

DRAFT RECLAMATION MANUAL RELEASE

Comments on this draft release must be submitted to kdahm@usbr.gov

Background and Purpose of the Following Draft Directive and Standard (D&S) The operation, maintenance, and replacement (OM&R) responsibility of about two-thirds of Reclamation assets have been transferred to an operating entity pursuant to contracts with Reclamation. In these instances, the operating entity is responsible for providing or obtaining the necessary technical services required in performing work activities needed to operate, maintain, and/or replace the transferred work(s). Reclamation remains responsible to ensure that OM&R of transferred works facilities fulfill all applicable legal and technical requirements. To ensure Reclamation is aware of proposed changes, to ensure the changes are consistent with the original purposes and intent of the authorized Project, and to ensure the changes meet Reclamation's current design and safety requirements, and fulfill other legal requirements, Reclamation must review and determine if the proposed changes are acceptable.

The purpose of this Directive and Standard (D&S) is to establish Reclamation-wide requirements regarding roles, responsibilities, and procedures for acceptance of planning, design, and construction, of substantial changes by operating entities (and other external entities) on Reclamation-owned facilities. The benefits of this D&S are to ensure Reclamation, in collaboration with its operating entities (and other external entities), fulfills existing contract requirements; is aware of potential facility modifications; can verify that the substantial change work performed does not create unacceptable risks to the facility, property, environment, historic properties, and public safety; and can confirm the substantial change is performed in full compliance with other mandates.

The Reclamation Manual is used to clarify program responsibility and authority and to document Reclamation-wide methods of doing business. All requirements in the Reclamation Manual are mandatory.

See the following pages for the draft D&S.

Reclamation Manual

Directives and Standards

Subject:	Substantial Changes on Transferred Works, Bureau of Reclamation Facilities
Purpose:	The purpose of this Directive and Standard (D&S) is to establish Reclamation-wide requirements regarding roles, responsibilities, and procedures for acceptance of planning, design, and construction, of substantial changes by operating entities (and other external entities) on Reclamation-owned facilities. The benefits of this D&S are to ensure Reclamation, in collaboration with its operating entities (and other external entities), fulfills existing contract requirements; is aware of potential facility modifications; can verify that the substantial change work performed does not create unacceptable risks to the facility, property, environment, historic properties, and public safety; and can confirm the substantial change is performed in full compliance with other mandates.
Authority:	Reclamation Act, June 17, 1902 (ch. 1093; 32 Stat. 388; 43 U.S.C. 391 et seq.), as amended and supplemented; Reclamation Project Act of 1939 (Act of August 4, 1939, ch.418, 53 Stat. 887); Reclamation Safety of Dams Act of 1978 as amended; and acts relating to individual dams or projects.
Approving Official:	Director, Policy and Administration (Policy)
Contact:	Asset Management Division (84-57000)

1. Introduction.

- A. The operation, maintenance, and replacement (OM&R) responsibility of about two-thirds of Reclamation assets have been transferred to an operating entity pursuant to contracts with Reclamation. In these instances, the operating entity is responsible for providing or obtaining the necessary technical services required in performing work activities needed to operate, maintain, and/or replace the transferred work(s).
- B. The purpose of this D&S is to provide clear expectations of Reclamation's process and internal requirements to support the completion of substantial changes. Reclamation Manual (RM) D&S, *Reclamation Standard Water-Related Contract Articles, Standard Article 5: Operation and Maintenance of Transferred Works (Federal Construction)* (PEC 10-05), standard article language identifies the contractor will not make any substantial changes in the transferred works without first coordinating with Reclamation.
- C. Reclamation remains responsible to ensure that OM&R of transferred works facilities fulfill all applicable legal and technical requirements. To ensure Reclamation is aware of proposed changes, to ensure the changes are consistent with the original purposes and intent of the authorized Project, and to ensure the changes meet Reclamation's

Reclamation Manual

Directives and Standards

current design and safety requirements, and fulfill other legal requirements, Reclamation must review and determine if the proposed changes are acceptable.

- D. This D&S defines the scope of Reclamation's oversight and monitoring activities through all phases – planning, design, construction, and close-out – of the substantial change activity irrespective of how the operating entity (or other external entities) elects to perform the substantial change through the use of:
- (1) technical services of Reclamation; or
 - (2) technical services outside of Reclamation.

