A0A0740 | Validator workpaper sample

Project	Siltronic Sediment Sampling
Matrix / method	Sediment; Alkylated PAH Homologs by EPA 8270D modified
Purpose	Selected source-traceable Stage 4 review checks

Source-linked findings for a validator to verify. Observed results, laboratory context, and professional decisions remain separate. This is an illustrative subset, not a complete validation report.

Package completeness - open items

Item	Observed in material reviewed	Reviewer follow-up
LCSD result table	No separate LCSD results table identified in the reviewed excerpt; the QAPP calls for LCS/LCSD deliverables.	Locate the record or request the laboratory explanation; do not infer LCSD performance.
Image-only raw quantitation	One C2-Decalin calculation verified; other image-only rows have not been fully checked.	Review the remaining rows; obtain clearer raw tables or instrument files if needed.

Not identified in the material reviewed does not establish that a record is absent from the complete package.

Status definitions

`PASS`	Objective check met the cited criterion in the stated scope.
`EXCEPTION`	An objective result is outside the cited limit; the laboratory context is documented.
`VERIFIED`	The stated batch/sample association is supported by cited records.
`VALIDATOR DECISION`	Final qualification or usability requires professional judgment.
`REVIEW REQUIRED`	Additional source review or information is needed.

Selected checks

QC element	Scope	Status	Validator action
Holding time	Stage 4 samples; refrigerated days-to-prep exceed 14 days; H-08 documented	`VALIDATOR DECISION`	Assess the reported frozen extension
Matrix spike	9110570-MS2; SED-04-SS-1.0; Dibenzothiophene and Pyrene	`EXCEPTION`	`VALIDATOR DECISION` for qualification/usability
Method blank	9110570-BLK2; batch 9110570; 11 added homologs	`PASS`	No blank transfer indicated under the cited policy
Batch association	9110570 blank, LCS, duplicate, and matrix spike records	`VERIFIED`	Cited batch/source relationships only
Representative recalculation	A0A0740-12; C2-Decalin	`PASS`	No arithmetic discrepancy in the reviewed row

1. Sample receipt and preservation - holding time

QC element	Holding time and preservation
Scope	Stage 4 samples, including A0A0740-01, -12, -21, and -31
Observed	Printed days-to-preparation values are approximately 27.85–30.65 days against a 14-day refrigerated criterion.
Context	The laboratory record carries H-08, stating that the hold was extended by freezing at −18 °C and that total time at 4 °C was below the standard hold time.
Status	VALIDATOR DECISION

The QAPP lists 14 days at 0–6 °C and 1 year at −18 °C for Alkylated PAH Homologs. The package documents the frozen-extension explanation, but the final qualification or usability consequence depends on the validator's assessment of the reported storage condition and project-specific decision rules.

Source trail

Lab package pp.162–163, holding-time summary.
Lab package p.42, H-08 definition.
QAPP p.71, Table 4-2, holding times for Alkylated PAH Homologs by EPA 8270D modified.

2.1 Sample QA/QC - matrix-spike recovery

QC element	Matrix spike
Batch / sample	9110570-MS2; source sample SED-04-SS-1.0 (A0A0740-33)
Method	EPA 8270Dm; EPA 3546 preparation
Status	EXCEPTION
Disposition	VALIDATOR DECISION

Analyte	Spike added (µg/kg dry)	Native sample (µg/kg dry)	MS result (µg/kg dry)	Printed recovery	Printed limit	Objective result
Dibenzothiophene	1,310	7,600	7,440	**−13%**	40–125%	Outside limit
Pyrene	1,310	40,700	37,100	**−282%**	47–127%	Outside limit

The laboratory QC record shows a 40x dilution and an S-05 dilution context. The qualifier definition for Q-03 states that spike recovery and/or RPD may be outside control limits because of the high analyte concentration in the sample. The native concentrations are materially greater than the spike amount, which is consistent with that documented context.

Production note: Preserve both facts: the recoveries are numerically outside the printed limits, and Q-03 documents why the laboratory treated the event as an exception. The exception does not itself assign a project qualifier.

