



Drilling & Initial Completions ERP Supplement Content Checklist Guidance Document

August 2018

Version 2.1

ERP System - Relationships between Plan Types

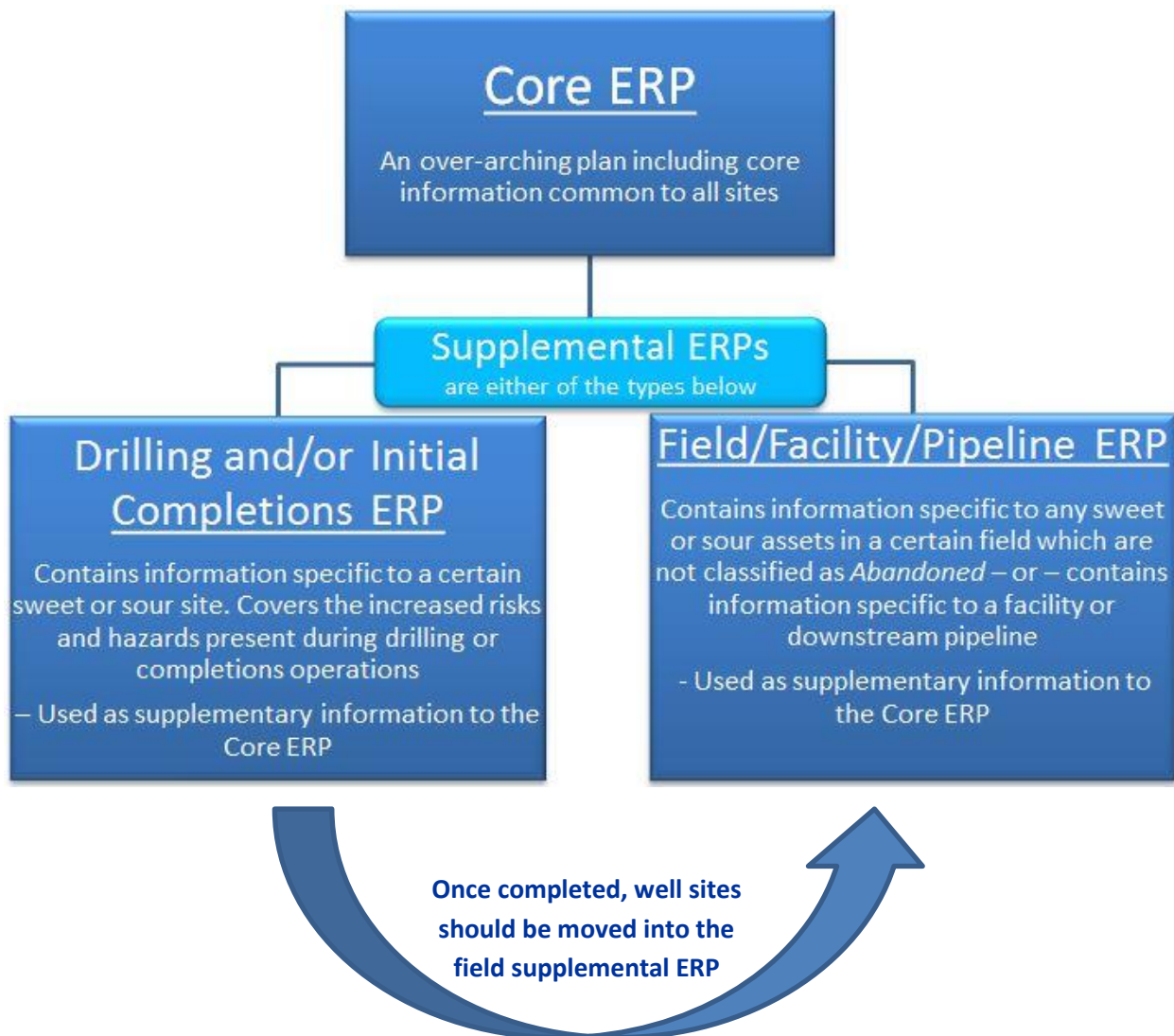


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Manual Revisions

The Commission is committed to the continuous improvement of its documentation. Revisions to the documentation are highlighted in this section and are posted to the [Documentation Section](#) of the Commission's website. Stakeholders are invited to provide input or feedback on Commission documentation to OGC.Systems@bcogc.ca or submit feedback using the [feedback form](#).