2. Applicability.

- A. This D&S is applicable to Reclamation staff involved with the oversight of transferred facilities regarding the technical services required for substantial changes to Reclamation-owned facilities.
- (1) This D&S applies to such work regardless of the funding source for the work.
 - (2) Any arrangements for collaboration with operating entities on Reclamation's decisions regarding the technical services required for construction work that exist as of the effective date of this D&S shall remain in place and not be affected.
- B. This D&S does not apply to Safety of Dams Modifications. Collaboration with operating entities regarding Safety of Dams Modifications is covered by RM D&S, *Bureau of Reclamation Dam Safety Program* (FAC 06-01). If the substantial change involves work on a high- or significant-hazard dam, reference additional Dam Safety Analyses in RM D&S, *Construction Activities* (FAC 03-02).
- C. Nothing in this D&S changes existing contracts or formal agreements between Reclamation and the respective operating entity.
- D. The processes provided for in this D&S do not alter the environmental and other regulatory requirements applicable to substantial change work as defined in this D&S^{1,2} nor the responsibilities of various parties associated with such compliance.

¹ National Historic Preservation Act (54 U.S.C. 306108; 36 CFR 800) (NHPA), National Environmental Policy Act (NEPA) (Pub. L. 91-190; 83 Stat. 852; 42 U.S.C. Sec. 4321 et. seq.), Endangered Species Act (ESA) (Pub. L. 93-205; 87 Stat. 884; 16 U.S.C. 35 Sec. 1531 et. seq.), and Office of Management and Budget Memorandum M-12-12 Section 3, among others.

² Please see the following RM Policy and D&S for potential applicability to substantial OM&R of transferred works facilities: ENV P08, *Sustainable Buildings*; LND 02-01, *Cultural Resources Management*, LND 02-03, *Operation and Maintenance of Project Works that are Historic Properties*.

Reclamation Manual

Directives and Standards

3. Definitions.

- A. **Authorized Reclamation Official.** The Reclamation official to whom a regional or other director has delegated authority and responsibility for the accomplishment of construction work at a given Reclamation-owned facility, or such other Reclamation official to whom authority and responsibility has been re-delegated.
- B. **Construction Activity.** Any non-recurring activity to develop new features or assets, or rehabilitate, renovate, or replace existing assets. A construction activity meets the definition of a project.
- C. **Facilities.** A term used to encompass buildings, other structures, installed equipment, and other real property improvements, associated land, including utility systems and collateral equipment. The term does not include operating materials, supplies, special tooling, special test equipment, and noncapitalized equipment. The term “facility” is used in connection with buildings (facilities having the basic function to enclose usable space), structures (facilities having the basic function of an operational activity), associated land and real property improvements.
- D. **Information Technology.** The equipment, interconnected systems or subsystems, services, personnel, and other resources used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or communication of information by an organization. The term includes computers, networks, ancillary equipment, software, firmware, services (including support services), and related resources.
- E. **Non-Reimbursable Costs.** The portions of project costs paid by the Federal Government that are not required to be repaid to the Federal Government. The costs for Reclamation to review the design drawings and written specifications of the substantial change and to monitor the construction progress are considered non-reimbursable costs. Unless specifically stated, nothing in this D&S changes the reimburseability or non-reimburseability of costs per an existing contract or formal agreement between Reclamation and the respective operating entity.
- F. **Non-Routine Maintenance.** Major, non-recurring repairs, replacement and renovations to Reclamation-owned or operated facilities, or facility components, that are intended to ensure the continued safe, dependable, and reliable delivery of authorized project benefits.
- G. **Operating Entity.** A non-Federal entity that has the responsibility, via a contract or formal agreement with Reclamation, for the OM&R of a Reclamation project or features thereof.
- H. **Operations, Maintenance, and Replacement or OM&R.** Actions undertaken on a facility which keeps a facility or system operational, as originally designed and/or intended. This includes the replacement or installation of component(s) to maintain the reliable function of the facility or to meet current safety standards.

