiencies and entry points that need repairs for exclusion. K108. Knowledge of discussing preventive pest control measures and exclusion strategies with consumer.
T62. Inform consumers of pest activity requiring notification to pest control company for follow-up treatment.	K109. Knowledge of pest activity expected in response to treatment provided. K110. Knowledge of pest activity after treatment that consumers should monitor and report to company.
T63. Locate specific sites for follow-up treatment by gathering information from consumers about remaining pest activity.	K111. Knowledge of key questions to ask consumer on remaining pest issues.
T64. Determine follow-up treatment methods to be used based on evidence of pest activity.	K112. Knowledge of post treatment monitoring and evaluation methods. K113. Knowledge of procedures to evaluate follow-up treatment methods.
T65. Perform follow-up treatment plan to maintain effectiveness based on service plan agreements.	K114. Knowledge of methods for providing follow-up pesticide treatment to maintain effectiveness of service plan agreements.
T66. Maintain work record of initial and follow-up treatments performed indicating application site, pest treated, and details of pesticide applied.	K115. Knowledge of procedures for documenting and maintaining treatment work records.

Content Area 4: Environmental Protection and Safety Procedures (15%)

This area assesses a candidate's knowledge of interpreting label instructions, laws, regulations, and standardized procedures to follow in the safe handling, transportation, storage, and disposal of pesticides, pest control materials, containers, and equipment to protect the environment.

Tasks	Knowledge Statements
T67. Follow safety procedures for mixing, loading, and using pesticides to prevent injury and to avoid nontarget exposure of pesticides into the environment.	K116. Knowledge of procedures for safely mixing, loading, and using pesticides. K117. Knowledge of effects of unintended exposure from different sources (point, nonpoint, direct) of pesticide contamination and its harmful impact on the environment. K118. Knowledge of procedures for application of pesticides in target and non-target areas.
T68. Follow safety procedures for handling pesticides and treatment materials to prevent and contain pesticide spills in accordance with legal requirements.	K119. Knowledge of procedures for preventing, containing, and removing all types (e.g., liquid, dry) of pesticide spills. K120. Knowledge of required spill kit contents and the methods for using them. K121. Knowledge of county, state, and federal laws and regulations related to preventing, containing, and removing pesticide spills. K122. Knowledge of procedures for disposing of absorbent material used to soak up pesticide spills and pesticide spilled on work clothes. K123. Knowledge of the procedure for having a change of clothing to use if pesticide spills on clothes.
T69. Report pesticide spills in accordance with legal requirements.	K124. Knowledge of county, state, and federal laws and regulations related to reporting pesticide spills.
T70. Label service and secondary containers for use according to legal requirements.	K125. Knowledge of county, state, and federal laws and regulations related to the use and labeling of service and secondary pesticide containers.

Content Area 4: Environmental Protection and Safety Procedures (15%), continued

This area assesses a candidate's knowledge of interpreting label instructions, laws, regulations, and standardized procedures to follow in the safe handling, transportation, storage, and disposal of pesticides, pest control materials, containers, and equipment to protect the environment.

Tasks	Knowledge Statements
T71. Label bait stations for use according to legal requirements.	K126. Knowledge of county, state, and federal laws and regulations related to use and labeling of bait stations.
T72. Perform visual inspections of service vehicles and contents to verify they conform to manufacturers' recommendations and legal requirements for pesticide transportation.	K127. Knowledge of manufacturers' recommendations and county, state, and federal laws and regulations related to safe transport of pesticide containers, application equipment, and materials.
T73. Perform visual inspection of service vehicles to ensure that required pesticide use paperwork and contents are present.	K128. Knowledge of required pesticide paperwork (e.g., Safety Data Sheet, Product Label, Emergency Medical Card) and other contents of service vehicles according to county, state, and federal regulations.
T74. Verify that service vehicles, pesticides, and equipment are securely stored after use according to manufacturer's recommendations and legal requirements.	K129. Knowledge of pesticide manufacturers' recommendations and county, state, and federal laws and regulations for storing service vehicles, pesticide, application equipment, materials, containers, and personal protective equipment.
T75. Verify that pesticide service vehicles and equipment are in good working order to prevent potential accidents, spills, injury, and possible contamination of the environment.	K130. Knowledge of procedures for checking transport/service vehicles for safety before use. K131. Knowledge of procedures for checking pesticide application equipment for defects (e.g., leaks, punctures) before use.
T76. Follow safety procedures for handling and discarding pest carcasses or remains.	K132. Knowledge of procedures for safe handling and disposal of pest carcasses or remains.
T77. Dispose of pesticides and empty pesticide containers according to manufacturer's specifications and legal requirements to prevent contamination and nontarget exposure.	K133. Knowledge of procedures for following manufacturer's recommendation for disposal of pesticide containers. K134. Knowledge of procedures for triple rinsing of pesticide container and disposal as per county / state regulations.

Content Area 5: Personal Protection and Safety Measures (15%)

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T78. Review pesticide label safety directions before use.	K135. Knowledge of sections in pesticide labels and interpretation of precautions and safety measures. K136. Knowledge of application of safety precautions on pesticide labels to prevent overexposure to pesticides.
T79. Maintain awareness of adverse reactions to pesticide exposure to self and others.	K137. Knowledge of short-term (acute) and long-term (chronic) adverse health effects, and other emergencies that can occur due to pesticide misapplication or exposure.
T80. Identify signs and symptoms of overexposure to pesticides in humans and animals.	K138. Knowledge of routes of pesticide entry or exposure and transfer of pesticide residues from one part of the body to another. K139. Knowledge of signs and symptoms of ocular, oral, dermal, and respiratory overexposure to pesticides.
T81. Follow pesticide label precautionary statements to provide emergency first aid or seek medical attention in the event of overexposure to a pesticide.	K140. Knowledge of first-aid procedures on pesticide labels to be followed in the event of overexposure to a pesticide. K141. Knowledge of reference sources for first-aid procedures in case of overexposure of humans or animals to pesticides.
T82. Select personal protective equipment and clothing for use in compliance with county, state, and federal regulations to prevent exposure to pesticides.	K142. Knowledge of standards and regulations regarding selection and use of personal protective equipment and clothing for pesticide treatment.
T83. Comply with pesticide label requirements and manufacturer's instructions for the selection and use of personal protective equipment and clothing.	K143. Knowledge of methods for following pesticide label guidelines and manufacturer's instructions on selecting and using personal protective equipment and clothing for pesticide treatment.

Content Area 5: Personal Protection and Safety Measures (15%), continued

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T84. Clean, maintain, and store personal protective equipment as required by manufacturer's instructions.	K144. Knowledge of types of personal protective equipment required to be provided by employers. K145. Knowledge of procedures for cleaning, maintaining, and storing personal protective equipment. K146. Knowledge of guidelines to replace dirty and damaged personal protective equipment.
T85 Follow recommended guidelines for laundering, drying and storing work clothing.	K147. Knowledge of standards and methods to launder, dry and store work clothing.
T86. Identify and manage health hazards that could impact job site safety.	K148. Knowledge of potential health and safety hazards at job sites. K149. Knowledge of standards and methods to follow hazard communication information (warning signs, PSIS, SDS) for safe work practices.
T87. Follow personal safety measures when working in closed and open spaces.	K150. Knowledge of symptoms of heat and cold stress in both closed and open spaces. K151. Knowledge of personal safety procedures for working at heights; on roofs, terraces, and balconies; and in basements and crawl spaces.
T88. Follow personal safety measures when working on roofs, at heights, and in attics.	K151. Knowledge of personal safety procedures for working at heights; on roofs, terraces, and balconies; and in basements and crawl spaces. K152. Knowledge of different types of personal safety devices and their usage, and attic entry procedures.
T89. Follow recommended safety guidelines when using ladders.	K153. Knowledge of fall protection, ladder safety, and scaffold use procedures. K154. Knowledge of different types of ladders and their usage.

Content Area 5: Personal Protection and Safety Measures (15%), continued

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T90. Complete pesticide handler safety training program in accordance with legal requirements.	K155. Knowledge of county, state, and federal laws and regulations for completing pesticide handler safety training.
T91. Complete annual respirator training in accordance with legal requirements.	K156. Knowledge of county, state, and federal laws and requirements for completing respirator use and fit training.
T92. Report incidents of serious injuries or death related to pesticide application to the required agencies.	K157. Knowledge of requirements for reporting serious injury or death related to pesticide application to the Structural Pest Control Board and the County Agricultural Commissioner's office.
T93. Provide designated supervision at branch offices and direct supervision to unlicensed individuals in accordance with legal requirements.	K158. Knowledge of Structural Pest Control Board laws and regulations on providing supervision at branch offices and to unlicensed individuals. K159. Knowledge of EPA regulations on responsibilities for supervision of unlicensed applicators.

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STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 3 FIELD REPRESENTATIVE PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 13 – EXAMINATION CONTENT OUTLINE: BRANCH 3 FIELD REPRESENTATIVE

I. Inspection (33%) – This area assesses the candidate's knowledge to determine the presence and characteristics of wood-destroying pest infestations and/or infections, identify treatment needs, and identify repair and/or corrective measures.

Job Tasks	*Associated Knowledge*
T3. Identify locations of infestations or infections of wood-destroying organisms.	**K1.** Knowledge of techniques to assess wood-destroying organism infestations and infections.
T4. Identify conditions conducive to the development of wood-destroying organisms.	**K2.** Knowledge of excessive moisture conditions that promote wood-destroying organism infestations or infections.
T5. Determine the extent of wood-destroying organism infestations or infections to structures.	**K3.** Knowledge of faulty grade levels that promote wood-destroying organism infestations or infections.
T13. Identify infestations of wood-destroying organisms that require fumigation.	**K4.** Knowledge of the effects of earth-to-wood contact on wood-destroying organism infestations or infections.
T2. Inspect the visible and accessible areas of structures for wood-destroying organisms.	**K5.** Knowledge of the effects of cellulose debris on wood-destroying organism infestations or infections.
T6. Identify client practices that could lead to wood-destroying organism infestations or infections.	**K6.** Knowledge of the effects of shower/shower pan leakage on wood-destroying organism infestations or infections.
T14. Identify nontermite wood-destroying organisms that require treatment.	**K7.** Knowledge of techniques to identify conditions conducive to wood-destroying organism infestations or infections.
T15. Identify specific areas of structures that require chemical treatments for wood-destroying organisms.	**K8.** Knowledge of standards for conducting wood-destroying organism inspections.
T16. Determine evidence of wood-destroying organisms to be removed and/or covered during treatment.	**K9.** Knowledge of methods to estimate extent of wood-destroying organism infestations or infections.
T17. Identify wood damage that requires repair, replacement, or reinforcement.	**K10.** Knowledge of building codes pertaining to repairs for wood members damaged by wood-destroying organism infestations and infections.
T7. Recognize presence of wood-destroying organism infestations or infections.	**K11.** Knowledge of the effects of monitoring device placements on information obtained on infestation.
T9. Identify wood members weakened by infestations or infections.	**K12.** Knowledge of anatomy, distinguishing features, habits, activity, and growth patterns of termites.
T8. Identify different types of wood-destroying organism infestations or infections.	**K13.** Knowledge of anatomy, distinguishing features, habits, activity, and growth patterns of nontermite wood-destroying organisms.
T12. Evaluate accessibility of areas of structures to be inspected.	**K14.** Knowledge of distinguishing features and growth patterns of wood-destroying fungi.
T10. Locate potential entry points of wood-destroying organisms at the exteriors, interiors, or subareas of structures.	**K15.** Knowledge of California statutes pertaining to liabilities resulting from subcontracts for fumigation.
T11. Discuss the need for monitoring conducive conditions to identify future wood-destroying organism infestations or infections.	**K16.** Knowledge of common signs of wood-destroying organism infestations and infections.

II. Reporting and Recordkeeping (15%) – This area assesses the candidate's knowledge to describe evidence of wood-destroying pest infestations and/or infections, describe conditions conducive to wood-destroying pest infestations and/or infections, describe the extent of wood damage due to wood-destroying pest infestations and/or infections, describe treatments and repair recommendations, and document for consumers any risks of identified pesticide exposure.

Job Tasks	*Associated Knowledge*
T25. Describe areas recommended for further inspection. **T18.** Provide client information regarding risks of pesticide exposure. **T24.** Describe inaccessible areas of structures. **T23.** Explain repairs and replacements to be performed on damaged wood members. **T19.** Describe evidence of wood-destroying organism infestations or infections. **T20.** Describe extent of wood damage due to wood-destroying organism infestations or infections. **T22.** Provide information about wood-destroying organism treatments to be applied. **T21.** Explain conditions conducive to wood-destroying organism infestations or infections.	**K17.** Knowledge of common terms to describe elements of wood-frame structures. **K18.** Knowledge of content in wood-destroying organism inspection reports. **K19.** Knowledge of pesticide label content prescribed by state and federal agencies. **K20.** Knowledge of California laws pertaining to maintenance of records of pesticide use. **K21.** Knowledge of California requirements pertaining to corrective measures for wood-destroying organism-related conducive conditions. **K22.** Knowledge of California requirements for different types of wood-destroying organism inspection reports. **K23.** Knowledge of common terms to describe wood-destroying organism infestations and infections. **K24.** Knowledge of common terms to describe wood-destroying organism treatments. **K25.** Knowledge of recordkeeping requirements for pest control facilities. **K26.** Knowledge of methods for estimating labor and material costs for repair, replacement, and reinforcement of damaged wood members. **K27.** Knowledge of methods for estimating labor and material costs for corrective measures associated with wood-destroying organism-related conducive conditions.

III. Planning (17%) – This area assesses the candidate's knowledge to establish treatment goals, select treatment methods, explain treatment hazard risks, and prepare treatment sites.

