

OWNER

Operations and Maintenance Manual Outline



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1. INTRODUCTION

1.1. PURPOSE

This report sets the structure and minimum content of the operations and maintenance (O&M) manual for the . It lists the 49 CFR 192 procedures the Owner's manual shall contain for this station, gives the maintenance intervals, and identifies the operator qualification covered tasks. It is written so that the Owner can have the station volume of its manual ready, and its people qualified, before gas is introduced, as 49 CFR 192.605(a) requires.

1.2. SCOPE

The Owner's O&M manual under 49 CFR 192.605 is a company-wide document. This outline defines the station-specific volume and the station content that the company manual shall cover. The station is designed to transmission requirements regardless of its final regulatory classification (HOLD H-18), so this outline applies the transmission-line O&M requirements by default; REG-RPT-001 sets out the classification question. The Owner will compile the manual from Contractor and vendor information delivered at turnover under SPC-SPC-020.

1.3. EXCLUSIONS

The outline does not reproduce the vendor manuals, the company-wide procedures that are not station specific, or the measurement procedures of the Interconnect and Operating Agreement with (the receiving pipeline operator) (HOLD H-01), which the manual will incorporate by reference.

1.4. REFERENCES

1. 49 CFR 192 Subparts I, K, L, M and N; 49 CFR 191; 49 CFR 199; 165:20.
2. AGA Report No. 8 and No. 9; API MPMS Chapters 14.1 and 21.1; GPA 2166, 2198 and 2261.
3. API 12K; API RP 556; API 520 Part II; API 527; API 6D; IEC 61511-1:2016 with Amendment 1.
4. AMPP SP0169; NFPA 70 and 70B; 40 CFR 112; 40 CFR 60 Subparts OOOOb and JJJJ.
5. GEN-DB-001, Basis of Design; REG-RPT-001, REG-RPT-004 and REG-CAL-001; SPC-SPC-018 and SPC-SPC-020.
6. INS-RPT-001, Control Philosophy; INS-LST-003, Alarm and Trip Setpoints; INS-LST-004, Cause and Effect; SAF-SRS-001, Safety Requirements Specification; SAF-RPT-002, LOPA; SAF-CAL-001, SIL Verification.
7. MEA-PRC-001, Meter Verification; MEA-DS-008, Flow Computer; CP-CAL-001, Cathodic Protection Design; MEC-LST-003, Valve List; PRO-CAL-007, Relief System; PRO-CAL-008, Blowdown and Vent System.

2. MANUAL STRUCTURE

The station volume shall follow the structure in Table 2-1. Three operating rules deserve emphasis because they come from the design and would not be obvious to an operator. First, the standby meter run shall be kept pressurized with its outlet valve open and never blocked in at both ends, because an isolated run in sun reaches about 1,570 psig. Second, the station shall be blown down one section at a time, because the vent stack is sized for one section; blowing down all sections at once would need a 43 ft stack. Third, first gas-in and every re-pressurization after a blowdown shall use nitrogen purge and nitrogen pre-pressurization, unless the supply is at 900 psig or less and 60 °F or warmer, because throttled winter gas cools to about -52 °F, below the -20 °F minimum design metal temperature.

