

Inspection & Test Plan Procedure – US Gas



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Inspection & Test Plan Procedure

Review and Approval

The following signatures indicate that the undersigned have read and agreed to the contents of this record, and that they approve and accept its distribution and use.

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Revision History

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Inspection & Test Plan Procedure – US Gas**Doc. No.: USNG-QA-PRO-0002****Rev. #: 0****Driver: Best Practice****Status: Published****Purpose**

The purpose of this procedure is to define the US Gas Projects process for:

- Defining when and how often ITPs are required
- Development of ITPs (both from scratch and use of Standard ITP Templates)
- Review of ITPs prior to use
- Utilization of ITPs at the work location

Scope

This document has been developed for use by both TC Energy and Contractor personnel and is intended for all TC Energy project sizes, types and regions. It is to be used in conjunction with *TES-CT-ITP-GL Inspection Test Plan Specification for Construction and Fabrication (CAN-US-MEX) (Item ID: 1017376226)*.

Use of Inspection and Test Plans are not mandatory for work performed by the US Construction Services group.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

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Contents

1	General	4
1.1	Inspection and Test Plans	4
1.2	Content of an Inspection and Test Plan	4
1.3	Activities Requiring Inspection & Test Plans	4
1.4	Frequency of Inspection & Test Plans	5
1.4.1	Facilities Construction	5
1.4.2	Pipeline Construction	5
2	Developing an Inspection and Test Plan	5
2.1	Activity Number	6
2.2	Description of QA and QC Inspection and Test Activity	6
2.3	Reference Document Code / Standard / Specification	7
2.4	Inspection / Test Procedure	7
2.5	Acceptance Criteria	8
2.6	Responsible Party	8
2.7	Quality Control Compliance Documentation	8
2.8	Stage / Frequency	9
2.9	Contractor and Company Verification Points	9
2.10	Comments	11
3	Standardized ITP Templates	11
3.1	How to Complete Standardized ITP Templates	12
4	Submission and Review of ITPs	13
5	Utilizing ITPs on the Worksite	14
5.1	Approval	14
5.2	ITP Content	14
5.3	Activity Signoff	14
5.4	Quality of Compliance Documents	14
5.5	Closure	15
6	Frequently Asked Questions	15
Appendix A: ITP Template		17
Appendix B: Critical ITPs		19

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

1 General

1.1 Inspection and Test Plans

ITPs provide a formal means of examining, evaluating, monitoring, testing, and measuring how the quality for each definable feature of work - or activity - on a project will be ensured at different project stages, according to specified requirements.

They are supplied by the Contractor and signed off progressively by their Quality Control personnel and a TC Energy representative (e.g. Craft Inspector).

ITPs are developed per the requirements in [TES-CT-ITP-GL Inspection Test Plan Specification for Construction and Fabrication \(CAN-US-MEX\)](#) (Item ID: 1017376226)

ITPs are not intended to replace the requirement to review the Specification / Code. They are to be used as a planning tool for Inspection and Tests.

1.2 Content of an Inspection and Test Plan

ITP content consists of:

- Activities that provide evidence that requirements to complete the project have been met, e.g. compaction testing, weld inspection, coating inspection, etc.
- The origin of the requirement (e.g. Scope of Work, Standards, Specifications, Codes, Manufacture's Requirements, etc.), including the rationale, stage and frequency, and acceptance criteria.
- A reference to the contractor's Inspection Procedure(s) that describes how the activity will be tested or inspected and the verification document they will use to verify the activity.
- Controls (e.g. hold points, witness points) to ensure the quality of a project is monitored.
- Notes or comments that have been taken from Lessons Learned if available.

The [Inspection and Test Plan Template](#) (Item ID 014266747) (Appendix A) is an optional template the contractor can utilize to create ITPs and contains the minimum requirements required by TC Energy.

1.3 Activities Requiring Inspection & Test Plans

Within US Gas Projects, ITPs covering critical activities will be utilized. For non-critical activities, the Project Manager, with support of the Construction and Quality Teams, will determine what requires an ITP and what does not. When determining if an ITP is required, ensure the applicable risk is considered.