Job Tasks	*Associated Knowledge*
T33. Identify objects and areas that could become damaged due to wood-destroying organism treatments.	**K28.** Knowledge of factors that influence pesticide effectiveness.
T29. Inform clients about risks associated with chosen treatments.	**K29.** Knowledge of California mechanic's lien law protecting registered pest control companies from consumer nonpayments.
T30. Identify wood-destroying organism treatments that reduce nontarget exposure to pesticides.	**K30.** Knowledge of California statutes pertaining to extermination of wood-destroying organism infestations.
T32. Identify potential situations that could impact worksite safety.	**K31.** Knowledge of advantages and disadvantages of chemical treatments for wood-destroying organisms.
T31. Identify conditions that affect pesticide selection and performance.	**K32.** Knowledge of advantages and disadvantages of nonchemical treatments for wood-destroying organisms.
T26. Establish wood-destroying organism treatment goals with clients.	**K33.** Knowledge of nonchemical control measures for termite infestations.
T28. Select methods of treatment for wood-destroying organisms.	**K34.** Knowledge of nonchemical control measures for nontermite wood-destroying organism infestations.
T37. Locate water sources and shut-offs.	**K35.** Knowledge of methods to minimize pesticide exposure to nontarget pests and organisms.
T36. Locate drainage lines that could be contaminated during applications by pesticides.	**K36.** Knowledge of California laws pertaining to worker safety in pest control operations.
T38. Locate electrical power sources that could be used for pesticide applications.	**K37.** Knowledge of California laws pertaining to handling and storage of pesticides.
T39. Prepare areas for treatment by eliminating adverse conditions.	**K38.** Knowledge of methods to locate water lines in residential and commercial structures.
T27. Select chemical and/or nonchemical treatments to be applied for wood-destroying organisms.	**K39.** Knowledge of methods to locate drainage lines and drains in residential and commercial structures.
T34. Locate gas/water lines that could cause personal injury or property damage during pesticide applications.	**K40.** Knowledge of methods to locate water meters and main shut-off in residential and commercial structures.
T35. Locate water wells and waterways that could be contaminated by pesticides.	**K41.** Knowledge of methods to locate electrical power sources and breaker box.
	K42. Knowledge of methods to locate source of gas lines in residential and commercial structures.
	K43. Knowledge of different types of emergencies resulting from misapplication of pesticides.
	K44. Knowledge of procedures to notify clients and persons in adjacent areas about planned pesticide applications.
	K45. Knowledge of types of property damage that could result from pesticide applications.
	K46. Knowledge of manufacturer's label restrictions on treatment applications.
	K47. Knowledge of California statutes pertaining to liabilities resulting from subcontracts for nonfumigant treatments of nontermite wood-destroying organisms.
	K48. Knowledge of California laws related to reporting pesticide leaks and spills.
	K49. Knowledge of effects of pesticides on various surfaces.

IV. Treatment (16%) – This area assesses the candidate's knowledge to set up treatment application equipment and tools and perform application treatments to control wood-destroying pest infestations and/or infections.

Job Tasks	*Associated Knowledge*
T55. Apply chemical barriers in and around existing structures per manufacturer's label instructions. **T54.** Perform nonchemical treatments to control infestations by nontermite wood-destroying organisms. **T40.** Determine amount of materials to be applied per manufacturer's label instructions. **T45.** Set up pesticide application equipment and tools. **T43.** Wear personal protective equipment required for pesticide applications per manufacturer's label instructions. **T41.** Prepare pesticides per manufacturer's label instructions. **T53.** Apply chemical treatments to control infestations by nontermite wood-destroying organisms. **T47.** Remove, replace, and/or reinforce infested and infected wood members to control wood-destroying organism infestations and infections. **T48.** Mask accessible evidence of wood-destroying organism infestations. **T42.** Prepare entry points for pesticide treatments. **T44.** Determine equipment and tools used to apply pesticide treatments per manufacturer's label instructions. **T46.** Apply preconstruction treatments to foundation soils and/or wood members per manufacturer's label instructions. **T49.** Remove accessible evidence of wood-destroying organism infestations. **T51.** Perform nonchemical treatments to control wood-destroying organism infestations. **T52.** Apply chemical treatments to control wood-destroying fungal infections. **T50.** Apply chemical treatments to control termite infestations per manufacturer's label instructions.	**K50.** Knowledge of contents of all sections of pesticide labels. **K51.** Knowledge of pesticide label requirements regarding use of personal protective equipment. **K52.** Knowledge of techniques to prevent pesticide accidents during applications. **K53.** Knowledge of techniques to prepare pesticide solutions. **K54.** Knowledge of methods for preventing pesticide spills. **K55.** Knowledge of procedures for cleaning and maintaining personal protective equipment. **K56.** Knowledge of laws related to storage of pesticides in a facility. **K57.** Knowledge of equipment for applying liquid pesticides. **K58.** Knowledge of California regulation requirements regarding removal of infested or infected wood. **K59.** Knowledge of chemical control measures for termite infestations. **K60.** Knowledge of chemical control measures for nontermite infestations. **K61.** Knowledge of chemical control measures for wood-destroying fungal infections. **K62.** Knowledge of methods to repair, maintain, and clean liquid pesticide application equipment. **K63.** Knowledge of methods to repair, maintain, and clean dry chemical pesticide application equipment. **K64.** Knowledge of the different methods to treat wood-destroying organisms. **K65.** Knowledge of different types of foundations associated with different types of structures. **K66.** Knowledge of techniques to confine pesticide applications to treatment areas. **K67.** Knowledge of methods to clean up and contain pesticide leaks and spills. **K68.** Knowledge of prescribed methods for safe disposal of used pesticides and pesticide containers. **K69.** Knowledge of factors that influence compatibility of pesticides combined at time of applications. **K70.** Knowledge of specialized techniques for applying wood-destroying organism bait.

IV. Treatment (16%) continued – This area assesses the candidate's knowledge to set up treatment application equipment and tools and perform application treatments to control wood-destroying pest infestations and/or infections.

Job Tasks	*Associated Knowledge*
	K71. Knowledge of methods to handle pesticide explosions and fires. **K72.** Knowledge of first-aid techniques to treat injuries resulting from pesticide exposure. **K73.** Knowledge of California laws pertaining to storage of pesticides during transport.

V. Repairs and Corrective Measures (19%) – This area assesses the candidate's knowledge to repair, replace, and reinforce structural wood members damaged by wood-destroying pests and to correct conducive conditions.

Job Tasks	*Associated Knowledge*
T63. Correct faulty grade conditions at structures to prevent future infestations or infections.	**K74.** Knowledge of techniques to repair, replace, or reinforce damaged wood members.
T56. Determine equipment and tools used to repair, replace, or reinforce damaged wood members.	**K75.** Knowledge of construction methods to correct conducive conditions for wood-destroying organisms in structures and adjacent areas.
T64. Remove earth-to-wood contact in foundations or structures to prevent future infestations or infections.	**K76.** Knowledge of different types of wood fasteners.
T67. Install ventilation to reduce or eliminate excessive moisture conditions in subareas.	**K77.** Knowledge of different types of adhesive repair products.
T57. Determine equipment used to remedy or correct conditions conducive to wood-destroying organism infestations or infections.	**K78.** Knowledge of different types of wood-fill products.
T65. Remove cellulose debris from subareas to prevent wood-destroying organisms.	**K79.** Knowledge of different types of primers for wood surfaces.
T66. Install vapor barriers to reduce or eliminate excessive moisture conditions in subareas.	**K80.** Knowledge of purposes of different types of concrete materials.
T58. Repair parts of building structures damaged by wood-destroying organisms in accordance with California Building Code.	**K81.** Knowledge of purposes of different types of wood materials.
T62. Repair shower stalls to prevent wood-destroying organism infestations or infections.	**K82.** Knowledge of purposes and types of different drywall materials.
T61. Restore areas of structures damaged by wood-destroying organism treatment applications (fill drill holes, patch drywall).	**K83.** Knowledge of components of common wood-frame structures.
T59. Replace parts of building structures damaged by wood-destroying organisms in accordance with California Building Code.	**K84.** Knowledge of methods for correcting conducive conditions for wood-destroying organisms with concrete.
T60. Reinforce parts of building structures damaged by wood-destroying organisms in accordance with Structural Pest Control Code.	**K85.** Knowledge of methods to repair and patch concrete after treatments.
	K86. Knowledge of techniques to correct conditions conducive to wood-destroying organisms using vapor barriers.
	K87. Knowledge of techniques to correct conditions conducive to wood-destroying organisms by increasing ventilation.
	K88. Knowledge of techniques to correct conditions conducive to wood-destroying organisms with pressure-treated lumber.
	K89. Knowledge of methods to restore integrity of materials removed during wood-destroying organism treatments.
	K90. Knowledge of methods to repair and patch drywall materials during and after treatments.
	K91. Knowledge of California Building Codes related to restoring structures damaged by wood-destroying organisms.
	K92. Knowledge of California Building Codes related to correcting conditions conducive to wood-destroying organism infestations and infections.

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STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 1 OPERATOR PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 10 – EXAMINATION OUTLINE FOR THE BRANCH 1 OPERATOR PROFESSION

1. Fumigation Preparation (25%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T1. Verify that signed copy of Occupants Fumigation Notice is on site before starting fumigation preparation.	K1. Knowledge of required documents to be on site prior to fumigation.
T69. Determine adjacent properties that may be affected by fumigation.	K103. Knowledge of written authorization requirements to access neighboring properties affected by fumigation.
T2. Identify construction elements, conduits, or drains that could allow passage of fumigant to adjoining or connecting structures.	K2. Knowledge of methods and procedures for determining if adjoining or connecting structures could be exposed during fumigation. K3. Knowledge of methods to prevent passage of fumigants through connecting structures or conduits.
T3. Inspect areas of property to verify that landscaping is prepared to optimize ground seal.	K4. Knowledge of landscaping and other items that could be harmed by fumigation. K5. Knowledge of types of landscaping that could impede the ground seal.
T4. Inspect areas to be fumigated to ensure all people, pets, and plants have been removed.	K6. Knowledge of areas that need to be inspected to verify readiness for fumigation.
T5. Inspect indoor areas to be fumigated to ensure all ingestible and medicinal items have been double-bagged or removed.	K7. Knowledge of methods and procedures to prevent exposure of ingestible and medicinal items during fumigation.

1. Fumigation Preparation (25%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T6. Open interior subarea accesses, attic accesses, cabinets, drawers, closets, and appliances.	K8. Knowledge of methods and procedures to prepare interior areas for aeration. K9. Knowledge of methods and procedures to prepare attic for fumigation and aeration.
T7. Determine number and location of introduction sites and warning agent pans.	K10. Knowledge of placement of fumigant introduction sites. K11. Knowledge of methods and procedures to prepare structure for distribution of fumigant.
T8. Determine number and placement of fans.	K11. Knowledge of methods and procedures to prepare structure for distribution of fumigant. K12. Knowledge of air circulation requirements for disbursement of fumigants and warning agents. K13. Knowledge of factors that affect the circulation of air in structures. K14. Knowledge of type, size, and capacity of aeration fans.
T9. Set up monitoring equipment.	K15. Knowledge of methods and procedures for setting up monitoring equipment.
T10. Install secondary locks or barricade exterior entrances to prevent entry.	K16. Knowledge of laws and regulations requiring vacating, locking, and barricading structures and adjoining structures. K17. Knowledge of methods and procedures for barricading and securing doors against entry.

1. Fumigation Preparation (25%) – This area assesses the candidate's knowledge of inspecting interior and exterior areas of structures to prepare for fumigation; determining type and placement of fumigation and monitoring equipment; and ensuring fumigation notices are on site and warning signs are posted to prevent unauthorized entry.

Tasks	*Associated Knowledge Statements*
T11. Post fumigation warning signs on structures at entrances and on each side of structures.	K18. Knowledge of rules and regulations related to fumigation warning signs.
T12. Determine placement of tarps and install tarps to cover structures.	K19. Knowledge of methods and procedures to install tarps around perimeter of structure.
T13. Seal tarp seams and ensure ground seals.	K20. Knowledge of methods and procedures for sealing tarp seams. K21. Knowledge of methods and procedures for sealing perimeter of tarps.
T14. Install aeration ducting and inlet devices.	K22. Knowledge of methods and procedures for installing aeration ducting and inlet devices. K23. Knowledge of placement of aeration ducting and inlet devices in accordance with California Aeration Plan (CAP) requirements.
T15. Post fumigation warning signs on exterior of tarps and joint seams.	K18. Knowledge of rules and regulations related to fumigation warning signs.

2. Fumigation (10%) – This area assesses the candidate's knowledge of determining amounts of warning agents and fumigants to be released; measuring and releasing warning agents and fumigants; and monitoring the fumigation process to prevent leaks and ensure the efficacy of the fumigation.

Tasks	*Associated Knowledge Statements*
T16. Verify that natural gas to property has been shut off.	K24. Knowledge of procedures to confirm that natural gas is turned off.
T17. Determine amount of warning agent to be used according to manufacturer label.	K25. Knowledge of laws and regulations related to compliance with fumigant and warning agent label requirements. K26. Knowledge of regulations for measuring fumigants and warning agents. K27. Knowledge of methods and procedures for use of warning agents.
T18. Calculate volume of area to be fumigated.	K28. Knowledge of methods to calculate volume of area to be fumigated.
T19. Calculate dosage of fumigant to be used according to manufacturer label.	K29. Knowledge of methods to calculate dosages of fumigants for target pests. K30. Knowledge of methods to determine exposure time for fumigants.
T20. Dispense warning agent into pans before introducing fumigant.	K27. Knowledge of methods and procedures for use of warning agents.
T21. Introduce fumigant into structure through introduction lines.	K31. Knowledge of regulations for releasing fumigants into structures. K32. Knowledge of methods and procedures for releasing fumigants into structures. K33. Knowledge of techniques for using fumigation instruments, tools, and equipment.
T22. Visually inspect structure for leaks during fumigation.	K34. Knowledge of methods and procedures to detect leaks during fumigations.

