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NEW APPLICATION

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Arizona Corporation Commission

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DOCKETED

JUN 27 2019

LIBERTY UTILITIES

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DOCKETED BY

SW-02361A-19-0139

Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

APPLICATION

Liberty Utilities (Black Mountain Sewer) Corp., an Arizona public service corporation ("Liberty Black Mountain" or "Company") hereby applies for an order establishing the fair value of its plant and property used for the provision of public wastewater utility service and, based on such finding, approving permanent rates and charges for utility service designed to produce a fair return thereon. In support thereof, Company states as follows:

1. Liberty Black Mountain is an Arizona public service corporation engaged in providing wastewater utility services in portions of Maricopa County, Arizona, pursuant to certificates of convenience and necessity granted by the Arizona Corporation Commission. During the Test Year, Liberty Black Mountain served approximately 2,210 customers.

1 2. Liberty Black Mountain's business office is located at 12725 W. Indian
2 School Road, Suite D-101, Avondale, Arizona 85392 and its telephone number is
3 (623) 935-9367. The primary management contact is Matthew Garlick. Mr. Garlick is
4 President of Liberty Utilities – Arizona/Texas.

5 3. The person responsible for overseeing and directing the conduct of this rate
6 application is Leticia Washington, Manager, Rates and Regulatory Affairs for Liberty
7 Utilities (Arizona). Ms. Washington was assisted by the Company's rate case consultant,
8 Thomas Bourassa and undersigned legal counsel. Ms. Washington's mailing address is
9 12725 W. Indian School Road, Suite D-101, Avondale, Arizona 85392; her telephone
10 number is (623) 298-3762; and her e-mail address is
11 Leticia.Washington@libertyutilities.com. Mr. Bourassa's mailing address is 139 W. Wood
12 Drive, Phoenix, Arizona 85029; his telephone number is (602) 246-7150; and his e-mail
13 address is tjb114@cox.net. **All discovery, data requests and other requests for**
14 **information concerning this Application should be directed to Ms. Washington,**
15 **including copies by e-mail, as well as to Matthew Garlick by e-mail at**
16 **Matthew.Garlick@libertyutilities.com, and to Mr. Bourassa, with a copy by e-mail to**
17 **undersigned counsel at jay@shapslawaz.com and whitney@shapslawaz.com, and to**
18 **Liberty Utilities' General Counsel at todd.wiley@libertyutilities.com.**

19 4. Liberty Black Mountain's present rates and charges for utility service were
20 approved by the Commission in Decision No. 75510 (April 22, 2016) using a test year
21 ending December 31, 2014. There have been no other changes to the Company's rates since
22 the current rates went into effect on or after May 1, 2016.

23 5. The Company's revenues from its utility operations are presently inadequate
24 to provide a fair rate of return on the fair value of its utility plant and property devoted to
25 public service. Operating expenses have caused the revenues produced by the current rates
26 and charges for service to become inadequate to meet operating expenses and provide a

1 reasonable rate of return. Therefore, the Company requests that certain adjustments to its
2 rates and charges for utility service be approved by the Commission so that the Company
3 may recover its operating expenses and be given an opportunity to earn a just and reasonable
4 rate of return on the fair value of its property. The Company agrees to use its original cost
5 rate base as its fair value rate base in this proceeding to minimize disputes and reduce rate
6 case expense.

7 6. Filed concurrently herewith are the schedules required pursuant to A.A.C.
8 R14-2-103 for rate applications by Class "B" utilities. The test year utilized by Liberty
9 Black Mountain in connection with the preparation of such schedules is the 12-month period
10 that ended December 31, 2018. Liberty Black Mountain requests that the Commission
11 utilize such test year in connection with this Application, with appropriate adjustments to
12 obtain a normal or more realistic relationship between revenues, rate base and expenses
13 during the period in which the rates established in this proceeding are in effect.

14 7. During the test year, Liberty Black Mountain's adjusted gross revenues were
15 \$2,473,391. The adjusted operating income was \$397,226 leading to an operating income
16 deficiency of \$655,867. The adjusted fair value rate base was \$14,408,605. Thus, the rate
17 of return during the test year was 2.76 percent.

18 8. Liberty Black Mountain submits that these rates of return are inadequate to
19 allow it to obtain debt, pay a reasonable return to its stockholder, maintain a sound credit
20 rating, and/or enable the Company to attract additional capital on reasonable and acceptable
21 terms in order to continue the investment in utility plant necessary to adequately serve
22 customers.

23 9. Liberty Black Mountain is seeking total revenues of \$3,352,176.
24 The Company seeks an increase in total revenues of \$878,785, an increase of approximately
25 35.53 percent over the adjusted and annualized test year revenues of \$2,473,391.
26 The revenue amount is inclusive of the revenues required to recover (1) operating expenses;

1 (2) a return on rate base; and 3) costs associated with closure of the East Boulders
2 Wastewater Treatment Plant (“Boulders WWTP”); and is exclusive of rate case expense
3 surcharge revenues. Specifically, the increase in annual revenues to provide for recovery
4 of operating expenses and a 7.31 percent return on rate base is approximately \$1,053,093.

5 10. Filed concurrently in support of this Application is the Direct Testimony of
6 Matthew Garlick, which provides an overview of Liberty Black Mountain and discusses the
7 Company’s compliance with the Commission’s orders to close the Boulders WWTP.

8 11. Liberty Black Mountain also submits the Direct Testimony of Teresa A.
9 Valentine, P.E. Ms. Valentine discusses her independent evaluation of the
10 decommissioning of the Boulders WWTP, and her assessment as to whether the Company’s
11 costs related to closure were reasonable and prudent.

12 12. The Company also submits the direct testimony of Leticia Washington, who
13 provides an overview of Liberty Utilities’ business model, cost allocation manual, and
14 corporate cost allocation process. Ms. Washington also addresses the purchased power
15 adjuster mechanism (“PPAM”), the property tax adjuster mechanism (“PTAM”), and the
16 wastewater treatment adjuster mechanism (“WTAM”) for which the Company is seeking
17 approval, as well as the proposed modifications to the Company’s tariff of rates and charges,
18 including a low income tariff and a deployed services member tariff.

19 13. Finally, Liberty Black Mountain submits the Direct Testimony of Thomas
20 Bourassa, in two separate volumes that collectively provide an overview of the Company’s
21 rate filing, discussion of the revenue requirement, including the “A” through “F” schedules,
22 development of the rate base and income statement adjustments, cost of equity capital and
23 related issues, proposed rates, including the “H” schedules, and discussion of the effects of
24 the proposed rates on customers’ bills. The Company’s “D” Schedules, which concern the
25 cost of capital, are attached to the volume of Mr. Bourassa’s testimony addressing cost of
26

1 capital. The remaining schedules are attached to Mr. Bourassa's testimony addressing rate
2 base, income statement and rate design.

3 14. Attached hereto as **Attachment 1** are wastewater plant descriptions, and
4 wastewater flows for January 2018-December 2018.

5 15. Attached hereto as **Attachment 2** is Liberty Black Mountain's proposed tariff
6 of rates and charges.

7 16. Attached hereto as **Attachment 3** is Liberty Black Mountain's proposed
8 PPAM;

9 17. Attached hereto as **Attachment 4** is Liberty Black Mountain's proposed
10 PTAM; and

11 18. Attached hereto as **Attachment 5** is Liberty Black Mountain's proposed
12 WTAM.

13 WHEREFORE, Liberty Black Mountain requests the following relief:

14 A. That the Commission, upon proper notice and at the earliest possible time,
15 conduct a hearing in accordance with A.R.S. § 40-251 and determine the fair value of
16 Liberty Black Mountain's utility plants and property devoted to providing wastewater
17 utility service;

18 B. Based upon such determination, that the Commission approve permanent
19 adjustments to the rates and charges for wastewater utility service provided by Liberty
20 Black Mountain, as proposed herein, or approve such other rates and charges as will
21 produce a just and reasonable rate of return on the fair value of Liberty Black Mountain's
22 utility plant and property;

23 C. That the Commission approve Liberty Black Mountain's request for a PPAM
24 PTAM, and WTAM;

25 D. That the Commission rely on A.R.S. § 40-252 to the extent the Commission
26 believes it necessary to amend past Commission decisions in order to grant the relief

1 requested herein or any other relief the Commission deems just and reasonable under the
2 circumstances; and

3 E. That the Commission authorize such other and further relief as may be
4 appropriate to ensure that Liberty Black Mountain has an opportunity to earn a just and
5 reasonable return on the fair value of their utility plant and property and as may otherwise
6 be required under Arizona law.

7 RESPECTFULLY SUBMITTED this 27th day of June, 2019.

8 SHAPIRO LAW FIRM, P.C.

9
10
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15 and

16 LIBERTY UTILITIES

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21 Attorneys for Liberty Utilities (Black Mountain
22 Sewer) Corp.
23
24
25
26

1 **ORIGINAL** and fifteen (15) copies
2 of the foregoing filed
3 this 27th day of June, 2019, with:

4 Docket Control
5 Arizona Corporation Commission
6 1200 W. Washington Street
7 Phoenix, AZ 85007

8 By: Whitney Bink

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Application Attachment 1

Wastewater Utility Plant Description

Name of System:	Liberty Utilities (Black Mountain Sewer) Corp.
Wastewater Inventory Number (if applicable):	APP100351
Type of Treatment	Extended Aeration
Design Capacity of Plant (Gallons per day)	160000GPD BMSC Facility/318,000 GPD Scottsdale

LIFT STATION FACILITIES

Location	Quantity of Pumps	Horsepower Per Pump	Rated Capacity Per Pump (GPM)	Wet Well Capacity (gals)
Commercial	2	35 HP	200	1080
CIE - No Longer Exists	N/A	N/A	N/A	N/A
Indian Rock	2	6.5	100	470
Sage Brush	2	4	45	470
Trade Center	2	10	174	1000
Sentinel Rock	2	15	370	1500
Carefree Highway	2	20	150	1525
Stage Coach Pass	2	5	50	470
Peaceful Place	2	3	15	470
Sunset Trails	2	20	150	2600
El Pedregal	2	10	185	2000
Ridgeview	2	7.5	100	470
Canyon Crossings - New	2	2	85	1000
Carefree Village	2	2.7	85	1760
Indian Basket	2	1	11	150
NA	NA	NA	NA	NA

FORCE MAINS

Size	Material	Length (Feet)
Unknown	ACP/PVC/DIP	3,581
1.5 inch	ACP	2,660
2 inch	ACP	5,352
2.5 inch	PVC	164
3 inch	PVC	685
4 inch	PVC	7,263
6 inch	PVC	39,327
8 inch	PVC	625
10 inch	PVC	1,188

MANHOLES

Type	Quantity
Standard	1,069
Drop	20

CLEANOUTS

Quantity
36
NA
NA
NA

Note: If you are filing for more than one system, please provide separate sheets for each system.

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Wastewater Utility Plant Description (Continued)					
COLLECTION MAINS			SERVICES/LATERALS		
Sizes (inches)	Material	Length (feet)	Size (inches)	Material	Quantity
4	VCP/PVC/DIP/ABS	473	4		2,074
6	VCP/PVC/DIP/ABS	12,457	6		131
8	VCP/PVC/DIP/ABS	196,190			
10	VCP/PVC/DIP/ABS	3,145			
12	VCP/PVC/DIP/ABS	3,061			
15	VCP/PVC/DIP/ABS	1,708			
18	VCP/PVC/DIP/ABS	130			
21	VCP/PVC/DIP/ABS	74			
24	VCP/PVC/DIP/ABS	0			
30	VCP/PVC/DIP/ABS	0			
Unknown & 16	VCP/PVC/DIP/ABS	2,786			
2	VCP/PVC/DIP/ABS	473			
NA	NA	NA			
NA	NA	NA			
NA	NA	NA			

For the following five items, list the utility owned assets in each category for each system.

SOLIDS PROCESSING AND HANDLING FACILITIES	N/A
DISINFECTION EQUIPMENT (Chlorinator, Ultra-Violet, Etc.)	Sodium Hypochlorite
FILTRATION EQUIPMENT (Rapid Sand, Slow Sand, Activated Carbon, Etc.)	Rapid Sand Filter
STRUCTURES (Buildings, Fences, Etc.)	Main Blower Bldg., Chlorine Bldg., Headworks Bldg., Concrete Black Wall (plant)
Other (Laboratory Equipment, Tools, Vehicles, Standby, Power Generators, Etc.)	Odor Control Scrubber (Plant), Stand-by Generator (Portable); Lifting Crane Assembly; Chevy Pickup (x1); Ford Pickup (x2); Stand by Generators (Carefree Village, Commercial, New Trade Center)

Note: If you are filing for more than one system, please provide separate sheets for each system.

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report. Copy and paste this sheet as many times as is necessary.

Liberty Utilities (Black Mountain Sewer) Corp
Annual Report
Wastewater Flows
12/31/18

Wastewater Flows					
Month	Number of Services	Total Monthly Sewage Flow	Sewage Flow on Peak Day	Purchased Power Expense ¹	Purchased Power (kWh) ²
January	2,449	5,988,000	263,000	\$ 5,644.60	41,560
February	2,451	5,763,000	305,000	\$ 5,370.88	40,818
March	2,455	5,567,000	219,000	\$ 5,099.23	38,697
April	2,458	6,228,000	302,000	\$ 5,498.77	40,741
May	2,466	6,538,000	248,000	\$ 5,618.38	37,413
June	2,470	5,524,000	247,000	\$ 5,630.66	38,004
July	2,473	5,462,000	208,000	\$ 5,415.75	36,563
August	2,478	5,268,000	210,000	\$ 5,370.88	36,105
September	2,478	5,239,000	210,000	\$ 6,135.54	41,478
October	2,478	6,669,000	429,000	\$ 5,425.83	35,199
November	2,478	5,371,000	259,000	\$ 5,086.55	39,159
December	2,478	6,004,000	403,000	\$ 5,355.44	42,204
	Totals	69,621,000	3,303,000	\$65,653	467,941

Provide the following information as applicable per wastewater system:

Method of Effluent Disposal	Reuse
Groundwater Permit Number	N/A
ADEQ Aquifer Protection Permit ("APP") Number	APP100351
ADEQ Reuse Permit Number	R105424
EPA NPDES Permit Number	N/A
APP Effluent Treatment Requirement (Class)?	A+
Permitted Flow Rate	120000 gpd
Permitted Organic Capacity	N/A
Hydraulic Capacity	N/A
Type of Biological Treatment	N/A

In the space below, list all violations within the past 12 months:

N/A

Note: If you are filing for more than one system, please provide separate sheets for each system.

1 Enter the total purchased power costs for the power meters associated with this system.

2 Enter the total purchased kWh used by the power meters associated with this system.

Instructions: Fill out the Grey Cells with the relevant information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Application Attachment 2

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Applies to all service areas
PART ONE
STATEMENT OF CHARGES

I. RATES

In Decision No. XXXXX, dated _____, the Commission approved the following rates and charges to become effective _____:

A. Monthly Minimum Charge

Customer Class	Charge
Residential, per single family unit	\$104.94
Commercial	112.20

B. Commodity Rate**Commercial/Non-Residential Customers (Water Usage Data Available)***

Description	Charge
Commercial (per 1,000 gallons)*	\$6.758
Commercial (per 1,000 gallons) measured influent**	\$9.326

*Company shall bill non-residential customers based on actual water usage data provided by the Town of Carefree, the City of Scottsdale and Cave Creek Water Company. If, at any point, Company is unable to obtain actual water usage data for such commercial/non-residential customers, Company shall bill non-residential customers based on the last known, most recent usage data as a proxy. Billing shall be trued up when actual data is obtained. If no water data can be obtained, a non-residential customer may be required to install an influent meter at cost and such customers shall be billed in accordance with the influent data rates set forth above.

** For customers that are not receiving water service from the Company, and/or the Company is not receiving water usage data information from another water provider, a meter to measure influent will be installed at cost and paid by customer and such customers shall be billed in accordance with the influent data rates set forth above.

Applies to all service areas
PART ONE
STATEMENT OF CHARGES

C. Other Service Related Charges

Description	Charge
Establishment per A.A.C. R14-2-603(D)(1)	\$25.00
Re-Establishment of Service per A.A.C. R14-2-603(D)(1)	(a)
Disconnection	At Cost (b)
Reconnection per A.A.C. R14-2-603(D)(1)	(b)
NSF Check per A.A.C. R14-2-608(E)(1)	\$25.00
Deferred Payment (per month)	1.50%
Late Charge	(c)
Service Calls After Hours	\$50.00 (d)
Deposit Requirement	(e)
Deposit Interest per A.A.C. R14-2-603(B)	6.00%
Service Lateral Connection Charge – All Sizes	(f)
Collection Main Extension Tariff per A.A.C. R14-2-606(B)	(g)
Influent Meter and Metering System Installation	At Cost (h)
Wastewater Hook-Up Fee	(i)
Industrial Pretreatment Costs	(j)

- (a) Minimum charge times number of months off the system, per A.A.C. R14-2-603(D)(1).
- (b) Customer shall pay the actual cost including costs for excavation and trenching, pipeline modification, sewer block, backfill and grading, road repairs and permitting. Customer will be provided copies of invoices for actual costs incurred. There shall be no charge if no work is performed.
- (c) Greater of \$5.00 or 1.50% of unpaid balance.
- (d) Customer shall be charged for after-hours service calls outside of normal working hours for work performed at customer's request or convenience.
- (e) Per A.A.C. R14-2-603(B)(7):
Residential – two times the average bill by class.
Commercial – two and one-half times the customer's estimated maximum monthly bill.
- (f) At cost. Customer/Developer shall install or cause to be installed all Service Laterals as a refundable advance in aid of construction.
- (g) All Main Extensions shall be completed at cost and shall be treated as refundable advances-in-aid of construction.
- (h) The cost of the influent meter and metering system installation shall be at the sole expense of the commercial and industrial user and not subject to refund.
- (i) Residential and Commercial - Customers/Developers shall pay the applicable Wastewater Hook-Up Fees per tariff.
- (j) Customers that qualify as Industrial Users and are subject to compliance with Utility's Industrial Pretreatment Program shall pay the actual costs incurred by Utility relating to Utility's review of such Customer's discharges, and actual costs incurred by Utility for engineering and design of necessary Pre-Treatment requirements and agreements.

Applies to all service areas
PART ONE
STATEMENT OF CHARGES

II. TAXES AND ASSESSMENTS

In addition to all other rates and charges authorized herein, the Company shall collect from its customers all applicable sales, transaction, privilege, regulatory or other taxes and assessments as may apply now or in the future, per Rule R14-2-608(D)(5).

Under applicable law, any contributions or advances provided by a Developer are taxable income to the Utility. In accordance with the Gross-Up Sharing Method policy adopted by the Commission in Decision No. 76974, the Company will collect from the Developer an applicable share of income taxes for the Company's state and federal tax liability on all funds contributed and/or advanced. The funds will be collected prior to the commencement of service.

Applies to all service areas

PART TWO
STATEMENT OF TERMS AND CONDITIONS

I. PERMITTED COSTS

- A. Costs shall be verified by invoice.
- B. For services that are provided by Company at cost, costs shall include labor, materials, other charges incurred, and overhead. However, prior to any such service being provided, the estimated cost of such service will be provided by Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to Company.
- C. In the event that the actual cost is less than the estimated cost, Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.
- D. In the event the actual cost is more than the estimated cost, Company will bill the customer for the amount due within 30 days after completion of the invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date.
- E. At the customer's request, Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.
- F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by Company as a result of any tariff or contract for wastewater facilities under which the Customer advances or contributes funds or facilities to Company.

Applies to all service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS

II. CUSTOMER DISCHARGE TO SYSTEM

A. Service Subject to Regulation

Company provides wastewater service using treatment and collection facilities that are regulated by numerous county, state and federal statutes and regulations. Those regulations include limitations as to domestic strength wastewater and the type of wastewater that may be discharged into the system by any person directly or indirectly connected to the plant.

B. Waste Limitations

Company has established the permissible limits of concentration as domestic strength wastewater and will limit concentration for various specific substances, materials, waters, or wastes that can be accepted in the sewer system, and to specify those substances, materials, waters, or wastes that are prohibited from entering the sewer system. Each permissible limit so established shall be placed on file in the business office of Company, with a copy filed with the Commission. No person shall discharge, or cause to be discharged, any new sources of inflow including, but not limited to, storm water, surface water, groundwater, roof runoffs, subsurface drainage, cooling water, or polluted industrial process waters into the sanitary sewer. Company will require an affidavit from all non-residential customers, and their professional engineer, stating that the wastewater discharged to the system does not exceed domestic strength or applicable pre-treatment standards.

Applies to all service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS

II. CUSTOMER DISCHARGE TO SYSTEM (cont.)

C. Inspection and Right of Entry

Every facility that is involved directly or indirectly with the discharge of wastewater to the Treatment Plant may be inspected by Company as it deems necessary. These facilities shall include but not be limited to sewer; sewage pumping plants; all processes; devices and connection sewer; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these rules and this tariff. Inspections may include the collection of samples. Authorized personnel of Company shall be provided immediate access to all of the above facilities or to other facilities directly or indirectly connected to the Treatment Plant at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the user's facility to be inspected shall promptly be removed by the facility user or owner at the written or verbal request of Company and shall not be replaced. No person shall interfere with, delay, resist or refuse entrance to an authorized Company representative attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the Treatment Plant. Adequate identification shall be provided by Company for all inspectors and other authorized personnel and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

All transient motor homes, travel trailers and other units containing holding tanks must arrive at the Company's service area in an empty condition. Inspection will be required of said units prior to their being allowed to hookup to the wastewater system.

D. Termination of Service for Violation of Wastewater Rules and Regulations

The Company is authorized to discontinue service to any person connected to its sewer system who violates the Company's wastewater terms and conditions as set forth in this PART TWO or in any way creates a public health hazard or the likelihood of such a public health hazard. This termination authority also applies to non-payment for wastewater services.

Applies to all service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS

III. RULES AND REGULATIONS

Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-601 through A.A.C. R14-2-609 will be controlling of Company procedures, unless specifically approved tariffs or Commission Order(s) provide otherwise.

Applies to all service areas

PART THREE

ALTERNATE RATES FOR WASTEWATER (ARW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

APPLICABILITY

Applicable to residential wastewater service for domestic use rendered to low-income households where the customer meets all the program qualifications and special conditions of this rate schedule. Acceptance into the program is subject to verification of income source.

TERRITORY

Within all customer service areas served by Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Utilities").

RATES

Thirty percent (30%) discount applied to the regular filed tariff.

PROGRAM QUALIFICATIONS

1. The Liberty Utilities bill must be in your name and the address must be your primary residence or you must be a tenant receiving water service by a sub-metered system.
2. You may not be claimed as a dependent on another person's tax return.
3. You must reapply each time you move residences.
4. You must renew your application once every two (2) years, or sooner, if requested.
5. You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: (1) copy of tax return from prior year (proof of gross income); or (2) copy of complete W2 form with gross income calculation from prior year; or (3) copy of welfare / current eligibility letter for food stamps (dated).
6. You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARW.
7. Your total gross annual income of all persons living in your household cannot exceed the income levels below:

Applies to all service areas
PART THREE
ALTERNATE RATES FOR WASTEWATER (ARW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

Effective _____

<u>No. of Person in Household</u>	<u>Total Gross Annual Income*</u>
1	\$XXXXXX
2	\$ XXXXXX
3	\$ XXXXXX
4	\$ XXXXXX
5	\$ XXXXXX
6	\$ XXXXXX

For each additional person residing in the household, add \$XXXXXX

***Qualifying annual incomes are set at 150 percent of the 2020 federal poverty levels.**

For the purpose of the program the “gross household income” means all money and non-cash benefits, available for living expenses, from all sources, both taxable and non-taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries	Social Security, SSI, SSP	Rental or royalty income
Interest or dividends from:	Scholarships, grants, or other aid	Profit from self-employment
Savings account, stocks or bonds	used for living expenses	(IRS form Schedule C, Line 29)
Unemployment benefits	Disability payments	Worker’s Compensation
TANF (AFDC)	Food Stamps	Child Support
Pensions	Insurance settlements	Spousal Support
Gifts		

Applies to all service areas

PART THREE

ALTERNATE RATES FOR WASTEWATER (ARW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

SPECIAL CONDITIONS

1. Application: An application on a form authorized by the Commission is required for each request for service under this schedule. A customer must reapply every two (2) years.
2. Recertification: A customer enrolled in the ARW program must, each year, recertify by submitting a declaration attesting to continuing eligibility, and provide one of the following items as proof of eligibility: (1) copy of tax return from prior year (proof of gross income); or (2) copy of complete W2 form with gross income calculation from prior year; or (3) copy of welfare / current eligibility letter for food stamps (dated).
3. Commencement of Rate: Eligible customers whose applications have been approved shall be billed on this schedule commencing with the next regularly scheduled billing period that follows receipt of application by Liberty Utilities.
4. Verification: Information provided by the applicant is subject to verification by Liberty Utilities. Refusal or failure of a customer to provide documentation of eligibility acceptable to Liberty Utilities, upon request by Liberty Utilities, shall result in removal from this rate schedule.
5. Notice from Customer: It is the customer's responsibility to notify Liberty Utilities if there is a change of eligibility status.
6. Rebilling: Customers may be re-billed retroactively for periods of ineligibility under the applicable rate schedule.
7. Master-metered: A reduction will be calculated in the bill of master-metered customers, who have sub-metered tenants that meet the income eligibility criteria, so an equivalent discount (30%) can be passed through to eligible customer(s).
8. Participation Cap: The ARW program is limited to 500 wastewater customers. Applications will be reviewed and approved on a first come, first served basis. Applicants will be placed on a waiting list if the participation cap has been met.

Applies to all service areas

PART THREE

ALTERNATE RATES FOR WASTEWATER (ARW)
DOMESTIC SERVICE – SINGLE FAMILY ACCOMMODATION

RECOVERY OF COST OF LOW INCOME TARIFF AND CUSTOMER SURCHARGES

Under the terms of Company's Alternate Rates for Wastewater (ARW) Domestic Service, qualifying low-income customers receive a 30 percent discount applied to the Company's regular filed tariff rates for wastewater service. The cost of the ARW tariff shall be recovered by Company from a monthly low income tariff surcharge on all residential and non-residential wastewater customers who are not participating in the ARW program. Specifically, Company is entitled to seek recovery of direct costs (*i.e.*, those costs directly associated with the program, and would not be incurred in the absence of the program). Company shall account for those direct costs separately from other operating costs.

Company shall be entitled to implement a low income tariff surcharge on non-participating residential and non-residential wastewater customers as follows.

- For customers participating in ARW, the Company shall maintain separate balancing accounts for wastewater customers detailing the beginning and ending balance of the cumulative unrecovered program costs each month.
- Company's authorized rate of return shall be applied monthly to the average of the beginning balances of the cumulative unrecovered program costs for wastewater service and included in the beginning balances for the following month.
- Using the separate balancing accounts for wastewater customers, Company shall calculate separate monthly surcharges for wastewater customers. The wastewater surcharges shall be calculated as follows:

(Ending Balance for Low-Income Tariff Balancing Account including amortized carrying costs during recovery period/Number of active non-participating wastewater connections at year end)/12

- The ending balance in the balancing accounts shall equal the beginning balances plus discounts allowed on bills for the twelve month tracking period, plus direct program costs incurred in the twelve month period plus carrying charges less surcharge fees billed in the twelve month tracking period.
- Company shall implement monthly wastewater surcharges for the ARW program for each twelve month period of the ARW Program. Company shall calculate the monthly wastewater surcharges each year based on the active number of wastewater connections for each respective system as of December 31 of the prior year. Company shall file notice of the wastewater surcharges, along with a report on the ARW Program, with the Arizona Corporation Commission on or before January 31 and the surcharges shall be implemented on customer bills in February of each year with the recovery period ending in January of the following year.

Application for Alternate Rates for Wastewater (ARW)

To qualify for Liberty Utilities ARW please check (✓) all that apply:

- ☐ I am a Liberty Utilities residential customer and the Liberty Utilities account is in my name.
- ☐ I am a sub-metered tenant within the Liberty Utilities service area.
- ☐ My household income is at or below the income level in the listing below.

Household Size	Total Gross Annual Income from All Sources
1	XXXXXX
2	XXXXXX
3	XXXXXX
4	XXXXXX
5	XXXXXX
6	XXXXXX

For each additional person residing in the household, add XXXXXX.

The definition of "gross household income" (before taxes) is all money and non-cash benefits available for living expenses from all sources, both taxable and nontaxable, before deductions, including expenses, for all people who live in your home. **This includes, but is not limited to the following (please check (✓) all that apply):**

- | | |
|--|--|
| <input type="checkbox"/> Wages, salaries or profit from self-employment | <input type="checkbox"/> Social Security, SSI or SSP |
| <input type="checkbox"/> Disability and/or Workers' Compensation payments | <input type="checkbox"/> Food Stamps |
| <input type="checkbox"/> Insurance and/or legal settlements | <input type="checkbox"/> TANF (AFDC) |
| <input type="checkbox"/> Pensions | <input type="checkbox"/> Veterans Affairs benefits |
| <input type="checkbox"/> Spousal and/or child support | <input type="checkbox"/> Unemployment benefits |
| <input type="checkbox"/> Scholarships, grants, or other aid used for living | <input type="checkbox"/> Rental and/or royalty income |
| <input type="checkbox"/> Interest/dividends from: savings, stocks, bonds, or retirement accounts | <input type="checkbox"/> Cash, gifts and/or other income |

Please print the following information. **Incomplete information will delay your discount.** The name used to apply for the discount must be the same as the name on the Liberty Utilities statement.

PLEASE PRINT LEGIBLY															
Liberty Utilities Account Number (As shown on statement)															
Total No. of persons living in household:		Household's Total Gross Annual Income:								Contact Phone Number					
Name as shown on Liberty Utilities statement															
Liberty Utilities Service Address															
City				State				Zip Code							

Please attach one of the items listed as proof of income for eligibility verification: Copy of tax return from prior year (proof of gross income), or copy of complete W2 form with gross income calculation from prior year, or copy of welfare /current eligibility letter for food stamps (dated).

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I further authorize Liberty Utilities to verify source of income provided above. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

Customer Signature

Date

Note: An Application for ARW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification. Please allow 30-45 days for processing.

Office Use Only: Date Verified _____ Verified By _____ Expires _____

Issued: [DATE, 2020]

Effective: [DATE, 2020]

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Black Mountain Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXXX

**Declaration of Eligibility
Alternate Rates for Wastewater (ARW)**

To recertify enrollment in the ARW Program please fill out the following attesting to continuing eligibility:

PLEASE PRINT LEGIBLY															
Name as shown on Liberty Utilities statement															
Liberty Utilities Account Number (As shown on statement)															
Liberty Utilities Service Address															
City				State				Zip Code							
Contact Phone Number								Work Phone Number							

I,

Your Name (Please Print)

Last submitted an Application for Alternative Rates (ARW) on _____
(dd/mm/yyyy)

and hereby confirm my eligibility for the year ending _____
(dd/mm/yyyy)

Please attach one of the items listed below as proof of income for eligibility verification:
Copy of tax return from prior year (proof of gross income); or copy of complete W2 form with gross income calculation from prior year; or copy of welfare /current eligibility letter for food stamps (dated).

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I further authorize Liberty Utilities to verify source of income provided above. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

Customer Signature

Date

Note: An Application for ARW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification.

Issued: [DATE, 2020]

Effective: [DATE, 2020]

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Black Mountain Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

**Liberty Utilities (Black Mountain Sewer) Corp.
Alternate Rates for Wastewater (ARW)**

Applicability

Applicable to residential wastewater service for domestic use rendered to low-income households where the customer meets all the Program Qualifications and Special Conditions of this rate schedule.

Territory

Within all customer service areas served by Liberty Utilities (Black Mountain Sewer) Corp.

Discount

Thirty percent (30%) discount applied to the regular filed tariff. The discount will be applied to the customer's total bill before any adjustments and application of any other taxes, credit, penalties or fees.

Program Qualifications

- The Liberty Utilities account must be in your name and the address must be your primary residence in our service area or you must be a tenant receiving water service by a sub-metered system.
- You may not be claimed as a dependent on another person's tax return.
- You must reapply each time you move residences.
- You must renew your application once every two (2) years or sooner if requested.
- You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: (1) copy of tax return from prior year (proof of gross income); or (2) copy of complete W2 form with gross income calculation from prior year; or (3) copy of welfare/current eligibility letter for food stamps (dated).
- You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARW.
- Your total gross annual income of all persons living in your household cannot exceed the income levels provided on the application.

Special Conditions

- You must fill out and sign the ARW Application completely. Incomplete information will delay your discount. You must reapply every two (2) years.
- You must recertify your enrollment in the ARW annually by submitting a Declaration of Eligibility and providing one of the following items as proof of eligibility: (1) copy of tax return from prior year (proof of gross income); or (2) copy of complete W2 form with gross income calculation from prior year; or (3) copy of welfare/current eligibility letter for food stamps (dated).
- Customers shall be billed on this schedule commencing with the next regularly scheduled billing period that follows the receipt and approval of the application by Liberty Utilities.
- Documentation of your gross annual income must be provided to Liberty Utilities for verification of eligibility for ARW. Refusal or failure to provide documentation of acceptable eligibility to Liberty Utilities shall result in removal from this rate schedule.
- It is the customer's responsibility to notify Liberty Utilities if there is a change in eligibility status.
- You may be re-billed for any periods of ineligibility under the applicable rate schedule.
- Master-metered customers who have sub-metered tenants will receive a reduction in the billing. Sub-metered tenants must qualify and meet the income eligibility criteria so an equivalent discount (30%) can be passed through to eligible customer(s).
- The ARW program is limited 500 wastewater division customers.

How to Submit Completed ARW Application and/or Declaration of Eligibility

Mail, Fax or Email your ARW Application and Declaration of Eligibility to:

Liberty Utilities (Black Mountain Sewer) Corp.

12725 W. Indian School Rd. Ste. D101

Avondale, AZ 85392

Fax: 623-935-1020

Email: customerserviceavondale@libertywater.com

Issued: [DATE, 2020]

Effective: [DATE, 2020]

ISSUED BY:
Matthew Garlick, President
Liberty Utilities (Black Mountain Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Decision No. XXXXX

Applies to all service areas

PART FOUR

DEPLOYED SERVICES MEMBER PROGRAM

This program allows the Company to provide a credit to deployed service members of the United States Military equal to the cost of the monthly minimum wastewater charges as well as applicable taxes. The Company will defer these costs and seek recovery in its next rate case.

The Company will provide the credit on the deployed service member's wastewater bill provided that the following criteria are met:

1. Deployment is not a "permanent change of station." Permanent change of station requires a service member to permanently change his or her place of residence, paid for by the applicable military branch. A service member's decision to keep a secondary residence in Arizona would be discretionary and would not qualify for this credit.
2. Deployed member does not have family or any tenant(s) living in the premises. Short term deployments, where a spouse and/or dependents remain in the United States would not qualify, as the service member would receive separate compensation from the military to cover domestic expenses while deployed.
3. The deployed service member is an active member of the military (*e.g.*, Air Force, Army, Coast Guard, Marines, and Navy).

ADMINISTRATION

1. Participation shall be limited to 50 customers, as determined on a first come, first served basis.
2. Continued eligibility will be determined periodically through a recertification process.
3. The Company is permitted to seek Commission approval to change participant limits based on level of participation.

The Company file with Docket Control, by March 1st each year, an annual report detailing the number of participants from the previous calendar year, the total amount of credits provided by the program, and the total of any program administrative costs.

Applies to all service areas
PART FIVE
OFF-SITE FACILITIES HOOK-UP FEE

I. Purpose and Availability

The purpose of the off-site facilities hook-up fees payable to **Liberty Utilities (Black Mountain Sewer) Corp.** ("Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission's ("Commission") rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

"Applicant" means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals, and may include developers and/or builders of new residential subdivisions, and non-residential properties.

"Company" means Liberty Utilities (Black Mountain Sewer) Corp.

"Collection Main Extension Agreement" means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as "Wastewater Facilities Agreement."

"Off-Site Facilities" means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Off-site facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the Applicant and benefit the entire wastewater system.

"Service Lateral" means and includes all service laterals for single-family residential, commercial, industrial or other uses.

Applies to all service areas
PART FIVE
OFF-SITE FACILITIES HOOK-UP FEE

III. Wastewater Hook-up Fee

For each new residential service lateral, Company shall collect a Hook-Up Fee of \$1,700 based on the Equivalent Residential Unit ("ERU") of 320 gallons per day. Non-residential applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 320 gallons per day.

IV. Terms and Conditions

A. Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per parcel, service lateral, or lot within a subdivision (similar to a service lateral installation charge). If a development or subdivision is upsized or expanded by Applicant, Builder and/or Developer after assessment of Hook-Up Fees by Company, Company may charge additional Hook-Up Fees for such upsizing or expansion by Applicant based on the calculation set forth above.

B. Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of off-site facilities, repay loans obtained to fund the cost of installation of off-site facilities, or pay state and federal income taxes related to the hook-up fees. Off-site hook-up fees shall not be used to cover repairs, maintenance, the cost of closing wastewater treatment plant, including lift stations, or other operational purposes. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

C. Time of Payment:

1. In the event that the person or entity that will be constructing improvements ("Applicant," "Developer," or "Builder") is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder within 15 days of execution of a Main Extension Agreement or as otherwise mutually agreed between Applicant and Company.

Applies to all service areas
PART FIVE
OFF-SITE FACILITIES HOOK-UP FEE

2. In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the hook-up fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

D. Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

E. Failure to Pay Charges; Delinquent Payments: Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

F. Off-Site Hook-Up Fees Non-refundable: The amounts collected by Company pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction ("CIAC").

G. Use of Off-Site Hook-Up Fees Received: All funds collected by Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities. In addition, funds may be used to pay state and federal income taxes related to the hook-up fees.

H. Off-Site Facilities Hook-Up Fee in Addition to On-site Facilities: The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

Applies to all service areas
PART FIVE
OFF-SITE FACILITIES HOOK-UP FEE

I. Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust account shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

J. Status Reporting Requirements to the Commission: Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2020, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.

Applies to all service areas
PART SIX

PRETREATMENT STANDARDS



LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

INDUSTRIAL PRETREATMENT PROGRAM

SEPTEMBER, 2015

LIBERTY UTILITIES
12725 W. Indian School Road, Suite D101,
Avondale, AZ 85392

PRETREATMENT PROGRAM

The objective of a Pretreatment Program (the General Pretreatment Regulations (40 CFR, Part 403) of Clean Water Act of 1977) is to protect the water quality and is designed to reduce the level of pollutants discharged by industry and other non-domestic wastewater sources into municipal sewer systems, and thereby, reduce the amount of pollutants released into the environment through wastewater. Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain") enforces requirements of the pretreatment program by enforcing the EPA established limits and the state or local authority on the amount of pollutants allowed to be discharged. This requires dischargers to treat their wastewater prior to its discharge in Liberty Black Mountain's collection system.

Specific objectives of this ordinance are outlined below:

1. To prevent the introduction of pollutants into Liberty Black Mountain's wastewater collection system that will interfere with the operation of the system, including the City of Scottsdale WWTP, or contaminate the resulting sludge.
2. To prevent the introduction of pollutants into the Liberty Black Mountain wastewater collection system that will pass through the system, inadequately treated, into receiving waters or the atmosphere or otherwise be incompatible with the system.
3. To improve the opportunity to recycle and reclaim waste waters and sludges from the system.
4. To provide for equitable distribution of the cost of operating and maintaining the Liberty Black Mountain's wastewater system.

