CHILDHOOD LEAD POISONING PREVENTION BRANCH

Study Guide for the Lead Abatement Project Monitor Certification Exam

California Department of Public Health,
Childhood Lead Poisoning Prevention Branch, Lead-Related Construction Unit

Introduction

The purpose of the Lead Abatement Project Monitor certification examination is to determine if the candidates possess the necessary knowledge and abilities to safely and successfully perform the Project Monitor job duties. This study guide has been developed to help candidates prepare for the Lead Abatement Project Monitor certification examination.

To register for the Lead Abatement Project Monitor certification examination, obtain a registration form from Cooperative Personnel Services (CPS) by calling (916) 263-3624, option 5. CPS will provide information regarding examination administration schedules, locations, exam fees, and special accommodations.

All candidates must pass the Lead Abatement Project Monitor certification examination prior to applying to the California Department of Public Health (CDPH) for certification, and you must also meet CDPH requirements for training, education and experience in order to become certified. You may take the exam as many times as you need to in order to pass. However, you must submit a completed re-examination form, and pay the re-examination fee to be rescheduled for a future examination. CDPH recommends that you take the Lead Abatement Project Monitor course again if you fail the certification exam three or more times, but this is not a requirement.

If you have additional questions regarding your application for certification or the examination requirements, please call the Lead-Related Construction Information Line at 1-800-597-LEAD (outside California (510) 620-5694) or visit the **Lead Certification Process Overview page**.

Examination Content Overview

The Lead Abatement Project Monitor certification examination contains 125 questions, all written in the multiple-choice format. Each question has four distinct alternatives from which to choose. None of the examination questions are intended to trick the candidates. Although some of the examination questions may seem to have multiple correct responses, candidates are instructed to choose the one response that is best from among the four alternatives. The Lead Abatement Project Monitor certification examination time limits should allow the vast majority of candidates ample time to respond to all of the examination questions.

The Lead Abatement Project Monitor certification examination assesses ten job-related content areas. The knowledge and abilities associated with each of the ten examination content areas are described below. The specific references for each of the knowledge and abilities are also listed below. It is from these references that the Lead Abatement Project Monitor certification examination questions will be based.

A. Federal and State Regulatory Requirements (24 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of the applicable Federal and State regulatory requirements for lead testing and lead in construction activities. A successful candidate should possess the:

Knowledge of the CDPH and EPA regulatory standards for lead in paint, dust, and soil. (*17 CCR 35033, 35035, and 35036)*

Knowledge of the EPA regulatory standards for lead in water. *(40 CFR Part 141, 22 CCR Chapter 17.5, Section 64670; HUD Guidelines: Chapter 5)*

Knowledge of regulations governing the abatement of lead-contaminated soil. *(HUD Guidelines: Chapter 12; and 17 CCR 36000 and 36100)*

Knowledge of CDPH Title 17 definitions and Work Practice Standards. *(17 CCR 35001 - 35050, 36000, and 36100)*

Knowledge of Cal/OSHA Lead in Construction Exposure Assessment Requirements. *(HUD Guidelines: Chapter 9, and Appendix 13.4; 8 CCR 1532.1)*

Knowledge of Cal/OSHA Hazardous Communications regulations. *(8 CCR 1509, 8 CCR 3203,* and *8 CCR 5194)*

Knowledge of the roles of CDPH Certification Disciplines. *(8 CCR 1532.1; and 17 CCR 35001-35050, 36000, and 36100)*

Knowledge of when to apply the HUD requirements and the Federal EPA lead hazard levels (Federally funded/HUD Housing) and when to use the CDPH Title17 requirements and lead hazard levels. (*40 CFR Part 745 and 24 CFR, Part 35, et al.*)

B. Lead Hazard Evaluation (10 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of lead hazard screen, risk assessment, and paint inspection protocols. A successful candidate should possess the:

Knowledge of lead hazard screen protocols, and their limitations. *(HUD Guidelines: Chapter 5)*

Knowledge of risk assessment protocols, and their limitations. *(HUD Guidelines: Chapter 5, and Appendices 8.0, 8.1 and 8.2)*

Knowledge of lead-based paint inspection protocols, and their limitations. *(HUD Guidelines: Chapter 7)*