A list of critical ITPs can be found in Appendix B of this document.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

Example:

The only concrete scope on a project is pouring a 10' sidewalk – which is a small scope. An ITP would reduce risk of re-work due to improper installation however this risk is low. An ITP would not be used for this scope. If there was a lot of concrete or if it was for a building or equipment foundation, these would be more critical.

1.4 Frequency of Inspection & Test Plans**1.4.1 Facilities Construction**

Number of ITPs is based on how systems are turned over. If systems will be turned over sequentially, separate ITPs shall be developed to ensure there is a completed ITP with each turned over system.

Example:

A project will be performing upgrades in an existing compressor station. These will be done in two phases so the station can re-start before some of the scope is complete. Two ITPs should be developed for each activity being performed as the phase I work will be turned over earlier.

If the same activity is performed by two different companies or two different groups of the same company, separate ITPs shall be developed.

Example:

The contractor will be fabricating pipe spool in their shop and performing welds in the field – two separate ITPs would be used.

1.4.2 Pipeline Construction

Pipeline construction usually only consists of a single system that stretches long distances. This however does not mean you only need one ITP for each activity. It is beneficial to have multiple ITPs for an activity as this will likely identify potential problems sooner, however, it is important not to have so many ITPs that it hinders the process. Pipeline ITPs can be implemented as follows:

- Per Linear Distance. Indicate the “to and from” markers on the ITP (e.g. every 5km/miles).
- Physical boundaries (i.e., between block valves)
- Per Pressure Test Package Section. Supporting documents for the pressure test package is required. Utilizing an ITP to help organize this would help the process.

Example:

It makes sense to have a Welding ITP that aligns with pressure test package boundaries, but it does not make sense to have one for every ten welds.

2 Developing an Inspection and Test Plan

The following section will walk through the step-by-step requirements for developing an ITP from a blank template. You can find a blank ITP Template in Appendix A.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

2.1 Activity Number

Activity Number is a unique number assigned by the author to each activity in the Inspection and Test Plan.

The ITP is broken up into sections and each section has a sub-section. For example, Section 1.0, “Pre-Construction” or “General”, Section 2, “Submittals, etc. Sub-Section are numbered as follows: 1.0: 1.1, 1.2; 2.0: 2.1, 2.2, etc.

Example:

When creating ITPs, it is a good idea to keep the format consistent for all ITPs on the project - The best way to build out an ITP is to sequence activities in which construction will take place - much like telling a story - so that the person utilizing can follow along. This prevents the user from missing a step that was supposed to be done in sequence.

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria
5.0	Compaction			
5.1				

2.2 Description of QA and QC Inspection and Test Activity

The Description of the QA/QC Inspection and Test Activity describes the inspection and testing activities that require completion per the stated Code, Standard or Specification.

Do not include the acceptance criteria, frequency, or other information in this column (this information is found elsewhere on the document).

When developing an ITP, review all applicable standards, specifications, scope of work and codes to determine which inspections and tests are required and confirm the acceptance criteria for each.

Example:

Backfilling requires soil compaction testing. Write the activity as a series of actions that the contractor's quality representative would perform. Include words such as confirm, verify, inspect, monitor, test, etc. Be as specific as possible.

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria	Responsible Party
5.0	Compaction				
5.1	Compaction Testing Performed				



2.3 Reference Document Code / Standard / Specification

The Reference Document Code / Standard / Specification references the document in which the requirement exists.

Include only the document reference. Be sure to reference all required sources for the activity.

Note: Always include the section in the document so the person using the ITP can quickly look up the requirement.

Example:

Soil compaction testing requirements can be found within IFC Drawings and TES-CI-EARTH-GLE - Sections 6.2, 9.3 and 9.4.

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria
5.0	Compaction			
5.1	Compaction Testing Performed	IFC Drawings / TES-CI-EARTH-GLE - Sections 6.2 / 9.3 / 9.4		

2.4 Inspection / Test Procedure

The Inspection/Test Procedure is a document used by the contractor that instructs their quality control personnel on how to perform an inspection or testing activity. If the Contractor does not have Inspection / Test Procedures, "N/A" can be used as this is a non-mandatory requirement.