Liberty Black Mountain will enforce these standards by limiting the following discharges and will review pretreatment prior to approval of a discharge into its wastewater system:

1. Discharge of any liquids, solids or gases that by reason of their nature or quantity are, or may be, sufficient either alone or by interaction to cause fire or explosion or be injurious in any other way to the operation of the Liberty Black Mountain wastewater collection system or City of Scottsdale WWTP, or the integrity of the sewer system or cause a danger to the public health or safety is prohibited. This prohibition includes but is not limited to waste streams with a closed cup flash point of less than one hundred forty degrees Fahrenheit or sixty degrees Centigrade using the test methods specified in federal regulations, 40 CFR 261.21.
2. Discharge of any solid or viscous substances that will or may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater system is prohibited.
3. Any trucked or hauled pollutants, unless the hauler has first obtained written approval from Liberty Black Mountain.
4. Discharge of any wastewater having a pH less than 5.5 or greater than 10.5 SU, or having any other corrosive property capable of causing damage or hazard to

- structures, equipment, or personnel of the system, or interference with the operation of the City of Scottsdale WWTP is prohibited.
5. Discharge of any wastewater containing hazardous substances, toxic, conventional, or non conventional pollutants in sufficient quantity, either singly or by interaction, which could injure or interfere with any wastewater treatment process, constitutes a health or safety hazard to humans or animals, or exceed the limitations set forth in the LOCAL REGULATORY LIMITS or the categorical pretreatment standards appropriate for the specific industrial user is prohibited. Hazardous substances, toxic, conventional or non conventional pollutants will include, but not be limited to, any pollutant identified in 40 CFR 122 Appendix D Tables II, III, IV, AND V (AZPDES Permit Limits that are applicable), or substances alone or in combination with other constituents that are determined to be toxic by the toxicity test as defined in 40 CFR Part 136 for wastewater or the toxicity characteristic leaching procedure (TCLP) test as defined in 40 CFR Part 261 for biosolids.
6. Discharge of any noxious or malodorous liquids, gases or solids which, either singly or by interaction, are capable of creating a public nuisance or hazard to life or are sufficient to prevent entry into the sewers without special hazardous material protective equipment or clothing for their maintenance and repair is prohibited.
7. Discharge of any substance which may cause the City of Scottsdale WWTP effluent or treatment residues, biosolids or scum to be unsuitable for reclamation and reuse or which may interfere with such reclamation and reuse process is prohibited. In no case will a substance discharged to the Liberty Black Mountain wastewater collection system cause the City of Scottsdale WWTP to be in a noncompliance with biosolids use or disposal criteria, guidelines or regulations developed under Section 405 of the Clean Water Act, any criteria, guidelines or regulations affecting biosolids uses or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act or state or local standards applicable to the biosolids management method adopted by the Liberty Black Mountain and/or local and state authorities.
8. Discharge of any substances which will inhibit the operation or performance of the City of Scottsdale WWTP or pass through the system and cause the City of Scottsdale WWTP to violate any requirements of any discharge permit issued by the state or federal government is prohibited.
9. Discharge of any substance with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, is prohibited.
10. Discharge of any wastewater having a temperature which will inhibit biological activity in the City of Scottsdale WWTP treatment plant resulting in interference; but in no case, wastewater with a temperature at the introduction into the City of Scottsdale WWTP which exceeds thirty eight degrees Celsius (one hundred degrees Fahrenheit) is prohibited.
11. Discharge of any slug load, which will mean any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a single extraordinary discharge

- episode of such volume or strength as to cause interference to the City of Scottsdale WWTP is prohibited.
12. Discharge of any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as to exceed limits established by state and federal regulations is prohibited.
 13. Discharge of any wastewater which causes the City of Scottsdale WWTP effluent to exhibit toxicity to test organisms in a standard biological toxicity test as defined by local, state or federal requirements, or which Liberty Utilities BMSC determines would be toxic to or impede the treatment capabilities of the biological processes in the City of Scottsdale WWTP is prohibited.
 14. Discharge of any petroleum oil, non biodegradable cutting oil or products of mineral oil origin that will cause interference or pass through the City of Scottsdale WWTP is prohibited.
 15. No industrial user of the Liberty Black Mountain wastewater collection system may discharge wastes or waste waters containing concentrations of pollutants higher than those listed in TABLE I.1.

ORGANIC CONTAMINANTS (µg/L)	
Benzene	35
Chloroform	2,000
4,4' - DDE	Not allowed
4,4' - DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated biphenyl compounds (PCBs)	Not allowed

TRACE METALS	
PARAMETER	Daily Average Effluent Limitation (mg/L)
Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc (Zn)	3.5

16. Liberty Black Mountain can accept certain pollutants which are compatible with the City of Scottsdale WWTP treatment processes; however, the discharge would pay a surcharge, established on quantity, to cover the costs of such treatment.
17. Dilution of a waste is not an acceptable pretreatment strategy.

Waste Discharge Permits

A waste discharge permit is required for industrial and non-domestic wastewater generators for the following conditions:

1. Any discharger subject to National Categorical Pretreatment Standards
2. Any Significant Industrial discharge as defined by the Liberty Utilities BMSC
3. Any discharger whose discharge who would be in violation with local limits in Table 1.1.
4. Any discharger by State Pretreatment requirements to obtain a permit
5. Any other discharger directed by the Liberty Utilities BMSC to apply for a permit

Permit Applications and Fees (to be developed based on site specific conditions)

Violations and enforcement (to be developed based on site specific conditions)

Penalties

Installation of Meter

Liberty Black Mountain will be responsible, unless the responsibility is given to the discharger by Liberty Black Mountain for the reading of water and/or wastewater meters when installed in discharger's establishment. All meters shall be installed at a location approved by Liberty Black Mountain. All meters will be accessible to Liberty Black Mountain at all times.

**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
INDUSTRIAL PRETREATMENT PROGRAM STANDARD
OPERATING PROCEDURES**

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**LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.
PRETREATMENT PROGRAM STANDARD
OPERATING PROCEDURES**

1.0 INTRODUCTION

To control the discharge of pollutants to the Nation's waters, the Clean Water Act (CWA) requires the Environmental Protection Agency (EPA) to promulgate regulations related to discharges. Discharges from non-domestic dischargers can impact the operations of the Publicly Owned Treatment Works (POTWs) as the pollutants can pass through or interfere with the operations of the plants, threaten worker's health and safety, or contaminate sludges. POTWs are designed to treat domestic sewage. The non-domestic discharges are regulated by the National Pretreatment Program. Industrial and commercial dischargers known as IUs) are required to obtain permits or other control mechanisms to discharge wastewater to the POTW under the National Pretreatment Program. EPA promulgated the General Pretreatment Regulations (Title 40 Code of Federal Regulations [CFR] Section 403 [40 CFR 403]), which defines the National Pretreatment Program. The Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b) incorporates the General Pretreatment Regulations.

The Liberty Utilities (Black Mountain Sewer) Corp. (Liberty Utilities BMSC) operates a wastewater collection and conveyance system and discharges collected wastewater to the City of Scottsdale's wastewater treatment plant. Liberty Utilities BMSC can regulate discharges from IUs for potential contaminants of concern to minimize impact on the City of Scottsdale POTW under the Liberty Utilities BMSC's CODE OF PRACTICE (Liberty Utilities BMSC-CP).

The discharge of toxic and other harmful pollutants from IUs can be effectively controlled through a local pretreatment program that is based on these regulations, structured to address specific local concerns, and enforced through the Liberty Utilities BMSC Code Liberty Utilities BMSC-CP.

The objectives of the pretreatment SOP are:

- To prevent the introduction of pollutants into the POTWs that will interfere with its operation;
- To prevent the introduction of pollutants into the POTWs that will pass through the POTWs, inadequately treated, into receiving waters, or otherwise be incompatible with the POTWs;
- To protect both POTWs personnel who may be affected by wastewater and sludge in the course of their employment and the general public;
- To promote reuse and recycling of industrial wastewater and sludge from the POTWs;
- To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the POTWs; and
- To enable Liberty Utilities BMSC to comply with its Arizona Pollutant Discharge Elimination System permit conditions, sludge use and disposal requirements, and any other Federal or State laws to which the POTWs is subject.

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These Standard Operating Procedures (SOPs) shall apply to all IUs of the Liberty Utilities BMSC wastewater collection and conveyance system. The SOPs include the issuance of individual wastewater discharge permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires IUs reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established herein.

1.1 ADMINISTRATION

Except as otherwise provided herein, the Liberty Utilities BMSC Operations Manager shall administer, implement, and enforce the provisions of these SOPs. Any powers granted to or duties imposed upon the Liberty Utilities BMSC Operations Manager may be delegated by the Liberty Utilities BMSC Operations Manager to a duly authorized Liberty Utilities BMSC employee.

1.2 ABBREVIATIONS

The following abbreviations, when used in this SOP, shall have the designated meanings:

AZPDES - Arizona Pollutant Discharge Elimination System
BOD - Biochemical Oxygen Demand
BMP - Best Management Practice
BMR - Baseline Monitoring Report
CFR - Code of Federal Regulations
CIU - Categorical Industrial User
COD - Chemical Oxygen Demand
EPA - U.S. Environmental Protection Agency
GPD - gallons per day
IU - Industrial User
MG/l - milligrams per liter
NPDES - National Pollutant Discharge Elimination System
NSCIU - Non-Significant Categorical Industrial User
POTW - Publicly Owned Treatment Works
RCRA - Resource Conservation and Recovery Act
SIU - Significant Industrial User
SNC - Significant Noncompliance
TSS - Total Suspended Solids
U.S.C. - United States Code

1.3 DEFINITIONS

- A. Act or "the Act." The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. section 1251 et seq.
- B. Approval Authority. Arizona Department of Environmental Quality, the Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b)
- C. Authorized or Duly Authorized Representative of the IU
 - a. If the IU is a corporation:
 - i. The president, secretary, treasurer, or a vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for individual wastewater discharge permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
 - b. If the IU is a partnership or sole proprietorship: a general partner or proprietor, respectively.
 - c. If the IU is a Federal, State, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.
 - d. The individuals described in paragraphs 1 through 3, above, may designate a Duly Authorized Representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to Liberty Utilities BMSC
- D. Biochemical Oxygen Demand or BOD. The quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedures for five (5) days at 20

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degrees centigrade, usually expressed as a concentration (e.g., mg/l).

- E. Best Management Practices or BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in Section 2.1 A and B [40 CFR 403.5(a)(1) and (b)] and/or the Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b). BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.
- F. Brewery Discharge. A brewery discharge qualifies as a non-categorical IU and requires a permit for compliance.
- G. Categorical Pretreatment Standard or Categorical Standard. Any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the Act (33 U.S.C. section 1317) that apply to a specific category of IUs and that appear in 40 CFR Chapter I, Subchapter N, Parts 405-471.
- H. Categorical Industrial User. An IU subject to a categorical Pretreatment Standard or categorical Standard.
- I. Liberty Utilities BMSC Organizational Structure. The Liberty Utilities BMSC Operations Manager or their designee shall be responsible official who will administer this pretreatment program and the permitting process.
- J. Chemical Oxygen Demand or COD. A measure of the oxygen required to oxidize all compounds, both organic and inorganic, in water.
- K. Control Authority. Liberty Utilities BMSC
- L. Daily Maximum. The arithmetic average of all effluent samples for a pollutant collected during a calendar day.
- M. Daily Maximum Limit. The maximum allowable discharge limit of a pollutant during a calendar day. Where Daily Maximum Limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where Daily Maximum Limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- N. Environmental Protection Agency or EPA. The U.S. Environmental Protection Agency or, where appropriate, the Regional Water Management Division Director, the Regional Administrator, or other duly authorized official of said agency.
- O. Existing Source. Any source of discharge that is not a "New Source."
- P. Grab Sample. A sample that is taken from a waste stream without regard to the flow in the

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waste stream and over a period of time not to exceed fifteen (15) minutes.

- Q. Indirect Discharge or Discharge. The introduction of pollutants into the POTW from any nondomestic source.
- R. Instantaneous Limit. The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.
- S. Interference. A discharge that, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and therefore, is a cause of a violation of Liberty Utilities BMSC's or the City of Scottsdale's AZPDES permit or of the prevention of sewage sludge use or disposal in compliance with any of the following statutory/regulatory provisions or permits issued there under, or any more stringent State or local regulations: section 405 of the Act; the Solid Waste Disposal Act, including Title II commonly referred to as the Resource Conservation and Recovery Act (RCRA); any State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the Solid Waste Disposal Act; the Clean Air Act; the Toxic Substances Control Act; and the Marine Protection, Research, and Sanctuaries Act.
- T. Local Limit. Specific discharge limits developed and enforced by the Liberty Utilities BMSC upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR 403.5(a)(1) and (b).
- U. Medical Waste. Isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.
- V. Monthly Average. The sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
- W. Monthly Average Limit. The highest allowable of "daily maximum discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.
- X. New Source.
 - a. Any building, structure, facility, or installation from which there is (or may be) a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under section 307(c) of the Act that will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:
 - i. The building, structure, facility, or installation is constructed at a site at

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- which no other source is located; or
 - ii. The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an Existing Source; or
 - iii. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an Existing Source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the Existing Source, should be considered.
 - b. Construction on a site at which an Existing Source is located results in a modification rather than a New Source if the construction does not create a new building, structure, facility, or installation meeting the criteria of Section (1)(b) or (c) above but otherwise alters, replaces, or adds to existing process or production equipment.
 - c. Construction of a New Source as defined under this paragraph has commenced if the owner or operator has:
 - i. Begun, or caused to begin, as part of a continuous onsite construction program
 - 1. any placement, assembly, or installation of facilities or equipment; or
 - 2. significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - ii. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.
- Y. Noncontact Cooling Water. Water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.
- Z. Pass Through. A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the Liberty Utilities BMSC's or City of Scottsdale's AZPDES permit, including an increase in the magnitude or duration of a violation.
- AA. Person. Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity, or any other legal entity; or their legal

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representatives, agents, or assigns. This definition includes all Federal, State, and local governmental entities.

- BB. pH. A measure of the acidity or alkalinity of a solution, expressed in standard units.
- CC. Pollutant. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, Medical Wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, municipal, agricultural and industrial wastes, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor).
- DD. Pretreatment. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to, or in lieu of, introducing such pollutants into the POTW. This reduction or alteration can be obtained by physical, chemical, or biological processes; by process changes; or by other means, except by diluting the concentration of the pollutants unless allowed by an applicable Pretreatment Standard.
- EE. Pretreatment Requirements. Any substantive or procedural requirement related to pretreatment imposed on an IU, other than a Pretreatment Standard.
- FF. Pretreatment Standards or Standards. Pretreatment Standards shall mean prohibited discharge standards, categorical Pretreatment Standards, and Local Limits.
- GG. Prohibited Discharge Standards or Prohibited Discharges. Absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 2.1 of this SOPs.
- HH. Publicly Owned Treatment Works or POTW. A treatment works, as defined by section 212 of the Act (33 U.S.C. section 1292), which is owned by Liberty Utilities BMSC or the City of Scottsdale POTWs to which Liberty Utilities BMSC's conveyance system discharges. This definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature and any conveyances, which convey wastewater to a treatment plant.
- II. Septic Tank Waste. Any sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.
- JJ. Sewage. Human excrement and gray water (household showers, dishwashing operations, etc.).
- KK. Significant Industrial User (SIU). Except as provided in paragraphs (3) and (4) of this Section, a Significant Industrial User is:
 - a. An IU subject to categorical Pretreatment Standards; or

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- b. An IU that:
 - i. Discharges an average of twenty five thousand (25,000) gpd or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blow down wastewater);
 - ii. Contributes a process waste stream which makes up five (5) percent or more of the average dry weather hydraulic or organic (BOD, ammonia, and/or total nitrogen) capacity of the POTW treatment plant; or
 - iii. Is designated as such by Liberty Utilities BMSC on the basis that it has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement.
 - c. Liberty Utilities BMSC may determine that an IU subject to categorical Pretreatment Standards is a Non-Significant Categorical IU rather than a Significant IU on a finding that the IU never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the Pretreatment Standard) and the following conditions are met:
 - i. The IU, prior to Liberty Utilities BMSC's finding, has consistently complied with all applicable categorical Pretreatment Standards and Requirements;
 - ii. The IU annually submits the certification statement required in Section 6.14 B [see 40 CFR 403.12(q)], together with any additional information necessary to support the certification statement; and
 - iii. The IU never discharges any untreated concentrated wastewater.
 - d. Upon a finding that a IU meeting the criteria in Subsection (2) of this part has no reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or Requirement, Liberty Utilities BMSC may at any time, on its own initiative or in response to a petition received from an IU, and in accordance with procedures in 40 CFR 403.8(f)(6), determine that such IU should not be considered a Significant IU.
- LL. Slug Load or Slug Discharge. Any discharge at a flow rate or concentration, which could cause a violation of the prohibited discharge standards in Section 2.1 of this SOP. A Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, Local Limits or Permit conditions.
- MM. Storm Water. Any flow occurring during or following any form of natural precipitation, and resulting from such precipitation, including snowmelt.

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- NN. Liberty Utilities BMSC Operations Manager. The person designated by Liberty Utilities BMSC to supervise the operation of the POTW, and who is charged with certain duties and responsibilities by this SOP. The term also means a Duly Authorized Representative of the Liberty Utilities BMSC Operations Manager.
- OO. Total Suspended Solids or Suspended Solids. The total suspended matter that floats on the surface of, or is suspended in, water, wastewater, or other liquid, and that is removable by laboratory filtering.
- PP. User or Industrial User. A source of indirect discharge.
- QQ. Wastewater. Liquid and water-carried industrial wastes and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, which are contributed to the POTW.
- RR. Wastewater Treatment Plant or Treatment Plant. That portion of the POTW which is designed to provide treatment of municipal sewage and industrial waste.

2. GENERAL SEWER USE REQUIREMENTS

2.1 Prohibited Discharge Standards

- A. General Prohibitions. No IU shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes Pass Through or Interference. These general prohibitions apply to all IUs of the POTW whether or not they are subject to categorical Pretreatment Standards or any other National, State, or local Pretreatment Standards or Requirement.
- B. Specific Prohibitions. No IU shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:
 - a. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21;
 - b. Wastewater having a pH less than 5.5 or more than 10.5, or otherwise causing corrosive structural damage to the POTW or equipment;
 - c. Solid or viscous pollutants, fats, oils, or grease in amounts or sizes which will cause obstruction of the flow in the wastewater collection system and/or POTW or result in interference or otherwise disrupt the operation of the POTW or any private sewer;
 - d. Pollutants, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause Interference with the POTW;

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- e. Wastewater having a temperature greater than 104 degrees F (40 degrees C), or any wastewater at temperature greater than 150 degrees F (65 degrees C), or which will inhibit biological activity in the treatment plant resulting in Interference;
- f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or pass through;
- g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- h. Trucked or hauled pollutants, except at discharge points designated by Liberty Utilities BMSC Operations Manager in accordance with Section 3.4 of this SOP;
- i. Hazardous waste that violates any local limit contained in this article;
- j. Noxious or malodorous liquids, gases, solids, or other wastewater which either alone or by interaction with other wastes are sufficient to create a nuisance or a hazard to life, generate odor complaints, or to prevent entry into the sewers for maintenance or repair;
- k. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;
- l. Hazardous waste that violates any local limit contained in this article;
- m. Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, condensate, noncontact cooling water and unpolluted wastewater unless specifically authorized by the Liberty Utilities BMSC
- n. Sludges, screenings, and other residues from the pretreatment of industrial wastes or from the cleaning of interceptors or sewer collection systems;
- o. Medical wastes except as specifically authorized by the division in a wastewater discharge permit;
- p. Wastewater causing, alone or in conjunction with other sources, the POTW's effluent to fail a toxicity test;
- q. Detergents, surface active agents, or other substances which might cause excessive foaming in the POTW;
- r. Wastewater causing a reading on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than ten percent.

Pollutants, substances, or wastewater prohibited by this Section shall not be processed or stored in such a manner that they could be discharged to the POTW.

2.2 National Categorical Pretreatment Standards

IUs must comply with the categorical Pretreatment Standards found at 40 CFR Chapter I, Subchapter N, Parts 405-471.

- A. Where a categorical Pretreatment Standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, Liberty Utilities BMSC Operations Manager may impose equivalent concentration or mass limits in accordance with Section 2.2E & 2.2F.
- B. When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, the Liberty Utilities BMSC Operations Manager may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual IUs.
- C. When wastewater subject to a categorical Pretreatment Standard is mixed with wastewater not regulated by the same Standard, Liberty Utilities BMSC Operations Manager shall impose an alternate limit in accordance with 40 CFR 403.6(e).
- D. A user may obtain a net/gross adjustment to a categorical pretreatment standard in accordance with 40 CFR §403.15.

2.3 State Pretreatment Standards

IUs must comply with The Arizona Administrative Code (AAC) R18-9-A905(A)(8)(b) incorporates the General Pretreatment Regulations.

2.4 Local Limits

- A. The Liberty Utilities BMSC Operations Manager is authorized to establish Local Limits pursuant to 40CFR 403.5(c).
- B. The following pollutant limits are established to protect against Pass Through and Interference. No person shall discharge wastewater containing in excess of the Daily Maximum Limits shown on the table atop the following page.

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CONTAMINANTS (mg/L)	
Benzene	0.035
Chloroform	2.0
4,4' - DOE	Not allowed
4,4' – DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated byphenyl compounds (PCBs)	Not allowed

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CONTAMINANTS (mg/L) CONTD.	
PARAMETER	Daily Average Effluent Limitation (mg/L)
Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc	3.5

The above limits apply at the point where the wastewater is discharged to the POTW. All concentrations for metallic substances are for total metal unless indicated otherwise. Liberty Utilities BMSC Operations Manager may impose mass limitations in addition to the concentration based limitations above.

- C. The division may develop Best Management Practices (BMPs) for any significant industrial user or other user, as needed, to implement this article. BMPs may be implemented through a permit, order, or regulation. For purposes of this article, BMPs are pretreatment requirements.
- D. All users subject to a categorical pretreatment standard shall comply with all requirements of such standard, and shall also comply with any limitations and prohibitions contained in this article. Where the same pollutant is limited by more than one pretreatment standard, the limitations which are more stringent shall prevail. Compliance with categorical pretreatment standards for existing sources shall be within the timeframe specified in the applicable categorical pretreatment standard. Compliance with categorical pretreatment standards for new sources shall be upon commencement of discharge.
- E. Liberty Utilities BMSC may establish more stringent pretreatment standards or additional

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site specific effluent limits, when, in the judgment of the division, such limitations are necessary to implement the objectives of this article.

2.5 Liberty Utilities BMSC Right of Revision

Liberty Utilities BMSC reserves the right to establish, by SOP or in individual wastewater discharge permits, more stringent Standards or Requirements on discharges to the POTW consistent with the purpose of this SOP.

2.6 Dilution

No IU shall ever increase the use of process water, or in any way attempt to dilute a discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. Liberty Utilities BMSC Operations Manager may impose mass limitations on IU who are using dilution to meet applicable Pretreatment Standards or Requirements or in other cases when the imposition of mass limitations is appropriate.

3. PRETREATMENT OF WASTEWATER

3.1 Pretreatment Facilities

IUs shall provide wastewater treatment as necessary to comply with this SOPs and shall achieve compliance with all categorical Pretreatment Standards, Local Limits, and the prohibitions set out in Section 2.1 of this SOPs within the time limitations specified by EPA, the State, or Liberty Utilities BMSC Operations Manager, whichever is more stringent. Any facilities necessary for compliance shall be provided, operated, and maintained at the IU's expense. Detailed plans describing such facilities and operating procedures shall be submitted to Liberty Utilities BMSC Operations Manager for review, and shall be acceptable to Liberty Utilities BMSC Operations Manager before such facilities are constructed. The review of such plans and operating procedures shall in no way relieve the IU from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to Liberty Utilities BMSC under the provisions of this SOP.

3.2 Additional Pretreatment Measures

- A. Whenever deemed necessary, Liberty Utilities BMSC Operations Manager may require IUs to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage waste streams from industrial waste streams, and such other conditions as may be necessary to protect the POTW and determine the IU's compliance with the requirements of this SOP.
- B. Liberty Utilities BMSC Operations Manager may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage

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and flow control facility to ensure equalization of flow. An individual wastewater discharge permit may be issued solely for flow equalization.

- C. Grease, oil, and sand interceptors shall be provided when, in the opinion of Liberty Utilities BMSC Operations Manager, they are necessary for the proper handling of wastewater containing excessive amounts of grease and oil, or sand; except that such interceptors shall not be required for residential users. All interception units shall be of a type and capacity approved by Liberty Utilities BMSC Operations Manager, shall be so located to be easily accessible for cleaning and inspection. Such interceptors shall be inspected, cleaned, and repaired by the IU at their expense.
- D. IUs with the potential to discharge flammable substances may be required to install and maintain an approved combustible gas detection meter.

3.3 Accidental Discharge/Slug Discharge Control Plans

Liberty Utilities BMSC Operations Manager shall evaluate whether each SIU needs an accidental discharge/slug discharge control plan or other action to control Slug Discharges. Liberty Utilities BMSC Operations Manager may require any IU to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control Slug Discharges. Alternatively, Liberty Utilities BMSC Operations Manager may develop such a plan for any IU. An accidental discharge/slug discharge control plan shall address, at a minimum, the following:

- A. Description of discharge practices, including non routine batch discharge;
- B. Description of stored chemicals;
- C. Procedures for immediately notifying Liberty Utilities BMSC Operations Manager of any accidental or Slug Discharge, as required by Section 6.6 of this SOP; and
- D. Procedures to prevent adverse impact from any accidental or Slug Discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.

3.4 Hauled Wastewater

- A. Septic tank waste may be introduced into the POTW only at locations designated by Liberty Utilities BMSC Operations Manager, and at such times as are established by Liberty Utilities BMSC Operations Manager. Such waste shall not violate Section 2 of this SOP or any other requirements established by Liberty Utilities BMSC. Liberty Utilities BMSC Operations Manager may require septic tank waste haulers to obtain individual wastewater discharge permits.

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- B. Liberty Utilities BMSC Operations Manager may require haulers of industrial waste to obtain individual wastewater discharge permits. Liberty Utilities BMSC Operations Manager may require generators of hauled industrial waste to obtain individual wastewater discharge permits. Liberty Utilities BMSC Operations Manager also may prohibit the disposal of hauled industrial waste. The discharge of hauled industrial waste is subject to all other requirements of this SOP.
- C. Industrial waste haulers may discharge loads only at locations designated by Liberty Utilities BMSC Operations Manager. No load may be discharged without prior consent of Liberty Utilities BMSC Operations Manager. Liberty Utilities BMSC Operations Manager may collect samples of each hauled load to ensure compliance with applicable Standards. Liberty Utilities BMSC Operations Manager may require the industrial waste hauler to provide a waste analysis of any load prior to discharge.
- D. Industrial waste haulers must provide a waste tracking form for every load. This form shall include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall identify the type of industry, known or suspected waste constituents, and whether any wastes are RCRA hazardous wastes.

3.5 Brewery Waste

- A. A brewery discharge qualifies as a non-categorical IU, and therefore, requires a permit for compliance. Assuming that there are no toxics in the brewery discharge, IU should comply with the Liberty Utilities BMSC Pretreatment Program Local Limits.

4. INDIVIDUAL WASTEWATER DISCHARGE PERMITS

4.1 Wastewater Analysis

When requested by Liberty Utilities BMSC Operations Manager, an IU must submit information on the nature and characteristics of its wastewater within 30 days of the request. Liberty Utilities BMSC Operations Manager is authorized to prepare a form for this purpose and may periodically require IUs to update this information.

4.2 Individual Wastewater Discharge Permit Requirement

- A. No Significant IU shall discharge wastewater into the POTW without first obtaining an individual wastewater discharge permit from Liberty Utilities BMSC Operations Manager, except that a Significant IU that has filed a timely application pursuant to Section 4.3 of this SOP may continue to discharge for the time period specified therein.
- B. Liberty Utilities BMSC Operations Manager may require other IUs to obtain individual wastewater discharge permits as necessary to carry out the purposes of this SOP.

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- C. Any violation of the terms and conditions of an individual wastewater discharge permit shall be deemed a violation of this SOP and subjects the wastewater discharge permittee to the sanctions set out in Sections 10 through 12 of this SOP. Obtaining an individual wastewater discharge permit does not relieve a permittee of its obligation to comply with all Federal and State Pretreatment Standards or Requirements or with any other requirements of Federal, State, and local law.

4.3 Individual Wastewater Discharge Permitting: Existing Connections

Any IU required to obtain an individual wastewater discharge permit who was discharging wastewater into the POTW prior to the effective date of this SOP and who wishes to continue such discharges in the future, shall, within 90 days after said date, apply to Liberty Utilities BMSC Operations Manager for an individual wastewater discharge permit in accordance with Section 4.5 of this SOP, and shall not cause or allow discharges to the POTW to continue after 30 days of the effective date of this SOP except in accordance with an individual wastewater discharge permit issued by Liberty Utilities BMSC Operations Manager.

4.4 Individual Wastewater Discharge Permitting: New Connections

Any IU required to obtain an individual wastewater discharge permit who proposes to begin or recommence discharging into the POTW must obtain such permit prior to the beginning or recommencing of such discharge. An application for this individual wastewater discharge permit, in accordance with Section 4.5 of this SOP, must be filed at least 90 days prior to the date upon which any discharge will begin or recommence.

4.5 Individual Wastewater Discharge Permit Application Contents

- A. All IUs required to obtain an individual wastewater discharge permit must submit a permit application. Liberty Utilities BMSC Operations Manager may require IUs to submit all or some of the following information as part of a permit application:
 - a. Identifying Information
 - i. The name and address of the facility, including the name of the operator and owner.
 - ii. Contact information, description of activities, facilities, and plant production processes on the premises;
 - b. Environmental Permits. A list of any environmental control permits held by or for the facility.
 - c. Description of Operations
 - i. A brief description of the nature, average rate of production (including each product produced by type, amount, processes, and rate of production), and standard industrial classifications of the operation(s) carried out by such IU. This description should include a schematic process diagram, which indicates

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- points of discharge to the POTW from the regulated processes.
 - ii. Types of wastes generated, and a list of all raw materials and chemicals used or stored at the facility which are, or could accidentally or intentionally be, discharged to the POTW;
 - iii. Number and type of employees, hours of operation, and proposed or actual hours of operation;
 - iv. Type and amount of raw materials processed (average and maximum per day);
 - v. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, floor drains, and appurtenances by size, location, and elevation, and all points of discharge;
 - d. Time and duration of discharges;
 - e. The location for monitoring all wastes covered by the permit;
 - f. Flow Measurement. Information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from regulated process streams and other streams, as necessary, to allow use of the combined waste stream formula set out in Section 2.2C (40 CFR 403.6(e)).
 - g. Measurement of Pollutants.
 - i. The categorical Pretreatment Standards applicable to each regulated process and any new categorically regulated processes for Existing Sources.
 - ii. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the Standard or by Liberty Utilities BMSC Operations Manager, of regulated pollutants in the discharge from each regulated process.
 - iii. Instantaneous, Daily Maximum, and long-term average concentrations, or mass, where required, shall be reported.
 - iv. The sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in Section 6.10 of this SOP. Where the Standard requires compliance with a BMP or pollution prevention alternative, the IU shall submit documentation as required by the Liberty Utilities BMSC Operations Manager or the applicable Standards to determine compliance with the Standard.
 - v. Sampling must be performed in accordance with procedures set out in Section 6.11 of this SOP.
 - h. Any other information as may be deemed necessary by Liberty Utilities BMSC Operations Manager to evaluate the permit application.
- B. Incomplete or inaccurate applications will not be processed and will be returned to the IU for revision.

4.6 Application Signatories and Certification

- A. All wastewater discharge permit applications, IU reports and certification statements must be signed by an Authorized Representative of the IU and contain the certification statement in Section 6.14 A. [see Section 1.4 C for definition].
- B. If the designation of an Authorized Representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new written authorization satisfying the requirements of this Section must be submitted to Liberty Utilities BMSC Operations Manager prior to or together with any reports to be signed by an Authorized Representative.

4.7 Individual Wastewater Discharge Permit Decisions

Liberty Utilities BMSC Operations Manager will evaluate the data furnished by the IU and may require additional information. Within 30 days of receipt of a complete permit application, Liberty Utilities BMSC Operations Manager will determine whether to issue an individual wastewater discharge permit. Liberty Utilities BMSC Operations Manager may deny any application for an individual wastewater discharge permit.

5. INDIVIDUAL WASTEWATER DISCHARGE PERMIT ISSUANCE

5.1 Individual Wastewater Discharge Permit Duration

An individual wastewater discharge permit shall be issued for a specified time period, not to exceed five (5) years from the effective date of the permit. An individual wastewater discharge permit may be issued for a period less than five (5) years, at the discretion of Liberty Utilities BMSC Operations Manager. Each individual wastewater discharge permit will indicate a specific date upon which it will expire.

5.2 Individual Wastewater Discharge Permit Contents

An individual wastewater discharge permit shall include such conditions as are deemed reasonably necessary by Liberty Utilities BMSC Operations Manager to prevent Pass Through or Interference, protect the quality of the water body receiving the treatment plant's effluent, protect worker health and safety, facilitate sludge management and disposal, and protect against damage to the POTW.

- A. Individual wastewater discharge permits must contain:
 - a. A statement that indicates the wastewater discharge permit issuance date, expiration date and effective date;
 - b. A statement that the wastewater discharge permit is nontransferable without prior

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notification to Liberty Utilities BMSC in accordance with Section 5.5 of these SOPs, and provisions for furnishing the new owner or operator with a copy of the existing wastewater discharge permit;

- c. Effluent limits, including Best Management Practices, based on applicable Pretreatment Standards;
 - d. Self monitoring, sampling, reporting, notification, and record-keeping requirements. These requirements shall include an identification of pollutants (or best management practice) to be monitored, sampling location, sampling frequency, and sample type based on Federal, State, and local law.
 - e. A statement of applicable civil and criminal penalties for violation of Pretreatment Standards and Requirements, and any applicable compliance schedule. Such schedule may not extend the time for compliance beyond that required by applicable Federal, State, or local law.
 - f. Requirements to control Slug Discharge, if determined by the Liberty Utilities BMSC Operations Manager to be necessary.
- B. Individual wastewater discharge permits may contain, but need not be limited to, the following conditions:
- a. Limits on the average and/or maximum rate of discharge, time of discharge, and/or requirements for flow regulation and equalization;
 - b. Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the treatment works;
 - c. Requirements for the development and implementation of spill control plans or other special conditions including management practices necessary to adequately prevent accidental, unanticipated, or non routine discharges;
 - d. Development and implementation of waste minimization plans to reduce the amount of pollutants discharged to the POTW;
 - e. The unit charge or schedule of IU charges and fees for the management of the wastewater discharged to the POTW;
 - f. Requirements for installation and maintenance of inspection and sampling facilities and equipment, including flow measurement devices;
 - g. A statement that compliance with the individual wastewater discharge permit does not relieve the permittee of responsibility for compliance with all applicable Federal and State Pretreatment Standards, including those which become effective during the

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term of the individual wastewater discharge permit; and

- h. Other conditions as deemed appropriate by Liberty Utilities BMSC Operations Manager to ensure compliance with this SOP, and State and Federal laws, rules, and regulations.

5.3 Permit Modification

- A. Liberty Utilities BMSC Operations Manager may modify an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:
 - a. To incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements;
 - b. To address significant alterations or additions to the IU's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
 - c. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
 - d. Information indicating that the permitted discharge poses a threat to Liberty Utilities BMSC POTW, Liberty Utilities BMSC personnel, or the receiving waters;
 - e. Violation of any terms or conditions of the individual wastewater discharge permit;
 - f. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;
 - g. Revision of or a grant of variance from categorical Pretreatment Standards pursuant to 40 CFR 403.13;
 - h. To correct typographical or other errors in the individual wastewater discharge permit; or
 - i. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 5.5.

5.4 Individual Wastewater Discharge Permit Transfer

Individual wastewater discharge permits may be transferred to a new owner or operator only if the permittee gives at least 60 days advance notice to Liberty Utilities BMSC Operations Manager and Liberty Utilities BMSC Operations Manager approves the individual wastewater discharge

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permit transfer. The notice to Liberty Utilities BMSC Operations Manager must include a written certification by the new owner or operator which:

- A. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;
- B. Identifies the specific date on which the transfer is to occur; and
- C. Acknowledges full responsibility for complying with the existing individual wastewater discharge permit.

Failure to provide advance notice of a transfer renders the individual wastewater discharge permit void as of the date of facility transfer.

5.5 Individual Wastewater Discharge Permit Revocation

Liberty Utilities BMSC Operations Manager may revoke an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:

- A. Failure to notify Liberty Utilities BMSC Operations Manager of significant changes to the wastewater prior to the changed discharge;
- B. Failure to provide prior notification to Liberty Utilities BMSC Operations Manager of changed conditions pursuant to Section 6.5 of this SOP;
- C. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
- D. Falsifying self monitoring reports and certification statements;
- E. Tampering with monitoring equipment;
- F. Refusing to allow Liberty Utilities BMSC Operations Manager timely access to the facility premises and records;
- G. Failure to meet effluent limitations;
- H. Failure to pay fines;
- I. Failure to pay sewer charges;
- J. Failure to meet compliance schedules;
- K. Failure to complete a wastewater survey or the wastewater discharge permit application;

- L. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
- M. Violation of any Pretreatment Standard or Requirement, or any terms of the wastewater discharge permit or this SOP.

Individual wastewater discharge permits shall be voidable upon cessation of operations or transfer of business ownership. All individual wastewater discharge permits issued to a IU are void upon the issuance of a new individual wastewater discharge permit to that IU.

5.6 Individual Wastewater Discharge Permit Reissuance

An IU with an expiring individual wastewater discharge permit shall apply for individual wastewater discharge permit reissuance by submitting a complete permit application, in accordance with Section 4.5 of this SOP, a minimum of 90 days prior to the expiration of the IU's existing individual wastewater discharge permit.

6. REPORTING REQUIREMENTS

6.1 Baseline Monitoring Reports

- A. Within either one hundred eighty (180) days after the effective date of a categorical Pretreatment Standard, or the final administrative decision on a category determination under 40 CFR 403.6(a)(4), whichever is later, existing Categorical IUs currently discharging to or scheduled to discharge to the POTW shall submit to Liberty Utilities BMSC Operations Manager a report which contains the information listed in paragraph B, below. At least ninety (90) days prior to commencement of their discharge, New Sources, and sources that become Categorical IUs subsequent to the promulgation of an applicable categorical Standard, shall submit to Liberty Utilities BMSC Operations Manager a report which contains the information listed in paragraph B, below. A New Source shall report the method of pretreatment it intends to use to meet applicable categorical Standards. A New Source also shall give estimates of its anticipated flow and quantity of pollutants to be discharged.
- B. IUs described above shall submit the information set forth below.
 - a. All information required in Section 4.5A (1) (a), Section 4.5A (2), Section 4.5A (3) (a), and Section 4.5A (6).
 - b. Measurement of pollutants.
 - i. The IU shall provide the information required in Section 4.5 A (7) (a) through (d)
 - ii. The IU shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.
 - iii. Samples should be taken immediately downstream from pretreatment

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- facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the IU should measure the flows and concentrations necessary to allow use of the combined waste stream formula in 40 CFR 403.6(e) to evaluate compliance with the Pretreatment Standards.
- iv. Where an alternate concentration or mass limit has been calculated in accordance with 40 CFR 403.6(e) this adjusted limit along with supporting data shall be submitted to the Control Authority;
 - v. Sampling and analysis shall be performed in accordance with Section 6.10;
 - vi. The Liberty Utilities BMSC Operations Manager may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures;
 - vii. The baseline report shall indicate the time, date and place of sampling and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant Discharges to the POTW
- c. Compliance Certification. A statement, reviewed by the IU's Authorized Representative as defined in Section 1.4 C and certified by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required to meet the Pretreatment Standards and Requirements.
- d. Compliance Schedule. If additional pretreatment and/or O&M will be required to meet the Pretreatment Standards, the shortest schedule by which the IU will provide such additional pretreatment and/or O&M must be provided. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard. A compliance schedule pursuant to this Section must meet the requirements set out in Section 6.2 of this SOP.
- e. Signature and Report Certification. All baseline monitoring reports must be certified in accordance with Section 6.14 A of this SOP and signed by an Authorized Representative as defined in Section 1.4C.

6.2 Compliance Schedule Progress Reports

The following conditions shall apply to the compliance schedule required by Section 6.1(B)(4) of this SOP:

- A. The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the IU to meet the applicable Pretreatment Standards (such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);

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- B. No increment referred to above shall exceed nine (9) months;
- C. The IU shall submit a progress report to Liberty Utilities BMSC Operations Manager no later than fourteen (14) days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress, the reason for any delay, and, if appropriate, the steps being taken by the IU to return to the established schedule; and
- D. In no event shall more than nine (9) months elapse between such progress reports to Liberty Utilities BMSC Operations Manager.