2. Fumigation (10%) – This area assesses the candidate's knowledge of determining amounts of warning agents and fumigants to be released; measuring and releasing warning agents and fumigants; and monitoring the fumigation process to prevent leaks and ensure the efficacy of the fumigation.

Tasks	*Associated Knowledge Statements*
T23. Monitor concentration level of fumigant to determine actual half-loss time.	K35. Knowledge of factors that affect half-loss time of fumigants. K36. Knowledge of methods and procedures to monitor concentrations of fumigants. K37. Knowledge of methods to calculate half-loss time.
T24. Calculate amount of additional fumigant to be introduced into structures when excessive leakage occurs.	K38. Knowledge of methods to determine additional fumigant in case of excessive leakage.
T25. Manage "blow opens" during fumigation.	K39. Knowledge of procedures to follow if tarp is displaced from structures ("blow opens").

3. Aeration (10%) – This area assesses the candidate's knowledge of methods and procedures to facilitate the ventilation of structures after fumigation.

Tasks	*Associated Knowledge Statements*
T26. Take terminal reading to confirm efficacy of the fumigation.	K40. Knowledge of methods and procedures for measuring fumigant levels.
T27. Turn on aeration fans to facilitate ventilation of structures.	K41. Knowledge of procedures to turn on aeration fans to ventilate structures.
T28. Remove aeration duct covers from aeration ducting to facilitate ventilation of structures.	K42. Knowledge of methods and procedures to remove aeration duct covers.
T29. Open fresh air intake inlets in tarps to facilitate ventilation of structures.	K43. Knowledge of methods and procedures to open fresh air intake inlets in tarps.
T30. Inspect the fumigation to ensure that aeration has not been compromised.	K44. Knowledge of California Aeration Plan (CAP) procedures.
T31. Follow fumigant label aeration procedures.	K45. Knowledge of conditions under which fumigant label aeration procedures should be used instead of California Aeration Plan (CAP) procedures. K46. Knowledge of methods and procedures for aeration in accordance with fumigant manufacturer label.

4. Certification (10%) – This area assesses the candidate's knowledge of verifying that active aeration time has been achieved; removing tarps and warning agent pans; ensuring that structures are safe for re-entry; removing and posting required signage; and completing fumigation logs.

Tasks		*Associated Knowledge Statements*	
T32.	Verify that active aeration time has been achieved, and then turn off aeration fans.	K47. K48.	Knowledge of minimum time required for aeration of structures. Knowledge of factors that affect aeration time.
T33.	Remove ground seal and take down tarps.	K49. K50.	Knowledge of methods and procedures to remove tarps from structures. Knowledge of regulations for tarp removal and aeration.
T34.	Ventilate the forced air ducts using HVAC system or circulation fans.	K51.	Knowledge of procedures to turn on HVAC systems in fan-only mode.
T35.	Remove warning agent pans.	K52.	Knowledge of methods to remove warning agent pans.
T36.	Test breathing zones throughout structures to confirm fumigant concentration is at safe level.	K53. K54. K104.	Knowledge of required fumigant concentration levels for safe re-entry into structures after aeration. Knowledge of identification of safe breathing zones in accordance with manufacturer labels. Knowledge of calibration requirements for clearance devices.
T37.	Remove secondary locks and barricades.	K55.	Knowledge of methods and procedures to remove secondary locks and barricades.
T38.	Remove fumigation warning signs and post NOTICE OF RE-ENTRY sign.	K56. K57.	Knowledge of laws and regulations for removal of posted fumigation warning signs. Knowledge of laws and regulations for posting NOTICE OF RE-ENTRY signs.

4. Certification (10%) – This area assesses the candidate's knowledge of verifying that active aeration time has been achieved; removing tarps and warning agent pans; ensuring that structures are safe for re-entry; removing and posting required signage; and completing fumigation logs.

Tasks	*Associated Knowledge Statements*
T39. Post fumigation tags in accordance with regulations.	K58. Knowledge of laws and regulations for posting fumigation tags.
T40. Complete fumigation logs in accordance with Structural Pest Control Board requirements.	K59. Knowledge of information and requirements for completing fumigation logs.

5. Safety (25%) – This area assesses the candidate's knowledge of worksite safety procedures, including the use of self-contained breathing apparatus, CPR, pesticide labels, and personal protective equipment, as well as the safe handling, storage, and transportation of fumigants and warning agents.

Tasks		*Associated Knowledge Statements*	
T41.	Complete self-contained breathing apparatus (SCBA) and respiratory protection program training in accordance with laws and regulations.	K60.	Knowledge of laws and regulations related to self-contained breathing apparatus (SCBA) and respiratory protection program training.
T42.	Complete CPR training in accordance with laws and regulations.	K61.	Knowledge of laws and regulations related to CPR training.
T43.	Complete pesticide safety, label, and stewardship training in accordance with laws and regulations.	K62.	Knowledge of laws and regulations related to pesticide safety, label, and stewardship training.
		K105.	Knowledge of information on pesticide labels and Safety Data Sheets.
T44.	Comply with requirements for the use of personal protective equipment (PPE).	K63.	Knowledge of the use of personal protective equipment (PPE) to prevent exposure to fumigants and warning agents.
		K64.	Knowledge of procedures for providing, cleaning, storing, and maintenance of personal protective equipment (PPE).
T45.	Comply with requirements for the use and inspection of self-contained breathing apparatus (SCBA).	K65.	Knowledge of the use and maintenance of self-contained breathing apparatus (SCBA).
		K66.	Knowledge of requirements for backup air bottles.
T46.	Identify and manage hazards that could impact worksite safety.	K67.	Knowledge of potential safety hazards on fumigation job sites.
		K68.	Knowledge of the effect of weather and environmental conditions on fumigation.
		K69.	Knowledge of methods to manage leaking fumigant cylinders.
		K70.	Knowledge of symptoms of exposure to fumigants and warning agents.
		K71.	Knowledge of conditions that may impair or prevent fumigation.

5. Safety (25%) – This area assesses the candidate's knowledge of worksite safety procedures, including the use of self-contained breathing apparatus, CPR, pesticide labels, and personal protective equipment, as well as the safe handling, storage, and transportation of fumigants and warning agents.

Tasks	*Associated Knowledge Statements*
T47. Follow safety procedures when working on roofs.	K72. Knowledge of methods and procedures for fall protection. K73. Knowledge of safety procedures for working at heights. K74. Knowledge of ladder safety procedures.
T48. Inspect tarps for holes and tears to prevent fumigant leaks.	K75. Knowledge of procedures to inspect and repair tarps.
T49. Comply with laws and regulations for the handling and use of fumigants and warning agents.	K76. Knowledge of procedures for handling and use of fumigants and warning agents.
T50. Comply with requirements for fumigation safety kits.	K77. Knowledge of laws and regulations related to fumigation safety kits.
T51. Store fumigants and warning agents in accordance with laws and regulations.	K78. Knowledge of requirements for storage of fumigants and warning agents.
T52. Ensure vehicles contain required equipment and emergency medical information.	K79. Knowledge of regulations for posting emergency medical care information for employees handling fumigants.

6. Business Administration (20%) – This area assesses the candidate's knowledge of managing a fumigation business, including compliance with Structural Pest Control Board requirements; local notification requirements; laws and regulations related to employee training and record keeping; and laws related to contracts, labor, and workers' compensation.

Tasks	*Associated Knowledge Statements*
T53. Assess the success or failure of fumigation to determine further action.	K80. Knowledge of pest identification and biology to confirm target pest has been eradicated.
T54. Comply with local department of agriculture notification, registration, and reporting requirements.	K81. Knowledge of requirements and role of the county agricultural commissioner regarding Branch 1 structural pest control operations. K82. Knowledge of requirements for filing monthly pesticide use reports.
T55. Comply with local fire department fumigation notification requirements.	K83. Knowledge of local fire department fumigation notification requirements.
T56. Verify and document that employees receive self-contained breathing apparatus (SCBA) and respiratory protection program training in accordance with laws and regulations.	K84. Knowledge of employee self-contained breathing apparatus (SCBA) and respiratory protection program training and record keeping requirements.
T57. Verify and document that employees receive CPR training.	K85. Knowledge of employee CPR training and record keeping requirements.
T58. Verify and document that employees receive pesticide safety, label, and stewardship training in accordance with laws and regulations.	K86. Knowledge of employee pesticide safety, label, and stewardship training record keeping requirements.

6. Business Administration (20%) – This area assesses the candidate's knowledge of managing a fumigation business, including compliance with Structural Pest Control Board requirements; local notification requirements; laws and regulations related to employee training and record keeping; and laws related to contracts, labor, and workers' compensation.

Tasks	*Associated Knowledge Statements*
T59. Manage contracts and subcontracts in accordance with Structural Pest Control Board rules and regulations.	K87. Knowledge of notification requirements for using subcontractors. K88. Knowledge of contract law related to Branch 1 structural pest control contracts. K89. Knowledge of types of property liability releases for fumigations.
T60. Document and maintain business records in accordance with Structural Pest Control Board rules and regulations.	K90. Knowledge of the Structural Pest Control Board requirements regarding Branch 1 structural pest control operations.
T61. Provide copies of fumigation logs and certification letters in accordance with rules and regulations of Structural Pest Control Board.	K91. Knowledge of rules and regulations related to fumigation logs and certification letters.
T62. Maintain Occupants Fumigation Notices and Pesticide Disclosure Notices in accordance with Structural Pest Control Board rules and regulations.	K92. Knowledge of rules and regulations related to pesticide disclosure record keeping.
T63. Maintain pest control licenses in accordance with Structural Pest Control Board rules and regulations.	K93. Knowledge of Structural Pest Control Board licensing and license renewal requirements.
T64. Follow business practices for managing pest control businesses in accordance with Structural Pest Control Board rules and regulations.	K94. Knowledge of insurance requirements for Branch 1 structural pest control companies. K95. Knowledge of bond requirements for Branch 1 structural pest control companies. K96. Knowledge of laws and regulations related to advertising fumigation work.

6. Business Administration (20%) – This area assesses the candidate's knowledge of managing a fumigation business, including compliance with Structural Pest Control Board requirements; local notification requirements; laws and regulations related to employee training and record keeping; and laws related to contracts, labor, and workers' compensation.

Tasks		*Associated Knowledge Statements*	
T65.	Comply with state and local laws related to mechanic's liens, labor, and workers' compensation.	K97. K98.	Knowledge of California mechanic's lien laws. Knowledge of California labor laws.
T66.	Comply with Cal/OSHA and Structural Pest Control Board safety and reporting requirements.	K99.	Knowledge of Cal/OSHA and Structural Pest Control Board safety and reporting requirements.
T67.	Comply with hazardous material transportation laws.	K100. K101.	Knowledge of vehicle hazard placard requirements. Knowledge of laws and regulations related to transporting fumigants and warning agents.
T68.	Develop emergency response plan for employees handling fumigants.	K102.	Knowledge of regulations for developing an emergency response plan for employees handling fumigants.

SPCB

STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 2 OPERATOR PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 14 – BRANCH 2 OPERATOR EXAMINATION OUTLINE 2025

Content Area 1: Inspection, Monitoring, and Identification (18%)

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T1. Gather pest activity information from consumers.	K1. Knowledge of typical consumer indications of structural pest activity.
T2. Perform visual inspection of interior and exterior of structures to identify signs of pest entry and activity.	K2. Knowledge of methods for inspecting interior and exterior of structures to locate pest entry. K3. Knowledge of signs of pest activity. K4. Knowledge of tools and equipment to locate pests.
T3. Perform visual inspection of interior and exterior of structures to identify structural conditions that can lead to pest entry and infestation.	K5. Knowledge of structural vulnerabilities that can lead to pest entry and infestation.
T4. Perform visual inspection of interior and exterior of structures to identify potential pest food sources, harborage areas, and breeding grounds.	K6. Knowledge of pest dietary habits and preferences. K7. Knowledge of typical pest harborage areas and breeding grounds. K8. Knowledge of methods for inspecting interior and exterior of structure to identify pest food sources. K9. Knowledge of interior and exterior storage practices that can lead to pest entry, harborage, and breeding grounds.
T5. Perform visual inspection of perimeter and landscaping around structures to identify pest activity, food sources, harborage areas, breeding grounds, colonies, and habitats.	K10. Knowledge of methods for inspecting perimeter and landscaping around structures and neighboring structures. K11. Knowledge of vegetation, moisture, shelter areas, and other conditions around structures that can lead to pest habitation.

Content Area 1: Inspection, Monitoring, and Identification (18%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T6. Perform visual inspection of interior and exterior of structures to identify sanitation and waste management conditions that can lead to pest activity and infestation.	K12. Knowledge of sanitary conditions and practices in residential and commercial environments that can lead to pest infestation. K13. Knowledge of waste management conditions that are conducive to pest infestation.
T7. Identify pest sources of entry, nesting sites, and/or harborage areas by inspecting locations typically associated with pest life cycle stages.	K14. Knowledge of pest reproductive behavior and different life cycle stages. K15. Knowledge of effect of time, temperature, weather conditions, and seasonal variations on pest reproduction and activity. K16. Knowledge of pest life cycle stages related to typical harborage areas, nesting, colonies, and burrowing in or near structures.
T8. Determine type of monitoring devices to be used based on target pests and treatment site conditions.	K17. Knowledge of pest monitoring plans. K18. Knowledge of methods for monitoring interior and exterior of structures to estimate level of pest infestation and activity. K19. Knowledge of pest monitoring devices to be used for different target pests and treatment site conditions. K20. Knowledge of procedures for setting up monitoring devices in residential, commercial, and specialized facilities (e.g., hospitals, zoos).
T9. Set up monitoring for rodents, using toxic and nontoxic baits.	K21. Knowledge of laws and regulations for using different types of rodenticides and alternative control measures.

