

**KENTUCKY-AMERICAN WATER COMPANY**  
**CASE NO. 2020-00027**  
**COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION**

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**Witness: Elaine Chambers**

- 11.** Refer to Chambers Workpaper Spreadsheet, tab labeled "Placed in Service."
- a. Explain whether the monthly totals were calculated by projection of actual costs per month or by allocating a known total project cost to each month.
  - b. As shown in the tab labeled "Placed in Service," the plant removal rates as of June 2017 produces a utility plant reduction of \$1,292,015, while the three-year average composite removal rate of 7.27 percent included in the tab labeled "Assumptions" produces a Utility Plant Retirement of \$975,553. Explain in specific detail why Kentucky-American used the composite removal rates in place of the removal rates as of June 2017.
  - c. Provide updated removal rates for each line item as of June 2018. Include all calculations supporting the 2018 removal rates in Excel spreadsheet format with formulas intact and unprotected and all rows and columns fully accessible.
  - d. Provide the detailed calculations supporting the 2017 removal rates in Excel spreadsheet format with formulas intact and unprotected and all rows and columns fully accessible.
  - e. Provide an updated version of the tab labeled "Placed in Service" that reflects the retirement rates as of June 2018.

**Original Response 3/25/20:**

- a. The total project costs were estimated for each project, and then allocated over the durations of the projects that are expected to be placed into service within the QIP year timeframe of July 1, 2020 through June 30, 2021.
- b. The removal rates in the tab labeled "Placed in Service" and the retirement ratio in the tab labeled "Assumptions" are used for two separate calculations. The removal rates are used to calculate cost of removal. The cost to remove an asset includes costs for labor, contracted services, paving, materials and supplies, etc. The retirement ratio is used to calculate the removal of the original cost of the asset.
- c. The June 2017 removal rates listed in the Chambers Workpaper Spreadsheet, "Placed In Service" tab, are the most current, updated removal rates used by the Company.

- d. The 2017 removal rates are standardized removal rates which are uniformly used and are based on information gathered from historical projects. Those rates were provided to the Company by American Water Works Service Company. At this time, the Company does not have the underlying data for those rates, but it will supplement this response as soon as possible.
- e. Please see KAW\_R\_PSCDR1\_NUM011\_03252020\_Attachment.

**Supplemental Response 4/29/20:**

**Co-Witnesses: Elaine Chambers/Kurt Stafford**

- d. Please see the attached documentation regarding the development of removal rates from Tony Biacci, Senior Plant Manager for American Water in Camden, New Jersey. Please also see the attached documentation regarding Construction Work in Progress and Retirement Work in Progress.

## Accounting Memo

Date: April 23, 2020  
To: Accounting Files  
From: Tony Biacci  
Subject: Cost of Removal Process

Ultimately, the cost of removal recovery and spend are accumulated through a specific liability account that in theory would net to zero at a point in time when the asset is removed, and if all cost of removal recovery and cost of removal spend perfectly matched. However, having a \$0 balance liability account is extremely rare since there is always a timing difference of cost of removal recovery and spend, especially when continuously adding new assets and removing old assets are factored into the process which generally repeats over long periods of time.

### **Introduction:**

The Company applies cost of removal ("COR") to select development, investment and/or recurring (routine) projects, as permitted by Commission authorization. The COR rates are generally applied at the NARUC utility account level (e.g. 331 for mains). It appears Kentucky does not prescribe specific depreciation rate development requirements through a published depreciation practice or guide, as some states do. Therefore, the Company uses the Broad Group/Straight Line/Remaining Life depreciation system to develop annualized depreciation accruals and rates. This depreciation system has been widely used across all utility industry sectors for nearly 100 years. The Company complies with established professional requirements in developing depreciation rates and accruals under this system that it files with the Commission periodically via depreciation studies (see below rate development discussion and attached file with an example). Generally, after reviewing the Company's depreciation study, the Commission authorizes prospective depreciation and COR rates the Company can use in depreciating assets' balances and accounting for recovery of its removal costs.

