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APPENDIX I
OPERATION AND MAINTENANCE EXPENSE ASSIGNMENTS BY COST ACCOUNT NUMBER

OPERATION

A. Operation Expense. Accounts in this category will include all costs incurred in connection with:

1. Operation of project facilities and components, including labor, materials and supplies and such parts as are replaced as a result of routine operational activities.
2. Flood emergency operations which do not involve channel work or structural repairs.
3. General regulatory functions.
4. Inspection and collection and dissemination of technical data in connection with completed projects.

B. Account Number and Title.

601 Locks, Dams and Reservoirs

601.1 Locks (Plant Account Number 05)

- a. Duties.
 - (1) Direct supervision of operations.
 - (2) Operating lock gates and associated equipment including radio communications and bridges associated with lock facilities.
 - (3) Maintaining lock records, collecting operational data and preparing reports.
 - (4) Removing debris, ice and snow.
 - (5) Custodial services and cleanup of the lock facilities and structures and the lock area including cleaning and relamping lighting fixtures for structures and service roads.
 - (6) Routine testing and adjustment of meters, relays, instruments, radios and similar equipment.
 - (7) Lubricating equipment.

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(8) Routine replacement, purification and testing of lubricating and hydraulic oils.

(9) Repacking glands and replacing electrical brushes.

(10) Inspection, testing, recharging and service of single purpose fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use.

b. Materials and Equipment.

(1) Log books, forms and incidental materials.

(2) Packing, electrical brushes, lubricants, lubricating oils and hydraulic fluids.

(3) Custodial supplies, tools and equipment.

(4) Materials required for restoring fire fighting equipment to normal.

(5) Other equipment and material costs.

(6) Miscellaneous expenses such as transportation costs.

601.2 Dams.

601.21 Power Intake Works (Plant Account Number 04.4). Includes intake structure and equipment, surge tanks, penstocks and service roads. (When powerhouse is an integral part of intake works, include in Account Number 604.2).

a. Duties.

(1) Direct supervision of operations.

(2) Operating intake gates when not incidental to maintenance work (does not include remote operation from powerhouse control room).

(3) Cleaning trash racks, including ice and log jams, at intake structure.

(4) Removal and disposal of debris, ice and snow on or in the vicinity of intake or intake structures including submerged debris.

(5) Custodial services and cleanup of intake structure and associated facilities including cleaning and relamping lighting fixtures for structure and service road.

(6) Routine testing and adjustment of gages, meters, instruments and relays in intake structure.

(7) Lubricating intake equipment including intake cranes.

(8) Routine replacement, purification and testing of lubricating and hydraulic oils.

(9) Repacking glands and replacing electrical brushes.

(10) Inspection, testing, recharging and service of single purpose fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use.

b. Materials and Equipment.

(1) Packing, electrical brushes, lubricants, lubricating oils and hydraulic fluids.

(2) Custodial supplies and equipment.

(3) Materials required for restoring fire fighting equipment to normal.

(4) Trash removal equipment costs such as crane and truck charges and other equipment and material costs.

(5) Miscellaneous expenses such as transportation costs.

601.22 Other Dam Facilities (Plant Account Numbers 04.1, 04.3, 04.5, and 04.6). Includes all dams and dam structures such as spillways and outlet works except power intake works.

a. Duties.

(1) Direct supervision of operations.

(2) Operation of spillway gates, sluiceways and regulating orifices for reservoir regulation (not remote operation from powerhouse).

(3) Removal and disposal of trash and debris on or in the vicinity of dam or dam structures including submerged debris in these areas.

(4) Removal and disposal of ice and snow from dams and dam structures including service roads.

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(5) Custodial services and cleanup of dams, dam structures and associated service facilities including cleaning and relamping lighting fixtures for structures and service roads.

(6) Lubricating all dam and dam structure equipment.

(7) Routine replacement, purification and testing of lubricating and hydraulic oils.

(8) Repacking glands and replacing electrical brushes.

(9) Routine testing and adjustment of gages, meters, instruments and relays in dam structure.

(10) Inspection, testing, recharging and service of single purpose fire fighting equipment. This includes cleanup, service, recharging, and restoring equipment to normal following use.

(11) Removal, disposal and control of weeds, brush, trees and aquatic growths on earth fill dams.

(12) Grass cutting and disposal on earth fill dams.

b. Materials and Equipment.

(1) Packing, electrical brushes, lubricants, lubricating oils and hydraulic fluids.

