

Closeout and Operation & Maintenance (O&M) Requirements Template

National Park Service (NPS) - Denver Service Center (DSC) | 1-27-21

Topic	Specification Section	Requirement	Submittal Date	Completed	Received by Park
Project Record Drawings	01 70 00	Final Project Record Drawings.			
System Demonstration and Training	01 31 00	Contractor's Environmental Training Program			
	01 35 23	First Aid and Hazardous Material Training			
	01 32 25	Blasting Safety Training			
	01 43 33	Prestartup and Post-Startup Training			
	01 57 13	Personnel Training on responsibilities under Construction Stormwater Discharge Permit and training on spill prevention and property disposal procedures			
	01 74 19	Proper Waste Management Procedures			
	01 78 25	Post Commissioning Hands-On NPS Operator Training - SOPs and UPCPs			
	03 01 32	Repair of mortar system applicators			
	03 62 00	Demonstration and training sessions for bleed tests, mixing, flow cone measurement, cube testing, application, and curing for each category and type of grout.			
	05 05 19	Adhesive and Mechanical Anchors			
	07 54 23	Thermoplastic Membrane (TPO) Roofing			
	12 24 13	Roller Shade Systems			
	21 13 13	Wet-pipe sprinkler systems			
	23 09 00	Instrumentation and Control Devices for HVAC			
	23 77 00	Air Handling Units			
	23 81 00	Unitary Air Conditioning Equipment			
	26 09 13	Post startup training for transformers and digital power meter			
	26 14 13	Switchboards			
	26 20 00	Low-Voltage AC Induction Motors			
	26 24 19	Low-voltage motors			
	26 29 23	Low-voltage adjustable frequency drives			
	26 32 13.13	Diesel Engine Generator			
	26 36 23	Automatic Transfer Controller			
	35 20 16.25	Fabricated slide gates and stop gates			
	40 90 00	PLC and HMI Configuration Training			
	40 96 00	System Delivery Plan training			
	40 99 90	Package control systems			
	41 22 23.19	Monorail hoist, portable davit crane and gantry crane			
	43 22 56.02	Vertical Mixers			
	43 32 56	Membrane Equipment System			
	44 42 19.04	Rotary positive displacement blower			
	44 42 30	Inclined rotating drum screens			
	44 42 31	Septage receiving system			
	44 42 40	Grit Concentrator			
	44 42 41	Grit washing and dewatering unit			
	44 42 48.04	Automatic composite sampler			
	44 42 56.04	Submersible pumps			
	44 42 56.09	Non-clog dry-pit centrifugal pumps			
	44 42 56.11	Vertical wet-pit centrifugal pumps			
	44 42 56.13	Progressing Cavity Pumps			
	44 42 56.14	Lobe pumps			
	44 42 56.18	Horizontal self-priming centrifugal pumps			
	44 44 73	Ultraviolet Disinfection Equipment			

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Tools Spare Parts Equipment	44 45 13.11	Package Biofilter System			
	44 45 16.02	Fine Bubble Air Diffuser System			
	44 46 30	Miscellaneous Mechanical Equipment			
	05 50 00	Two neoprene gaskets for each location requiring neoprene gaskets, one neoprene gasket adhesive for each location requiring neoprene gaskets.			
	08 71 00	Two sets of special tools for installation and maintenance of hardware			
	21 13 13	One sprinkler cabinet, six sprinklers of each different size unit			
	23 05 48	Neoprene inserts for seismic snubber units			
	23 09 00	One complete set of special tools required to dismantle for each different unit size. For each building, one set of special tools recommended by manufacturer and a toolbox for storage.			
	23 09 13	One complete set of special tools required to dismantle for each different unit size. Spare lamps for each type and color of pilot light used, a minimum of one per HCP, stored inside HCP in dummy light sockets secured to back panel surface.			
	23 09 23	One complete set of special tools required to dismantle for each different unit size.			
	23 31 13	Ten percent of the amount installed of fusible links, one complete set of special tools required to dismantle for each different unit size.			
	23 34 00	One complete set per unit of Filters, one complete set of special tools required to dismantle for each different unit size.			