Content Area 1: Inspection, Monitoring, and Identification (18%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T10. Evaluate monitoring devices for effective placement and to determine level of pest infestation and range of pest activity.	K22. Knowledge of conditions that indicate ineffective bait and trap placement. K23. Knowledge of methods for evaluating monitoring devices for intensity of infestation and pest population density. K24. Knowledge of how frequently bait stations and traps must be monitored for pest activity.
T11. Identify species of pest by evaluating pest harborages, colonies, signs, and behavior patterns.	K25. Knowledge of evidence of pest harborage, activity, and signs of infestation (e.g., egg casings, nesting material, chew marks). K26. Knowledge of biology, anatomy, and growth patterns of different pest species.
T12. Identify pest physical characteristics by viewing pests to distinguish between families.	K26. Knowledge of biology, anatomy, and growth patterns of different pest species. K27. Knowledge of distinct features of pests in different life cycle stages (e.g., wings, antennae).
T13. Examine characteristics of rodent and other pest droppings to identify pest species.	K28. Knowledge of characteristics of different rodents and pest fecal matter (e.g., size, shape, color, dryness) specific to the species.
T14. Evaluate pest droppings and other observations to determine if pest activity is recent.	K28. Knowledge of characteristics of different rodents and pest fecal matter (e.g., size, shape, color, dryness) specific to the species. K29. Knowledge of indications of recent pest activity.

Content Area 1: Inspection, Monitoring, and Identification (18%), continued

This area assesses a candidate's knowledge of methods to inspect interior and exterior areas of structures for signs of pest activity, conditions conducive to pest entry, and harborage; and to monitor for pest infestation and identify various structural pest species based on their anatomical features, behaviors, habits, and characteristics.

Tasks	Knowledge Statements
T15. Examine pest physical characteristics by visual inspection, using tools or resources.	K30. Knowledge of types of identification tools and resources used to identify pests.
T16. Inform consumers of pest identified and health risks from exposure to, or infestation of, target pest.	K31. Knowledge of diseases carried by pests and modes of transmission from pests to humans.
T17. Document observations and findings regarding pests identified and level of infestation.	K32. Knowledge of methods for documenting details of pests identified and level of infestation.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (15%)

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T18. Select treatment options depending on target pest tolerance level and active treatment threshold specific to the pest for corrective and preventive pest control.	K33. Knowledge of principles and procedures of Integrated Pest Management and Sustainable Pest Management practices (IPM/SPM). K34. Knowledge of different treatment options and methods used in structural pest control. K35. Knowledge of tolerable pest threshold levels for various pests and situations. K36. Knowledge of short-term (corrective) and long-term (preventive) treatment methods for pest control. K37. Knowledge of mechanical, chemical, non-chemical, and cultural treatment methods for controlling infestations.
T19. Select treatment options compatible to specific occupant and environmental conditions or concerns, target pest infestation level, and location.	K38. Knowledge of occupant conditions (e.g., age, health) with potential for increased risk of sensitivity to pesticides. K39. Knowledge of treatment options for avoiding pesticide exposure to non-target organisms, pets, beneficial insects, vegetation, and wildlife. K40. Knowledge of basic pesticide chemical classifications, their level of toxicity, and harmful effects to humans. K41. Knowledge of different sections on pesticide labels and reviewing their information (e.g., toxicity, target pest, target area, active ingredient) to determine treatment option. K42. Knowledge of using botanical pesticide alternatives (25b products) for pest control.
T20. Select treatment options depending on pet care practices and pet activity leading to pest entry and harborage.	K43. Knowledge of pet care practices and pet activity patterns that increase likelihood of pest entry and harborage.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (15%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T21. Explain to consumer the treatment option selected to control target pest infestation and potential pesticide exposure.	K44. Knowledge of methods to explain to consumer treatment option conducive for use based on pest infestation level, pets, occupant activity and site conditions.
T22. Select least toxic pesticide for treatment with limitations near water bodies, such as surface or Groundwater Protection Areas (GWPA).	K45. Knowledge of treatment limitations and pesticide selection for applications near water bodies. K46. Knowledge of treatment site features, including soil type, that influence the potential for a pesticide to reach surface water or groundwater.
T23. Select type of pesticide formulation by evaluating label requirements for target pest, consistency with treatment area for moisture, temperature, ventilation, and weather conditions.	K47. Knowledge of pesticides suitable for various treatments based on target pest, moisture, temperature, ventilation, and weather conditions. K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue.
T24. Select type of pesticide formulation by evaluating label information, target pest, and surface texture and type (e.g., carpet, soil, wood, concrete) to be treated.	K47. Knowledge of pesticides suitable for various treatments based on target pest, moisture, temperature, ventilation, and weather conditions. K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue. K49. Knowledge of different pesticide formulations, adjuvants, and their effects on target pest and surfaces.
T25. Evaluate pesticides to be used for noticeable residue or odor associated with its application and explain it to consumer.	K48. Knowledge of effects of temperature, weather conditions, rate of dilution, and ventilation on pesticide odor and residue. K49. Knowledge of different pesticide formulations, adjuvants, and their effects on target pest and surfaces. K50. Knowledge of residual and odor effects of various pesticides.

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (15%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T26. Review active ingredients, mode of action, and pesticide rotation of previous treatments used to adjust treatment threshold.	K51. Knowledge of using different classifications or mode of action pesticides to prevent pest resistance. K52. Knowledge of methods to maintain threshold and avoid pesticide resistance. K53. Knowledge of different pesticides' mode of action and time span normally required to control various pests.
T27. Assess frequency of treatment requirements for reduction of pest activity based on label information, level of infestation, and target pest.	K53. Knowledge of different pesticides' mode of action and time span normally required to control various pests. K54. Knowledge of methods for assessing treatment frequency (one-time or periodic) requirements based on label information, level of infestation, and target pest.
T28. Select type of equipment and tools based on pesticide treatments.	K55. Knowledge of advantages and limitations of pesticide application equipment and tools. K56. Knowledge of different types of equipment, components, and tools used in pesticide application.
T29. Set up equipment and tools for pesticide treatments according to manufacturers' instructions.	K57. Knowledge of reviewing manufacturers' instructions for setting up and using equipment and tools for pesticide application.
T30. Adjust equipment and tools used in pesticide treatments based on pesticides applied.	K58. Knowledge of methods for adjusting pesticide application equipment and tools to accommodate varying output and treatment conditions (e.g., nozzles, Psi).

Content Area 2: Treatment Planning, Application Equipment Selection, Calibration, and Usage (15%), continued

This area assesses a candidate's knowledge of establishing treatment goals using integrated and sustainable pest management principles; determining factors affecting suitability of various treatment methods for target pest; and methods for selecting and calibrating pesticide application equipment for use.

Tasks	Knowledge Statements
T31. Calibrate pesticide application equipment for different formulations, treatment conditions, and processes.	K59. Knowledge of current techniques, tools, and equipment needed for calibration activities. K60. Knowledge of methods for calibrating pesticide application equipment for varied formulations and adjuvants (e.g., granular, encapsulate), treatment types (e.g., broadcast, spot), areas (e.g., carpet, grass), and conditions (e.g., wind, rain).
T32. Inspect pesticide application equipment and components for damage or malfunction.	K61. Knowledge of methods for inspecting application equipment and components for damage or malfunction.
T33. Maintain and store pesticide application equipment and tools according to manufacturers' instructions.	K62. Knowledge of methods for cleaning, maintaining, preventing malfunction, and storing pesticide application equipment and tools.
T34. Label pesticide application equipment during use and storage in accordance with legal requirements.	K63. Knowledge of procedures for labelling pesticide application equipment during use and storage according to laws and regulations.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%)

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T35. Inspect sites for objects and areas that could be damaged or become health or fire hazards if treated with pesticides.	K64. Knowledge of interior and exterior objects and areas subject to potential property damage, health risks, or fire hazards from pesticide application. K65. Knowledge of objects or conditions in or around structures that could be hazardous to self and others during pesticide treatment (e.g., location of air conditioner, protruding nails). K66. Knowledge of methods for removing hazardous objects and for remedying adverse conditions in pesticide treatment areas.
T36. Identify structural conditions that could cause injury to self and others during pesticide treatment.	K67. Knowledge of cameras, lighting, and other items that could cause personal injury or property damage during pesticide treatment.
T37. Locate drainage elements and water sources that could become polluted during pesticide treatment.	K68. Knowledge of methods for locating drainage patterns, lines, and drains. K69. Knowledge of methods for locating groundwater and surface water sources.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T38. Locate sprinkler valves, and gas and water lines that could cause personal injury or property damage.	K70. Knowledge of methods for locating sprinkler valves, gas and water lines, and their shutoff valves in different structures.
T39. Locate electrical power sources that could cause potential harm or hazard (e.g. open flame, pilot light).	K71. Knowledge of methods for locating electrical power sources that could cause potential harm or hazardous conditions during pesticide treatment.
T40. Prepare areas for treatment based on pesticide label directions and Safety Data Sheet specifications.	K72. Knowledge of methods for preparing target areas for various pesticide applications per label and Safety Data Sheet directions.
T41. Remove toys, water bowls, pet food, and other objects out of treatment areas in accordance with label directions.	K73. Knowledge of pesticide label requirements to remove toys, water bowls, pet food, and other objects out of treatment areas.
T42. Inform consumers to keep away persons and pets from treatment areas in accordance with label directions.	K74. Knowledge of requirements regarding the presence of persons and pets during treatment process at site per label directions.
T43. Provide consumers with pesticide pre-application notice in compliance with legal requirements.	K75. Knowledge of county, state, and federal laws and regulations regarding consumer pre-application notifications of pesticide treatment. K76. Knowledge of information to provide consumer on pre-application notification for pesticide treatment.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T44. Inform consumers about safety procedures and protocols to follow before pesticide applications.	K77. Knowledge of safety procedures and protocols to be followed by consumers for pesticide treatment (e.g., turning off machines, motors, boilers, fans, HVAC). K78. Knowledge of county, state, and federal regulations for application of pesticide in residential and commercial sites, and other specialized facilities.
T45. Inform consumers about procedures to be followed before pesticide application to maintain treatment effectiveness.	K79. Knowledge of procedures to be followed by consumers to prepare treatment areas before application to maintain treatment effectiveness (e.g., vacuuming, shutting off sprinklers).
T46. Apply pesticides in interior and exterior areas of residential, commercial, and specialized facilities by referring to label information and Safety Data Sheet specifications.	K80. Knowledge of following directions on pesticide label and Safety Data Sheet for application of pesticide. K81. Knowledge of pesticide, application procedures, and equipment used to treat different pest infestations in interior and exterior areas of residential, commercial sites, and specialized facilities (e.g., food storage, restaurant, hospitals).
T47. Apply pesticides in cracks, crevices, wall voids, and other similar areas using required equipment.	K82. Knowledge of procedures to apply baits in cracks, crevices, and other areas using a gel gun, syringe, and other application equipment. K83. Knowledge of procedures to apply pesticide using dusters, aerosols, foam or handheld sprayers in wall voids and other areas.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T48. Apply pesticides in carpeted areas; around doorframes, thresholds, baseboards, and entry points; and on other surfaces using required equipment.	K84. Knowledge of application procedures used to treat pest infestations in carpeted areas; around doorframes, thresholds, baseboards, and entry points; and on other surfaces. K85. Knowledge of procedures for using compressed air handheld, backpack and space sprayers, ULV foggers, and other application equipment.
T49. Apply pesticides to spot treat interior and exterior areas of residential and commercial sites, and specialized facilities.	K86. Knowledge of procedures for spot treatment in both interior and exterior areas of residential and commercial sites, and specialized facilities. K87. Knowledge of procedures for applying pesticides around indoor and outdoor plants or vegetable gardens.
T50. Apply pesticides in outdoor perimeter areas of structures to control active pest infestations and provide exterior barrier pest control treatment.	K88. Knowledge of procedures for application of pesticides in outdoor perimeter of target and non-target pest areas. K89. Knowledge of pesticides formulations and equipment used for application of periodic exterior barrier pest control treatments. K90. Knowledge of methods for spreading granules using a broadcaster in perimeter areas of structures to control active pest infestations.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T51. Apply rodenticide in bait stations of interior and exterior areas in residential and commercial sites, and specialized facilities.	K91. Knowledge of regulations and procedures for applying rodenticide in residential and commercial sites, and specialized facilities.
T52. Service rodent bait stations in interior and exterior areas of residential and commercial sites, and specialized facilities in accordance with regulations.	K92. Knowledge of regulations and procedures for servicing rodent bait stations in residential and commercial sites, and specialized facilities.
T53. Measure surface areas to determine amount of pesticide needed for various applications.	K93. Knowledge of how to calculate linear feet, square feet, and cubic feet measurements for various shapes and distances. K94. Knowledge of methods for estimating the area of various shapes, including irregular shapes. K95. Knowledge of conversion methods for various types of measurements used in pesticide treatment.
T54. Determine amount of pesticide concentrate needed for target pest treatment based on label directions.	K96. Knowledge of methods to review label requirements to determine amount of pesticide concentrate needed for treatment of target pest.
T55. Calculate pesticide concentrations and dilution ratios based on label directions.	K97. Knowledge of formulas used to calculate the active ingredient concentration and dilution ratio of pesticides.
T56. Calculate rate of application and pesticide dilution ratios for different pesticide applications.	K98. Knowledge of methods to calculate application rate and dilution dosage of pesticides for various formulations and treatments. K99. Knowledge of formulas used to calculate rate of flow, pressure, gallons per minute, and nozzle output.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T57. Modify application methods based on area, weather conditions, and label restrictions.	K100. Knowledge of alternate application methods based on area, weather conditions (e.g., temperature, humidity, wind), target pest activity and label restrictions.
T58. Provide consumers with re-entry time after pesticide applications by following product label information and the time treatment is applied.	K101. Knowledge of methods to determine re-entry times for various pesticides based on label recommendations.
T59. Provide consumers with pesticide post-application notices in compliance with legal requirements.	K102. Knowledge of county, state, and federal laws and regulations regarding consumer post-application notifications of pesticide treatment. K103. Knowledge of information to provide consumers on post-application notification for pesticide applied.
T60. Inform consumers of procedures to follow after pesticide application to maintain treatment effectiveness.	K104. Knowledge of consumer guidelines to follow after application to maintain treatment effectiveness. K105. Knowledge of sanitation conditions that reduce the effectiveness of pesticide treatment. K106. Knowledge of consumer actions that reduce the effectiveness of pesticide treatment (e.g., using over-the-counter products).
T61. Inform consumers of structure points that should be repaired to exclude pests and prevent re-infestation.	K107. Knowledge of structural deficiencies and entry points that need repairs for exclusion. K108. Knowledge of discussing preventive pest control measures and exclusion strategies with consumer.