6.3 Reports on Compliance with Categorical Pretreatment Standard Deadline

Within ninety (90) days following the date for final compliance with applicable categorical Pretreatment Standards, or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any IU subject to such Pretreatment Standards and Requirements shall submit to Liberty Utilities BMSC Operations Manager a report containing the information described in Section 4.5A(6) and (7) and 6.1(B)(2) of this SOP. For IUs subject to equivalent mass or concentration limits established in accordance with the procedures in Section 2.2, this report shall contain a reasonable measure of the IU's long term production rate. For all other IUs subject to categorical Pretreatment Standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the IU's actual production during the appropriate sampling period. All compliance reports must be signed and certified in accordance with Section 6.14 A of this SOP. All sampling will be done in conformance with Section 6.11.

6.4 Periodic Compliance Reports

- A. Except as specified in Section 6.4.C, all IUs must, at a frequency determined by Liberty Utilities BMSC Operations Manager submit no less than once per year (January 15) report indicating the nature, concentration of pollutants in the discharge which are limited by Pretreatment Standards and the measured or estimated average and maximum daily flows for the reporting period. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (BMP) or pollution prevention alternative, the IU must submit documentation required by Liberty Utilities BMSC Operations Manager or the Pretreatment Standard necessary to determine the compliance status of the IU.
- B. The Liberty Utilities BMSC may authorize an IU subject to a categorical Pretreatment Standard to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if the IU has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the Discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the IU. [see 40 CFR 403.12(e)(2)] This authorization is subject to the following conditions:

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- a. The waiver may be authorized where a pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical Standard and otherwise includes no process wastewater.
 - b. The monitoring waiver is valid only for the duration of the effective period of the individual wastewater discharge permit, but in no case longer than 5 years. The IU must submit a new request for the waiver before the waiver can be granted for each subsequent individual wastewater discharge permit. See Section 4.5A(8).
 - c. In making a demonstration that a pollutant is not present, the IU must provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes.
 - d. The request for a monitoring waiver must be signed in accordance with Section 1.4C, and include the certification statement in 6.14 A (40 CFR 403.6(a)(2)(ii)).
 - e. Non-detectable sample results may be used only as a demonstration that a pollutant is not present if the EPA approved method from 40CFR Part 136 with the lowest minimum detection level for that pollutant was used in the analysis.
 - f. Any grant of the monitoring waiver by the Liberty Utilities BMSC Operations Manager must be included as a condition in the IU's permit. The reasons supporting the waiver and any information submitted by the IU in its request for the waiver must be maintained by the Liberty Utilities BMSC Operations Manager for 3 years after expiration of the waiver.
 - g. Upon approval of the monitoring waiver and revision of the IU's permit by the Liberty Utilities BMSC Operations Manager, the IU must certify on each report with the statement in Section 6.14 C below, that there has been no increase in the pollutant in its waste stream due to activities of the IU.
 - h. In the event that a waived pollutant is found to be present or is expected to be present because of changes that occur in the IU's operations, the IU must immediately: Comply with the monitoring requirements of Section 6.4 A, or other more frequent monitoring requirements imposed by the Liberty Utilities BMSC Operations Manager, and notify the Liberty Utilities BMSC Operations Manager.
 - i. This provision does not supersede certification processes and requirements established in categorical Pretreatment Standards, except as otherwise specified in the categorical Pretreatment Standard.
- C. Reduced reporting is not available to IUs that have in the last two (2) years been in Significant Noncompliance, as defined in Section 9 of this SOP. In addition, reduced reporting

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is not available to an IU with daily flow rates, production levels, or pollutant levels that vary so significantly that, in the opinion of the Liberty Utilities BMSC Operations Manager, decreasing the reporting requirement for this IU would result in data that are not representative of conditions occurring during the reporting period.

- D. All periodic compliance reports must be signed and certified in accordance with Section 6.14 A of this SOP.
- E. All wastewater samples must be representative of the IU's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of an IU to keep its monitoring facility in good working order shall not be grounds for the IU to claim that sample results are unrepresentative of its discharge.
- F. If an IU subject to the reporting requirement in this section monitors any regulated pollutant at the appropriate sampling location more frequently than required by Liberty Utilities BMSC Operations Manager, using the procedures prescribed in Section 6.11 of this SOP, the results of this monitoring shall be included in the report. [Note: See 40CFR 403.12(g)(6)].

6.5 Reports of Changed Conditions

Each IU must notify Liberty Utilities BMSC Operations Manager of any significant changes to the IU's operations or system which might alter the nature, quality, or volume of its wastewater at least 90 days before the change.

- A. Liberty Utilities BMSC Operations Manager may require the IU to submit such information as may be deemed necessary to evaluate the changed condition, including the submission of a wastewater discharge permit application under Section 4.5 of this SOP.
- B. Liberty Utilities BMSC Operations Manager may issue an individual wastewater discharge permit under Section 5.7 of this SOP or modify an existing wastewater discharge permit under Section 5.4 of this SOP in response to changed conditions or anticipated changed conditions.

6.6 Reports of Potential Problems

- A. In the case of any discharge, including, but not limited to, accidental discharges, discharges of a non-routine, episodic nature, a non-customary batch discharge, a Slug Discharge or Slug Load, that might cause potential problems for the POTW, the IU shall immediately telephone and notify Liberty Utilities BMSC Operations Manager of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the IU.
- B. Within five (5) days following such discharge, the IU shall, unless waived by Liberty

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Utilities BMSC Operations Manager, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the IU to prevent similar future occurrences. Such notification shall not relieve the IU of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the IU of any fines, penalties, or other liability which may be imposed pursuant to this SOP.

- C. A notice shall be permanently posted on the IU's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph A, above. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.
- D. Significant Industrial IUs are required to notify the Liberty Utilities BMSC Operations Manager immediately of any changes at its facility affecting the potential for a Slug Discharge.

6.7 Reports from Unpermitted IUs

All IUs not required to obtain an individual wastewater discharge permit shall provide appropriate reports to Liberty Utilities BMSC Operations Manager as Liberty Utilities BMSC Operations Manager may require.

6.8 Notice of Violation/Repeat Sampling and Reporting

If sampling performed by an IU indicates a violation, the IU must notify Liberty Utilities BMSC Operations Manager within twenty four (24) hours of becoming aware of the violation. The IU shall also repeat the sampling and analysis and submit the results of the repeat analysis to Liberty Utilities BMSC Operations Manager within thirty (30) days after becoming aware of the violation. Resampling by the IU is not required if Liberty Utilities BMSC performs sampling at the IU's facility at least once a month, or if Liberty Utilities BMSC performs sampling at the IU between the time when the initial sampling was conducted and the time when the IU or Liberty Utilities BMSC receives the results of this sampling, or if Liberty Utilities BMSC has performed the sampling and analysis in lieu of the IU.

6.9 Notification of the Discharge of Hazardous Waste

- A. Any IU who commences the discharge of hazardous waste shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the IU discharges more than one hundred (100) kilograms of such waste per calendar month to the POTW, the notification also shall contain the following information to the extent such information is known and readily available to the IU: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in

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the waste stream discharged during that calendar month, and an estimation of the mass of constituents in the waste stream expected to be discharged during the following twelve (12) months. All notifications must take place no later than one hundred and eighty (180) days after the discharge commences. Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted under Section 6.5 of this SOP. The notification requirement in this Section does not apply to pollutants already reported by IUs subject to categorical Pretreatment Standards under the self monitoring requirements of Sections 6.1, 6.3, and 6.4 of this SOP.

- B. Dischargers are exempt from the requirements of paragraph A, above, during a calendar month in which they discharge no more than fifteen (15) kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than fifteen (15) kilograms of nonacute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one time notification. Subsequent months during which the IU discharges more than such quantities of any hazardous waste do not require additional notification.
- C. In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the IU must notify Liberty Utilities BMSC Operations Manager, the EPA Regional Waste Management Waste Division Director, and State hazardous waste authorities of the discharge of such substance within ninety (90) days of the effective date of such regulations.
- D. In the case of any notification made under this Section, the IU shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.
- E. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this SOP, a permit issued there under, or any applicable Federal or State law.

6.10 Analytical Requirements

All pollutant analyses, including sampling techniques, to be submitted as part of a wastewater discharge permit application or report shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, unless otherwise specified in an applicable categorical Pretreatment Standard. If 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the Liberty Utilities BMSC Operations Manager or other parties approved by EPA.

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6.11 Sample Collection

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, based on data that is representative of conditions occurring during the reporting period.

- A. Except as indicated in Section B and C below, the IU must collect wastewater samples using 24 hour flow proportional composite sampling techniques, unless time proportional composite sampling or grab sampling is authorized by Liberty Utilities BMSC Operations Manager. Where time proportional composite sampling or grab sampling is authorized by Liberty Utilities BMSC, the samples must be representative of the discharge. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24 hour period may be composited prior to the analysis as follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by Liberty Utilities BMSC, as appropriate. In addition, grab samples may be required to show compliance with Local Limits.
- B. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques.
- C. For sampling required in support of baseline monitoring and 90 day compliance reports required in Section 6.1 and 6.3 [40 CFR 403.12(b) and (d)], a minimum of four (4) grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, Liberty Utilities BMSC Operations Manager may authorize a lower minimum. For the reports required by paragraphs Section 6.4 (40 CFR 403.12(e) and 403.12(h)), the IU is required to collect the number of grab samples necessary to assess and assure compliance by with applicable Pretreatment Standards and Requirements.

6.12 Date of Receipt of Reports

Written reports will be deemed to have been submitted on the date postmarked or if hand delivered, date received by Liberty Utilities BMSC.

6.13 Recordkeeping

IUs subject to the reporting requirements of this SOP shall retain, and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities required by this SOP, any additional records of information obtained pursuant to monitoring activities undertaken by the IU independent of such requirements, and documentation associated with Best Management Practices established under Section 2.4 C. Records shall include the date, exact place,

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method, and time of sampling, and the name of the person(s) taking the samples; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses. These records shall remain available for a period of at least three (3) years. This period shall be automatically extended for the duration of any litigation concerning the IU or Liberty Utilities BMSC, or where the IU has been specifically notified of a longer retention period by Liberty Utilities BMSC Operations Manager.

6.14 Certification Statements

- A. Certification of Permit Applications, IU Reports and Initial Monitoring Waiver-The following certification statement is required to be signed and submitted by IUs submitting permit applications in accordance with Section 4.7; IUs submitting baseline monitoring reports under Section 6.1 B (5); IUs submitting reports on compliance with the categorical Pretreatment Standard deadlines under Section 6.3; IUs submitting periodic compliance reports required by Section 6.4 A-D, and IUs submitting an initial request to forego sampling of a pollutant on the basis of Section 6.4B(4). The following certification statement must be signed by an Authorized Representative as defined in Section 1.3 C:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- B. Annual Certification for Non-Significant Categorical Industrial IUs-A facility determined to be a Non Significant Categorical IU by Liberty Utilities BMSC Operations Manager pursuant to 1.3 GG(3) and 4.7 C [Note: See 40 CFR 403.3(v)(2)] must annually submit the following certification statement signed in accordance with the signatory requirements in 1.3 C [Note:

See 40 CFR 403.120(l)]. This certification must accompany an alternative report required by Liberty Utilities BMSC Operations Manager:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical Pretreatment Standards under 40 CFR _____, I certify that, to the best of my knowledge and belief that during the period from _____, _____ to _____, [months, days, year]:

- (a) The facility described as _____
[facility name] met the definition of a Non Significant Categorical IU as described in 1.4 GG (3); [Note: See 40 CFR 403.3(v)(2)]

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- (b) The facility complied with all applicable Pretreatment Standards and requirements during this reporting period; and © the facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period.

This compliance certification is based on the following information.

7. COMPLIANCE MONITORING

7.1 Right of Entry: Inspection and Sampling

Liberty Utilities BMSC Operations Manager shall have the right to enter the premises of any IU to determine whether the IU is complying with all requirements of this SOP and any individual wastewater discharge permit or order issued hereunder. IUs shall allow Liberty Utilities BMSC Operations Manager ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

- A. Where an IU has security measures in force which require proper identification and clearance before entry into its premises, the IU shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, Liberty Utilities BMSC Operations Manager shall be permitted to enter without delay for the purposes of performing specific responsibilities.
- B. Liberty Utilities BMSC Operations Manager shall have the right to set up on the IU's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the IU's operations.
- C. Liberty Utilities BMSC Operations Manager may require the IU to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the IU at its own expense. All devices used to measure wastewater flow and quality shall be calibrated [insert desired frequency] to ensure their accuracy.
- D. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the IU at the written or verbal request of Liberty Utilities BMSC Operations Manager and shall not be replaced. The costs of clearing such access shall be born by the IU.
- E. Unreasonable delays in allowing Liberty Utilities BMSC Operations Manager access to the IU's premises shall be a violation of this SOP.

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7.2 Search Warrants

If Liberty Utilities BMSC Operations Manager has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this SOP, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of Liberty Utilities BMSC designed to verify compliance with this SOP or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, Liberty Utilities BMSC Operations Manager may seek issuance of a search warrant from the Maricopa County Court or other authorities as applicable.

8. CONFIDENTIAL INFORMATION

Information and data on a IU obtained from reports, surveys, wastewater discharge permit applications, individual wastewater discharge permits, and monitoring programs, and from the Liberty Utilities BMSC inspection and sampling activities, shall be available to the public without restriction, unless the IU specifically requests, and is able to demonstrate to the satisfaction of Liberty Utilities BMSC Operations Manager, that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets under applicable State law. Any such request must be asserted at the time of submission of the information or data. When requested and demonstrated by the IU furnishing a report that such information should be held confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302 shall not be recognized as confidential information and shall be available to the public without restriction.

9. PUBLICATION OF IUS IN SIGNIFICANT NONCOMPLIANCE

Liberty Utilities BMSC Operations Manager shall publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by Liberty Utilities BMSC, a list of the IUs which, at any time during the previous twelve (12) months, were in Significant Noncompliance with applicable Pretreatment Standards and Requirements. The term Significant Noncompliance shall be applicable to all Significant IUs (or any other IU that violates paragraphs (C), (D) or (H) of this Section) and shall mean:

- A. Chronic violations of wastewater discharge limits, defined here as those in which sixty six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six (6) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Section 2;

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- B. Technical Review Criteria (TRC) violations, defined here as those in which thirty three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six (6) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement including Instantaneous Limits, as defined by Section 2 multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH);
- C. Any other violation of a Pretreatment Standard or Requirement as defined by Section 2 (Daily Maximum, long term average, Instantaneous Limit, or narrative standard) that Liberty Utilities BMSC Operations Manager determines has caused, alone or in combination with other discharges, Interference or Pass Through, including endangering the health of POTW personnel or the general public;
- D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in Liberty Utilities BMSC Operations Manager's exercise of its emergency authority to halt or prevent such a discharge;
- E. Failure to meet, within ninety (90) days of the scheduled date, a compliance schedule milestone contained in an individual wastewater discharge permit or enforcement order for starting construction, completing construction, or attaining final compliance;
- F. Failure to provide within forty five (45) days after the due date, any required reports, including baseline monitoring reports, reports on compliance with categorical Pretreatment Standard deadlines, periodic self monitoring reports, and reports on compliance with compliance schedules;
- G. Failure to accurately report noncompliance; or
- H. Any other violation(s), which may include a violation of Best Management Practices, which Liberty Utilities BMSC Operations Manager determines will adversely affect the operation or implementation of the local pretreatment program.

10. ADMINISTRATIVE ENFORCEMENT REMEDIES

10.1 Notification of Violation

When Liberty Utilities BMSC Operations Manager finds that an IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Utilities BMSC Operations Manager may serve upon that IU a written Notice of Violation. Within 14 days of the receipt of such notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted by the IU to Liberty Utilities BMSC Operations Manager. Submission of such a plan in no way relieves the IU of liability for any violations occurring before or after receipt of the Notice of Violation. Nothing in this Section shall limit the authority of Liberty Utilities BMSC Operations Manager to take any action,

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including emergency actions or any other enforcement action, without first issuing a Notice of Violation.

A. **Enforcement Actions.** In enforcing compliance with this Industrial Pretreatment Program, Liberty Black Mountain may take any of the following actions relating to an IU that has violated or continues to violate any provision of the Industrial Pretreatment Program and/or SOP.

- (1) Contact by inspector;
- (2) Provide educational material of BMP and TCC requirements and/or prohibitions;
- (3) Warning letter;
- (4) Notice of Violation;
- (5) Administrative Orders, which may include:
 - (a) Modification of wastewater discharge permits,
 - (b) Affirmative obligations, such as increased monitoring,
 - (c) Prohibited actions or obligations to cease and desist,
 - (d) Other appropriate orders;
- (6) Administrative Fines;
- (7) Emergency suspension or permanent termination of service;
- (8) Hearings to show cause;
- (9) Publication of significant violators and imposition of fines;
- (10) Judicial enforcement action, including injunctive relief and criminal prosecution.

B. **Enforcement Timeframes.** Enforcement Actions under this tariff shall be conducted in accordance with the following timeframes.

- (1) Enforcement responses to initial Pretreatment Program Violations will be initiated within ten (10) days of discovery or at the discretion of Liberty Black Mountain. Whenever use of an NOV as an enforcement response is selected, immediate issuance is allowed.
- (2) When appropriate, follow-up inspections will occur within ten (10) days of a due date specified in a Notice of Violation.
- (3) Follow-up escalated action for repeat or reoccurring offenses will be taken within ten (10) days of discovery of the repeat or reoccurring offenses and may include additional Administrative Enforcement, including Administrative Orders and Administrative Fines, and Judicial Enforcement.

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- (4) In emergency situations caused by Violations, including imminent danger to the public health, safety, or welfare, and endangerment to persons or the environment, Liberty Black Mountain may initiate enforcement responses, including without limitation:
 - (a) Issuance of cease and desist orders;
 - (b) Service termination;
 - (c) Revocation or termination of any permits issued under this Industrial Pretreatment Program.

10.2 Consent Orders

Liberty Utilities BMSC Operations Manager may enter into Consent Orders, assurances of compliance, or other similar documents establishing an agreement with any IU responsible for noncompliance. Such documents shall include specific action to be taken by the IU to correct the noncompliance within a time period specified by the document. Such documents shall have the same force and effect as the administrative orders issued pursuant to Sections 10.4 and 10.5 of this SOP and shall be judicially enforceable.

10.3 Show Cause Hearing

Liberty Utilities BMSC Operations Manager may order an IU which has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, to appear before Liberty Utilities BMSC Operations Manager and show cause why the proposed enforcement action should not be taken. Notice shall be served on the IU specifying the time and place for the meeting, the proposed enforcement action, the reasons for such action, and a request that the IU show cause why the proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least 30 days prior to the hearing. Such notice may be served on any Authorized Representative of the IU as defined in Section 1.4 C and required by Section 4.7 A. A show cause hearing shall not be a bar against, or prerequisite for, taking any other action against the IU.

10.4 Compliance Orders

When Liberty Utilities BMSC Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Utilities BMSC Operations Manager may issue an order to the IU responsible for the discharge directing that the IU come into compliance within a specified time. If the IU does not come into compliance within the time provided, sewer service may be discontinued unless adequate treatment facilities, devices, or other related appurtenances are installed and properly operated. Compliance orders also may contain other requirements to address the noncompliance, including additional self monitoring and management practices designed to minimize the amount of pollutants discharged to the sewer. A compliance order may not extend the deadline for compliance established for a Pretreatment Standard or Requirement, nor does a compliance order relieve the IU of liability for any violation,

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including any continuing violation. Issuance of a compliance order shall not be a bar against, or a prerequisite for, taking any other action against the IU.

10.5 Cease and Desist Orders

When Liberty Utilities BMSC Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, or that the IU's past violations are likely to recur, Liberty Utilities BMSC Operations Manager may issue an order to the IU directing it to cease and desist all such violations and directing the IU to:

- A. Immediately comply with all requirements; and
- B. Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and/or terminating the discharge. Issuance of a cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the IU.

10.6 Administrative Fines

- A. When Liberty Utilities BMSC Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Utilities BMSC Operations Manager may fine such IU in an amount not to exceed \$250 per day. Such fines shall be assessed on a per-violation, per-day basis. In the case of monthly or other long-term average discharge limits, fines shall be assessed for each day during the period of violation.
- B. Unpaid charges, fines, and penalties shall, after 90 calendar days, be assessed an additional penalty of 10 percent (10%) of the unpaid balance, and interest shall accrue thereafter at a rate of one percent (1 %) per month. A lien against the IU's property shall be sought for unpaid charges, fines, and penalties.
- C. IUs desiring to dispute such fines must file a written request for Liberty Utilities BMSC Operations Manager to reconsider the fine along with full payment of the fine amount within 30 days of being notified of the fine. Where a request has merit, Liberty Utilities BMSC Operations Manager may convene a hearing on the matter. In the event the IU's appeal is successful, the payment, together with any interest accruing thereto, shall be returned to the IU. Liberty Utilities BMSC Operations Manager may add the costs of preparing administrative enforcement actions, such as notices and orders, to the fine.
- D. Issuance of an administrative fine shall not be a bar against, or a prerequisite for, taking any other action against the IU.

10.7 Emergency Suspensions

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Liberty Utilities BMSC Operations Manager may immediately suspend a IU's discharge, after informal notice to the IU, whenever such suspension is necessary to stop an actual or threatened discharge, which reasonably appears to present, or cause an imminent or substantial endangerment to the health or welfare of persons. Liberty Utilities BMSC Operations Manager may also immediately suspend an IU's discharge, after notice and opportunity to respond, that threatens to interfere with the operation of the POTW, or which presents, or may present, an endangerment to the environment.

- A. Any IU notified of a suspension of its discharge shall immediately stop or eliminate its contribution. In the event of an IU's failure to immediately comply voluntarily with the suspension order, Liberty Utilities BMSC Operations Manager may take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW, its receiving stream, or endangerment to any individuals. Liberty Utilities BMSC Operations Manager may allow the IU to recommence its discharge when the IU has demonstrated to the satisfaction of Liberty Utilities BMSC Operations Manager that the period of endangerment has passed, unless the termination proceedings in Section 10.8 of this SOP are initiated against the IU.
- B. A IU that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful contribution and the measures taken to prevent any future occurrence, to Liberty Utilities BMSC Operations Manager prior to the date of any show cause or termination hearing under Sections 10.3 or 10.8 of this SOP.

Nothing in this Section shall be interpreted as requiring a hearing prior to any Emergency Suspension under this Section.

10.8 Termination of Discharge

In addition to the provisions in Section 5.6 of this SOP, any IU who violates the following conditions is subject to discharge termination:

- A. Violation of individual wastewater discharge permit conditions;
- B. Failure to accurately report the wastewater constituents and characteristics of its discharge;
- C. Failure to report significant changes in operations or wastewater volume, constituents, and characteristics prior to discharge;
- D. Refusal of reasonable access to the IU's premises for the purpose of inspection, monitoring, or sampling; or
- E. Violation of the Pretreatment Standards in Section 2 of this SOP.

Such IU will be notified of the proposed termination of its discharge and be offered an opportunity

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to show cause under Section 10.3 of this SOP why the proposed action should not be taken. Exercise of this option by Liberty Utilities BMSC Operations Manager shall not be a bar to, or a prerequisite for, taking any other action against the IU.

11. JUDICIAL ENFORCEMENT REMEDIES

11.1 Injunctive Relief

When Liberty Utilities BMSC Operations Manager finds that a IU has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, Liberty Utilities BMSC Operations Manager may petition the Maricopa County through Attorney for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the individual wastewater discharge permit, order, or other requirement imposed by this SOP on activities of the IU. Liberty Utilities BMSC Operations Manager may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the IU to conduct environmental remediation. A petition for injunctive relief shall not be a bar against, or a prerequisite for, taking any other action against an IU.

11.2 Civil Penalties

- A. An IU who has violated, or continues to violate, any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement shall be liable to Liberty Utilities BMSC for a maximum civil penalty of \$250 per violation, per day. In the case of a monthly or other long term average discharge limit, penalties shall accrue for each day during the period of the violation.
- B. Liberty Utilities BMSC Operations Manager may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by Liberty Utilities BMSC.
- C. In determining the amount of civil liability, the Court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the IU's violation, corrective actions by the IU, the compliance history of the IU, and any other factor as justice requires.
- D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, taking any other action against an IU.

11.3 Criminal Prosecution

- A. An IU who willfully or negligently violates any provision of this SOP, an individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement shall be punishable by a fine of not more than \$250 per violation, per day and subject to misdemeanor violations, as applicable by law.
- B. An IU who willfully or negligently introduces any substance into the POTW which causes personal injury or property damage shall, \$250 per violation, per day and subject to

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misdemeanor violations, as applicable by law. This penalty shall be in addition to any other cause of action for personal injury or property damage available under State law.

- C. A IU who knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this SOP, individual wastewater discharge permit, or order issued hereunder, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this SOP shall, upon conviction, be punished by a fine of not more than \$250 fine per day.
- D. In the event of a second conviction, a IU shall be punished by a fine of not more than \$500 fine per day.

11.4 Remedies Nonexclusive

The remedies provided for in this SOP are not exclusive. Liberty Utilities BMSC Operations Manager may take any, all, or any combination of these actions against a noncompliant IU. Enforcement of pretreatment violations will generally be in accordance with [the Liberty Utilities BMSC's] enforcement response plan. However, Liberty Utilities BMSC Operations Manager may take other action against any IU when the circumstances warrant. Further, Liberty Utilities BMSC Operations Manager is empowered to take more than one enforcement action against any noncompliant IU.

12. SUPPLEMENTAL ENFORCEMENT ACTION

12.1 Penalties for Late Reports

A penalty of \$100 shall be assessed to any IU for each day that a report required by this SOP, a permit or order issued hereunder is late, beginning five days after the date the report is due [higher penalties may also be assessed where reports are more than 30-45 days late]. Actions taken by Liberty Utilities BMSC Operations Manager to collect late reporting penalties shall not limit Liberty Utilities BMSC Operations Manager authority to initiate other enforcement actions that may include penalties for late reporting violations.

12.2 Performance Bonds {Optional}

Liberty Utilities BMSC Operations Manager may decline to issue or reissue an individual wastewater discharge permit to any IU who has failed to comply with any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, unless such IU first files a satisfactory bond, payable to Liberty Utilities BMSC, in a sum not to exceed a value determined by Liberty Utilities BMSC Operations Manager to be necessary to achieve consistent compliance.

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12.3 Liability Insurance {Optional}

Liberty Utilities BMSC Operations Manager may decline to issue or reissue an individual wastewater discharge to any IU who has failed to comply with any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder, or any other Pretreatment Standard or Requirement, unless the IU first submits proof that it has obtained financial assurances sufficient to restore or repair damage to the POTW caused by its discharge.

12.4 Payment of Outstanding Fees and Penalties {Optional}

Liberty Utilities BMSC Operations Manager may decline to issue or reissue an individual wastewater discharge permit to any IU who has failed to pay any outstanding fees, fines or penalties incurred as a result of any provision of this SOP, a previous individual wastewater discharge permit, or order issued hereunder.

12.5 Contractor Listing {Optional}

IUs which have not achieved compliance with applicable Pretreatment Standards and Requirements are not eligible to receive a contractual award for the sale of goods or services to Liberty Utilities BMSC. Existing contracts for the sale of goods or services to Liberty Utilities BMSC held by an IU found to be in Significant Noncompliance with Pretreatment Standards or Requirements may be terminated at the discretion of Liberty Utilities BMSC Operations Manager.

13. AFFIRMATIVE DEFENSES TO DISCHARGE VIOLATIONS**13.1 Upset**

- A. For the purposes of this Section, upset means an exceptional incident in which there is unintentional and temporary noncompliance with categorical Pretreatment Standards because of factors beyond the reasonable control of the IU. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- B. An upset shall constitute an affirmative defense to an action brought for noncompliance with categorical Pretreatment Standards if the requirements of paragraph C, below, are met.
- C. A IU who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and the IU can identify the cause(s) of the upset;
 - b. The facility was at the time being operated in a prudent and workman like manner and in compliance with applicable operation and maintenance procedures; and
 - c. The IU has submitted the following information to Liberty Utilities BMSC Operations

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Manager within twenty four (24) hours of becoming aware of the upset [if this information is provided orally, a written submission must be provided within five (5) days]

- i. A description of the indirect discharge and cause of noncompliance;
 - ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
 - iii. Steps being taken and/or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- D. In any enforcement proceeding, the IU seeking to establish the occurrence of an upset shall have the burden of proof.
- E. IUs shall have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with categorical Pretreatment Standards.
- F. IUs shall control production of all discharges to the extent necessary to maintain compliance with categorical Pretreatment Standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

13.2 Prohibited Discharge Standards

A IU shall have an affirmative defense to an enforcement action brought against it for noncompliance with the general prohibitions in Section 2.1(A) of this SOP or the specific prohibitions applicable of this SOP if it can prove that it did not know, or have reason to know, that its discharge, alone or in conjunction with discharges from other sources, would cause Pass Through or Interference and that either:

- A. A Local Limit exists for each pollutant discharged and the IU was in compliance with each limit directly prior to, and during, the Pass Through or Interference; or
- B. No Local Limit exists, but the discharge did not change substantially in nature or constituents from the IU's prior discharge when Liberty Utilities BMSC or the City of Scottsdale was regularly in compliance with its AZPDES permit, and in the case of Interference, was in compliance with applicable sludge use or disposal requirements.

13.3 Bypass

- A. For the purposes of this Section,
 - a. Bypass means the intentional diversion of waste streams from any portion of an IU's treatment facility.

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- b. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- B. An IU may allow any bypass to occur which does not cause Pretreatment Standards or Requirements to be violated, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of paragraphs (C) and (D) of this Section.
- C. Bypass Notifications
 - a. If an IU knows in advance of the need for a bypass, it shall submit prior notice to

Liberty Utilities BMSC Operations Manager, at least ten (10) days before the date of the bypass, if possible.
 - b. An IU shall submit oral notice to Liberty Utilities BMSC Operations Manager of an unanticipated bypass that exceeds applicable Pretreatment Standards within twenty four (24) hours from the time it becomes aware of the bypass. A written submission shall also be provided within five (5) days of the time the IU becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. Liberty Utilities BMSC Operations Manager may waive the written report on a case by case basis if the oral report has been received within twenty four (24) hours
- D. Bypass
 - a. Bypass is prohibited, and Liberty Utilities BMSC Operations Manager may take an enforcement action against a IU for a bypass, unless
 - i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - iii. The IU submitted notices as required under paragraph © of this section.

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- b. Liberty Utilities BMSC Operations Manager may approve an anticipated bypass, after considering its adverse effects, if Liberty Utilities BMSC Operations Manager determines that it will meet the three conditions listed in paragraph (D)(1) of this Section.

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

PRETREATMENT STANDARDS TARIFF

EXECUTIVE SUMMARY

Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain") hereby declares that the following Code of Practice has been prepared and adopted to provide for pretreatment standards in the maintenance and operation of wastewater treatment at the City of Scottsdale Wastewater Treatment Plant ("CSWWTP"). This Code of Practice shall be filed with the Arizona Corporation Commission and made part of Liberty Black Mountain's Wastewater Service Tariff, Part Four, Section I.B [Waste Limitations].

Liberty Black Mountain hereby expressly reserves the right to make any lawful addition and/or revisions in this Code of Practice when and as they may become advisable to properly manage the CSWWTP and to promote the peace, health, safety and welfare of the customers that will be served. This Code of Practice is supplementary to, and are not to be construed as, any abridgement of any lawful rights of Liberty Black Mountain as outlined in the Arizona Revised Statutes governing Public Utilities (Title 40) and the Arizona Administrative Corporation Commission Rules on Sewer (Title 14, Article 6), including the right to disconnect or to refuse permission to connect a customer to Liberty Black Mountain's wastewater system for violation of this Code of Practice or any other applicable law of the State of Arizona.

This Code of Practice incorporates pretreatment standards per 40 CFR 403, A.A.C. Title 12, Article 4, and A.A.C. Title 18, Chapter 9, Article 3. This Code of Practice is enforceable per the authority granted to wastewater utilities established under A.A.C. Title 14, Chapter 2, Article 6 of the Arizona Administrative Code.

Approved: _____

Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-DEF)

SECTION 1 – DEFINITIONS

A. PROHIBITED WASTE

Prohibited waste means:

1. Air Contaminant Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, is capable of creating, causing or introducing an air contaminant outside any sewer or sewage facility or is capable of creating, causing or introducing an air contaminant within any sewer or sewage facility which would prevent safe entry by authorized personnel.

2. Flammable or Explosive Waste

Any pollutants which create a fire or explosion hazard to the sewer or any waste other than sanitary waste which, which by itself or in combination with another substance, is capable of causing or contributing to an explosion or supporting combustion in any sewer or sewage facility including, but not limited to gasoline, naphtha, propane, diesel, fuel oil, kerosene or alcohol.

3. Obstructive Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, is capable of obstructing the flow of, or interfering with, the operation or performance of any sewer or sewage facility including, but not limited to: earth, sand, sweepings, gardening or agricultural waste, ash, chemicals, paint, metal, glass, sharps, rags, cloth, tar, asphalt, cement-based products, plastic, wood, waste portions of animals, fish or fowl and solidified fat.

4. Corrosive Waste

Any waste other than sanitary waste which, with corrosive properties which, by itself or in combination with any other substance, may cause damage to any sewer or sewage facility or which may prevent safe entry by authorized personnel.

5. High Temperature Waste

Any waste other than sanitary waste which, by itself or in combination with another substance, will create heat in amounts which will interfere with the operation and maintenance of a sewer or sewage facility or with the treatment of waste in a sewage facility;

Any waste other than sanitary waste which, will raise the temperature of waste entering any sewage facility to 40 degrees Celsius (104 degrees Fahrenheit) or more; or any non-domestic waste with a temperature of 65 degrees Celsius (150 degrees Fahrenheit) or more.

6. Biomedical Waste

Any of the following categories of biomedical waste: human anatomical waste, animal waste, untreated microbiological waste, waste sharps, medical products, and untreated human blood and body fluids known to contain viruses and agents.

Approved: _____

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7. Miscellaneous Wastes

Any storm water, surface water, groundwater, roof runoff, or surface drainage is prohibited.

8. Dilution Wastes

Any discharge that has been in any way, been diluted as a substitute for pretreatment, for the purposes of obtaining compliance with any categorical standard or pretreatment requirement or any other requirement imposed by this article except where dilution is expressly authorized by an categorical standard.

9 Other Discharge Limitations

Any discharge that is transported from the point of generation to the sewer by any hauler, unless the hauler has first:

- a. Obtained authorization to discharge from Liberty Black Mountain.
- b. Disclosed the nature, origin, and volume of the discharge.

Any waste, other than sanitary waste, which by itself or in combination with another substance:

- a. constitutes or may constitute a significant health or safety hazard to any person;
- b. Any waste other than sanitary waste which may interfere with any sewer or sewage treatment process;
- c. may cause a discharge from a sewage facility to contravene any requirements by or under any ADEQ or AZPDES discharge permit or any other act, approved Waste Minimization Plan (WMP), or any other law or regulation governing the quality of the discharge, or may cause the discharge to result in a hazard to people, animals, property or vegetation;
- d. may cause bio-solid to fail criteria for beneficial land application.

B. RESTRICTED WASTE (Liberty Utilities BMSC-CP-01-001)

Restricted waste means:

1. Specified Waste

Any waste other than sanitary waste which, at the point of discharge into a sewer, contains any contaminant at a concentration in excess of the limits set out below. All concentrations are expressed as total concentrations which includes all forms of the contaminant, whether dissolved or un-dissolved. The concentration limits apply to both grab and composite samples. Contaminant definitions and methods of analysis are outlined in standard methods.

ORGANIC CONTAMINANTS (µg/L)	
Benzene	35
Chloroform	2,000
4,4' - DOE	Not allowed
4,4' - DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed

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BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated byphenyl compounds (PCBs)	Not allowed
TRACE METALS	
PARAMETER	DAILY AVERAGE (mg/L)
Arsenic	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc (Zn)	3.5

2. Food Waste

Any solid or viscous pollutants, animal fats, oil, and grease (FOG) in amounts that may cause obstruction to the flow in sewers or pass through or other interference or damage to the sewer collection system. Any pollutant, including oxygen demanding pollutants (BOD, COD, TOC, etc.) released in a discharge flow at a rate and/or pollutant concentration which may cause interference with the sewer collection system or wastewater treatment process. This also includes petroleum oil, non-biodegradable cutting oil, or other products of mineral oil origin in amounts that may cause interference or pass through at the wastewater treatment facility.

3. Brewery Waste

Any discharge containing solid or other substances in which sufficient quantity to cause or have the potential to cause obstruction to the flow in sewers or pass through or other interference or damage to the sewer collection system. Any pollutant, including oxygen demanding pollutants (BOD, COD, TOC, etc.) and/or suspended solids released in a discharge flow at a rate and/or pollutant concentration which may cause interference with the sewer collection system or wastewater treatment process.

4. Radioactive Waste

Any discharge containing a toxic, radioactive, poisonous or other substances in which sufficient quantity to cause or have the potential to cause injury or damage to a person or property or interference with any sewage treatment process, cause corrosive structural damage, constitute a hazard to humans or create any hazard to the sewer system or the effluent of the sewer system. All such wastes shall be subject to compliance with Nuclear Regulatory Commission standards for sewer disposal including the Unity Equation.

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Responsible Agent: Operations

5. pH Waste

Any discharge with a pH less than 5.5 standard units (SU) or greater than 10.5 SU as determined by either a grab or a composite sample.

6. Dyes and Coloring Material

Dyes or coloring materials which may pass through a sewage facility and discolor the effluent from a sewage facility except where the dye is used by the Liberty Utilities BMSC, or one or more of its agents, as a tracer.

7. Miscellaneous Restricted Wastes

Any of the following wastes:

- a. 4,4' - DDE
- b. 4,4' - DDT
- c. Aldrin
- d. BHC—Alpha
- e. BHC—Beta
- f. BHC—Gamma (Lindane)
- g. Heptachlor
- h. Heptachlor epoxide.
- i. Polychlorinated biphenyl compounds (PCB's)

7. Temperature

Any waste other than sanitary waste which, will raise the temperature of waste entering any sewage facility to 40 degrees Celsius (104 degrees Fahrenheit) or more; or any non-domestic waste with a temperature of 65 degrees Celsius (150 degrees Fahrenheit) or more.

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Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-002)

SECTION 2 - DENTAL OPERATIONS

I. APPLICATION

This code of practice for dental operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to dental operations.

II. DISCHARGE REGULATIONS

An operator of a dental operation must not discharge waste which, at the point of discharge into a sewer, contains:

- a. prohibited waste, special waste, or storm water ; or
- b. restricted waste with the exception of mercury measured at the point of discharge from a certified amalgam separator.

An operator of a dental operation that produces liquid waste from photographic imaging containing silver shall comply with the requirements of Liberty Utilities BMSC-CP-01-001.

An operator of a dental operation that produces wastewater containing dental amalgam must either:

- a. collect and transport the wastewater from the dental operation for off-site waste management; or
- b. treat the wastewater at the dental operation site prior to discharge to the sewer using a certified amalgam separator.

An operator of a dental operation must install and maintain the amalgam separator according to the manufacturer's or supplier's recommendations in order that the amalgam separator functions correctly. Such separator must be certified for use by the manufacturer.

An operator of a dental operation who installs an amalgam separator must ensure that:

- a. all dental operation wastewater that contains dental amalgam is treated using the amalgam separator;
- b. a monitoring point is installed at the outlet of the amalgam separator or downstream of the amalgam separator at a location upstream of any discharge of other waste;
- c. the monitoring point must be installed in such a manner that the total flow from the amalgam separator may be intercepted and sampled; and
- d. the monitoring point shall be readily and easily accessible at all times for inspection.

If the amalgam separator is located downstream of a wet vacuum system, an operator of a dental operation must ensure that:

- a. the wet vacuum system is fitted with an internal flow control fitting; or
- b. a flow control fitting is installed on the water supply line to the wet vacuum system.