Always include the section within the procedure corresponding to the activity so the person using the ITP can quickly look up the requirements. This document does not always need to be a contractor procedure – it can also reference industry procedures for performing the activity such as ASTM, API, etc. It does need to be prescriptive enough to tell the personnel performing the Quality Control activity what needs to be done.

Example:

The Contractor's Earthwork Inspection Procedure Section 1.1 provides the specific details for the soil compaction testing activity.

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria
5.0	Compaction			
5.1	Compaction Testing Performed	IFC Drawings / TES-CI-EARTH-GLE - Sections 6.2 / 9.3 / 9.4	Earthwork Inspection Procedure Section 1.1	

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

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Status: Published

2.5 Acceptance Criteria

The Acceptance Criteria includes details of the inspection activity for the requirement to be accepted. It may contain the specific result or the acceptable criteria range. If there is too much information to list, reference the applicable section of the specification. Acceptance criteria should always be written in a manner that the person performing the inspection / test can answer “no” or “yes”.

Example:

The Earthwork Inspection Procedure specifies that soil must be uniformly compacted to at least 98% Standard Proctor dry density (SPDD) for each lift. The TC Energy Representative (e.g. Quality Assurance Construction Inspector) will approve each lift.

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria
5.0	Compaction			
5.1	Compaction Testing Performed	IFC Drawings / TES-CI-EARTH-GLE - Sections 6.2 / 9.3 / 9.4	Earthwork Inspection Section 1.1	Compaction meets 98% SPDD - Each lift will be accepted by the TC Energy Representative

If the requirement is not satisfied, the ITP is not signed, and supporting document(s) are rejected.

2.6 Responsible Party

The Responsible Party performs the inspection or test. They may be the contractor’s Quality Control representative (e.g. craft inspector), the subcontractor’s Quality Control representative, a third-party inspection company or a combination.

Example:

The 3rd Party Civil Inspection Company is responsible for performing the compaction testing

Reference Document Code / Standard / Specification	Inspection/Test Procedure (Contractor)	Acceptance Criteria	Responsible Party	Quality Control Compliance Document
IFC Drawings / TES-CI-EARTH-GLE - Sections 6.2 / 9.3 / 9.4	Earthwork Inspection Section 1.1	98% SPDD - Each lift will be approved by the TC Energy Representative	3rd Party Civil Inspection Company	

2.7 Quality Control Compliance Documentation

The inspection or test is documented in the Quality Control Compliance Documentation.

Forms or documentation, typically from the third-party company/contractor, make up the aggregate of the evidence that the inspection or testing was performed, and is used by the TC Energy representative (e.g. Quality Assurance Construction Inspector) to verify.

Keep in mind "If it's not documented, it didn't happen."

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

Example:

The evidence that the Earthwork Inspection Procedure was performed is recorded within the 3rd Party Compaction Report.

Quality Control Compliance Documentation	Stage / Frequency	Contractor Inspection Verification Point (H/R/W/S/I/T)			Company Inspection Verification Point (H/R/W/S/I/T)			Comments
		Type	Initial	Date	Type	Initial	Date	
3rd Party Compaction Report								

If this documentation is not complete and accurate, the Verification Points discussed later cannot be signed off.

2.8 Stage / Frequency

The Stage of an inspection is the “when” an inspection or testing activity must be performed. The Frequency is the “how often” it must be performed.

The Stage and Frequency of an inspection or testing activity are sometimes found in the Reference Document. If there is too much information to list, reference the applicable section of the Reference Document.

Example:

The Earthwork Inspection Procedure is performed during Backfill and per Section 9.4 of the TES-CI-EARTH-GLE specification.

Quality Control Compliance Documentation	Stage / Frequency	Contractor Inspection Verification Point (H/R/W/S/I/T)			Company Inspection Verification Point (H/R/W/S/I/T)			Comments
		Type	Initial	Date	Type	Initial	Date	
3rd Party Compaction Report	During Backfill / Section 9.4							

If there are no Stage / Frequency details within the specification, include these items from a project perspective (e.g. daily? weekly? per section?).