(2) Custodial supplies and equipment.

(3) Materials required for restoring fire fighting equipment to normal.

(4) Trash removal equipment costs such as crane and truck charges.

(5) Equipment and material costs for removal and control of weeds, brush, trees and aquatic growths.

(6) Miscellaneous expenses such as transportation costs.

601.3 Reservoirs (Plant Account Number 03).

601.31 Operation Activities. Recreation sites, facilities, and equipment are not included.

a. Duties.

- (1) Direct supervision of operations.
- (2) Reservoir inspections and patrols.
- (3) Removal and control of trash and debris; floating, submerged or beached that is not included in cost accounts 601.21, 601.22, 604.2, or 606.2.
- (4) Minor bank erosion control.
- (5) Clearing reservoir areas of weeds, brush, trees and aquatic growths.
- (6) Insect control.
- (7) Fire control.
- (8) Elimination of safety hazards.
- (9) Boundary line surveys.
- (10) Operational procedures for floating trash booms for general reservoir use.

b. Materials and Equipment.

Equipment usage and material expenses needed to accomplish the duties listed above including such miscellaneous expenses as transportation.

601.32 Real Estate Management Service.

See ER 37-2-10, paragraph 8-8.

602 Service Facilities.

602.1 Roads, Railroads and Bridges (Plant Account Number 08)

602.11 Roads, Project Access (Excluding recreation roads, housing area streets and sidewalks, and service roads on specific structures such as dams and power plants).

a. Duties.

- (1) Direct supervision of operations.

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(2) Sweeping and snow or ice removal costs of project access roads, parking areas and walkways.

(3) Sanding and salting project access roads, parking areas and walkways.

(4) Minor patching, ditch cleaning, culvert cleaning and similar operating duties.

b. Materials and Equipment.

Equipment usage and material and miscellaneous expenses needed to accomplish the duties listed above.

602.12 Railroads. Operational supervision, labor and material costs.

602.13 Bridges.

a. Duties.

(1) Direct supervision of operations.

(2) Bridge operation when not a necessary part of lock operation.

(3) Custodial services and cleanup of bridge structure and operating facilities.

b. Materials and Equipment.

Materials, transportation and equipment necessary to bridge operation.

602.2 Buildings, Grounds and Utilities (Plant Account Number 19).

For projects having a gross annual requirement exceeding \$50,000 for this account number, the following subitems are required.

602.21 Project Administration Facilities: Operating expenses of non-rental project buildings and areas such as, administration buildings, shop buildings and areas, storage and warehouse buildings and areas, public buildings and other facilities, local streets and sidewalks (excluding project access roads, recreation roads and service roads on structures and dams), and other project areas and buildings. This does not include buildings or areas covered under other accounts such as powerhouse, switchyard, navigation locks and recreational facilities.

a. Duties.

- (1) Direct supervision of operations.
- (2) Custodial duties at all areas listed above including relamping and cleaning of lamp fixtures for buildings in this group.
- (3) Sweeping, snow removal, sanding and salting of local streets and sidewalks.
- (4) Lawn and shrubbery watering and maintenance.
- (5) General project garbage disposal including transport of material and operation of dump site either by approved incinerator, land fill or contract disposal method.
- (6) General project security patrols other than reservoir inspections and patrols or similar patrols or inspections of recreation areas.
- (7) Inspection, testing, recharging and service of single purpose fire fighting equipment for general project use not included in plant account number 20. This includes cleanup, service, recharging and restoring equipment to normal following use.

b. Materials and Equipment.

- (1) Custodial materials and equipment costs.
- (2) Sweeping and snow removal equipment costs and cost of miscellaneous supplies.
- (3) Grounds care materials and equipment costs.
- (4) Meals, traveling, transportation and incidental expenses.
- (5) Fuel expense.
- (6) First aid supplies and safety equipment for general project use and not included in plant account number 20.

602.22 Project Utilities: Operating expenses for project water, sewer, gas and electric utilities for general project use not specifically furnished for powerhouse, dam or recreation use. Also includes street,

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access road, and area lighting not specifically furnished for dam, powerhouse, switchyard, recreation or similar other specific uses.

a. Duties.

(1) Direct supervision of utility operations.

(2) Custodial services in relation to project utilities. This includes relamping and cleaning fixtures for street, road and area lighting that are included in plant account number 19.