The flow control fitting must be sized to limit the flow to a rate that is no more than the maximum inlet flow rate of the amalgam separator as stated by the manufacturer of the amalgam separator.

Approved: _____

Responsible Agent: Operations

An operator of a dental operation must locate an amalgam separator in such a manner that an accidental spill, leak or collecting container failure will not result in waste containing amalgam entering any sewer. If a location is not available, an operator of a dental operation must do one of the following:

- (a) install spill containment to contain spills or leaks from the amalgam separator; or
- (b) cap all floor drains into which liquid spilled from the amalgam separator would normally flow.

An operator of a dental operation must replace the amalgam separator's collecting container when any one of the following occurs:

- (a) the manufacturer's or supplier's recommended expiry date, as shown on the amalgam separator, has been reached; or
- (b) the warning level specified by the manufacturer has been reached; or
- (c) analytical data obtained using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.000005 mg/L or lower, indicates that the total concentration of mercury in the discharge from the amalgam separator is greater than, or equal to 0.005 mg/L.

An operator of a dental operation shall not dispose of dental amalgam collected in an amalgam separator, a collecting container, or any other device, to a sewer.

III. RECORD KEEPING AND RETENTION

An operator of a dental operation that uses an amalgam separator must keep, at the site of installation of the amalgam separator, an operation and maintenance manual containing instructions for installation, use, maintenance and service of the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must post, at the site of installation of the amalgam separator, a copy of the manufacturer's standard test report pertaining to the amalgam separator installed.

An operator of a dental operation that uses an amalgam separator must keep a record book at the dental operation site that includes the following information pertaining to the amalgam separator installed:

- a. date of installation of the amalgam separator and name of the installation service provider;
- b. serial number and expiry date of the amalgam separator and/or its components;
- c. maximum recommended flow rate through the amalgam separator, where applicable;
- d. dates of inspection, maintenance, cleaning and replacement of any amalgam separation equipment or components;
- e. dates and descriptions of all operational problems, spills, leaks or collecting container failures associated with the amalgam separator and remedial actions taken;
- f. name, address and telephone number of any person or company who performs any maintenance or disposal services related to the operation of the amalgam separator; and
- g. dates of pick-up of the collecting container for off-site disposal, volume of waste disposed and the location of disposal.

The records must be retained for a period of two years and must be available on request by an company representative.

Approved: _____

Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-003)

SECTION 3 - DRY CLEANING OPERATIONS

I. APPLICATION

This code of practice for Dry Cleaning operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from dry cleaning businesses, or other facilities employing solvent or chemical cleaning routines.

Definitions are included in Liberty Utilities BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a dry cleaning operation must not discharge waste, which at the point of discharge into a sewer contains:

- (a) Petroleum solvent in a concentration that is in excess of 15 milligrams per liter as analyzed in a grab sample; and
- (b) Prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

Solvent Water Separators and Holding Tanks

Solvent/water separator and holding tank installations must conform to the requirements of this code of practice.

An operator of a dry cleaning operation shall not directly discharge wastewater from the solvent/water separator to a sewage facility

All dry cleaning operations in business that generate wastewater containing tetrachloroethylene, perchloromethylene, or petroleum solvent, but do not have a solvent/water separator and holding tank shall install and maintain a solvent/water separator and holding tank when any of the following occur:

- (a) The dry cleaning operation is renovated, to modify the plumbing or dry cleaning equipment;
- (b) New equipment, designed specifically for dry cleaning, is added to the dry cleaning operation; or
- (c) The discharge from the dry cleaning operation exceeds the discharge limits specified above or any of the restricted waste criteria specified in Liberty Utilities BMSC-CP-01-DEF.

An operator of a dry cleaning operation must:

- (a) Collect the wastewater discharged from a solvent/water separator into a transparent, solvent-compatible, holding tank with a containment capacity 25% larger than the total volume of the solvent/water separator; and
- (b) Allow the wastewater to stand undisturbed for a period of not less than 12 hours following each operating date.

If the holding tank contains any visible tetrachloroethylene or petroleum solvent after the specified period of time, then the tetrachloroethylene or petroleum solvent must be separated and returned to the solvent recovery system. After the removal of all visible solvent, the wastewater may be discharged to the sanitary sewer.

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Visual Inspections

An operator of a dry cleaning operation must:

- (a) Visually inspect the solvent/water separator on a daily basis and
- (b) Clean the solvent/water separator at least once every seven (7) days to manufacturer's standards.

Spills and Leaks

An operator of a dry cleaning operation must install spill containment facilities in all chemical storage areas and around all dry cleaning machines.

An operator of a dry cleaning operation must block off all sewer drains within the containment area for chemical storage and dry cleaning equipment to prevent any accidental discharge of solvent to a sewer.

An operator of a dry cleaning operation must inspect all dry cleaning equipment for liquid leaks at least once per day.

An operator of a dry cleaning operation must keep all equipment clean to ensure that leaks are visible. The following areas and items are to be checked for leaks:

- (i) hose connections, unions, couplings and valves
- (ii) machine door gasket and seating
- (iii) filter head gasket and seating
- (iv) pumps
- (v) base tanks and storage
- (vi) solvent/water separators
- (vii) filter sludge recovery
- (viii) distillation unit
- (ix) diverter valves
- (x) saturated lint in lint baskets
- (xi) holding tanks
- (xii) cartridge filters

An operator of a dry cleaning operation who detects any liquid leak from dry cleaning equipment or chemical storage must repair the leak within 72 hours and must immediately prevent any discharge of contaminants to a sewer.

III. RECORD KEEPING AND RETENTION

Every dry cleaning operation must keep a record book on site for inspection with records from the previous two years.

The following information shall be recorded in the record book:

- (i) record of all inspections done by the operator, employees or other hired personnel;
- (ii) record of any liquid leaks detected and remedial action taken;
- (iii) record of solvent/water separator cleaning;
- (iv) record of holding tank cleaning and solvent transfer; and
- (v) record of all other equipment maintenance and repair.

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Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-004)

SECTION 4 - FOOD SERVICE OPERATIONS

I. APPLICATION

This code of practice for Food Service operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from restaurants, or other facilities employing food service (such as food preparation services) as a primary or secondary business operation. Traps, interceptors and separators shall be provided to prevent the discharge of oil, grease, sand and other substances harmful or hazardous to the building drainage system, the collection system the private sewage disposal system or the sewage treatment plant or processes.

Traps, interceptors and separators shall be installed:

- (a) operators of a food services operation that adds kitchen equipment that discharges oil and grease;
- (b) operators of a food services operation that discharges non-domestic waste to sewer that exceeds any of the restricted waste criteria specified in Liberty Utilities BMSC-CP-01-DEF; or
- (c) any food service operation, as determined by Liberty Black Mountain's wastewater operations group.
- (d) at new facilities
- (e) at existing food service facilities, not equipped with a trap, interceptor or separator, when additions, alterations or remodel are done which increase servicing volume, seating capacity, , etc.
- (f) at existing food service facilities, equipped with a trap, interceptor or separator, when additions, alterations or remodel are done which increase servicing volume, seating capacity, changes to the menu, etc.
- (g) at any non-food facilities when additions, alterations, or remodeling is proposed for the purpose of food preparation and service.
- (h) at existing facilities not equipped with a trap, interceptor or separator, which is proposed for the purpose of food preparation and service.

Definitions are included in Liberty Utilities BMSC-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a Food Service Operation must not discharge waste, which at the point of discharge into a sewer, contains:

- I. Prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

III. GREASE INTERCEPTORS

Grease interceptors are required to be installed and maintained by the Owner of food service operations within the collection system of Liberty Black Mountain facilities. Grease interceptor installations shall conform to the requirements of this code of practice.

Interceptors, such as grease, oil, or sand shall be provided by laundries, restaurants, service stations, auto repair shops, carwashes and other industrial users when, in the opinion of Liberty Black Mountain, interceptors are necessary for the proper handling of wastewater containing oil and grease or sand or any flammable wastes. Such interceptors shall not be required for domestic users.

Construction:

All traps, interceptors and separators shall be constructed of impervious materials capable of withstanding abrupt

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and extreme changes in temperature. New or upgraded grease device shall have a three-lid manhole, properly sized per Table 1. Traps, interceptors and separators shall be watertight, and equipped with easily removable covers. Covers shall be gastight and watertight.

Cleaning and Maintenance:

Cleaning and maintenance must be performed when total volume of captured oil, grease and solids material displaces more than twenty-five (25) percent of the total volume of the trap, interceptor or separator or when the pH of a sample taken from the effluent side of the interceptor drops below 5.0 or when odor generation becomes a health issue or when the Liberty Black Mountain inspection determines a cleaning is necessary.

Maintenance Records:

All traps, interceptors and separators shall be maintained by the user in efficient operating condition at all times. Written records and documentation of all cleaning, repair, calibration, and maintenance shall be maintained at the facility for a minimum of three (3) years and be made available upon request.

Maintenance Inspection:

All traps, interceptors and separators shall be inspected by Liberty Black Mountain representative during normal working hours. Inspection results shall be made available to person, firm or corporation in reasonable charge of the traps, interceptors and separators. Liberty Black Mountain representative shall require correction in order to enforce Liberty Black Mountain pretreatment code of practices.

Skimming:

Skimming, decanting or discharging of removed waste or wastewater back into any traps, interceptors and separators or any appurtenance of the wastewater collection system is strictly prohibited.

Pumping:

All oil, sand and grease interceptors shall be pumped out or cleaned out completely not less than once every ninety (90) calendar days. Grease traps must be cleaned out completely not less than once every thirty (30) calendar days. Traps and interceptors shall be cleaned more frequently when necessary or required.

Bacteria as a Substitute:

The use of bacteria additives as a supplement to maintenance may be authorized by Liberty Black Mountain when a written request is made to the Liberty Black Mountain, which includes material safety data sheets. The addition of emulsifiers, de-emulsifiers, surface active agents, enzymes, or degreasers directly or into any drain leading to any grease removal device is strictly prohibited unless approved by Liberty Black Mountain.

Use:

Traps, interceptors and separators shall be single user only. When an interceptor can be safely used by multiple users (e.g., food courts), multiple users may be allowed when approved by Liberty Black Mountain. Multiple facilities operated by the same person, firm or corporation may be allowed to connect to a single interceptor with approval from Liberty Black Mountain. The person, firm or corporation in reasonable charge of the trap, interceptor or separator shall take any and all steps necessary to assure adequacy which includes repair, modification or replacement.

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Alternate Devices and Technology:

Alternative devices and technologies shall be submitted to Liberty Black Mountain for approval before any such device is installed. The service facility will be required to furnish analytical data demonstrating the effluent discharge concentration to Liberty Black Mountain's wastewater collection system will not exceed those listed in Liberty Utilities BMSC-CP-01-001.

Sizing:

All traps, interceptors and separators shall be properly sized per Table 1. When an interceptor is sized less than five hundred (500) gallons or more than two thousand five hundred (2,500) gallons, the person, firm or corporation making the permit application shall first meet with Liberty Black Mountain to verify the reduced or increased size has been correctly calculated and that no other options are available.

Size Modification:

Modifying the size of any trap or interceptor shall only be done when sizing per Table 1 allows the modification. Modifying the size of any trap or interceptor shall not be done without the approval of Liberty Black Mountain.

Domestic Wastewater:

Domestic wastewater shall not be discharged to the interceptor.

Minimization Plan:

All facilities required to install and operate a trap, interceptor or separator shall develop and implement a Waste Minimization Plan pertaining to the disposal of grease, oils, and food bearing wastes.

Best Management:

All establishments requiring a trap, interceptor or separator shall adopt BMP's (Best Management Practices) for handling sources of floatable oils, fat or grease originating within their facility. Proof of employee training in BMP's shall be shown to Liberty Black Mountain upon request.

Other Fixtures:

Toilets, urinals, and other similar fixtures shall not discharge through a grease interceptor.

Minimization Program:

The applicant shall establish and submit a written waste minimization plan (maintenance program) outlining specific methods (Best Management Practices) that the facility will use on a daily basis to reduce the discharge of oil and grease as well as solids from entering the interception device and ultimately, the Liberty Black Mountain sewer system. This plan shall be acceptable to and approved by Liberty Black Mountain. The approved document shall accompany the permit application.

Discharge Permit:

This document will be used in lieu of a discharge permit to assist with enforcing all Liberty Black Mountain's codes of practices.

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Grease interceptors and automatic grease removal devices required:

A grease interceptor or automatic grease removal device shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias, caterers, nursing homes, day care center, churches and clubs. Fixtures and equipment shall include pot sinks, pre-rinse sinks; soup kettles or similar devices; work stations; floor drains or sinks into which kettles are drained; automatic hood wash units and dishwashers without pre-rinse sinks. Grease interceptors and automatic grease removal devices shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. Interceptors, such as grease, oil or sand shall be provided at laundries, restaurants, service stations, auto repair shops, carwashes and other industrial users when the proper handling of wastewater containing oil and grease or sand or any flammable wastes is necessary.

Location:

All Interceptors shall be approved and shall be located to be readily and easily accessible for cleaning and inspection.

Food waste grinder:

Where food waste grinders connect to grease interceptors, a solids interceptor shall separate the discharge before connecting to the grease interceptor. Solids interceptors and grease interceptors shall be sized and rated for the discharge of the food waste grinder. Emulsifiers, chemicals, enzymes and bacteria shall not discharge into the food waste grinder. Liberty Black Mountain shall require any user to cease operation of a garbage grinder and permanently remove such equipment when it is determined that the grinder is imposing any adverse effect on interceptor function.

Grease interceptor capacity:

Grease interceptors shall have the grease retention capacity indicated in Table 1 for the flow-through rates indicated. Liberty Black Mountain shall make determinations of interceptor adequacy and need, based on review of all relevant information regarding interceptor performance, facility site and building plan review and to require repairs to, modifications, or replacement of such traps.

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TABLE 1 - CAPACITY OF GREASE INTERCEPTORS - EPA-2 Model

A. Determine maximum drainage flow from fixtures:					
Type of Fixture	Total Fixtures		Flow Rate		Amount
Restaurant kitchen sink	_____	X	15 gpm	=	_____
Single compartment sink	_____	X	20 gpm	=	_____
Double compartment sink	_____	X	25 gpm	=	_____
2, single compartment sinks	_____	X	25 gpm	=	_____
2, double compartment sinks	_____	X	35 gpm	=	_____
Triple sink 1.5 inch drain	_____	X	35 gpm	=	_____
Triple sink 2 inch drain	_____	X	50 gpm	=	_____
30 gallon dishwasher	_____	X	15 gpm	=	_____
50 gallon dishwasher	_____	X	25 gpm	=	_____
50--100 gallon dishwasher	_____	X	40 gpm	=	_____
B. Total	Number of fixtures			=	_____ gpm
C. Loading Factors					
Restaurant type	Fast food-paper delivery			=	.50
	Low volume			=	.50
	Medium volume			=	.75
	High Volume			=	1.0
D. $B \times C = D$, subtotal					
E. $D \times 60 = \text{Subtotal} \times 60 \text{ minutes} = E$, maximum flow for one (1) hour, in gallons					
F. $E \times 2 = \text{maximum flow for one hour times two (2) hours retention time (based on restaurant volume)} = F$, volume of trap in gallons = _____					

Access and maintenance of traps, interceptors, and separators:

Complete access shall be provided to each interceptor and separator for service, maintenance and inspection of the inner chamber(s) and viewing and sampling of effluent wastewater discharged to the sewer. Interceptors and separators shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the interceptor or separator.

Periodic Inspection:

All traps, inceptors and separators shall be subject to periodic inspections by Liberty Black Mountain during normal operating hours. These inspections can be based on an annual inspection or when a complaint is registered with Liberty Black Mountain regarding a grease-removal device. Should the inspection of any trap, interceptor or separator indicate a violation of any item in (1) thru (3) below, the person, firm or corporation in reasonable charge shall bring the device into compliance within the timeframe noted on the notice of violation, but not longer than fourteen (14) calendar days.

(1) If twenty-five (25) percent of the interceptor is full; both surface (oil and grease) and bottom (solids).

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(2) When OSHA (Occupational, Safety and Health Administration) atmospheric levels of Hydrogen Sulfide limits have been exceeded - "Short Term Exposure Limit" (STEL) of fifteen (15) ppm over a fifteen-minute time-weighted average. When the "Immediately Dangerous to Life and Health" (IDLH) level is 100 ppm or above, immediate action shall be performed to return the level of Hydrogen Sulfide to safe and acceptable limits. If the violation cannot be immediately resolved, all use of the Trap, Interceptor or Separator shall cease until compliance is obtained.

(3) When pH in the effluent chamber falls below 5.0 - which is an unhealthy anaerobic interceptor condition.

Maintenance:

Any trap, interceptor or separator not adequately maintained to prevent floatable oils, fat or grease from entering the sewerage system or produce excessive odors shall be in violation of Liberty Black Mountain codes of practice.

Clearing Obstructions:

Liberty Black Mountain shall take appropriate action to clear any obstruction of the Liberty Black Mountain sewer that causes a sewer overflow. When the obstruction is found to be caused by an over-burdened or non-maintained trap, interceptor or separator, the person, firm or corporation in reasonable charge of the trap, interceptor or separator reimbursement of Liberty Black Mountain costs associated with clean-up efforts including any fines leveled against Liberty Black Mountain. Any establishments that continuously violates Liberty Black Mountain codes of practice shall be subject to having sewer service discontinued.

Contain and/or Clean Up:

Should Liberty Black Mountain find it necessary to contain and/or clean up a private sanitary sewer overflow caused by blockage of private or public sewer lateral or system, all associated cost shall be the responsibility of the person, firm or corporation in reasonable charge of the property.

Repairs or Replacements:

When repairs or replacements are necessary to a trap, interceptor or separator, all repairs or replacements shall be completed within the time frame stated on the notice to comply. Liberty Black Mountain may authorize an time extension, not to exceed thirty (30) days, for justifiable cause.

Grease Removal:

The person, firm or corporation in reasonable charge shall remove and dispose of grease at a facility permitted to receive and process such waste. Cleaning frequencies shall be dependent on the amount of oil, grease or solids generated at each operation, the size of the grease trap or interceptor, and the approved written waste minimization program, but not to exceed thirty-day intervals for traps and ninety-day intervals for interceptors. Traps and interceptors shall be cleaned by a licensed contractor.

Interference, Operation and Odors:

Any facility whose effluent discharge into the sewerage system causes interference in the conveyance system, operation of the sewerage system, or emits excessive odors shall be required to sample the discharge from the trap, interceptor or separator and have it analyzed for oil and grease and sulfides, total and dissolved. Results of the analysis shall be immediately reported. Liberty Black Mountain may sample the grease interception device at any time, utilizing Liberty Black Mountain representatives. The person, firm or corporation in reasonable charge shall be responsible for any and all associated cost of such testing or sampling.

Approved: _____

Responsible Agent: Operations

IV. RECORD KEEPING AND RETENTION

An operator of a food services operation must keep a record at the food services operation of all grease interceptor inspection and maintenance activities including:

- (a) the date of inspection or maintenance;
- (b) the maintenance conducted;
- (c) the type and quantity of material removed from the grease interceptor; and
- (d) the location of disposal of the material removed from the grease interceptor.

The records shall be retained for a period of three years, and shall be available on request by an company representative.

Approved: _____

Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-005)

SECTION 5 - PHOTOGRAPHIC IMAGING OPERATIONS

I. APPLICATION

This code of practice for photographic imaging operations defines mandatory requirements for managing non-domestic waste discharged directly or indirectly into a sewer connected to a sewage facility.

This code of practice applies to photographic imaging operations. Definitions are included in Liberty Utilities BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of a photographic imaging operation must not discharge waste which, at the point of discharge into a sewer, contains:

- (a) silver in a concentration that is in excess of prescribed local limit analyzed in a grab sample; or,
- (b) prohibited waste, restricted waste, special waste, storm water, or uncontaminated water as defined in Liberty Utilities BMSC-CP-01-DEF.

An operator of a photographic imaging operation that produces liquid waste containing silver must either:

- (a) collect and transport the waste from the photographic imaging operation for off-site waste management; or
- (b) treat the waste at the photographic imaging operation site prior to discharge to the sewer using one of the following silver recovery technologies:
 - (i) two chemical recovery cartridges connected in a series;
 - (ii) an electrolytic recovery unit followed by two chemical recovery cartridges connected in series; or
 - (iii) any other silver recovery technology, or combination of technologies, capable of reducing the concentration of silver in the waste to 1.2 mg/L or less where valid analytical test data has been submitted to and accepted by the Liberty Black Mountain wastewater group.

An operator of a photographic imaging operation must install and maintain silver recovery technology according to the manufacturer's or supplier's recommendations.

An operator of a photographic imaging operation must collect all liquid waste containing silver in a holding tank and must deliver this waste to the chemical recovery cartridges using a metering pump.

An operator of a photographic imaging operation must calibrate the metering pump at least once per year.

Spill/Leak Prevention

An operator of a photographic imaging operation must locate the silver recovery system in such a manner that an accidental spill, leak or container failure will not result in liquid waste containing silver in concentrations greater than 1.2 mg/L entering any sewer.

If a location referred to above is not available, an operator of a photographic imaging operation must do one of the following:

- (a) install spill containment to contain spills or leaks from the silver recovery system; or

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- (b) cap all floor drains into which liquid spilled from the silver recovery system would normally flow.

Testing

When using two separate chemical recovery cartridges, an operator of a photographic imaging operation must test the discharge from the first cartridge for silver content at least once per month using either silver test paper or a portable silver test kit.

When the discharge from the first chemical recovery cartridge referred to above cannot be sampled, an operator of a photographic imaging operation must:

- (a) install a cumulative flow meter on the silver recovery system; and
- (b) test the discharge from the second chemical recovery cartridge once per week using silver test paper or a silver test kit.

Cartridge Replacement

An operator of a photographic imaging operation must replace the chemical recovery cartridges when any one of the following occurs:

- (a) the manufacturer's or supplier's recommended expiry date, as shown on each cartridge, has been reached;
- (b) eighty percent (80%) of the manufacturer's or supplier's maximum recommended capacity, or total cumulative flow, for each cartridge has been reached;
- (c) test data, using silver test paper or a silver test kit, indicates that the discharge from the first cartridge is greater than 1000 mg/L; or
- (d) analytical data using a method of analysis outlined in standard methods, or an alternative method of analysis approved by the manager, having a method detection limit of 0.5 mg/L silver or lower, indicates that the concentration of silver in the discharge from the silver recovery system is greater than, or equal to, 1.2 mg/L.

III. RECORD KEEPING AND RETENTION

An operator of a photographic imaging operation that uses a silver recovery system must keep, at the photographic imaging operation site, an operation and maintenance manual pertaining to all equipment used in the silver recovery system.

An operator of a photographic imaging operation that uses two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

- (a) serial number of each chemical recovery cartridge used;
- (b) installation date of each chemical recovery cartridge used;
- (c) expiry date of each chemical recovery cartridge used (where provided by manufacturers or suppliers);
- (d) maximum recommended capacity, or total cumulative flow, of each chemical recovery cartridge used;
- (e) dates of all metering pump calibrations;
- (f) monthly silver test results on the discharge from the first chemical recovery cartridge; or where the discharge from the first cartridge cannot be sampled, weekly silver test results on the discharge from the second chemical recovery cartridge and weekly cumulative flows through the silver recovery system; and
- (g) dates and descriptions of all operational problems associated with the chemical recovery cartridges and remedial actions taken.

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¹ If treatment of liquid waste with two chemical recovery cartridges connected in series is the only silver recovery technology being used, then the owner of the photographic imaging operation must replace both chemical recovery cartridges when one of the events referred to occurs.

If treatment of liquid waste with two chemical recovery cartridges connected in series is used following treatment by an electrolytic recovery unit, the second cartridge may replace the used first cartridge and a new second cartridge may be installed when one of the events referred to occurs.

Both chemical recovery cartridges used following an electrolytic recovery unit must be replaced by the operator of the photographic imaging operation when one of the events referred to above occurs if this is recommended by the manufacturer or supplier of the cartridges.

An operator of a photographic imaging operation that uses an electrolytic recovery unit in addition to two chemical recovery cartridges connected in series must keep a record book at the photographic imaging operation site which includes the following information recorded for the previous two years:

- (a) all information specified above;
- (b) date of each removal of silver from the electrolytic recovery unit;
- (c) date of each maintenance check on the electrolytic recovery unit;
- (d) dates and descriptions of all operational problems associated with the electrolytic recovery unit and remedial actions taken.

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LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-006)

SECTION 6 - RV PARK OPERATIONS

I. APPLICATION

This code of practice for RV park operations defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a sewage facility from RVs, mobile homes, trailers, watercraft and other sources which employ storage, chemical disinfection/stabilization and discharge as a waste disposal mechanism.

This code of practice applies to all RV park operations. Definitions are included in Liberty Utilities BMSC-CP-01-DEF.

II. DISCHARGE REGULATIONS

An operator of an RV park operation must not discharge waste, which at the point of discharge into a sewer, contains:

- (a) prohibited waste, restricted waste, special waste, storm water, or uncontaminated water.

If the RV park operation accepts RV customers with the intention of providing sewerage hook-ups, that practice is only acceptable if one of the following conditions is met:

1. If the RV park operation has a dedicated pre-treatment facility, that facility must be used for the disposal of the first discharge of wastewater from any entering RVs. The facility must be maintained as per manufacturer's or engineer's operating instructions. Discharge from that facility which is directed to a sewer connected to a sewerage facility shall be metered such that large slugs of waste are not introduced to the sewer instantaneously. Discharges from such facilities to sewers are limited to 10% of the average daily sewerage flow (in USGPM) experienced in the sewer.
2. In the absence of a dedicated pre-treatment facility, the RV park operation shall require incoming RVs to certify that, prior to connection to a sewer, that the holding tanks of the RV have been discharged at an approved facility.

III. RECORD KEEPING AND RETENTION

An operator of an RV park operation must keep a record at the RV park operation of:

1. All disposals of RV waste into a dedicated pre-treatment facility;
2. Pre-treatment facility inspection and maintenance activities including:
 - a. the date of inspection or maintenance;
 - b. the maintenance conducted; and
 - c. the type and quantity of material removed from the facility;
3. Certifications of waste disposal prior to hook up of RVs to sewer services.

The records shall be retained for a period of two years, and shall be available on request by a Liberty Black Mountain representative.

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LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-007)

SECTION 7 – PRETREATMENT/INDUSTRIAL WASTE CONTROL

I APPLICATION

This Section is adopted by Liberty Black Mountain in accordance with the authority conferred in the Clean Water Act, and any regulations implementing the Clean Water Act, including, but not limited to, 40 CFR 403.8, applicable Arizona Revised Statutes, including but not limited to 49 A.R.S. 2, applicable Arizona Administrative Code, including but not limited to 18 A.A.C. 9 and 18 A.A.C. 11, and with all the powers thereof which are specifically granted to Liberty Black Mountain, or are necessary or incidental to or implied from power specifically granted therein for carrying out the objectives and purposes of Liberty Black Mountain and this Section.

II. COMPLIANCE

The Pretreatment/Industrial Waste Control Program is designed to enable Liberty Black Mountain to comply with all conditions of any applicable Aquifer Protection Permit (APP), AZPDES discharge permit, Federal Pretreatment Regulations, Arizona Pretreatment Regulations, and any applicable sludge disposal regulations, and to meet the following objectives:

1. To prevent the introduction of pollutants into the Company's Facilities which will interfere with the operation of the wastewater systems or contaminate the sludge.
2. To prevent the introduction of pollutants into the wastewater system which will pass through the wastewater system, inadequately treated, into the receiving waters or the atmosphere.
3. To prevent the introduction of pollutants into the wastewater system which might constitute a hazard to humans or to animals.
4. To assure the Company's ability to recycle and reclaim wastewater and sludge.
5. To protect human health and welfare, the environment, property and the Company's wastewater system

II. DISCHARGE REGULATIONS

A. General Discharge Limitations

No customer shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of Liberty Black Mountain's wastewater system. These general prohibitions apply to all customers of Liberty Black Mountain whether or not the customer is subject to National Categorical Pretreatment Standards or any other national, State, Liberty Black Mountain, or local pretreatment standards or requirements.

B. Specific Discharge Limitations

No User shall discharge into the Liberty Black Mountain wastewater system or into any connected sewer system at any time or over any period of time, wastewater containing any of the materials and substances in excess of the limitations provided under Section B "Restricted Waste". The specified limitations may also be imposed directly on process wastewaters prior to dilution by domestic and other wastewaters discharged by a customer.

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Once promulgated, National Categorical Pretreatment Standards for a particular industrial subcategory, if more stringent, shall supersede all conflicting discharge limitations contained in this Section 7, as they apply to that industrial subcategory.

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those contained elsewhere in this Code.

C. Prohibited Discharges

None of the following described sewage, water, substances, materials, or wastes shall be discharged into the Liberty Black Mountain wastewater system or into the sewer system by any customer, and each governing body of any applicable Service Provider shall prohibit and shall prevent such discharges by any Liberty Black Mountain customer, either directly or indirectly, into its sewer system:

- (a) Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the Liberty Black Mountain wastewater system, the sewer system of a Service Provider or any of its connectors, or to the operation of Liberty Black Mountain. At no time shall any reading on an explosion hazard meter, at the point of discharge into the Liberty Black Mountain wastewater system or the sewer system of a Service Provider or any of its customers (or at any point in the wastewater systems), or at any monitoring location designated by Liberty Black Mountain in a wastewater contribution permit, be more than ten percent (10%) of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, tetrachloroethylene, perchloroethylene, bromates, carbides, hydrides, and sulfides.
- (b) Any solid or viscous material which could cause an obstruction to flow in the sewers or in any way could interfere with the treatment process, including as examples of such materials but without limiting the generality of the foregoing, significant proportions of ashes, wax, paraffin, cinders, sand, mud, straw, shavings, metal, glass, rags, lint, feathers, tars, plastics, wood and sawdust, paunch manure, hair and fleshings, entrails, lime slurries, beer and distillery slops, grain processing wastes, grinding compounds, acetylene generation sludge, chemical residues, acid residues, food processing bulk solids, snow, ice, and all other solid objects, material, refuse, and debris not normally contained in sanitary sewage.
- (c) Any wastewater having a pH less than 5.5 for discharges from Industrial Customers into the Liberty Black Mountain wastewater system or the sewer system of a Service Provider or that of any of its Customers, or less than 5.5 or greater than 10.5 for other discharges into the Liberty Black Mountain wastewater system, or wastewater having any other corrosive property capable of causing damage or hazard to any part of the Liberty Black Mountain wastewater system or the sewer system of a Service Provider or any of its Customers, or to personnel.
- (d) Any wastewater having a temperature which will inhibit biological activity at the Liberty Black Mountain treatment plant, but in no case wastewater containing heat in such amounts that the temperature at the introduction into the Liberty Black Mountain wastewater treatment exceeds 40°C (104°F).
- (e) Any pollutants, including oxygen demanding pollutants (BOD, COD, etc.) released at a flow rate and/or pollutant concentration which cause Upset. In no case shall a slug load have a flow rate or contain concentrations or qualities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities, or flow during normal operation.
- (f) Any water or wastes containing a toxic substance (such as Chlorine from large swimming pools over 25,000 gallons, etc.) in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any sewage treatment process, to constitute a hazard to humans or to animals, or to create any hazard or toxic effect in the waters which receive the treated or untreated sewage.
- (g) Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference.

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- (h) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and safety problems.
- (i) Any trucked or hauled pollutants except at discharge points designated by Liberty Black Mountain.
- (j) Any water or wastes containing pollutant quantities or concentrations exceeding the limitations in Section 7 of this Code of Practice, or the limitations in any applicable Categorical Standards.

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Responsible Agent: Operations

III. HAZARDOUS WASTE DISCHARGE NOTICE

Any customer disposing of industrial waste shall notify Liberty Black Mountain, the EPA Regional Waste Management Division Director, and the state hazardous waste authorities in writing of any discharge into the Liberty Black Mountain wastewater system of any substance which, if otherwise disposed of, would be considered a hazardous waste under 40 CFR Part 261. The specific information required to be reported and the time frames in which it is to be reported are found at 40 CFR §403.12(p).

IV. REPORTING REQUIREMENTS FOR SIGNIFICANT INDUSTRIAL USERS

[RESERVED]

V. MONITORING BMSC FACILITIES

Liberty Black Mountain may require to be provided and operated, at the customer's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with the provisions of this Code.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the customer.

The sampling and monitoring facilities shall be provided in accordance with Liberty Black Mountain's requirements and all applicable local construction standards and specifications. Construction shall be completed within such a time frame as Liberty Black Mountain shall specify by written notification.

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Responsible Agent: Operations

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

CODE OF PRACTICE (Liberty Utilities BMSC-CP-01-008)

SECTION 8 – NONCOMPLIANCE / ENFORCEMENT

I. NOTICE OF VIOLATIONS

Whenever Liberty Black Mountain determines that any customer has violated or is violating any provision of this Code, or any directives, orders, or permits issued or approved to which Liberty Black Mountain is bound, Liberty Black Mountain may serve upon such customer a written notice ("Notice") stating the nature of the violation(s) in accordance with A.A.C. R14-2-609.C, and requiring that the customer correct the violation(s) within a specified period of time; perform such tasks as Liberty Black Mountain determines are necessary for the customer to correct the violations; or perform such tasks and submit such information as is necessary for Liberty Black Mountain to evaluate the extent of noncompliance or to determine appropriate enforcement actions to be taken in conjunction with the applicable regulatory agencies. A copy of the Notice shall also be provided to the Director of the Utilities Division of the Arizona Corporation Commission.

II. SUSPENSION OF SERVICE

If the customer does not cure the violation, or present a satisfactory plan of remediation to Liberty Black Mountain, within the time specified in the Notice, then Liberty Black Mountain may suspend or disconnect wastewater treatment service in accordance with A.A.C. R14-2-609.C.

In addition, Liberty Black Mountain may suspend wastewater treatment service, in accordance with A.A.C. R14-2-609.B (without notice), when such suspension is necessary, in the opinion of Liberty Black Mountain, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, or causes to violate any condition of its aquifer protection permit, AZPDES discharge permit, or any applicable sludge disposal regulations.

Any customer notified of an immediate suspension of the wastewater treatment service shall immediately stop or eliminate the discharge. In the event of a failure of the customer to comply voluntarily with the cease and desist request, the Liberty Black Mountain shall take such steps as deemed necessary, including immediate severance of the sewer connection and/or immediate disconnection of the water service, to prevent or minimize damage to the company's wastewater system or endangerment to any individuals or the environment. Any action that results in the immediate suspension of service, or disconnection, of a customer shall be reported to the Director of the Utilities Division of the Arizona Corporation Commission and Maricopa County Environmental Services Department (MCESD) within twenty-four (24) hours of the suspension or disconnection. Any reconnection of the affected customer shall be in accordance with the Liberty Black Mountain Tariff for which the customer must pay the cost of disconnection and reconnection, plus the cost of parts and installation of an Elder valve (or similar equipment) to allow for easier disconnection in the event of a repeated discharge offense by customer.

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RATIONAL AND JUSTIFICATION FOR LOCAL LIMITS

CONVENTIONAL CONTAMINANTS

These limits are consistent with influent loading design parameters for the facility and with other similar sewerage systems in the area. They represent the maximum limits that can be accepted at the headworks and the values are similar to maximum values found in domestic wastewater.

TRACE INORGANIC CONTAMINANTS

These limits were developed to maintain compliance with the aquifer protection and AZPDES permit limits at Liberty Utilities (Black Mountain Sewer) Corp. In considering the waste load allocation for industries, background concentrations in domestic wastewater and the target permit limits at the water reclamation facility were considered. The maximum allowable concentrations that can be allocated to industries were identified while considering the dilution factors that occur in the sewerage system with background wastewater flows.

ARTICLE 5 PRETREATMENT/INDUSTRIAL WASTE CONTROL

5.1 General.

5.1.1 Authority:

This Article 5 is adopted by Liberty Utilities (Black Mountain Sewer) Corp. (Liberty Black Mountain) in accordance with the authority conferred in the Clean Water Act, and any regulations implementing the Clean Water Act, including, but not limited to, 40 CFR 403.8, applicable Arizona Revised Statute, including but not limited to 49 A.R.S. 2, applicable Arizona Administrative Code, including but not limited to 18 A.A.C. 9 and 18 A.A.C. 11, and with all the powers thereof which are specifically granted to Liberty Black Mountain, or are necessary or incidental to or implied from power specifically granted therein for carrying out the objectives and purposes of the Liberty Black Mountain and this Article 5. The provisions in this Article 5 shall be called the Pretreatment/Industrial Waste Control Program of the Liberty Black Mountain.

5.1.2 Compliance:

The Pretreatment/Industrial Waste Control Program of the Liberty Utilities (Black Mountain Sewer) Corp. (Liberty Black Mountain) is designed to enable the Liberty Black Mountain to comply with all conditions of its Arizona Pollutant Discharge Elimination System (AZPDES) Permit, Federal Pretreatment Regulations, Arizona Pretreatment Regulations, and any applicable sludge disposal regulations, and to meet the following objectives:

- (a) To prevent the introduction of pollutants into the Liberty Black Mountain Liberty Black Mountain Facilities which will interfere with the operation of the Wastewater Systems or contaminate the sludge.
- (b) To prevent the introduction of pollutants into the Wastewater System which will pass through the Wastewater System, inadequately treated, into the receiving waters or the atmosphere.
- (c) To prevent the introduction of pollutants into the Wastewater System which might constitute a hazard to humans or to animals.
- (d) To assure the Liberty Black Mountain's ability to recycle and reclaim Wastewater and sludge.
- (e) To protect human health and welfare, the environment, property and Liberty Black Mountain's Wastewater System.

PART A

RULES AND REGULATIONS FOR INDUSTRIAL/PRETREATMENT USERS

5.2 Applicability.

- (a) A User is any non-domestic discharger who contributes, causes, or permits the contribution of wastewater into the Liberty Black Mountain's wastewater collection and City of Scottsdale's POTW.
- (b) Any User, the sewage from which directly or indirectly enters the Wastewater System of the Liberty Black Mountain from an area within or without the boundaries (through a Service Provider) of the Liberty Black Mountain, shall be subject to the requirements of this Part and shall be bound by these Rules and Regulations as they now exist or may hereafter be amended. Such Rules and Regulations may be enforced against any User.

5.3 General Discharge Prohibitions.

No User shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the Liberty Black Mountain's Wastewater System. These general prohibitions apply to all such Users of the Liberty Black Mountain's Wastewater System whether or not the User is subject to national categorical pretreatment standards or any other national, State, Liberty Black Mountain, or local pretreatment standards or requirements: A User may not discharge any of the sewage, water, substances, materials, or wastes listed in Articles 5.4, 5.27, 5.28, 4.29 of these Rules and Regulations.

5.4 Specific Discharge Limitations – Users.

5.4.1 Liberty Black Mountain Limitations:

No User shall discharge into the Liberty Black Mountain Wastewater System or into any connected sewer system at any time or over any period of time, Wastewater containing any of the following materials and substances in excess of the limitations provided herein. These limitations may also be imposed directly on process wastewaters prior to dilution by domestic and other Wastewaters discharged by the User:

ORGANIC CONTAMINANTS (µg/L)	
Benzene	35
Chloroform	2,000
4,4' - DOE	Not allowed
4,4' - DDT	Not allowed
Aldrin	Not allowed
BHC-Alpha	Not allowed
BHC-Gamma (Lindane)	Not allowed
Heptachlor	Not allowed
Heptachlor Epoxide	Not allowed
Polychlorinated biphenyl compounds (PCBs)	Not allowed

PARAMETER	Daily Average Effluent Limitation (mg/L)
Arsenic (As)	0.13
Cadmium (Cd)	0.047
Copper (Cu)	1.5
Cyanide (CN)	2.0
Lead (Pb)	0.41
Mercury (Hg)	0.0023
Selenium (Se)	0.10
Silver (Ag)	1.2
Zinc	3.5

*Notwithstanding these numeric limitations, the discharge of dry-cleaning process wastes, including new and used tetrachloroethene (perchloroethylene), still bottom oil, and separator water, is prohibited entirely. Where necessary the may require that these wastes be physically prevented from discharging into the Liberty Black Mountain's Wastewater System.