Table 2-1: Station Volume Contents

Part	Chapter	Content
1 General	1.1	Station description, scope boundaries (IJ-101 to tap valve flange), ownership and interface (Interconnect and Operating Agreement, HOLD H-01)
	1.2	Regulatory status and applicable rules (from REG-RPT-001); MAOP and its basis (49 CFR 192.619 record)
	1.3	Organization, responsibilities, contacts (Owner gas control, gas control, emergency)
	1.4	Document hierarchy, MOC procedure, revision control, annual review (192.605(a))
2 Station data	2.1	As-built P&IDs PRO-DWG-101 to 111, plot plan, piping GA, line list MEC-LST-001
	2.2	Equipment register (GEN-DB-001 Section 8), valve list (MEC-LST-003), instrument index INS-LST-001 (Instrument Index)
	2.3	Setpoints and alarm/trip list INS-LST-003 (Alarm and Trip Setpoints), cause and effect INS-LST-004 (Cause and Effect)
	2.4	Safety requirements specification for the OPSS Safety Requirements Specification (SAF-SRS-001) and SIL verification LOPA and SIL Verification (SAF-RPT-002 and SAF-CAL-001)
	2.5	Area classification drawing (ELE-RPT-001 and ELE-DWG-002), one-line (ELE-DWG-001)
	2.6	CP design and test station map Cathodic Protection Design Calculation (CP-CAL-001)
3 Operations	3.1	Normal operation: rate control FIC-131 with PIC-134 override, duty/standby control valves, meter run selection (the standby meter run is kept pressurized with its outlet MOV open and is never blocked in at both ends, because an isolated run in sun reaches about 1,570 psig), heater operation (winter on, summer bypass) per INS-RPT-001 (Control Philosophy Narrative)

Part	Chapter	Content
	3.2	Startup and shutdown procedures (station, sections, heater), including pressure limits (192.605(b)(5)); first gas-in and every re-pressurization after a blowdown: purge with nitrogen and pre-pressurize with nitrogen before admitting gas, or admit gas only when the supply is at 900 psig or less and 60 F or warmer (throttled winter gas reaches about -52 F, below the -20 F MDMT); pressurize through the SDV equalizing bypasses with metal temperature monitored at the throttle point
	3.3	Emergency shutdown, ESD reset, restart after ESD
	3.4	Gas quality out-of-spec response and controlled shut-in (GEN-DB-001 Section 9.6)
	3.5	Pig receiving procedure (PR-101 closure interlock, barrel venting to VS-101, liquids to T-101)
	3.6	Filter separator element change-out (at 10 psi differential)
	3.7	Liquids handling, T-101 level management, truck loadout, and recordkeeping for the legally enforceable T-101 throughput limit of 350 bbl/yr, 12-month rolling: monthly total from loadout tickets, cross-checked against LT-191, rolling total computed each month and kept 5 years; action at 80 % of the limit (Owner review of the V-101 liquids rate, HOLD H-20) and exercise of ALT-6 vapor control if the limit cannot be held (REG-CAL-001)
	3.8	Manual blowdown procedures by section (BDV-181/182/183, BDV-102 through RO-102), volumes per PRO-CAL-008, venting notifications. Blow down one section at a time: VS-101 (NPS 8 x 25 ft with strakes) is sized for one section; simultaneous blowdown would need a 43 ft stack. VS-101 base drain: check and empty the portable collection pan under the 2 in plugged drain valve by vacuum truck after each blowdown and monthly; dispose of liquids with T-101 liquids
	3.9	Abnormal operating conditions: recognition and response (192.605(c))
	3.10	Loss of power, UPS, generator operation; loss of communications; SCADA failover
4 Measurement	4.1	Measurement procedures per the agreement (HOLD H-01): meter inspection, diagnostics review, series verification through MOV-115 with witness Meter Verification Procedure (MEA-PRC-001)
	4.2	Flow computer configuration control and audit trail per API 21.1 Flow Computer Configuration (MEA-DS-008)
	4.3	GC operation, calibration and verification (GPA 2261, GPA 2198); moisture, H ₂ S, O ₂ analyzer verification
	4.4	Composite sampling per API 14.1 and GPA 2166; spot sampling
	4.5	Measurement adjustments and correction procedures, dispute handling
5 Maintenance	5.1	Maintenance interval tables (Section 4 of this outline)
	5.2	Valve maintenance, actuator maintenance, SDV partial and full stroke
	5.3	Relief valve and pressure limiting inspection and testing



