WHAT IS AUTHENTICATION AND VALIDATION?

**AUTHENTICATION**

- **Performed by** Licensed Professionals (LP)
- who are legally obligated to authenticate all Professional Work Products (PWP) that they:
  - Prepare
  - Supervise
  - Review

Authentication demonstrates that the Licensed Professionals:
- ACCEPT PROFESSIONAL RESPONSIBILITY FOR PWP
- in accordance with:
  - APEGA CODE OF ETHICS
  - AUTHENTICATION PRACTICE STANDARD

Authentication includes 3 components:
- Impression of stamp
- Licensed Professional's signature
- Date of authentication

**VALIDATION**

- **Performed by** Responsible Members
- who validate authenticated PWP

Validation ensures PWP are consistent with:
- LP's SCOPE
- ETHICS
- QUALITY

Validation includes 4 components:
- Name of Permit Holder
- Signature
- Date
- Permit to Practice Number
- Permit to Practice (Name of Permit Holder)
- Signature
- Date 22 March 20XX
- Permit Number: P 1234
- The Association of Professional Engineers and Geoscientists of Alberta

*does not indicate technical responsibility.*
### WHAT TO AUTHENTICATE AND VALIDATE?

#### The AUTHENTICATION TEST

<table>
<thead>
<tr>
<th>Question</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the output contain technical information?</td>
<td>![Checkmark]</td>
<td>![Box]</td>
</tr>
<tr>
<td>Is the technical information complete for its intended purpose?</td>
<td>![Checkmark]</td>
<td>![Box]</td>
</tr>
<tr>
<td>Is the technical information going to be relied on by others to make a decision or take action?</td>
<td>![Checkmark]</td>
<td>![Box]</td>
</tr>
</tbody>
</table>

If the answers to these 3 questions are “YES”, the output is a professional work product and must be authenticated.

### IMPORTED AND EXPORTED PROFESSIONAL WORK PRODUCTS (PWP)

**IMPORTED**

All Professional Work Products developed or imported for use in Alberta must be authenticated and validated using APEGA protocols.

**EXPORTED**

Professional Work Products developed in Alberta for use outside Alberta must also be authenticated and validated using APEGA protocols.

**ONLY EXCEPTION**

If a PWP will never be used in Alberta, a Licensed Professional and Permit Holder may use the protocols of the destination, if they are licensed and in good standing with that jurisdiction’s regulatory body.
COMMERCIAL OR CUSTOMIZED ENGINEERED GOODS

COMMERCIAL ENGINEERED GOODS are products for which there are no applicable Canadian or international standards or specifications that govern the entire design or manufacture of the products and in compliance with existing Canadian or international regulations, codes or specifications.

When is Authentication and Validation Required?

- **NOT REQUIRED**
  - If purchased commercially and used for its intended purpose as stated in the manufacturer’s specifications.

- **REQUIRED FOR DEVIATIONS**
  - If the user deviates from the designer’s or manufacturer’s published specifications.

- **WHEN INTEGRATED, REQUIRED FOR OVERALL SYSTEM ONLY**
  - Required for system within which purchased good is integrated.

Examples of Integration Into Overall Systems

- A turbine in a mechanical system
- A pump in a fire suppression system
- A prefabricated beam or truss in a structure
- A commercial software application for a building control system

Customized Engineered Goods are products for which there are no applicable Canadian or international standards or specifications that govern the entire design or manufacture of the products.

When is Authentication and Validation Required?

All customized engineered goods, including those designed, constructed, manufactured or erected in Alberta, or imported into Alberta, must be authenticated and validated by an APEGA licensed professional and permit holder if applicable.

For more information or assistance, contact APEGA’s Director of Professional Practice.

Email: professionalpractice@apega.ca

Toll-free 1-800-661-7020
HOW TO AUTHENTICATE AND VALIDATE

PHYSICAL AUTHENTICATION

Applying an ink impression

Physically signing and dating

DIGITAL AUTHENTICATION

Licensed Professional inserts
e-PWP
e-Stamp
e-Signature
e-Date

Licensed Professional uses APEGA approved digital signature provider to digitally sign e-PWP

DIGITALLY AUTHENTICATED PWP

DIGITAL VALIDATION

Physically signing and dating

Licensed Professional uses APEGA approved digital signature provider to digitally sign e-PWP

Responsible Member uses APEGA approved digital signature provider to digitally sign e-PWP

DIGITALLY VALIDATED PWP

A digital signature irrefutably links the professional work product to a Licensed Professional or Responsible Member.

Visible when viewing on a screen

Visible when printed

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PROCEDURES FOR MULTIPLE CONTRIBUTORS

MULTIPLE PROFESSIONALS FROM A SINGLE DISCIPLINE

OPTION 1
One licensed professional authenticates and takes responsibility for the entire professional work product.

OPTION 2
Each licensed professional authenticates his/her professional work contribution and clearly indicates the boundaries and limitations of his/her authentication.

MULTIPLE CONTRIBUTORS FROM MULTIPLE DISCIPLINES

Professional work products that include several disciplines must have the work of each discipline authenticated by at least one licensed professional from the discipline taking responsibility for the work within that discipline.

NON-APEGA PROFESSIONAL CONTRIBUTORS

An APEGA licensed professional using an output that was created by non-engineer or non-geoscience professionals who have certification privileges from other professional associations, must request that the work be certified in accordance with their respective professions’ regulatory standards.

MULTIPLE CONTRIBUTORS FROM MULTIPLE PERMIT HOLDERS

When licensed professionals working under different permits to practice produce a professional work product, a responsible member from each permit holder must validate the appropriate portion of the professional work product already authenticated by their respective licensed professionals.
AUTHENTICATION FOR CONTINUOUS OPERATIONS AND FIELD REVISIONS OF PROFESSIONAL WORK PRODUCTS

IMPORTANCE OF AUTHENTICATION

APEGA recognizes that engineering and geoscience solutions during continuous operations may be needed.

LICENSED PROFESSIONALS

Licensed Professionals and Responsible Members are obligated to preserve the health, safety, and welfare of the public, and to maintain high regard for the environment when considering options to preserve continuous operations.

TIMING OF AUTHENTICATION

Is there time to authenticate before revisions or changes must be made?

SITUATIONAL FACTORS TO CONSIDER

Safety of people, preservation of the environment or infrastructure.

or integrity of continuous operations.

FIELD CHANGES OR REVISIONS

All revisions or changes, regardless of their number or how they are communicated, must be authenticated and validated.

WHEN AUTHENTICATION BEFORE IMPLEMENTATION IS NOT FEASIBLE

The Responsible Member must immediately document the circumstances and details surrounding the change or revision. The change or revision must then be authenticated as soon as reasonably possible.

FOR MORE INFORMATION OR ASSISTANCE, CONTACT APEGA’S DIRECTOR OF PROFESSIONAL PRACTICE

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