Version Number	Posted Date	Effective Date	Chapter Section	Summary of Revision(s)
2.1	August 8, 2018	September 1, 2018	Various	This document has been updated to include guidance regarding dams.

Submission of Plans

The permit holder is required to develop a drilling and initial completions (D&C) supplemental emergency response plan¹ (ERP) when involved in ANY drilling or initial completion operations. The permit holder must submit a supplemental plan for each location before operations commence, to be used in conjunction with the Core plan. If the permit holder wishes to use different sized Hazard Planning Zones (HPZs) for drilling and then initial completions operations, then the plan must show both release rates and HPZ's on the map.

- When drilling a multi-well pad, one supplemental plan may be used for all wells.
- The plan format for drilling and completions may also be used for workover operations.
- This plan is valid for one year from the date the supplement was created, or until the well(s) have been moved into production, at which time the Field supplemental plan should be updated to include the new well(s).

Plans must be received by the BC Oil and Gas Commission (Commission) prior to commencement of any drilling and completions activity. This includes spudding/setting of surface casing, and applies to both sweet and sour operations.

All supplemental ERPs on file with the Commission must be submitted in both electronic and hard copy formats, along with the associated checklist. At this time, the Commission can only accept ERP electronic submission through our Secure File Transfer Protocol Site (SFTP). In order to submit electronic ERP's through the SFTP, please email OGC.Systems@bcogc.ca for a user ID, password, and URL. Hard copies can be mailed to the BC Oil and Gas Commission, Bag 2, Fort St. John BC V1J 2B0 ATTN: Public Protection & Safety Branch

Each electronic D&C supplemental ERP is to be submitted in PDF format separately from the Core as follows:

WA # [Well Number(s) and Name] Supplement [Created Date YYYY-MM-DD]

e.g. WA 00252-00258 ABC Ltd HZ Gundy D-007-H,094-B-16 Wells Main to D Supplement 2016-06-25

A separate Hazard Planning Zone (HPZ) map (in Shape file format) and named as follows:

WA # [Well Number(s) and Name] Map [Created Date YYYY-MM-DD]

¹ OGAA Section 38(1)(a) and CSA Z 246.2 Sections 1.2 (application) and 11.1 (plan requirement)

e.g. WA 00252-00258 ABC Ltd HZ Gundy D-007-H,094-B-16 Wells Main to D Map 2016-06-25

Drilling and initial completion review letters will be sent to permit holders when we have received both electronic and hard copies or the electronic copy and a courier tracking number.

Contents of a Supplemental Plan

The permit holder is expected to determine the level of detail required to address each item in a D&C plan based on the hazards and potential consequences of an emergency. As a minimum, the permit holder must include the following information in its plan (where applicable).

1. Cover Page

The cover page of the binder should include:

- Legal name of the permit holder under which the assets are registered in B.C.
- The permit holder's 24-hour emergency phone number. This must be the same as the number on the site location signs.
- The Commission's 24-hour incident reporting phone number.
- Name and type of the supplement (must include that it is the D&C supplement with its well name(s) and location(s); for example, "ABC HZ Red Creek 9-70-64-30 Drilling & Initial Completions Supplement").
- Dates the ERP supplement was developed – D&C ERP's expire 1 year from the date the ERP was created.

2. Table of Contents

A comprehensive table of contents must be included at the beginning of the supplemental ERP in an easy-to-use format.

3. Document Controls

Distribution List

The number of each supplemental ERP and the names of the supplement holders are listed.

Record of Revisions/Updates (if applicable)

All revisions must be logged on a record of revision including the dates the supplement was revised, the content that was changed, and sign-off by the responsible person similar to the example below.