Part	Chapter	Content
	5.4	OPSS proof testing per SRS
	5.5	Heater and BMS maintenance (API 12K, vendor manual)
	5.6	Electrical maintenance (NFPA 70B), generator and ATS, UPS and batteries
	5.7	Instrument calibration
	5.8	Corrosion control: CP monitoring, atmospheric corrosion inspection, internal corrosion monitoring
	5.9	Tank T-101 inspections (SPCC), containment
	5.10	Buildings, HVAC, gas detection, fire extinguishers, lighting
	5.11	Site: fence, gates, road, drainage, vegetation, signs and markers
6 Integrity and surveillance	6.1	Patrols, leak surveys, line markers, continuing surveillance (192.613)
	6.2	Damage prevention program (192.614), OKIE811 membership and locate procedures
	6.3	Integrity records, pressure test records, MAOP verification records (192.517, 192.619, 192.624 where applicable)
7 Safety and emergency	7.1	Emergency plan (192.615) station annex
	7.2	Public awareness (192.616)
	7.3	Failure investigation (192.617)
	7.4	Prevention of accidental ignition (192.751), hot work, permit to work
	7.5	Confined space, LOTO, gas detection
8 Environmental	8.1	Air: OOOOb and JJJJ compliance, generator hours log, T-101 throughput log, blowdown log, GHG data (REG-CAL-001)
	8.2	SPCC plan (REG-RPT-004)
	8.3	Waste management (filter elements, pig debris, liquids)
9 Qualification and training	9.1	Operator qualification covered tasks (Section 7 of this outline)
	9.2	Drug and alcohol (Part 199)
10 Records	10.1	Records retention table (Section 6 of this outline)
Appendices	A	Vendor O&M manuals (V-101, H-101, PR-101, SK-110 meters, GC and analyzers, actuators, G-101, UPS, safety PLC)
	B	Turnover dossiers index (SPC-SPC-020)
	C	Forms and checklists

3. PART 192 PROCEDURES FOR THIS STATION

3.1. ROUTINE PROCEDURES

The company manual shall contain the procedures of 49 CFR 192.605(b), applied to this station as shown in Table 3-1. Two do not apply because the station has no compression, and one (control room management) depends on whether the Owner's gas control falls under 49 CFR 192.631, which the Owner shall determine (HOLD H-18).

Table 3-1: Routine Procedures under 49 CFR 192.605(b)

Clause	Procedure	Station application
192.605(b) (1)	Operating, maintaining and repairing the pipeline per Subparts L and M	All of Parts 3, 5
192.605(b) (2)	Controlling corrosion per Subpart I	CP, atmospheric and internal corrosion (Part 5.8)
192.605(b) (3)	Making construction records, maps and operating history available to operating personnel	Station records at B-102 and electronic system
192.605(b) (4)	Gathering data needed for reporting incidents under Part 191	Incident data forms
192.605(b) (5)	Starting up and shutting down any part of the pipeline so that MAOP plus allowable build-up for pressure-limiting devices is not exceeded	Station and section startup; OPSS in service before gas-in
192.605(b) (6)	Maintaining compressor stations	Not applicable (no compression)
192.605(b) (7)	Starting, operating and shutting down gas compressor units	Not applicable
192.605(b) (8)	Periodically reviewing the work done by operator personnel to determine the effectiveness and adequacy of the procedures	Annual procedure review and field observation
192.605(b) (9)	Taking adequate precautions in excavated trenches to protect personnel from unsafe accumulations of vapor or gas, including breathing apparatus and a rescue harness and line	Excavation procedure
192.605(b) (10)	Systematic and routine testing and inspection of pipe-type or bottle-type holders	Not applicable
192.605(b) (11)	Responding promptly to a report of a gas odor inside or near a building	B-101, B-102 gas detection response
192.605(b) (12)	Implementing the applicable control room management procedures (192.631)	Applies if the Owner's gas control meets the 192.631 applicability; HOLD, Owner determination

3.2. ABNORMAL OPERATION

Procedures for responding to, investigating and correcting: unintended closure of valves or shutdowns (SDV-101/102/103); increase or decrease in pressure or flow outside normal limits (PT-101, PT-133A/B/C, PT-172, FQI-110); loss of communications; operation of any safety device (OPSS trip, PSV lift, BMS trip, LSHH-105, LSHH-192); any other foreseeable malfunction or operator error that may create a hazard. Includes checking variations from normal operation after abnormal operation has ended, notifying responsible personnel, and periodic review of personnel response.