### **Summary Description of the COR Process:**

#### **COR Rate Development and Approval:**

The Company generally develops proposed COR rates by NARUC utility accounts via a depreciations study that is submitted to the Commission for approval. The Commission determines the COR rates (they often vary from what was proposed by the Company) to use and directs the Company to use those COR rates beginning at a specific effective date. The summary process for COR rate development is as follows using simple actuarial analysis (see attached file for an example):

## Accounting Memo

- Work with Company subject matter experts to gather and understand data and related operational processes,
- Determine annual retirements from the Company's asset records for a fixed period of time, generally known as a bandwidth (e.g. 10 years in attached example),
- Determine annual amounts spent and any salvage received from removing assets that year, as recorded in the Company's asset records,
- Develop a simple ratio of annual amounts spent and salvage received against annual retirements recorded,
- Analyze the data, make any required adjustments, and consider smoothing analyses (e.g. 5 year average or some other representational average for expected removal costs and salvage receipts),
- Propose an appropriate COR rate based on the aforementioned actuarial analysis,
- Discuss results with Company personnel subject matter experts to ensure no material items are missing or misrepresented,
- File the proposal with the Commission for review and approval
- The Commission approves a COR rate

### **COR Accounting:**

The Company records two COR related charges (COR Expense and COR Spend) monthly into the financial statements, as outlined below.

#### **COR Expense:**

The Company will use the approved COR rates to calculate monthly COR depreciation expense ("COR Expense") which is calculated as:

$$\text{COR Expense} = [\text{COR rate} \div 12] \times \text{applicable monthly asset base balance (generally by NARUC utility account)}$$

The COR Expense is then recorded in the income statement as a debit charge to depreciation expense with an offsetting credit to a COR Liability account in the balance sheet.

#### **COR Spend:**

During each month, on-going projects not yet in service will also incur actual or estimated COR spend related to removal of an existing asset, either partial or in whole. These COR charges are known as COR incurred ("COR Spend") and is different from the aforementioned COR Expense. COR Spend is generally determined by:

1. estimates derived by subject matter experts (e.g. engineers or project managers) for projects based on project type (e.g. line replacement) or scope of work involved in the project, as a percentage of the total project costs (e.g. 5% of the project total costs represent COR Spend), or
2. direct charges to a project for certain removal charges.

## Accounting Memo

During the month when project accounting is performed, project costs settle to a Construction Work-in-progress (“CWIP”) account while related project removal costs settle to a Removal Work-in-progress (“RWIP”) account with an offset to a related RWIP Liability account. When the project is completed and placed in service, the cumulative RWIP charges are cleared from the RWIP account and the related COR Spend in the RWIP Liability account is transferred to the aforementioned COR Liability account, generally as debit transaction.

### **COR Liability Account:**

The COR Liability account is the account where the COR Expense (generally credit transactions in the account) and COR Spend (generally debit transactions in the account) related to projects in service are accumulated and have an offsetting relationship. In theory, the COR Expense represents the appropriate allowed rate recovery to ensure all COR Spend related to the removal of an asset is recovered by the ratepayers that used the asset over the course of the asset’s service life. This process is designed to ensure intergenerational inequity does not occur regularly or in the long run, where future generations pay for COR Spend on an asset whose operations they did not benefit from in use to provide them services.

- A running credit balance in the COR Liability account does not necessarily mean, at that point in time, that the Company has over or sufficiently collected for COR Spend. This is because the related COR Spend may not have occurred yet, and generally, it is expected COR Spend to occur in the distant future when the asset is removed. COR rates are generally set to recover cost of removing an asset in the future, over a long period of time so as to reduce intergenerational inequity and allow for ratable collection of COR Spend over the service life or other allowed period, where the rate payers benefitting from the asset’s operations pay a fair share not only for that operational benefit (via general depreciation expense) but they also pay a fair share for the future removal of that asset as well (via COR Expense) since they benefitted from its operation over time.
- A running debit balance in the account may signify, at that point in time, that the Company is behind in collecting the appropriate COR Spend ratably over time because the related COR Spend exceeds the COR Expense to date. This situation may result in intergenerational inequity as well, if over a long period of time, the COR Spend continues to exceed the COR Expense. Hence, the importance for periodic depreciation studies using actuarial or similar analysis to demonstrate the current level of COR rates required to ensure that COR Spend is collected timely through COR Expense so that the rate payers benefitting from the asset’s operations over time also appropriately pay for its COR Spend to be incurred in the future upon asset removal, otherwise, future generations of rate payers that did not benefit from the asset’s operations may end up paying for its COR Spend.



## CWIP/RWIP Allocation Guidance for Recurring Projects

### **General**

This document provides general guidance to help in determining the Construction Work In Progress (CWIP)/Retirement Work In Progress (RWIP) allocation for recurring projects. Since each project is unique, the actual allocation should always be reflective of a reasonable allocation that is generally aligned with the guidance provided in this document.

When determining the CWIP/RWIP account allocation on a project, the work effort should first be evaluated separately for each account, looking at discrete work tasks. Determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should be split? 50/50. An example would be excavation to replace a valve. This work effort would be required to perform either the addition or the removal.