As with the Quality Control Compliance Documentation, if Stage/Frequency is not complete and accurate, the Verification Points discussed later cannot be signed off.

2.9 Contractor and Company Verification Points

The Contractor and Company Verification Points are one of the most important parts of the Inspection and Test Plan. It details what type of verification a specific activity requires.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

Both the Contractor and Company will state their verification point types for an activity. Critical inspections and tests will have a Hold or Witness verification, whereas less critical inspections and tests will have surveillance verification.

Standardized ITPs will have all verification points pre-added. These can be modified by the contractor / Project Team based on need – **these changes must be agreed upon.**

Quality assurance verification points (H/W/S/R) are used by the company as they provide oversight verification where quality control verification points (I/T) are used by the Contractor as they involve the activity of inspection and testing. Review (R) can be used by either group when the activity involves the review of reports / submittals / certifications, etc.

Once all inspections/tests required for the compaction activity have been completed for the project, the activity can be signed off and dated by the Contractor Quality Control and TC Energy representatives. The Contractor Verification Points are Inspect and Review. The TC Energy Verification Points are Witness and Review. **Verification Points shall be signed off progressively as activities are completed and verified.**

Company	Hold Point (H)	Quality assurance activity - Further processing or operations for specified hold point shall not continue until acceptance has been received (e.g., inspect rebar before pouring concrete).
	Witness (W)	Quality assurance activity - A Company representative shall always be present during the testing process. May only be waived in writing. Contractor shall notify in writing the Company's representative in advance of the start of the activity.
	Surveillance (S)	Quality assurance activity - Periodic surveillance or monitoring of the process to ensure compliance to the control procedure, standard, or specification (e.g. the material is stored per preservation specification requirements).
Contractor	Review (R)	Quality assurance activity - Documentation associated with the operation will be periodically reviewed by Quality Control Personnel / TC Energy representative (e.g. 3rd Party Compaction Reports)
	Inspect (I)	Quality control activity completed to ensure the work is performed in accordance with the test procedure and meets acceptance criteria.
	Test (T)	Quality control activity to - examines and evaluates the performance of the work or reliability of the product.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

Example:

It is imperative that before a line item is signed off that all supporting documentation has been reviewed to ensure it is complete, free of errors and the correct quantity is available.

Quality Control Compliance Documentation	Stage / Frequency	Contractor Inspection Verification Point (H/R/W/S/I/T)			Company Inspection Verification Point (H/R/W/S/I/T)			Comments
		Type	Initial	Date	Type	Initial	Date	
3rd Party Compaction Report	During Backfill / Section 9.4	I/R	BF	~	W/R	AS	~	Ensure nuclear Gauge is calibrated

2.10 Comments

The Comments section is a handy location to ensure nothing is overlooked by including any additional information such as a note in the specification, concerns or lessons learned about the inspection test.

Example:

Comments are added to ensure the nuclear gauge is calibrated before performing the inspection.

Quality Control Compliance Documentation	Stage / Frequency	Contractor Inspection Verification Point (H/R/W/S/I/T)			Company Inspection Verification Point (H/R/W/S/I/T)			Comments
		Type	Initial	Date	Type	Initial	Date	
3rd Party Compaction Report	During Backfill / Section 9.4	I/R	BF	~	W/R	AS	~	Ensure nuclear Gauge is calibrated

3 Standardized ITP Templates

TC Energy has developed Standardized ITP Templates that are pre-populated documents that include all standard inspections and tests expected for common activities on Pipeline and Facilities projects. They have been designed and reviewed by personnel from all TC Energy Business Units and Regions including our subject matter experts (SMEs).

These templates may be adopted by the Contractor. In cases where the Contractor does not utilize the Standardized Templates, they can still be utilized as a baseline during review to ensure all required inspection and tests are included (use as a reference).

These templates have been developed with the intention to reduce the development and review time required for ITPs as well improve quality by setting a repeatable, standardized document.

