

INDUSTRY STANDARD

NO. 48

Independent Verification Management (Wells, Installations, Pipelines)

18 December 2019

Inhoud

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This document will be controlled in accordance with the NOGEPA Industry Standard No. 80 on Standards and Document Control.

Abbreviations

AIM	Asset Integrity Management
EXCOM	Executive Committee of NOGEPA
IV	Independent verification
IV-er	Independent verifier
IV-SECE-block	Independent verifier SECE-block
MBW	Mijnbouwwet
MBB	Mijnbouwbesluit
MBR	Mijnbouwregeling
MEA	Ministry of Economic Affairs
MH	Major Hazard
NOGEPA	Netherlands Oil and Gas Exploration and Production Association
OPCOM	Operations Committee of NOGEPA
OSD	Offshore Safety Directive
O&G	Oil & Gas
RIGG	Rapport Inzake Grote Gevaren
RoMH	Report on Major Hazards
SECE	Safety & Environmental Critical Element
SodM	State Supervision of Mines

Definitions

Term	Meaning
Good Operating Practice	The application of those methods and practices customarily used in good and prudent oil and gas field practice in the Netherlands and/or on the Netherlands Continental Shelf with that degree of diligence and prudence reasonably and ordinarily exercised by experienced operators engaged in the Netherlands and/or on the Netherlands Continental Shelf in a similar activity under similar circumstances and conditions.
Independent Verification	Independent Verification means an assessment and confirmation of the validity of particular Written Statements by an entity or an organisational part of the operator or the owner that is not under the control of or influenced by, the entity or the organisational part using those statements.
Independent Competent Person	Independent Competent Person (ICP) is an internal or external person that assures that technical compliance of a SECE block meets legislation, international standards, industry standards and company standards.
Independent Verifier	The Independent Verifier (IV) is a person or entity performing the Independent Verification.
Independent Verifier SECE-block	IV-er SECE-block assesses and confirms Written statements of a group of SECE's and reports to the Independent Verifier about the validity of the SECE-block written statement.
Material Change IV	A change to the basis on which the current version of the RoMH was accepted including, inter alia, physical modifications, availability of new knowledge or technology and operational management changes.
Material Change SECE's	A change to the basis on which the current version of the RoMH was accepted including, inter alia, physical modifications, availability of new knowledge or technology and operational management changes.
Material Changes Wells	In the case of a notification of Well Operations, a change to the basis on which the original notification was submitted including, inter alia, physical modifications, replacement of one installation with another, availability of new knowledge or technology and operational management changes.
Non-production installation	An installation other than an installation used for production of oil and gas as defined in article 1.ac of the Dutch Mining Act.
Operations	Oil or Gas exploration or production management.
Operator	The entity appointed by the licensee or licensing authority to conduct (offshore) oil and gas operations, including planning and executing a well

	operation or managing and controlling the functions of a production installation
Offshore Safety Directive	Directive 2013/30/EU of the European Parliament and of the Council of 12 June 2013 on safety of offshore oil and gas operations.
Term	Meaning
Production installation	An installation used for production of oil and gas as meant in the article 1.ab of the Dutch Mining Act.
Responsible Committee	The committee of NOGEP that has been appointed by the EXCOM as the owner of a specific Standard.
SECE	A Safety & Environmental Critical Element as identified in the RoMH.
SECE-block	A group of SECE's identified by an operational system.
Standard	A NOGEP Industry Standard as approved in accordance with Standard 80.
Suitable	Right or fully appropriate, including consideration of proportionate effort and cost, for a given requirement or situation, based on objective evidence and demonstrated by an analysis, comparison with appropriate standards or other solutions used in comparable situations by other authorities or industry.
Standard	A NOGEP Industry Standard as approved in accordance with Standard 80.
Verification Scheme	By Operator established scheme(s) regarding SECE verification and Well Examination.
Well Examination	Well Examination is an independent assurance process on behalf of the Well Operator to give independent assurance that the pressure boundary of the well is controlled throughout its life and the pressure-containment equipment that forms part of the well is suitable for the anticipated well conditions at all times.
Well Examiner	The Well Examiner is an Independent Verifier performing the Well Examination.
Well Operations	Any operation concerning a well that could result in the accidental release of materials that has the potential to lead to a major accident, including the drilling of a well, the repair or modification of a well, the suspension of well operations and the permanent abandonment of a well.
Well Operator	The Well Operator is the Operator carrying the responsibility for the well, being the licensee who is appointed as operator by MEA (of the sole licensee).