Content Area 3: Treatment Area Preparation, Consumer Notification, Pesticide Application, and Maintenance (16%), continued

This area assesses a candidate's knowledge of preparing site and notifying consumers regarding factors involved in treatment process; following label instructions to apply pesticides and control infestations; and providing post treatment follow-ups to maintain treatment effectiveness.

Tasks	Knowledge Statements
T62. Inform consumers of pest activity requiring notification to pest control company for follow-up treatment.	K109. Knowledge of pest activity expected in response to treatment provided. K110. Knowledge of pest activity after treatment that consumers should monitor and report to company.
T63. Locate specific sites for follow-up treatment by gathering information from consumers about remaining pest activity.	K111. Knowledge of key questions to ask consumer on remaining pest issues.
T64. Determine follow-up treatment methods to be used based on evidence of pest activity.	K112. Knowledge of post treatment monitoring and evaluation methods. K113. Knowledge of procedures to evaluate follow-up treatment methods.
T65. Perform follow-up treatment plan to maintain effectiveness based on service plan agreements.	K114. Knowledge of methods for providing follow-up pesticide treatment to maintain effectiveness of service plan agreements.
T66. Maintain work record of initial and follow-up treatments performed indicating application site, pest treated, and details of pesticide applied.	K115. Knowledge of procedures for documenting and maintaining treatment work records.

Content Area 4: Environmental Protection and Safety Procedures (14%)

This area assesses a candidate's knowledge of interpreting label instructions, laws, regulations, and standardized procedures to follow in the safe handling, transportation, storage, and disposal of pesticides, pest control materials, containers, and equipment to protect the environment.

Tasks	Knowledge Statements
T67. Follow safety procedures for mixing, loading, and using pesticides to prevent injury and to avoid nontarget exposure of pesticides into the environment.	K116. Knowledge of procedures for safely mixing, loading, and using pesticides. K117. Knowledge of effects of unintended exposure from different sources (point, nonpoint, direct) of pesticide contamination and its harmful impact on the environment. K118. Knowledge of procedures for application of pesticides in target and non-target areas.
T68. Follow safety procedures for handling pesticides and treatment materials to prevent and contain pesticide spills in accordance with legal requirements.	K119. Knowledge of procedures for preventing, containing, and removing all types (e.g., liquid, dry) of pesticide spills. K120. Knowledge of required spill kit contents and the methods for using them. K121. Knowledge of county, state, and federal laws and regulations related to preventing, containing, and removing pesticide spills. K122. Knowledge of procedures for disposing of absorbent material used to soak up pesticide spills and pesticide spilled on work clothes. K123. Knowledge of the procedure for having a change of clothing to use if pesticide spills on clothes.
T69. Report pesticide spills in accordance with legal requirements.	K124. Knowledge of county, state, and federal laws and regulations related to reporting pesticide spills.

Content Area 4: Environmental Protection and Safety Procedures (14%), continued

This area assesses a candidate's knowledge of interpreting label instructions, laws, regulations, and standardized procedures to follow in the safe handling, transportation, storage, and disposal of pesticides, pest control materials, containers, and equipment to protect the environment.

Tasks	Knowledge Statements
T70. Label service and secondary containers for use according to legal requirements.	K125. Knowledge of county, state, and federal laws and regulations related to the use and labeling of service and secondary pesticide containers.
T71. Label bait stations for use according to legal requirements.	K126. Knowledge of county, state, and federal laws and regulations related to use and labeling of bait stations.
T72. Perform visual inspections of service vehicles and contents to verify they conform to manufacturers' recommendations and legal requirements.	K127. Knowledge of manufacturers' recommendations and county, state, and federal laws and regulations related to safe transport of pesticide containers, application equipment, and materials.
T73. Perform visual inspection of service vehicles to ensure that required pesticide use paperwork and contents are present.	K128. Knowledge of required pesticide paperwork (e.g., Safety Data Sheet, Product Label, Emergency Medical Card) and other contents of service vehicles according to county, state, and federal regulations.
T74. Verify that service vehicles, pesticides, and equipment are securely stored after use according to manufacturer's recommendations and legal requirements.	K129. Knowledge of pesticide manufacturers' recommendations and county, state, and federal laws and regulations for storing service vehicles, pesticide, application equipment, materials, containers, and personal protective equipment.
T75. Verify that pesticide service vehicles and equipment are in good working order to prevent potential accidents, spills, injury, and possible contamination of the environment.	K130. Knowledge of procedures for checking transport/service vehicles for safety before use. K131. Knowledge of procedures for checking pesticide application equipment for defects (e.g., leaks, punctures) before use.

Content Area 4: Environmental Protection and Safety Procedures (14%), continued

This area assesses a candidate's knowledge of interpreting label instructions, laws, regulations, and standardized procedures to follow in the safe handling, transportation, storage, and disposal of pesticides, pest control materials, containers, and equipment to protect the environment.

Tasks	Knowledge Statements
T76. Follow safety procedures for handling and discarding pest carcasses or remains.	K132. Knowledge of procedures for safe handling and disposal of pest carcasses or remains.
T77. Dispose of pesticides and empty pesticide containers according to manufacturer's specifications and legal requirements to prevent contamination and nontarget exposure.	K133. Knowledge of procedures for following manufacturer's recommendation for disposal of pesticide containers. K134. Knowledge of procedures for triple rinsing of pesticide container and disposal as per county / state regulations.

Content Area 5: Personal Protection and Safety Measures (14%)

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T78. Review pesticide label safety directions before use.	K135. Knowledge of sections in pesticide labels and interpretation of precautions and safety measures. K136. Knowledge of application of safety precautions on pesticide labels to prevent overexposure to pesticides.
T79. Maintain awareness of adverse reactions to pesticide exposure to self and others.	K137. Knowledge of short-term (acute) and long-term (chronic) adverse health effects, and other emergencies that can occur due to pesticide misapplication or exposure.
T80. Identify signs and symptoms of overexposure to pesticides in humans and animals.	K138. Knowledge of routes of pesticide entry or exposure and transfer of pesticide residues from one part of the body to another. K139. Knowledge of signs and symptoms of ocular, oral, dermal, and respiratory overexposure to pesticides.
T81. Follow pesticide label precautionary statements to provide emergency first aid or seek medical attention in the event of overexposure to a pesticide.	K140. Knowledge of first-aid procedures on pesticide labels to be followed in the event of overexposure to a pesticide. K141. Knowledge of reference sources for first-aid procedures in case of overexposure of humans or animals to pesticides.
T82. Select personal protective equipment and clothing for use in compliance with county, state, and federal regulations to prevent exposure to pesticides.	K142. Knowledge of standards and regulations regarding selection and use of personal protective equipment and clothing.

Content Area 5: Personal Protection and Safety Measures (14%), continued

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T83. Comply with pesticide label requirements and manufacturer's instructions for the selection and use of personal protective equipment and clothing.	K143. Knowledge of methods for following pesticide label guidelines and manufacturer's instructions on selecting and using personal protective equipment and clothing for pesticide treatment.
T84. Clean, maintain, and store personal protective equipment as required by manufacturer's instructions.	K144. Knowledge of types of personal protective equipment required to be provided by employers. K145. Knowledge of procedures for cleaning, maintaining, and storing personal protective equipment. K146. Knowledge of guidelines to replace dirty and damaged personal protective equipment.
T85 Follow recommended guidelines for laundering, drying, and storing work clothing.	K147. Knowledge of standards and methods to launder, dry, and store work clothing.
T86. Identify and manage health hazards that could impact job site safety.	K148. Knowledge of potential health and safety hazards at job sites. K149. Knowledge of standards and methods to follow hazard communication information (warning signs, PSIS, SDS) for safe work practices.
T87. Follow personal safety measures when working in closed and open spaces.	K150. Knowledge of symptoms of heat and cold stress in both closed and open spaces. K151. Knowledge of personal safety procedures for working at heights; on roofs, terraces, and balconies; and in basements and crawl spaces.

Content Area 5: Personal Protection and Safety Measures (14%), continued

This area assesses a candidate's knowledge of understanding label instructions, regulations, and standards to follow for safe work practices and using personal protective equipment during treatment process and while operating pesticide application equipment to protect self.

Tasks	Knowledge Statements
T88. Follow personal safety measures when working on roofs, at heights, and in attics.	K151. Knowledge of personal safety procedures for working at heights; on roofs, terraces, and balconies; and in basements and crawl spaces. K152. Knowledge of different types of personal safety devices and their usage, and attic entry procedures.
T89. Follow recommended safety guidelines when using ladders.	K153. Knowledge of fall protection, ladder safety, and scaffold use procedures. K154. Knowledge of different types of ladders and their usage.
T90. Complete pesticide handler safety training program in accordance with legal requirements.	K155. Knowledge of county, state, and federal laws and regulations for completing pesticide handler safety training.
T91. Complete annual respirator training in accordance with legal requirements.	K156. Knowledge of county, state, and federal laws and requirements for completing respirator use and fit training.
T92. Report incidents of serious injuries or death related to pesticide application to the required agencies.	K157. Knowledge of requirements for reporting serious injury or death related to pesticide application to the Structural Pest Control Board and the County Agricultural Commissioner's office.
T93. Provide designated supervision at branch offices and direct supervision to unlicensed individuals in accordance with legal requirements.	K158. Knowledge of Structural Pest Control Board laws and regulations on providing supervision at branch offices and to unlicensed individuals. K159. Knowledge of EPA regulations on responsibilities for supervision of unlicensed applicators.

Content Area 6: Business Management and Practice Regulations (23%)

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T94. Comply with legal requirements regarding ownership of pest control businesses and corporations.	K160. Knowledge of laws and regulations regarding ownership of a registered pest control company. K161. Knowledge of laws and regulations regarding fictitious business name requirements.
T95. Comply with legal requirements as a qualifying manager regarding management and supervision of pest control company operations.	K162. Knowledge of laws and regulations regarding qualifying manager obligations.
T96. Manage business operations of principal and branch office locations according to legal requirements.	K163. Knowledge of laws and regulations regarding managing principal and branch office business operations. K164. Knowledge of license and registration details to be displayed at primary and branch office locations. K165. Knowledge of laws and regulations regarding employee qualifications of licensed pest control personnel.
T97. Employ licensed pest control personnel in accordance with license category requirements.	K165. Knowledge of laws and regulations regarding employee qualifications of licensed pest control personnel. K166. Knowledge of methods for verifying licenses and credentials of potential pest control personnel.
T98. Provide direct supervision to licensed and unlicensed pest control personnel.	K167. Knowledge of laws and regulations regarding supervision of licensed and unlicensed pest control personnel.

Content Area 6: Business Management and Practice Regulations (23%), continued

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T99. Comply with workers' compensation requirements for pest control businesses.	K168. Knowledge of laws and regulations to maintain or file exemption from workers' compensation for pest control businesses.
T100. Maintain insurance and bonds to comply with liability requirements for registered pest control companies.	K169. Knowledge of laws regarding insurance and bond coverage for pest control business.
T101. Inform Structural Pest Control Board of changes related to personnel and business operations.	K170. Knowledge of laws and regulations related to informing the Structural Pest Control Board of disassociation of licensee, changes to qualifying manager, ownerships, or business locations. K171. Knowledge of procedures for informing the Structural Pest Control Board when opening a branch office and designating the branch supervisor.
T102. Ensure marketing materials comply with advertisement and solicitation requirements for pest control business and services.	K172. Knowledge of laws and regulations regarding advertising and soliciting for pest control business. K173. Knowledge of laws and regulations regarding misrepresentation, and false claims when advertising or offering pest control services.
T103. Comply with Structural Pest Control Board requirements related to contracting for pest control services.	K174. Knowledge of laws and regulations regarding contracting with consumers for pest control services. K175. Knowledge of California's mechanic's lien laws and the rights and responsibilities regarding its use.