Not all construction activities requiring Inspection and Test Plans have a standardized ITP. In this case,

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

the Contractor must develop the ITPs according to requirements specified in TES-CT-ITP-GL Inspection Test Plan Specification for Construction and Fabrication (CAN-US-MEX) (Item ID: 1017376226).

3.1 How to Complete Standardized ITP Templates

1. Contractor to review and accept the content of the ITP Template as provided by TC Energy and include project specific/ Contractor Quality Management System (QMS) requirements not accounted for in the template.
2. Activities that are not applicable to the scope are to be indicated by changing the row's cell color to **red**. Content is not to be deleted from the templates. The Project Team will review the redlined items and remove if in agreement. If commenting is required, utilize the comment option in Excel.
3. If activities are added to the ITP indicate by changing the row's cell color to **green**. This will allow faster review by the Project Team.
4. Include all Verifying Document and Inspection/Test Procedures including reference to section of document. Also include the responsible party(s) for performing the activity.
5. Add missing Contractor verification point types. These may be modified by the Project Team during the review process to align with TC Energy's expectations.
6. Ensure the reference documents listed at the bottom of the ITP are the same revision being utilized on the project. If they are not, content will need to be verified to the utilized revision.
7. The contractor will submit the modified ITP(s) to the TC Energy Project team for review and acceptance.
8. **Ensure personnel have reviewed and understand the specifications in their entirety. These templates are not meant to replace Company's Specifications.**

Example:

Example of an addition – the contractor requires a dimensional check on a cut section prior to welding:

5.2	Prior to alignment or welding, ensure weld areas are clean and prepped and bevel face is per Specification requirements	TES-WL-AS-GL Clause 2.9.1	DFW Welding Inspection Procedure	Weld area cleaned and prepped per the Specification.	DFW	DFW Welding Inspection Checklist	Prior to welding/Each joint	I			TBD			
5.3	Dimensional verification of cut pipe	DFW Welding Inspection Procedure/ Cut sheets	DFW Welding Inspection Procedure	Pipe correct length per the cut sheets	DFW	DFW Welding Inspection Checklist	Prior to welding/Each joint	H			TBD			
5.4	Verify Welding Procedure Specification (WPS) is used and bevel design is per WPS requirements	WPS/WPS Matrix/ IFC Drawings	DFW Welding Inspection Procedure	Correct WPS is used and bevel design is per requirements per the WPS/Approved WPS Matrix (if used).	DFW	DFW Welding Inspection Checklist	Prior to welding/Each joint	I			TBD			

Example of a proposed deletion as PWHT is out of scope:

8.1	Complete final tie-in weld	TES-WL-AS-GL Clause 2.10.8/ Closure Weld ITP	DFW Welding Inspection Procedure	Final tie-in weld completed and TEF-WELD-TIE-IN Tie-in Welds In-process Examination Form completed and accepted.	DFW	TEF-WELD-TIE-IN	During final tie-in welds/ All final tie-in welds	W			TBD			
9.0	Post Weld Heat Treatment (PWHT)													
9.1	Verify Post Weld Heat Treatments (PWHT) requirements are met	TES-WL-AS-GL Section 2.4.8/ ASME BPVC Section IX	<<Contractor Input>>	Stress relieving to follow PWHT Procedure/applicable code requirements.	<<Contractor Input>>	DFW Welding Inspection Checklist	PWHT/PWHT welds	TBD			TBD			
10.0	Nondestructive Examination (NDE)													
4.1	Complete a visual inspection	TES-WL-AS-GL Clause 2.11.6/ Code of Construction	DFW Welding Inspection Procedure	Welds visually acceptable with no rejectable flaws. Applicable weld information is included next to weld.	DFW	Visual Weld Reprot	Required at all stages/ 100% of welds	I			TBD			

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

4 Submission and Review of ITPs

The Contractor will submit the draft ITPs to the Company for review. This will be done per the project's submittal requirements (i.e. Transmittal, SharePoint drop, etc).