(3) Routine operational inspection of utilities system, including such items as addition of chemicals to chlorinators or septic tanks, thawing of frozen pipes, checking water tanks and pumps for proper operation, distribution system switching outside powerhouse, and similar operational activities.

b. Materials and Equipment.

Materials and equipment required to perform the operating duties.

602.23 Dwellings and other Facilities Rented to Government Personnel.

a. Duties.

(1) Direct supervision of operating functions.

(2) Utility meter reading, thawing frozen water pipes and similar operating functions with respect to individual rental facilities and routine checking of unoccupied dwellings.

b. Material and Equipment.

Materials, purchased fuel and utilities, equipment and miscellaneous expenses required to perform operating functions.

602.24 Other Outleased Dwellings and Facilities.

a. Duties.

Similar to those shown for account number 602.23.

b. Materials and Equipment.

Materials, equipment and miscellaneous expenses as required to perform the operating functions.

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602.3 Permanent Operating Equipment (Plant Account Number 20).

Operating costs of automotive and other equipment not assigned to specific features will be charged to this account. Operating costs of permanent equipment assigned to specific features will be charged to those features.

a. Duties.

- (1) Direct supervision of operating duties.
- (2) Servicing vehicles, such as washing, greasing, fueling, addition of oil, water and tires and similar duties.
- (3) Similar duties for floating plant.
- (4) Servicing of land plant.
- (5) Checking and aligning radio equipment for general project use.
- (6) Routine cleaning and servicing of audio-visual and similar equipment at public displays.

b. Material and Equipment.

- (1) Gasoline and other fuels, tires, oil, batteries and lubricants.
- (2) Other materials, equipment and miscellaneous costs for performing the operating functions.

603. Levees, Floodwalls and Pumping Plants.603.1 Levees and Floodwalls (Plant Account Number 11).

a. Duties.

- (1) Direct supervision of operating duties.
- (2) Operating duties such as removal of snow and ice from service roads or other custodial duties.
- (3) Grass and brush control, removal and disposal.
- (4) Minor erosion control.

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b. Material and Equipment

Material, equipment and miscellaneous costs required to perform the operating functions.

603.2 Pumping Plants (Plant Account Number 13).

a. Duties.

- (1) Direct supervision of operations.
- (2) Operating pumps and associated equipment.
- (3) Maintaining pumping plant operational records, collecting operational data and preparing reports.
- (4) Removing debris, ice and snow.
- (5) Custodial services and cleanup of pumping plant, including cleaning and relamping lighting fixtures for structures and service roads.
- (6) Routine testing and adjustment of meters, relay, instruments and similar equipment.
- (7) Lubricating equipment.
- (8) Routine replacement, purification and testing of insulating, lubricating, and hydraulic oils.
- (9) Repacking glands and replacing electrical brushes.
- (10) Inspection, testing, recharging and service of single purpose fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use.

b. Materials and Equipment.

- (1) Log books, forms and incidental materials.
- (2) Packing, electrical brushes, lubricants, lubricating, insulating and hydraulic oils, engine fuels and similar materials.
- (3) Custodial supplies, tools and equipment.

(4) Materials required for restoring fire fighting equipment to normal, after use.

(5) Other equipment and material costs.

(6) Miscellaneous expenses such as transportation costs and purchased utilities.

604. Power Plant (Plant Account Number 07).

This account includes operating expenses of the following:

Powerhouse, tailrace, turbines, generators, governors, accessory electrical equipment, miscellaneous power plant equipment, switchyard equipment and the intake equipment when the powerhouse is part of the intake structure.

604.1 Operation Supervision and Engineering.

Labor, material and incidental expenses incurred by the power plant superintendent and staff assistants in the general supervision of the operations of hydraulic generating stations. Engineering, other than condition studies included in account number 607, and clerical and secretarial expenses directly related to power plant operations should also be included. This does not include engineering, clerical and secretarial work chargeable to other specific accounts.

604.2 Hydraulic Expenses.

This account includes the cost of labor, materials and expenses incurred in the operation of the power intake works when the intake works is included in Item 2 of plant account number 07.1.

a. Duties.

Applicable duties listed under account number 601.21, except custodial duties which will be included in account number 604.4 below.

b. Materials and Equipment.

Applicable items listed under account number 601.21.

604.3 Electric Expense.

This account includes operating expenses of the powerhouse, tailrace, turbines, generators, governors, accessory electrical equipment, miscellaneous power plant equipment and the switchyard.

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a. Duties.