Content Area 6: Business Management and Practice Regulations (23%), continued

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T104. Evaluate scope of work, cost, and requirement to determine whether subcontracted services should be used.	K176. Knowledge of methods for evaluating scope of work and cost to determine the need for subcontracted services for pest control.
T105. Disclose to consumer if subcontracted services are needed and get consent for use if arranging such services.	K177. Knowledge of laws and regulations regarding the use of subcontracted work. K178. Knowledge of details to inform consumers regarding the use of sub-contracted services for pest control.
T106. Provide consumer details regarding payment information and company obligations for using subcontracted work.	K179. Knowledge of information to provide consumers and company obligations regarding the use of subcontracted services for pest control. K180. Knowledge of primary and subcontractor requirements and responsibilities for subcontracted work agreements in pest control.
T107. Verify that required warning signs of stored pesticides are posted.	K181. Knowledge of laws and regulations regarding display of warning signs and hazard communication information (PSIS, SDS) for pesticides used.
T108. Provide pest control personnel an area for washing up chemicals, changing clothes, and storing personal clothing in accordance with legal requirements.	K182. Knowledge of laws and regulations for providing and maintaining a chemical wash area for routine and emergency decontamination use by pest control personnel. K183. Knowledge of standards to provide pest control personnel with a pesticide-free area to change and store personal clothing not in use while working.

Content Area 6: Business Management and Practice Regulations (23%), continued

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T109. Maintain solid surface, ventilation, and protection from elements in pesticide storage area.	K184. Knowledge of standards for pesticide storage locations. K185. Knowledge of laws and regulations related to the maintenance, handling, and storage of pesticides. K186. Knowledge of the requirement to post fire hazard code signs on pesticide storage area and building according to laws and regulations. K187. Knowledge of procedures for storing pesticide containers away from direct sunlight, moisture or water, potential heat sources, and fire hazards. K188. Knowledge of local, state, and federal regulations related to storing pesticides in facilities.
T110. Maintain inventory of stored pesticides and facility emergency evacuation plan in accordance with legal requirements.	K189. Knowledge of using Safety Data Sheets to review and follow recommendations for fire-fighting measures and precautions related to specific hazards according to chemicals stored. K190. Knowledge of how to develop a Hazardous Material Business Plan (HMBP) in accordance with CalEPA regulations to assist emergency responders.
T111. Rotate pesticides and materials based on shelf life.	K191. Knowledge of methods for rotation of pesticides and materials for use.
T112. Maintain daily work records of field representatives and applicators.	K192. Knowledge of procedures and content necessary to maintain records (e.g., service ticket) of daily treatments performed.

Content Area 6: Business Management and Practice Regulations (23%), continued

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T113. Prepare monthly use report summarizing list of pesticides used, total amount of each pesticide applied, and number of applications in counties in which serviced was performed.	K193. Knowledge of laws and regulations related to preparing and reporting pesticide usage. K194. Knowledge of methods for converting diluted amounts of pesticides used in field to determine total amount of pesticide used.
T114. Prepare annual notice of intent to apply pesticides and register with each county in which business is expected.	K195. Knowledge of laws and regulations related to registering pesticides for structural pest control use with county Agricultural Commissioner's office.
T115. Comply with county Agricultural Commissioner's office notification, registration, and monthly reporting requirements in counties in which serviced was performed.	K196. Knowledge of laws and regulations related to monthly reporting of pesticide for structural pest control use with county Agricultural Commissioner's office.
T116. Verify that employees receive pesticide safety, label, and personal protective equipment training.	K197. Knowledge of standards and procedures for providing new hire training for licensees. K198. Knowledge of laws and regulations regarding providing the pesticide handler safety training for pest control employees. K199. Knowledge of laws regarding providing annual training on respirator and pesticide label for pest control employees. K200. Knowledge of regulations regarding planning and providing emergency medical care details to employees for pesticide poisoning.
T117. Comply with legal requirements regarding maintenance of Safety Data Sheets and records of pesticide use, pesticide safety, and personal protective equipment training records.	K201. Knowledge of regulations for maintaining records on pesticides used and employee training on pesticide handling safety, SDS, PSIS, and PPE use.

Content Area 6: Business Management and Practice Regulations (23%), continued

This area assesses a candidate's knowledge of laws, regulations, and standards for managing business operations; contractual agreements and related obligations; employee training, safety, and workers' compensation; recordkeeping, reporting, and Healthy Schools Act training; and maintaining professional responsibilities of a qualifying manager.

Tasks	Knowledge Statements
T118. Comply with California's Healthy Schools Act when providing services at school sites.	K202. Knowledge of regulations of the Healthy Schools Act regarding pest control service requirements for school and childcare centers.
T119. Comply with professional conduct requirements for structural pest control operators and pest control professionals supervised.	K203. Knowledge of laws and regulations regarding violations of the California Code of Regulations for structural pest control. K204. Knowledge of laws and regulations regarding citations, fines, and other disciplinary actions. K205. Knowledge of standards and regulations to follow to comply with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

SPCB

STRUCTURAL PEST CONTROL BOARD

OCCUPATIONAL ANALYSIS OF THE BRANCH 3 OPERATOR PROFESSION

CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS

OFFICE OF PROFESSIONAL EXAMINATION SERVICES

TABLE 13 – EXAMINATION OUTLINE FOR BRANCH 3 OPERATOR PROFESSION

1. Inspection (25%) – Determine the presence, location, and degree of any wood-destroying pest infestations, infections, or conducive conditions; identify wood pests and fungi, and accessibility and entry points in structures.

Task Statement	Associated Knowledge Statements	
T1. Determine presence of wood-destroying pests and organisms.	K1.	Knowledge of techniques to assess wood-destroying infestations and infections.
T2. Determine location of infestation or infection.	K2.	Knowledge of excessive moisture conditions that promote wood-destroying infestations or infections.
T3. Identify conditions conducive to wood-destroying infestation or infection.	K3.	Knowledge of faulty grade levels that promote wood-destroying infestations or infections.
T4. Determine distribution and severity of wood-destroying infestation or infection.	K4.	Knowledge of the effect of earth-to-wood contacts on wood-destroying infestations or infections.
T5. Determine consumer practices and behaviors that could lead to wood-destroying infestation or infection.	K5.	Knowledge of the effect of excessive cellulose debris on wood-destroying infestations or infections.
T6. Identify type of wood-destroying infestation or infection.	K6.	Knowledge of the effect of shower leakage on wood-destroying infestations or infections.
T7. Identify structurally weakened portions of wood members due to infestation or infection.	K7.	Knowledge of techniques to identify conducive conditions.
T8. Determine accessibility of areas in structure to be inspected.	K8.	Knowledge of standards for conducting wood-destroying pest and organism inspections.
	K9.	Knowledge of methods to estimate extent of wood-destroying infestations or infections.
	K10.	Knowledge of building codes pertaining to wood-destroying pest damage and decay.
	K11.	Knowledge of common terms to describe elements of a wood frame structure.
	K12.	Knowledge of anatomy, distinguishing features, habits, activity, and biology of termite wood pests.
	K13.	Knowledge of anatomy, distinguishing features, habits, activity, and biology of non-termite wood pests.
	K14.	Knowledge of distinguishing features and growth patterns of wood-destroying fungi.

2. Planning (20%) – Develop treatment strategies, select treatments, identify and minimize environmental and treatment risks, explain treatment risks to the consumer, and notify consumers about planned treatments.

Task Statement		Associated Knowledge Statements	
T9.	Establish treatment options with consumer.	K15.	Knowledge of regulation requirements regarding removal of infested or infected wood.
T10.	Select treatment method.		
T11.	Identify wood-destroying pest infestations that require fumigation.	K16.	Knowledge of factors that influence or enhance pesticide effectiveness.
T12.	Identify non-termite wood-destroying organisms that require treatment.	K17.	Knowledge of California mechanic's lien law protecting registered pest control company from consumer nonpayment.
T13.	Select chemical treatment to be applied.		
T14.	Identify areas requiring treatment.	K18.	Knowledge of California statutes pertaining to liabilities resulting from subcontracts for fumigation.
T15.	Identify risks of pesticide exposure for consumer.		
T16.	Identify methods to reduce nontarget exposure to pesticides.	K19.	Knowledge of wood-destroying pest infestations.
T17.	Identify conditions that affect pesticide selection and performance.	K20.	Knowledge of common signs of wood-destroying infestations and infections.
T18.	Identify potential hazards and situations that could impact worksite safety.	K21.	Knowledge of methods to minimize pesticide exposure to nontarget pests and organisms.
T19.	Identify objects and areas that could become damaged due to treatment application.	K22.	Knowledge of California laws pertaining to worker safety in pest control operations.
T20.	Explain to consumer possible hazards associated with chosen treatment.	K23.	Knowledge of California laws pertaining to the handling and storage of pesticides.
T21.	Locate gas and water lines that could cause personal injury or property damage.	K24.	Knowledge of the contents of wood-destroying organisms and pest inspection reports.
T22.	Locate areas that could be contaminated by pesticide.	K25.	Knowledge of the advantages and disadvantages of chemical treatments for wood-destroying pests and organisms.
T23.	Locate water sources and shutoffs.		
T24.	Locate electrical power sources that could be used for application.	K26.	Knowledge of the advantages and disadvantages of nonchemical treatments for wood-destroying pests and organisms.
T25.	Prepare area for treatment application by removing hazardous objects and remedying adverse conditions.		
T26.	Identify accessible evidence of wood-destroying organisms to be removed or covered.	K27.	Knowledge of methods to locate water lines.
		K28.	Knowledge of methods to locate drainage lines and drains.

3. Treatment Application (15%) – Prepare work area for treatment by such means as mixing pesticides, selecting tools and equipment, and applying treatments to control wood-destroying pest infestations and infections.

Task Statement		Associated Knowledge Statements	
T27.	Dilute concentrate pesticides for application.	K29.	Knowledge of methods to locate water meter and main shutoff.
T28.	Prepare site for treatment.		
T29.	Set up application equipment and tools.	K30.	Knowledge of methods to locate electrical power sources and breaker box.
T30.	Select personal protective equipment.		
T31.	Determine amount of materials to be applied.	K31.	Knowledge of first aid techniques to treat injuries resulting from pesticide exposure.
T32.	Determine equipment and tools to apply treatments.		
T33.	Remove infested and infected wood-destroying pest infestations and infections.	K32.	Knowledge of different types of emergencies resulting from the misapplication of pesticides.
T34.	Mask accessible evidence of wood-destroying pest infection.	K33.	Knowledge of the contents of pesticide labels and Safety Data Sheets.
T35.	Remove accessible evidence of wood-destroying pest and organism infestation.	K34.	Knowledge of California laws pertaining to the storage of pesticides during transport.
T36.	Apply chemical treatments to control termite infestations.	K35.	Knowledge of chemical control measures for termite infestations.
T37.	Apply chemical treatments to control wood-destroying fungal infections.	K36.	Knowledge of chemical control measures for non-termite wood-destroying pest infestations.
T38.	Locate galleries in infested wood members.	K37.	Knowledge of chemical control measures for wood-destroying fungal infestations.
T39.	Create chemical barrier in and around existing structures.	K38.	Knowledge of California laws regarding the use of personal protective equipment.
		K39.	Knowledge of techniques to prevent pesticide accidents during application.
		K40.	Knowledge of techniques to mix pesticides according to the label.
		K41.	Knowledge of methods for preventing pesticide spills.
		K42.	Knowledge of procedures for cleaning and maintaining personal protective equipment.

3. Treatment Application (15%) – Prepare work area for treatment by such means as mixing pesticides, selecting tools and equipment, and applying treatments to control wood-destroying pest infestations and infections.

Task Statement	Associated Knowledge Statements
(see previous page)	K43. Knowledge of California laws related to the storage of pesticides in a facility. K44 Knowledge of manufacturer's label restrictions on treatment application. K45. Knowledge of nonchemical control measures for termite infestations. K46. Knowledge of equipment for applying liquid pesticides. K47. Knowledge of methods to repair, maintain, and clean liquid application equipment. K48. Knowledge of methods to repair, maintain, and clean dry chemical application equipment. K49. Knowledge of alternative methods to treat wood-destroying pests and organisms. K50. Knowledge of different types of foundations associated with different types of structures. K51. Knowledge of techniques to confine pesticide applications to treatment areas. K52. Knowledge of methods to clean up and contain pesticide leaks and spills. K53. Knowledge of prescribed methods for safe disposal of used pesticides and pesticide containers. K54. Knowledge of California labor laws related to reporting work injuries. K55. Knowledge of California laws related to reporting pesticide leaks and spills. K56. Knowledge of factors that influence compatibility of pesticides combined at time of application.

3. Treatment Application (15%) – Prepare work area for treatment by such means as mixing pesticides, selecting tools and equipment, and applying treatments to control wood-destroying pest infestations and infections.

Task Statement	Associated Knowledge Statements
	K57. Knowledge of label contents prescribed by state and federal agencies. K58. Knowledge of California laws pertaining to maintenance of records or pesticides.

4. Repairs and Corrective Measures (20%) – Perform work or subcontract the performance of work to repair, replace, or reinforce wood members damaged by wood-destroying pest infestations and infections, and to correct conducive conditions.