Typically, but not always, the labor associated with the actual installation of the asset is expected to be slightly greater than for the actual removal of the asset. When a new asset is installed, some additional effort and care is usually required to ensure it functions properly, which is not required for a removal. An example of an exception to this could be interference with other underground utilities requiring a significant amount of time to remove an existing asset, with the new installation in a slightly different location where utility interference does not exist.

Materials may be charged only to CWIP. If a removal-only project requires materials, then a CWIP account should be established. An example would be the retirement of a valve that is not being replaced, and the valve is physically removed rather than abandoned in place. Once the valve is cut out of the main and replaced with a section of pipe coupled at each end, the pipe, couplings and associated labor would be charged to CWIP.

Guidance for each of the 19 recurring project line items is provided below. Since each individual project within a line item could be unique, guidance is provided only for discrete work tasks within a line item, rather than for the overall line item.

### **RP Line A: Mains - New**

No RWIP should typically be charged to this line item. There could be exceptions where existing assets (e.g., a shutoff valve) are replaced on the end of the existing main before extending the line with new main.

<u>Line A Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

### **RP Line B: Mains - Replaced/Restored**

The CWIP/RWIP allocation effort for main replacements can vary greatly, depending on the project specifics including the length of the main and number of hydrants, valves and services. Thus, it needs to be evaluated by discrete work activity. Since most replaced mains are abandoned in place, the disconnection of the existing main at each end is generally the same amount of effort for any project

independent of the length of the main, and most of the work effort is CWIP. The removal of fire hydrants, valve boxes and curb boxes, however, would typically be a function of the length of the main.

<u>Line B Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site each day	100%	0%
Labor - install/remove temporary service	100%	0%
Labor - excavate/backfill at each end of existing main	100%	0%
Labor - excavate/backfill/install new main, hydrants, valves and services	100%	0%
Labor - disconnect (cut) main at each end	0%	100%
Labor - remove hydrants and valve/curb boxes from existing main	0%	100%
Labor - fill, flush, test new main	100%	0%
Restoration for the pipeline	100%	0%
Materials - all	100%	0%

Note that if the project is not a replacement and utilizes a rehabilitation technology, the allocation would be the same as above.

### **RP Line C: Mains - Unscheduled**

The majority of the labor associated with this line item could be allocated 50/50. When cutting and removing the failed section and installing a new section of pipe with couplings, it is reasonable to assume the work effort associated with installation of the new section of pipe should be slightly greater since it is necessary to ensure the pipe will not leak.

<u>Line C Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site	100%	0%
Labor - shut off water and notify customers	50%	50%
Labor - excavate/backfill	50%	50%
Labor - remove failed section and install new section	60%	40%
Labor - fill and flush	100%	0%
Restoration	50%	50%
Materials - all	100%	0%

### **RP Line D: Mains - Relocated**

Same as Line B. When mains are relocated, they are not actually removed and relocated but instead abandoned in place and a new main is installed.

<u>Line D Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site	100%	0%
Labor - install/remove temporary service	100%	0%
Labor - excavate/backfill at each end of existing main	100%	0%
Labor - excavate/backfill/install new main, hydrants, valves and services	100%	0%
Labor - disconnect (cut) main at each end	0%	100%
Labor - remove hydrants and valve/curb boxes from existing main	0%	100%
Labor - fill, flush, test new main	100%	0%
Restoration at each end of existing main	100%	0%
Restoration for the remainder of the pipeline	100%	0%
Materials - all	100%	0%

### **RP Line E: Hydrants, Valves, and Manholes - New**

No RWIP should typically be charged to this line item.

<u>Line E Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

### **RP Line F: Hydrants, Valves, and Manholes - Replaced**

The majority of the labor associated with this line item could be allocated 50/50. It is reasonable to assume the work effort associated with installation of the new hydrant, valve or manhole should be slightly greater since it is necessary to ensure the new asset won't leak and functions properly.

<u>Line F Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site	100%	0%
Labor - shut off water and notify customers	50%	50%
Labor - excavate/backfill	50%	50%
Labor - remove existing asset and install new asset (greater CWIP if new tee and valve are needed)	60%	40%
Labor - fill and/or flush as necessary	100%	0%
Restoration	50%	50%
Materials - all	100%	0%

### **RP Line G: Services and Laterals - New**

No RWIP should typically be charged to this line item.

<u>Line G Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

### **RP Line H: Services and Laterals - Replaced**

The CWIP/RWIP allocation effort for replacing a service or lateral can vary greatly depending on the project specifics including the Business Segment (water or wastewater), short side or long side, and whether a new tap at the main is needed. Thus it needs to be evaluated for discrete work activities. Since most services are abandoned in place, the majority of the work effort is typically CWIP.