- (1) Direct supervision of operations.
- (2) Operating powerplant and switchyard equipment for power production, including turbines, generators, transformers and auxiliary equipment. This also includes operation of communications equipment and remote control of other facilities when performed in or from the powerhouse control center.
- (3) Operating switchboards, switchgear and electronic control and protective equipment.
- (4) Maintaining power plant operational records, collecting operational data and preparing reports on plant operations.
- (5) Operating governor, lubricating and other oil systems. This also includes routine testing and purification, replacement or reclamation of insulating, hydraulic and lubricating oils.
- (6) Routine testing, cleaning, and adjustment of meters, relays, recorders, instruments, radios and similar equipment.
- (7) Lubricating equipment, repacking glands and replacing electrical brushes.
- (8) Cleaning plant equipment when not incidental to maintenance work.
- (9) Inspection, testing, recharging and service of special purpose fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use. Generator, transformer and oil room fire control equipment are included here.

b. Materials and Equipment.

- (1) Log books, forms, recorder charts, and incidental materials.
- (2) Packing, electrical brushes, lubricants and oils.
- (3) Materials required for restoring fire fighting equipment to normal.
- (4) Miscellaneous expenses such as transportation costs.

604.4 Miscellaneous Hydraulic Power Generation Expense.

This account includes the cost of labor, materials and other expenses incurred in connection with power plant operations, not specifically provided for in other power plant operation accounts, such as custodial and administrative services.

a. Duties.

(1) Direct supervision of duties.

(2) All custodial duties including cleaning and restocking power plant service facilities, removal of snow, ice and debris, and relamping and cleaning lighting fixtures for inside and outside lighting in or related to the powerhouse, tailrace, intake, and switchyard structures or areas when included in plant account 07.

(3) Inspection, testing, recharging and service of general purpose power plant fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use. Fire fighting systems for specific equipment such as generators, transformers, and oil rooms will be included under account number 604.3.

604.9 Joint Expense Credit.

Credit this account for services performed by power production facilities chargeable to non-power facilities.

605 Fish and Wildlife Facilities (Plant Account 06).

605.1 Fish Passage Facilities.

This feature covers operating duties in connection with fish ladders, elevators and locks, downstream fish by-pass equipment and related facilities, and other facilities for passage of fish around dam structures.

a. Duties.

(1) Directs supervision of operating duties.

(2) Fish counting activities, logs and reports.

(3) Regulation of water flow in fish passage facilities, such as regulating valves, gates, orifices, and stoplogs as well as transport of equipment for accomplishing these duties.

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(4) Lubrication of fish passage equipment.

(5) Custodial functions for all fish passage facilities including public facilities associated therewith. Also includes cleaning and relamping both inside and outside lighting fixtures.

(6) Operation of fish trapping facilities for migrant fish and transport of fish around dam.

b. Materials and Equipment.

(1) Custodial materials and equipment costs.

(2) Lubricants.

(3) Materials and equipment usage costs for operation of passage facilities.

605.2 Fish Propagation Facilities.

This feature covers operating duties in connection with hatcheries, holding ponds, egg-collecting stations and related facilities.

a. Duties.

Operating duties in connection with these facilities including direct supervision; such duties as egg-collecting and custodial (including relamping functions and inspection and recharging of fire fighting equipment). Also includes general operation inspection costs of Corps-owned facilities operated by others.

b. Materials and Equipment.

Materials and equipment costs in connection with above duties.

605.3 Wildlife Preservation Facilities.

Cost of direct supervision, labor, materials, and equipment expense for operational type functions relating to facilities included under Item 4 of plant account number 06.

605.4 Fish and Wildlife Studies.

Cost of fish and wildlife studies applicable to a specific project and pro rata share of basin-wide fish and wildlife studies.

606. Recreational Facilities (Plant Account Number 14)

606.2 Other Activities

a. Duties.

(1) Direct supervision of operation functions.

(2) Custodial duties including policing recreation areas, garbage collection and disposal, cleaning and relamping lighting fixtures, road and parking area sweeping, grass and weed removal and disposal, servicing comfort stations and bath houses, furnishing fuel and similar operating duties relative to recreation facilities.

(3) Operational type duties performed on water, sewerage and drainage systems and operation of sprinkler systems.

(4) Inspection, testing, recharging and service of single purpose fire fighting equipment. This includes cleanup, service, recharging and restoring equipment to normal following use.

(5) Recreation patrols.

