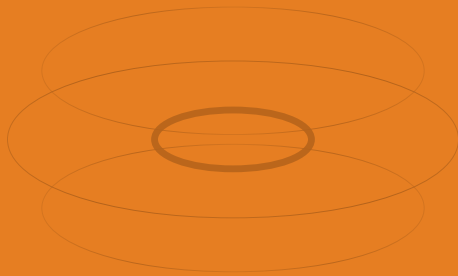


OWNER

Construction Records and Turnover

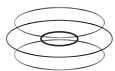


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TORUS

[REDACTED] [REDACTED], [REDACTED] County, [REDACTED]

ISSUE SUMMARY AND APPROVAL

This page records each issue of SPC-SPC-020. The preparer, reviewer and approver sign for each revision.

Rev.	Date	Issue purpose	Description
A	2026-09-29	Issued for Review	First issue

Contributors

Rev.	Discipline	Prepared by	Reviewed by	Approved by
A	Specifications			

SECTION PC-SPC-020

CONSTRUCTION RECORDS AND TURNOVER

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes the construction records that the Contractor shall create, collect, verify, index and turn over for the and for the outlet lateral from IJ-102 to the tap valve flange (about 96 ft buried plus the riser, NPS 12 with 0.500 in wall; final length by survey, HOLD H-04). The records shall be traceable, verifiable and complete, so that the Owner can establish and substantiate the maximum allowable operating pressure (MAOP) of 1,440 psig under 49 CFR 192.619, and meet the record requirements of 49 CFR 192 for materials, welding, NDE, pressure testing, corrosion control and operator qualification. The work includes:
1. A records management plan and a master document register (MDR).
 2. Heat-number traceability from mill test reports (MTRs) to every pipe joint, spool, fitting, flange, valve and pressure component.
 3. Weld maps, weld logs, welding procedure and welder qualification records, and NDE records.
 4. Coating, painting, holiday test and cathodic protection installation records.
 5. Pressure test, dewatering and drying records for test sections TS-01A, TS-01B and TS-02 to TS-05, and the vendor shop test certificates of pre-tested units PT-01 to PT-05, including the V-101 shop hydrotest at 2,225 psig and the H-101 coil shop test.
 6. Instrument calibration, loop check, electrical test and commissioning records.
 7. As-built drawings and the as-built survey, including the location of every buried weld and fitting.
 8. Operator qualification records for covered tasks performed during construction.
 9. The electronic turnover dossier, quality review, correction of deficiencies and final acceptance.
- B. Related sections: SPC-SPC-001, General Requirements and Definitions (requests for information, management of change); SPC-SPC-006 to SPC-SPC-015 (the records each produces); SPC-SPC-018, Pre-commissioning, Commissioning and Startup; SPC-SPC-019, Inspection and Test Plan.
- C. Work by others:
1. Vendor data books for Owner-furnished equipment (V-101, H-101, PR-101, SK-110, FG-101, T-101, B-101, B-102, G-101, valves and insulating joints) are furnished by the vendors to the Owner. The Contractor shall check them against installed nameplates and heat numbers and integrate them into the dossier index.

2. Records for the hot tap fitting, tap valve and the receiving pipeline operator's RTU are kept by (the receiving pipeline operator).
3. The Owner's permanent records systems (geographic information system and maintenance management system) are the Owner's; the Contractor shall deliver data in the formats in 3.09.

1.02 REFERENCES

A. Codes, regulations and guidance:

1. 49 CFR 192.205 (records for pipeline components), 192.225 and 192.227 (welding procedure and welder qualification), 192.243 (NDE records), 192.491 (corrosion control records), 192.517 (pressure test records), 192.603 and 192.605 (operations and maintenance), 192.607 (verification of material properties), 192.619 (MAOP), and 192.807 (operator qualification records). Where a section's applicability to a gathering line is uncertain (HOLD H-18), it is applied here as a transmission-grade requirement, because the station is designed to transmission requirements.
2. PHMSA Advisory Bulletins ADB-11-01 and ADB-2012-06, establishing MAOP from records and the attributes of traceable, verifiable and complete records.
3. 165:20, Gas and Hazardous Liquid Pipeline Safety.
4. API Specification 5L, 46th Edition; API Standard 1104, 22nd Edition; ASME BPVC Section IX; ASME B31.8-2022.
5. ASME B16.5, MSS SP-75 and API 6D (fitting, flange and valve certification).
6. EN 10204 and ISO 10474, inspection document types (type 3.1 as the minimum for pressure-retaining materials).
7. ASME Y14.35, Revision of Engineering Drawings and Associated Documents (as-built revision practice).
8. NAD83 State Plane South (US survey feet) and NAVD88 (survey datum per GEN-DB-001).