Reclamation Manual

Directives and Standards

- I. **Project.** For the purposes of this D&S, a temporary endeavor undertaken to create a unique product, service, or result.³ A project has a discrete and definable commencement and conclusion. A project has a unique deliverable and there may not be a need to repeat the project once it has been completed. For the purposes of this D&S, a project meets the definition of a construction activity.
- J. **Reclamation Authorized Official.** Regional director or Reclamation official to whom authority has been delegated pursuant to Paragraph 5.C. of the RM *Delegations of Authority*, for the accomplishment of substantial changes at a Reclamation owned facility.
- K. **Reimbursable Costs.** The portion of the project costs that are required to be repaid to the Federal Government. Unless specifically stated, nothing in this D&S changes the reimburseability or non-reimburseability of costs per an existing contract or formal agreement between Reclamation and the respective operating entity.
- L. **Responsible Design Engineer.** An engineer, acting in the scope of their competence, exercising supervisory direction, control, or authority over engineering decisions that affect the life, health, property, and welfare of the public by personally making or reviewing, and approving, the decision.
- M. **Routine Maintenance.** Routine O&M for purposes of this D&S includes the recurring activities, typically annual in nature, required for the continuing safe operation of Reclamation facilities in the manner necessary to provide authorized Project benefits. The definition includes tasks, activities, practices, management, and programs that are recurring based on a finite time period, condition analysis, or other metric.
- N. **Substantial Change.** A modification in, or addition to, a project facility which involves changes in the original design intent, function, and/or operational parameters of the facility, or changes in project benefits, including non-routine maintenance activities that involve construction or reconstruction of a portion of the facility. These modifications may be capitalized or non-capitalized. A substantial change is not a characterization of the proposed action in terms of being a major or minor action as defined in NEPA. Definition in accordance with RM D&S, *Reclamation Standard Water-Related Contract Articles, Standard Article 5: Operation and Maintenance of Transferred Works (Federal Construction)* (PEC 10-05).
- O. **Transferred Works.** Those facilities owned by Reclamation where Reclamation has assigned the responsibility for OM&R activities to a non-Federal operating entity pursuant to a contract or formal agreement with such entity.
- P. **Written Specifications.** For the purposes of this D&S, the term “written specifications” means the written portion of Section C – Description/specifications of a

³ Project Management Institute. A Guide to the Project Management Body of Knowledge: PMBOK® Guide, 6th Edition, Newtown Square, PA: Project Management Institute, 2017, p. 3.

Reclamation Manual

Directives and Standards

solicitation. The written specifications do not include the design drawings or the clauses and provisions of the solicitation.

4. **Responsibilities.** Responsibilities for establishing roles, responsibilities, and procedures for acceptance of planning, design, and construction, of substantial changes by operating entities (and other external entities) on Reclamation-owned facilities, as outlined in this D&S, will be shared by different levels of the organization. Primary responsibilities are as follows:
 - A. **Regional Directors.** Regional directors are responsible for:
 - (1) implementing this D&S;
 - (2) overseeing and coordinating the regional programs related to this D&S; and
 - (3) ensuring that area offices conduct and participate in appropriate activities related to this D&S under their jurisdiction.
 - B. **Area Managers.** Area managers are responsible for:
 - (1) identifying a Reclamation Authorized Official to manage the activities associated with administering the D&S requirements; and
 - (2) collaborating with operating entities of transferred works on all aspects of program coordination, scheduling, and accomplishment of D&S activities.
 - C. **Reclamation Authorized Official.** Reclamation authorized officials are responsible for:
 - (1) ensuring operating entities of transferred works are aware of the requirements to submit a written request for acceptance of substantial changes prior to construction;
 - (2) working in coordination with the operating entity (or other external entity) to determine modifications to a project facility which meet the definition of a substantial change;
 - (3) ensuring the necessary engineering designs, design drawings, and written specifications are completed in accordance with Reclamation's design criteria and/or standards (see RM D&S, *Design Activities* (FAC 03-03) and *Collaboration with Customers Regarding Technical Services Required for Work on Existing Bureau of Reclamation Facilities* (CMP 10-04));
 - (4) reviewing requests for substantial changes for consistency with the authorized project purposes, intent of the construction activity, and the changes meet

Reclamation Manual

Directives and Standards

Reclamation's design, safety, cybersecurity and other environmental and historical properties requirements;