(6) Periodic recreational utilization studies.

b. Materials and Equipment.

(1) Custodial supplies, tools and equipment.

(2) Materials required for restoring fire fighting equipment to normal.

(3) Cost of uniforms and other incidental expenses for recreation area patrols.

(4) Fuel and other supplies for recreation facilities.

607 Condition and Operation Studies.

This feature includes operation and condition studies of the kind described in ER 11-2-101 and financed with O&M funds.

607.1 Studies for Lock and Dam Replacement.

Costs incurred at project and district office in connection with preliminary studies for the replacement of locks and dams.

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607.2 Other Studies.

Costs incurred at project and district office in connection with studies covered in ER 11-2-101 except for those covered by cost account number 607.1.

610. Inspections and Reports.

Costs of inspections and reports covered in ER 11-2-101.

610.3. Other Activities.

See ER 11-2-101, chapter 4, paragraph 3.a.

619. Supervision and Administration - Operation Features

619.1 Project Office.

619.11 Administration.

Costs originating in the project office for fiscal, personnel, office service, procurement, property accounting, and similar administrative functions including costs of labor, materials, supplies and equipment.

619.12 Technical.

Cost originating in the project office of a technical nature including office engineering and drafting not chargeable to construction, maintenance or a specific cost account. This account will not include costs related to assembly and reporting of operating data and reports such as power generating statistics, gage readings, lockage statistics, and similar items which should be charged to applicable operating expense accounts.

619.2 District Office Direct Charges to Project Level.

District office costs of a technical, supervisory or administrative nature properly chargeable to project operation but not chargeable to specific operation features. The general nature of costs to be included in this category precludes segregation.

619.3 District and Area Overhead.

This account will include the pro rata share of district and area office overhead chargeable to project operation activities. Do not include amounts applicable to maintenance features.

619.4 Damages Assessed Contractors.

See ER 37-2-10, Paragraph 8-5 b (1).

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MAINTENANCE

A. Maintenance Expense. This category will include all costs incurred in connection with:

1. Repair of project structures and facilities and components thereof to preserve the useful life of the existing facilities or to return them to normal operating condition.
2. All repairs or replacements of property, facilities or equipment resulting from accidental damage, acts of God, and similar causes.
3. Retirement and replacement of units of property at multiple purpose projects.
4. Betterments and improvements of existing facilities to conform to modern design or practice which are performed in conjunction with periodic repair, or independently.
5. Additions of project plant, equipment or facilities, not previously existing, within the scope of the authorized project or activity.
6. All navigation channel excavation and dredging and related activities.

The segregation of costs for maintenance, betterments, additions and retirements and the explanation of what constitutes a betterment and a retirement unit is covered in Chapter 8 of ER 37-2-10. Maintenance activities performed under the rehabilitation category of appropriation 96X3122, Construction, General, will be classified and accounted for in accordance with provisions of Chapter 8, ER 37-2-10. Care should be taken to assure that operation type work listed under operation accounts above are not charged to the following maintenance accounts.

B. Account Number and Title.

620 Land and Damages (Plant Account Number 01).

See ER 11-2-101, and ER 37-2-10.

621 Dams. (Plant Account Number 04).

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621.1 Power Intake Works (Plant Account Number 04.4)

This account to be used when the power intake and powerhouse are in separate structures.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of intake facilities and equipment such as:

(1) Structure, elevator, service roads on structures, penstocks, surge tanks, tunnels and water conduits, intake cranes, intake gates, support cables, machinery, trash racks, trash booms included in this plant account, and light, power, compressed air, water, heating, ventilating, air conditioning and sewer systems.

(2) Maintenance of one purpose fire fighting equipment included in plant account number 04.4.

(3) Maintenance of any public facilities included in an intake structure.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

621.2 Dam Joint Facilities (Plant Account Numbers 04.1, 04.3 and 04.5).

a. Duties: All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of facilities and equipment for main dams, spillways, outlet works and auxiliary dams such as:

(1) Structures, elevators, service roads on structures, spillway and outlet gates and associated machinery, tunnels and water conduits, outlet and spillway gantry cranes, trash racks, trash booms included in these plant account numbers, and light, power, compressed air, heating, ventilating, air conditioning, and sewer systems.

(2) Foundation uplift pressure equipment and drainage systems including piping and pumps.

(3) Public facilities included in these structures.

(4) Maintenance of one purpose fire fighting equipment included in these plant account numbers.

