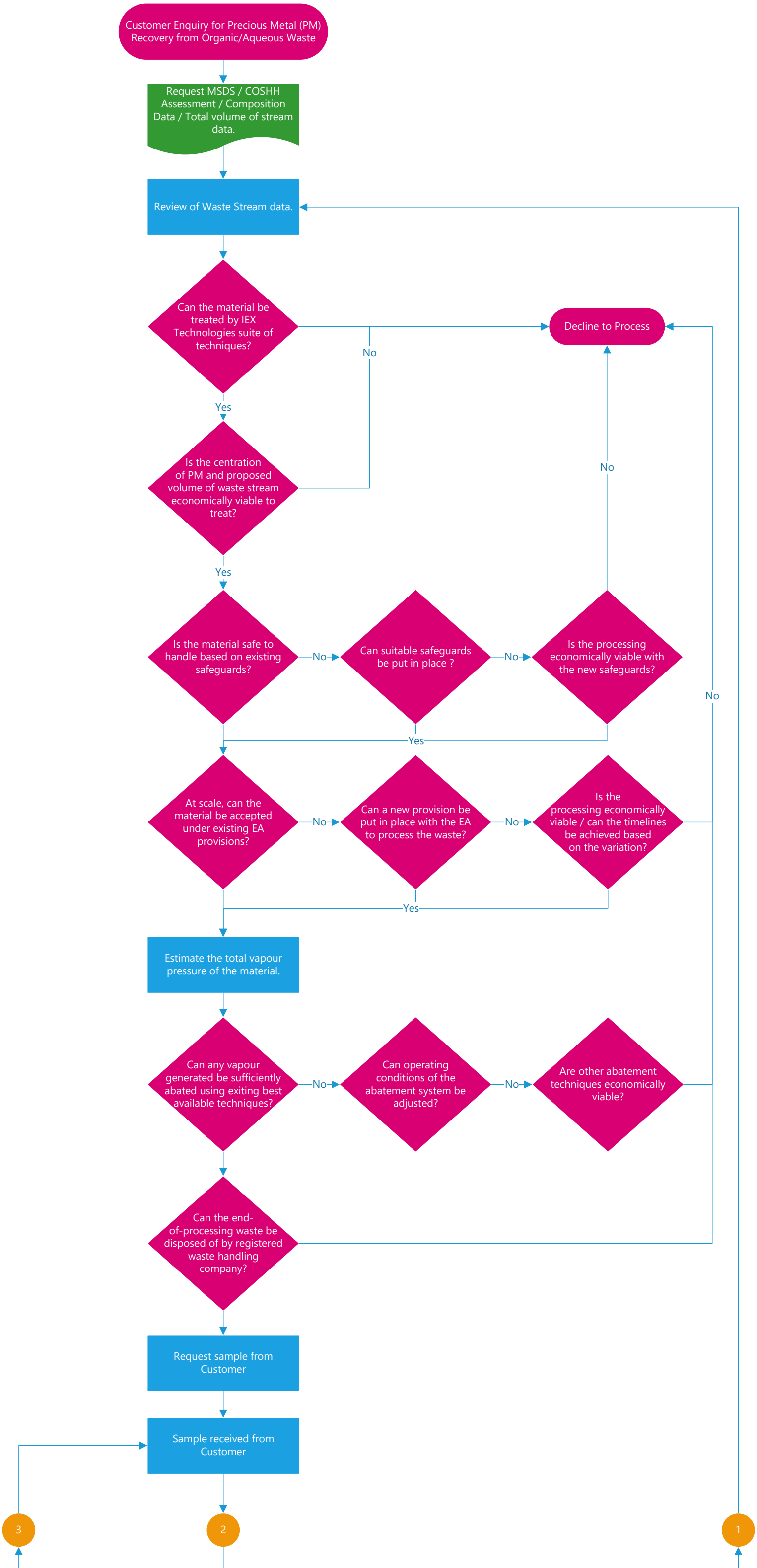
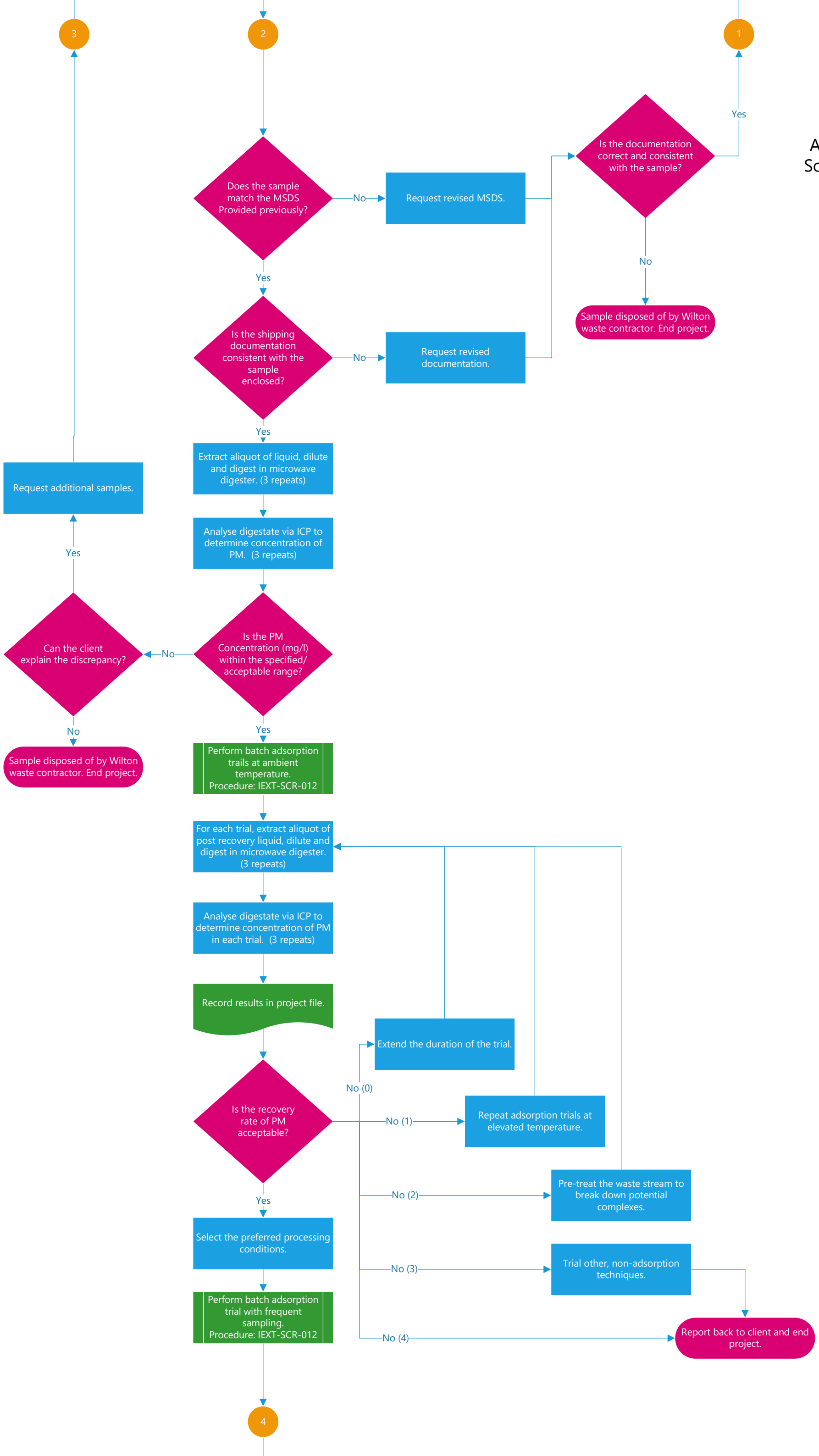
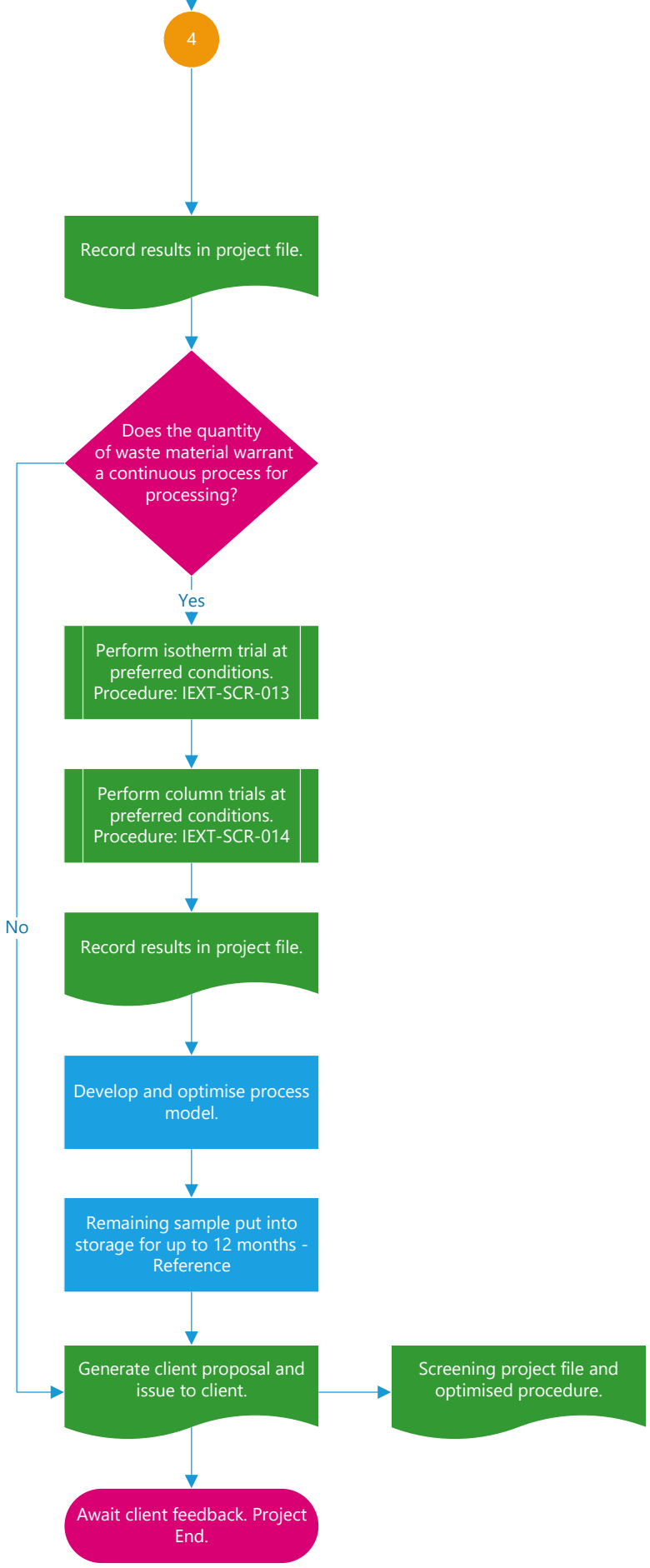

Customer Enquiry for Precious Metal (PM) Recovery from Organic/Aqueous Waste
Request MSDS / COSHH Assessment / Composition Data / Total volume of stream data.
Review of Waste Stream data.
Can the material be treated by IEX Technologies suite of techniques?
No
Decline to Process
Yes
Is the centration of PM and proposed volume of waste stream economically viable to treat?
No
Yes
Is the material safe to handle based on existing safeguards?
No
Can suitable safeguards be put in place ?
No
Is the processing economically viable with the new safeguards?
No
Yes
At scale, can the material be accepted under existing EA provisions?
No
Can a new provision be put in place with the EA to process the waste?
No
Is the processing economically viable / can the timelines be achieved based on the variation?
Yes
Estimate the total vapour pressure of the material.
Can any vapour generated be sufficiently abated using exiting best available techniques?
No