5.4.2 General Requirements Regarding Deleterious Wastes.

None of the following described sewage, water, substances, materials or waste shall be discharged into the Liberty Black Mountain's Wastewater System; and each governing body of each Service Provider shall prohibit and shall prevent any discharges from any outlet into its sewer system, if such discharges cause or significantly contribute to a violation of any of the requirements contained herein:

- (a) Sewage of such a nature and delivered at such a rate as to impair the hydraulic capacity of the Liberty Black Mountain's Wastewater System, normal and reasonable wear and usage excepted.
- (b) Sewage of such a quantity, quality, or other nature as to impair the strength or the durability of the sewer structures, equipment or treatment works, either by chemical or by mechanical action.
- (c) Sewage having a flash point lower than 187°F, as determined by the test methods specified in 40 CFR §261.21.
- (d) Any radioactive substance, the discharge of which, does not comply with Article 4, Appendix B of the AAC, Title 12, Chapter 1.
- (e) Any garbage other than that received directly into the Service Provider's sewer system from domestic and commercial garbage grinders in dwellings, restaurants, hotels, stores, and institutions, by which such garbage has been shredded to such a degree that all particles will be carried freely under flow conditions normally prevailing in public sewers with no particle greater than one-half (1/2) inch in any dimension.
- (f) Any night soil or septic tank pumpage, except by permit in writing from the Liberty Black Mountain at such points and under such conditions as the Liberty Black Mountain may stipulate in each permit.
- (g) Sludge or other material from sewage or industrial waste treatment plants or from water treatment plants, except such sludge or other material, the discharge of which to the Liberty Black Mountain Wastewater System shall be governed by the provisions of these Rules and Regulations or any Connector Agreement or as otherwise authorized by the Liberty Black Mountain.
- (h) Water which has been used for cooling or heat transfer purposes without recirculation, discharged from any system of condensation, air conditioning, refrigeration, or similar use.
- (i) Water accumulated in excavations or accumulated as the result of grading, water taken from the ground by well points, or any other

- drainage associated with construction.
- (j) Any water or wastes containing grease or oil and other substances that will solidify or become discernibly viscous at temperatures between 32°F and 150°F except by permit in writing from the Liberty Black Mountain at such points and under such conditions as the Liberty Black Mountain may stipulate in each permit.
 - (k) Any wastes that contain a corrosive, noxious, or malodorous material or substance which, either singly or by reaction with other wastes, is capable of causing damage to the Liberty Black Mountain's Wastewater System or to any part thereof, of creating a public nuisance or hazard, or of preventing entry into the sewers for maintenance and repair.
 - (l) Any wastes that contain concentrated dye wastes or other wastes that are either highly colored or could become highly colored by reacting with any other wastes, except by permission of the Liberty Black Mountain.
 - (m) Any wastes which are unusual in composition; i.e., contain an extremely large amount of suspended solids or BOD; are high in dissolved solids such as sodium chloride, calcium chloride, or sodium sulfate; contain substances conducive to creating tastes or odors in drinking water supplies; otherwise make such waters unpalatable even after conventional water purification treatment; or are in any other way extremely unusual unless the Liberty Black Mountain determines that such wastes may be admitted to the Liberty Black Mountain Wastewater System or shall be modified or treated before being so admitted.
 - (n) Any substance which may cause the Liberty Black Mountain's effluent or any other product of the Liberty Black Mountain such as residues, sludges or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case, shall a substance discharged to the Wastewater System cause the Liberty Black Mountain to be in non-compliance with sludge use or disposal criteria, guidelines or regulations developed under Article 405 of the Clean Water Act; any criteria, guidelines, or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or State criteria applicable to the sludge management method being used.
 - (o) Any substance which may cause the Liberty Black Mountain to violate its Arizona Pollutant Discharge Elimination System (AZPDES) Permit or the receiving water quality standards.
 - (p) Except for existing combined sewer facilities, any stormwater, directly or indirectly, from surface drains, ditches, or streams, storm or combined sewers, roof, areaway, sumps and sump pumps, or foundation drains, or from any other means, including subsurface drainage or groundwater.

(q) 5.4.3 Prohibited Discharges.

None of the following described sewage, water, substances, materials, or wastes shall be discharged into the Liberty Black Mountain's Wastewater System or into the sewer system of a Service

Provider, by any User and each governing body of each Service Provider shall prohibit and shall prevent such discharges by any User, either directly or indirectly, into its sewer system:

- (a) Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the Liberty Black Mountain's Wastewater System, the sewer system of a Service Provider or any of its connectors, or to the operation of the Liberty Black Mountain. At no time shall any reading on an explosion hazard meter, at the point of discharge into the Liberty Black Mountain's Wastewater System or the sewer system of a Service Provider or any of its Customers (or at any point in the Wastewater Systems), or at any monitoring location designated by the Liberty Black Mountain in a wastewater contribution permit, be more than ten percent (10%) of the Lower Explosive Limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides.
- (b) Any solid or viscous material which could cause an obstruction to flow in the sewers or in any way could interfere with the treatment process, including as examples of such materials but without limiting the generality of the foregoing, significant proportions of ashes, wax, paraffin, cinders, sand, mud, straw, shavings, metal, glass, rags, lint, feathers, tars, plastics, wood and sawdust, paunch manure, hair and fleshings, entrails, lime slurries, beer and distillery slops, grain processing wastes, grinding compounds, acetylene generation sludge, chemical residues, acid residues, food processing bulk solids, snow, ice, and all other solid objects, material, refuse, and debris not normally contained in sanitary sewage.
- (c) Any Wastewater having a pH less than 5.5 and more than 10.5 for discharges from Industrial Users into the Liberty Black Mountain's Wastewater System or the sewer system of a Service Provider or that of any of its Customers, or less than 5.5 or greater than 10.5 for other discharges into the Liberty Black Mountain's Wastewater System, or wastewater having any other corrosive property capable of causing damage or hazard to any part of the Liberty Black Mountain's

- Wastewater System or the sewer system of a Service Provider or any of its Customers, or to personnel.
- (d) Any wastewater having a temperature which will inhibit biological activity at the Liberty Black Mountain's treatment plant, but in no case wastewater containing heat in such amounts that the temperature at the introduction into the Liberty Black Mountain's, Wastewater Treatment Works exceeds 40°C (104°F).
 - (e) Any pollutants, including oxygen demanding pollutants (BOD, etc.) released at a flow rate and/or pollutant concentration which cause Upset. In no case shall a slug load have a flow rate or contain concentrations or qualities of pollutants that exceed for any time period longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration, quantities, or flow during normal operation.
 - (f) Any water or wastes containing a toxic substance in sufficient quantity, either singly or by interaction with other substances, to injure or interfere with any sewage treatment process, to constitute a hazard to humans or to animals, or to create any hazard or toxic effect in the waters which receive the treated or untreated sewage.
 - (g) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, each in amounts that will cause interference or Upset.
 - (h) Pollutants which result in the presence of toxic gases, vapors, or fumes within the system in a quantity that may cause acute worker health and safety problems.
 - (i) Any trucked or hauled pollutants except at discharge points designated by the Liberty Black Mountain.
 - (j) Any water or wastes containing pollutant quantities or concentrations exceeding the limitations in Article 5 of these Rules and Regulations, or the limitations in any applicable Categorical Standards.
 - (k) Any wastewater discharges to the Liberty Black Mountain's Wastewater System, except at locations approved by the Liberty Black Mountain.

5.4.4 National Categorical Pretreatment Standards:

Once promulgated, Categorical Standards for a particular industrial subcategory, if more stringent, shall supersede all conflicting discharge limitations contained in this Article 5, Part B, as they apply to that industrial subcategory.

5.4.5 State Requirements:

State requirements and limitations on discharges shall apply in any case where they are more stringent than federal requirements and limitations or those contained elsewhere in this Article 5, Part B.

5.4.6 Dilution Prohibited:

Except where permitted by Categorical Standards, no User may increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to attain compliance with the limitations contained in National Categorical Pretreatment Standards or any other specific discharge limitations contained in this Article 5. The Liberty Black Mountain may set or require a Service Provider to set mass limitations or alternate concentration-based limitations for those Users which are using improper dilution to meet these limitations.

5.5 Insignificant Discharges.

Notwithstanding the prohibitions and limitations contained in Article 5.3 of these Rules and Regulations, the Liberty Black Mountain may allow a proposed discharge to the system if the Liberty Black Mountain determines that the quantity and quality of the discharge, both alone and in conjunction with similar discharges which might be affected by this determination, will have no material effect on the Liberty Black Mountain's operations, including the quality of its effluent or sludges. Approval of the Liberty Black Mountain must be received in writing before the discharge may commence, and the discharge must adhere to any terms and conditions of the Liberty Black Mountain's approval.

Approval of such a discharge is entirely at the discretion of the Liberty Black Mountain, and shall not constitute approval of any additional or similar discharges. Disapproval of a proposed discharge by the Liberty Black Mountain shall not be subject to the appeal and hearing procedure set forth in these Rules and Regulations.

5.6 Accidental Or Unusual Discharges.

An accidental or unusual discharge is a discharge which may disrupt Wastewater System treatment processes or operations, damage Wastewater System facilities, cause an AZPDES Permit violation at the Liberty Black Mountain's treatment plant or degrade sludge quality excessively, or which differs significantly in quantity or quality from discharges under normal operations.

5.6.1 Accidental Discharge Protection:

Each User shall provide protection from accidental or unusual discharges of prohibited materials or other substances regulated by these Rules and Regulations. Infrastructure necessary to prevent accidental discharge of prohibited materials shall be provided and maintained at the Customer or User's own cost and expense.

5.6.2 Notification Requirements:

- (a) Telephone Notification: In the case of any accidental or unusual discharge, it is the responsibility of the User to immediately telephone and notify the Liberty Black Mountain and the Service Provider providing sewage services of the incident. The notification shall include the

location of discharge, type of waste, concentration and volume, and corrective actions

- (b) Written Notice: Within five (5) days following an accidental or unusual discharge, the User shall submit to the Liberty Black Mountain a detailed written report describing the cause of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification shall not relieve the User of any expense, loss, damage, or other liability which may be incurred as a result of damage to the Liberty Black Mountains wastewater system, fish kills, or any other damage to person or property; nor shall such notification relieve the User of any fines, civil penalties, or other liability which may be imposed by these Rules and Regulations or other applicable law.

Notice To Employees. A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees whom to call in the event of an accidental discharge. Employers shall ensure that all employees who may cause or suffer such an accidental discharge to occur are advised of the emergency notification procedure.

5.6.3 Slug Discharge Plan Requirements:

At least every two (2) years, or as required by 40 CFR §403.8(f)(2)(v), the Liberty Black Mountain shall evaluate whether each Significant Industrial User needs a plan to control slug discharges. If a slug discharge plan is needed, it shall be submitted to the Liberty Black Mountain for review and approval as directed by the Liberty Black Mountain, and shall contain, at a minimum, the following elements:

- (a) A description of discharge practices, including non-routine batch discharges.
- (b) A description of stored chemicals.
- (c) Procedures for immediately notifying the Liberty Black Mountain and the Service Provider providing sewage services of slug discharges, including any discharge that would violate any prohibition or limitation under Articles 5.17 or 5.18 of these Rules and Regulations, with procedures for follow-up written notification within five (5) days.
- (d) If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant-site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

5.7 Hazardous Waste Discharge Notification.

Industrial Users shall notify the Liberty Black Mountain, the EPA Regional Waste Management Division Director, and the state hazardous waste authorities in writing of

any discharge into the Liberty Black Mountains Wastewater System of any substance which, if otherwise disposed of, would be considered a hazardous waste under 40 CFR Part 261. This notification requirement does not apply to pollutants already being reported under the reporting requirements contained in these Rules and Regulations. The specific information required to be reported and the time frames in which it is to be reported are found at 40 CFR §403.12(p).

5.8 Wastewater Contribution Permits.

5.8.1 Applicability:

All Significant Industrial Users and other users as required by the Liberty Black Mountain, contributing to or proposing to connect to or to contribute to the Liberty Black Mountain's Wastewater System, shall obtain a Wastewater Contribution Permit. Such permit shall either be issued by the Liberty Black Mountain, or co-issued by the Service Provider providing sewage services and the Liberty Black Mountain or in a form acceptable to the Liberty Black Mountain.

Requirements pertaining to permits co-issued with municipalities or issued solely by the Liberty Black Mountain are contained in the Liberty Black Mountain's Rules and Regulations. Permits co-issued with Service Providers may also contain requirements contained in the various municipal codes, ordinances, resolutions, and rules and regulations.

5.8.2 Permit Application:

Users required to obtain a Wastewater Contribution Permit shall complete and file with the Liberty Black Mountain an application accompanied by a fee as determined pursuant to Article 5.12 of these Rules and Regulations.

Applications Are Due: For new dischargers, at least 90 days prior to beginning discharge to the Liberty Black Mountain's Wastewater System.

For existing dischargers who become subject to a newly promulgated Categorical Standard, at least 90 days prior to the effective date of such standard.

For existing dischargers who, because of process changes or additions, will become subject to an existing Categorical Standard, at least 90 days prior to beginning discharge from the categorical process.

For existing dischargers subject to Categorical Standards as of the effective date of this regulation, who have not previously obtained a Wastewater Contribution Permit, within 30 days of the effective date of this regulation.

For all other dischargers, in a time frame as specified in notice from the Liberty Black Mountain.

In support of the application, the User shall submit, in units and terms appropriate for evaluation, the following information:

- (a) Name, mailing address, and facility location.
- (b) SIC number(s) according to the Standard Industrial Classification (SIC) Manual, Office of Management and Budget, 1987, as amended or the 1997 North American Industrial Classification System (NAICS), as amended.
- (c) Time and duration of wastewater discharges.
- (d) Average daily and thirty (30) minute peak wastewater flow rates, including daily, monthly, and seasonal variations, if any.
- (e) Site plan, floor plans, mechanical and plumbing plans, and details to show all sewers, sewer connections, and appurtenances by the size, location, and elevation.
- (f) Description of activities, facilities, and plant processes on the premises including all materials which are or could be discharged.
- (g) Wastewater constituents and characteristics including, but not limited to, those limited by Article 5 of these Rules and Regulations, as determined by a reliable analytical laboratory. Sampling and analysis shall be performed in accordance with procedures established by the EPA pursuant to Article 304(g) of the act and contained in 40 CFR, Part 136, as amended.
- (h) A statement regarding whether or not the discharge standards and pollutant limitations contained in Article 5 of these Rules and Regulations, including any applicable State or national pretreatment standards, are being met on a consistent basis and if not, whether additional O&M and/or additional pretreatment is required for the User to meet the applicable standards.
- (i) If additional pretreatment and/or O&M will be required to meet the discharge standards and pollutant limitations, the shortest schedule by which the User will provide such additional treatment. For state or national pretreatment standards, the completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard.

The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the User to meet the applicable discharge standards and pollutant limitations (e.g., Hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.). In no case shall an increment of progress exceed nine (9) months.

- (a) Each product produced by type, amount, process or processes, and rate of production.
- (b) The type and amount of raw materials processed (average and maximum

- per day).
- (c) The number and type of employees, and hours of operation of the plant, and proposed or actual hours of operation of the Pretreatment System.
- (d) Any other information as may be deemed by the Liberty Black Mountain to be necessary to evaluate the permit application.

5.8.3 Permit Issuance:

The Liberty Black Mountain shall issue a Wastewater Contribution Permit to the applicant if the Liberty Black Mountain finds that all of the following conditions are met:

- (a) The proposed discharge of the applicant is in compliance with the prohibitions and limitations of Articles 5.17 and 5.18 of these Rules and Regulations;
- (b) The proposed discharge of the applicant would permit the normal and efficient operation of the wastewater treatment system; and
- (c) The proposed discharge of the applicant would not result in a violation by the Liberty Black Mountain of the terms and conditions of its AZPDES Permit.

If the Liberty Black Mountain finds that the condition set out in Paragraph 1 of this Subsection is not met, the Liberty Black Mountain may issue a Wastewater Contribution Permit to the applicant if the conditions set out in Paragraphs 2 and 3 of this Subsection are met and if the applicant submits, and the Liberty Black Mountain approves, a schedule setting out the measures to be taken by the applicant and the dates that such measures will be implemented to ensure compliance with the provisions of these Rules and Regulations.

5.8.4 Permit Denial;

Appeal and Hearing. In the event an application for a Wastewater Contribution Permit is denied, the Liberty Black Mountain shall notify the applicant in writing of such denial. Such notification shall state the grounds for denial with that degree of specificity which will inform the applicant of the measures or actions which must be taken by the applicant prior to issuance of a permit.

An applicant denied a Wastewater Contribution Permit may request that the Liberty Black Mountain Operations Manager review the denial and issue a permit. If the Liberty Black Mountain Operations Manager reaffirms the denial, the applicant may appeal this decision pursuant to the terms and conditions of the Liberty Black Mountain's appeal and hearing procedure as set forth in these Rules and Regulations.

5.8.5 Permit Conditions:

Wastewater Contribution Permits shall be expressly subject to all provisions of these

Rules and Regulations. Permits will contain, at a minimum, the following:

- (a) A statement of duration (in no case more than five (5) years).
- (b) A statement of non-transferability without, at a minimum, prior notification to the Liberty Black Mountain and provision of a copy of the existing permit to the new Customer or operator.
- (c) Effluent limits based on applicable Pretreatment Standards, Categorical Pretreatment Standards, specific discharge limitations, as cited in these Rules and Regulations, site-specific discharge limitations, and other federal, state and local law and regulations.
- (d) Self-monitoring, sampling, reporting, notification, and record keeping requirements, including an identification of the pollutants to be monitored, sampling locations, sampling frequencies, and sample types. These requirements shall be based on applicable general pretreatment standards and requirements at 40 CFR §403; categorical pretreatment standards; specific discharge limitations; State and local law and regulations; and Liberty Black Mountain determinations as to the type, quantity, quality, and frequency of information needed to adequately determine compliance with conditions of the permit.
- (e) A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedules. Such schedules may not extend compliance dates beyond federal deadlines.
- (f) Permits may also contain the following:
 - 1. A Schedule Of User Charges and Fees pursuant to Article 5.12 of these Rules and Regulations.
 - 2. Limits on average and maximum rate and time of discharge or requirements for flow regulation and equalization.
 - 3. Requirements for installation and maintenance of inspection and sampling facilities.
 - 4. Requirements for notification to the Liberty Black Mountain of any new introduction of wastewater constituents or any substantial change in operations or in the volume or character of the wastewater constituents being introduced into the Liberty Black Mountain's Wastewater System.
 - 5. Requirements for notification of slug discharges.
 - 6. Other conditions as deemed appropriate by the Liberty Black Mountain to ensure compliance with these Rules and Regulations.

5.8.6 Permit Modifications:

- (a) The terms and conditions of a Wastewater Contribution Permit may be modified by the Liberty Black Mountain during the term of the permit as limitations or requirements as identified in these Rules and Regulations are modified or other just cause exists. The User shall be informed of any proposed changes in his permit at least thirty (30) days prior to the effective date of change. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance.
- (b) Within nine (9) months of the promulgation of a national categorical pretreatment standard, the Wastewater Contribution Permit of Users subject to such standard shall be revised to require compliance with such standard within the time frame prescribed by such standard.

5.8.7 Permit Duration;

Reapplication: Permits shall be issued for a specified time period, not to exceed five (5) years. The User shall apply for permit reissuance a minimum of ninety (90) days prior to the expiration of the User's existing Permit.

5.9 Reporting Requirements For Significant Industrial Users.

5.9.1 Initial Compliance Report For Users Subject To National Categorical Pretreatment Standards:

Within ninety (90) days following the date for final compliance with applicable Pretreatment Standards or, in the case of a new source, following commencement of the introduction of wastewater into the Liberty Black Mountain's Wastewater System, or as specified in the wastewater discharge permit, any User subject to Pretreatment Standards and requirements shall submit to the Liberty Black Mountain a report indicating the nature and concentration of all pollutants in the discharge from the regulated processes which are limited by the Pretreatment Standards and requirements and the average and maximum daily flow for those process units in the User's facility which are limited by such Pretreatment Standards or requirements.

Where applicable Pretreatment Standards contain limitations on the mass of pollutants discharged per unit of production, the report shall also contain the pollutant mass and production information necessary to determine compliance with such Pretreatment Standards.

The report shall state whether the applicable Pretreatment Standards and Requirements are being met on a consistent basis and, if not, what additional O&M and/or pretreatment is necessary to bring the User into compliance with the applicable Pretreatment Standards or Requirements. This statement shall be signed by an authorized representative of the Industrial User, and certified to by a qualified professional.

5.9.2 Periodic Compliance Reports:

- (a) Any User subject to a National Categorical Pretreatment Standard, after the compliance date of such Pretreatment Standard, or, in the case of a new source, after commencement of the discharge into the Liberty Black Mountain's Wastewater System, shall submit to the Liberty Black Mountain during the months of July and January, unless required more frequently in the pretreatment standard or by the Liberty Black Mountain, a report covering the preceding six (6) months and indicating the nature and concentration of pollutants in the effluent which are limited by such pretreatment standards. In addition, this report shall include a record of average and maximum daily flows for the reporting period for all regulated processes.
- (b) Where applicable Pretreatment Standards contain limitations on the mass of pollutants discharged per unit of production, the report shall also contain the pollutant mass and production information necessary to determine compliance with such pretreatment standards. At the discretion of the Liberty Black Mountain and in consideration of such factors as local high or low flow rates, holidays, and budget cycles, the Liberty Black Mountain may agree to alter the months during which the above reports are to be submitted.
- (c) Significant Industrial Users not subject to National Categorical Pretreatment Standards shall submit to the Liberty Black Mountain at least once every six (6) months (on dates specified by the Liberty Black Mountain), unless required more frequently by the Liberty Black Mountain, a description of the nature, pollutant concentrations, flows, and, where requested, pollutant masses, of the discharges required to be reported by the Liberty Black Mountain.
- (d) All reports submitted pursuant to this section shall be based on analyses performed in accordance with procedures established by the EPA Administrator pursuant to Article 304(g) of the act and contained in 40 CFR, Part 136 and amendments thereto or with any other test procedures approved by the EPA Administrator. Sampling shall be performed in accordance with the techniques approved by the administrator.

5.10 Monitoring Liberty Black Mountain Facilities.

The Liberty Black Mountain may require to be provided and operated at the User's own expense, monitoring facilities to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with the provisions of these Rules and Regulations.

There shall be ample room in or near such sampling manhole or facility to allow accurate sampling and preparation of samples for analysis. The facility, sampling, and measuring equipment shall be maintained at all times in a safe and proper operating condition at the expense of the User.

The sampling and monitoring facilities shall be provided in accordance with the Liberty Black Mountain's requirements and all applicable local construction standards and specifications. Construction shall be completed within such a time frame as the Liberty Black Mountain shall specify by written notification.

5.11 Information Submittal, Inspection and Sampling.

The Liberty Black Mountain may require any User to submit information as necessary to determine compliance with the requirements of these Rules and Regulations.

The Liberty Black Mountain may inspect the facilities of any User to ascertain whether the requirements of these Rules and Regulations are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the Liberty Black Mountain or its representatives ready access at all reasonable times to all parts of the premises for the purposes of inspection, sampling, records examination and copying, or in the performance of any of their duties.

The Liberty Black Mountain, Maricopa County, the Arizona Department of Environmental Quality, and EPA shall have the right to set up on the User's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where a User has security measures in force which would require proper identification and clearance before entry into the User's premises, the User shall make necessary arrangements with security guards so that upon presentation of suitable identification, personnel from the Liberty Black Mountain, the Arizona Department of Environmental Quality, and EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.

All records relating to compliance with pretreatment standards and requirements shall be made available to officials of the Liberty Black Mountain, the Arizona Department of Environmental Quality, and EPA upon request.

5.12 Wastewater Treatment.

Users shall provide wastewater treatment as required to comply with the requirements of these Rules and Regulations, and shall achieve compliance with all national categorical pretreatment standards within the time limitations as specified by the federal pretreatment regulations. Any facilities required to pretreat wastewater to a level acceptable to the Liberty Black Mountain shall be provided, operated, and maintained at the User's expense.

5.13 Confidential Information.

Information and data on a User obtained from reports, questionnaires, permit applications, permits, monitoring programs, and inspections shall be available to the public or other governmental agency without restriction unless the User specifically designates and is able to demonstrate to the satisfaction of the Liberty Black Mountain

that the release of such information would divulge sales or marketing data, processes, or methods of production entitled to protection as “Confidential Business Information” of the User. Wastewater constituents and characteristics will not be recognized as confidential information. It shall be the User’s obligation to stamp each page, which has been demonstrated to the Liberty Black Mountain’s satisfaction to contain trade secrets, with the words “Confidential Business Information,” “Confidential Information,” or “Confidential.” A failure by the User to designate and identify any document in this manner may result in the document losing its protection from disclosure as confidential business information.

Confidential business information shall not be made available for inspection by the public but shall be made available upon request to governmental entities or agencies for uses related to these Rules and Regulations, the Liberty Black Mountain’s Aquifer Protection Permit and Arizona Discharge Pollutant Discharge Elimination System (AZPDES) Permit and/or the pretreatment program in accordance with 40 CFR Part 2 and Title 18, Article 9 of the AAC. Confidential business information shall not be transmitted to any governmental agency or entity for other uses by the Liberty Black Mountain except upon written request and after a ten (10) day notification and right to object is given to the User. Such notification shall not be required in certain circumstances provided for in 40 CFR Part 2. If after a request for public inspection, a person or entity challenges the determination of any record to protection as confidential business information, the User shall cooperate, to the fullest extent possible and at User’s own expense, with the Liberty Black Mountain in the defense of the determination. At the request of the Liberty Black Mountain the user shall, at the User’s expense, provide a defense to such challenge.

5.14 Remedies for Noncompliance; Enforcement.

5.14.1 Notice of Violation:

Whenever the Liberty Black Mountain determines that any User has violated or is violating any provision of these Rules and Regulations or a Wastewater Contribution Permit issued or approved hereunder, the Liberty Black Mountain may serve upon such User a written notice stating the nature of the violation(s). Where directed to do so by the notice, a plan for the satisfactory correction of the violation(s) shall be submitted to the Liberty Black Mountain by the User, within a time frame as specified in the notice.

5.14.2 Administrative Orders:

Whenever the Liberty Black Mountain determines that any User has violated or is violating any provision of these Rules and Regulations, or any directives, orders, or permits issued or approved hereunder, the Liberty Black Mountain may serve upon such User a written order stating the nature of the violations(s), and requiring that the User correct the violation(s) within a specified period of time; perform such tasks as the Liberty Black Mountain determines are necessary for the User to correct the violations;

or perform such tasks and submit such information as is necessary for the Liberty Black Mountain to evaluate the extent of noncompliance or to determine appropriate enforcement actions to be taken.

5.14.3 Compliance Orders / Compliance Schedules:

Whenever the Liberty Black Mountain determines that any User has violated or is violating any provision of these Rules and Regulations, or any directives, orders or permits issued or approved hereunder, the Liberty Black Mountain may serve upon the User a written order requiring that the User submit, within a time frame as specified in the notification, a plan (compliance schedule) for the satisfactory correction of such violation(s).

The compliance schedule must represent the shortest schedule by which the User will provide additional treatment or perform such other tasks as will enable the User to consistently comply with applicable requirements. The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to compliance (e.g., Hiring an engineer, completing preliminary plans for pretreatment systems, completing final plans, executing contracts for major components, commencing construction, completing construction). In no case shall an increment of progress exceed nine (9) months.

Upon approval by the Liberty Black Mountain, the compliance schedule will be issued to the User as an administrative order which contains the approved schedule milestones and any applicable reporting requirements. Issuance of a compliance schedule by the Liberty Black Mountain does not release the User of liability for any violations.

Not later than fourteen (14) days following each date in the schedule and the final date for compliance, the User shall submit a progress report to the Liberty Black Mountain including, at a minimum, information on whether or not the User complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason(s) for delay, and the steps being taken by the User to return to the schedule established.

5.14.4 Suspension of Service:

The Liberty Black Mountain may suspend the wastewater treatment service and/or a Wastewater Contribution Permit when such suspension is necessary, in the opinion of the Liberty Black Mountain, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, causes pass through or interference or causes the Liberty Black Mountain to violate any condition of its aquifer protection permit or AZPDES permit.

Any User notified of a suspension of the wastewater treatment service and/or the Wastewater Contribution Permit shall immediately stop or eliminate the discharge. In

the event of a failure of the User to comply voluntarily with the suspension order, the Liberty Black Mountain shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the Liberty Black Mountain's Wastewater System or endangerment to any individuals or the environment. The Liberty Black Mountain shall reinstate the Wastewater Contribution Permit and/or the wastewater treatment service upon proof of the elimination of the non-complying discharge. A detailed written statement submitted by the User describing the causes of the harmful contribution and the measures taken to prevent any future occurrence shall be submitted to the Liberty Black Mountain within fifteen (15) days of the date of occurrence.

5.14.5 Permit Revocation:

Any User who has violated or is violating any provision of these Rules and Regulations, or any orders or permits issued or approved hereunder, is subject to having his permit revoked. Grounds for permit revocation include, but are not limited to:

- (a) Failure of a User to factually report the wastewater constituents and characteristics of his discharge.
- (b) Failure of the User to report significant changes in operations, or wastewater constituents and characteristics.
- (c) Refusal of reasonable access to the User's premises for the purpose of inspection or monitoring.
- (d) Violation of conditions of the permit.

5.14.6 Penalties:

Any User who is found to have violated any provision of these Rules and Regulations, or any orders or permits issued or approved hereunder, shall be subject to a penalty not to exceed, except as noted below, twenty-five thousand dollars (\$25,000) per violation. Each day on which a violation occurs or continues shall be deemed a separate and distinct violation. In the case of violations of monthly or other long-term average discharge limitations, penalties may be assessed for each day in the period covered by the violations.

In addition to the penalties provided herein, the Liberty Black Mountain may recover reasonable attorney's fees, court costs, court reporter's fees, and other expenses of litigation by appropriate suit at law against the User found to have violated these Rules and Regulations, or the order or permits issued hereunder. Such penalties shall be in addition to any actual damages the Liberty Black Mountain may incur because of such violations.

Where a violation is found to have caused Interference or Upset, the maximum penalty of \$25,000 per violation per day as described above may be increased as necessary to allow the Liberty Black Mountain to recover any fines or penalties paid by the Liberty Black Mountain for AZPDES Permit violations due to the Interference or Upset.

5.14.7 Legal Action:

If any person discharges sewage, industrial wastes or other wastes into the Liberty Black Mountain's wastewater disposal system contrary to the provisions of these Rules and Regulations, or any orders or permits issued hereunder, the Liberty Black Mountain's attorney may commence an action for appropriate legal and/or equitable relief in the Superior Court of Maricopa County.

5.14.8 Appeal Procedure:

Any User who is aggrieved by any enforcement action taken by the Liberty Black Mountain pursuant to this Article 5.12 may within thirty (30) days of the receipt of notice of the determination, order, or finding being appealed request in writing that the Liberty Black Mountain review the enforcement action. The request (Letter of Appeal) shall state all points of disagreement and objection to the determination, order, or finding. If the Liberty Black Mountain reaffirms the action, the User may appeal this decision to the ACC.

- (a) Hearing Request, Deadlines, Procedure and Related Matters **[Reserved]**.

5.15 Charges and Fees.

Charges and fees to be assessed against Users will be determined by the Liberty Black Mountain and, where instituted, will be set at a level to allow the Liberty Black Mountain to recover its costs for administering elements of the Pretreatment/Industrial Waste Control Program. Program elements for which charges and fees may be assessed include, but are not limited to, permit applications; monitoring, inspection, and surveillance activities; and general program administration.

PART B

RULES AND REGULATIONS FOR SERVICE PROVIDER USE OF LIBERTY BLACK MOUNTAIN WASTEWATER SYSTEM

5.16 Applicability.

Any Service Provider, the sewage from which directly or indirectly enters the Wastewater System of the Liberty Black Mountain from areas within or without the boundaries or Service Area of the Liberty Black Mountain, shall be subject to the requirements of this Part and shall be bound by these Rules and Regulations as they now exist or may hereafter be amended.

All Service Providers are required to design and administer Pretreatment Industrial Waste Control Programs which are in accordance with this Article 5, and which will enable the Liberty Black Mountain to comply with all pretreatment and effluent limitation conditions of its National Pollutant Discharge Elimination System (AZPDES) Permit, Federal Pretreatment Regulations, and applicable sludge disposal regulations.

5.17 Compliance with Requirements.

Each Service Provider will cause all sewage at any time discharged directly or indirectly into its sewer system, or into the Liberty Black Mountain Wastewater System by it or on its behalf, to comply with any requirements of the Liberty Black Mountain. In all cases where the application or the enforcement of said requirements involve technical or scientific analyses or determinations, the Liberty Black Mountain shall have final authority as to methods, standards, criteria, significance, evaluation, and interpretation of such analyses and determinations. Each Service Provider will permit no new connections and will discontinue existing public connections and will require the discontinuance of existing private connections to its sewer system which allow entrance therein of such sewage as will cause the discharge at any time into its sewer system, or into the Liberty Black Mountain Wastewater System from such sewer system of sewage that does not comply with said requirements of the Liberty Black Mountain.

The Liberty Black Mountain may from time to time make a determination of the respects in which sewage discharged or to be discharged into the sewer system of a Service Provider, or into the Liberty Black Mountain Wastewater System by any Service Provider, is not in compliance with said requirements and with the amendments thereof, if any, then in effect. A copy of said determination shall be mailed to the Service Provider at its usual place of business and for all purposes of these Rules and Regulations shall be conclusively deemed to have been made in accordance with this section and to be correct at the expiration of thirty (30) days after such mailing unless within said period of thirty (30) days the Service Provider shall have filed with the Liberty Black Mountain an objection thereto stating that such determination is incorrect and stating the changes therein which should be made in order to correct such determination.

5.17.1 Penalties:

Any Service Provider who is found to have violated any provision of this Article 5 shall be subject to a penalty not to exceed, except as noted below, five thousand dollars (\$5,000) for such violation. Each day on which a violation occurs or continues shall be deemed a separate and distinct violation. Such penalty shall be in addition to any actual damages the Liberty Black Mountain may incur because of such violation.

In addition to the penalties provided here, the Liberty Black Mountain may recover reasonable attorney's fees, court costs, court reporter's fees, and other expenses of litigation by appropriate suit at law against the Service Provider found to have violated these Rules and Regulations.

Where a violation is found to have caused Interference or Upset, the maximum penalty of \$5,000 per violation described above may be increased as necessary to allow the Liberty Black Mountain to recover any fines or penalties paid by the Liberty Black Mountain for AZPDES permit violations due to the Interference or Upset.

5.18 Legal Authority Requirements.

5.18.1 Ordinance/Resolution:

Except as provided in Subsection 5.4.3, each Service Provider will enact and enforce an ordinance or resolution which conforms to 40 CFR §403.8(f)(1) Pretreatment Program Requirements, as from time to time amended, for legal authority and containing all other legal provisions mandated by these Rules and Regulations. Any proposed amendments to such ordinance or resolution, or any proposed actions which would serve to amend such ordinance or resolution with respect to any pretreatment program requirements, must be submitted to the Liberty Black Mountain for review, and must be approved in writing by the Liberty Black Mountain, prior to such enactment.

Each Service Provider shall adopt and enforce in its ordinance or resolution provisions which are in conformance to the following provisions:

- (a) A provision requiring any Industrial User responsible for a significant accidental or unusual discharge to notify immediately both the Service Provider and the Liberty Black Mountain.
- (b) A provision precluding, except where authorized by Categorical Standards, the use of dilution to attain conformance to Pretreatment/Industrial Waste Control Standards, and authorizing the Service Provider to set mass limitations for any Industrial User using improper dilution.
- (c) A provision forbidding and where possible penalizing the knowing transmittal of false information by an Industrial User to the Service Provider or Liberty Black Mountain.

- (d) A provision requiring the installation of all necessary monitoring and pretreatment facilities by Industrial Users. This provision shall also authorize the Service Provider to impose compliance schedules on Industrial Users for the installation of such facilities.
- (e) A provision applying civil or criminal penalties or, where permitted by 40 CFR §403.8(f)(1), assessing liquidated damages against Industrial Users which violate Pretreatment/Industrial Waste Control Standards and Requirements. Where possible, such penalties and liquidated damages shall be set at a level determined by the Liberty Black Mountain to provide a reasonable degree of deterrence to violations.
- (f) A provision adopting discharge limitations for Users at least as stringent as the corresponding limitations in Article 5, Part B of these Rules and Regulations.
- (g) A provision requiring that Industrial Users agree to act and allow the Liberty Black Mountain to act as provided under the provisions of this Article 5.
- (h) A provision requiring that any User discharging any toxic Pollutants which cause an increase in the cost of managing the effluent or the sludge of the Liberty Black Mountain's Wastewater System shall pay for such increased costs.

5.18.2 Attorney's Statement:

Except as provided in Subsection 5.4.3, each Service Provider must submit to the Liberty Black Mountain an Attorney's Statement which conforms to the requirements of 40 CFR §403.9(b)(1), and which certifies that the Service Provider has adequate authority to carry out its responsibilities under the Liberty Black Mountain's Pretreatment/Industrial Waste Control Program including the provisions of these Rules and Regulations.

5.18.3 Legal Authority Exemption:

Any Service Provider that does not serve any commercial or Industrial Users may submit a letter to the Liberty Black Mountain in lieu of enacting the ordinance or resolution, and submitting the Attorney's Statement, as required by these Rules and Regulations. The letter must state that the Service Provider has no commercial or Industrial Users, and must identify any nonresidential Users served. Furthermore, any Service Provider submitting such a letter shall (1) notify the Liberty Black Mountain at least fourteen (14) days in advance of the date that any commercial or Industrial User is granted a sewer connection and (2) fully comply with the Liberty Black Mountain's Pretreatment/Industrial Waste Control Program, including the requirements of these Rules and Regulations, and the Federal Pretreatment Regulations prior to allowing that User to connect to the Service Provider's sewer system. The Liberty Black Mountain, at its own discretion, may require any Service Provider to fully comply with these Rules and Regulations, regardless of whether or not the aforementioned letter has been submitted and/or previously accepted by the Liberty Black Mountain.

5.19 Program Procedure Requirements.

5.19.1 General:

Each Service Provider must formulate, fund, and implement procedures which will enable Liberty Black Mountain compliance with the “Procedures” and “Funding” requirements contained in 40 CFR §403.8(f)(2) and (3) of the Federal Pretreatment Regulations, and which will enable Service Provider compliance with the requirements of these Rules and Regulations.

5.19.2 Procedures Manual:

The Liberty Black Mountain shall issue to all Service Providers a manual on Procedures for Implementing the Pretreatment/Industrial Waste Control Program of the Liberty Black Mountain (Procedures Manual). The Procedures Manual shall set forth Liberty Black Mountain requirements on formulating, funding, and implementing Pretreatment/Industrial Waste Control Program procedures, and shall provide guidance to Service Providers on implementing the procedural requirements.

Where necessary to maintain continued compliance with applicable federal and state regulations, or these Rules and Regulations, or to facilitate the operation of the Pretreatment/Industrial Waste Control Program, the Liberty Black Mountain may from time to time amend the Procedures Manual, and shall provide notice of such amendments to all Service Providers.

The following subsections highlight the procedural requirements that will be more fully presented in the Procedures Manual to be adopted by the Liberty Black Mountain.

5.19.3 Industrial Waste Survey:

Each Service Provider shall formulate and implement procedures for conducting ongoing, comprehensive industrial waste surveys to locate and identify all Significant Industrial Users discharging to the Service Provider’s sewer system.

5.19.4 Notification to Industrial Users:

Each Service Provider is responsible for notifying its Industrial Users of their obligations under the Pretreatment/Industrial Waste Control Program.

5.19.5 Permitting of Significant Industrial Users:

Each Service Provider shall control, through permits, industrial waste discharges from each Significant Industrial User within its service area.

The Liberty Black Mountain shall make the final determination as to whether a particular Industrial User is a Significant Industrial User. To this end, the Liberty Black Mountain may require that a Service Provider collect and forward to the Liberty Black Mountain all information necessary to make this determination.