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b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials. Transportation costs, and equipment usage expense for performing the maintenance duties.

621.3 Reservoirs (Plant Account Number 03)

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of the reservoir and facilities such as the following:

(1) Trash booms, trash removal equipment and facilities, major erosion repairs, bulkheads, retaining walls, riprap, docks, piers and mooring facilities and fixed and floating signs and markers when these items are included in the reservoir plant account.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, transportation costs, miscellaneous supplies and materials, and equipment usage expense for performing the maintenance duties.

622 Locks (Plant Account 05)

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of the lock structure and facilities such as the following:

(1) Lock structures and buildings including gates, valves, machinery and controls, heating and ventilating, utility systems, including lighting and power, elevators, mooring bits and fenders, navigational radio system, lock cranes (not mobile cranes listed in plant account number 20), filling, emptying and unwatering piping systems, public facilities and bridges included in the lock plant account.

(2) Maintenance dredging of lock and approaches within the limits outlined in ER 11-2-101, paragraph 3-3, feature 05.

(3) Maintenance of one purpose fire fighting equipment included in plant account number 05.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

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623 Power Plant (Plant Account Number 07)

Maintenance costs of these facilities specifically required for the production and transmission of power other than those included in plant account number 04 (Dams).

623.1 Maintenance Supervision (General).

Labor, material and incidental expenses incurred by the power plant superintendent and staff assistants in the general supervision of maintenance of the power plant facilities. Also included should be secretarial and clerical work of a general nature directly related to power plant maintenance. Do not include supervision of secretarial or clerical activities or such secretarial or clerical duties that can be segregated and charged to other specific maintenance accounts. Cost of supplies for performing these duties are also included.

623.2 Maintenance of Structures.

Maintenance of powerhouse, tailrace, switchyard and the power intake structures.

623.21 Maintenance of Powerhouse Structure.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, betterment, replacement, and additions to or retirement of the powerhouse and tailrace structures, including lighting systems, water systems, exclusive of generator or transformer cooling, sewer systems, heating and ventilating systems, elevators, roof coverings, and tailrace stop logs, bulkheads, gaging stations, guide walls, riprap and flood lighting where provided. Intake and switchyard structures and facilities are not included. Public facilities when integral part of powerhouse structure are included.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs and equipment usage expense for performing the maintenance duties.

623.22 Maintenance of Switchyard Structures.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of the switchyard structures including steel structures, towers and supports, transformers supports, lighting systems, fencing, buildings, conduit for lighting, cable tunnels, and underground conduit runs.

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b. Materials and Equipment. Spare parts, replacements, additions, tools, miscellaneous supplies and materials, transportation costs and equipment usage expense for performing the maintenance duties.

623.23 Maintenance of Intake Structure.

This account to be used when the power intake and the powerhouse are in the same structure.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of the intake structure including lighting system, heating and ventilating system, intake gates, including the hoists or gate machinery, power system and controls, trash racks, trash rake, trash sluiceway and associated equipment, trash booms, intake elevators, and intake cranes when included in plant account number 07.1. Station service generator intake equipment and penstocks are included.

b. Materials and Equipment. Spare parts, replacements, additions, tools, miscellaneous supplies and materials, transportation costs and equipment usage expense for performing the maintenance duties.

623.3 Maintenance of Electric Plant.

This account covers the maintenance costs of power plant generating and accessory electrical equipment and switchyard electrical equipment.

623.31 Maintenance of Powerhouse Electric Plant.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of the powerhouse electrical equipment such as the following:

(1) Turbines and accessories including air systems (compressors, receivers and piping, primarily for depressing draft tube water level for condenser operation of generating units or for draft tube evacuation), butterfly valves, pressure regulators and unit flow meters.

(2) Governors and accessories including actuators, oil pressure tanks and pumps, oil sumps, pressure and return piping, permanent magnet generator and speed switch assembly and the governor air pressure system.

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(3) Generators and accessories including thrust and guide bearings and lubricating systems (not piping included in cost account number 623.4), heat exchangers and cooling water supply system, exciters, and generator fire control and internal lighting systems.

(4) Speed increasers and accessories.

(5) Accessory electrical equipment which includes all equipment in plant account number 07.31.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

623.32 Maintenance of Switchyard Electric Plant.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of the switchyard electrical equipment including power transformers and accessories (including fire control equipment, cooling water piping and heat exchangers), instrument transformers, oil circuit breakers, bus, insulators, disconnect switches, reactors, lightning arresters, control cables and equipment included in plant account number 07.34, power cables and accessory equipment, switchyard grounding system, and exposed control and power conduits.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs and equipment usage expense for performing the maintenance duties.