B. Project documents: GEN-DB-001, Basis of Design; MEC-LST-001, Line List; MEC-LST-002, Mechanical Equipment List; MEC-LST-003, Valve List; MEC-LST-004, Tie-in List; PIP-SPC-001, Piping Material Specification; PRO-DWG-101 to PRO-DWG-111, P&IDs; PIP-DWG-001 to PIP-DWG-004, Piping General Arrangement and Tie-in; MEC-CAL-003, Hydrostatic Test Calculation; INS-LST-001, Instrument Index; CP-CAL-001, Cathodic Protection Design; SAF-SRS-001, Safety Requirements Specification; CON-RPT-004, Operations and Maintenance Manual Outline.



1.03 DEFINITIONS

- A. Traceable: a record clearly linked to the component or weld it describes through a unique identifier marked on the component and written on the record (heat number, joint number, weld number or tag).
- B. Verifiable: a record whose content is confirmed by a second, independent record or signature, for example an MTR heat number confirmed by the receiving inspection of the pipe stencil, or an NDE report confirmed by the radiograph or ultrasonic data file.
- C. Complete: a record that is final, signed and dated by the responsible person, legible, with every required field filled.
- D. Master document register (MDR): the index of every turnover record with its ID, category, system, related tags, file name and status.
- E. Weld map: an isometric or alignment drawing showing the location and unique number of every weld.
- F. Test package: the records for one hydrostatic test section under SPC-SPC-011.

1.04 SUBMITTALS

- A. The Contractor shall submit the items in Table 1-1.

Table 1-1: Submittal Schedule

No.	Submittal	Timing	Action
20-01	Records management plan: records manager, workflow, software, naming, review steps, backup	30 days after award	Owner approval
20-02	MDR template and dossier structure (3.08)	30 days after award	Owner approval
20-03	Traceability register template, weld log template and a sample weld map	Before first fabrication	Owner approval
20-04	As-built survey procedure: equipment, accuracy, control points, data format	Before the first buried pipe is installed	Owner approval
20-05	Records status report: percentage complete by category, open deficiencies	Weekly	Information
20-06	Pressure test package records for each test section	7 days after each test	EOR approval
20-07	Weld and NDE records for each test section	Before that section is tested	Owner approval
20-08	Redline as-built drawings (field set)	Maintained continuously; submitted at MC of each system	Owner review
20-09	Final as-built drawings (native CAD and PDF) and survey data	30 days after MC	Owner and EOR approval

No.	Submittal	Timing	Action
20-10	Draft turnover dossier, complete and electronic	At MC of the last system	Owner review
20-11	Final turnover dossier with all deficiencies closed and a signed certificate of completeness	Before provisional acceptance	Owner approval

1.05 QUALITY ASSURANCE

- A. The Contractor shall appoint a full-time records manager from first fabrication until final acceptance, independent of production supervision and reporting to the Contractor's quality manager.
- B. Records shall be made at the time of the activity. A record completed more than 48 hours after the activity shall carry a written explanation in the nonconformance log. Back-dated or recreated records are not acceptable and shall be grounds for re-examination or re-test at the Contractor's cost, because a recreated record cannot be verified.
- C. Every record shall be signed and dated by the person who performed or inspected the work, with printed name and, where applicable, qualification (welder ID, NDE level, operator qualification task number).
- D. Paper records shall be corrected only by a single line through the error, initialed and dated, with no correction fluid or overwriting. Electronic records shall keep an audit trail of changes.
- E. Hold and witness points shall be as listed in 3.11 and in SPC-SPC-019.
- F. The Owner may audit the records at any time. A sample of 10 installed welds and 10 installed pipe joints per test section will be traced in the field from marking to MTR, weld log, NDE report and survey point. Any break in traceability shall trigger a 100 % audit of that test section at the Contractor's cost.