Upon receipt of the Contractor's draft ITPs, the Construction Manager will review with applicable members of their team. If the Contractor chooses not to utilize the Standardized ITP Templates or if technical content is added to the templates, applicable Subject Matter Experts (SME) will be utilized for review. A list of SME can be found on the [Engineering Governance](#) 1TC SharePoint Page. When the review process is complete, the ITP will be returned to the Contractor with comments to be incorporated. The revised ITP will be re-submitted to TC Energy for review and if all comments are satisfied, the contractor may proceed with its use. Please reference the Construction ITP Review Process Flow below:

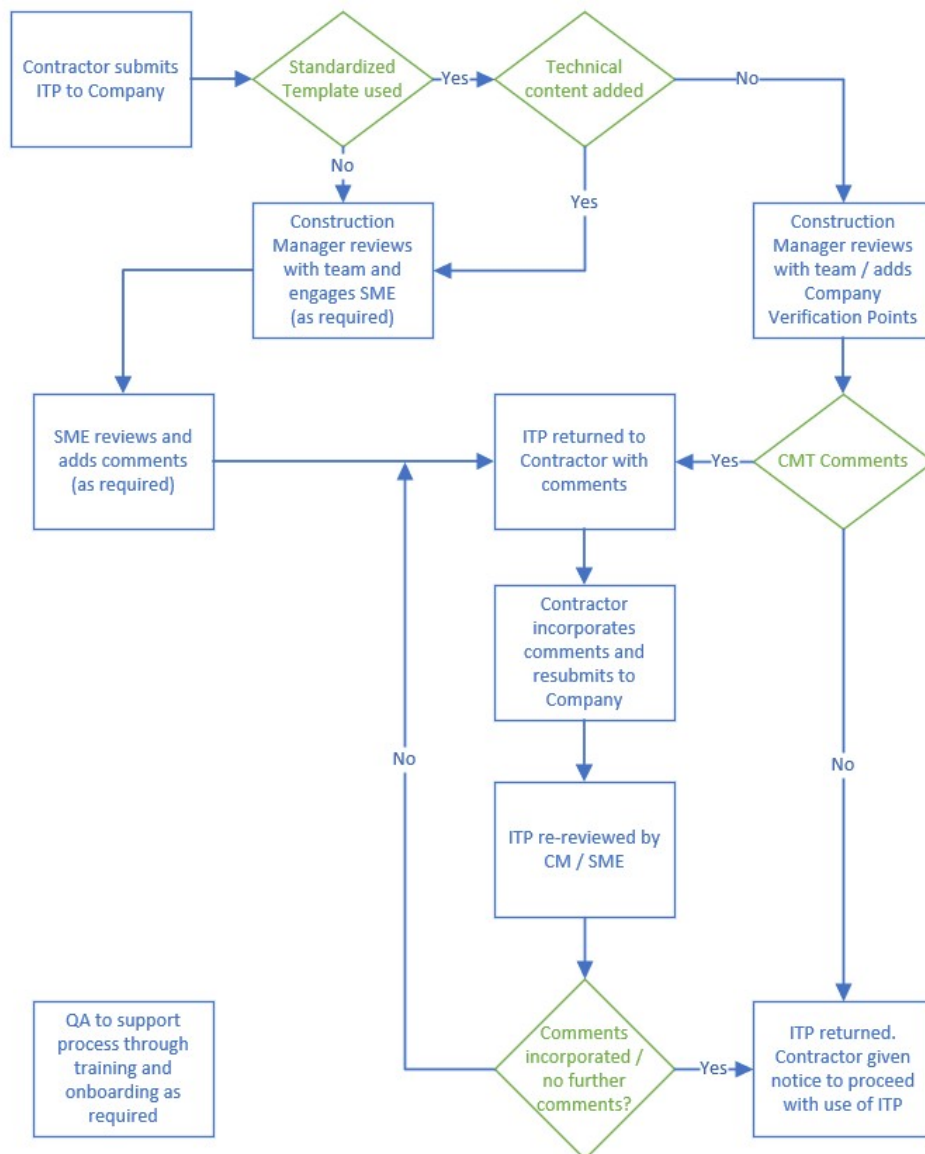


Figure 4.0 - Construction ITP Review Process Flow

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

The review cycle of ITPs can take time, so it is a good idea to take this into account when planning. Factors that can affect review time are:

- Is the contractor familiar with ITPs (general)?
- Has the contractor developed ITPs for TC Energy before?
- Are they using a TC Energy Standardized Template or their own (their own will take a lot longer as an SME will need to review as well and there are usually more comments to fix)?