3.3. OTHER PROCEDURES

Table 3-2 lists the other Part 191 and 192 procedures the manual shall contain, with their station application. Odorization is noted because the station gas is not odorized; this shall be confirmed against the receiving pipeline operator's practice (HOLD H-13).

Table 3-2: Other Part 191 and 192 Procedures

Clause	Procedure
192.603, 192.605(a)	General requirements, manual review at intervals not exceeding 15 months, at least once each calendar year
192.613	Continuing surveillance (changes in class location, failures, leakage history, corrosion)
192.614	Damage prevention program (one-call membership, locate and mark, excavation monitoring)
192.615	Emergency plan: notification, response, ESD, restoration, liaison with fire, police,
192.616	Public awareness program per API RP 1162
192.617	Investigation of failures and incidents
192.619, 192.620 (not used), 192.624	MAOP determination and verification records
192.625	Odorization: station gas is not odorized (Class 1, transmission-type); confirm with practice (HOLD H-13)
192.705	Patrolling
192.706	Leakage surveys (transmission lines)
192.707	Line markers (outlet lateral, station perimeter)
192.709	Records of patrols, surveys, inspections, tests
192.711 to 192.719	Repair procedures
192.739, 192.743	Pressure limiting and regulating stations: inspection, testing, capacity review
192.745	Valve maintenance (transmission)
192.749	Vault maintenance (not applicable unless vaults are added)

Clause	Procedure
192.751	Prevention of accidental ignition
192.465, 192.467, 192.469, 192.471, 192.473	External corrosion control monitoring, electrical isolation (IJ-101, IJ-102), test stations, test leads, interference
192.475, 192.477	Internal corrosion: gas quality monitoring, coupons or inspection when pipe is removed
192.479, 192.481	Atmospheric corrosion control and monitoring
192.491	Corrosion control records
192.517	Test records (retained for the life of the pipeline)
192.801 to 192.809	Operator qualification
191.5, 191.15, 191.17, 191.22, 191.23	Incident notification and reports, annual reports, operator identification (OPID), safety-related condition reports

4. MAINTENANCE INTERVALS

The intervals in Table 4-1 to Table 4-5 are the regulatory maximum or the recommended practice stated. Where the Interconnect and Operating Agreement (HOLD H-01) or a vendor manual (HOLD H-15) requires a shorter interval, the shorter one governs. The quarterly partial-stroke test of SDV-102 is mandatory, because the SIL 2 rating of the overpressure shutdown depends on the diagnostic coverage it provides.

Table 4-1: Pressure Control, Protection and Valves

Item	Tags	Activity	Interval	Basis
Emergency and block valves	SDV-101, SDV-102, SDV-103, SDV-165, MOVs, BDVs, HV valves that may be needed in an emergency	Inspect and partially operate; service as needed	At least once each calendar year, not exceeding 15 months	49 CFR 192.745
SDV actuators (electro-hydraulic)	SDV-101/102/103, SDV-106	Full stroke and closure timing test (SDV-102 full stroke 4 s or less); hydraulic fluid and accumulator check	Annually, and at each OPSS proof test	Vendor; SRS
SDV-102 partial-stroke test	SDV-102 (OPSS SIF-01 final element, SIL 2)	Partial-stroke test from the safety PLC; record travel, time and diagnostic result; failure is treated as a dangerous detected fault per the SRS	Quarterly (mandatory)	SAF-SRS-001, SAF-CAL-001
Pressure limiting and regulating	FCV-131/132, PIC-134 override, OPSS (PT-133A/B/C, SDV-102), PCV-161/162 and PSV-161	Inspect and test for condition, adequate from the standpoint of capacity and reliability, set to function at the correct pressure, properly installed and protected	At least once each calendar year, not exceeding 15 months; capacity review annually (192.743)	49 CFR 192.739, 192.743