	23 77 00	Four complete sets per unit of pre-filters, one complete set per unit of filters, one complete set for each belt driven fan of fan belts, one complete set for each unit size of special tools required to maintain and dismantle.			
	23 81 00	One complete set per unit of Filters, one complete set of special tools required to dismantle for each different unit size.			
	26 05 04	Three of each type and each current rating of fuses installed (0 volt to 600 volts).			
	26 14 13	One complete set of spare fuses of each current rating (both power and control), one complete set of spare indicating light, one pint of paint, to match enclosure exterior finish in color and quality.			
	26 24 16	One half-pint container of touch-up paint for panelboards			
	26 29 23	One complete set of spare fuses of each current rating (both power and control), one complete set of spare indicating light, one pint of paint, to match enclosure exterior finish in color and quality.			
	26 32 13.13	Three complete sets per unit of diesel fuel line filter elements, three complete sets per unit of lubricating oil filter elements with gasket, one complete set per unit of air cleaner filter element, two complete sets per unit of cooling fan drive belt, one hydrometer, one two-pronged battery voltmeter, one complete set per unit of spare fuses, four of each type used per unit of indicating lamps, one quart of each color used of touch up paint, one complete set for each different size unit of special tools required to maintain or dismantle engine generator set.			
	28 31 00	Provide extra materials with protective packaging for storage and identifiable with labels describing the contents. Manual alarm boxes: no fewer than one, Notification devices: no fewer than one of each type, Initiation devices: no fewer than one of each type, Detector bases: no fewer than two of each type.			
	32 84 00	Two sets of special tools required for removing, disassembling and adjusting each type of sprinkler and valve supplied, one quick-coupling key and matching hose swivel for every six, or fraction of, quick-coupling valves.			
	35 20 16.25	One of each different size of stem collars for all gate stems, one of each different size of bronze lift nuts, one dozen indicator lights, one complete set of special tools required to maintain or dismantle.			
	40 27 01	Furnish, tag, and box for shipment and storage any special tools required to install, maintain, or dismantle piping specialties products			
	40 90 00	Twenty percent of each type and sized used of dc power supplies, twenty percent of each type and sized used of fuses, twenty percent of each type and sized used of relays, ten percent of each type and sized used of terminal blocks, ten percent of each type and sized used of 120V ac isolation transformers, ten percent of each type and sized used of surge suppressors, two year supply of chemicals for analyzers, two pH sensor overhaul kits, one pint per panel of spray pump filter adhesive.			
	40 99 90	Ten of each type of indicator used in the panels, five of each type and rating of fuse used in the panel, one each of each type primary protector surge suppressor used in the panels, one each of each type of surge protective device used in the panels, one of each type of HMI for each package system, ten percent minimum of each type of I/O modules used for each panel, ten percent minimum of each type of PLC power supplies used for each panel, one of each type of PLC processor used, one of each type of PLC communications module used, one of each type of ethernet switch used, one of each type of panel power supplies used, one of each type of transformer used.			
	43 22 56.02	One set of special tools, for each model mixer, one gearbox, one shaft holder, rubber buffers and bottom guide system for mixer/aerator.			

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	43 32 56	One set of expendable materials such as gaskets, seals, and packing, one set of new and unused special tools required for installation, operation, and maintenance per each type of equipment or system, one repair kit for sealing off damaged membrane fibers within the small membrane subunit sufficient to repair up to 5 percent of the supplied membranes, one complete set of all jigs, fixtures, clamps, lifting beams, hooks, and other instruments required facilitating the removal, disassembly, re-assembly, and installation of each item of equipment within the system, reagents/chemicals, calibration sets, and spare parts as specified for individual equipment items or instruments, spare parts for instruments, PLC hardware and control devices, one shelf spare permeate pump, each size, one shelf spare for each type of meter (flow, level, etc.), pressure gauge, pressure differential transmitter, valve and actuator supplied, special tools and spare parts recommended for the first year of operation.			
	43 41 14	One spare gasket for every flanged connection, manway, port, inlet, outlet or nozzle on every tank, one spare bolting hardware kit for one of each size flange.			