Task Statement		Associated Knowledge Statements	
T40.	Develop a plan for repair, replacement, or reinforcement of damaged wood members.	K59.	Knowledge of techniques to repair, replace, or reinforce damaged wood members.
T41.	Develop a plan to correct conducive conditions.	K60.	Knowledge of construction methods to correct conducive conditions in structures and adjacent areas.
T42.	Determine the equipment and tools to repair, replace, or reinforce damaged wood members.	K61.	Knowledge of potential liabilities that could result from subcontract agreements to repair, replace, or reinforce damaged wood members.
T43.	Determine the equipment to remedy or correct conducive conditions.	K62.	Knowledge of potential liabilities that could result from subcontract agreements to correct conducive conditions.
T44.	Repair portions of building structure damaged by wood-destroying pests and organisms.	K63.	Knowledge of components of common wood frame structures.
T45.	Replace portions of building structure damaged by wood-destroying pests and organisms.	K64.	Knowledge of purposes of different types of wood materials.
T46.	Reinforce portions of building structure damaged by wood-destroying pests and organisms.	K65.	Knowledge of methods to restore integrity of materials removed during treatment.
T47.	Remove or correct earth-to-wood contact.	K66.	Knowledge of methods for correcting conducive conditions with concrete.
T48.	Remove cellulose debris from subareas.	K67.	Knowledge of methods to repair and patch concrete after treatment.
T49.	Identify wood damage that requires repair, replacement, or reinforcement.	K68.	Knowledge of industry standards for repairing structures damaged by wood-destroying pests and organisms.
		K69.	Knowledge of industry standards for correcting conducive conditions.
		K70.	Knowledge of techniques to correct conducive conditions with ventilation.
		K71.	Knowledge of techniques to correct conducive conditions with pressure-treated lumber.
		K72.	Knowledge of California requirements pertaining to corrective measures for conducive conditions.
		K73.	Knowledge of methods for estimating labor and material costs for repair, replacement, or reinforcement of damaged wood members.
		K74.	Knowledge of methods for estimating labor and material costs for corrective measures associated with conducive conditions.
		K75.	Knowledge of different types of wood fasteners.
		K76.	Knowledge of different types of wood-fill products.

5. Regulations and Reporting (20%) – Describe evidence of wood-destroying pest infestations and infections, make treatment and repair recommendations, evaluate wood-destroying pest treatments, determine completion of construction work performed, and comply with report and recordkeeping regulation requirements.

Task Statement		Associated Knowledge Statements	
T50.	Describe evidence of wood-destroying pest or organism infestation or infection.	K77.	Knowledge of content requirements for different types of wood-destroying pest or organism inspection reports.
T51.	Describe extent of wood damage due to wood-destroying pest and organism infestation or infection.	K78.	Knowledge of California requirements for reporting pesticide use.
		K79.	Knowledge of common terms to describe wood-destroying pest or organism infestations and infections.
T52.	Describe conditions conducive to wood-destroying pest or organism infestation or infection.	K80.	Knowledge of common terms to describe wood-destroying pest or organism treatments.
		K81.	Knowledge of recordkeeping requirements for pest control facilities.
T53.	Describe wood-destroying pest or organism treatments to be applied.	K82.	Knowledge of techniques for determining effectiveness of wood-destroying pest or organism treatments.
T54.	Describe repairs to be performed on damaged wood members.	K83.	Knowledge of procedures for determining completion of construction work performed.
T55.	Evaluate effectiveness of wood-destroying pest or organism treatments.	K84.	Knowledge of the effect of plumbing leakage on wood-destroying infestations or infections.
T56.	Evaluate completeness of repairs and corrective measures performed.	K85.	Knowledge of methods to minimize pesticide exposure to nontarget areas.
		K86.	Knowledge of potential liabilities that could result when correcting conducive conditions.
T57.	Describe inaccessible areas or portions of structure.	K87.	Knowledge of potential liabilities that could result when repairing, replacing, or reinforcing damaged wood members.
T58.	Apply chemical treatments to control non-termite infestations.	K88.	Knowledge of Structural Pest Control Act rules and regulations that apply to licensed Branch 3 Operators.
T59.	File necessary reports (e.g., WDO, chemical use).	K89.	Knowledge of report writing as it pertains to findings and recommendations.
T60.	Describe Structural Pest Control Act rules and regulations that apply to licensed Branch 3 Operators.	K90.	Knowledge of report writing as it pertains to Section I and II.

ATTACHMENT I: Code of Federal Regulations, Title 40, sections 171.103(c) and 171.103(d)(14), dated July 1, 2023

Code of Federal Regulations

Title 40 - Protection of Environment

Volume: 26
Date: 2023-07-01
Original Date: 2023-07-01
Title: Section 171.103 - Standards for certification of commercial applicators.
Context: Title 40 - Protection of Environment. CHAPTER I - ENVIRONMENTAL PROTECTION AGENCY (CONTINUED). SUBCHAPTER E - PESTICIDE PROGRAMS. PART 171 - CERTIFICATION OF PESTICIDE APPLICATORS. Subpart B - Certification Requirements for Applicators of Restricted Use Pesticides.

§ 171.103 Standards for certification of commercial applicators.

(a) *Determination of competency.* To be determined to have the necessary competency in the use and handling of restricted use pesticides by a State, Tribe, or Federal agency, a commercial applicator must receive a passing score on a written examination that meets the standards specified in paragraph (a)(2) of this section and any related performance testing that is required by the State, Tribe, or Federal agency. Examinations and any alternate methods employed by the certifying authority to determine applicator competency must include the core standards applicable to all categories (paragraph (c) of this section) and the standards applicable to each category in which an applicator seeks certification (paragraph (d) of this section). Certification processes must meet all of the following criteria:

(1) *Commercial applicator minimum age.* A commercial applicator must be at least 18 years old.

(2) *Examination standards.* The certifying authority must ensure that examinations conform to all of the following standards:

(i) The examination must be presented and answered in writing.

(ii) The examination must be proctored by an individual designated by the certifying authority and who is not seeking certification at any examination session that he or she is proctoring.

(iii) Each person seeking certification must present at the time of examination valid, government-issued photo identification or other form of similarly reliable identification authorized by the certifying authority as proof of identity and age to be eligible for certification.

(iv) Candidates must be monitored throughout the examination period.

(v) Candidates must be instructed in examination procedures before beginning the examination.

(vi) Examinations must be kept secure before, during, and after the examination period so that only the candidates have access to the examination, and candidates have access only in the presence of the proctor.

(vii) Candidates must not have verbal or non-verbal communication with anyone other than the proctor during the examination period.

(viii) No portion of the examination or any associated reference materials described in paragraph (a)(2)(ix) of this section may be copied or retained by any person other than a person authorized by the certifying authority to copy or retain the examination or any associated reference materials described in paragraph (a)(2)(ix) of this section.

(ix) The only reference materials used during the examination are those that are approved by the certifying authority and provided and collected by the proctor.

(x) Reference materials provided to examinees are reviewed after the examination is complete to ensure that no portion of the reference material has been removed, altered, or destroyed.

(xi) The proctor reports to the certifying authority any examination administration inconsistencies or irregularities, including but not limited to cheating, use of unauthorized materials, and attempts to copy or retain the examination.

(xii) The examination must be conducted in accordance with any other requirements of the certifying authority related to examination administration.

(xiii) The certifying authority must notify each candidate of the results of his or her examination.

(b) *Additional methods of determining competency.* In addition to written examination requirements for determining competency, a certifying authority may employ additional methods for determining applicator competency, such as performance testing. Any such additional methods must be specified in the certifying authority's Agency-approved certification plan and must comply with the applicable standards in paragraph (a) of this section.

(c) *Core standards for all categories of certified commercial applicators.* Persons seeking certification as commercial applicators must demonstrate practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides by passing a written examination. Written examinations for all commercial applicators must address all of the following areas of competency:

(1) *Label and labeling comprehension.* Familiarity with pesticide labels and labeling and their functions, including all of the following:

(i) The general format and terminology of pesticide labels and labeling.

(ii) Understanding instructions, warnings, terms, symbols, and other information commonly appearing on pesticide labels and labeling.

(iii) Understanding that it is a violation of Federal law to use any registered pesticide in a manner inconsistent with its labeling.

(iv) Understanding labeling requirements that a certified applicator must be physically present at the site of the application.

(v) Understanding labeling requirements for supervising noncertified applicators working under the direct supervision of a certified applicator.

(vi) Understanding that applicators must comply with all use restrictions and directions for use contained in pesticide labels and labeling, including being certified in the certification category appropriate to the type and site of the application.

(vii) Understanding the meaning of product classification as either general or restricted use and that a product may be unclassified.

(viii) Understanding and complying with product-specific notification requirements.

(ix) Recognizing and understanding the difference between mandatory and advisory labeling language.

(2) *Safety.* Measures to avoid or minimize adverse health effects, including all of the following:

(i) Understanding the different natures of the risks of acute toxicity and chronic toxicity, as well as the long-term effects of pesticides.

(ii) Understanding that a pesticide's risk is a function of exposure and the pesticide's toxicity.

(iii) Recognition of likely ways in which dermal, inhalation, and oral exposure may occur.

(iv) Common types and causes of pesticide mishaps.

(v) Precautions to prevent injury to applicators and other individuals in or near treated areas.

(vi) Need for, and proper use of, protective clothing and personal protective equipment.

(vii) Symptoms of pesticide poisoning.

(viii) First aid and other procedures to be followed in case of a pesticide mishap.

(ix) Proper identification, storage, transport, handling, mixing procedures, and disposal methods for pesticides and used pesticide containers, including precautions to be taken to prevent children from having access to pesticides and pesticide containers.

(3) *Environment.* The potential environmental consequences of the use and misuse of pesticides, including the influence of all of the following:

(i) Weather and other indoor and outdoor climatic conditions.

(ii) Types of terrain, soil, or other substrate.

(iii) Presence of fish, wildlife, and other non-target organisms.

(iv) Drainage patterns.

(4) *Pests.* The proper identification and effective control of pests, including all of the following:

(i) The importance of correctly identifying target pests and selecting the proper pesticide product(s) for effective pest control.

(ii) Verifying that the labeling does not prohibit the use of the product to control the target pest(s).

(5) *Pesticides.* Characteristics of pesticides, including all of the following:

(i) Types of pesticides.

(ii) Types of formulations.

(iii) Compatibility, synergism, persistence, and animal and plant toxicity of the formulations.

(iv) Hazards and residues associated with use.

(v) Factors that influence effectiveness or lead to problems such as pesticide resistance.

(vi) Dilution procedures.

(6) *Equipment.* Application equipment, including all of the following:

(i) Types of equipment and advantages and limitations of each type.

(ii) Use, maintenance, and calibration procedures.

(7) *Application methods.* Selecting appropriate application methods, including all of the following:

(i) Methods used to apply various forms and formulations of pesticides.

(ii) Knowledge of which application method to use in a given situation and that use of a fumigant, aerial application, sodium cyanide, or sodium fluoroacetate requires additional certification.

(iii) How selection of application method and use of a pesticide may result in proper use, unnecessary or ineffective use, and misuse.

(iv) Prevention of drift and pesticide loss into the environment.

(8) *Laws and regulations.* Knowledge of all applicable State, Tribal, and Federal laws and regulations.

(9) *Responsibilities of supervisors of noncertified applicators.* Knowledge of the responsibilities of certified applicators supervising noncertified applicators, including all of the following:

(i) Understanding and complying with requirements in § 171.201 of this part for certified commercial applicators who supervise noncertified applicators using restricted use pesticides.

(ii) The recordkeeping requirements of pesticide safety training for noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(iii) Providing use-specific instructions to noncertified applicators using restricted use pesticides under the direct supervision of a certified applicator.

(iv) Explaining pertinent State, Tribal, and Federal laws and regulations to noncertified applicators who use restricted use pesticides under the direct supervision of a certified applicator.

(10) *Professionalism.* Understanding the importance of all of the following:

(i) Maintaining chemical security for restricted use pesticides.

(ii) How to communicate information about pesticide exposures and risks with customers and the public.

(iii) Appropriate product stewardship for certified applicators.

(d) *Specific standards of competency for each category of commercial applicators.* In addition to satisfying the requirements of paragraph (c) of this section, to be certified as commercial applicators, persons must demonstrate through written examinations practical knowledge of the principles and practices of pest control and proper and effective use of restricted use pesticides for each category for which they intend to apply restricted use pesticides, except as provided at §§ 171.303(a)(4) and 171.305(a)(5). The minimum competency standards for each category are listed in paragraphs (d)(1) through (15) of this section. Examinations for each category of certification listed in § 171.101 must be based on the standards of competency specified in paragraphs (d)(1) through (15) of this section and examples of problems and situations appropriate to the particular category in which the applicator is seeking certification.

(1) *Agricultural pest control.*

(i) *Crop pest control.* Applicators must demonstrate practical knowledge of crops, grasslands, and non-crop agricultural lands and

the specific pests of those areas on which they may be using restricted use pesticides. The importance of such competency is amplified by the extensive areas involved, the quantities of pesticides needed, and the ultimate use of many commodities as food and feed. The required knowledge includes pre-harvest intervals, restricted entry intervals, phytotoxicity, potential for environmental contamination such as soil and water problems, non-target injury, and other problems resulting from the use of restricted use pesticides in agricultural areas. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(ii) *Livestock pest control.* Applicators must demonstrate practical knowledge of such animals and their associated pests. The required knowledge includes specific pesticide toxicity and residue potential, and the hazards associated with such factors as formulation, application techniques, age of animals, stress, and extent of treatment.

(2) *Forest pest control.* Applicators must demonstrate practical knowledge of types of forests, forest nurseries, and seed production within the jurisdiction of the certifying authority and the pests involved. The required knowledge includes the cyclic occurrence of certain pests and specific population dynamics as a basis for programming pesticide applications, the relevant organisms causing harm and their vulnerability to the pesticides to be applied, how to determine when pesticide use is proper, selection of application method and proper use of application equipment to minimize non-target exposures, and appropriate responses to meteorological factors and adjacent land use. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures.

(3) *Ornamental and turf pest control.* Applicators must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of ornamental plants and turf. The required knowledge includes the potential for phytotoxicity due to a wide variety of plants to be protected, for drift, for persistence beyond the intended period of pest control, and for non-target exposures. Because of the frequent proximity of human habitations to application activities, applicators in this category must demonstrate practical knowledge of application methods that will minimize or prevent hazards to humans, pets, and other domestic animals.

(4) *Seed treatment.* Applicators must demonstrate practical knowledge including recognizing types of seeds to be treated, the effects of carriers and surface active agents on pesticide binding and germination, the hazards associated with handling, sorting and mixing, and misuse of treated seed, the importance of proper application techniques to avoid harm to non-target organisms, and the proper disposal of unused treated seeds.