- (5) monitoring approved changes during the planning, design, construction, and closeout phases to ensure compliance with applicable conditions associated with the acceptance;
- (6) requiring operating entities to provide notice of undertakings sufficiently prior to the undertaking so that Reclamation may complete NEPA, ESA and/or NHPA section 106 and compliance process;
- (7) notifying the regional finance officer when the work is completed in accordance with RM D&S, *Assets Under Construction (AUC)* (FIN 07-24); and
- (8) collaborating with the regional finance officer and real property office to appropriately capture and record the costs in FBMS for those substantial changes that meet the criteria for capitalization in accordance with RM D&S, *General Property, Plant and Equipment (G-PP&E)* (FIN 07-20).

D. Director, Policy. The Director, Policy is responsible for:

- (1) establishing and maintaining related Policy and D&S for substantial changes to Reclamation assets; and
- (2) ensuring, after the asset is transferred to O&M status, the substantial change is examined during the applicable *Operation and Maintenance (RO&M) Program Examination of Associated Facilities (Facilities Other than High- and Significant-Hazard Dams)* (FAC 01-04), *Review/Examination Program for High- and Significant-Hazard Dams* (FAC 01-07), *Bureau of Reclamation's Review of Operations and Maintenance of Urbanized Canals (RO&MUC) Program* (FAC 01-12), and Temporary Reclamation Manual Release, *Bridge Inventory and Inspection Program* (FAC TRMR-98).

5. Process.

A. Collaboration and Coordination for Work on Existing Reclamation Facilities.

Reclamation will work together with operating entities (and other external entities) during periodic or routine meetings to discuss:

- (1) common modifications or additions to project facilities as examples of actions which generally meet the definition of a substantial change;
- (2) examples of modifications at a specific project facility which meet the definition of a substantial change to provide clarity in the scope of the definition; and
- (3) currently proposed changes at project facilities planned and/or designed.

Reclamation Manual

Directives and Standards

- B. Collaborative Plan.** The Reclamation Authorized Official will work with operating entities (and other external entities) to:
- (1) determine whether proposed actions meet the definition of a substantial change (as defined in Paragraph 3.O.); and
 - (2) collaborate with the operating entities (and other external entities) to develop a clear plan for the timely completion of a substantial change. Appendix A provides an example substantial change plan outline.
- C. Substantial Change Review Initiation.** Substantial change review initiation shall, at a minimum, adhere to this process:
- (1) Reclamation will receive a substantial change plan, at the applicable Reclamation area office, for review and acceptance.
 - (2) Per requirements to be identified between Reclamation, an operating entity, and other external entities in a substantial change plan, the substantial change review initial shall initiate with the transmission of design drawings and written specification packages for substantial changes proposed at a transferred work describing the changes to be made, including at a minimum, the following requirements:
 - (a) name and address of the operating entity (or other external entity);
 - (b) name of facility;
 - (c) complete description of proposed work;
 - (d) location of work in reference to the facility;
 - (e) applicable maps;
 - (f) identification of a point of contact;
 - (g) written specifications that establish precise measurements, tolerances, materials, processes, equipment criteria, performance and finished product requirements, construction acceptance criteria, and other specific details of the deliverable. Compliance with material handling, storage, packaging, preservation, delivery requirements, and material identification and traceability;
 - (h) potential impacts to environmental and/or historical properties associated with the proposed activity;
 - (i) design drawings, which at a minimum, must show details about the entire construction activity, including specific information regarding modifications

Reclamation Manual

Directives and Standards

to existing Reclamation facilities and new features to be constructed, such as: dimensions, measurements, locations, elevations, type of material, material size, cross-sections, profiles, limits of disturbance, other details of the construction activity, and provide explicit information about the requirements for the construction activity and associated system changes, and how the construction activity is to be constructed or assembled;

- (j) schedule;
 - (k) construction management plan including identification of onsite inspection and material testing entities and frequency of inspection and testing;
 - (l) current and valid registration in the appropriate engineering discipline of the responsible design engineers;
 - (m) current and valid licenses in the state where the work is to occur of any contractors;
 - (n) design data;
 - (o) design criteria; and
 - (p) other pertinent information as deemed necessary for appropriate review of the design.
- (3) The Reclamation Authorized Official will acknowledge, in writing, receipt of design drawings and specifications packages within 10 business days. This acknowledgement may also identify additional information needed for Reclamation to complete its review, which could include:
- (a) data concerning subsoil and foundation conditions and the materials used in the construction activity;
 - (b) analyses and design calculations; and
 - (c) other information deemed necessary.