Written Statement	A Written Statement is a performance report of (a group of) SECE's (SECE-block).
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Legal Requirements

Offshore Safety Directive 2013/30/EU	Annex I. 4; Annex I. 5; Annex V
Dutch Mining Act – MBW (<i>Mijnbouwwet</i>)	MBW 45I Independent Verification MBW45n.3 Notification Well Activity
Dutch Mining Decree – MBB (<i>Mijnbouwbesluit</i>)	MBB 53(1a-b) technical integrity and inspection programme of production/storage installation (offshore - before first use, five yearly) MBB 54 strength and stability of installation after repair (offshore) MBB 55(7) 56(1d)(1e) technical integrity of exploration installation (mobile rig etc.) – offshore before placing it on location MBB 60 assessment of abandonment plan MBB 84e, 84f, 84g Independent Verification MBB 97, 101 quality and construction/installation of pipeline conform legal requirements – before fist use/ following repair
Dutch Mining Regulation – MBR (<i>Mijnbouwregeling</i>)	MBR 11a.5.1, 11a.5.2, 11a.5.3 Independent Verification

Related standards

NOGEP A Standard 04	Competency of personnel
NOGEP A Standard 42	Well Examination
NOGEP A Standard 45	Well Decommissioning
NOGEP A Standard 49	Independent Verification Execution
NOGEP A Standard 83	RIGG Standard, Report on Major Hazards (RoMH)
NOGEP A Standard 90	Asset Integrity Management

Important Nomenclature used in this Standard

In the context of this Standard and when so used to describe a method or practice:	
'shall'	means that such method or practice reflects a mandatory provision of law (in Dutch: <i>dwingend recht</i>). Such method or practice is mandatory for those who are the addressees of such provision (mostly the operators). A Standard can describe or quote, but not amend, mandatory provisions. When an operator in exceptional cases cannot comply for technical, operational or HSE reasons, exceptions shall be documented and reported, and risks mitigated. Please note that this does not release the operator from the obligation to comply with the law. *
'should'	means that such method or practice reflects a Good Operating Practice. An operator is generally expected to apply such method or practice, but a specific situation may require a specific alternative. In other words: the operator complies or explains, and documents the explanation. *
'could'	means that such method or practice is of an advisory nature or mentioned by way of example. An operator is not obliged to comply and is not obliged to explain if he does not comply.
* Please refer to paragraph 2.3 of Standard 80 (Standards and Document Control), for further explanation on an exception of a 'shall' provision, or on a comply-or-explain of a 'should' provision.	

1. Executive Summary

Independent verification (IV) has been an established process in the E&P industry for many years, for instance Notified Bodies and Well Examiners conduct IV.

The Dutch Mining Act (MBW) provides additional requirements for Independent Verification.

This Standard provides requirements and guidance into the system of Independent Verification and the roles of the stakeholders, and can be outlined as:

- SECE's are part of an installation with the purpose to prevent or limit consequences of Major accidents. Major (accident) Hazards are identified in the Report on Major Hazards, including the corresponding SECE's.
- Operators and owners shall establish schemes of Independent Verification as part of the Report on Major Hazards. (The RoMH needs consent from SodM.)
- Requirements for independency and competency assessment of Independent Verifiers and stipulations with respect to previous involvement.
- Requirements for selection of Independent Verifiers.
- Independent Verification can be performed by a 2nd or 3rd party, previously not involved in the SECE. SECE's of platform sections (blocks) can be assessed for verification by limited independency of verifier, to be reviewed by an Independent Verifier and is applicable to a verifiers spot-check.
- Elements in Exploration & Production can be clustered for Independent Verification.
- Accents in the relationship between Independent Verifier and Operator.