(5) *Aquatic pest control.* Applicators must demonstrate practical knowledge of the characteristics of various aquatic use situations, the potential for adverse effects on non-target plants, fish, birds, beneficial insects and other organisms in the immediate aquatic environment and downstream, and the principles of limited area application.

(6) *Right-of-way pest control.* Applicators must demonstrate practical knowledge of the types of environments (terrestrial and aquatic) traversed by rights-of-way, recognition of target pests, and techniques to minimize non-target exposure, runoff, drift, and excessive foliage destruction. The required knowledge also includes the potential for phytotoxicity due to a wide variety of plants and pests to be controlled, and for persistence beyond the intended period of pest control.

(7) *Industrial, institutional, and structural pest control.* Applicators must demonstrate a practical knowledge of industrial, institutional, and structural pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to problem identification and control. Applicators must demonstrate practical knowledge of types of formulations appropriate for control of industrial, institutional and structural pests, and methods of application that avoid contamination of food, minimize damage to and contamination of areas treated, minimize acute and chronic exposure of people and pets, and minimize environmental impacts of outdoor applications.

(8) *Public health pest control.* Applicators must demonstrate practical knowledge of pests that are important vectors of disease, including recognizing the pests and signs of their presence, their habitats, their life cycles, biology and behavior as it may be relevant to problem identification and control. The required knowledge also includes how to minimize damage to and contamination of areas treated, acute and chronic exposure of people and pets, and non-target exposures.

(9) *Regulatory pest control.* Applicators must demonstrate practical knowledge of regulated pests, applicable laws relating to quarantine and other regulation of regulated pests, and the potential impact on the environment of restricted use pesticides used in suppression and eradication programs. They must demonstrate knowledge of factors influencing introduction, spread, and population dynamics of regulated pests.

(10) *Demonstration and research.* Applicators must demonstrate practical knowledge of the potential problems, pests, and population levels reasonably expected to occur in a demonstration situation and the effects of restricted use pesticides on target and non-target organisms. In addition, they must demonstrate competency in each pest control category applicable to their demonstrations.

(11) *Sodium cyanide predator control.* Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be

relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of mechanical ejection devices for sodium cyanide, including the restrictions on the use of sodium cyanide products ordered by the EPA Administrator. . Applicators must also demonstrate practical knowledge and understanding of all of the specific use restrictions for sodium cyanide devices, including safe handling and proper placement of the capsules and device, proper use of the antidote kit, notification to medical personnel before use of the device, conditions of and restrictions on when and where devices can be used, requirements to consult U.S. Fish and Wildlife Service maps before use to avoid affecting endangered species, maximum density of devices, provisions for supervising and monitoring applicators, required information exchange in locations where more than one agency is authorized to place devices, and specific requirements for recordkeeping, monitoring, field posting, proper storage, and disposal of damaged or used sodium cyanide capsules.

(12) *Sodium fluoroacetate predator control.* Applicators must demonstrate practical knowledge of mammalian predator pests, including recognizing those pests and signs of their presence, their habitats, their life cycles, biology, and behavior as it may be relevant to pest identification and control. Applicators must demonstrate comprehension of all laws and regulations applicable to the use of sodium fluoroacetate products, including the restrictions on the use of sodium fluoroacetate products ordered by the EPA Administrator. Applicators must also demonstrate practical knowledge and understanding of the specific use restrictions for sodium fluoroacetate in the livestock protection collar, including where and when sodium fluoroacetate products can be used, safe handling and placement of collars, and practical treatment of sodium fluoroacetate poisoning in humans and domestic animals. Applicators must also demonstrate practical knowledge and understanding of specific requirements for field posting, monitoring, recordkeeping, proper storage of collars, disposal of punctured or leaking collars, disposal of contaminated animal remains, vegetation, soil, and clothing, and reporting of suspected and actual poisoning, mishap, or injury to threatened or endangered species, humans, domestic animals, or non-target wild animals.

(13) *Soil fumigation.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing soil fumigation applications, including all the following:

(i) *Label and labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform soil fumigation, including all of the following:

(A) Labeling requirements specific to soil fumigants.

(B) Requirements for certified applicators of fumigants, fumigant handlers and permitted fumigant handler activities, and the safety information that certified applicators must provide to noncertified applicators using fumigants under their direct supervision.

(C) Entry-restricted periods for tarped and untarped field application scenarios.

(D) Recordkeeping requirements.

(E) Labeling provisions unique to fumigant products containing certain active ingredients.

(ii) *Safety.* Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, field workers, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require that applicators wear respirators or exit the work area entirely.

(E) Steps to take if a fumigant applicator experiences sensory irritation.

(F) Understanding air monitoring, when it is required, and where and when to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(H) First aid measures to take in the event of exposure to a soil fumigant.

(I) Labeling requirements for transportation, storage, spill clean up, and emergency response for soil fumigants, including safe disposal of containers and contaminated soil, and management of empty containers.

(iii) *Soil fumigant chemical characteristics.* Characteristics of soil fumigants, including all of the following:

(A) Chemical characteristics of soil fumigants.

(B) Specific human exposure concerns for soil fumigants.

(C) How soil fumigants change from a liquid or solid to a gas.

(D) How soil fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application.* Selecting appropriate application methods and timing, including all of the following:

(A) Application methods, including but not limited to water-run and non-water- run applications, and equipment commonly used for each soil fumigant.

(B) Site characteristics that influence fumigant exposure.

(C) Understanding temperature inversions and their impact on soil fumigant application.

(D) Weather conditions that could impact timing of soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications during specific weather conditions.

(E) Conducting pre-application inspection of application equipment.

(F) Understanding the purpose and methods of soil sealing, including the factors that determine which soil sealing method to use.

(G) Understanding the use of tarps, including the range of tarps available, how to seal tarps, and labeling requirements for tarp removal, perforation, and repair.

(H) Calculating the amount of product required for a specific treatment area.

(I) Understanding the basic techniques for calibrating soil fumigant application equipment.

(v) *Soil and pest factors.* Soil and pest factors that influence fumigant activity, including all of the following:

(A) Influence of soil factors on fumigant volatility and movement within the soil profile.

(B) Factors that influence gaseous movement through the soil profile and into the air.

(C) Soil characteristics, including how soil characteristics affect the success of a soil fumigant application, assessing soil moisture, and correcting for soil characteristics that could hinder a successful soil fumigant application.

(D) Identifying pests causing the damage and verifying they can be controlled with soil fumigation.

(E) Understanding the relationship between pest density and application rate.

(F) The importance of proper application depth and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Buffer zones and posting requirements.* Understanding buffer zones and posting requirements, including all of the following:

(A) Buffer zones and the buffer zone period.

(B) Identifying who is allowed in a buffer zone during the buffer zone period and who is prohibited from being in a buffer zone during the buffer zone period.

(C) Using the buffer zone table from the labeling to determine the size of the buffer zone.

(D) Factors that determine the buffer zone credits for application scenarios and calculating buffer zones using credits.

(E) Distinguishing buffer zone posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(F) Proper choice and placement of warning signs.

(14) *Non-soil fumigation.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing fumigation applications of restricted use pesticides to sites other than soil, including all the following:

(i) *Label & labeling comprehension.* Familiarity with the pesticide labels and labeling for products used to perform non-soil fumigation, including labeling requirements specific to non-soil fumigants.

(ii) *Safety.* Measures to minimize adverse health effects, including all of the following:

(A) Understanding how certified applicators, noncertified applicators using fumigants under direct supervision of certified applicators, and bystanders can become exposed to fumigants.

(B) Common problems and mistakes that can result in direct exposure to fumigants.

(C) Signs and symptoms of human exposure to fumigants.

(D) Air concentrations of a fumigant that require applicators to wear respirators or to exit the work area entirely.

(E) Steps to take if a fumigant applicator experiences sensory irritation.

(F) Understanding air monitoring, when it is required, and where and when to take samples.

(G) Buffer zones, including procedures for buffer zone monitoring and who is permitted to be in a buffer zone.

(H) First aid measures to take in the event of exposure to a fumigant.

(I) Labeling requirements for transportation, storage, spill clean up, and emergency response for non-soil fumigants, including safe disposal of containers and contaminated materials, and management of empty containers.

(iii) *Non-soil fumigant chemical characteristics.* Characteristics of non-soil fumigants, including all of the following:

(A) Chemical characteristics of non-soil fumigants.

(B) Specific human exposure concerns for non-soil fumigants.

(C) How fumigants change from a liquid or solid to a gas.

(D) How fumigants disperse in the application zone.

(E) Compatibility concerns for tanks, hoses, tubing, and other equipment.

(iv) *Application.* Selecting appropriate application methods and timing, including all of the following:

(A) Application methods and equipment commonly used for non-soil fumigation.

(B) Site characteristics that influence fumigant exposure.

(C) Conditions that could impact timing of non-soil fumigant application, such as air stability, air temperature, humidity, and wind currents, and labeling statements limiting applications under specific conditions.

(D) Conducting pre-application inspection of application equipment and the site to be fumigated.

(E) Understanding the purpose and methods of sealing the area to be fumigated, including the factors that determine which sealing method to use.

(F) Calculating the amount of product required for a specific treatment area.

(G) Understanding the basic techniques for calibrating non-soil fumigant application equipment.

(H) Understanding when and how to conduct air monitoring and when it is required.

(v) *Pest factors.* Pest factors that influence fumigant activity, including all of the following:

(A) Influence of pest factors on fumigant volatility.

(B) Factors that influence gaseous movement through the area being fumigated and into the air.

(C) Identifying pests causing the damage and verifying they can be controlled with fumigation.

(D) Understanding the relationship between pest density and application rate.

(E) The importance of proper application rate and timing.

(vi) *Personal protective equipment.* Understanding what personal protective equipment is necessary and how to use it properly, including all of the following:

(A) Following labeling directions for required personal protective equipment.

(B) Selecting, inspecting, using, caring for, replacing, and disposing of personal protective equipment.

(C) Understanding the types of respirators required when using specific non-soil fumigants and how to use them properly, including medical evaluation, fit testing, and required replacement of cartridges and canisters.

(D) Labeling requirements and other laws applicable to medical evaluation for respirator use, fit tests, training, and recordkeeping.

(vii) *Fumigant management plans and post-application summaries.* Information about fumigant management plans and when they are required, including all of the following:

(A) When a fumigant management plan must be in effect, how long it must be kept on file, where it must be kept during the application, and who must have access to it.

(B) The elements of a fumigant management plan and resources available to assist the applicator in preparing a fumigant management plan.

(C) The person responsible for verifying that a fumigant management plan is accurate.

(D) The elements, purpose and content of a post-application summary, who must prepare it, and when it must be completed.

(viii) *Posting requirements.* Understanding posting requirements, including all of the following:

(A) Understanding who is allowed in an area being fumigated or after fumigation and who is prohibited from being in such areas.

(B) Distinguishing fumigant labeling-required posting and treated area posting, including the pre-application and post-application posting timeframes for each.

(C) Proper choice and placement of warning signs.

(15) *Aerial pest control.* Applicators must demonstrate practical knowledge of the pest problems and pest control practices associated with performing aerial application of restricted use pesticides, including all the following:

(i) *Labeling.* Labeling requirements and restrictions specific to aerial application of pesticides including:

(A) Spray volumes.

(B) Buffers and no-spray zones.

(C) Weather conditions specific to wind and inversions.

(ii) *Application equipment.* Understand how to choose and maintain aerial application equipment, including all of the following:

(A) The importance of inspecting application equipment to ensure it is in proper operating condition prior to beginning an application.

(B) Selecting proper nozzles to ensure appropriate pesticide dispersal and to minimize drift.

(C) Knowledge of the components of an aerial pesticide application system, including pesticide hoppers, tanks, pumps, and types of nozzles.

(D) Interpreting a nozzle flow rate chart.

(E) Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed, and swath width.

(F) How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter

rotor turbulence, and aircraft propeller turbulence.

(G) Where to place nozzles to produce the appropriate droplet size.

(H) How to maintain the application system in good repair, including pressure gauge accuracy, filter cleaning according to schedule, and checking nozzles for excessive wear.

(I) How to calculate required and actual flow rates.

(J) How to verify flow rate using fixed timing, open timing, known distance, or a flow meter.

(K) When to adjust and calibrate application equipment.

(iii) *Application considerations.* The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:

(A) Weather conditions that could impact application by affecting aircraft engine power, take-off distance, and climb rate, or by promoting spray droplet evaporation.

(B) How to determine wind velocity, direction, and air density at the application site.

(C) The potential impact of thermals and temperature inversions on aerial pesticide application.

(iv) *Minimizing drift.* The applicator must demonstrate knowledge of methods to minimize off-target pesticide movement, including all of the following:

(A) How to determine drift potential of a product using a smoke generator.

(B) How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed, and concentration.

(C) Selecting techniques that minimize pesticide movement out of the area to be treated.

(D) Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.

(v) *Performing aerial application.* The applicator must demonstrate competency in performing an aerial pesticide application, including all of the following:

(A) Selecting a flight altitude that minimizes streaking and off-target pesticide drift.

(B) Choosing a flight pattern that ensures applicator and bystander safety and proper application.

(C) The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.

(D) Tools available to mark swaths, such as global positioning systems and flags.

(E) Recordkeeping requirements for aerial pesticide applications including application conditions if applicable.

(e) *Exceptions.* The requirements in § 171.103(a)–(d) of this part do not apply to the following persons:

(1) Persons conducting laboratory research involving restricted use pesticides.

(2) Doctors of Medicine and Doctors of Veterinary Medicine applying restricted use pesticides to patients during the course of the ordinary practice of those professions.