<u>Line H Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site	100%	0%
Labor - excavate/backfill to remove/shutoff existing corp and install new corp	50%	50%
Labor - remove existing curb box	0%	100%
Labor - retap main	100%	0%
Labor - bore under or open cut road	100%	0%
Labor - excavate opposite side of road	100%	0%
Labor - flush new service	100%	0%
Restoration at main	50%	50%
Restoration opposite side of road or across the road	100%	0%
Materials - all	100%	0%



### **RP Line I: Meters - New**

No RWIP should typically be charged to this line item.

<u>Line I Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

### **RP Line J: Meters - Replaced**

The majority of the labor associated with this line item could be allocated 50/50. When removing the existing meter and installing the new one, it is reasonable to assume the work effort associated with installation of the new meter should be slightly greater, since it is necessary to ensure the meter does not leak and that it functions properly.

<u>Line J Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - travel time to/from site	100%	0%
Labor - remove existing meter and install new meter	55%	45%
Materials - all	100%	0%

### **RP Line K: ITS Equipment and Systems**

This line item includes both new and replacement Information Technology Services equipment and systems. No RWIP should typically be charged to this line item for new assets. For replacements, the type of work encompassed in this line item can vary greatly, and would not be considered as routine and recurring as many of the other RP line items. For that reason, no specific guidance is being provided for replacement work other than the general guidance provided at the beginning of this document. In particular, the Project Manager (PM) should always determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should be 50/50.

### **RP Line L: SCADA Equipment and Systems**

This line item includes both new and replacement SCADA equipment and systems. No RWIP should typically be charged to this line item for new assets. For replacements, the type of work encompassed in this line item can vary greatly, and would not be considered as routine and recurring as many of the other RP line items. For that reason, no specific guidance is being provided for replacement work other than the general guidance provided at the beginning of this document. In particular, the PM should always determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should be 50/50.

### **RP Line M: Security Equipment and Systems**

This line item includes both new and replacement Security equipment and systems. No RWIP should typically be charged to this line item for new assets. For replacements, the type of work encompassed in this line item can vary greatly, and would not be considered as routine and recurring as many of the other RP line items. For that reason, no specific guidance is being provided for replacement work other than the general guidance provided at the beginning of this document. In particular, the PM should always determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should be 50/50.

## **RP Line N: Office and Operations Centers**

This line item includes both new and replacement office and operations centers. No RWIP should typically be charged to this line item for new assets. For replacements, the type of work encompassed in this line item can vary greatly, and would not be considered as routine and recurring as many of the other RP Line Items. For that reason, no specific guidance is being provided for replacement work other than the general guidance provided at the beginning of this document. In particular, the PM should always determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should be 50/50.

## **RP Line O: Vehicles**

This line item includes both new and replacement vehicles. No RWIP should typically be charged to this line item even if it is a replacement, as there really is no effort involved in the removal of the old vehicle.

<u>Line O Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

## **RP Line P: Tools and Equipment**

This line item includes both new and replacement tools and equipment. No RWIP should typically be charged to this line item even if it is a replacement, as there really is no effort involved in the removal of the old tool or equipment.

<u>Line P Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - all	100%	0%
Materials - all	100%	0%

## **RP Line Q: Process Plant Facilities and Equipment**

This line item includes both new and replacement Process Plant facilities and equipment. No RWIP should typically be charged to this line item for new assets. For replacements, the type of work encompassed in this line item can vary greatly, and would not be considered as routine and recurring as many of the other RP Line Items. For that reason, no specific guidance is being provided for replacement work other than the general guidance provided at the beginning of this document. In particular, the PM should always determine the effort that would have been required if only the addition (CWIP) portion of the project was performed, then do the same analysis assuming that only the removal (RWIP) portion of the project was performed. When the same work tasks are required for both, the allocation for that individual work task should 50/50.

## **RP Line R: Capitalized Tank Rehabilitation / Painting**

This line item is primarily used for tank re-painting in those states which allow this to be capitalized. Paint itself is an asset which needs to be treated just like any other asset that is being removed and replaced. The removal of paint occurs via sandblasting. Blasting and re-painting a tank is always a contracted activity.

<u>Line R Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
Labor - sandblast existing tank	0%	100%
Labor - structural repairs to tank	100%	0%
Labor - paint tank	100%	0%
Materials - all	100%	0%

**RP Line S: Engineering Studies**

No RWIP should typically be charged to this line item. Not all States allow for the capitalization of engineering studies.

<u>Line S Reasonable Allocation (can vary for each individual project)</u>	<u>CWIP</u>	<u>RWIP</u>
<u>Labor - all</u>	<u>100%</u>	<u>0%</u>
<u>Materials - all</u>	<u>100%</u>	<u>0%</u>