At revision 2 the content has been adjusted to the revision of the Mining Act as per 1-1-2017, due to the implementation of the EU 2013/30/EU Offshore Safety Directive.

2. Purpose, Scope and Application

2.1 Purpose

The EU Offshore Safety Directive 2013/30 from EU member states to implement Independent verification in member states regulations.

January 1st, 2017 the EU Offshore Safety Directive has been implemented in Dutch regulations.

Schemes for Independent Verification shall be established according MBW 45I.

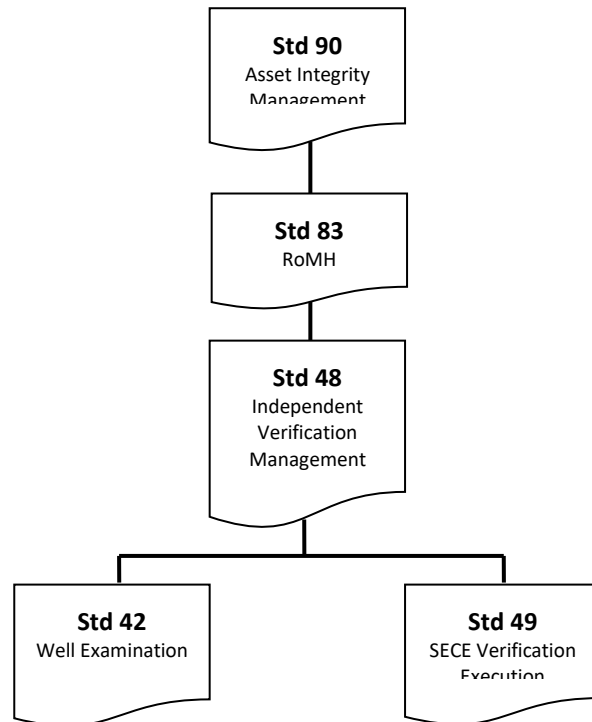
Written Statements, about the suitability and performance of SECE's, are to be issued and made available by a competent person. These Written Statements are prepared by the Operator or owner and subject to agreement with the Independent Verifier.

2.2 Scope

Independent Verification of Design, Construction, Operations, Material changes and Decommissioning as well as for Well Examination in the on- and offshore Oil & Gas-industry.

Relation to NOGEPA Asset Integrity Standards

This Standard 48 is part of NOGEPA Asset Integrity standards as outlined below.



Standard 90 describes practical approaches to Asset Integrity Management (AIM). It provides general guidance on good practice and is geared to enable and maintain management systems that fully address these conditions.

Standard 83 is a goal setting document describing the regulatory requirements for a RoMH and provides a template to draw up a compliant RoMH document. The RoMH provides a SECE listing for Independent verification and a demonstration of suitability including their scheme of maintenance.

Standard 48 contains principles and requirements for independency, impartiality of Independent Verification Management and provides the principles for Standard 42 and 49.

Standard 42 works out the requirements and provides guidance for Well Examination during Design, Construction, Intervention and Abandonment.

Standard 49 contains principles and requirements for independency, impartiality of Independent Verification of SECE's.

2.3 Application

Netherlands Territory including Netherlands Continental Shelf.

The MBW requires Independent Verification of SECE's as identified in the RoMH, in certain specified instances. IV may also be applied outside of the scope of the MBB. Where IV is applied outside the scope of the MBW, the MBW legal requirements do not apply but can provide guidance.