	44 42 19.04	Sufficient gallons for standard oil (synthetic) change interval, enough for 1 complete change per unit of inlet filters, one complete set of flexible coupling, one complete set per unit of drive V-Belts, one complete set for each unit of special tools required to maintain or dismantle.			
	44 42 30	One set of hopper cleaning brushes for influent screens, one set of hopper cleaning brushes for fine screens, two complete solenoid valve rebuild kit for influent screens, two complete solenoid valve rebuild kit for fine screens, six plastic rollers for fine screens, ten boxes with 230 feet endless bags.			
	44 42 31	One complete unit of brushes, one complete set of drive shaft end bearings, one complete set of special tools required to maintain or dismantle unit.			
	44 42 48.04	Two replacements of pump tubing two bags of desiccant bags, two large sampling bottles, 48 small sampling bottles.			
	44 42 56.04	One set of mechanical seals, one complete set of special tools required to maintain or dismantle unit.			
	44 42 56.09	One non-clog dry-pit centrifugal RAS pump, complete set of bearings, complete set of gaskets and O-ring seals, complete set of shaft sleeves, complete set of keys, dowels and pins, complete mechanical seal, set of impeller and casing wear rings, one complete set of special tools required to dismantle pump.			
	44 42 56.11	Complete set of packing, complete set of bearings, complete set of gaskets and O-ring seals, complete set of shaft sleeves, complete set of keys, dowels, pins, etc., complete mechanical seal, impeller, impeller shaft, impeller wear ring, head shaft, one complete set of special tools required to dismantle pump.			
	44 42 56.13	Complete set of packing, complete set of bearings, complete set of gaskets and O-ring seals, complete set of rod washers, complete set of keys, dowels, pins, etc., one complete set of special tools required to dismantle pump.			
	44 42 56.14	Two complete sets of bearings, complete set of gaskets and O-ring seals, two shaft sleeves, complete set of keys, dowels, and pins, two complete mechanical seals, one set wear plates, one set housing segments or radial liners, two pairs of rotors or rotor tips for two rotors, one complete set of special tools required to dismantle pump, two sets of drive belts, one set of pump shafts.			
	44 42 56.18	One horizontal self-priming centrifugal grit pump, special tools materials and supplies required to install, commission and startup equipment.			
	44 44 13.01	One complete pump, drive motor and gear box, one printed circuit board of each type, one complete set of special tools required to dismantle pump.			
	44 44 73	Four UV lamps, one sleeve, set of seals and O-rings for one reactor, set of replacement wiper seals for one reactor, one face shield, able to block UV light wavelengths between 200 and 400 nm.			
	44 45 16.02	One percent of number installed of ceramic diffuser sealing gaskets, five percent of number installed of flexible membrane diffuser elements, five percent of total number installed of diffuser element retainers, three element tighteners, quarter percent of number installed of diffuser element holders, one percent of each type and size installed of air distribution pipe support assemblies, one percent of each type and size installed of air distribution pipe expansion joints, two tool sets.			
Extra Stock	09 30 00	Two percent of each tile used			
	09 65 00	Furnish additional floor covering materials from same production run as installed material, equivalent to 10 percent of installed materials.			
	01 40 00	Quality Control Daily Report(s)			
	01 45 33	Special Inspection Report			
	01 57 19.11	Moisture content testing report, moisture penetration testing report			
	01 61 03	Manufacturer's Field Service Report (MFSR) for each piece of equipment supplied			
	01 67 00	Affirmative Procurement Reporting Form			
	01 91 15	Commissioning Report, Deficiency Report			

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	02 61 00	Inspection Report for contaminated soil			
	02 81 00	Hazardous material test reports record keeping, exception report and spill response.			
	02 82 00	Asbestos air sampling test reports, pressure differential recordings for local exhaust system test reports, clearance sampling test reports.			
	02 83 00	Lead Occupational and Environmental Assessment Data Report, Lead sampling and analysis test reports, sampling results, pressure differential recordings for local exhaust system test reports.			
	02 84 33	Polychlorinated Biphenyls (PCBS) inspection reports			
	03 01 32	Repair of vertical and overhead concrete surfaces field and laboratory test reports.			