Knowledge of the combined risk assessment and lead-based paint inspection protocols, and their limitations. *(HUD Guidelines: Chapters 5, 7, and Appendices 8.0, 8.1, and 8.2)*

Knowledge of when and how to review and interpret lead hazard evaluation results. *(HUD Guidelines Chapters 3, 4, 5, 7, and Appendix 1; and 17 CCR 35035 - 35037)*

Knowledge of paint condition classifications as specified by the HUD Guidelines. *(HUD Guidelines: Chapter 5)*

C. Administrative Duties (7 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of the administrative requirements associated with a lead abatement project. A successful candidate should possess the:

Knowledge of what the Scope of Work would consist of for abatement and clearance purposes. *(HUD Guidelines: Chapter 3, and Appendix 7.3)*

Knowledge of how to develop an Abatement Work Plan, and of the items which must be included in it. *(17 CCR 36100)*

Knowledge of requirements associated with the CDPH Abatement Notification (including documentation, posting, and filing requirements). *(17 CCR 36000 and 36100)*

Ability to make sketches, drawings, and/or diagrams of locations of deteriorated paint and where samples were taken. *(HUD Guidelines: Appendix 13.3; and 17 CCR 36000)*

Ability to determine the sequence of steps required when developing project timelines. *(HUD Guidelines: Chapter 3 and Appendix 7.3)*

D. Clearance Inspection (7 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of clearance inspection procedures and protocols. A successful candidate should possess the:

Knowledge of clearance inspection protocols, and their limitations. *(HUD Guidelines: Chapter 15, and Appendices 7.3, and 13.1 - 13.4)*

Knowledge of when and how to perform a visual inspection (prior to clearance dust wipe sampling) to ensure the work was completed, and that no visible dust or debris remains. *(HUD Guidelines: Chapters 15 and 16, and Appendix 7.3)*

Ability to calculate areas and distances (such as square footage or linear feet). *(HUD Guidelines: Appendix 1)*

E. Sampling Protocols and Procedures (15 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of the appropriate methods of testing and sampling for lead, as well as the ability to interpret and convert various lead testing results. A successful candidate should possess the:

Knowledge of when and how to collect pre-work background samples. *(HUD Guidelines: Chapters 11, 12 and 15)*

Knowledge of the HUD Guidelines sampling protocols. *(HUD Guidelines: Chapters 3, 5, 7, 10, 15, and 16, and Appendices 10.0, and 13.1 - 13.5)*

Knowledge of the appropriate sampling tools and containers to use when collecting paint, water, dust wipes, and soil samples. *(HUD Guidelines: Chapter 5, 7, and Appendices 13.1 - 13.5)*

Knowledge of how and when to collect first draw and second draw water samples to determine where the source of lead is located. *(HUD Guidelines: Chapters 5 and 16, and Appendix 13.5)*

Knowledge of the proper chain of custody protocols when sending samples out to be tested. *(HUD Guidelines, Chapter 5 sample forms)*

Knowledge of the analytical methods for assessing the amount of lead in paint (such as flame atomic absorption spectroscopy, graphite furnace, inductively coupled plasma). *(HUD Guidelines: Chapter 7 and Appendix 14.1)*

Knowledge of the analytical methods for assessing the amount of lead in soil (such as EPA Method SW-846). *(HUD Guidelines: Appendix 13.3)*

Knowledge of the analytical methods for assessing the amount of lead in dust (such as flame atomic absorption spectroscopy). *(HUD Guidelines: Appendices 13.1, 14.1, and 14.2)*

Ability to convert from one measurement unit to another (such as ppm to percent by weight). *(HUD Guidelines: Appendix 1)*

Ability to interpret laboratory testing results. *(HUD Guidelines: Chapter 7)*

Ability to interpret XRF results. *(HUD Guidelines: Chapter 7)*

F. Abatement Options (20 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of applicable abatement methods and their limitations. A successful candidate should possess the:

Knowledge of approved cleaning patterns (such as top to floor, back to forward, etc.) and approved cleaning procedures (such as vacuum, mop, vacuum) for cleaning work areas. *(HUD Guidelines: Chapter 14)*

Knowledge of procedures, hazards, and limitations associated with lead abatement options (such as costs, longevity, procedures, etc.) for interim control measures (designed to last less than 20 years). *(HUD Guidelines: Chapters 11 and 16)*