Can operating conditions of the abatement system be adjusted?
No
Are other abatement techniques economically viable?
Can the end-of-processing waste be disposed of by registered waste handling company?
Request sample from Customer
Sample received from Customer
3
2
1


3
2
1
Does the sample match the MSDS Provided previously?
No
Request revised MSDS.
Yes
Is the documentation correct and consistent with the sample?
Yes
No
Sample disposed of by Wilton waste contractor. End project.
Is the shipping documentation consistent with the sample enclosed?
No
Request revised documentation.
Yes
Extract aliquot of liquid, dilute and digest in microwave digester. (3 repeats)
Analyse digestate via ICP to determine concentration of PM. (3 repeats)
Is the PM Concentration (mg/l) within the specified/ acceptable range?
No
Can the client explain the discrepancy?
Yes
Request additional samples.
No
Sample disposed of by Wilton waste contractor. End project.
Yes
Perform batch adsorption trails at ambient temperature. Procedure: IEXT-SCR-012
For each trial, extract aliquot of post recovery liquid, dilute and digest in microwave digester. (3 repeats)
Analyse digestate via ICP to determine concentration of PM in each trial. (3 repeats)
Record results in project file.
Is the recovery rate of PM acceptable?
No (0)
Extend the duration of the trial.
No (1)
Repeat adsorption trials at elevated temperature.
No (2)
Pre-treat the waste stream to break down potential complexes.
No (3)
Trial other, non-adsorption techniques.
No (4)
Report back to client and end project.
Yes
Select the preferred processing conditions.
Perform batch adsorption trial with frequent sampling. Procedure: IEXT-SCR-012
4


4
Record results in project file.
Does the quantity of waste material warrant a continuous process for processing?
Yes
No
Perform isotherm trial at preferred conditions. Procedure: IEXT-SCR-013
Perform column trials at preferred conditions. Procedure: IEXT-SCR-014
Record results in project file.
Develop and optimise process model.
Remaining sample put into storage for up to 12 months - Reference
Generate client proposal and issue to client.
Screening project file and optimised procedure.
Await client feedback. Project End.