RADCHEM H3

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?					
Tritium					
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				

	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				1000 pCi/L
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

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