

RMD Equipment Checklist

IRP 22 defines RMD as “A drilling activity where hydrostatic drilling fluid weight could be less than pore pressure of the formation but the well is not believed to be capable of flow to surface. The intention is to handle/respond to nuisance gas at surface with appropriate equipment.”.

Note: RMD configurations do NOT include a choke. If a choke is added then the operation becomes MPD or UBD and requires MPD or UBD equipment and on-site personnel competent to use the equipment.

Note: An isolation valve is not designed to control flow or pressure and is not to be used as a choke.

For purposes of IRP 22, nuisance gas could be one or more of the following: trip gas, drill gas, bottoms-up gas or connection gas.

Note: A continuous flare may indicate there is more than nuisance gas being dealt with. At this point it is necessary to review job parameters and equipment limitations to confirm that RMD is still appropriate (see IRP 22 Section 22.7.5.1 RMD Operations Matrix).

Refer to IRP 22 Section 22.1.1 Defining the Terms for a more detailed description of the expectations of RMD.

The RMD Checklist outlines all of the topics that need to be discussed between a service provider and operator/drilling contractor when RMD equipment is provided. A review of the topics in the checklist will help ensure all personnel involved with the equipment have the necessary knowledge to operate the equipment, understand operational limits and know what to do if operations don't go as planned. The checklist is to be completed for each new well. The completed RMD checklist should be filed with the job documentation and be available to all required personnel.

Table 1. Sections of the RMD Checklist

Section	Information
Well Information	The parties involved in the operation, well location (and license), contact information for the equipment provider.
Equipment	Lists the equipment for the operation, operating limits, pressure ratings, inspection requirements, maintenance requirements.
Procedures and Operational Documentation	Lists the information the equipment provider is expected to provide and the drilling contractor is expected to discuss at the pre-drillout meeting. Note: IRP 22 provides templates for the PFD and operations matrix but these must be customized for each operation. The equipment installation should be inspected to ensure it matches the PFD. All personnel involved in the operation should understand the operations matrix and their role during well control events once the indicators in the operations matrix have been observed.
Signoff	The personnel who need to understand the equipment requirements and their operational use and confirm that all sections of the RMD Checklist have been covered.
Comments	Any comments added during review.

RMD Equipment Checklist

Well Information				
Operator:		Drilling Contractor:		
Location:		License:		
Equipment Provider:		Provider Contact:	Ph:	
Equipment Information Provided and Reviewed ¹				
	Equipment Provided	Documentation Provided	Inspection Requirements	Maintenance Requirements
RCD	Y / N	Y / N	Y / N	Y / N
RCD Spare Elements	Y / N	Y / N	Y / N	Y / N
Degasser	Y / N	Y / N	Y / N	Y / N
Flowlines	Y / N	Y / N	Y / N	Y / N
Flow Meter	Y / N	Y / N	Y / N	Y / N
Other:				
	Y / N	Y / N	Y / N	Y / N
	Y / N	Y / N	Y / N	Y / N
Procedures and Operational Documentation			Provided	Reviewed/ Verified
Process Flow Diagram ²			Y / N	Y / N
Operations Matrix ²			Y / N	Y / N
SOPs for Equipment			Y / N	Y / N
JSAs for Equipment			Y / N	Y / N
Equipment Manuals			Y / N	Y / N
Pre-Drillout Meeting/Handover			Y / N	Y / N
Other:				
			Y / N	Y / N
Signoff ³	Name		Signature	Date
Licensee Representative				
Rig Manager				
Driller				
Driller (Alternate)				
Service Provider				
Comments				

¹ Refer to documentation provided by provider for ratings, inspection, maintenance and equipment specifications.

² Available on the IRP 22 page of the Energy Safety Canada website (www.energysafetycanada.com).

³ Signoff indicates the above information has been provided and has been reviewed with the equipment provider.