	03 21 00	Steel reinforcement lab test reports and test results of field testing, current ICC Evaluation Services Report			
	03 30 00	Water-Soluble Chloride-Ion Content in Hardened Concrete test report, Shrinkage Test Results, Alkali Aggregate Reactivity test reports, cast-in-place concrete field test reports			
	03 62 00	Test report for 24-hour evaluation of nonshrink grout, Test results and service report from demonstration and training session, Field test reports and laboratory test results for field-drawn Samples.			
	03 63 00	Concrete Doweling ICC Evaluation Services Report			
	04 22 00	Test reports stating aggregates for mortar meet requirements of ASTM C144, Test reports or letter of certification stating aggregates for grout meet requirements of ASTM C404			
	05 05 19	Current ICC-ES or IAPMO-UES Report for each type of post-installed anchor to be used			
	05 05 23	Welding Special Inspection personnel report, CWI visual inspection (VT) reports			
	05 12 00	Manufacturer's inspection test report results for Tensile strength, Yield strength, Reduction of area, Elongation and hardness. Certified Mill Test Reports for Bolts and Nuts, Direct Tension Indicators (DTIs): Manufacturer's test report meeting requirements of ASTM F959, Twist-Off-Type Tension-Control (TC) Bolts: Manufacturer's test report meeting requirements of ASTM F3125 Grade F1852, Welding Procedures, Qualifications, and Inspection Reports, Nondestructive Testing (NDT) report.			
	05 52 16	ICC Evaluation Services Report: ICC report on evaluation of manufactured concrete anchor systems. Railing and post connections test reports, Railing wall connections test reports, Railing expansion joint connections test reports, Railing system gate test reports, Deflection Criteria test reports, Aluminum Rail Piping test reports.			
	06 10 00	APA product reports for structural composite lumber. ICC Evaluation Service Reports for Connections and Fasteners, Wood Treatment, Nails, Wood Framing, Structural Panels. Material test reports from testing laboratory			
	06 82 00	Factory test reports for physical properties of glass-fiber-reinforced plastic, Independent laboratory test report of fire retardant testing conducted on exact type of grating proposed .			
	07 41 13	Metal roof and soffit panels product test reports			
	07 54 23	Thermoplastic membrane roofing manufacturer's inspection report			
	07 84 00	Certified test reports for firestopping showing compliance with specified performance characteristics and physical properties			
	08 51 13	Aluminum windows factory quality control test reports			
	08 71 00	Door hardware manufacturer's field service report			
	08 80 00	Glazing manufacturer's adhesion test reports			
	09 96 35	Field inspection and test reports for chemical-resistant coatings			
	09 97 13	Inspection and field testing reports for steel tank lining and coating			
	21 13 13	Fire hydrant flow test report, wet-sprinkler system field quality control report and field test reports			
	22 07 00	Plumbing piping insulation certified test report from an approved testing laboratory			
	22 10 01	Plumbing pipe test report documentation			
	23 05 93	Balancing Log Report for HVAC			
	23 23 00	Refrigerant piping field quality test report			
	23 31 16.16	Thermoset fiberglass-reinforced plastic ducts manufacture factory inspection report			
	23 34 00	HVAC fan(s) test reports			
	23 77 00	Electric heating coil and DX cooling coil manufacturer's test reports			
	23 81 00	Unitary air-conditioning equipment test report			
	23 82 00	Electric duct heater manufacturer test report			
	26 05 05	Factory Test Report for conductors 600 volts and below, Factory Test Report per AEIC CS 8 for conductors above 600 volts.			
	26 05 10	Sample of Network Test Report			
	26 05 70	Arc flash study report, harmonic analysis report			

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Reports	26 08 00	Test and/or inspection reports and certificates for each electrical item tested within 30 days after completion of test. Report that includes areas surveyed and the resultant temperature gradients, locations of areas having temperature gradients of 3 degrees C or greater, cause of heat rise and actions taken to correct cause of heat rise, and detected phase unbalance.			
	26 14 13	Switchboard factory test report			
	26 20 00	Low-voltage AC induction motor factory test reports and routine tests using form: IEEE 112, Form A-1.			