Applicable Dutch laws required Independent Verification of:

	Matter to be verified	Applies to	When	laws regulations and NOGEP A standards
1	Design, Construction and Installation	O&G production installations and non-production installation e.g. drilling rig or support platform	At Design phase and Commissioning	MBB 53a(1a-b), 55(7) 56(1d) MBB 97(2) NOGEP A Standard 90
2	Operate & Maintain	O&G production installations and non-production installation e.g. drilling rig or support platform	During Operations every five years	MBB 53a(1a-b), 55(7) 56(1d) MBB 97(2) NOGEP A Standard 90
3	Material changes	O&G production installations and non-production installation e.g. drilling rig or support platform	At modification / Revision SECE-listing in RoMH	MBB 53a(1a-b), 55(7) 56(1d) MBB 97(2) NOGEP A Standard 90
4	Decommissioning	O&G production installations	Before its execution	MBB 60
5	Strength (w/r subsidance, shift, drift)	O&G production installations and non-production installation e.g. drilling rig or support platform	Before first use	MBB 56(1), 55(7) 56(1d) NOGEP A Standard 90

	Matter to be verified	Applies to	When	laws regulations and NOGEPA standards
6	Strength and stability of repaired installation after physical impairment or damage	O&G production installations	After repair	MBB 54 (3)

	Matter to be verified	Applies to	When	laws regulations and NOGEPA standards
7	Selection of Independent Verifier	SECE Verification & Well Examination	Before start of Independent Verification.	MBR 11a.5.1
8	SECE Verification Scheme, Well Examination Scheme	SECE Verification & Well Examination	At start of Independent Verification.	MBR 11a.5.2 NOGEPA Standard 42, 49
9	Period of time to file documentation and repond to Verifiers findings.	SECE Verification	As off start of Independent Verification.	MBR 11a.5.3 NOGEPA Standard 42, 49
10	Safety and environmental critical elements identified in the risk assessment for the installation as described in the Report on Major Hazards, are suitable	O&G installations (mobile installations only when in use), not wells	As described in the scheme of IV, five yearly review and upon major modifications	MBW 45l MBB 84f
11	Schedule of examination and testing of the safety and environmental critical elements is suitable, up-to-date and operated as intended	O&G installations (mobile installations only when in use), not wells	As described in the scheme of IV, five yearly review and upon major modifications	MBW 45l MBB 84f NOGEPA Standard 49
12	Well design and well control measures suitable for anticipated well conditions at all times	Wells	Before start of Well Operations to be included in notification to SODM Verification of work in progress	MBW 45l MBB 84e NOGEPA Standard 42
13	<i>Independent Verification</i> , Involvement of the Independent Verifier in case of a material change to SECE(s).	SECE Verification	In the event of a change to the basis of the RoMH.	MBR 11a.5.1.3 NOGEPA Standard 49
14	<i>Independent Verification</i> , involvement of the Well Examiner in case of a material change to notified Well Operations	Wells	Planning and preparation phase As well as during the execution phase	MBW 45n.3 MBR 11a.5.1.3 NOGEPA Standard 42

3. Independent Verification

Independent Verification means an assessment and confirmation of the validity of particular Written statements by an entity (3rd party) or an organisational part of the Operator or the owner (2nd party) that is not under the control of or influenced by, the entity or the organisational part using those statements.

Therefore Independent Verification can consist of audit based confirmation of the validity and suitability written statements.

The selection of the Independent Verifier (IV-er) and the design of schemes for Independent Verification shall meet the criteria in the MBR detailed in Annex 5 of the OSD.

The MBR requires that Operators establish schemes for Independent Verification as detailed in Annex 1.5 of the OSD and shall prepare a summarized description of such schemes to be enclosed in the RoMH.

3.1 Schemes for Independent Verification

The Independent Verification scheme shall include¹:

- (a) a statement by the Operator or owner, made after considering the report of the Independent Verifier in respect of the Installation, Well design and/or Well operations, that the record of safety and environmental² critical elements and their scheme of maintenance as specified in the report on major hazards are or will be suitable;
- (b) a description of the verification scheme including the selection of Independent Verifiers, the means of verification that safety and environmental critical elements and any specified plant in the scheme remain in good repair and condition;
- (c) a description of the means of verification referred to in point (b) that shall include details of the principles that will be applied to carry out the functions under the scheme and to keep the scheme under review throughout the lifecycle (Design, Construction, Operate & Maintain, Material Changes, and Decommissioning) of the installation including:
 - (i) the examination and testing of the safety and environmental critical elements by Independent and competent Verifiers;
 - (ii) verification of the design, standard, certification or other system of conformity of the safety and environmental critical elements;
 - (iii) examination of work in progress;
 - (iv) the reporting of any instances of non-compliance;
 - (v) remedial actions taken by the Operator or owner.