D. Reclamation Review and Acceptance.

- (1) Review of design drawings and written specifications will be performed in accordance with RM D&S, *Design Activities* (FAC 03-03) with the exception of documenting the review by signing "Accepted" on the design drawings.
- (2) Timelines for Reclamation review of design drawings, written specifications, environmental compliance documentation, and related required permits will be identified with the operating entities (and other external entities) in a substantial

Reclamation Manual

Directives and Standards

change plan to ensure timely completion of a substantial change. Appendix A provides an example substantial change plan outline.

- (3) Reclamation's review and acceptance of the design drawings and written specifications for compliance with policies, standards, procedures and good engineering practice does not limit the responsibility or liability of the responsible design engineer.
- (4) Upon receipt of a design package, the Reclamation Authorized Official may seek support and assistance from the regional office and/or Reclamation's Technical Service Center, when deemed necessary, and in consultation with the appropriate regional office division(s), may determine which offices are to be included in the review process to ensure a thorough evaluation of the design drawings and written specifications.
- (5) Inclusion of specific offices in the review process will be dependent on factors such as the type of asset(s) undergoing substantial change(s), potential hazards, engineering disciplines involved, potential risk to public safety and Reclamation operations, complexity of the construction activity, and ensuring compliance with other applicable laws. Reviewing offices may include, but are not limited to:
 - (a) engineering;
 - (b) construction;
 - (c) safety;
 - (d) environmental compliance;
 - (e) land resources;
 - (f) historical properties;
 - (g) energy and sustainability;
 - (h) information technology; and
 - (i) other disciplines determined to be required with respect to a particular design drawings and written specifications package.
- (6) The Reclamation Authorized Official will ensure coordination and review by participating reviewing offices, as deemed appropriate. Each reviewing office, as deemed appropriate to the Reclamation Authorized Official, will give its consideration and provide comments to the area office.

Reclamation Manual

Directives and Standards

- (7) The Reclamation area office, in conjunction with the participating reviewing offices, will determine if the design drawings and written specifications are acceptable, subject to comments, or deficient.
- (8) The operating entity will be notified of any deficiencies in the submitted design drawings and written specification package. The notice will provide the specific deficiencies, and if needed, request supplemental information, supporting data and/or clarification.
- (9) When the Reclamation Authorized Official determines that the design drawings and written specifications for the applicable design phase are acceptable, the area office will provide written notification to the entity requesting review and acceptance of its determination.
- (10) The Reclamation Authorized Official will request copies of the final design drawings and written specifications and retain them with the construction activity records, including entry into Reclamation's current design drawings and records system. Design drawings and written specifications shall be signed and stamped by the responsible design engineer.
- (11) Written, formal Reclamation acceptance to proceed with the substantial change will be provided by the Reclamation Authorized Official only after all Reclamation requirements have been met.

E. Documentation.

- (1) Appendix A provides an example outline for a collaborative plan to be developed between Reclamation, an operating entity, and other external entities outlining the project, expectations, communication, notifications, monitoring, Quality Assurance/Quality Control (QA/QC), closeout, and timelines for proposed substantial changes.
- (2) Records documentation will be kept in conformance with applicable National Archives and Records Administration Records Management Guidance and Regulations, Policy, and D&S including RM D&S, *Information Management* (RDC 05-01).

F. Emergencies.

- (1) In case of unusual conditions or emergencies threatening the interruption of water delivery or posing a significant safety hazard to the facility, property or the public, the operating entity may initiate and implement measures to mitigate the hazard.
- (2) Reclamation will work together with operating entities (and other external entities) during periodic, routine, or emergency-related meetings to discuss

Reclamation Manual

Directives and Standards

notification procedures and timeframes of emergency repairs in accordance with the water-related contract.