Item	Tags	Activity	Interval	Basis
OPSS safety instrumented function (SIF-01, SIL 2)	PT-133A/B/C (separate safety PLC input cards), safety PLC logic, SDV-102 and SDV-103	Full proof test (sensor to final element, including trip setpoint 1,225 psig, SDV-102 closure in 4 s or less and SDV-103 closure,)	Proof test interval per the SIL verification LOPA and SIL Verification (SAF-RPT-002 and SAF-CAL-001) and SRS (SAF-SRS-001); not to exceed the 192.739 annual test	IEC 61511
OPSS transmitters	PT-133A/B/C	Calibration check; 2003 deviation alarm review	Monthly deviation review, calibration at proof test	SRS
Relief valves	PSV-101, PSV-157, PSV-161, TSV-136	Bench test set pressure and seat tightness (API 527), inspect inlet/outlet, verify capacity	Annually, not exceeding 15 months (192.739); bench test at least every 3 years or per Owner program, whichever is shorter	192.739, API 576 practice
PVRV-193 / FA-193	T-101	Inspect pallets, screen and flame arrestor element	Annually	Vendor
Check valve	CKV-171	Inspect for function (backflow test during shutdown)	Annually	Owner practice
Insulating joints	IJ-101, IJ-102	Isolation test (radio frequency or potential method)	Annually with CP survey	192.467

Table 4-2: Measurement and Analysis

Item	Tags	Activity	Interval	Basis
USM diagnostics	FE-111, FE-121	Review of path velocities, speed of sound versus AGA 10 calculated, gain, SNR, profile factors	Daily automatic, monthly documented review	AGA 9, Meter Verification Procedure (MEA-PRC-001)
Meter-to-meter series verification	MOV-115 series	Place runs in series; agreement within 0.3 %	At least quarterly and on diagnostic drift; witness	GEN-DB-001 Section 9.5; HOLD H-01
Meter inspection	MR-110, MR-120	Visual inspection of meter bore, transducers, flow conditioner	When diagnostics indicate, and at least per agreement (typical every 3 to 5 years)	AGA 9, HOLD H-01

Item	Tags	Activity	Interval	Basis
Meter recalibration	FE-111, FE-121	Flow calibration at an accredited facility	Per agreement (HOLD H-01) or on failed verification	AGA 9
Secondary instruments	PT-111/121, TT-111/121	Verification against reference standards (as-found, as-left)	Monthly for custody transfer (typical), or per agreement	API 21.1, HOLD H-01
Flow computer	FQI-110	Configuration audit, AGA 8 check calculation, event log review	Monthly review; audit at each verification	API 21.1
Gas chromatograph	AT-141	Automatic calibration with certified standard blend (GPA 2198); verification with a second blend; response factor and retention time trending	Daily automatic calibration; monthly verification (typical); annual maintenance	GPA 2261, GPA 2198, HOLD H-13
Moisture analyzer	AT-142	Verification with a certified moisture standard or comparison to ASTM D5454	Quarterly (typical)	Vendor, HOLD H-13
H2S analyzer	AT-143	Verification with certified H2S standard; tape replacement (if tape)	Monthly	Vendor
O2 analyzer	AT-144	Verification with certified O2 standard; cell replacement	Monthly verification; cell per vendor	Vendor
Composite sampler	SMP-146	Cylinder change, grab rate check, cylinder cleaning	Monthly cylinder change (typical, per agreement)	API 14.1, GPA 2166
Sample probe and system	SP-141, 3/8"-G-1080-T1	Inspect probe, filters, heat tracing, regulators	Quarterly	API 14.1