Table of Revisions				
Date	Revision #	Revision Highlights	Date Inserted into ERP YYY-MM-DD	Signature
16 Apr 01	1	New AQM contacts, Pg. 17	16 Apr 03	AJ Smith

4. Well Summary Page

- Well name(s) and Authorization number(s).
- Surface legal location of the well (NTS/DLS).
- Surface location coordinates UTM NAD 83.
- Size of HPZ in metres for drilling and initial completions.
- Potential H₂S release rate for both drilling and completions.
- Rig name (if known)
- Name of the nearest main response centre where emergency services would be dispatched. Include Directions that include road names, kilometre markings, and right or left turns. These directions should be shared with the response services that may be dispatched to the site.
- Topographic setting, land use and prevailing winds.
 - Describe the land; for example, forested, rolling hills, flat land, mountainous, river valley, farm land, etc.
 - For fluid producing wells, the direction of anticipated overland flow, and any bodies of water in close proximity.
 - State the prevailing winds for the area.
 - Name of the nearest settlement area and distance in kilometers.
 - Distance to nearest occupied dwelling.

5. Procedures for Notification of Operations to Affected Parties

Procedures for who will be contacted, including who will make the contacts and how and when they will be contacted. Contact must occur at commencement and conclusion of drilling, entry of a sour zone and initial completion operations.

6. Site Specific Procedures for Isolating the Hazard Response Zone (HRZ)

- Site-specific procedures describing where and how the HRZ will be isolated, including applicable roads, waterways, railroad lines, pipeline right of ways, etc.
- Reference the Core ERP for other procedures.

7. Site Specific Procedures for contacting and evacuating/sheltering impacted parties

- Site specific procedures of who to contact, when to contact, and how to contact the affected public
- Reference the Core ERP for general procedures.

8. Site Safety Plan

A site-specific plan to ensure the safety of the workers and responders at the site for example, muster points, evacuation of workers, etc.

9. Site-Specific Contact Information

List the site-specific contact names and numbers for the following:

- Permit holder.
- On site emergency contacts.
- Rights holders, non-resident land owners/renters (including legal land description), and industrial operators.
- External emergency response services phone numbers:
 - contractors,
 - mutual aid partners,
 - other permit holders in the area
 - health emergency management
 - municipal or forestry fire service
 - Government agencies (24-hour number)
- School District (if applicable).
- Reference the Core ERP for other contact information.

10. Maps

The permit holder must ensure that maps included in the supplement are sized to provide a clear representation of the entire mapped area. The regional map and site map must be on separate pages. Digital maps must be submitted in Shape file format. Please see the

Commission's [Spatial Data Submission Standards Manual](#) or the Emergency Management Manual if additional guidance is required.

Regional Map

Regional maps should be a representation of the general area around the location, including nearby centres, airports, waterways, reception centres and the highlighted route from main response centre to the site.

Hardcopy maps should be approximately 1:250,000 scale.

Site Specific Hazard Planning Zone Map

Planning zone map showing the HPZ and everything within the zone. The zone must be ground-truthed for accuracy.

Planning zone maps must include the following if applicable:

- Locations and reference numbers of residences within the HPZ, including residences adjacent to the HPZ or on dead-end roads requiring egress through the HPZ; include driveways for dwellings.
- Lakes, rivers, streams, and any elevation feature that could impact emergency response in the HPZ.
- Topography within the area that will help determine gas or fluid dispersion.
- Settlement areas and boundaries.
- Campgrounds, recreation areas, public facilities (for example, churches, schools, hospitals, etc.) and any other public developments within the HPZ.
- Municipal boundaries.
- Trapping areas, grazing leases, range allotments and any other rights holder boundaries and their reference numbers.
- Industrial operations, including oil and gas operations.
- Railways and airports.
- Names of roads.
- Legend, measurement scale, map scale, and north arrow.
- Numbered or lettered potential roadblock locations.
- Roads that extend past the map must indicate if the roads are continuous.
- NTS and/or DLS mapping grids.
- Site map should be approximately 1:15,000 scale on 11X17 paper or larger.

11. List of site-specific emergency response and safety resources

Core ERPs should be used to list major regional equipment caches.

Supplemental ERPs will include a comprehensive list of on-hand spill and quickly available containment resources, internal or contract responders, mutual aid contacts and resources, etc. available for immediate and short-term spill response actions.

The permit holder must ensure that all equipment identified in the supplement is located where specified, and is in good working order. If including spill cooperative equipment in the plan, permit holders should be members in good standing.