¹ Specified in Annex 1.5 and Annex 5 OSD

² Please note that Annex 1.5a. doesn't contain the term environmental critical elements.

Other Elements for the Schemes of Independent Verification include:

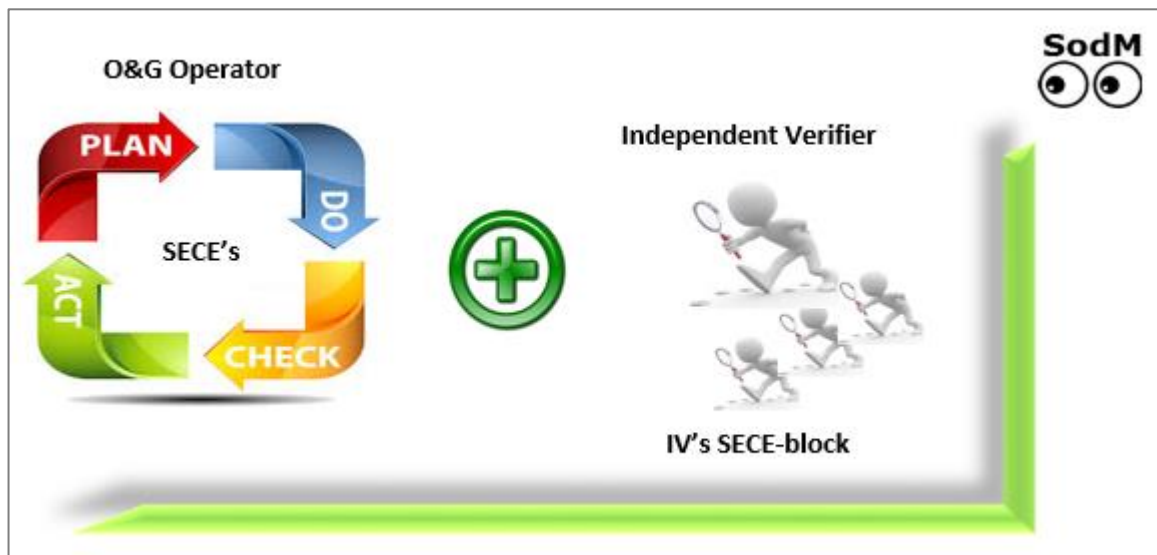
- Suitable arrangements are in place for the flow of information between the Operator or owner and the independent Verifier.
- The IV-er is given sufficient authority to carry out the functions effectively.
- The Scheme is managed, responsibility for management of the Scheme is at a suitable level.
- Description of the lines of contact between the IV-er and the Operator, including a direct escalation line between the IV-er and the General Manager (Mijnbestuurder).
- The Operator's standards, industry Standards (incl. NOGEP Standards) and applicable laws and regulations are identified and adhered to under the Scheme.
- Clear allocation of roles and responsibilities are established and documented.
- Material changes shall be referred to the independent Verifier.
- Independence and competence of the IV-er (See below).

Within the boundaries set by the MBW, Schemes of Independent Verification may vary between Operators.

3.2 Stakeholders at Independent Verification

Stakeholders at the Independent Verification process are:

- Operator.
- Independent Verifier.
- Independent Verifier SECE-block.
- Well Examiner.
- State Supervision of Mines.



Operator

The Operator assures Well Examination and SECE Verification is performed according to regulations by independent and competent Verifiers (2nd or 3rd party), that it covers 100% of the identified SECE's as mentioned to the RoMH, and that findings are adequately addressed.

The Operator **shall** coordinate the Independent Verification process.

SECE's **shall** be verified once every 5 years.