Table 4-3: Heater, Fuel Gas and Equipment

Item	Tags	Activity	Interval	Basis
Line heater	H-101	Bath level and quality (inhibitor, pH), firetube inspection, burner and pilot service, stack inspection	Bath level weekly in season; firetube and burner annually before the heating season	API 12K, vendor

Item	Tags	Activity	Interval	Basis
Burner management (SIF-05, SIL 2 BMS)	BMS-150, two diverse flame detectors, BE-213 heater-area fire detector, LSL-154, TSHH-155, TT-156 high-high gas outlet trip at 140 F, TCV-152	Function test of flame failure, low bath level, high-high bath temperature and TT-156 trips; fuel shutoff tightness; proof test interval per SAF-CAL-001	Annually before heating season	API RP 556 guidance, vendor
Heater coil	H-101 coil	External inspection when bath is drained; thickness check of inlet and outlet	Every 5 years or per inspection findings	Owner practice
Fuel gas skid	FG-101, FT-163, PT-164	Filter change, regulator inspection, Coriolis zero check	Semi-annually	Vendor
Filter separator	V-101	Element change at 10 psi differential; internal inspection; PDIT-103 and LT-104 check; LSHH-105 and LSLL-106 function test	Elements on differential; switches annually; internal inspection at element change	GEN-DB-001 Section 6; vendor
Pig receiver	PR-101	Closure seal, locking device and pressure warning interlock inspection	Each use; full inspection annually	ASME VIII Div 1 quick-actuating closure requirements, vendor
Pressure vessels	V-101, PR-101	External inspection; internal at element change or pigging	Annual external; internal per Owner inspection program	Owner practice (API 510 style)
Liquids tank	T-101, LT-191, LSHH-192	Level instruments and high-high trip test	Annually	Owner practice
Vent stack	VS-101 (S1 stainless, helical strakes,)	Visual, strakes, base drain valve and collection pan, rain cap, ignition source exclusion	Annually; collection pan monthly	Owner practice
Electric fuel gas preheater	E-161	Outlet temperature control at 105 F (TIC-161A), high-temperature cutout, explosion-proof enclosure and seals inspection	Annually	Vendor (PRO-DS-012)

Table 4-4: Corrosion Control

Item	Activity	Interval	Basis
Pipe-to-soil potentials	Survey at all test stations, IJ-101, IJ-102	At least once each calendar year, not exceeding 15 months	49 CFR 192.465(a)
Rectifier (if impressed current)	Check output (voltage, current)	At least 6 times each calendar year, intervals not exceeding 2-1/2 months	192.465(b)
Deep anode well	Keep the Water Resources Board registration record and any well-construction and plugging requirements with the CP records; inspect the well head and vent (HOLD H-19)	Annually with the CP survey; plugging at abandonment	(registration requirement to be confirmed), CP-CAL-001
Interference bonds	Check bond function	Critical bonds 6 times per year (2-1/2 months), others annually (15 months)	192.465(c)
Atmospheric corrosion	Inspect above-grade piping, soil-to-air interfaces, under supports and clamps	At least once every 3 calendar years, not exceeding 39 months (onshore)	192.481(a)
Internal corrosion	Monitor gas quality (water, CO ₂ , O ₂ , H ₂ S) continuously; inspect internal surfaces whenever pipe is removed; examine filter separator liquids and pig debris	Continuous; on each opportunity	192.475, 192.477
Exposed buried pipe	Examine coating and pipe when exposed	Each exposure	192.459
AC interference	AC voltage and coupon current density where AC mitigation is installed	Annually	AMPP SP21424, AC Interference and Mitigation Assessment (CP-CAL-001 Section 11)