	26 22 00	Sound test certification for dry type power transformers (0 volt to 600 volt, primary) test report.			
	26 24 19	Low-voltage motor control certified factory test reports			
	26 27 26	Wiring device tests and inspection reports			
	26 29 23	Low-voltage adjustable frequency drive system factory functional test reports, Certified copy of test report for identical motor tested, Field test reports.			
	26 32 13.13	Test reports demonstrating appropriate vibration analysis and design in all modes for diesel engine generator, diesel generator factory test reports, test report for generator including electric load on generator, fuel consumption, exhaust temperature, ambient air temperature, safety shutdown performance results and noise levels at meters.			
	26 36 23	Automatic transfer controller factory test reports			
	26 41 00	Lightning protection field test report			
	26 42 01	Factory test reports for isolation fittings, Field Test Reports, including results of insulator testing, and results from testing associated with Paragraph Metallic Pipe Isolation from Structures			
	26 50 00	LED lighting IESNA LM-80 test reports,			
	31 05 23	Daily quality control report for cement and concrete			
	31 10 00	Site clearing close out report that includes survey information			
	31 21 13	Radon Mitigation Systems Enclosure Components Test Reports			
	31 23 16.27	Blasting summary report			
	32 12 16	Asphalt cement test report			
	32 13 13	Water-Soluble Chloride-Ion Content in Hardened Concrete test report, Shrinkage Test Results, Alkali Aggregate Reactivity test report, concrete paving field test reports			
	32 31 13	Field test reports for compliance of installation of chain link fence, gates, and gate operator			
	32 91 13	Preconstruction soil analysis test report, soil field quality control reports, soil sieving method report, soil hydrometer method report, soil compaction test report			
	33 05 13	Precast manufacturer's concrete test cylinders report, field quality control report			
	33 12 17.01	Surge Tank Test Reports			
	40 27 01	Coupling harness thrust restraint test reports and load proof testing reports			
	40 80 01	Pipe leakage testing certified test reports			
	40 90 00	Test reports from factory and field test of instrumentation and control systems, loop status report(s)			
	40 95 80	Fiber optic test reports - test summary, cable test reports and OTDR test results, sample of network test report			
	40 99 90	Factory Test Reports, Witnessed Test Reports, Certificate of Proper Installation Reports, and Field Test Field Reports for package control systems.			
	41 22 23.19	Factory functional test report, field functional and performance test report and load test report for monorail hoist, portable davit crane and gantry crane			
	43 12 01	Factory test reports and field test reports of each test and inspection for compressed air systems			
	43 22 56.01	Submersible mixers commissioning report, manufacturer's representative's signed report describing in detail the inspection, tests and adjustments made, quantitative results and suggestions for precautions to be taken to ensure proper maintenance			
	43 22 56.02	Vertical mixer Source Quality Control Factory Test report, Field Quality Control Functional Test reports, Field Quality Control Performance Test report			
	43 32 56	MES Supplier Performance Acceptance Test Report, MES commissioning period report			
	43 40 01	Polyethylene storage tank QA inspection report			
	43 41 14	Welded steel tank nondestructive test reports			
	44 42 19.04	Rotary positive displacement blower factory test reports, blower performance test report			
	44 42 30	Inclined rotating drum screen factory test report of inspection, field functional and performance test reports			
	44 42 32	Septage receiving system factory test report of inspection			
	44 42 48.04	Automatic composite sampler factory functional test reports and factory test results			
	44 42 56.04	Submersible pump Factory and Field Performance Test Reports			

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	44 42 56.09	Non-clog dry-pit centrifugal pump factory functional and performance test report, field vibration and performance test reports			
	44 42 56.11	Vertical inline multistage centrifugal pump factory functional and performance test reports, factory test reports			
	44 42 56.13	Progressing cavity pump factory functional test report, source quality control test reports, field quality control test reports			
	44 42 56.14	Lobe pump factory test report			
	44 42 56.18	Horizontal self-priming centrifugal pump factory functional and performance test report, field performance test report			
	44 44 13.01	Chemical metering pump factory functional and performance test report			
	44 44 73	Ultraviolet disinfection equipment manufacturer's field report, reactor performance validation testing report, factory test report and witness report, functional testing report, performance testing report			
	44 45 13.11	Package biofilter system field performance test report, factory quality control report,			
Keys & Keying	44 45 16.02	Fine bubble air diffuser system factory test reports			
	08 71 00	Keys, two per lock, four master keys.			