A standardized ITP submitted from an experienced contractor can usually be turned around within 24 hours if the CMT is available to review it. Non-standardized ITPs can take as long as a couple of weeks. In all, it is suggested that ITPs are submitted no later than 2 weeks prior to an activity starting to ensure its review does not impede the start of work.

5 Utilizing ITPs on the Worksite

5.1 Approval

Although the ITPs have already been accepted by the project via transmittal to the project team, there is still a required sign off on the individual paper copies. **Prior** to each activity starting at site, the associated ITP will be printed, reviewed and signed/dated by representatives from the Contractor's Quality Control and the TC Energy representative. Any items that are not in scope should be redlined from the template and initialed.

Approval of Inspection & Test Plan			
Contractor		Client	
Print:	Date:	Print:	Date:
Signature:		Signature:	
Contractor		Client	
Print:	Date:	Print:	Date:
Signature:		Signature:	

5.2 ITP Content

To better understand the content of the ITPs refer to sections 2.1 to 2.9 of this document.

5.3 Activity Signoff

Upon completion of an activity and verification of all associated Quality Control Compliance Documentation is complete, the Contractor and Company's representatives will sign and date in the Contractor & Company Verification Points columns. This then closes the activity. If additional scope is added after the activity is closed, a new ITP will be used.

Progressive Signoff – It is important to sign these activities off progressively, as each activity finishes, and the documents are reviewed. Ensure that these are not signed off too soon or too late.

5.4 Quality of Compliance Documents

It is the responsibility of both the Contractor and TC Energy representative to confirm all documentation is complete and of good quality (not missing information, dates, signed, etc). If documents are missing or have missing information, the Activity shall not be signed off until the issue is rectified. How do you confirm that all the documents are present? For most activities this will have to be a comparison between the drawings / scope and descriptions on the forms. If the forms are not traceable enough to be able to identify what scope they cover, they shouldn't be accepted.

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

5.5 Closure

Upon completion of all activities for the specified work, and verification that all associated Quality Control Compliance Documentation is complete, the Contractor and Company's representatives will sign and date in the Contractor & Company Verification Points columns. This completes the ITP. If additional scope is added after the activity is closed, a new ITP will be required.

Note: ITP Activities should not be left open in anticipation of possible new scope.

Approval of Inspection & Test Plan			
Contractor		Client	
Print:	Date:	Print:	Date:
Signature:		Signature:	
Final Acceptance			
Contractor		Client	
Print:	Date:	Print:	Date:
Signature:		Signature:	

6 Frequently Asked Questions

What happens if we need to modify content?

Things can change in the field; ITPs can be redlined if required. The contractor can change content if they have TC Energy Approval. If it is technical content, the approval shall come from Company technical resources (Subject Matter Experts (SMEs)). If redlining is done, the Chief Inspector/Assistant Construction Manager or QA Coordinator must initial for acceptance along with the contractor. If there are a lot of changes, you may consider revising the ITP.

What happens if we need to revise an ITP?

If revising an ITP that already has signatures, keep the original ITP as backup and signoff the new one with the current date. Write superseded on the top of the existing ITP.

What happens if the contractor / TC Energy representative leaves halfway through the project?

People may leave a project before completion. If an ITP is only partially completed, the replacement Inspector can take over. The replacement inspector should review all existing verification documents to ensure the task(s) have been properly performed.

What happens if the contractor's documents are not complete/acceptable?

The TC Energy **representative** will not accept the document/ will not sign off on the ITP. These verification documents need to have enough detail to tell the reader (including someone in the office 10 years later who was not on the project) what, where, why, when and how things happened.

Where does the onsite ITP reside?