In the event that a Service Provider fails to issue a suitable permit to a Significant Industrial User upon notification to do so by the Liberty Black Mountain, the Liberty Black Mountain shall deny service to the Significant Industrial User, and may impose conditions upon the Service Provider to take such steps as are necessary to provide such service.

5.19.6 Monitoring of Industrial Users:

Each Service Provider must sample, monitor, and inspect its Significant Industrial Users, and where appropriate, require industrial self-monitoring, at a frequency adequate to determine if such Users are in compliance with applicable Pretreatment/Industrial Waste Control Program Standards and Requirements.

5.19.7 Slug Discharge Determinations:

Each Service Provider must evaluate, at least every two (2) years, whether each Significant Industrial User needs a plan to control slug discharges. If needed, the Slug Control Plan must contain the minimum elements listed at 40 CFR §403.8(f)(2)(v).

5.19.8 Compliance Activities:

Each Service Provider is required to implement procedures for identifying violators of Pretreatment/Industrial Waste Control Program Standards and Requirements, and to diligently enforce such Standards and Requirements and provide suitable remedies for non-compliance.

5.19.9 Industrial User Reporting/Confidentiality:

Each Service Provider is required to receive and analyze self-monitoring reports and any other notices submitted by Industrial Users pursuant to the requirements of the Pretreatment/ Industrial Waste Control Program. Where an Industrial User claims confidentiality for any information transmitted, the Service Provider must implement procedures to ensure that confidential information is treated in accordance with the procedures in 40 CFR Part 2 and/or 5 CCR 1002-63.

5.19.10 Public Participation:

- (a) Each Service Provider must comply with the public participation requirements of 40 CFR Part 25 in the enforcement of National Pretreatment Standards.
- (b) Each Service Provider must make all information collected under the

Pretreatment/Industrial Waste Control Program, except those documents legitimately classified as “confidential,” available for public review and copying to the extent required by 40 CFR §403.14 and the ARS, Title 39 (Public Records, Printing, and Notices).

- (c) The Liberty Black Mountain will publish an annual notice in the newspaper with the largest daily circulation within the Liberty Black Mountain, a list of Users that were found to be in significant noncompliance during the previous year with Pretreatment Standards or other Pretreatment Requirements. For the purposes of this provision, “significant noncompliance” is as defined at 40 CFR §403.8(f)(2)(vii).

5.19.11 Information Transmittal:

Each Service Provider shall transmit to the Liberty Black Mountain, in a timely manner, all documents as necessary to enable the Liberty Black Mountain to effectively administer the Pretreatment/Industrial Waste Control Program. Such documents shall include:

- (a) A certified copy of the Industrial Waste Discharge Ordinance or Resolution, and any amendments thereto, together with any Rules and Regulations issued pursuant to such ordinance or resolution.
- (b) Copies of all Industrial Waste permits and contracts issued or entered into pursuant to the requirements of the Pretreatment/Industrial Waste Control Program.
- (c) Copies of all industrial survey, monitoring, and inspection reports.
- (d) Any information needed to enable the Liberty Black Mountain to determine whether a particular Industrial User is subject to a particular Categorical Standard.
- (e) Notices of all compliance and enforcement activities, and all related correspondence.
- (f) An annual staffing, costs, and funding report, if requested by the Liberty Black Mountain Operations Manager.

5.19.12 Staffing, Costs, and Funding:

Each Service Provider must provide sufficient resources and qualified personnel to carry out its responsibilities under the Pretreatment/Industrial Waste Control Program. Upon request of the Liberty Black Mountain, a Service Provider must submit to the Liberty Black Mountain a report describing personnel responsibilities, an itemization of program capital and operating costs, and a demonstration that adequate funds are available to support program activities.

5.20 Extra-Jurisdictional Industrial Users.

Each Service Provider shall have the responsibility for those Industrial Users located outside its corporate limits, who discharge industrial wastewater into the Service

Provider's sewer system. Each extra-jurisdictional Industrial User shall be subject to an ordinance, resolution, or equivalent source of legal authority which contains 40 CFR §403.8(f)(1) minimum legal authorities and all other legal provisions mandated by these Rules and Regulations. Each extra-jurisdictional Industrial User shall also be included in a Pretreatment Program which substantially conforms to 40 CFR §403.8(f)(2) and (3) "Procedures" and "Funding" requirements. To this end, the Service Provider shall make contractual arrangements with the extra-jurisdictional legal entity exercising powers over the Industrial User providing either for the inclusion of the Industrial User in the Liberty Black Mountain's Pretreatment/Industrial Waste Control Program, or for formal review of a Pretreatment Program administered by the extra-jurisdictional legal entity. Where necessary to obtain compliance with Federal Pretreatment Regulations, the Service Provider shall enter into a separate contract with each extra-jurisdictional Industrial User discharging into its sewer system.

The Service Provider shall also secure by contract, as it applies to extra-jurisdictional Industrial Users, for each of the following Liberty Black Mountain rights: (i) the right to inspect, sample, and monitor Industrial Users, (ii) the right to terminate service to an Industrial User on an emergency basis, (iii) the right to determine the applicability of Categorical Standards and to determine Significant Industrial Users, (iv) the right to receive copies of all monitoring reports, (v) the right to enforce all Article 5 discharge limitations and (vi) the right to act in lieu of the Service Provider in executing Pretreatment/Industrial Waste Control Program responsibilities.

Where the Service Provider and extra-jurisdictional legal entity fail to execute their Program responsibilities in obtaining compliance by extra-jurisdictional Industrial Users with all applicable Pretreatment/ Industrial Waste Control Standards and Requirements, the Liberty Black Mountain shall have full recourse to the remedy provisions of these Rules and Regulations as they apply to the Service Provider receiving the industrial waste discharge in question.

5.21 Exemptions.

A Service Provider administering a Pretreatment Program, separate from that of the Liberty Black Mountain, which has been approved by the Regional Administrator of EPA or the Arizona Department of Environmental Quality in accordance with §403.11 of the Federal Pretreatment Regulations, may be exempted from compliance with certain provisions of this Article 5, as determined by the Liberty Black Mountain.

5.21 Program Review.

The Liberty Black Mountain shall review Municipal ordinances or other Service Provider resolutions, measures, guidelines, or regulations, and amendments thereof, for conformance to 40 CFR §403.8(f)(1) Pretreatment Requirements for minimum legal authorities and for the inclusion of all other legal provisions mandated by these Rules and Regulations. The Liberty Black Mountain shall periodically review the enforcement efforts of Service Providers to ascertain whether Pretreatment/Industrial Waste Control

Requirements and Standards are being diligently enforced at the local level.

Insofar as a Service Provider administers the Pretreatment/Industrial Waste Control Program, the Liberty Black Mountain shall periodically review the Service Provider's procedures, including, but not limited to, procedures for updating the industrial waste survey, and for inspecting, sampling, and monitoring industrial waste discharges, to ensure that each such Service Provider is administering the Program in technical conformance to "Procedures" and "Funding" requirements under 40 CFR §403.8(f)(2) and (3) of the Federal Pretreatment Regulations and to the provisions of these Rules and Regulations. Any significant Program changes shall be subject to Liberty Black Mountain approval.

5.22 Remedies.

5.22.1 Emergency Remedies:

Where a discharge to the Wastewater System reasonably appears to present an imminent endangerment to the health or welfare of persons, or presents or may present an endangerment to the environment, or threatens to interfere with the operation of the Liberty Black Mountain, the Liberty Black Mountain shall immediately initiate investigative procedures to identify the source of the discharge, and take any steps necessary to halt or prevent the discharge. If necessary, the Liberty Black Mountain shall seek injunctive relief against the violating Service Provider and any User contributing significantly to the emergency condition.

5.22.2 Routine Remedies:

If the Liberty Black Mountain determines that a Pretreatment/Industrial Waste Control Program as administered by a Service Provider is not in compliance with Pretreatment/Industrial Waste Control Requirements, or that the discharge from a Service Provider is not in compliance with Liberty Black Mountain Standards, the Liberty Black Mountain shall issue a notice setting forth the Requirements and Standards not being complied with and directing the Service Provider to attain conformance to these Requirements and Standards within a period of ten (10) days.

If after ten (10) days, the Service Provider has failed or refuses to comply with this notice, the Liberty Black Mountain may issue an additional notice setting forth remedial actions to be taken by the violating Service Provider and a time schedule for attaining compliance with all Pretreatment/ Industrial Waste Control Requirements and Standards. If after thirty (30) days notice, the violating Service Provider has not taken necessary steps to correct the violation, the Liberty Black Mountain may assume in whole or in part Pretreatment/Industrial Waste Control Program responsibilities in lieu of the violating Service Provider. The Liberty Black Mountain may continue in this capacity until the violating Service Provider agrees to the original terms of the notice and any additional terms which the Liberty Black Mountain feels are necessary to ensure ongoing compliance by the Service Provider with all Pretreatment/ Industrial

Waste Control Requirements and Standards. The Service Provider shall be liable for all costs associated with the Liberty Black Mountain's assumption of responsibilities on behalf of the Service Provider and the Liberty Black Mountain may recover such costs in any manner permitted by law.

5.23 Program Preemption.

Where the Liberty Black Mountain preempts a Service Provider in the execution of Pretreatment/Industrial Waste Control Program responsibilities, the Liberty Black Mountain shall directly enforce Federal Pretreatment Standards, including Categorical Standards, and the provisions of Article 5 of these Rules and Regulations against the Industrial Users located within the service area of the Service Provider. The Liberty Black Mountain may request that all industrial self-monitoring reports, including those required under 40 CFR §403.12, be conveyed directly to the Liberty Black Mountain. Moreover, the Liberty Black Mountain shall carry out all inspection and sampling activities necessary to monitor compliance with Pretreatment/Industrial Waste Control Standards and Requirements. Where Program preemption occurs, the Liberty Black Mountain shall have the right to seek injunctive relief against the Service Provider and any Industrial User in order to obtain full compliance with Pretreatment/Industrial Waste Control Standards and Requirements. The Liberty Black Mountain shall bill and the Service Provider shall be liable for costs incurred by the Liberty Black Mountain in conjunction with the administration of the Program in lieu of the Service Provider, and the Liberty Black Mountain may recover such costs, including attorney fees and costs, in any manner permitted by law.

The Liberty Black Mountain shall have the right to require the cessation of any industrial wastewater discharge in violation of Pretreatment/Industrial Waste Control Standards and Requirements. Where the Liberty Black Mountain finds an Industrial User to be in violation of any Pretreatment/Industrial Waste Control Standard or Requirement, the Liberty Black Mountain may require the Industrial User to enter into a bilateral contract with the Liberty Black Mountain containing any conditions, including conditions relating to the installment of pretreatment or monitoring facilities, necessary to ensure compliance with Pretreatment/Industrial Waste Control Standards and Requirements. At the discretion of the Liberty Black Mountain, these conditions may be incorporated into the municipal industrial waste discharge permit or Agreement once Program responsibilities are returned to the Service Provider.

5.24 Program Delegation.

Any Service Provider may enter into an Agreement with the Liberty Black Mountain providing the Liberty Black Mountain with the legal authority to carry out technical and administrative procedures necessary to implement the Pretreatment/ Industrial Waste Control Program at the local level. These procedures may include, among others, updating the industrial waste survey, providing technical services relating to the issuance and review of industrial waste discharge permits, inspecting and monitoring industrial waste discharges, waste discharge facilities and operations of permittees, and

providing technical assistance for local enforcement actions. Where Program delegation occurs, the delegation agreement shall contain provisions for the Liberty Black Mountain to recover the costs, including attorney fees and costs, incurred by the Liberty Black Mountain in conjunction with the administration of the Program on behalf of the Service Provider.

5.25 Liberty Black Mountain Monitoring.

For the purpose of determining the quantity, quality, and other characteristics of any sewage which shall be or may be delivered and discharged into the Wastewater System by a Service Provider, or into the system of a Service Provider by any User, the Liberty Black Mountain shall have the right at all reasonable times to enter upon and to inspect the Service Provider's system or any industrial or commercial installations connected thereto or any other connections which contribute sewage or Wastewater to the Service Provider's system and to inspect and copy records, to take samples and to make tests, measurements, and analyses of sewage or other wastes in, entering, or to be discharged into such Service Provider's system.

5.26 Specific Discharge Limitations for Service Providers.

No Service Provider shall discharge to the Wastewater System at any time or over any period of time wastewater containing any of the materials and substances in excess of the limitations provided under section 5.3

Company: Liberty Utilities (Black Mountain Sewer) Corp.

Decision No.: _____

Phone: _____

Effective Date: _____

PRE-TREATMENT TARIFF

PURPOSE

The purpose of this tariff is to enable Liberty Utilities (Black Mountain Sewer) Corporation ("Liberty Black Mountain" or "Company") to set forth certain waste limitations and pretreatment standards that apply based on the class of commercial/industrial customer served by the Liberty Black Mountain's wastewater collection system. Customer classes include dental offices, dry cleaners, food service establishments, photo imaging operations, RV Parks and pretreatment for industrial wastes. This tariff will govern the type and quality of waste discharged into the Company's wastewater collection system and treated at its wastewater treatment facilities.

This tariff incorporates pretreatment standards consistent with the City of Scottsdale which meet applicable Federal and State standards. In addition, the Liberty Black Mountain has a Code of Practice guideline attached to this tariff.

REQUIREMENTS

The requirements to be in compliance with the rules of the Arizona Corporation Commission ("Commission"), specifically A.A.C. R14-2-603, 605, 607, and 609, the above pretreatment standards and guidelines that govern this tariff are as follows:

1. Any customer disposing of industrial waste considered as hazardous under this tariff shall notify Company in writing of any discharge into the Company's collection system. The specific information for the reporting and time-frame requirement to be submitted to Liberty Black Mountain is 180 days per 40 CFR §403.12 (p)
2. The Company may require monitoring equipment facilities, at the customer's expense, to allow inspection, sampling, and flow measurement of any discharges as necessary to determine compliance with this tariff.
3. Subject to the provisions of A.A.C. R14-2-603, 607 and 609, the Company may terminate service or may deny service to a customer who fails to meet the pretreatment standards or to permit the inspecting and sampling of any discharge as required by this tariff.
4. Liberty Black Mountain may suspend wastewater treatment service, in accordance with A.A.C. R14-2-609.B (without notice), when such suspension is necessary, in the opinion of the Company, in order to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment

Company: Liberty Utilities (Black Mountain Sewer) Corp.

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to the health or welfare of persons, to the environment, or causes the Company to violate any condition of its aquifer protection permit.

5. Liberty Black Mountain shall give any new customer who is required to meet the pretreatment standards written notice of said requirement and shall be given a complete copy of this tariff and all attachments.
6. Any existing customer found to be in violation of this tariff shall be given written notice of such violation and a complete copy of this tariff with all attachments. If A.A.C. R14-2-609.B.1. is **not** applicable the customer shall be given thirty (30) days from the time such written notice is received to comply with this notice. If the customer can show good cause as to why the pretreatment standards cannot be met within thirty (30) days, the Company may allow, at its sole discretion the customer an additional thirty (30) days to have the pretreatment standards met.
7. Consistent with the provisions of A.C.C. R14-2-607.B.1 and 2, each customer shall be responsible for maintaining and safeguarding all Liberty Black Mountain property installed on the customer's premises for the purpose of supplying utility service to that customer.

Attachment – Liberty Utilities BMSC's Code of Practice Guideline

Websites:

Arizona Administrative Code (A.A.C.) Title 18, Article 9

www.azsos.gov/public_services/table_of_contents.htm

Code of Federal Register:

www.epa.gov/lawsregs/search/40cfr.html



Liberty Utilities®
WATER GAS ELECTRIC

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

City Use Only
☐ Permit Not Required
☐ SIU
☐ Zero Discharger
☐ High Strength
☐ Pollution Prevention
☐ Other
 This Permit is for:
☐ New Permit
☐ Existing Permit

Industrial Wastewater Discharge Permit Application

In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Black Mountain Code Liberty Utilities BMSC-CP-01, information and data provided in this permit application which identifies the nature and frequency of discharge shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in Liberty Black Mountain's Code Liberty Utilities BMSC-CP-01 and 40 CFR Part 2.

The completed application and all attachments should be mailed within 30 days of receipt to: 12725 W Indian School Rd. St. D101 Avondale, AZ 85323 623-536-4480

Section A - General Information			
Business Name			
Facility Address		Mailing Address (if different from previous)	
A map of the facility is attached to this application		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Signing Official Name		Primary Contact Name	
Title		Title	
Telephone No.		Telephone No.	
Facsimile No.		Facsimile No.	
		E-mail Address	

Section B – Water Usage			
Is water used in manufacturing process (Y/N)?			
Describe processes that consume water?			
Water Supply	Public	Private Well	Others
Is water supply metered (Y/N)?			
Describe treatment process to treat facility incoming water.			
Describe water consumption in the facility	Non contact cooling water (gallons per day)		
	Boiler feed (gallons per day)		
	Manufacturing processes (gallons per day)		
	Personnel sanitary use (gallons per day)		
	Contained in product (gallons per day)		
	Landscaping/Other (gallons per day)		
	Total (gallons per day)		
Provide a water balance diagram for the facility.			

Section C – Discharged Wastewater				
Type of discharges and volumes	Discharge to (volume in gallons /day)		Batch	Continuous
	City sanitary sewer			
	City storm water			
	Natural outlet			
	Waste hauler			
	Total			
Does the facility have flow metering of its discharges (Y/N)? If yes, describe the type of equipment and its locations.				
If applicable, describe future plans for facility expansion that may impact facility discharge(s) characteristics and/or volumes.				
Describe the location of discharge connection to the City's sewer.				
Provide discharge information for each manufacturing process.	Process	Average flow (gallons/day)	Maximum flow (gallons/day)	Batch or Continuous
<p>Provide a schematic of all wastewater discharges for the entire manufacturing train(s) and for each manufacturing process. Show sampling locations. Show locations for all treatment devices such as interceptors, grease/oil/sand traps, ion exchange, filtration, neutralization systems, and any other treatment systems. Show connection to the sanitary sewer on a facility schematic. Indicate floor drains and chemical storage areas on site schematic. Are there any chemical spill/containment devices/storage? If yes, show on facility site schematic. Based on the provided information, additional information may be requested.</p>				
Provide information on storm sewers and well located inside the facility. If yes, provide location of these on facility site plan schematic.	Storm sewers (Y/N)			
	Private wells (Y/N)			
	Dry wells (Y/N)			
	Abandoned wells (Y/N)			

Section D – Wastewater Pretreatment			
Describe all wastewater streams which are treated before their discharge.			
<p>From the following list, provide pretreatment methods employed at the facility. For each discharge stream, list the discharge streams and their locations and provide a schematic of the installed pretreatment process(es).</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Grease or oil separation:</p> <p><input type="checkbox"/> Grease trap</p> <p><input type="checkbox"/> Grease interceptor (in-ground)</p> <p><input type="checkbox"/> Dissolved air flotation</p> <p><input type="checkbox"/> Oil/water separator (specify type: _____)</p> <p><input type="checkbox"/> Sand filter</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Metals treatment:</p> <p><input type="checkbox"/> Chemical precipitation</p> <p><input type="checkbox"/> Filtration (specify type: _____)</p> <p><input type="checkbox"/> Ion exchange</p> <p><input type="checkbox"/> Silver Recovery Unit (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Organics treatment:</p> <p><input type="checkbox"/> Activated carbon</p> <p><input type="checkbox"/> Solvent separation (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Solids separation:</p> <p><input type="checkbox"/> Centrifuge/cyclone</p> <p><input type="checkbox"/> Filtration (specify type: _____)</p> <p><input type="checkbox"/> Grit removal (specify type: _____)</p> <p><input type="checkbox"/> Screens (specify type: _____)</p> <p><input type="checkbox"/> Sedimentation/settling tank</p> <p><input type="checkbox"/> Sump</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Other:</p> <p><input type="checkbox"/> Flow equalization</p> <p><input type="checkbox"/> Neutralization, pH correction</p> <p><input type="checkbox"/> Ozonation</p> <p><input type="checkbox"/> Water/wastewater reclamation (attach description)</p> <p><input type="checkbox"/> Biological treatment (specify type: _____)</p> <p><input type="checkbox"/> Other chemical treatment (specify type: _____)</p> <p><input type="checkbox"/> Other physical treatment (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p> </td> </tr> </table>		<p>Grease or oil separation:</p> <p><input type="checkbox"/> Grease trap</p> <p><input type="checkbox"/> Grease interceptor (in-ground)</p> <p><input type="checkbox"/> Dissolved air flotation</p> <p><input type="checkbox"/> Oil/water separator (specify type: _____)</p> <p><input type="checkbox"/> Sand filter</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Metals treatment:</p> <p><input type="checkbox"/> Chemical precipitation</p> <p><input type="checkbox"/> Filtration (specify type: _____)</p> <p><input type="checkbox"/> Ion exchange</p> <p><input type="checkbox"/> Silver Recovery Unit (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Organics treatment:</p> <p><input type="checkbox"/> Activated carbon</p> <p><input type="checkbox"/> Solvent separation (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p>	<p>Solids separation:</p> <p><input type="checkbox"/> Centrifuge/cyclone</p> <p><input type="checkbox"/> Filtration (specify type: _____)</p> <p><input type="checkbox"/> Grit removal (specify type: _____)</p> <p><input type="checkbox"/> Screens (specify type: _____)</p> <p><input type="checkbox"/> Sedimentation/settling tank</p> <p><input type="checkbox"/> Sump</p> <p><input type="checkbox"/> Other (specify: _____)</p> <p>Other:</p> <p><input type="checkbox"/> Flow equalization</p> <p><input type="checkbox"/> Neutralization, pH correction</p> <p><input type="checkbox"/> Ozonation</p> <p><input type="checkbox"/> Water/wastewater reclamation (attach description)</p> <p><input type="checkbox"/> Biological treatment (specify type: _____)</p> <p><input type="checkbox"/> Other chemical treatment (specify type: _____)</p> <p><input type="checkbox"/> Other physical treatment (specify type: _____)</p> <p><input type="checkbox"/> Other (specify: _____)</p>
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<p>Is any form of pretreatment planned for the facility within the next three (3) years? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Please furnish a process flow diagram for each existing or planned pretreatment system. Include process equipment, by-products, by-product disposal method, concentrations, waste and by-product volumes, and design and operating conditions.</p>			

Section E - Discharge(s) Characteristics						
For each of the priority pollutants listed below, provide the information.						
Item No.	Chemical Compound	Amount of chemical stored onsite (pounds or gallons)	Amount of total chemical discharged (pounds or gallons/day)	Amount of chemical discharged to sanitary sewer (pounds or gallons/day)	Amount of chemical sent to waste hauler (pounds or gallons/day)	Amount of chemicals sent to other(s), describe (pounds or gallons/day)
1.	asbestos (fibrous)					
2.	cyanide (total)					
3.	antimony (total)					
4.	arsenic (total)					
5.	beryllium (total)					
6.	cadmium (total)					
7.	chromium (total)					
8.	copper (total)					
9.	lead (total)					
10.	mercury (total)					
11.	nickel (total)					
12.	selenium (total)					
13.	silver (total)					
14.	thallium (total)					
15.	zinc (total)					
16.	acenaphthene					
17.	acenaphthylene					
18.	acrolein					
19.	acrylonitrile					
20.	aldrin					
21.	anthracene					
22.	benzene					
23.	benzidine					
24.	benzo (a) anthracene					
25.	benzo (a) pyrene					
26.	3,4-benzofluoranthene					
27.	benzo (g, h, i) perylene					
28.	benzo (k) fluoranthene					
29.	α -BHC (alpha)					
30.	β -BHC (beta)					
31.	δ -BHC (delta)					
32.	γ -BHC (gamma)					

33.	bis (2-chloroethyl) ether					
34.	bis (2- chloroethoxyl) methane					
35.	bis (2- chloroisopropyl) ether					
36.	bis (2-ethylhexyl) phthalate					
37.	bromodichlorometh ane					
38.	bromoform					
39.	bromomethane					
40.	4-bromophenyl phenyl ether					
41.	butyl benzyl phthalate					
42.	carbon tetrachloride					
43.	chlordan					
44.	4-chloro-3- methylphenol					
45.	chlorobenzene					
46.	chloroethane					
47.	2-chloroethyl vinyl ether					
48.	chloroform					
49.	chloromethane					
50.	2- chloronaphthalene					
51.	2-chlorophenol					
52.	4-chlorophenyl phenyl ether					
53.	chrysene					
54.	4,4'-DDD					
55.	4,4'-DDE					
56.	4,4'-DDT					
57.	dibenzo (a, h) anthracene					
58.	dibromochlorometh ane					
59.	1,2- dichlorobenzene					
60.	1,3- dichlorobenzene					
61.	1,4- dichlorobenzene					
62.	3,3'- dichlorobenzidene					
63.	1,1-dichloroethane					

64.	1,2-dichloroethane					
65.	1,1-dichloroethene					
66.	1,2-trans-dichloroethylene					
67.	2,4-dichlorophenol					
68.	1,2-dichloropropane					
69.	(cis & trans) 1,3-dichloropropene					
70.	dieldrin					
71.	diethyl phthalate					
72.	2,4-dimethylphenol					
73.	dimethyl phthalate					
74.	di-n-butyl phthalate					
75.	di-n-octyl phthalate					
76.	4,6-dinitro-o-cresol					
77.	2,4-dinitrophenol					
78.	2,4-dinitrotoluene					
79.	2,6-dinitrotoluene					
80.	1,2-diphenylhydrazine					
81.	α -endosulfan (alpha)					
82.	β -endosulfan (beta)					
83.	endosulfan sulfate					
84.	endrin					
85.	endrin aldehyde					
86.	ethylbenzene					
87.	fluoroanthene					
88.	fluorene					
89.	heptachlor					
90.	heptachlor epoxide					
91.	hexachlorobenzene					
92.	hexachlorobutadiene					
93.	hexachlorocyclopentadiene					
94.	hexachloroethane					
95.	indeno (1,2,3-cd) pyrene					
96.	isophorone					
97.	methylene chloride					
98.	naphthalene					
99.	nitrobenzene					
100.	2-nitrophenol					
101.	4-nitrophenol					
102.	N-nitrosodimethylamine					

Pretreatment Standards 120

103.	N-nitrosodi-n-propylamine					
104.	N-nitrosodiphenylamine					
105.	PCB-1016					
106.	PCB-1221					
107.	PCB-1232					
108.	PCB-1242					
109.	PCB-1248					
110.	PCB-1254					
111.	PCB-1260					
112.	pentachlorophenol					
113.	phenanthrene					
114.	phenol					
115.	pyrene					
116.	2,3,7,8-tetrachlorodibenzo-p-dioxin					
117.	1,1,2,2-tetrachloroethane					
118.	tetrachloroethylene					
119.	toluene					
120.	toxaphene					
121.	1,2,4-trichlorobenzene					
122.	1,1,1-trichloroethane					
123.	1,1,2-trichloroethane					
124.	trichloroethylene					
125.	2,4,6-trichlorophenol					
126.	vinyl chloride					

Is the sampling data representative of facility's discharges to sanitary sewer (Y/N)? If no, describe why.

Parameter	Average Concentration (mg/L)	Maximum Concentration (mg/L)
BOD ₅		
COD		
Total Suspended solids		
TKN (Nitrogen)		
Oil & Grease		
Total Phosphorus		

List pH and temperature for each discharge location.

Discharge Location	pH			Temperature		
	Minimum	Average	Maximum	Minimum	Average	Maximum

Information on discharge(s) not disposed of into sanitary sewer.

Wastes	Estimated quantity/year (pounds or gallons)	Disposal method (i.e., landfill, recycle, sale, evaporation, incineration, etc.)

Pretreatment Standards 121

Waste solvent		
Oil & Grease		
Process wastes		
Pretreatment sludges		
Inks/dyes		
Thinner		
Paints		
Acids and Alkalis		
Left over or extra product		
Pesticides		
Others (specify)		
Provide information for an outside firm (name, address, permit number, etc.) if this firm removes any of the above listed wastes.		
1.	2.	3.
<div>Do any of your substances require an EPA Hazardous Waste Generator permit (Y/N)?</div> <div>If "Yes," please provide your ID number and type of permit (large quantity generator, small quantity generator, or conditionally exempt small quantity generator).</div>		

Section F -Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature and Title of Industry Signing Official

(Seal if applicable)

Date

12725 W Indian School Rd. St. D101 Avondale, AZ 85323 623-536-4480 FAX #

DATE

NAME AND ADDRESS
OF PERMITTEE

RE: Issuance of Permit for Coverage under the Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Utilities BMSC-CP-01 Permission to Discharge to Liberty Utilities (Black Mountain Sewer) Corp. Sanitary Sewer, Permit No. 2015-1

Dear Mr./Ms. :

In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain") Code Liberty Utilities BMSC-CP-01, Liberty Black Mountain has made a final determination to issue coverage under its Industrial Wastewater Discharge Permit Program, effective from DATE through END DATE (usually 5 years or end of AZPDES Permit Term). This letter serves as official notification of issuance of the Industrial Wastewater Discharge Permit.

Liberty Black Mountain's final decision to issue permit coverage is based on the Industrial Wastewater Discharge Permit Application submitted on DATE and additional requested information. As you know, it is the responsibility of the industry/facility owner and/or operator to comply with the requirements of the Title 40 of the Code of Federal Regulations Part 403 Section 403.14 and Liberty Black Mountain's Code Liberty Utilities BMSC-CP-01. This issuance of coverage does not preclude the industry/facility from following up with an inspection or audit to verify compliance with the Industrial Wastewater Discharge Permit and Liberty Black Mountain's Code Liberty Utilities BMSC-CP-01. Also, be aware that as a condition of recordkeeping, Liberty Black Mountain's Code Liberty Utilities BMSC-CP-01 requires that the permittee retain the required information and all records pertinent to the Permit for at least three (3) years beyond the term of the Permit.

In addition, any previous Permit issued under the Liberty Black Mountain's Code Liberty Utilities BMSC-CP-01 is terminated on the coverage date as specified above. An industry/facility covered under the new Industrial Wastewater Discharge Permit is required to report on activities that were required or committed to under the previous Permit.

Finally, Liberty Black Mountain thanks you for your cooperation in the permitting process. Please retain this letter as documentation of your Industrial Wastewater Discharge Permit. Please contact me at PHONE NUMBER or by email at _____ with any questions.

Sincerely,

NAME
Liberty Black Mountain Operations Manager or Program Administrator

Application Attachment 3

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

**PLAN OF ADMINISTRATION FOR
PURCHASED POWER ADJUSTER MECHANISM**

JUNE 27, 2019

I. GENERAL DESCRIPTION.

This document is the Plan of Administration (“POA”) for the Purchased Power Adjuster Mechanism (“PPAM”) for Liberty Utilities (Black Mountain Sewer) Corp. (“Liberty Black Mountain” or “Company”) approved by the Arizona Corporation Commission (“Commission”) in Decision No. _____ on _____, 2020. The PPAM allows Liberty Black Mountain to pass through to its customers the increase or decrease in purchased power costs that result from a rate change for any Commission-regulated electric service provider supplying retail electric service to the Company.

II. PPAM RELATED FILINGS.

A. Within 60 days of the effective date of a Commission Decision authorizing a rate change in the approved tariffs for any Commission-regulated electric service provider supplying retail electric service to the Company, the Company shall file with Docket Control an analysis of the actual impact on the energy portion of the Company’s electric service costs.

B. The Company will provide the Commission with spreadsheets detailing exactly how the Company’s purchased power expenses were calculated in the time period prior to a change in the rate that the Company must pay for purchased power. These calculations will include basic service charges and rate and volume figures. That is, the Company will break down its total purchased power bill into the amount due to fixed fees, volume of electricity used, and the rates paid per unit of electricity. For the period following the rate change, the Company will provide the same information, then compare the two periods, isolating any change in purchased power cost that is due exclusively to a rate change. The specific intent is to show exactly how much of any increase or decrease is due to changes in rates beyond the Company’s control and how much is due to a change in the amount of power that the Company consumes. The Company will only recover increases or refund decreases that are due to changes in rates.

C. All revised schedules filed with the Commission pursuant to the provisions of this PPAM will be accompanied by documentation prepared by the Company in a format approved by Utilities Division Staff of the Commission and will contain sufficient detail to enable the Commission to verify accuracy of the Company’s calculations.

D. The surcharges will not become effective until approved by the Commission.

E. The Company will file annually with the Commission a report detailing the Company's purchased power costs and any conservation or power-shifting measures employed by the Company.

F. The Company shall provide notice (in a form acceptable to Staff) of the rate increases to customers with the bill where the rate increase first appears.

III. APPLICATION TO SEWER CUSTOMERS.

A. The increase or decrease in purchased power costs that are due to changes in rates at the Company's sewer facilities will be allocated on a per capita basis.

B. See the following example:

<i>Test Year</i>					
Purchased Power					
Rate		\$0.0800	→	Rate	\$0.1000
Kilowatt Hours Used	1,250,000			Kilowatt Hours Used	1,250,000
Purchased Power				Purchased Power	
Expense	\$100,000			Expense	\$125,000

<i>Pass Through Calculation</i>	
Current Year Purchased Power Expense	\$125,000
Test Year Purchased Power Expense	\$100,000
Increase in Purchased Power Expense Due to Rate Increase	\$25,000

<i>PPAM Charge on Sample Customer Bill</i>	
Increase in Purchased Power Expense Due to Rate Increase	\$25,000
Number of Sewer Customers	20,000
PPAM Charge on Sample Customer Bill	\$1.25

Application Attachment 4

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

**PLAN OF ADMINISTRATION FOR
PROPERTY TAX ADJUSTER MECHANISM**

JUNE 27, 2019

I. GENERAL DESCRIPTION.

This document is the Plan of Administration (“POA”) for the Property Tax Adjuster Mechanism (“PTAM”) for Liberty Utilities (Black Mountain Sewer) Corp. (“Liberty Black Mountain” or “Company”) approved by the Arizona Corporation Commission (“Commission”) in Decision No. _____ on _____, 2020. The PTAM allows Liberty Black Mountain to pass through to its customers the increase or decrease in property taxes that results from a change in the applicable assessment ratio and/or property tax rates.

II. PTAM RELATED FILINGS.

A. Within 60 days of the effective date of a change in the assessment ratio and/or property tax rates applicable to the Company, the Company shall file with Docket Control an analysis of the actual impact on the Company’s property tax expenses.

B. The Company will provide the Commission with spreadsheets detailing exactly how the Company’s property tax expenses were calculated in the time period prior to a change in the assessment ratio and/or property tax rate that affects the Company’s property tax expenses. These calculations will include the assessment ratio, the property tax rates, and the value of the property that was taxed. For the period following the change(s), the Company will provide the same information, then compare the two periods, isolating any change in property tax expense that is due exclusively to changes in the assessment ratio and/or property tax rates. The specific intent is to show exactly how much of any increase or decrease in property tax expense is due to changes in the assessment ratio and tax rates beyond the Company’s control and how much is due to changes in the value of the property the Company owns. The Company will only recover increases or refund decreases that are due to changes in the assessment ratio and tax rates.

C. All revised schedules filed with the Commission pursuant to the provisions of this PTAM will be accompanied by documentation prepared by the Company in a format approved by Utilities Division Staff of the Commission and will contain sufficient detail to enable the Commission to verify accuracy of the Company’s calculations.

D. The surcharges will not become effective until approved by the Commission.

E. The Company will file annually with the Commission a report detailing the Company's property tax expenses.

F. The Company shall provide notice (in a form acceptable to Staff) of the rate increases to customers with the bill where the rate increase first appears.

III. APPLICATION TO SEWER CUSTOMERS.

A. The increase or decrease in property tax expenses that are due to changes in the assessment ratio and/or property tax rates at the Company's sewer facilities will be allocated on a per capita basis.

B. See the examples on the next page:

Change in Assessment Ratio Example

<i>Test Year</i>					
Assessment Ratio		20.00%	➔	Current Year	
Property Full Cash Value		\$10,000,000		Assessment Ratio	21.00%
Assessed Valuation		\$2,000,000		Property Full Cash Value	\$10,000,000
				Assessed Valuation	\$2,100,000

<i>Change in Assessed Valuation</i>		
Current Year Assessed Valuation		\$2,100,000
Test Year Assessed Valuation		\$2,000,000
Increase in Assessed Valuation Due to Increase in Assessment Ratio		\$100,000

<i>Test Year</i>					
Total Property Tax Rate		10.00%		Current Year	
Assessed Valuation		\$2,000,000		Total Property Tax Rate	10.00%
Property Tax Expense		\$200,000		Assessed Valuation	\$2,100,000
				Property Tax Expense	\$210,000

<i>PTAM Charge on Sample Customer Bill</i>		
Increase in Property Tax Expense Due to Increase in Assessment Ratio		\$10,000
Number of Sewer Customers		20,000
PTAM Charge on Sample Customer Bill		\$0.50

Change in Total Property Tax Rate Example

<i>Test Year</i>					
Total Property Tax Rate		10.00%	➔	Current Year	
Assessed Valuation		\$2,000,000		Total Property Tax Rate	11.00%
Property Tax Expense		\$200,000		Assessed Valuation	\$2,000,000
				Property Tax Expense	\$220,000

<i>Pass Through Calculation</i>		
Current Year Property Tax Expense		\$220,000
Test Year Property Tax Expense		\$200,000
Increase in Property Tax Expense Due to Rate Increase		\$20,000

<i>PTAM Charge on Sample Customer Bill</i>		
Increase in Property Tax Expense Due to Rate Increase		\$20,000
Number of Sewer Customers		20,000
PTAM Charge on Sample Customer Bill		\$1.00

Application Attachment 5

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

**PLAN OF ADMINISTRATION FOR
WASTEWATER TREATMENT ADJUSTER MECHANISM**

JUNE 27, 2019

I. GENERAL DESCRIPTION.

This document is the Plan of Administration (“POA”) for the Wastewater Treatment Adjuster Mechanism (“WTAM”) for Liberty Utilities (Black Mountain Sewer) Corp. (“Liberty Black Mountain” or “Company”) approved by the Arizona Corporation Commission (“Commission”) in Decision No. _____ on _____, 2020. The WTAM allows Liberty Black Mountain to pass through to its customers the increase or decrease in wastewater treatment costs that result from a change in the Revised Code Chapter 49, Article IV, Division 3 - “User Rates and Charges.” Scottsdale may modify Liberty Black Mountain’s user charges for chemical oxygen demand (COD) and total suspended solids (TSS) to correspond to any modifications to the Revised Code.

II. WTAM RELATED FILINGS.

A. Within 60 days of the effective date of a change in the rate Scottsdale charges Company for COD and TSS, Liberty Black Mountain shall file with Docket Control an analysis of the actual impact on the sampling results portion of the Company’s wastewater treatment costs.

B. The Company will provide the Commission with spreadsheets detailing exactly how the Company’s wastewater treatment expenses were calculated in the time period prior to a change in the rate that the Company must pay for treatment. These calculations will include basic flow charges and rate and volume amounts for the sampling results. That is, the Company will break down its total wastewater treatment bill into the amount due to fixed fees, volume of COD and TSS, and the rates paid per pound. For the period following the rate change, the Company will provide the same information, then compare the two periods, isolating any change in wastewater treatment cost that is due exclusively to a rate change. The specific intent is to show exactly how much of any increase or decrease is due to changes in rates beyond the Company’s control and how much is due to a change in the amount of flows delivered. The Company will only recover increases or refund decreases that are due to changes in rates.

C. All revised schedules filed with the Commission pursuant to the provisions of this WTAM will be accompanied by documentation prepared by the Company in a format approved by Utilities Division Staff of the Commission and will contain sufficient detail to enable the Commission to verify accuracy of the Company’s calculations.

D. The surcharges will not become effective until approved by the Commission.

E. The Company shall provide notice (in a form acceptable to Staff) of the rate increases to customers with the bill where the rate increase first appears.

LIBERTY UTILITIES (BLACK MOUNTAIN SEWER) CORP.

III. APPLICATION TO SEWER CUSTOMERS.

A. The increase or decrease in wastewater treatment costs that are due to changes in Scottsdale user rates for COD and TSS will be allocated on a per capita basis.