- (3) Within 60 calendar days of implementing an emergency repair, or as mutually agreed upon, Reclamation will review the operating entity submission of design drawings and written specifications for acceptance.
6. **Technical Services Work Performed by Reclamation.** Reclamation can perform, at the request of the operating entity, the technical services required for the construction of a substantial change with the costs of such services being borne by the operating entity to the extent such costs are allocable to reimbursable project purposes. Additional contractual or regulatory constraints may also apply. RM D&S, *Collaboration with Customers Regarding Technical Services Required for Work on Existing Bureau of Reclamation Facilities* (CMP 10-04), Paragraph 7 identifies the minimum conditions for Technical Services Work Performed by Customers.

Reclamation Manual

Directives and Standards

The following is an example outline of a collaborative plan between the Bureau of Reclamation, an operating entity, and other external entities, if applicable, outlining the project, expectations, communication, and timelines for proposed substantial changes:

1. **Project Background.** Describe the background including installation name and project, date of original completion and modifications to date, proposed change, and progress on planning, design, and environmental compliance.
2. **Project Overview.** Describe the work to be completed under the proposed project, location of work in reference to the facility, applicable maps, identification of a point of contact, method of project delivery (e.g., contractor, district, etc.), identify the major work components to be performed by each entity, written specifications, design drawings, data, and criteria, subsoil and foundation conditions, materials used in the construction activity, and potential impacts to environmental and/or historic properties.
3. **Authorities.** List of the applicable authorities for conducting the work including the operations, maintenance, and replacement contract, repayment contract, master services agreements, non-Federal contracts, etc.
4. **Costs.** Clearly identify the distribution of costs for the proposed substantial change. Reclamation is responsible for labor costs of the technical review, acceptance of submitted design, written specifications of the proposed substantial change, as well as monitoring and oversight associated with the construction of the substantial change.
5. **Expectations.** Describe the expectations for the roles, responsibilities, and procedures for completing the substantial change including project management, construction management, contract, design, and specification review. Reference the use of a construction management plan industry standards, and risk management best practices.
6. **Roles and Responsibilities.** Define distinct roles and responsibilities for Reclamation, operating entity, and other external entities, if applicable. The plan will document those performing engineering work will meet Reclamation's requirements for professional registration, as set forth in Reclamation Manual (RM) Policy, *Performing Design and Construction Activities* (FAC P03). For example, if modifications, amendments, or changes are needed to the accepted design drawings or written specifications to ensure structural, electrical, mechanical or operational safety of the facility, then any changes to accepted designs or specifications shall be approved by the responsible design engineer for that portion of the work.
7. **Design and Specification Review.** Define responsible reviewers, phased approach, and timeframes for design and specification review. To facilitate and expedite review and acceptance, the design and written specifications submitted to the Reclamation authorized official will proceed for phase review. A phase review is a formal review by various disciplines at various stages of the design development process and typically occur at the 30 percent, 60 percent, 90 percent, and 100 percent design phases, but will be defined on a

Reclamation Manual

Directives and Standards

project by project basis. All submittals should include a disposition of Reclamation's previous comments on the design drawings and written specifications. The duration, frequency, and detail of the phase review will be commensurate with the complexity of the proposed substantial change. If the review is expected to exceed 30 days, Reclamation will clearly define the expected timeframe as an initial step of initiating the proposed substantial change plan.

8. **Additional Reviews.** Identify additional potential review required prior to proceeding with the performance of work, such as environmental affairs, land resources, historical properties, and other offices responsible for regulatory compliance activities. The operating entity is responsible for ensuring all required permits and approvals have been obtained prior to proceeding with the proposed construction activity.
9. **Resolution of Conflicts.** Establish clear procedures for the timely resolution of conflicts including responsibilities of project leads, meetings with participants to discuss resolution, and procedures for raising conflicts to management.
10. **Communication.** Provide a detailed communication plan to minimize schedule delays and cost-increases. Include documentation of proposed written and verbal communication methods, primary contacts, and communication log.
11. **Construction Management Plan.** Construction management plan including identification of onsite inspection and material testing entities and frequency of inspection and testing, current and valid registration in the appropriate engineering discipline of the responsible design engineers, current and valid licenses in the state where the work is to occur of any contractors.
12. **Notifications.** List key notices in the process to improve coordination and streamline project completion including:
 - A. notification of changes to the construction activity schedule, design drawings, and/or written specifications;
 - B. notice of final construction schedule, including key milestone dates, and copies of permits and approvals prior to the commencement of the construction activity;
 - C. notice before foundations, abutments or any other critical stages of construction are available for inspection;
 - D. notice prior to concrete placement; and
 - E. notification of failure of quality assurance testing.
13. **Monitoring.** Document a plan for monitoring the progress and completion of the construction activity including the frequency and responsibility of monitoring