Table 4-5: Surveillance, Electrical and Site

Item	Activity	Interval	Basis
Patrol of outlet lateral and station perimeter	Surface conditions, construction activity, markers	Class 1: at least once each calendar year, not exceeding 15 months (transmission default)	192.705

Item	Activity	Interval	Basis
Leakage survey	Gas detector survey of station and lateral	Class 1: at least once each calendar year, not exceeding 15 months; station walk-through with detector monthly (Owner practice)	192.706
Line markers and signs	Inspect and replace	Annually with patrol	192.707
Gas detectors	GD-205, GD-206, GD-207	Bump test monthly; calibration quarterly	Vendor
Generator	G-101	Exercise under load; maintenance; hours logged (JJJJ emergency limits)	Monthly exercise (maintenance hours counted toward the 100 h/yr allowance)
UPS and batteries	Load test, battery impedance	Quarterly checks; annual discharge test	IEEE 1188 practice, vendor
Electrical and grounding	Infrared survey of panels; ground resistance tests	Annual IR; ground tests every 3 years	NFPA 70B
Hazardous area equipment	Inspection of seals, enclosures, bonding	Annually	NFPA 70, API RP 500
Fire extinguishers	Inspection monthly, maintenance annually	Monthly / annual	NFPA 10
T-101 SPCC inspections	Visual inspection of tank, containment, piping; drainage of containment with record	Monthly visual; annual owner inspection; formal integrity testing per STI SP001 (verify category and schedule)	40 CFR 112.8(c)(6), REG-RPT-004
Air compliance	T-101 12-month rolling throughput; blowdown and pigging log; generator hours	Monthly	REG-CAL-001
Site	Fence, gates, drainage, vegetation, signs	Quarterly	Owner practice

5. INTERFACE WITH THE RECEIVING PIPELINE OPERATOR

The station volume shall include the interface procedures that the Interconnect and Operating Agreement requires (HOLD H-01): rate nominations and setpoint changes, notice of scheduled blowdowns and outages, scheduling of witnessed meter verifications, notice of gas quality excursions and the shut-in response, the response to a remote shutdown command from the operator, the data link through the demarcation panel (HOLD H-14), and the emergency contact tree.

6. RECORDS RETENTION

Table 6-1 gives the minimum retention. Records that support the maximum allowable operating pressure are kept for the life of the pipeline because they must be traceable, verifiable and complete whenever the pressure is questioned.

Table 6-1: Minimum Records Retention

Record	Retention
Pressure test records (192.517)	Life of the pipeline
MAOP records (192.619) and material records that support MAOP	Life of the pipeline (traceable, verifiable, complete)
Design, construction, weld and NDE records	Life of the pipeline (Owner policy)
Corrosion control records (192.491)	CP records at least 5 years; records that demonstrate adequacy of corrosion measures for the life of the pipeline
Valve, relief and pressure limiting inspection records (192.709)	At least 5 years, or until the next inspection, whichever is longer
Patrol and leak survey records	At least 5 years
OQ records (192.807)	Current plus 5 years for superseded
Measurement records (API 21.1 audit trail)	Per agreement (HOLD H-01), minimum 3 years
OPSS proof test records	Life of the facility (IEC 61511 practice)
SPCC inspection records	3 years (40 CFR 112.7(e))
Air records (JJJJ, OOOOb, throughput limit)	5 years

7. OPERATOR QUALIFICATION

The Owner's operator qualification program under 49 CFR 192 Subpart N defines the covered tasks and evaluation methods. Table 7-1 lists the covered tasks expected at this station. The task numbers are station references to be mapped to the task numbers of the Owner's program, which may be based on an industry task list.