The following list outlines some of the typical equipment that would be included in a supplemental plan:

- Communication equipment (primary / alternate) and radio frequencies
- Roadblock kits.
- Ignition kits.
- First aid equipment.
- Breathing apparatuses and other specialized PPE.
- Spill containment (sorbent pads, sawdust / woodchips, etc.).
- Heavy equipment (for berming, digging bell holes, etc.).
- Air monitors.

The type of air monitoring units, and the number of monitors required, is based on site-specific information, including:

- Access and egress points.
- Population density and proximity to settlement areas.
- Local conditions.

Additional equipment may be required depending on the types of risks identified by the permit holder.

12. Mutual Aid Agreements

Mutual aid should be considered by the permit holder if the permit holder does not have the capacity or resources to effectively respond to an emergency as required.

If a permit holder depends on another permit holder(s) for response during an emergency, the assisting company name and the nature of the assistance must be detailed in a signed agreement and included in the ERP.

If a mutual aid agreement is terminated or significantly altered, the affected emergency response plan must be promptly updated to reflect the changes.

13. List of Affected Parties Information within the HPZ (if applicable)

Where there are affected public in the HPZ, the drilling & initial completions supplement must include the following:

- Information about residents, businesses and public facilities within the HPZ:
 - Legal description and 911 address of the residence, business, or public facility, including evacuation route issues.
 - Name of the primary contact and a 24-hour contact telephone number (home, business, cell or other).
 - Names and telephone numbers of all residents at the location and the names of the school(s) any children attend.
 - Names and requirements of residents with special needs or requiring special provisions.
 - General information about animals, including pets or livestock.
 - Other concerns or issues raised; for example, the security of the premises during an emergency.
- All information collected during the Public Involvement must be included in the drilling & initial completions supplement.
- Information should be arranged in such a manner that it corresponds with the markings on the map and is easy to locate.
- All resident information must be labeled and managed as confidential.

14. Site Specific Hazards and Risks

The permit holder must list the hazards and risks identified in the site hazard/risk analysis.

15. Description of Site-Specific Hazardous Products and General Health Effects

A table of hazardous products for the site, listing general health effects. An example is provided in the following table:

On Site Hazardous Products Table

Hazardous Product	General Description	Health Effects	Minimum PAZ
Methane	Odorless; colorless; often referred to as "sweet gas"; flammable; lighter than air	Oxygen narcosis	
Nitrogen (NO ₂)	Lighter than air	Oxygen narcosis	
Hydrogen Sulphide (H ₂ S)	Flammable-explosive when mixed with air- forms SO ₂ when combusted; Rotten egg" smell at low concentrations- inhibits olfactory senses at high concentrations; Heavier than air; will tend to disperse slower in sheltered or low lying areas Extremely toxic;	Moderate to strong offensive odour; may cause nausea, burning of the eyes, headaches, or loss of sleep upon prolonged exposure; Moderate to severe irritation to the eyes and lungs; may cause indigestion and loss of appetite; Severe lung and eye irritation; Loss of smell; Serious damage to lungs and eyes ensues within 30 minutes of exposure leading to loss of consciousness; death within four to eight hours after exposure	

16. Copy of most recent Public Protection Information Package to Affected Parties

A copy of the most recent Public Protection Information Package must be included in the Field Supplemental. The following information should be included in the information package:

- The name and contact information for the permit holder.
- A map that shows the location of the hazard planning zone in relation to roads, dwellings, schools and public facilities, and private property potentially used by public.
- A description of site-specific hazards and risks of the activity or activities.
- A description of how the permit holder's response to an emergency may affect the person or entity receiving the information.
- How the permit holder will notify the person or entity receiving the information if, and when the permit holder thinks they should shelter in place or evacuate.
- If evacuating, how the person or entity receiving the information can get to safety in an emergency.

- A statement requesting that the person or entity receiving the information provide to the permit holder:
 - Name(s) and preferred contact information for the recipient address.
 - A description of how the person or entity may be affected by an emergency [such as any medical conditions or transportation issues.]

For further assistance, please consult the latest version of the Emergency Management Manual, available in the documentation section of the Commission’s website, or by emailing the Security and Emergency Management Branch at EMP@BCOGC.CA.