	10 44 00	Key box			
O&M Data Warranties	05 50 00	Metal fabrication special guarantee			
	07 14 00	Fluid-applied waterproofing guarantee			
	07 41 13	Metal roof, wall and soffit panels special guarantee and installer's warranty			
	07 54 23	Thermoplastic Membrane Roofing sample copy of guarantee, manufacturer's extended guarantee or warranty and O&M data			
	07 62 00	Sheet metal flashing and trim manufacturer's extended guarantee or warranty			
	07 84 00	Firestopping special guarantee and manufacturer's warranty requirements			
	07 92 00	Joint sealant manufacturer's extended guarantee or warranty			
	08 33 23	Overhead coiling door O&M data			
	08 51 13	Aluminum windows manufacturer's extended guarantee or warranty			
	08 71 00	Door hardware O&M data			
	08 80 00	Glazing manufacturer's extended guarantee or warranty			
	08 90 00	Louvers special guarantee			
	09 96 35	Chemical resistant coatings extended guarantee or warranty, 24-month warranty period inspection, extended warranty of 1 year for repairs			
	09 97 13	Steel tank linings and coatings extended guarantee or warranty, 24-month warranty period inspection, extended warranty of 1 year for repairs			
	10 44 00	Fire protection specialties and safety equipment O&M data			
	11 53 00	Laboratory equipment O&M data and special guarantees			
	13 34 19	Metal building systems manufacturer's extended guarantee or warranty			
	21 13 13	Wet-pipe sprinkler system O&M data			
	22 30 00	Plumbing equipment manufacturer's extended guarantee; 3 year guarantee on electric water heater			
	23 07 00	HVAC insulation O&M data			
	23 09 00	Instrumentation and Control Devices for HVAC O&M data			
	23 23 00	Refrigerant Piping O&M data			
	23 34 00	HVAC fans O&M data			
	23 77 00	Air handling units sample copy of guarantee and O&M data, leakage test failure guarantee			
	23 81 00	Unitary air-conditioning equipment sample copy of guarantee and O&M data; Refrigerant compressors manufacturer's extended guarantee or warranty			
	23 82 00	Terminal heating and cooling units O&M data			
	26 05 10	Network Communication System O&M data			
	26 08 00	Electrical systems O&M data			
	26 09 13	Power Measurement and Control O&M data			
	26 12 02	Oil-Filled Pad Mounted Transformers O&M data			
	26 13 16.02	Pad-Mounted Switchgear O&M data			
	26 14 13	Switchboards O&M data			
	26 20 00	Low-Voltage AC Induction Motors O&M data			
	26 24 19	Low-Voltage Motor Control O&M data			
	26 29 23	Low-Voltage Adjustable Frequency Drive System O&M data			
	26 32 13.13	Diesel Engine Generator sample guarantee, O&M data, and special guarantee			

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warranties Guarantees	26 36 23	Automatic Transfer Switches O&M data			
	26 50 00	Lighting O&M data and light engine and driver warranty (5 years minimum) for LED source systems			
	31 21 13	Radon Mitigation Systems Enclosure Components Operation and Maintenance Data			
	32 31 13	Chain Link Fences and Gates O&M data			
	32 84 00	One year manufacturer's guarantee over and above contractor's guarantee for irrigation			
	32 92 13	Hydro-mulching guarantee			
	35 20 16.25	Fabricated Slide Gates O&M data			
	40 27 01	Process Piping Specialties O&M data			
	40 27 02	Process Valves and Operators O&M data			
	40 90 00	Instrumentation and Control for Process Systems O&M data and product warranty service agreement			
	40 91 00	5-year corrosion warranty on submersible pressure transducer, 2 year manufacturer warranty on server hardware, 2 year warranty on SCADA server storage subsystem			
	40 92 01	Control Panels O&M manuals			
	40 92 07	Network Components O&M data			
	40 95 80	Fiber Optic Communication System O&M data			