Knowledge of procedures, hazards, and limitations associated with lead abatement options (such as costs, longevity, procedures, etc.) designed to last more than 20 years. *(HUD Guidelines: Chapter 12)*

Knowledge of abatement options prohibited by HUD. *(HUD Guidelines: Chapters 11 and 12)*

Knowledge of the different types of encapsulants and when it is appropriate to use them. *(HUD Guidelines: Chapter 13)*

Knowledge of building component nomenclature. *(HUD Guidelines: Chapters 7, 11, 12, and Appendix 7.3; and NIBS Guide Specifications)*

Knowledge of the different types of enclosure systems, and when it is appropriate to use them. *(HUD Guidelines: Chapter 12)*

Knowledge of the different types of fastening materials (nails, screws, bolts, etc.) and seals

(such as caulks) used to attach an enclosure, and when it is appropriate to use them. *(HUD Guidelines: Chapter 12)*

Knowledge of the different types of substances to chemically remove lead-based paint, their properties, and how and when they can be safely used. *(HUD Guidelines: Chapter 12)*

Knowledge of how and when to wet sand and/or wet scrape substrates to remove lead-based paint. *(HUD Guidelines: Chapters 4 and 11)*

Knowledge of how and when to use a heat gun to remove lead-based paint. *(HUD Guidelines: Chapter 12)*

Knowledge of how and when to use vacuum-assisted power tools (including abrasive blasters, needle guns, sanders, and grinders). *(HUD Guidelines: Chapters 9 and 12)*

Knowledge of the different methods used to safely treat friction surfaces, and when it is appropriate to apply them. *(HUD Guidelines: Chapter 11)*

G. Containment and Barrier Systems (7 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of when and how to properly construct containment systems and site barriers. A successful candidate should possess the:

Knowledge of how to properly construct and disassemble containments and various chambers (such as decontamination chamber, clean room, etc.). *(HUD Guidelines: Chapters 8 and 12; and Steel Structures Painting Council Guidelines for Containment, a.k.a. the Society for Protective Coatings: Guide 6)*

Knowledge of how and when to build a containment dam to restrict the flow of lead-contaminated water from the worksite. *(Steel Structures Painting Council Guidelines for Containment)*

Knowledge of how and when to erect site barriers to restrict people from entering the containment area and/or abatement site. *(HUD Guidelines: Chapter 8; and 8 CCR 1532.1)*

H. Waste Issues (7 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of the characterization, storage, and disposal of hazardous wastes. A successful candidate should possess the:

Knowledge of how and when to construct and/or obtain a suitable and secure on-site hazardous waste storage area/facility. *(HUD Guidelines: Chapters 8, 10, and 12; and 22 CCR)*

Knowledge of how to safely dispose of water used at an abatement project. *(HUD Guidelines: Chapter 10; and 22 CCR)*

Knowledge of waste characterization procedures, and how to interpret the results. *(HUD Guidelines: Chapter 10; and 22 CCR)*

Knowledge of how to obtain an EPA Generator Identification Number and fill out a hazardous waste manifest for the disposal of hazardous wastes generated by the project. *(HUD Guidelines: Chapter 10; and 22 CCR)*

I. Air Monitoring and Ventilation (10 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of air monitoring equipment and worksite ventilation systems, as well as the ability to calculate flow rates and interpret air sampling results. A successful candidate should possess the:

Knowledge of how and when to install a negative pressure ventilation system to minimize the migration of lead-contaminated dust outside a containment area. *(HUD Guidelines: Chapters 8 and 12)*

Knowledge of the ventilation requirements when performing chemical removal. *(HUD Guidelines: Chapters 9 and 12)*

Knowledge of NIOSH requirements for minimum and maximum employee air

monitoring sampling volumes. *(HUD Guidelines: Appendix 13.4; and NIOSH 7082)*

Knowledge of when to use the appropriate respiratory protection based on air monitoring results per Cal/OSHA regulations. *(HUD Guidelines: Chapter 9; and 8 CCR 1532.1)*

Knowledge of the procedures for calibrating air sampling pumps using a rotometer. *(HUD Guidelines: Chapter 9 and Appendix 13.4)*

Ability to interpret air sampling results. *(8 CCR 1532.1)*

Ability to accurately calculate the flow rate for an air sample pump by using the average of the pre-sampling and post-sampling calibration flow checks. *(8 CCR 1532.1)*