623.4 Maintenance of Miscellaneous Hydraulic Plant

This account covers the maintenance costs of power plant and switchyard miscellaneous hydraulic plant.

623.41 Maintenance of Miscellaneous Powerhouse Equipment.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of the equipment listed in plant account number 07.32.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs and equipment usage expense for performing the maintenance duties.

623.42 Maintenance of Miscellaneous Switchyard Equipment.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of such switchyard equipment as the insulating oil storage system (including storage tanks, piping, transfer pumps and insulating oil purifiers), and the switchyard fire control equipment (excluding transformer fire control) when such equipment is in plant account number 07.34.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

624. Fish and Wildlife Facilities (Plant Account Number 06).

624.1 Fish Passage Facilities.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, betterment, replacement, and additions to or retirement of the following:

(1) Fishladders including the main structure, training walls, collection channels, weirs, stoplogs, valves, gates and operating machinery, buildings (including public and fish counting facilities), pumps and prime movers and other facilities for furnishing fish attraction water, and lighting, power, and control systems and associated equipment.

(2) Fish elevators and locks including the operating machinery, structure, lighting, power and control system and other associated structures and equipment.

(3) Fingerling by-pass channels or piping systems and associated structures and equipment.

(4) Fish trapping and transportation equipment for passage of fish around dams.

(5) Fish attraction and guidance systems and associated equipment.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

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624.2 Fish Propagation Facilities.

a. Duties. All work, including direct supervision and keeping of maintenance records in connection with the maintenance, repair, betterment, replacement, additions to or retirement of fish hatcheries and associated equipment and utilities, holding ponds, fish traps, egg-collecting stations, housing and fish transportation trucks and tanks.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

624.3 Wildlife Preservation Facilities.

All work, including direct supervision and keeping of maintenance records, materials and equipment required to maintain, repair, better, replace, and make additions to or retire plant used for wildlife preservation and not covered in other 624 subaccounts.

624.4 Fish and Wildlife Studies.

All costs in connection with fish and wildlife studies that are appropriately chargeable to the project or the prorata share of costs incurred in making such studies on a basin-wide basis.

625 Roads, Railroads and Bridges (Plant Account Number 08).

This account covers the cost of maintenance for roads, railroads and bridges included in plant account number 08.

625.1 Roads

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of project access roads, parking areas and walkways including such functions as rebuilding, resurfacing, culvert and ditch repairs or additions to plant and similar items but excluding maintenance of bridges which is covered in cost account number 625.3 below. The facilities to be included in this cost account and the activities considered to be operational functions are covered above under operation account number 602.11. Roads and parking areas constructed primarily for recreation will be covered under maintenance account number 629.2.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage expense for performing the maintenance duties.

625.2 Railroads.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of project railroads including railroad bridges. Includes such work as replacement and repair of ties, rails, roadbed, culverts and railroad bridge structures including supports. Maintenance cost for railroads on project structures should be included in the structure maintenance costs.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous supplies and materials, transportation costs, and equipment usage expense for performing the maintenance duties.

625.3 Bridges.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with maintenance, repair, replacement, betterment, and additions to or retirement of access road bridges included in plant account number 08.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage expense for performing the maintenance duties.

627 Levees and Floodwalls (Plant Account Number 11).

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of embankments, walls and other structures to protect areas from inundation. Also included is maintenance of service roads and other items as listed under account number 603.1 in chapter 4, paragraph 3(a), ER 11-2-101.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

628 Pumping Plants (Plant Account Number 13).

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance repair, replacement, betterment and additions to or retirement of pumping plants

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furnished to pass accumulated drainage, seeping water and sewage from the protected areas through levees and floodwalls. This includes such items as buildings and pumps and prime movers including power supplies, controls, piping and other associated facilities.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs and equipment usage expense for performing the maintenance duties.

629 Recreational Facilities (Plant Account Number 14).

This cost account covers maintenance costs of recreational facilities as detailed under account number 606 in chapter 4, paragraph 3(a), ER 11-2-101.