Table 7-1: Covered Tasks

Owner task no.	Covered task	Station examples	Typical frequency of performance
OQ-01	Inspection and maintenance of valves (including actuators)	SDV-101/102/103, MOVs, BDVs	Annual
OQ-02	Operation of valves (manual and automated) including emergency valves	ESD response, section isolation	As needed
OQ-03	Inspection and testing of pressure limiting devices and pressure regulating stations	OPSS, FCVs, PCV-161/162	Annual
OQ-04	Inspection, testing and set-point adjustment of pressure relief devices	PSV-101, PSV-157, PSV-161, TSV-136	Annual
OQ-05	Proof testing of the OPSS safety instrumented function	PT-133A/B/C, safety PLC, SDV-102	Per SRS
OQ-06	Calibration and maintenance of pressure and temperature transmitters used for pressure control	PT-133, PT-134, PT-172	Per schedule
OQ-07	Measure structure-to-soil potentials	Annual CP survey	Annual
OQ-08	Inspect and test rectifiers and bonds	Rectifier checks	6 per year
OQ-09	Install and repair CP test leads and bonds (including thermite welding on live pipe)	Test stations	As needed
OQ-0	Inspect insulating devices (IJ-101, IJ-102)	Annual	Annual
OQ-1	Visual inspection for atmospheric corrosion	Above-grade piping	3 years
OQ-2	Internal corrosion monitoring (coupons, internal inspection when pipe is removed)	V-101 and pig debris	As needed
OQ-3	Leakage survey with gas detection instruments	Station and lateral	Annual
OQ-4	Patrolling and line marker maintenance	Outlet lateral	Annual
OQ-5	Locating and marking pipelines	OKIE811 tickets	As needed

Owner task no.	Covered task	Station examples	Typical frequency of performance
OQ- 6	Excavation monitoring near the pipeline (damage prevention)	Third-party excavation	As needed
OQ- 7	Inspection of exposed pipe and coating	Any excavation	As needed
OQ- 8	Coating application and repair on buried pipe	Repairs	As needed
OQ- 9	Purging of pipeline facilities (air to gas, gas to air)	Blowdowns and returns to service	As needed
OQ- 20	Pressure testing (hydrostatic or gas) of repairs and replacements	Repairs	As needed
OQ- 21	Emergency response actions and abnormal operating condition recognition	All operators	Annual refresher
OQ- 22	Startup and shutdown of the station within MAOP	Station operation	As needed
OQ- 23	Pig receiving (including quick-opening closure operation)	PR-101	Weekly (HOLD H-16)
OQ- 24	Gas detector (fixed) inspection and calibration	GD-205/206/207	Quarterly
OQ- 25	Joining of pipe (welding) for repairs, and tapping; in-service welding	Repairs (Owner or contractor)	As needed

Measurement tasks such as meter verification and chromatograph calibration are custody transfer tasks covered by the Owner's measurement training; they belong in the qualification program only if the Owner decides they affect operation or safety. Abnormal operating conditions to be included in the evaluations for this station: overpressure of the outlet (OPSS approach), gas release at the station or vent stack, fire at H-101, loss of power or UPS, failure of an SDV to close, loss of communications with
 , pig receiver closure pressure warning, high liquid level in V-101 or T-101, gas detection alarm in B-101 or B-102.

8. TURNOVER DELIVERABLES AND NEXT STEPS

At turnover the Contractor and the vendors shall deliver the vendor O&M manuals (two paper copies and electronic), as-built drawings, calibration certificates, test records, spare parts lists, recommended maintenance tasks, lubricant lists, setting sheets for relief valves, regulators, burner management and analyzers, and the commissioning dossiers under SPC-SPC-018 and SPC-SPC-020.

The Owner should start the station volume during construction so that it is approved, and the operators are qualified on the covered tasks, before the pre-startup safety review. The items that must be settled first are the regulatory classification and the control room management question (HOLD H-18), the measurement procedures and witness rights of the Interconnect and Operating Agreement (HOLD H-01), the odorization practice (HOLD H-13) and the registration of the deep anode well (HOLD H-19).