J. Health and Safety (18 questions)

Questions assessing this content area require the candidate to demonstrate his/her knowledge of Federal and State regulatory requirements for worker health and safety. A successful candidate should possess the:

Knowledge of pathways of lead exposure to children and adults (such as hand-to-mouth, inhalation, ingestion, etc.). *(HUD Guidelines: Chapters 1 and 9; and 8 CCR 1532.1)*

Knowledge of the symptoms, diagnosis and medical treatment of lead exposure in adults and children. (*8CCR 1532.1: Appendix A, and HUD Guidelines: Chapter 1*)

Knowledge of ways in which workers inadvertently can transport "take home" lead away from the worksite, and the worksite hygiene requirements designed to minimize the amount of "take-home" lead. *(HUD Guidelines: Chapter 9; and 8 CCR 1532.1)*

Knowledge of Cal/OSHA worksite safety requirements. *(HUD Guidelines: Chapter 8; Cal/OSHA Construction Safety Orders: 8 CCR Sections 1669 through 1675; 8 CCR 1509, 8 CCR 1644; 8 CCR 3203, 8 CCR 3220, 8 CCR 3620; and 17 CCR)*

Knowledge of basic first aid techniques for minor injuries and heat/cold-related medical conditions. *(Cal/OSHA Construction Safety Orders: Sections 1510 and 1512)*

Knowledge of when and how to properly use personal protective equipment (such as gloves, respirators, and safety goggles). *(HUD Guidelines: Chapters 9, 12, and 14; 8 CCR 1532.1, 8 CCR 3203,* and *8 CCR 5144)*

Knowledge of how and when to perform lockout/tagout of electrical equipment to ensure the electricity remains disconnected while work is being performed. *(HUD Guidelines: Chapter 12; and 8 CCR 1760)*

Knowledge of how to read and interpret Material Safety Data Sheets (MSDS). *(8 CCR 1509, 8 CCR 3203, and 8 CCR 5194)*

Knowledge of the Cal/OSHA requirements for employee medical and air monitoring testing results. *(8 CCR 1532.1 and 8 CCR 3204*

Passing Score Information

Your score on the Lead Abatement Project Monitor certification examination will be based on the number of questions you answer correctly. Each test question is worth one point towards your overall score. You will receive an overall score and a separate score for each of the ten examination content areas. You will not be penalized for incorrect answers or guessing, so it is to your advantage to attempt to respond to all of the examination questions.

During the examination, if you feel a test question is inappropriate or problematic, you may document your concerns on the test comment form that will be provided to you at the test administration site. All candidate comment forms will be reviewed by lead abatement experts and occupational testing specialists to determine if they have merit.

A criterion-referenced approach is used for setting the passing score on the Lead Abatement Project Monitor certification examination. This approach involves setting the passing score on the basis of minimum standards for competent practice (i.e., job requirements) rather than on relative candidate performance. A panel of lead abatement Subject

Matter Experts is used to determine the minimum standards (i.e., passing scores) for the Lead Abatement Project Monitor certification examinations.

Examination Preparation Strategies

The focus of your examination preparation should be on the knowledge and abilities relevant to a newly certified Lead Abatement Project Monitor. To study for the Lead Abatement Project Monitor certification examination, focus on learning the principles and practices associated with the ten examination content areas listed in this study guide. The examination questions for the Lead Abatement Project Monitor certification examination will be taken directly from the references associated with the knowledge and abilities listed under each of the examination content areas. Many of the references can be found on line, as follows:

Title 17 CCR 35001-36100
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/CLPPB/CDPH%20Document%20Library/Title%2017.pdf

Title 8 CCR 1532.1
www.dir.ca.gov/Title8/1532_1.html

HUD Guidelines
https://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines1995

California Codes
http://leginfo.legislature.ca.gov/faces/codes.xhtml

California Regulations
https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I19CB1BB0D60711DE88AEDDE29ED1DC0A&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

Federal Regulations
www.access.gpo.gov/nara/cfr/cfr-table-search.html

If you have further questions regarding your application for certification or the exam requirements, call the Lead-Related Construction Information Line at 1-800-597-LEAD (outside California (510) 620-5694) or visit the **Childhood Lead Poisoning Prevention Branch** and click on "**Lead Professionals**".