Reclamation Manual

Directives and Standards

commensurate with the size and complexity of the construction activity, environmental or historic resource protection concerns, and other identified risks associated with the project. Include the following in the monitoring plan:

- A. oversight to ensure conformity with the design drawings and written specifications and review of changes to the design drawings and/or written specifications found necessary, if needed;
 - B. continued monitoring to promote safe working conditions. If, at any time, conditions are revealed which will not permit the construction of a structurally safe structure or work to continue safely, monitoring will trigger an action of suspension for the construction activity until the identified conditions have been resolved or mitigated;
 - C. compliance with environmental or historic preservation requirements or commitments;
 - D. testing based on sound engineering judgement and industry practice; and
 - E. documentation of applicable test results, daily inspection reports, quality assurance and quality control documentation, photos, soil data, product data sheets, equipment specifications, contractor submittals, and other documents as necessary.
14. **Quality Assurance/Quality Control (QA/QC).** The area office will coordinate a plan for Reclamation's monitoring of the construction activity to ensure all work is constructed in accordance with design drawings and written specifications that have been accepted by Reclamation and with environmental, historic preservation, or other commitments defined by Reclamation in the NEPA or other documents. Additional considerations for QA/QC should include:
- A. monitoring by Reclamation in addition to inspections performed by the operating entity;
 - B. review of the operating entity QC plan or the full set of construction Contract Documents, to ensure the substantial change is completed in accordance with the design drawings and specifications that have been accepted by Reclamation (RM Directive and Standard (D&S), *Construction Activities* (FAC 03-02));
 - C. receipt of inspection documents throughout the performance activity for inspections performed by the operating entity personnel or their representative (independent of the construction contractor);
 - D. review of work or tests performed by the operating entity. Testing includes, but is not limited to: gradation testing, soils testing, density testing, concrete testing, pressure testing, electrical testing, and grade setting; and

Reclamation Manual

Directives and Standards

- E. responsibility for review and acceptance of all contractor submittals as required in the specifications.
15. **Closeout.** Document the agreed upon requirements for the project closeout including inspection requirements, documentation, timeframes, standing operating procedures, closeout package requirements, and substantial completion documentation requirements. Include the following closeout actions in the plan:
- A. inspection of the completed work while the contractor is still onsite, including relevant Reclamation staff, to identify and correct any deficiencies identified from the work performed;
 - B. within 24 hours, or as soon as practicable, after completion of the construction activity, the operating entity (or other external entities) will provide a notice of substantial completion; and
 - C. within 48 hours, or as soon as practicable, after receiving a notice of completion, the area office will schedule a final site visit of the completed work to ensure conformity with the accepted design drawings and written specifications and that environmental and historic property resource protection efforts were implemented per requirements. Documentation of the findings will be included in a final report;
 - D. as soon as practicable after the completion of the construction activity, final site visit by Reclamation, and post-construction activities, a closeout package will be completed which includes the following, as applicable:
 - (1) record drawings;
 - (2) design summary;
 - (3) daily inspection reports;
 - (4) work or testing documentation;
 - (5) O&M manuals;
 - (6) emergency management or action plans;
 - (7) designers' operating criteria;
 - (8) technical reports; and
 - (9) final construction report.
 - E. update the applicable standing operating procedures affected by the substantial change to incorporate the revised or new items; and

Reclamation Manual

Directives and Standards

- F. once all documentation is received, Reclamation will begin the process of transferring the constructed asset from Asset Under Construction to Operation and Maintenance status per RM D&S, *Completion of a Construction Activity* (FAC 01-05).
16. **Timeline.** Document project timelines for final design and construction. Details in the agreed upon plan will be adjusted and revised as the project moves forward.
17. **Other.** Depending on the status of the proposed activity, additional details of the project or attachments include plan and profile, task orders, proposal and preliminary fee estimated, etc.

DRAFT