B. See the following example:

Test Year

Factor	MG	COD/TSS	Total COD/TSS	Conversion Factor	Total Pounds	Price Per Pound	Total COD/TSS Charge
	(A)	(B)	(A) x (B)=(C)	(D)	(C) x (D) =(E)	(F)	(E) x (F)
COD	120.228	600	72,137	8.34	601,620	\$0.13	\$78,210.72
TSS	120.228	350	42,080	8.34	350,946	\$0.33	\$115,812.03

Factor	1,000's Gallons	Price Per 1,000 Gal	Total Gallons Charge	Basic Charge	Total Flow Charge
	(A)	(B)	(A) x (B)=(C)	(D)	(C) + (D)=(E)
FLOW	10,019	\$1.82	\$218,806.01	\$92	\$218,898.01

Current Year

Factor	MG	COD/TSS	Total COD/TSS	Conversion Factor	Total Pounds	Price Per Pound	Total COD/TSS Charge
	(A)	(B)	(A) x (B)=(C)	(D)	(C) x (D) =(E)	(F)	(E) x (F)
COD	120.228	600	72,137	8.34	601,620	\$0.19	\$114,307.97
TSS	120.228	350	42,080	8.34	350,946	\$0.40	\$140,378.21

Factor	1,000's Gallons	Price Per 1,000 Gal	Total Gallons Charge	Basic Charge	Total Flow Charge
	(A)	(B)	(A) x (B)=(C)	(D)	(C) + (D)=(E)
FLOW	10,019	\$1.82	\$218,806.01	\$92	\$218,898.01

Test Year		Current Year
COD/TSS Expense	\$194,023	COD/TSS Expense \$254,686

Pass Through Calculation	
Current Year Purchased Power Expense	\$254,686
Test Year Purchased Power Expense	\$194,023
Increase in Purchased Power Expense Due to Rate Increase	\$60,663

WTAM Charge on Sample Customer Bill	
Increase in Wastewater Treatment Expense Due to Rate Increase	\$60,663
Number of Customers	2,200
Annual Increase to Customers	\$27.57
WTAM Charge on Sample Customer Bill	\$2.30

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6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com

7 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.
8

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
12 MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
14 PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

16
17
18 **DIRECT TESTIMONY**

19 **OF**

20 **MATTHEW GARLICK**

21
22 **June 27, 2019**
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1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Matthew Garlick. My business address is 12725 W. Indian School Road,
4 Suite D-101, Avondale, Arizona 85392.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I have been employed by Liberty Utilities since 2000, and I am President of our
7 regulated utilities in Arizona and Texas, including applicant Liberty Utilities (Black
8 Mountain Sewer) Corp. ("Liberty Black Mountain" or the "Company"). I have been
9 President for Liberty Utilities in Arizona and Texas since June 1, 2015.

10 **Q. WHAT ARE YOUR RESPONSIBILITIES AS PRESIDENT OF LIBERTY**
11 **UTILITIES IN TEXAS AND ARIZONA?**

12 A. My responsibilities include directing the operations and administration of all of the
13 Arizona¹ and Texas utilities, including their financial and operating results, capital
14 and operating cost budgeting, rate case planning and oversight, and regulatory
15 policies and procedures. I also oversee customer and development services,
16 environmental, health and safety, accounting/finance, human resources, engineering,
17 and conservation planning.

18 **Q. WHAT OTHER POSITIONS HAVE YOU HELD WITH LIBERTY**
19 **UTILITIES?**

20 A. I was hired in January 2000 as a Technical Services Supervisor for Litchfield Park
21 Service Company, now known as Liberty Litchfield Park. In November 2009, I was
22 named Business Manager of Liberty Litchfield Park, and was responsible for
23

24 ¹ Liberty Utilities owns and operates seven regulated utilities in Arizona. Along with Liberty Black
25 Mountain, Liberty Utilities owns and operates Cordes Lakes Water Co., Liberty Utilities (Bella Vista Water)
26 Corp., Liberty Utilities (Entrada Del Oro Sewer) Corp., Liberty Utilities (Gold Canyon Sewer) Corp.,
Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park"), and Liberty Utilities
(Rio Rico Water & Sewer) Corp.

1 overseeing the utility operations for approximately 40,000 utility customers.
2 In March 2012, I assumed the role of Director of Operations and was responsible for
3 operations throughout Arizona, as well as in Texas, Missouri, and Illinois.

4 **Q. WHAT WAS YOUR EDUCATION AND EMPLOYMENT PRIOR TO**
5 **LIBERTY UTILITIES?**

6 A. I earned a Bachelor of Science degree in Earth Science from Northern Arizona
7 University. Before joining Liberty Litchfield Park, I was a Senior Project Geologist
8 for roughly 15 years with an environmental engineering firm called Environmental
9 Science and Engineering. My role was to direct and support other project scientists
10 in daily work activities on various State of Arizona Water Quality Assurance
11 Revolving Fund (WQARF) groundwater remedial projects.

12 **Q. DO YOU HOLD ANY CERTIFICATIONS?**

13 A. Yes. I hold Operator Certifications (Grade IV – Wastewater Collection, Water
14 Treatment, Wastewater Treatment, and Grade III in Water Distribution) in Arizona.
15 I also hold a backflow specialist certification. Additionally, I belong to several
16 professional organizations such as the American Water Works Association, and
17 American Backflow Prevention Association, and I am a board member for the Water
18 Utilities Association of Arizona.

19 **Q. HAVE YOU TESTIFIED BEFORE THIS OR ANY OTHER COMMISSION?**

20 A. Yes, I have testified in all of Liberty Utilities' rate cases since I became President in
21 2015, including the last rate case and financing dockets for Liberty Black Mountain
22 (Consolidated Docket Nos. SW-02361A-15-0206 and SW-02361A-15-0207).
23 I have also presented written testimony in pending rate case proceedings before the
24 Public Utility Commission of Texas for our regulated Texas utilities.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
2 **PROCEEDING?**

3 A. To support Liberty Black Mountain's request for rate relief. Specifically, I will
4 provide background on Liberty Utilities generally, and then on Liberty Black
5 Mountain specifically. I also will discuss the Company's compliance with the
6 Commission's directive that the Company close the Boulders Wastewater Treatment
7 Plant ("Boulders WWTP").

8 **Q. IS THAT THE REASON WHY LIBERTY BLACK MOUNTAIN IS FILING**
9 **THIS RATE CASE?**

10 A. The Commission ordered the Company to file a rate case on or before June 30, 2019.²
11 The Company needs new rates in order to ensure that its substantial capital
12 investment in successfully complying with the Commission's order and our
13 customers' wishes to close the Boulders WWTP is recognized in rates.

14 **II. OVERVIEW OF LIBERTY UTILITIES.**

15 **Q. PLEASE PROVIDE AN OVERVIEW OF LIBERTY UTILITIES.**

16 A. Liberty Utilities Co. ("Liberty Utilities") is a Delaware corporation that owns and
17 operates regulated utilities in the United States. Liberty Utilities is a subsidiary of
18 Liberty Utilities (Canada) Corp. ("Liberty Utilities Canada"), which is a subsidiary
19 of Algonquin Power & Utilities Corp., or APUC. APUC is a utility holding company
20 based in Oakville, Ontario and publicly traded on the Toronto and New York stock
21 exchanges.³ This means that the Arizona utilities, including Liberty Black
22 Mountain, ultimately are owned by APUC. The Arizona and Texas utilities are
23 wholly owned by Liberty Utilities (Sub) Corp., which is a wholly owned subsidiary

24
25 ² Decision No. 75510 (April 22, 2016) at 19:1-2.

26 ³ The APUC website is www.AlgonquinPowerandUtilities.com. The complete APUC 2018 Annual Report is available on that site.

1 of Liberty Utilities.

2 APUC's subsidiaries generally operate as separate business groups. The
3 distribution business group operates in the United States as "Liberty Utilities" and
4 owns and operates regulated water, wastewater, natural gas and electric transmission
5 and distribution utilities in thirteen states, delivering responsive and reliable utility
6 services to approximately 780,000 customers. Liberty Utilities currently operates in
7 Arizona, Arkansas, California, Georgia, Illinois, Iowa, Kansas, Massachusetts,
8 Missouri, New Hampshire, Oklahoma, New York and Texas. The electric
9 generation business group operates as Liberty Power and owns or has interests in a
10 portfolio of North American based contracted wind, solar, hydroelectric and natural
11 gas-powered generating facilities representing more than 1,150 MW of installed
12 capacity. Liberty Utilities uses a shared services model for its business groups.
13 Leticia Washington discusses the shared services model in her direct testimony.⁴

14 **Q. DOES THAT MEAN THAT THE DECISIONS REGARDING THE**
15 **OPERATION OF REGULATED UTILITY BUSINESSES IN ARIZONA ARE**
16 **BEING MADE IN CANADA?**

17 A. No, Liberty Utilities believes that local management, local decision-making and
18 local operational control are critical. Strategic oversight, financial and
19 administrative support services are provided centrally from Liberty Utilities Canada,
20 APUC and other entities within Liberty Utilities to supplement and support the local
21 operations. This shared-services approach to management, service and support is
22 intended to ensure efficient and dependable utility services to all of Liberty Utilities'
23 customers. We measure our performance in terms of service reliability, customer
24 experience and dedication to public and workplace safety. Liberty Utilities considers

25
26 ⁴ Direct Testimony of Leticia Washington ("Washington Dt.") at 2-8.

1 safety a meta-level value and places safety of customers, employees and community
2 first and foremost.

3 I think this rate case illustrates that Liberty Utilities' approach works. Nearly
4 15 years ago, the Company began responding to and working with its customers, the
5 local community and regulators to address concerns over odors in the community,
6 particularly concerns due to the location of the Boulder WWTP in the middle of a
7 residential neighborhood. As I explain in my testimony, this filing is one of the last
8 steps in the long, challenging and expensive process necessary for the Company to
9 modify its wastewater utility system in order to meet the specific and unique needs
10 and wishes of the community it serves. I believe Liberty Black Mountain's
11 achievement is directly attributable to an overall approach that allows local
12 management to make decisions that promote health, safety and customer satisfaction
13 with support and financing from our shared services partners.

14 **III. DESCRIPTION OF LIBERTY BLACK MOUNTAIN.**

15 **Q. PLEASE PROVIDE AN OVERVIEW OF LIBERTY BLACK MOUNTAIN.**

16 A. Liberty Black Mountain's service area is located in the northeastern portion of the
17 Phoenix metropolitan area. The Company serves primarily in the Town of Carefree
18 ("Town"), and also in an unincorporated portion of Maricopa County and in small
19 portions of the City of Scottsdale ("Scottsdale"). Liberty Black Mountain currently
20 has 2,210 customers, 2,075 of which are residential, 131 are commercial, and four
21 are homeowners' association customers.

22 **Q. HOW LONG HAS LIBERTY BLACK MOUNTAIN BEEN PART OF THE**
23 **LIBERTY UTILITIES FAMILY?**

24 A. Since March 2001 when Algonquin Water Resources of America, Inc.⁵ purchased
25

26 ⁵ Algonquin Water Resources of America, Inc. is now known as Liberty Utilities (Sub) Corp.

1 all of the stock of Boulders Carefree Sewer Corporation (“BCSC”) from an affiliate
2 of Wyndham International. Sometime subsequent to the granting of the Certificate
3 of Convenience and Necessity (“CC&N”), the Wyndham resort group had acquired
4 the Company along with the Boulders Resort (“Resort”). BCSC, which was later
5 renamed to Liberty Utilities (Black Mountain Sewer) Corp., was the first regulated
6 utility in what has since become the Liberty Utilities group of water, sewer, electric
7 and gas utilities in the United States. So, it is fair to say that Liberty Utilities
8 basically started in Carefree, Arizona.

9 **Q. WHEN DID BCSC RECEIVE ITS CC&N?**

10 A. January 3, 1980.⁶ BCSC was formed by the Boulders Carefree Corporation, the real
11 estate developer of Boulders Carefree as a public service corporation to provide
12 sewer utility service to two areas, the Boulders Carefree development, and the area
13 then served by Carefree Water Company, another public service corporation that was
14 providing sewer utility service in portions of the Town. At that time, the Boulders
15 Carefree development was planned for 249 residential lots with a golf course and
16 clubhouse.⁷ When BCSC received its CC&N, 143 of the lots were already built and
17 occupied. Today, there are several hundred homes in the Boulders Carefree
18 community and the Town has a population of more than 3,700 along with multiple
19 commercial areas.

20 **Q. DID BCSC OWN A WASTEWATER TREATMENT PLANT?**

21 A. Yes, BCSC acquired the Boulders WWTP from another affiliate, Boulders
22 Properties, around the time of the decision granting the CC&N.⁸ The Boulders
23

24 ⁶ Decision No. 50544.

25 ⁷ Decision No. 50544 at 2:21 – 3:17.

26 ⁸ Decision No. 50544 at 4:7-17.

1 WWTP was a 120,000 gallon per day package plant apparently built around 1969.⁹
2 The facility was built in what ultimately turned out to be the middle of the Boulders
3 community and resort as depicted in the map attached to my direct testimony as
4 **Exhibit MG-DT1**. The Boulders WWTP was located immediately adjacent to one
5 of the holes on the Boulders golf course and eventually homes were built around the
6 golf course and the sewer treatment plant. At the time BCSC acquired the Boulders
7 WWTP, the facility was already treating flows from the residents of Boulders
8 Carefree as well as the sewer utility customers of Carefree Water Company.¹⁰ By
9 the time Liberty Utilities acquired BCSC in 2001, there were three homes located
10 less than 100 feet from the Boulders WWTP, 10 homes located less than 300 feet
11 from the plant, 17 homes located within 500 feet, and up to 300 homes within 1,000
12 feet of the facility, as well as facilities at the Resort.¹¹

13 **Q. DID BCSC HAVE ANY PLAN BACK IN 1980 TO ADD ADDITIONAL**
14 **TREATMENT CAPACITY?**

15 A. According to the CC&N order, a 60,000 gallon per day Smith & Loveless package
16 plant had already been contracted for and was to be built on the same sight as the
17 Boulders WWTP and be in service by March 1980.¹² But no one seems to know
18 what happened to that planned plant.¹³

19 **Q. HOW DID BCSC TREAT THE EXCESS FLOWS THAT WERE BEYOND**
20 **THE CAPACITY OF THE BOULDERS WWTP?**

21 A. Before 1989, I don't know. Beginning in 1989, the Company started sending some
22

23 ⁹ Decision No. 71865 (September 1, 2010) at 36:24-26.

24 ¹⁰ Decision No. 50544 at 2:21 – 3:17.

25 ¹¹ Decision No. 71865 at 37:8-13.

26 ¹² Decision No. 50544 at 2:21 – 3:17.

¹³ Decision No. 71865 at 37 n. 18.

1 of the wastewater it collected to Scottsdale for treatment.¹⁴ From there, wastewater
2 was sent by Scottsdale to the regional City of Phoenix 91st Avenue Wastewater
3 Treatment Plant. Although the Company and Scottsdale began negotiation of an
4 agreement in 1989, it appears that the agreement was not finalized until several years
5 later.¹⁵ In 1996, the Company entered into the first in a series of wastewater capacity
6 and treatment agreements with Scottsdale. In the first installment, the Company
7 acquired 210,000 gallons per day of treatment capacity and acquired the right to
8 purchase additional capacity in the future. Today, the Company has the right to
9 deliver 520,000 gpd of wastewater per day to Scottsdale for treatment.

10 **Q. WHAT DID BCSC DO WITH RECLAIMED WATER FROM THE**
11 **BOULDERS WWTP?**

12 A. Initially, it went to the Boulders Carefree's developer to use for irrigation on one or
13 more golf courses under a contract that was under negotiation at the time of the
14 CC&N order.¹⁶ Later, the Resort acquired the rights to the Company's effluent and
15 the effluent was used solely for golf course irrigation. When Liberty Utilities
16 acquired the Company from the Resort's owners in 2001, the Company and the
17 Resort entered into an Effluent Delivery Agreement ("EDA") governing the
18 continued provision of effluent from the plant to the Resort. This arrangement gave
19 the Company a low cost means of disposing of its reclaimed water and the golf
20 courses had a source of irrigation water to supplement groundwater withdrawals.

21 **Q. THANK YOU. WHAT IS THE STATUS OF THE BOULDERS WWTP**
22 **TODAY, MR. GARLICK?**

23 A. As of November 30, 2018, Liberty Black Mountain ceased operations of the

24 ¹⁴ Decision No. 59944 at 2:20 – 3:1.

25 ¹⁵ Decision No. 59944 at 2-3.

26 ¹⁶ See Decision No. 50544 at 5 ¶ 9, Exhibit 12.

1 Boulders WWTP, precisely as it was ordered to do by the Commission.¹⁷

2 **Q. OKAY. HAS THE COMPANY MADE ANY OTHER SIGNIFICANT**
3 **UPGRADES OR IMPROVEMENTS SINCE THE LAST TEST YEAR**
4 **ENDED IN 2014?**

5 A. Aside from the closure costs and capital investment relating to closure of the
6 Boulders WWTP, the Company made other upgrades and improvements, including
7 lift station improvements, I&I reduction measures, vehicle replacements, sewer and
8 odor monitoring equipment and other similar items such as tool replacement. The
9 total of those additional improvements is \$387,636.

10 **Q. WHAT IS LIBERTY BLACK MOUNTAIN'S COMPLIANCE STATUS?**

11 A. As far as we know, Liberty Black Mountain is in compliance with the rules and
12 regulations of ADEQ, Maricopa County and the Commission.

13 **Q. WHEN DID THE CURRENT RATES GO INTO EFFECT?**

14 A. The current rates were approved in Decision No. 75510. These rates were based on
15 a test year ended December 31, 2014.

16 **Q. IS LIBERTY BLACK MOUNTAIN EARNING ITS AUTHORIZED**
17 **RETURN?**

18 A. No, especially when factoring in all of the costs of closing the Boulders WWTP as
19 discussed in the next section of my direct testimony.

20 **Q. WHAT RATE RELIEF IS LIBERTY BLACK MOUNTAIN SEEKING IN**
21 **THIS RATE FILING, MR. GARLICK?**

22 A. The Company is seeking a total annual revenue requirement equal to \$3,352,176,
23 which is an increase of \$878,785 annually or 35.53 percent over the test year ending
24 December 31, 2018. The primary reason the Company needs higher rates is recovery
25

26 ¹⁷ Decision Nos. 71865 and 73885 (May 8, 2013).

1 of the cost of complying with Commission Decision Nos. 71865 and 73885 relating
2 to closure of the Boulders WWTP. The resulting residential and commercial rates
3 are set forth in Mr. Bourassa's direct testimony.¹⁸ The Company also is requesting
4 certain other tariff changes as addressed by Ms. Washington in her direct
5 testimony.¹⁹

6 **IV. CLOSURE OF THE BOULDERS WTP.**

7 **A. Factual, Regulatory and Legal Background.**

8 **Q. PLEASE SUMMARIZE WHY THE COMMISSION ORDERED THE**
9 **COMPANY TO REMOVE THE BOULDERS WWTP FROM SERVICE.**

10 A. The Commission ordered the closure of the Boulders WWTP because that's what
11 the customers and community leaders told the Commission they wanted ten years
12 ago.²⁰ To help understand the chain of events leading to the plant closure, I have
13 attached a timeline of key events from 2005-2019 to my testimony as **Exhibit MG-**
14 **DT2.**

15 **Q. WHAT HAPPENED IN 2005 THAT STARTED THIS PROCESS,**
16 **MR. GARLICK?**

17 A. Odor concerns first arose in the Company's 2005 rate case filed on September 16,
18 2005. One of the more contentious issues in that rate case revolved around claims
19 that objectionable odors were emanating from the Company's system. The Town
20 and the Boulders Homeowners Association ("BHOA") first intervened in the
21 Company's 2005 rate case and raised concerns about odors that were then believed
22 to be coming from the Company's wastewater collection and transmission
23

24 ¹⁸ Direct Testimony of Thomas J. Bourassa – Rate Base, Income Statement and Rate Design at 18-19.

25 ¹⁹ Washington Dt. at 24-26.

26 ²⁰ See Decision No. 71865 at 36-55. The community continued to make their desires known in Phase 2 of the rate case decided in May 2013. Decision No. 73885 at 26:4 – 27:10, 31:11 – 32:20.

1 facilities.²¹ In the 2005 rate case decision, the Commission ordered Liberty Black
2 Mountain to take certain steps to mitigate odors coming from the Company's
3 collection system.²² As directed by the Commission, the Company deactivated and
4 removed a lift station, rerouted sewer lines and installed air-jumper pipelines at four
5 locations along the street between manholes to help prevent air from escaping into
6 the atmosphere.²³ The Company also took several steps to minimize odors from the
7 Boulders WWTP after the 2005 rate case, including covering grate openings and
8 installation of an odor scrubber.²⁴

9 **Q. WERE THE COMPANY'S EFFORTS AFTER THE 2005 RATE CASE**
10 **SUCCESSFUL?**

11 A. Yes, these improvements were designed to and did minimize odors from much of
12 the collection system.²⁵ The Company's odor and noise control efforts also made
13 the situation better at and around the plant. Ultimately, though, nothing could be
14 done to completely address customer concerns as long as the Boulders WWTP was
15 still located in the middle of the Boulders residential community.

16 **Q. WHAT HAPPENED NEXT?**

17 A. In December 2008, Liberty Black Mountain filed another rate case. The local
18 community, primarily through the BHOA and the Town, intervened in that rate case
19 because of continued concerns about odors from the plant. Those concerns prompted
20 our customers and community stakeholders to propose closure of the Boulders
21 WWTP.²⁶ The Commission received over 500 public comments supporting closure

22 ²¹ Decision No. 69164 at 30:15-19.

23 ²² Decision No. 69164 at 43.

24 ²³ Decision No. 71865 at 40:19-25.

25 ²⁴ Decision No. 71865 at 40:25 – 41:3.

26 ²⁵ Decision No. 71865 at 40:20 – 41:3.

²⁶ See Direct Testimony of Les Peterson, filed September 18, 2009 in Docket No. SW-02361A-08-0609

1 of the Boulders WWTP in the 2008 rate case, further illustrating the ground swell of
2 support from our customers for closure of the plant.²⁷

3 **Q. WERE THERE ANY OPERATIONAL OR COMPLIANCE PROBLEMS**
4 **WITH THE BOULDERS WWTP?**

5 A. No, and that is an important point. The Company was in compliance with all odor
6 control and other operational standards regarding the Boulders WWTP. This, again,
7 illustrates that the real problem was the location of the plant in the middle of a
8 residential community. As they say in real estate, it was all about “location, location,
9 location.” The community did not want the Boulders WWTP as its neighbor any
10 longer and used the 2008 rate case to achieve that goal.

11 It’s also helpful to remember the history of the Boulders WWTP, as I
12 discussed earlier. When we closed the plant in 2018, the plant had been in operation
13 for about 50 years. It was built on one of the golf courses and the community was
14 built up around the golf course and, thereby, around the Boulders WWTP. As a
15 result, the Boulders WWTP was situated less than 100 feet from three homes and
16 within 1,000 feet of approximately 300 homes.²⁸ If constructed today, the Boulders
17 WWTP would require a setback of 100 feet with odor, noise, and aesthetic controls,
18 and a setback of 500 feet without odor, noise, and aesthetic controls.²⁹ Les Peterson,
19 then the BHOA president and the current Mayor of the Town, testified in the 2008
20 rate case that when the Boulders WWTP was constructed, it “was expected to be a
21 temporary wastewater treatment solution until another location could be secured
22

23 (“Peterson 2009 Dt.”), at 6.

24 ²⁷ Decision No. 71865 at 49:23-26; Decision No. 73885 at 19:5-8. In fact, the Commission specifically
25 noted that only one member of the community opposed the plant closure. Decision No. 71865 at 51 n. 21.

26 ²⁸ Decision No. 71865 at 37:8-12; Decision No. 73885 at 6:5-9.

²⁹ A.A.C. R18-9-B201.I.

1 further away from homes.”³⁰

2 **Q. SO, WHAT HAPPENED IN THE 2008 RATE CASE?**

3 A. The Company’s representatives sat down with representatives from BHOA and
4 discussed a solution to the community’s concerns. Those efforts resulted in the
5 “Plant Closure Agreement,” under which the Company agreed to close the Boulders
6 WWTP if certain conditions were met.³¹

7 **Q. WHY WAS THE COMPANY WILLING TO AGREE TO DECOMMISSION**
8 **THE BOULDERS WWTP?**

9 A. The Company was in a difficult position. Liberty Utilities tries very hard to work
10 with and be a part of the communities it serves. The Company tried to address
11 customer concerns relating to the Boulders WWTP, as illustrated by the significant
12 steps Liberty Black Mountain took to address odors following the 2005 rate case
13 order. But for the community, the mission wasn’t complete yet. Liberty Black
14 Mountain was willing to close the Boulders WWTP if that is what the community
15 wanted as long as all of the stakeholders and the Commission recognized that the
16 Company should and would receive full recovery for any and all necessary costs
17 associated with closure of the plant. When the Company and the BHOA entered into
18 the Plant Closure Agreement in September 2009, it provided for the closure of the
19 Boulders WWTP and the timely recovery of the necessary capital investment by the
20 Company through rates.³²

21 **Q. DID THE COMMISSION APPROVE THE PLANT CLOSURE**
22 **AGREEMENT IN THE 2008 RATE CASE?**

23 A. Yes. The Commission issued Decision No. 71865 on September 1, 2010 (“Phase 1

24 ³⁰ Decision No. 73885 at 26:4-7 citing 11/18/09 (Vol. I) Transcript (“2009 Tr.”) at 144, 161-162 (Sorensen).

25 ³¹ Decision No. 71865 at 42:7-27.

26 ³² *Id.*

1 Decision”). In the Phase 1 Decision, the Commission gave a detailed explanation of
2 the “unique facts and circumstances” presented in the 2008 rate case, including the
3 “overwhelming and extraordinary level of customer participation and support for the
4 plant closure.”³³ Concerning the Plant Closure Agreement, the Commission stated
5 that it was a reasonable resolution of the odor concerns expressed by hundreds of
6 Liberty Black Mountain customers.³⁴ To facilitate Liberty Black Mountain’s
7 funding and recovery of costs associated with closure of the Boulders WWTP, the
8 Commission also approved a special plant closure cost recovery surcharge
9 mechanism in the Phase 1 Decision.³⁵ The Commission recognized that directing
10 the Company to remove a fully compliant, used and useful treatment facility was an
11 extraordinary remedy, as was the approval of a means to ensure timely rate recovery
12 by Liberty Black Mountain.³⁶ In the end, the Commission was persuaded that the
13 Plant Closure Agreement was a reasonable resolution of the unique and
14 extraordinary circumstances facing the Company, the community and the
15 Commission.³⁷

16 **Q. YOU MENTIONED EARLIER THAT THE EFFLUENT FROM THE**
17 **BOULDERS WWTP WENT TO THE RESORT FOR IRRIGATION OF ITS**
18 **GOLF COURSE UNDER THE EDA. HOW DID THE COMPANY ADDRESS**
19 **THE IMPACT OF THE CLOSURE ON THE RESORT?**

20 **A.** The Resort was not a party to the Phase 1 proceedings. However, a key condition of
21 the Plant Closure Agreement was the requirement that the Company successfully
22

23 ³³ Decision No. 71865 at 49:12-18.

24 ³⁴ *Id.*

25 ³⁵ Decision No. 71865 at 54:6 – 55:7.

26 ³⁶ *See* Decision No. 71865 at 54:2-5, 55:5-7.

³⁷ Decision No. 71865 at 49:12-18.

1 negotiate termination of the EDA at no cost to the Company and its customers.³⁸ As
2 a result, after the Phase 1 Decision, Liberty Black Mountain and the BHOA had
3 several meetings with the Resort in an effort to reach agreement to terminate the
4 EDA in order for the plant closure to proceed. Unfortunately, those efforts were not
5 successful, which led to a second phase of the 2008 rate case.

6 **Q. HOW DID PHASE 2 OF THE 2008 RATE CASE COMMENCE?**

7 A. On June 15, 2011, the BHOA filed a Motion for Plant Closure Order with the
8 Commission. In that motion, the BHOA asserted that progress on the Company and
9 the Resort's negotiations for a termination of the EDA appeared to have ceased but
10 that odors from the Boulders WWTP had not.³⁹ The BHOA specifically requested
11 that the Commission order the Boulders WWTP closed. On January 24, 2012, the
12 Commission voted to reopen the matter pursuant to A.R.S. 40-252 in order to address
13 the sole issue of whether it should order Liberty Black Mountain to close the
14 Boulders WWTP and directed the Hearing Division to conduct additional
15 proceedings. A procedural schedule was set, including testimony filing deadlines
16 and a hearing date (May 8, 2012). On January 26, 2012, the Resort was granted
17 intervention in Phase 2.⁴⁰

18 **Q. DID THE COMMISSION ISSUE ANOTHER DECISION IN THE SECOND**
19 **PHASE OF THE 2008 RATE CASE?**

20 A. Yes, after more hearings, the Commission issued Decision No. 73885 on May 8,
21 2013 ("Phase 2 Decision"). In the Phase 2 Decision, the Commission concluded that
22 continued operation of the Boulders WWTP in the midst of a residential
23

24 ³⁸ Decision No. 71865 at 49-54; Peterson 2009 Dt., Exhibit B at 3 ¶ iv.

25 ³⁹ Decision No. 73885 at 2:11-14.

26 ⁴⁰ Decision No. 73885 at 3:4-5. The Town did not participate as a party but passed a resolution that was
filed with the Commission supporting closure of the Plant. RUCO also elected not to participate in Phase 2.

1 neighborhood would have a detrimental effect on the quality of life for residents
2 within the community.⁴¹ As the Commission held, “[t]he record supports a finding
3 that due to its location, the Boulders WWTP can no longer be operated in a manner
4 consistent with the public interest[.]”⁴²

5 **Q. DID THE RESORT ACCEPT THE COMMISSION’S PHASE 2 DECISION?**

6 A. No. The Resort filed a petition for rehearing of the Phase 2 Decision pursuant to
7 A.R.S. 40-253, which petition was denied by operation of law. The Resort then
8 appealed the Phase 2 Decision pursuant to A.R.S. 40-254. The Superior Court in
9 Maricopa County Superior Court Case No. CV2013-00784 upheld the
10 Commission’s order, finding that the plant closure order was within the
11 Commission’s statutory powers. The Resort appealed the Superior Court’s decision
12 to the Arizona Court of Appeals as Case No. 1 CA CV 14-0643 (the “Appeal”) filed
13 on August 26, 2014.

14 **Q. WHAT WAS THE OUTCOME OF THE RESORT’S APPEAL TO THE**
15 **COURT OF APPEALS?**

16 A. On November 15, 2015, after the Company filed another rate case, the Appeal was
17 stayed on November 24, 2015, pending the outcome of the 2015 rate case. RUCO,
18 the Resort, the Town and the BHOA all intervened in the 2015 rate case.⁴³

19 **Q. WHY DID LIBERTY BLACK MOUNTAIN FILE ANOTHER RATE CASE**
20 **IN 2015?**

21 A. As stated in the rate application and supporting testimony, the rate case was brought
22 (1) because the plans for and estimated costs of the Boulders WWTP closure had
23 changed since the Phase 1 and Phase 2 Decisions, (2) Liberty Black Mountain already

24 ⁴¹ Decision No. 73885 at 38:2-5.

25 ⁴² Decision No. 73885 at 49:16-17.

26 ⁴³ Decision No. 75510 at 3:2-8, 3:19-21.

1 had over \$1 million of investment in the plant closure, (3) the Company was no
2 longer earning sufficient revenue and returns, and (4) the Company requested a new
3 commercial rate design supported by the Town.⁴⁴

4 **Q. DID THE COURT OF APPEALS RENDER A DECISION ON THE**
5 **RESORT'S APPEAL?**

6 A. No, while the rate case was pending and before the Court of Appeals made its
7 decision, the Resort, the Company, the Town, and the BHOA reached a
8 compromise.⁴⁵

9 **Q. WHAT WAS THE NATURE OF THIS "COMPROMISE"?**

10 A. Liberty Black Mountain, the Town and the Resort, along with the BHOA and Wind
11 Pl Mortgage Borrower LLC., entered into a Proposed Settlement Agreement filed
12 with the Commission in the rate case docket on November 16, 2015 (the
13 "Town/Resort Agreement").⁴⁶ The Town/Resort Agreement set a date certain for
14 closure of the Boulders WWTP of November 30, 2018. The Town/Resort
15 Agreement also included the proposed dismissal of the Resort's Appeal of Decision
16 No. 73885 and the release of all claims related to the closure of the Boulders WWTP
17 if the agreement was accepted by the Commission.

18 **Q. DID COMMISSION STAFF AND RUCO JOIN IN THE TOWN/RESORT**
19 **AGREEMENT?**

20 A. No, however, after the Town/Resort Agreement, the parties to the rate case,
21 including Staff and RUCO, entered into a Comprehensive Settlement Agreement.
22 The Comprehensive Settlement adopted much of the Town/Resort Agreement as
23 well as any remaining terms related to the closure as well as addressing the other

24 ⁴⁴ Liberty Black Mountain's Application, filed June 22, 2015 in Docket No. SW-02361A-15-0207.

25 ⁴⁵ Decision No. 75510 at 3:23 – 4:2, 7:11-18.

26 ⁴⁶ Decision No. 75510 at 7:11-16.

1 issues in the 2015 rate case.⁴⁷

2 **Q. DID THE COMMISSION APPROVE THE TOWN/RESORT AND**
3 **COMPREHENSIVE SETTLEMENT AGREEMENTS?**

4 A. Yes, in Decision No. 75510 the Commission approved the Town/Resort and
5 Comprehensive Settlement agreements, including ordering the Company to close the
6 Boulders WWTP on or before November 30, 2018.⁴⁸

7 **Q. DID THE COMMISSION'S ORDER IN THE 2015 RATE CASE ADDRESS**
8 **ANY OTHER ASPECTS OF THE PLANT CLOSURE?**

9 A. Yes. The Commission approved a regulatory asset to allow the Company to begin
10 recovering its costs to close the Boulders WWTP and approved post-in service
11 AFUDC and deferred depreciation on the closure costs based upon the then existing
12 estimates of costs. The Commission and the parties in last rate case also recognized
13 that the costs could change and that the Company could seek relief for additional
14 post-in service AFUDC and deferred depreciation on the closure costs. These
15 measures were agreed to by the parties in consideration of the Company agreeing to
16 forego the plant cost surcharge mechanism previously approved by the
17 Commission.⁴⁹ The Commission also approved a special effluent rate for the Resort
18 to offset some of the Company's closure costs related to litigation over the
19 Commission's orders directing the Company to close the Boulders WWTP.⁵⁰

20
21
22
23
24 ⁴⁷ Decision No. 75510 at 7:19 – 8:5.

25 ⁴⁸ Decision No. 77510 at 7:17-18, 17:24 – 18:1.

26 ⁴⁹ Decision No. 75510 at 12:28 – 13:6.

⁵⁰ Decision No. 75510 at 11:6-9.

1 **B. The Decommissioning.**

2 **Q. THANK YOU, MR. GARLICK. TURNING NOW TO THE ACTUAL PLANT**
3 **CLOSURE PROJECT, HOW DO YOU REMOVE A WASTEWATER**
4 **TREATMENT FACILITY FROM SERVICE?**

5 A. There were three main steps to closing the Boulders WWTP. First, alternative
6 treatment capacity had to be obtained. Second, flows that were previously going to
7 or through the plant needed to be re-routed by the means of installing new gravity
8 sewers, installing new force main, by-passing the existing lift station and
9 constructing a new lift station. Third is decommissioning, which involves removal
10 of the facilities, remediation of the property, and then sale of the parcel.

11 **Q. IN YOUR 30 YEARS OF UTILITY EXPERIENCE, HOW MANY USED AND**
12 **USEFUL WASTEWATER TREATMENT PLANTS HAVE YOU SEEN**
13 **CLOSED OR RETIRED?**

14 A. I can't recall any others, and think it is fair to say that this is a very unique event for
15 a utility.

16 **Q. WHERE IS LIBERTY BLACK MOUNTAIN IN THIS PROCESS AT THIS**
17 **TIME?**

18 A. The Company made the payment for the additional 120,000 gpd of replacement
19 treatment capacity from Scottsdale on December 31, 2017. All of the collection and
20 transmission facilities have been re-routed and upgraded as necessary to deliver all
21 flows to Scottsdale for treatment. The plant itself has been removed, the site has
22 been remediated and it is currently for sale. When sold, half of the net sale proceeds
23 will be shared with ratepayers as required under the Plant Closure Agreement.⁵¹
24 In other words, we have completed all of the steps required for closure of the

25
26 ⁵¹ Decision No. 71865 at 43:3-6.

1 Boulders WWTP and are just waiting to share the profits from the land sale with our
2 customers when the lot sells. If the land sale happens before the conclusion of this
3 case, the Company will reflect a sharing of profits (if any) in its request for relief.

4 **Q. HOW MUCH DID IT COST LIBERTY BLACK MOUNTAIN TO COMPLY**
5 **WITH THE COMMISSION'S ORDERS AND CLOSE THE BOULDERS**
6 **WWTP?**

7 A. The closure costs are detailed in the following table:

8
9 **TOTAL PLANT CLOSURE COSTS**

Description	Amount
Construction for Reroute	\$ 5,548,848
Construction for Decommissioning	1,234,004
Replacement Capacity Costs	1,200,074
INDOH	1,193,701
Engineering	267,446
Legal	685,719
Engineering for Flows	428,189
AFUDC	165,463
Engineering for Decommissioning	124,368
Engineering for Closure	108,901
Direct Labor	88,574
Other Expenses	1,594
Grand Total	\$11,046,881

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17
18
19 **Q. HOW MUCH WAS THE PLANT CLOSURE EXPECTED TO COST?**

20 A. There really is no simple answer to that question.

21 **Q. PLEASE EXPLAIN.**

22 A. While we knew the cost of the additional Scottsdale capacity because it was set by
23 contract, first at \$6 per gallon and then at \$10 per gallon, the actual costs to modify
24 and upgrade the collection and transmission facilities to re-route the flows and the
25 costs of decommissioning the plant and remediating the site were uncertain until we
26 started the project. The type of certainty needed to provide firm estimates requires

1 engineering and design, and that stage of a project like the closure of the Boulders
2 WWTP is costly and time consuming. For those reasons, those efforts did not
3 commence until the Commission's orders were final and certain.

4 **Q. DID THE COMPANY OFFER ANY PRELIMINARY ESTIMATES DURING**
5 **THE PROCEEDINGS BEFORE THE COMMISSION?**

6 A. Yes, but they were at best guesstimates based on 30,000 foot discussions with
7 engineers so that the Company's representatives could answer questions about what
8 the closure of the plant might cost after the Plant Closure Agreement was signed and
9 presented in Phase 1 of the 2008 rate case. For instance, in that rate case, the
10 Company could only state that the plant closure project might cost an estimated \$1.5-
11 \$2 million.⁵² These estimates were not based on any detailed engineering or design
12 analysis or any actual site conditions or municipal requirements. Rather, the
13 estimates were exclusive of the decommissioning and site remediation costs, and
14 were based on the purchase of additional capacity from Scottsdale at \$6 per gpd.⁵³
15 By the time the Company filed another rate case in 2015, the situation had already
16 changed significantly as explained in this excerpt from the Company's direct
17 testimony in that rate case –

18 **Q. DO YOU HAVE AN UPDATED ESTIMATE OF THE**
19 **TOTAL COST TO CLOSE THE BOULDERS**
20 **WWTP?**

21 A. The best I can say at this time is that the Company is looking
22 at an estimated \$1.2 million for replacement capacity, an
23 estimated \$2.6 million for upgrades to the collection and
24 transmission system, an estimated \$750,000 for legal fees
(assuming the Resort loses its current appeal and stops
litigating), for a total of at least \$4.5 million, plus the costs
to remove the facility after closure, which will be partially
offset by the sale of the land. Of course, engineers can only

25 ⁵² Rebuttal Testimony of Gregory S. Sorensen ("Sorensen 2009 Rb."), filed October 29, 2009 in Docket No.
SW-02361A-08-0609, at 8:10-15; 2009 Tr. at 133:24-134:7 (Sorensen).

26 ⁵³ 2009 Tr. at 165:14-166:6 (Sorensen).