Independent Verifier (IV-er)

The IV-er **shall** assess and confirm the validity of particular Written statements about SECE's as mentioned in the RoMH, if applicable by using the verification report of the IV-er SECE-block.

If applicable, spot checks **shall** be performed together with the issuing authority of the Written statement or the dedicated IV-er of the SECE's-block.

The IV-er **shall** not be previously involved in the verification of SECE's prior to verification.

For verification purposes IV-er **shall** have access to the General Manager (Mijnbestuurder).

Independent Verifier SECE-block

IV-er SECE-block assess and confirm Written Statements of a group of SECE's and reports to the Operator about the validity of the SECE-block Written Statement.

IV-er SECE-block **shall** be assigned by the operator.

IV-er SECE-block **shall** not have been previously involved in to be verified SECE's 5 years prior to verification.

Well Examiner

The Well Examiner **shall** perform Independent Verification that well design and well control measures are suitable for the anticipated well conditions at all times.

The Well Examiner **shall** not have been previously involved in the well operations prior to verification.

For verification purposes the Well Examiner **shall** have access to the General Manager (Mijnbestuurder).

State Supervision of Mines

State Supervision of Mines supervises that the process of Independent Verification is properly organized and conducted.

SodM shall receive the IV-reporting for Independent Verification including Operators comments / remedial actions regarding IV-er's notifications.

3.3 Independence Requirements

The Independent Verification **shall** be conducted independently. The verifications **shall** be carried out with the highest degree of professional integrity and technical competence and **shall** be free from all pressures and inducements, particularly financial, which might influence the verifiers judgment or the results of the verification, especially from persons or groups of persons with an interest in the results of verifications.

The Independent Verifier shall previously not have been involved in the installation which is subject of Independent Verification or where his or her objectivity might be compromised.

Previously involvement shall be restricted under the circumstances:

- By performing Independent Verification, the Independent Verifier **shall** in future not be considered as previously involved;
- An Independent Verifier SECE-block (IV-SECE-block) who was previously not design decision involved, is clearly disclosed and dates back five years or more, shall not be considered as previously involved.

4. Competency Requirements

The IV-er and Well Examiner should have suitable technical competence.

The Independent Verifier **shall** have appropriate knowledge of audit principles, practices and techniques.

The Independent Verifier **shall** have appropriate audit management skills.

NOGEP Standards 42 and 49 provide additional guidance.

5. Selection of Independent Verifier and Well Examiner

The Independent Verifier and Well Examiner **shall** meet the requirements according MBR 11.5.1 as detailed in the OSD Annex 5:

- Independent from the operational chain of command;
- Not previously involved as detailed in section 3.3;
- Suitable technical competence on areas to be verified, and good knowledge about relevant legislation requirements, industry standards and practices.