629.1 Public Recreation Areas.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of recreational facilities such as camping and picnic areas, tables, fireplaces, water supplies, sanitary facilities, comfort stations, bath houses, boat launching ramps and other facilities, other than those covered under account number 629.2 below, provided primarily for public recreational use. Operational type functions are covered in cost account number 606.2.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

629.2 Roads, Trails and Parking Areas.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of roads, trails and parking areas provided primarily for public recreational use.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

630 Permanent Operating Equipment (Plant Account Number 20).

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair,

replacement, betterment, and additions to or retirement of the permanent operating equipment included in plant account number 20 even if the equipment is assigned to a specific feature and the operating costs are charged to that feature. Information on operating expenses in connection with this equipment is given in cost account number 602.3 above. It should be noted that periodic calibration of test equipment and work of a similar nature is an operating expense while parts replacement or repair is a maintenance expense.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties. Note that gasoline and other fuels, tires, oil, batteries and lubricants are included in operating expense.

632 Buildings, Grounds and Utilities (Plant Account Number 19).

632.1 Project Administration Facilities, Including Grounds.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of project facilities such as administration and shop buildings, storage buildings and areas, garage buildings and areas, other non-leased or rented project buildings included in plant account number 19, local streets and sidewalks (not including roads for project access, recreational use, facility service and similar uses included in other plant accounts), landscaping, fencing and security and protective features included in plant account number 19. See cost account number 602.21 for operational type duties in connection with these features.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

632.2 Project Utilities.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of project utilities including project water, sewer, gas and electrical systems for general project use not specifically furnished for other features and included in those plant accounts. Cost of maintenance of utilities in buildings are chargeable to the building maintenance. Maintenance costs of street, road and area lighting, other than costs for such items furnished for other specific features and included in those plant accounts, are also included in this account.

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b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

632.3 Dwellings and Other Facilities Rented to Government Personnel.

a. Duties. All work, including direct supervision and keeping of maintenance records, in connection with the maintenance, repair, replacement, betterment, and additions to or retirement of houses, apartments and other living quarters or facilities rented to Government employees. Cost of painting, repairs to building utilities, roofs and other structural items are included here.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage expense for performing the maintenance duties.

632.4 Other Outleased Facilities.

Maintenance costs for facilities leased to other than Government employees are similar to those covered in cost account number 632.3 above.

633 Channels and Canals (Plant Account Number 09).

633.1 Excavation.

The costs, including direct supervision and keeping of adequate records, for maintenance of, betterment of, or additions to excavations of the types listed in subaccounts .11, .12, and .13, below, for channels and canals included in plant account number 09, shall be charged to those subaccounts. Such costs (including the equipment usage and other incidental expenses) shall be charged whether the work is accomplished by hired labor and Government owned equipment or by contract when such excavations are necessary for the maintenance of channels, harbors and canals for navigation and flood control purposes. Also included will be the expenses incurred for spoil disposal areas, retaining dikes or levees and other attendant facilities as well as the engineering and design and surveys for dredging or other purposes in connection with such excavation.

633.11 Hopper Dredging.

633.12 Other Dredging.

633.13 Other Excavation.

This subaccount number will include costs incurred in connection with maintenance excavation, other than dredging, for channels and canals, including removal of rock reefs, bulldozing of flood control channels and similar items of work.

633.2 Snagging and Clearing.

a. Duties. All work, including direct supervision and keeping of adequate records, in connections with the removal of trees, brush, accumulated snags, drifts and debris from canals, harbors and channels for navigation and clearing and removal of accumulated snags, drifts, debris and vegetable growth from streams for flood control and major drainage purposes.

b. Materials and Equipment. All materials, supplies, special tools, transportation costs and equipment usage expense to perform the maintenance duties.

633.3 Channel Improvement Works.

a. Duties. All work, including direct supervision and keeping of adequate records, in connection with the maintenance, repair, replacement, betterment and additions to or retirement of channel improvement structures and revetments, linings, dikes, jetties, bulkheads and building when provided for flood control or navigation channels. Such items provided for bank stabilization only are not included.

b. Materials and Equipment. Spare parts, replacements, additions, special tools, miscellaneous materials and supplies, transportation costs, and equipment usage costs for performing the maintenance duties.

634 Engineering and Design.

All work and other expenses incurred in engineering and design as outlined in paragraph 8-5b(2), ER 37-2-10.

635 Supervision and Administration.

All work and other expenses incurred in inspection, supervision and administration of maintenance work of such a general nature that charges to a specific account are precluded. Paragraph 8-5b(2), ER 37-2-10 outlines the requirements including establishment of applicable subaccounts.