



Featured Technical Topic Summary **FGI Monthly Members Meeting** **Friday, August 8, 2025**



TOPIC: Asking the Right Questions before Selecting your Geomembrane

Each month Tim Stark introduces a new technical topic for discussion and possible action. This month's topic is: "**Asking the Right Questions before Selecting your Geomembrane**". This topic generated significant discussion with the main "take-aways" listed below:

Top 10 Questions to Answer before Selecting your Geomembrane if No Details Available or They are Wrong

- Can the geomembrane handle what is being contained?
- How long do you want to contain this liquid?
- What is the application and size of the geomembrane containment area? Is it a bottom liner or cover system?
- Will the geomembrane be exposed or unexposed?
- What is the location? Temperature and access
- What are the applicable regulations for your containment system?
- Is your selected membrane type suitable for tight spaces, mechanical attachment, pipe boots and structures where the watertightness cannot be fully tested, nor guaranteed long term due to operational stress?
- Is site ready for geomembrane/geosynthetics installation?
- What are current conditions at the site? What are the pre-existing conditions?
- What is the timeframe for installation? What are the safety conditions for installation?

Asking the Right Questions before Selecting your Geomembrane if No Details Available or They are Wrong

- What is the application size of the geomembrane containment area?
- Does the project have funding?
- Is it a bottom liner system or a cover system?
- Is it primary or secondary containment? In other words, is it critical or non-critical containment?
- What are the applicable regulations? Are they federal and/or state?
- Is it exposed or unexposed?
- What is it containing?
- Can you provide a fluid analysis? What is the pH level? What is the fluid temperature?
- What is the ambient and fluid temperature?
- Do you have a material specification?
- What is the service life of the geomembrane?
- What is the location? High UV exposure?
- Is there a Google Earth image of the pond?
- What is proposed time of year for installation?
- What seaming processes are necessary?

- What seam testing requirements are specified?
- What are the subgrade conditions? Is subgrade ready or reinforcement?
- Will pond be constantly filled or have fluctuating water levels?
- Are you concerned about wind uplift?
- Who is installing the geomembrane?
- What are the anticipated slope inclinations?
- If GM will be covered, what is the cover material?
- Are there drawings showing inflow and outflow pipes? How will the liquid be added and removed from the pond? How many penetrations and type of penetrations?
- What project specifications need to be followed?
- Is selected membrane type suitable for tight spaces, mechanical attachments, pipe boots, and structures where water-tightness cannot be fully tested, nor guaranteed long term due to operational applied stresses?
- Is there an ingress and egress plan for the pond?
- Are the details constructable?
- What are the performance requirements of the geomembrane? Durability, tensile strength, dimensional stability,
- What is the site access for equipment and construction?
- What are the long-term site access needs for maintenance and repairs?
- Is a warranty required? If so, how long of a warranty is needed?
- Will CQA procedures be required? This is related to the Allowable Leakage Rate.
- Is wrinkling allowed? If so, how large can the wrinkles be?
- For secondary containment applications, what is the required cleanup procedure?
- What are the safety requirements for the cover system? Is a fence system required?
- Are you trying connect to an existing geomembrane?
- Do you plan to connect this geomembrane to a future geomembrane? Will there be future expansion?

Action Items

- FGI to create a selection flow chart
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