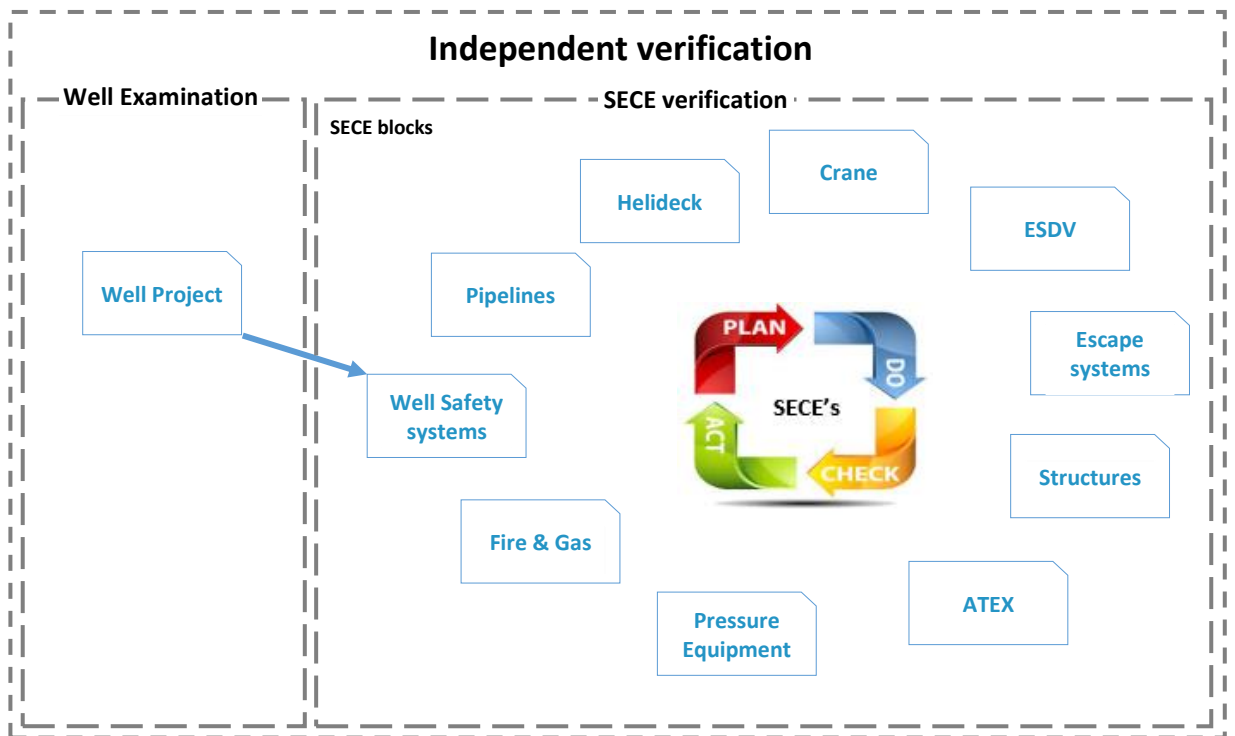
The requirements to be acknowledged by companies' management and formalized either by contract (third parties) or by appointment letter (second party).

6. Independent Verification elements

For Independent Verification purposes Installation SECE's can be clustered into SECE-blocks. A SECE-block can be Independent Verified by an IV-er or an IV-er-SECE-block.

In case of Independent Verification by an IV-er SECE block, the issued Independent Verification report shall be reviewed by the Independent Verifier.

Principle outline of Independent Verification of SECE's grouped to blocks.
 (Definition of SECE-block is indicative)



SECE's

Independent Verification of SECE's addresses the following elements:

A. Well examination

Independent Verification for Well Examination is described in NOGEP Standard 42.

B. Design, Construction, Installation, Material change & Decommissioning verification

Independent Verification of Design, Construction, Installation, and Decommissioning of facilities is detailed in NOGEP Standard 49 SECE Verification.

Material Change Verification is applicable if the consequence of the material change is a change of SECE's in the RoMH.

C. Operate & Maintain phase

Independent Verification of SECE's in Operate and Maintain phase is detailed in NOGEP Standard 49 SECE Verification.

7. Relationship between Independent Verifier and Operator

The relationship between the Verifier and Operator should address the following:

1. The subjects as mentioned in MBW referred EU-OSD Annex V.
2. The SECE's to be verified and corresponding performance standards.
3. The various steps in the verification process.
4. Accepting for review at operators initiative available reports of Independent verification by IV-er's SECE-block and to perform spot-checks together with IV-er-SECE-block.
5. Perform Independent Verification according the Verification scheme.
6. Independent Verifiers' quality management system.

The Operator and the IV agree on the degree of confidentiality.

Suitable arrangements **shall** be in place for the flow of information between the Operator or owner and the IV.

The IV-er and the Operator consult with each other as appropriate during the Verification assessment. In particular the IV contacts the Operator if it has any concerns as to subject matter of its Verification. The Operator responds to and takes appropriate action based on the advice of the IV.

The IV timely conveys its provisional views to the Operator and discusses its draft final report with the Operator before making it final.

The independent Verification **shall** be transparent.

8. Document Management and Retention

Document Management and Retention is detailed in Standard 042Well Examination and 049 Independent SECE Verification Execution.