1.06 MEASUREMENT AND PAYMENT

- A. Pay item 01.05, Construction records, as-builts and turnover: lump sum. The price shall include the records manager, traceability register, weld maps and logs, compilation of records from all sections, redline and final CAD as-builts, the as-built survey and GIS data, the electronic dossier and the correction of deficiencies. Vendor data books for Owner-furnished items and the receiving pipeline operator's records are excluded.
- B. The whole of pay item 01.05 shall be retained until the final turnover dossier is accepted (HP-20-08). No more than 90 % of pay items 06.01, 06.02 and 06.03 for a test section shall be paid until its weld, NDE and test package records are accepted (HP-20-03 and HP-20-05).
- C. Rework or re-examination required because records are missing, incomplete or not traceable, including cut-outs and re-testing, shall be at the Contractor's cost.

PART 2 PRODUCTS

2.01 CONTRACTOR-FURNISHED

- A. Records management software, or a structured file system with a controlled, version-tracked database index exported as CSV and PDF.
- B. Paint markers and stencils for heat numbers and joint numbers on pipe. Die stamps shall not be used on the pipe body; they may be used on fittings only where the manufacturer's marking is retained.
- C. Survey equipment: real-time kinematic GNSS (base and rover or network) with horizontal and vertical accuracy of 0.1 ft or better at 95 % confidence, and a total station for above-grade work.
- D. Scanners producing searchable PDF at 300 dpi or better, and a digital camera recording date, time and location.

2.02 OWNER-FURNISHED

- A. MTRs, certificates of conformance and vendor data books for Owner-furnished items (line pipe, valves, insulating joints and equipment), transmitted at material handover.
- B. The Owner's document numbering and CAD standards.

PART 3 EXECUTION

3.01 RECORDS REVIEW WORKFLOW

- A. The Contractor's quality control staff shall check each record for completeness against a checklist for its type (fields, signatures, traceability identifiers, legibility) before submitting it.
- B. The Owner's inspector will review records within 5 working days of receipt: 100 % of pressure test, weld, NDE and MTR records, and 20 % of other records. The EOR will review 100 % of pressure test packages, the MAOP summary, the weld and NDE reconciliation and the final as-built P&IDs and arrangements.
- C. Deficiencies shall be logged with the record ID, deficiency, required action and date, and closed within 10 working days. A dependent activity shall not proceed until the deficiency is closed; for example, a section shall not be pressure tested until its weld and NDE records are complete.

3.02 MATERIAL RECEIVING AND HEAT-NUMBER TRACEABILITY

- A. At receipt, every pipe joint, fitting, flange, valve, insulating joint and bolt lot shall be checked against its MTR or certificate for size, wall, grade, product specification level, heat number, manufacturer and specification, and for Charpy impact results at -20 °F, chemistry and tensile properties against the API 5L PSL2, MSS SP-75 or ASTM limits. Nonconforming or unmarked items shall be quarantined and tagged red.

- B. The traceability register shall record for each item: item ID (joint number or tag), description, size, wall or schedule, grade, heat number, MTR document ID, purchase order, supplier, receiving date and inspector, storage location, and final installed location (weld numbers at each end, spool number and coordinates).
- C. Pipe joints shall be numbered in sequence, with the joint and heat numbers stenciled inside and outside at both ends. Before a joint is cut, both numbers shall be transferred to each piece, witnessed by quality control, with suffix letters (joint 0014 cut to 0014A and 0014B). A piece that loses its marking without a documented transfer shall not be used in pressure service.
- D. Positive material identification (PMI) is not required for carbon steel. It shall be performed:
1. On a 10 % sample per heat or lot of 316 stainless tubing fittings and instrument manifolds, by X-ray fluorescence.
 2. On 100 % of the class S1 stainless pipe lengths, fittings, flanges, orifice plates and bolting lots, and on 100 % of S1 welds with ferrite readings, under SPC-SPC-008. Each S1 reading shall be recorded against the component heat number or weld number, with the instrument serial number and the daily reference check, because a wrong alloy in the vent system would be exposed to low-temperature relief flows.
- E. Bolting and gasket lot numbers shall be recorded against each flange joint tag under the flange management requirements of SPC-SPC-006.

3.03 WELD MAPS AND WELD LOG

- A. Welds shall be numbered with the short line number and a sequence number for station piping (for example 1003-W012) and OL-plus a sequence number for the outlet lateral. Repairs shall add suffix R1, R2; a cut-out shall add suffix C, and the new weld shall receive a new number referencing the removed weld. Tie-in welds shall carry the prefix TI.
- B. Weld maps shall be drawn on the isometrics for station piping and on the plan and profile for the outlet lateral, showing every weld, the joint numbers between welds and the heat number of each component.
- C. The weld log shall contain at least the fields in Table 3-1.

