NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION ON-SITE LABORATORY EVALUATION TRITIUM – EPA 906

V3

1/31/2023

Lab Name:	Lab ID:
Auditor:	Date:
Analyst Interviewed:	SOPs present: Y / N

General

	Reference	Yes	No	NA	Comments or Observations		
1. Make/Model of instrument							
2. Equipment in good repair?	6.6(c)6						

	Reference	Yes	No	NA	Comments or Observations
3. Make/Model of instrument					
4. Type of detector					
5. NIST traceable Calibration Standards					
6. Calibration geometry and, volume, source-detector distance reproducible?					
7. Quench curve report contains cpm, efficiency, t-SIE?					
8. Recovery and efficiency calibration completed and q-curve plot documented?	EPA 906 7.1.1-7.1.3				
9. Concentration, uncertainty, and MDA reported for each sample?					
10. Extraction and sample preparation in SOPs including corrective action?					
	Tı	ritiun	n		
 11. Add 0.5 g of sodium hydroxide and 0.1 g or potassium permanganate to 100 mL of sample. Heat to distill and discard to 10 mL fraction. Collect next 50 mL for analysis. 	EPA 906 8.1				
12. Mix 4 mL of distillate with 16 mL of dioxane liquid scintillator 8 mL	EPA 906 8.2				

Page 1 of 3 Disclaimer. This checklist is considered to be in draft form, and the information in this checklist does not supplant the requirements noted in the Regulations Governing the Certification of Laboratories and Environmental Measurements, NJ.A.C. 7:18-1 et seq, or the requirements noted within the applicable efference methods for which the laboratory is certified or seeking to become certified. This document is a tool to assist staff when performing laboratory evaluations for compliance with NJ.A.C. 7:18-1 et seq and the applicable reference methods, and is not to be considered inclusive of all requirements, and shall not be considered as final documentation that a deficiency or violation does or does not exist. If there is any disagreement between the contents of this document and NJ.A.C. 7:18-1 et seq or the analytical method reference, the regulations and/or method shall prevail (whichever requirement is more stringent).

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	Reference	Yes	No	NA	Comments or Observations
of distillate with 12 mL of detergent scintillator solution.					
13. Prepare background and standard tritium solution.	EPA 906 8.3				
14. Dark-adapt all samples and count to meet required DL.	EPA 906 8.4				

Additional Questions – Records

	Reference	Yes	No	NA	Comments or Observations
15. Are the date and time of calibration and the initials of the analyst recorded?	6.7(d)				
16. Is all calibration and sample analysis data maintained for a minimum of 5 years? Is at least 1 year of data on-site?	6.7(a) – (b)				
17. For labs using their own equipment is a maintenance log for equipment kept?	6.6(c)				

Additional Questions – Quality Control

	Reference	Yes	No	NA	Comments or Observations
18. Were PTs analyzed in the same manner as routine samples?	2.13(h)1				
19. Detection Limits	40 CFR 9,141,142				<u>1000 pCi/L</u>
20. Chain of Custody forms	6.7(c)				
21. Before beginning analysis, does the lab run a blank and spike standard?	6.6(c)4				
22. Does the laboratory perform 10% duplicate analyses?	6.6(c)3				RER or RPD

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23. Does the laboratory run a LCS and blank for every 20 samples?	6.6(c)5				

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