Source trail

Lab package p.33, QC sample results: 9110570-MS2, source sample, 40x dilution, S-05, and Q-03.
Lab package p.124, table 9110570-MS2: native, spike, matrix-spike result, printed recovery, and recovery limits.
Lab package p.42, qualifier definitions: Q-03 and S-05.
QAPP p.59, Table 3-1: Pyrene MS/MSD accuracy criterion.

2.2 Sample QA/QC - method blank

QC element	Method blank
Batch / sample	9110570-BLK2; batch 9110570
Analytes	11 added PAH homologs
Status	**PASS**

All listed homolog rows in the method blank are reported U at their printed reporting limits. No blank hit is shown. Under the project blank policy, no B or B-02 transfer is indicated from this record.

Source trail

- Lab package p.118, method blank data sheet 9110570-BLK2.
- Lab package p.43, reporting notes and conventions: blank hits at or above the policy thresholds receive B-02 or B.
- QAPP p.50, §6.3: method blank results are part of the laboratory deliverable.
- QAPP p.75, Table 4-4: one method blank per analytical batch for every 20 or fewer samples.

2.3 Sample QA/QC - batch and sample association trace

The following records all identify preparation batch 9110570. Keeping this association intact prevents a passing record from a different batch or source sample from being used to explain the SED-04 matrix spike.

Record	Source association	Evidence
9110570-BLK2	Method blank, batch 9110570	Lab package p.118
9110570-BS2	LCS, batch 9110570; cis-Decalin 90%, Dibenzothiophene 89%, Pyrene 89%	Lab package p.120
9110570-DUP2	QC source sample SED05-SB-2 (A0A0740-01)	Lab package pp.122–123
9110570-MS2	QC source sample SED-04-SS-1.0 (A0A0740-33)	Lab package pp.33 and 124

The QAPP requires matrix spike/matrix spike duplicate, method blank, LCS, and laboratory duplicate records at the analytical-batch level. The SED-04 matrix-spike result therefore remains a batch-9110570 finding; the separate 9110582 matrix-spike record is not substituted for it.

Source trail

- Lab package pp.118, 120, 122–124, QC records for batch 9110570.
- QAPP p.75, Table 4-4, QC sample frequency and batch requirements.

3. Representative raw-quantitation recalculation

QC element	Sample calculation check
Sample / analyte	A0A0740-12; C2-Decalin
Status	**PASS** for the reviewed row
Review	The remaining image-only rows require normal raw-data review.

Source preparation and raw-table values

Instrument response concentration	**138.69 ng/mL**
Initial sample mass	11.62 g
Solids	76.31% (0.7631)
Final volume	2 mL
Dilution	10x

(138.69 ng/mL × 2 mL × 10) ÷ (11.62 g × 0.7631)
= 312.814994 µg/kg dry
≈ 312.815 µg/kg dry

The laboratory table reports 313 µg/kg dry after rounding. The reviewed calculation and reported value agree.

Source trail

Lab package p.88, sample identity and preparation details for A0A0740-12.
Lab package pp.394–395, raw quantitation table for A0A0740-12 / C2-Decalin.

Items requiring validator review

9110570-MS2 matrix spike

Recoveries of −13% and −282% are outside printed limits; Q-03, S-05, high native concentrations, and 40x dilution are documented. Decide final qualification/usability and record the rationale.

H-08 holding time

Refrigerated days-to-preparation exceed 14 days; H-08 reports frozen storage at −18 °C under the one-year frozen criterion. Assess project disposition and request aliquot-specific temperature evidence if required.

Image-only raw quantitation

Only the illustrated C2-Decalin recalculation was checked. Verify the remaining integrations, flags, and transcription against legible raw records; obtain clearer tables or instrument files if needed.

LCSD completeness/precision

No separate LCSD table was identified in the reviewed excerpt. Locate the record or laboratory explanation; determine project disposition. Do not infer LCSD performance from LCS or sample duplicates.