Table 3-1: Weld Log Fields

Field group	Fields
Identification	Weld number, line number, spool or isometric, test section, system
Components	For each side: item ID, heat number, size, wall
Welding	Procedure number, welder ID for each pass, date, measured preheat, maximum interpass, consumable lots, position, process
Fit-up	Inspector, date, measured gap and high-low
Visual	Inspector, date, result
NDE	Method, report number, date, technician and level, result, film or data file ID

Field group	Fields
Repair	Repair number, repair procedure, re-examination result
Coating	Field joint coating report number (buried welds)
Location	Northing, easting and elevation (buried welds); as-built drawing reference

- D. The weld log shall reconcile at each test package: welds made shall equal welds examined, and each shall be accepted or cut out, as 49 CFR 192.243 requires.

3.04 WELDING, NDE, COATING AND CATHODIC PROTECTION RECORDS

- A. Welding: procedure specifications and qualification records (API 1104 and ASME IX) with EOR acceptance; welder qualification records and continuity log; welder identification register (SPC-SPC-007).
- B. NDE: procedures; technician certifications (Level II minimum for interpretation under ASNT SNT-TC-1A or ISO 9712); radiographs or ultrasonic data files with their interpretation reports; magnetic particle and penetrant reports; repair reports (SPC-SPC-008). Radiographic film and digital or ultrasonic raw data are original records and shall be turned over: film in archival boxes labeled by weld number, and digital data in DICONDE or the vendor's native format with a viewer.
- C. Coating: material certificates and batch numbers; surface preparation records (profile, cleanliness, air and steel temperature, relative humidity and dewpoint); film thickness readings; holiday test voltage and results for each joint; repairs (SPC-SPC-009). Above-grade painting records under SPC-SPC-010.
- D. Cathodic protection: anode and rectifier certificates, deep anode well log and its Water Resources Board registration (HOLD H-19), test station locations with coordinates, cable and bond records, insulating joint test records, native and polarized potential surveys, and AC interference readings (SPC-SPC-015).

3.05 PRESSURE TEST RECORDS

- A. Each test package under SPC-SPC-011 shall contain at least the items that 49 CFR 192.517(a) requires: the operator's name, the name of the person responsible for the test, the name of the test company, the test medium, test pressure, test duration, the pressure charts or other pressure records, elevation variations where significant, and leaks and failures with their disposition. It shall also contain the test section boundaries on marked P&IDs and isometrics, the list of welds in the section, instrument calibration certificates, the deadweight tester log with the surveyed high and low elevations and elevation-corrected pressures, the temperature log, the pressure-temperature correction, test water source and disposal records, dewatering and drying records with the final dewpoint, and the signatures of the Contractor, the Owner and the EOR. These records shall be kept for the useful life of the pipeline.
- B. Pre-tested units shall be documented by the vendor's shop test certificate, witnessed or reviewed under the purchase order: SK-110 (PT-01), FG-101 (PT-02), the V-101 liquid outlet spools (PT-03), V-101 at 2,225 psig (PT-04) and the H-101 coil (PT-05). Because V-101 and the H-101 coil

are isolated from the field test, their shop certificates are the pressure test records that substantiate their MAOP and shall be filed and kept with the field test packages.

- C. The SDV-102 full-stroke timing record (4 s or less), the baseline partial-stroke test of SDV-102 at commissioning and the validation record of the SIL 2 overpressure function SIF-01 shall be filed with the commissioning records and handed to the Owner as the start of the quarterly partial-stroke test history required by SAF-SRS-001.