ITPs are contractor documents. The TC Energy **representative** can ask for a copy but the original stays with the contractor. The construction inspection team will go to their trailer or have the contractor bring the ITP to them for signature. Upon completion of the ITP, it will be included in the project turnover to TC Energy.

Where do I find the Verification Documents for an ITP?

Inspection & Test Plan Procedure – US Gas**Doc. No.: USNG-QA-PRO-0002****Rev. #: 0****Driver: Best Practice****Status: Published**

The Contractor retains all verification documentation unless it is a function that is performed by TC Energy. In some cases, the contractor will maintain those documents (e.g., NDE Reports).

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: **Published**

Appendix A:

ITP Template

Document No.:		(Activity Name e.g., Clearing, Welding, Coating, etc.) INSPECTION & TEST PLAN (ITP)	Company:	
Project No.:			Project Name:	
Revision Date:			System/Area:	
Revision No.:			Contract No.:	

Activity No.	Description of QA/QC Inspection and Test Activity	Reference Document (Code/Standard/ Specification)	Inspection/Test Procedure	Acceptance Criteria	Responsible Party	Verifying Document	Stage/ Frequency	Contractor Inspection Verification Point (H/I/T/W/R/S)			Client Inspection Verification Point (H/I/T/W/R/S)			Comments
								Type	Initial	Date	Type	Initial	Date	

Documents Referenced														
Number	Title													Revision

Terms
H - Hold Point: Further processing or operations for specified hold point shall not continue until approval has been received.
I - Inspect: Activity completed to ensure the work is performed in accordance with the test procedure and meets acceptance criteria.
T - Test: Activity to examine and evaluate the performance of the work, or reliability of the product.
W - Witness: A representative shall always be present during the testing process. May only be waived in writing. Contractor shall notify in writing the Company's representative in advance of the start of the activity.
R - Review: Documentation associated with the operation will be periodically reviewed.
S - Surveillance: Periodic surveillance and/or monitoring of the process to ensure compliance to the control procedure, standard, or specification.

Approval of Inspection & Test Plan			
Contractor		Company Representative	
Print:		Print:	
Signature:	Date:	Signature:	Date:
Final Acceptance			
All Inspection activities associated with this Inspection and Test Plan have been completed and all associated records have been reviewed and are hereby accepted from the Contractor.			
Contractor		Company Representative	
Print:		Print:	
Signature:	Date:	Signature:	Date:

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: **Published**

Appendix B:

Critical ITPs

Inspection & Test Plan Procedure – US Gas



Doc. No.: USNG-QA-PRO-0002

Rev. #: 0

Driver: Best Practice

Status: Published

Activity	A (Critical)	B (Non-Critical)	ITP Template
Cathodic Protection	x		Yes
Concrete		x	Yes
Coatings	x		Yes
Earthwork			
Survey		x	No
Clearing		x	Yes
Topsoil Stripping and Grading		x	Yes
Trenching	x		Yes
Excavation	x		Yes
Backfill	x		Yes
Site Cleanup and Restoration		x	Yes
Electrical		x	Yes
Fired Equipment		x	No
Grout			
Cementitious Grout		x	Yes
Epoxy Grout	x		Yes
Hoists		x	No
HVAC		x	Yes
Instrumentation		x	Yes
Insulation		x	Yes
Materials		x	Yes
Mechanical Installation		x	No
Piling			
Helical (Screw) Piling Installation	x		Yes
Driven Steel Piling Installation	x		Yes
Sheet Piling Installation	x		No
Cast-in-Place Concrete Piling	x		Yes
Piping			
Piping Installation	x		Yes
Stringing		x	Yes
Field Bending		x	Yes
Lowering-in	x		Yes
Trenchless Crossing (HDD, HDB, DPI)	x		Yes
Buoyancy Control		x	Yes
Crossings		x	Yes
Prefabricated Buildings		x	Yes
Pressure Testing	x		Yes
Structural Steel		x	Yes
Joining (Welding / Poly)	x		Yes








USNG-QA-PRO-0002 - Inspection Test Plan Procedure

Final Audit Report

2023-08-23

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