

RCT/HPT Site Standard OJT Program  
OJE Evaluator Reference

Course Number: **022308**

Course Title: RCT/HPT OJT/OJE Task – Contamination Survey

Task Title: Contamination Survey

Form(s) Radiological Survey Report

[Generic forms may be used in lieu of contractor/facility specific forms]

Terminal Objective: Demonstrate and document a Contamination Survey

<b>Objectives – Part A</b>	
<b>Method</b>	<b>Task</b>
D	<p>Define the term “Survey”</p> <p><i>An evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources or radiation.</i></p>
D	<p>Define the term "Contamination"</p> <p><i>The presence of residual or unwanted radioactive material resulting from a DOE activity in or on a material or property.</i></p>
D	<p>Define the term “Removable Contamination”</p> <p><i>Radioactive material that can be removed from surfaces by non-destructive means, such as casual contact, wiping, brushing, or washing.</i></p>
D	<p>Define the term “Fixed Contamination”</p> <p><i>Radioactive material that has been deposited onto a surface and cannot be readily removed by non-destructive means, such as casual contact, wiping, brushing, or laundering. Fixed contamination does not include radioactive material that is present in a matrix, such as soil or cement, or radioactive material that has been induced in a material through activation processes.</i></p>
D	<p>Explain what constitutes a “Large Area Wipe (LAW)” and when and how they are used.</p> <p><i>Media is wiped over an area greater than 100 cm<sup>2</sup> (e.g., entire or large sections of floor area entire pieces of equipment). This is a no-go survey used to supplement standard swipe techniques in areas generally assumed to be</i></p>

Objectives – Part A	
Method	Task
	<p><i>non-contaminated, such as entrances to RBAs. If contamination is detected on a LAW, re-survey the area using 100 cm<sup>2</sup> technical swipes.</i></p> <p>NOTE: Maximum area for a LAW is 1,000 cm<sup>2</sup> (WCH 1,500 cm<sup>2</sup>)</p>
D	<p>Identify the minimum count time for the backgrounds</p> <p>Minimum of one minute for alpha Response time or until stabilized for beta-gamma <i>Minimum of ten minutes for alpha (WCH only)</i></p>
D	<p>Identify the maximum background levels when surveying for removable contamination</p> <p><i>WCH</i>  <math>\leq 700</math> cpm for all beta-gamma probes  <math>\leq 300</math> cpm for 20 cm<sup>2</sup> beta-gamma probes  <math>\leq 10</math> cpm for all alpha probes</p> <p><i>CHPRC/MSA/WRPS</i>  3 cpm for alpha surveys (PAM) and 150 cpm for beta-gamma surveys (GM Survey Instruments).</p>
D	<p>Identify the maximum scan speeds for personnel</p> <p><math>\leq 2</math> in/sec for all probes</p>
D	<p>Identify the maximum scan speeds for items and material surveys</p> <p><i>CHPRC/MSA/WRPS</i>  <math>\leq 2</math> in/sec beta/gamma for 15 cm<sup>2</sup> probe  <math>\leq 2</math> in/sec alpha for 100 cm<sup>2</sup> probe  <math>\leq 1</math> in/sec alpha for 54 cm<sup>2</sup> probe (with a background <math>\leq 3</math> cpm)</p> <p><i>WCH</i>  <math>\leq 6</math> in/sec beta/gamma for 100 cm<sup>2</sup> probe  <math>\leq 2</math> in/sec beta/gamma for 20 cm<sup>2</sup> probe  <math>\leq 2</math> in/sec alpha for 100 cm<sup>2</sup> probe  <math>\leq 2</math> in/sec alpha for 54 cm<sup>2</sup> probe (with a background <math>\leq 3</math> cpm)  <math>\leq 0.5</math> in/sec alpha for 54 cm<sup>2</sup> probe (with a background of <math>&gt; 3 - 10</math> cpm)</p>

Objectives – Part A	
Method	Task
D	<p>Identify the minimum static count times and locations for items and personnel</p> <p><i>Static counts are performed when increased counts are detected and at suspect areas, (i.e., face, hands, shoes, elbows, etc.)</i></p> <p>≥ 5 sec (PRC-PRO-RP-40026)            ≥ 10 sec beta/gamma for 15 cm<sup>2</sup> probe            ≥ 10 sec alpha for 100 cm<sup>2</sup> probe            ≥ 10 sec alpha for 54 cm<sup>2</sup> probe</p>

Objectives – Part B	
P	Given smear material, perform a Large Area Wipe (LAW) on various surfaces and objects
P	Given smear material, perform a technical smear on various surfaces and objects.
P	Given a GM Survey Instrument, perform scan and static direct surveys and document the results.
P	Given a PAM, perform a scan and static direct survey and document the results.