3.06 AS-BUILT DRAWINGS AND SURVEY

- A. The Contractor shall keep one controlled field set of construction drawings (P&IDs, plot plan, arrangements, isometrics, tie-in, foundations, electrical, cathodic protection and instrument loops) and shall mark every deviation within 24 hours, in red, with the request for information or management of change number, date and initials; deletions in green. The Owner's inspector will review the redlines weekly.
- B. A field change shall be incorporated only if approved by request for information or management of change under SPC-SPC-001. An unapproved field change found in the as-built review is a nonconformance.
- C. Before backfill, the top of buried pipe shall be surveyed at every weld, fitting, bend point, change in direction or grade, valve, IJ-102, casing end and foreign line crossing, and at intervals of no more than 50 ft on straight runs. Accuracy shall be ± 0.1 ft horizontal and vertical at 95 % confidence, in NAD83 State Plane South and NAVD88. Depth of cover shall be recorded at each point after final grading.
- D. Each surveyed point record shall include the point ID, weld or feature ID, northing, easting, top-of-pipe elevation, finished grade elevation, cover, description, date and surveyor, delivered as CSV and as a GIS shapefile or file geodatabase with line and point features.
- E. Above grade, the Contractor shall survey equipment and foundation centerlines and top-of-concrete elevations (± 0.02 ft), building and fence corners, gate posts, road centerlines, culverts, cathodic protection test stations, ground rods, and underground conduits at every change of direction and every 50 ft.
- F. Final as-builts shall be native CAD and PDF, revised to As-Built with a revision block entry and every changed area clouded with its reference, and signed by the Contractor's field engineer as reflecting the installed condition. The EOR will review the final as-builts; the Contractor shall not apply any seal.
- G. Every tag and line number on the P&IDs shall be verified by walk-down during MC under SPC-SPC-018, with zero unresolved discrepancies.

3.07 OPERATOR QUALIFICATION RECORDS

- A. For every individual who performs a construction task that is also a covered operations and maintenance task (tapping support, purging, pressurization, valve operation after gas-in, cathodic protection measurements, leak surveys after gas-in), the Contractor shall submit the

name, employer, covered task ID from the Owner's qualification plan, qualification method, evaluator, date and expiry. Construction tasks before gas-in are governed by the construction requirements of 49 CFR 192 (welder qualification and the inspection requirements of 192.305); the Owner's qualification plan governs after gas-in.

3.08 TURNOVER DOSSIER STRUCTURE

A. The dossier shall be organized in the volumes of Table 3-2. The MDR index shall carry at least the record ID, volume, record type, title, system, the tags, weld or joint numbers covered, date, originator, file name and status (draft, reviewed, accepted).

Table 3-2: Turnover Dossier Volumes

Volume	Content
T-00	MDR index (CSV and PDF), certificate of completeness, closed records deficiency log
T-01	Materials: MTRs and certificates, traceability register, receiving reports, PMI and ferrite records, material nonconformances
T-02	Welding: procedures and qualifications, welder qualifications and continuity, weld maps, weld log, preheat records
T-03	NDE: procedures, technician certifications, reports, film and data index, repair records
T-04	Coating and painting: product data, application records, holiday tests, repairs
T-05	Pressure testing: test packages for TS-01A, TS-01B and TS-02 to TS-05; deadweight logs and elevation-corrected pressures; shop test certificates PT-01 to PT-05, including V-101 at 2,225 psig; dewatering and drying; calibration certificates
T-06	Civil and structural: compaction, concrete and rebar tests, anchor bolt surveys, steel certificates, bolt tension records, aggregate gradation
T-07	Mechanical equipment: setting and alignment, grouting, vendor data book cross-reference, nameplate photographs
T-08	Electrical: insulation and ground resistance, hazardous-location seal inspections, relay and breaker settings, energization records
T-09	Instrumentation: calibration certificates, loop sheets, tubing leak tests, installation checklists
T-10	Cathodic protection: installation, deep anode well log, commissioning survey, insulating joint tests
T-11	Commissioning: MC, RFC, RFSU and PA certificates, SAT, cause-and-effect test, SIS validation of SIF-01 and SIF-05, SDV-102 full-stroke and baseline partial-stroke records, measurement commissioning, performance test
T-12	As-builts: drawings, survey data, GIS files, photographs
T-13	Personnel: operator qualification records, welder and NDE certification index, training records
T-14	Regulatory: permits and compliance records (construction stormwater coverage under the authority confirmed at HOLD H-17, stormwater inspections, hydrotest water discharge, deep anode well registration, air, SPCC), agency correspondence and notifications
T-15	Quality: nonconformance, request for information and management of change logs with closures, audits, punch lists

Volume	Content
T-16	Warranties, spare parts lists, vendor operating manuals cross-referenced to tags

3.09 ELECTRONIC FORMAT AND NAMING

- A. Every record shall be delivered as a searchable PDF (PDF/A-2b preferred), one record per file, with native files for spreadsheets (XLSX and CSV), CAD (DWG), survey (CSV and SHP or GDB), NDE digital data (native with viewer) and photographs (JPG with date and location).
- B. Files shall be named (volume)-(record type)-(identifier)-(revision), for example 05-HT-TS01A-0.pdf or 03-RT-1003-W012-0.pdf, with no spaces. Each PDF shall be bookmarked, and multi-page reports shall carry page numbers in the form x of y.
- C. The dossier shall be uploaded to the Owner's document management system and delivered on two encrypted USB drives. Hard copies are required only for original pressure test charts and signed certificates.