	40 96 00	Application Software O&M manuals			
	40 99 90	Package control systems 2 year warranty and O&M manuals			
	41 22 23.19	Monorail hoist, portable davit crane and gantry crane O&M data and manufacturer's warranty (1-year)			
	43 12 01	Compressed Air Systems O&M data			
	43 22 56.01	Submersible Mixers O&M data and written guarantee			
	43 22 56.02	Vertical Mixers O&M data			
	43 32 56	Membrane Equipment System (Membrane Bioreactor) O&M manuals and executed warranties			
	43 40 01	Polyethylene Storage Tank O&M data and minimum 2 year guarantee from tank manufacturer			
	44 42 19.04	Rotary Positive Displacement Blower O&M data			
	44 42 30	Inclined Rotating Drum Screens O&M data			
	44 42 31	Septage Receiving System O&M Manuals and Maintenance Summary			
	44 42 40	Vortex Grit Chamber Equipment O&M data			
	44 42 41	Grit Washer and Dewatering Unit O&M data			
	44 42 48.04	Automatic Composite Sampler O&M data			
	44 42 56.04	Submersible Pumps O&M data			
	44 42 56.09	Non-Clog Dry Pit Centrifugal Pumps O&M data			
	44 42 56.11	Vertical Wet-Pit Centrifugal Pumps O&M data			
	44 42 56.14	Lobe Pumps O&M data and manufacturer guarantee			
	44 42 56.18	Horizontal Self-Priming Centrifugal Pumps O&M data			
	44 44 13.01	Chemical Metering Pumps O&M data			
	44 44 73	Ultraviolet Disinfection Equipment for Wastewater O&M data and guaranteed replacement pricing as listed in special guarantee			
	44 45 13.11	Package Biofilter System O&M data and warranty statements for media and biofilter systems			
	44 45 16.02	Fine Bubble Air Diffuser System O&M data and manufacturer's special guarantee			

Closeout and Operation & Maintenance (O&M) Requirements **Sample**

National Park Service (NPS) - Denver Service Center (DSC) | 1-27-21

Topic	Specification Section	Requirement	Submittal Date	Completed	Received by Park
Project Record Drawings	01770	Final Project Record Drawings.			
System Demonstration and Training	15900	Mechanical equipment control system DDC (Direct Digital Control) training.			
	16720	Fire alarm system demonstration.			
	17000	Telecommunications system training.			
Tools Spare Parts Equipment	02515	Two curb stop wrenches with T-handles seven feet in length.			
	02512	One six inch gate valve (type used on water main).			
	02531	One ten horsepower grinder pump (type and configuration as specified).			
Extra Stock	09870	Two gallons of wall paint (forest green). One gallon of trim paint (battleship grey).			
	10800	Twelve each of wall and floor tiles used in the restrooms.			
Reports	07540	EIP and PVC (Ethylene-Interpolymer and Polyvinyl Chloride) Thermoplastic roofing manufacturer's inspection report.			
	07532	Renovation of CSPE (Chlorosulfonated Polyethylene Polymer) membrane roofing, manufacturer's inspection report.			
	15680	HVAC (heating, ventilation & air conditioning) Test and balance report.			
Keys & Keying Schedule	08710	Instructions for cylindrical lock sets, door closers, and panic exit devices.			
	08711	Instructions for card key lock system and software.			
	08710	Keying schedule.			
O&M Data Warranties Guarantees	02512	Gate valves, O&M data for gate and post indicator valves.			
	02515	O&M data for water meter.			
	02517	O&M data for fire hydrants.			
	07511	Built-up asphalt roofing with five year guarantee.			
	07620	Flashing and sheet metal with five year guarantee.			
	07810	Tubular skylights with ten year manufacturer's guarantee.			
	08211	Flush wood doors with manufacturer's two year guarantee.			
	09680	Kowski carpet with five year warranty.			
	15480	O&M data for propane water heater.			
	15733	Air cooled air condition units with manufacturer's five year guarantee on compressor and two year warranty on refrigerant loss.			