3.10 RETENTION

- A. The Owner will retain the records for at least the periods in Table 3-3. For this project, the Owner's policy is to keep every record in this section for the life of the pipeline plus 5 years.

Table 3-3: Record Retention

Record	Minimum retention	Basis
Pressure test records	Useful life of the pipeline	49 CFR 192.517(a)
MAOP substantiation (materials and pressure test)	Life of the pipeline	49 CFR 192.619
Girth weld NDE records	Life of the pipeline	49 CFR 192.243(f)
Pipeline component records (valves, fittings, flanges)	Life of the pipeline	49 CFR 192.205
Welding procedures and welder qualifications	Life of the pipeline (Owner policy)	49 CFR 192.225, 192.227
Cathodic protection installation, maps and test station locations	Life of the pipeline	49 CFR 192.491(a)
Cathodic protection tests, surveys and inspections	5 years minimum	49 CFR 192.491(c)
Operator qualification records	While the individual performs the task, and 5 years after	49 CFR 192.807
As-built drawings and survey; coating and material traceability	Life of the facility	Owner policy

3.11 FIELD QUALITY CONTROL

A. The hold and witness points in Table 3-4 apply. Party codes: C Contractor, O Owner, E EOR, W receiving pipeline operator; H hold, W witness, R review, P perform.

Table 3-4: Hold and Witness Points

ID	Activity	C	O	E	W	Record
HP-20-01	Records management plan and MDR structure accepted before fabrication	P	H	R	-	Submittals 20-01, 20-02
HP-20-02	Material receiving: MTR verification against markings before issue to fabrication	P	H	-	-	QF-20-01 receiving and traceability register
WP-20-01	Heat-number transfer on cut pipe	P	W	-	-	QF-20-01
HP-20-03	Weld and NDE records complete and reconciled per test section before hydrotest	P	H	R	-	QF-20-02 weld log reconciliation
HP-20-04	As-built survey of buried pipe before backfill	P	H	-	R	QF-20-03 survey point record
HP-20-05	Test package records accepted (49 CFR 192.517 content)	P	H	H	R	QF-11-02 test record and package; QF-20-04 package review
HP-20-06	MAOP summary sheet reviewed by the EOR	P	R	H	R	QF-20-05 MAOP summary
HP-20-07	Final as-builts accepted	P	H	H	R	Submittal 20-09
HP-20-08	Final turnover dossier accepted (release of pay item 01.05)	P	H	R	-	QF-20-06 completeness certificate

B. The receiving pipeline operator will review the as-built survey and records for the outlet lateral and the tap valve connection under the Interconnect and Operating Agreement (HOLD H-01).

C. MAOP summary: for each test section the Contractor shall compile the minimum component rating, pipe grade, wall, design factor, test pressure and duration, with the record ID of each element, for EOR review. The EOR will confirm the MAOP basis; the Owner establishes the MAOP.

3.12 ACCEPTANCE

A. The records are accepted when every criterion in Table 3-5 is met and the Contractor's quality manager and project manager have signed the certificate of completeness.

Table 3-5: Acceptance Criteria

Parameter	Criterion	Method
Traceability	100 % of pressure components linked to an MTR or certificate by heat number	Register review, field audit

Parameter	Criterion	Method
Weld reconciliation	Welds made = welds examined = welds accepted or cut out; 100 % NDE of butt welds	Weld log against NDE reports
Test records	All 49 CFR 192.517(a) items present and signed; charts original	Package review
Survey accuracy	±0.1 ft horizontal and vertical (95 %) for buried pipe; ±0.02 ft for foundations	Independent check shots on 5 % of points
Survey density	Every weld, fitting and feature, and 50 ft maximum spacing	Point file review
Cover	36 in minimum (48 in under roads and drainage) recorded at every point	Survey
As-built drawings	Every approved change incorporated; zero P&ID discrepancies on walk-down	Review, walk-down
Completeness	Every field complete and signed; zero open deficiencies at final submittal	Quality control and Owner review
File format	Searchable PDF, naming convention, bookmarks; native files delivered	Electronic check
Timeliness	Records within 48 h of the activity	Date comparison

END OF SECTION