1 give their best estimates based on known conditions, and I
2 can't possibly predict the future legal costs.⁵⁴

3 These estimates were also exclusive of any decommissioning costs.⁵⁵

4 In the end, all we can really say is that as time passed, the costs went up. Until
5 you start to engineer, permit and build, you cannot be certain of the cost of a project
6 like the closure of the Boulders WWTP, which is why the Company qualified every
7 estimate as very preliminary.⁵⁶ The parties expressly understood and agreed that
8 those closure costs were preliminary estimates and subject to change as it was
9 specifically written into the Comprehensive Settlement Agreement. In fact, the
10 Comprehensive Settlement Agreement expressly states that "[t]he Parties agree and
11 acknowledge that these costs are still estimates and subject to change."⁵⁷ The
12 Commission also recognized that the costs were not certain.⁵⁸

13 **Q. IF THE COMPANY HAD BEEN ABLE TO CLOSE THE BOULDERS**
14 **WWTP AFTER THE PHASE 1 DECISION WAS ISSUED IN 2010, WOULD**
15 **THE COSTS HAVE BEEN LOWER?**

16 **A.** The answer is likely, yes. As reflected in the timeline attached as **Exhibit MG-DT2**,
17 it ultimately took over nine years from the time Liberty Black Mountain and the
18 BHOA first agreed in the Plant Closure Agreement to the decommissioning of the
19 Boulders WWTP. This delay was necessitated to allow the Resort additional time
20

21 ⁵⁴ Direct Testimony of Greg Sorensen ("Sorensen 2015 Dt."), filed June 22, 2015 in Docket No. SW-
02361A-15-0207, at 24:20 – 25:3.

22 ⁵⁵ Sorensen 2015 Dt. at 25:4-17.

23 ⁵⁶ E.g., Sorensen 2009 Rb. at 8:10-15; 2009 Tr. at 133:24 – 134:7, 165:14 – 166:6 (Sorensen); 05/08/12
24 Transcript ("2012 Tr.") at 136:15 – 138:3, 188:2 – 190:23 (Sorensen); Sorensen 2015 Dt. at 22:13-20, 24:20
– 25:3; Rebuttal Testimony of Matthew Garlick, filed January 1, 2016 in Docket No. SW-02361A-15-0207,
at 5:10 – 6:9.

25 ⁵⁷ Decision No. 75510 at 17:28 – 18:1, Exhibit B ("Comprehensive Settlement Agreement") at 10 ¶ 3.4.1.

26 ⁵⁸ Decision No. 75510 at 14:1-4.

1 to find an alternative to the use of the Company's effluent. As a result, the Company
2 incurred substantial legal costs protecting its customers' interests in the
3 Commission's closure order after it was challenged by the Resort.⁵⁹ Those costs are
4 already being recovered and will continue to be for 17 more years.⁶⁰ Then, the cost
5 of the replacement capacity from Scottsdale increased by the time the Company was
6 able to exercise its right to acquire more capacity.⁶¹ In addition, construction labor
7 costs increased from the economic low in 2009-2010 to near peak levels due to
8 increased construction activity by 2018. The increased construction activity also
9 resulted in higher material costs and new tariffs affecting steel pricing, petroleum
10 costs (used to make PVC pipe), cement pricing (used for concrete backfill), and hard
11 dig. These are just some of the reasons the final cost to close the Boulders WWTP
12 exceeded all of the preliminary estimates.

13 **Q. WERE THERE OTHER SPECIFIC, UNANTICIPATED COSTS THAT THE**
14 **COMPANY EXPERIENCED IN THE PROCESS OF CLOSING THE**
15 **BOULDERS WWTP?**

16 A. Yes. Scottsdale's construction requirements led to additional costs related to the
17 new force main as we had to bore and jack under drainage structures rather than
18 install the force main over the top of those structures. Scottsdale also changed its
19 trench backfill requirements from compacted aggregate to a slurry cement mix which
20 is more expensive. Additionally, the total rebuild of the commercial lift station was
21 not anticipated until we began construction and discovered the deteriorating
22 condition of the prior lift station. Rebuilding the lift station cost approximately
23 \$1 million while the preliminary estimates contemplated an upgrade of the existing

24
25 ⁵⁹ Sorensen 2015 Dt. at 22:21 – 24:19; *see* p. 20, *supra*.

26 ⁶⁰ *See* Decision No. 75510 at 16:14-15.

⁶¹ Sorensen 2015 Dt. at 20:1 – 21:14.

1 lift station for an estimated \$412,000.

2 **Q. WOULD THESE INCREASED COSTS HAVE IMPACTED ANY OF THE**
3 **ALTERNATIVES THAT WERE CONSIDERED?**

4 A. Yes, any option that had the wastewater flows redirected from the Boulders WWTP
5 to Scottsdale would have required the rebuild instead of the upgrade to the
6 commercial lift station. I also believe that we would likely have had to deal with
7 that lift station soon enough if we had not closed the plant when we did. Given the
8 condition of the lift station when we got in there, it would likely have started to cause
9 odors and had to have been replaced. A new odor source is clearly the last thing the
10 Company and its customers needed.

11 **Q. BUT, MR. GARLICK, THE FINAL COST IS STILL MUCH HIGHER THAN**
12 **PRELIMINARY ESTIMATES, CORRECT?**

13 A. Yes, but the issue in this rate case is not the reasonableness of the estimated costs.
14 The Company made its best effort to provide initial estimates and it clearly and
15 repeatedly qualified those estimates as being preliminary. Any differences between
16 the initial estimates and the actual costs were due to (1) delays beyond the
17 Company's control; (2) accommodations made to the Resort; and (3) matters that
18 could not have been known when the estimates were made. Liberty Black Mountain
19 did not spend a single dollar more than was necessary to comply with the
20 Commission's order to close the Boulders WWTP.

21 **Q. OKAY, THANK YOU. THE TABLE YOU PROVIDED INCLUDES**
22 **SOMETHING LABELED "INDOH." WHAT IS INDOH?**

23 A. Indirect Overhead or INDOH refers to that portion of administration and general
24 (A&G) costs that support capital projects and, in turn, are capitalized.
25 Ms. Washington discusses the basis for and calculation of INDOH under the Liberty
26

1 Utilities shared service model in her direct testimony.⁶²

2 **Q. WHY SHOULD INDOH SHOULD BE ADDED TO THE COST TO CLOSE**
3 **THE BOULDERS WWTP, MR. GARLICK?**

4 A. INDOH is a means of apportioning labor and related services as part of the cost of
5 plant, i.e., rate base. Here, it's important and necessary to include INDOH as part of
6 the closure costs because the A&G costs comprising INDOH were necessary to
7 support the capital costs relating to the plant closure. Ms. Washington discusses and
8 addresses the importance of capitalizing these costs in her testimony.⁶³

9 **Q. THANK YOU. DOES LIBERTY BLACK MOUNTAIN BELIEVE ITS**
10 **TOTAL INVESTMENT IN THE CLOSURE WAS REASONABLE AND**
11 **PRUDENT, MR. GARLICK?**

12 A. Without question. The Commission determined that the closure was in the public
13 interest and necessary to respond to the wishes of the community the Company
14 serves. Liberty Black Mountain spent what was reasonable and necessary to comply
15 with the Commission's order. The Company's belief is supported by the expert
16 opinion of an independent engineer Teresa Valentine of Valentine Environmental
17 Engineering.

18 **Q. IS THE COMPANY ALSO PRESENTING THE TESTIMONY OF THE**
19 **INDEPENDENT ENGINEER?**

20 A. Yes. The direct testimony of Teresa Valentine is being filed with the Company's
21 application. Ms. Valentine's qualifications are discussed in her testimony and her
22 written engineering report is attached to her direct testimony.⁶⁴

23

24

⁶² Washington Dt. at 20-24.

25

⁶³ Washington Dt. at 24.

26

⁶⁴ Direct Testimony of Teresa A. Valentine ("Valentine Dt.") at 1, Exhibits TV-DT1 and TV-DT2.

1 **Q. WHY DID LIBERTY BLACK MOUNTAIN HIRE A THIRD-PARTY**
2 **ENGINEER TO CONDUCT AN INDEPENDENT ANALYSIS?**

3 A. We understand that Liberty Black Mountain has the burden to show that it acted
4 reasonably and prudently in complying with the Commission's order to close the
5 Boulders WWTP. We are also familiar with Commission rate proceedings and
6 thought it prudent to provide an independent opinion on which the Company and the
7 Commission could rely.

8 **Q. WHAT WERE THE INSTRUCTIONS TO MS. VALENTINE?**

9 A. Ms. Valentine was asked to evaluate whether the final closure project was reasonable
10 and prudent. Her analysis was to look at costs, availability of alternatives, and any
11 other facts she determined were relevant to her analysis.⁶⁵

12 **Q. CAN YOU SUMMARIZE THE FINDINGS OF THE INDEPENDENT**
13 **ENGINEER'S ANALYSIS?**

14 A. In my reading of her report, Ms. Valentine concluded that (1) of the alternatives that
15 were available to the Company, the purchase of capacity from Scottsdale was the
16 most appropriate option, and (2) that the Company's costs to modify its collection
17 and transmission facilities and to decommission the Boulders WWTP were
18 necessary and reasonable.⁶⁶

19 **Q. WHAT ALTERNATIVES WERE CONSIDERED?**

20 A. Ms. Valentine compared the closure project as built, known as the Tom Darlington
21 realignment option, along with the option of building a new plant and the option of
22 sending the wastewater that previously went to the Boulders WWTP to the Town of
23 Cave Creek's water reclamation facility.

24
25 ⁶⁵ Valentine Dt. at 2:4-7.

26 ⁶⁶ Valentine Dt. at 3:20 – 6:4.

1 **Q. DID THE COMPANY EVALUATE ANY OF THESE OPTIONS FOR**
2 **CLOSURE OF THE BOULDERS WWTP?**

3 A. Yes. The Cave Creek option and different alternatives to re-route the flows to
4 Scottsdale were considered as reflected in the parties' Comprehensive Settlement in
5 the 2015 rate case.⁶⁷ The parties unanimously agreed that the Tom Darlington option
6 was the preferred option. So did the Commission.⁶⁸

7 **Q. YET, THE PREFERRED OPTION TURNED OUT TO BE MORE COSTLY**
8 **THAN ESTIMATED?**

9 A. Yes, however, the factors that caused the cost increases would likely have impacted
10 any options for closing the plant and re-routing the flows to Scottsdale. As I
11 discussed earlier, the cost increases were largely due to delay, additional
12 requirements by Scottsdale, and things that could not have been known before
13 construction started. Such factors would likely have had a similar impact on any
14 plant closure alternative that was being pursued.

15 **Q. IN YOUR OPINION, MR. GARLICK, WAS THERE A POINT WHEN THE**
16 **PRICE TO REMOVE THE BOULDERS WWTP WOULD JUST BE TOO**
17 **MUCH?**

18 A. That wasn't Liberty Black Mountain's decision. All of the stakeholders were aware
19 that ordering the Company to decommission a used and useful, fully compliant plant
20 was unusual and would be costly. We emphasized over and over again that cost
21 estimates were preliminary and that the costs were likely to increase. We acted
22 prudently and, in the end, compliance with the community's wishes and the
23 Commission's order resulted in these costs.

25 ⁶⁷ Comprehensive Settlement Agreement at 10 ¶ 3.4.1.

26 ⁶⁸ See Decision No. 75510 at 17:28 – 18:1.

1 **Q. COULD THE COMPANY HAVE GONE BACK TO THE COMMISSION**
2 **WHEN IT REALIZED THAT THE COST WAS GOING TO BE HIGHER**
3 **THAN PREVIOUSLY ESTIMATED?**

4 A. Not really. For one thing, the Company had a hard deadline of January 1, 2018 to
5 acquire the replacement capacity from Scottsdale at a cost of \$10 per gallon.⁶⁹ After
6 that, Scottsdale advised us that the capacity costs would increase significantly.
7 Second, the Company spent roughly six years litigating over the closure of the
8 Boulders WWTP. The prospect of going back and asking if the Commission really
9 meant it when it issued three orders concerning closure of the Boulders WWTP was
10 undesirable. Boiled down, the reality is that once the Commission ordered Liberty
11 Black Mountain to close the facility by November 30, 2018 and the Company began
12 taking the steps to make that happen, there simply was no going back. From that
13 point forward, Liberty Black Mountain did everything the right way relating to
14 closure of the Boulders WWTP and the associated closure costs. Which is what
15 Liberty Utilities did all along. We operated a fully compliant, used and useful plant
16 and then removed it because that's what our customers and regulators told us to do.
17 During the entire process, the Company's representatives continually advised all
18 stakeholders that the closure costs were uncertain and subject to increases, and we
19 evaluated all potential closure options for the plant. All parties and stakeholders
20 agreed that the Tom Darlington closure option was the preferred option and the
21 Company did it.

26 ⁶⁹ Decision No. 75510 at 13:7-9.

1 **V. REVISED PRE-TREATMENT TARIFF.**

2 **Q. DOES LIBERTY BLACK MOUNTAIN CURRENTLY HAVE A PRE-**
3 **TREATMENT TARIFF?**

4 A. Yes, it was approved by the Commission in the 2015 rate case.⁷⁰ The pre-treatment
5 tariff is necessary to ensure that the wastewater flows we send to Scottsdale comply
6 with their influent requirements.

7 **Q. WHAT CHANGES IS LIBERTY BLACK MOUNTAIN PROPOSING TO**
8 **THE PRE-TREATMENT TARIFF IN THIS RATE CASE?**

9 A. The Company proposes two changes: (1) clarifying to customers qualifying as
10 industrial users enforcement actions for non-compliance; and (2) including language
11 to allow the Liberty Black Mountain to recover its costs incurred relating to industrial
12 users that are subject to compliance with the Company's Industrial Treatment
13 Program. Ms. Washington describes these changes in more detail in her direct
14 testimony.⁷¹

15 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

16 A. Yes.
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25 ⁷⁰ Decision No. 75510 at 18:15-17.

26 ⁷¹ Washington Dt. at 26.

EXHIBIT MG-DT1

BOULDERS SUBDIVISION AND RESORT

BOULDERS WWTP

Peaceful Place LS

E Stagecoach Pass

Indian Basket LS

Wastewater Treatment Plant

Influent LS

Sagebrush LS

Indian Rock LS

El Pedregal LS

E Elephant Ln

E Lizard Ln

N Whiskey Rd

N 7th Way

E Canyon View Ct

N 7th St

E Shoreline Way

E Evening Glow Dr

E Sycamore Dr

N 1st Way

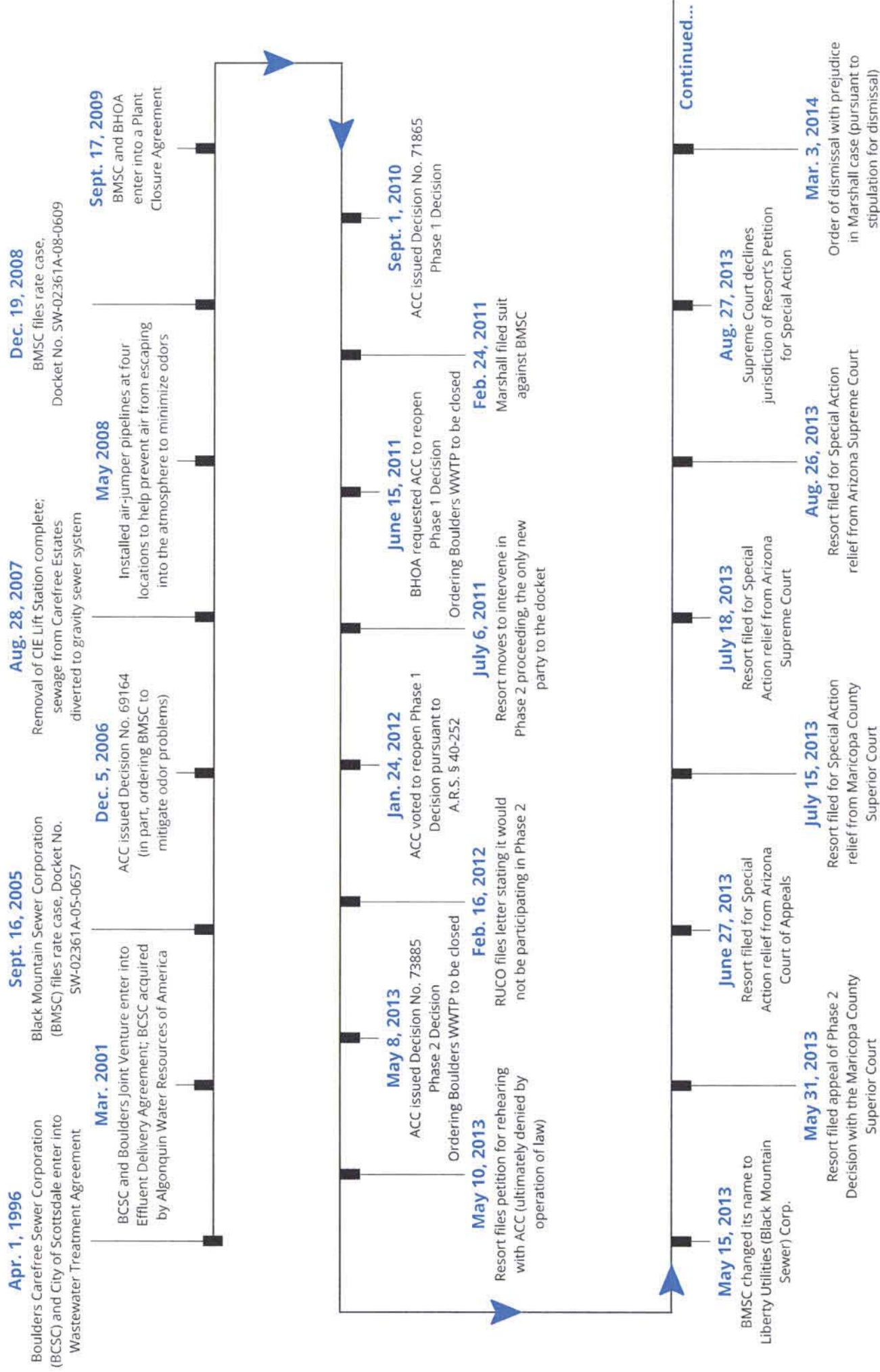
E Sandpiper Dr

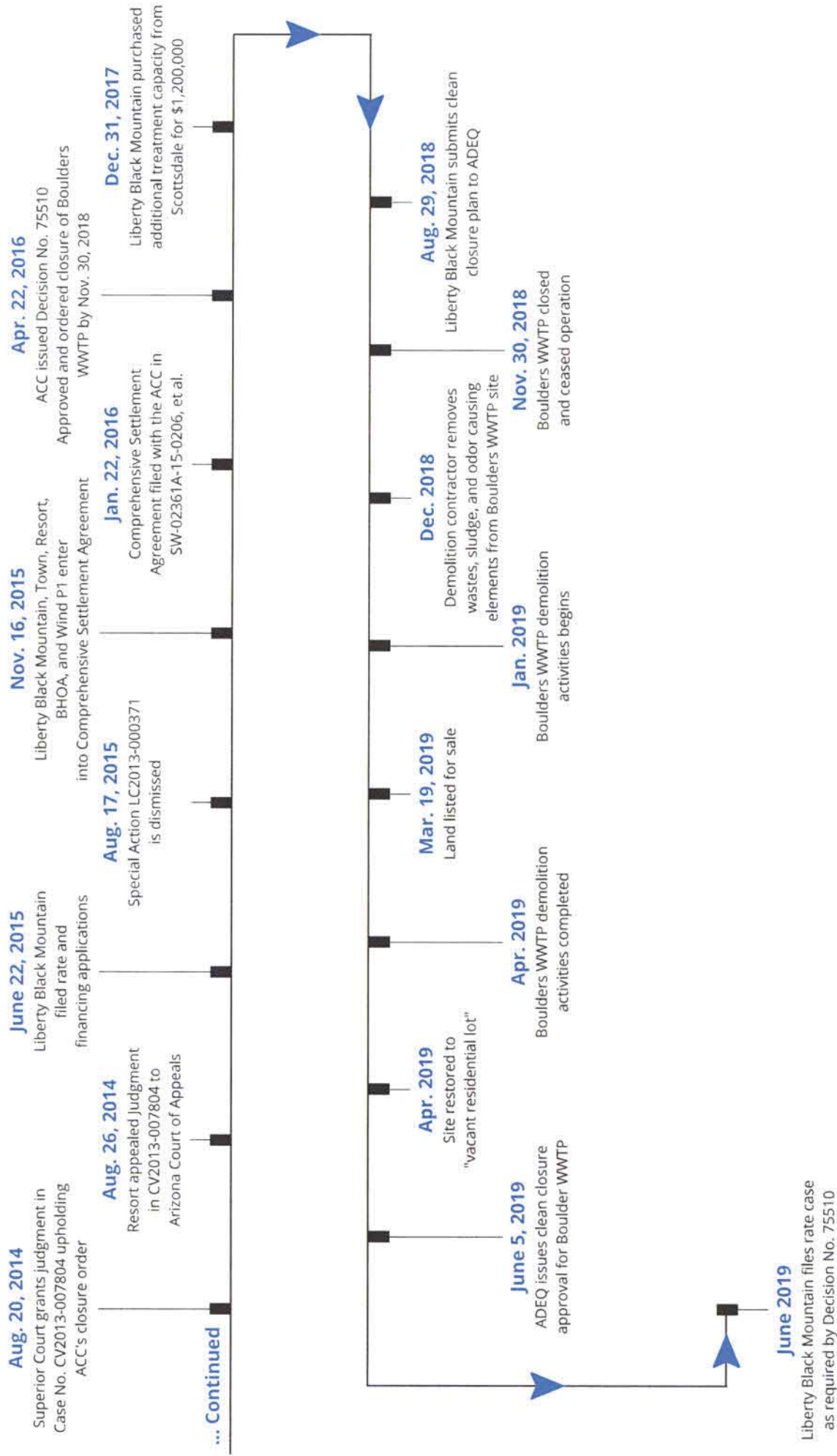
E Olese



BOULDERS WWTP LOCATION

EXHIBIT MG-DT2





1 SHAPIRO LAW FIRM, P.C.
Jay L. Shapiro (No. 014650)
2 1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
3 Telephone (602) 559-9575
jay@shapslawaz.com
4

LIBERTY UTILITIES
5 Todd C. Wiley (No. 015358)
12725 W. Indian School Road, Suite D-101
6 Avondale, Arizona 85392
Todd.Wiley@LibertyUtilities.com
7

8 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
12 MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
14 PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

16
17
18 **DIRECT TESTIMONY**
19 **OF**
20 **TERESA A. VALENTINE, P.E.**
21

22 **June 27, 2019**
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TABLE OF CONTENTS

I. INTRODUCTION, QUALIFICATIONS AND PURPOSE OF TESTIMONY 1

II. THE DECOMMISSIONING OF THE BOULDERS WWTP 2

1 **I. INTRODUCTION, QUALIFICATIONS AND PURPOSE OF TESTIMONY.**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Teresa A. Valentine. My business address is 15846 South 46th Street,
4 Suite 144, Phoenix, AZ 85048.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I am the Managing Principal of Valentine Environmental Engineers, LLC.

7 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

8 A. I have been retained as an expert witness to testify in this rate case on behalf of
9 Liberty Utilities (Black Mountain Sewer) Corp. ("Liberty Black Mountain" or the
10 "Company").

11 **Q. WHAT IS YOUR EXPERTISE?**

12 A. I have over 20 years of experience in preparing engineering studies and designs, as
13 well as construction oversight, of water and wastewater infrastructure including
14 treatment, storage and conveyance facilities.

15 **Q. CAN YOU DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
16 EMPLOYMENT EXPERIENCE IN YOUR AREA OF EXPERTISE?**

17 A. I received my Bachelor of Science in Civil Engineering from the University of North
18 Dakota in 1992, a Master of Science in Civil Engineering from Arizona State
19 University in 1993 and a Doctor of Philosophy in Civil Engineering from Arizona
20 State University in 1997. I have been employed by national engineering firms
21 locally, working on projects for those firms throughout the southwest and
22 internationally. In 2000, my husband started his own engineering firm, I joined the
23 firm in 2002, became the majority owner shortly thereafter and have been managing
24 the company and our work product since that time.¹

25
26 ¹ See Exhibit TV-DT1.

1 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

2 A. I was retained by Liberty Black Mountain to conduct a post hoc evaluation of the
3 decommissioning of the East Boulders Wastewater Treatment Plant ("Boulders
4 WWTP"). Specifically, the Company asked me to evaluate whether, given the final
5 costs, and considering any potential alternatives, the Company's costs to close the
6 Boulders WWTP were reasonable and prudent from my perspective as an expert
7 engineer. In my written report, I have opined that Liberty Black Mountain's final
8 closure project was reasonable and prudent and my report is attached to my
9 testimony as **Exhibit TV-DT2**.

10 **Q. HAVE YOU BEEN INVOLVED IN THE DECOMMISSIONING OF A**
11 **TREATMENT FACILITY PRIOR TO THIS ASSIGNMENT?**

12 A. Yes, I have been involved in one project where the existing WWTP was completely
13 decommissioned and my company designed the replacement WWTP, prepared the
14 decommissioning plans for the old WWTP, oversaw the closure efforts and
15 coordinated the permitting efforts associated with these design efforts. I have been
16 involved in several projects where portions of the WWTP were clean
17 closed/decommissioned in order to prepare that portion of the WWTP property for
18 other use. On these projects, I also prepared decommissioning plans, coordinated
19 permitting efforts and oversaw the closure efforts associated with the closure of the
20 portion of the WWTP.

21 **II. THE DECOMMISSIONING OF THE BOULDERS WWTP.**

22 **Q. WOULD YOU PLEASE SUMMARIZE HOW YOU CONDUCTED YOUR**
23 **ANALYSIS?**

24 A. I performed the following tasks to conduct my analysis:
25
26

- 1 • Gathered background information from Liberty Utilities, including existing
- 2 system maps and as-builts, decommissioning cost analyses performed by
- 3 others, and bid tabulations.
- 4 • After review of background information, I held several conference calls with
- 5 Liberty Utilities to discuss my questions and request further technical
- 6 information.
- 7 • After performing the above two tasks, I had developed a good understanding
- 8 of the Liberty Black Mountain system and the decommissioning that had been
- 9 implemented by Liberty Utilities for the Boulders WWTP.
- 10 • In order to determine if the strategy implemented by Liberty Utilities was
- 11 prudent and cost effective, I decided to test it against other possible
- 12 alternatives.
- 13 • To develop other possible alternatives, I relied on information provided by
- 14 Liberty Utilities for other alternatives that it had investigated, my
- 15 understanding of their existing system and my technical experience.
- 16 • At a conceptual level, I developed the key components for each alternative,
- 17 developed conceptual costs and non-monetary advantages/disadvantages of
- 18 each. For alternatives that were previously evaluated, I utilized cost estimates
- 19 and components where I could.

20 **Q. CAN YOU PLEASE ELABORATE ON THE REASONS YOU CONCLUDED**
21 **THAT LIBERTY BLACK MOUNTAIN HAS ACTED IN A REASONABLE**
22 **AND PRUDENT FASHION WITH RESPECT TO THE PLANT**
23 **DECOMMISSIONING?**

24 A. In my report, I reviewed three alternatives that could have been implemented for the
25 plant decommissioning, summarized as follows (for further details, please refer to
26 my report):

- Option 1: Extend gravity sewer and/or add a lift station/forcemain to connect to Cave Creek system
- Option 2: Extend gravity sewer and/or add a lift station/forcemain to connect to the City of Scottsdale system
- Option 3: Build a new WWTP and extend gravity sewer and/or forcemain to the new treatment plant

Liberty Black Mountain ultimately implemented Option 2.

The reasons I concluded that the Company acted in a reasonable and prudent fashion are:

- Option 2 was more cost effective than the other alternatives.
- Option 2 had the lowest impact to the community compared to the other alternatives.
- Option 2 had a reasonable implementation time frame compared to the other alternatives.

Q. WAS YOUR ANALYSIS DEPENDENT SOLELY ON THE INFORMATION PROVIDED TO YOU BY LIBERTY BLACK MOUNTAIN?

A. No, I relied on developing my own opinions based upon the facts and technical information provided by Liberty Black Mountain.

Q. WERE YOU AWARE OF THE EXTRAORDINARY CIRCUMSTANCES THAT LED TO THE CLOSURE OF THE BOULDERS WWTP?

A. I am aware of the requirement to close the WWTP by November 2018 as a result of an order from the Arizona Corporation Commission.

Q. HOW DID THAT INFLUENCE YOUR ANALYSIS AND OPINION?

A. Neither the fact that the closure was ordered or that there was a deadline to close the Boulders WWTP materially affected the development of the possible alternatives. I did, however, consider this deadline when evaluating whether the alternative could

1 be reasonably performed within the timeframe available.

2 **Q. IS IT FAIR TO SAY THAT YOU DID NOT EVALUATE WHETHER THE**
3 **COMPANY SHOULD HAVE CLOSED THE BOULDERS WWTP AS PART**
4 **OF YOUR ANALYSIS?**

5 A. Yes, that was not my decision. Nor, apparently, was it the Company's.

6 **Q. WERE YOU ASKED TO OPINE ON WHETHER THE COSTS TO**
7 **DECOMMISSION THE BOULDERS WWTP WERE REASONABLE WHEN**
8 **COMPARED TO THE ESTIMATES THE COMPANY PREVIOUSLY**
9 **PROVIDED IN COMMISSION PROCEEDINGS?**

10 A. No.

11 **Q. DO YOU HAVE ANY CONCERNS WITH THE DECOMMISSIONING OF**
12 **THE BOULDERS WWTP THAT YOU DID NOT EXPRESS BECAUSE**
13 **SUCH CONCERNS WERE OUTSIDE THE SCOPE OF YOUR**
14 **RETENTION?**

15 A. No.

16 **Q. ARE THERE ANY OTHER ALTERNATIVES FOR DECOMMISSIONING**
17 **OF THE BOULDERS WWTP THAT YOU MAY HAVE THOUGHT OF BUT**
18 **DISMISSED, AND HENCE DID NOT INCLUDE IN YOUR WRITTEN**
19 **REPORT OR THIS TESTIMONY?**

20 A. Yes, there was one other alternative that I initially thought may have been feasible.
21 This alternative would have continued to direct sewage to the Boulders WWTP site
22 but would have used a diversion structure to divert all of the flow into the existing
23 Boulders gravity system. I dismissed this alternative because it was not a sound
24 engineering solution. Furthermore, it would have been highly disruptive to the
25 community to make it technically feasible.

26

1 **Q. DO YOU HAVE ANY FURTHER COMMENTS OR TESTIMONY**
2 **CONCERNING YOUR ANALYSIS REGARDING THE CLOSURE OF THE**
3 **BOULDERS WWTP?**

4 A. Not at this time.

5 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

6 A. Yes.

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EXHIBIT TV-DT1

EXPERIENCE SUMMARY

Teresa has over 22 years of experience specializing in water and wastewater treatment processes and water reuse technologies. Teresa incorporates sustainable development strategies in all stages of planning, design, construction and maintenance for water and wastewater solutions. Over the past 18 years at Valentine Environmental Engineers, Teresa has managed and implemented major projects with municipalities and private companies for new, upgraded or expanded water and wastewater systems. She is a leader in her field with numerous technical papers and presentations and is recognized by her peers through the local State water association.

Valentine Environmental Engineers (2002 – present)

Carollo Engineers (1999 – 2002)

Malcolm Pirnie, Inc. (1997 – 1999)

EDUCATION

Ph.D. in Civil Engineering, Arizona State University, 1997

M.S. in Civil Engineering, Arizona State University, 1993

B.S. in Civil Engineering, University of North Dakota, 1992 – Magna Cum Laude

PROFESSIONAL REGISTRATION

Arizona, 32324, Civil Engineer

California, 83580, Professional Engineer

Colorado, 44065, Professional Engineer

Hawaii, 15301, Professional Engineer

Nevada, 22533, Professional Engineer

BCEE Certification in Water Supply and Wastewater, 2013

Arizona Department of Environmental Quality, Certified Grade 2 Water Treatment Plant Operator, 58623

Arizona Department of Environmental Quality, Certified Grade 3, Wastewater Treatment Plant Operator, 61086

PUBLICATIONS AND PRESENTATIONS

Valentine, T., Hickock, A., Bunchman, J., and Carlson, S. Save More than 40% 55% of Energy Use With New Technologies and Processes. Paper presented at the Arizona Water Association Conference, May 2014.

Valentine, T. Are Turbo Blowers Just a Bunch of Hot Air? Paper presented at the Arizona Water Association Conference, May 2012.

Valentine, T., Hassert C., and Nunez, A. Superoxygenation for Odor Control. Paper presented at the Arizona Water Association Conference, May 2012.

Valentine, T. Superoxygenation for Odor Control. Paper presented at the Tri-State Water Conference, September 2012.

Valentine, T., Green, J., Walz, T. and Wokulich, P. In Search of Digester Capacity at Less Cost? The 91st Avenue WWTP Select Multi-Phased Digestion. Paper presented at the Arizona Water Pollution Control Association, Mesa, AZ, April 14-16, 2002.

Drury, D., Kilian, R.E., and Valentine, T. Multiphased Digestion to Produce Class A Biosolids. Proceedings of the California Water Environment Association 2002 Annual Conference, Sacramento, CA, April 2-5, 2002.

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Chipello, P.L., Kopchynski, T., et.al. Nitrogen Removal During Simulation of Soil Aquifer Treatment. Proceedings of the American Water Works Association/Water Environment Federation 1996 Water Reuse Conference, San Diego, CA, February 25-28, 1996.

Kopchynski, T., Alsmadi, B., and Fox, P. Wet/Dry Cycle Time Influence on Soil Aquifer Treatment, Paper presented at the Arizona Water Pollution Control Association 1996 Annual Conference, Tucson, AZ, May 1-3, 1996.

Alsmadi, B., Kopchynski, T., Berner, M. and Fox, P. The Effects of Soil Type and Effluent Type on Soil Aquifer Treatment, Water Science and Technology, 34, 1996.

Alsmadi, B., Kopchynski, T., Berner, M., and Fox, P. Independent Characterization and Biological and Physical Removal Mechanisms During Soil Aquifer Treatment in the Role of Recharge Integrated Water Management. Proceedings of the 7th Annual Symposium on Artificial Recharge of Groundwater, Tempe, AZ, May 17-19, 1995.

Kopchynski, T., et.al. Soil Treatability Studies to Design and Model Soil Aquifer Treatment Systems, American Water Works Research Foundation, 1995.

AWARDS

Young Engineer of the Year, Arizona Water Pollution Control Association, 2005

Engineer of the Year, Arizona Water Association, 2014

Environmental Stewart Award, Arizona Water Association, 2015

WATER RELATED EXPERIENCE

Project Manager, Laredo Vista Well No. 2 and Water Campus, EPCOR Water Arizona, Bullhead City, AZ. Valentine provided the engineering design, permitting and construction administration services for an 80 gpm well, 37,500 gallon above grade steel reservoir, gas chlorination system, 190 gpm booster pump station and on site retention basins. Construction administration services included field observations, shop drawing reviews, responses to information requests, and startup assistance. Valentine coordinated the Approval to Construct with Arizona Department of Environmental Quality (ADEQ) and subsequent Approval of Construction.

Project Manager, Adelanto Detention Center Well Pump and Water Campus, HOK Architects, Adelanto, CA. This project demonstrates Valentine's ability to develop a water campus design on an expedited schedule and their knowledge of well equipping, booster pump station design, and reservoir and chlorine system design. As a result of a compressed schedule and limited information at initiation of project, this project proves their resilience to adjust to changing design conditions. This project was comprised of design for a new well, booster pump station, reservoir, and chlorination system on an expanding detention center site in Adelanto, San Bernardino, CA. The County's

Engineer did not complete the water supply infrastructure design for the prison expansion so the County hired Valentine to perform a fast track well drilling design and well equipping/water campus design so that this design package could be added as an addendum to the prison bid package. The design was completed within two months (October 2012 to December 2012) to facilitate the client's schedule. In addition to the well drilling and well equipping design, the package also included a reservoir, 1,600 gpm booster pump station, chlorination system and provisions for future arsenic treatment. After the well was drilled, the water quality data determined that fluoride and arsenic were above the MCLs. Valentine quickly turned around a design for RO treatment with pre-filtration and post calcite filtration along with a modified well pump design to address the new water quality issues.

Project Manager, Paradise Valley Country Club Booster Pump Station Improvements, EPCOR Water Arizona, Paradise Valley, AZ. This project exhibits Valentine's success with the design of booster pump station improvements, the ability to produce an intricate construction sequence plan, unique experience with public involvement, as well as, utility coordination in a congested area with unreliable as-builts. Valentine provided engineering design drawings and specifications for booster pump station improvements on a small

site in a high end neighborhood. The design encompassed replacing four existing pumps with four new VFD driven booster pumps for a total pumping capacity of 3,600 gpm. In addition to the pump replacement, yard piping was modified and upsized, new flow monitoring was added, new PLC panel, new HVAC system and ductwork, lighting, receptacles, and the roof of the pump station building was replaced. It also included the addition of a new manual transfer switch and generator quick connect panel for emergency power, a mini power zone, and pressure indication panel which housed the pressure transmitter and switches that monitored the pump suction and discharge lines. A major part of the design was providing the ability to maintain the pump station in service while replacing the pumps and installing new suction and discharge connections. To relay the sequence of work and available shut down periods to the contractors, a Maintenance of Plant Operation (MOPO) was created for the project work as part of the specifications. A complex bypass system and the MOPO plans were developed to meet the same water demands, noise pollution constraints, emergency backup plans, and small facility footprint limitations. The automated system allowed construction on the new station upgrades to proceed as planned, without interruption to surrounding Paradise Valley residents, a private country club and golf course, and a high-end resort, JW Marriott's Camelback Inn.

Project Manager, Corrections Corporation of America, La Palma Detention Center Water Campus, Eloy, AZ. Valentine performed design services, construction administration and permitting for the water system facilities to support a 4,000 bed detention center. The water system facilities included a water campus consisting of a 550,000 gallon reservoir, well pump system, booster pump station, arsenic treatment system, chlorination system. Site civil design including drainage, grading and paving were performed.

Project Director, Downtown Tempe 24-inch Waterline Replacement, Tempe, AZ. Valentine provided design services for 4,350 feet of 24-inch

waterline along Myrtle Avenue, 5th Street, Forest Avenue, and Mill Avenue. The new water main replaces an existing 20-inch 18-inch waterline located along a different alignment. At the end of the project, Tempe asked Valentine to add in the design of an 8-inch waterline between Myrtle and Forest Avenues. This CM@Risk project required significant utility coordination and potholing efforts to determine horizontal and vertical alignment. Abandonment tie-in details were also required.

Project Manager/Senior Project Engineer, Booster Pump Station 5J-B3 and Zone 4J Waterline Replacement, Phoenix, AZ. This project entailed replacing the existing 5J-B1 pump station located in the City's Paradise Valley service area with a new, larger adjacent pump station. The design of the new pump station, 5J-B3, was performed to the City's design standards and guidelines. The design also accommodated future dedicated fire flow pumps. The pump station upgrades consisted of perimeter wall design approved by the City and the Town of Paradise Valley, potable booster pump station and ancillary facilities, suction and discharge hydropneumatic tanks, standby power, pump station control and telemetry according to City Standards, native plant inventory and landscaping. The project also included the design of 12-inch water main along Cheney Drive in Zone 4J.

Project Director, Corrections Corporation of America, Eloy Correctional Facilities Interconnecting Pipelines, Eloy, AZ. Valentine performed the design, construction administration and permitting of water lines within CCA's Eloy Correctional Facility complex to connect the four water campuses' of Red Rock, Saguaro, La Palma and Eloy. The following segments of pipeline were designed:

- 3,290 feet of 12-inch HDPE water main connecting the Saguaro Reservoir and the Red Rock Reservoir
- 3,555 feet of 12-inch HDPE water main connecting the Red Rock Reservoir and the new La Palma Reservoir

Utility coordination, easement acquisition and coordination of canal crossing with the Central Arizona Irrigation District were required. Valentine performed WATERCAD modeling and system assessments and recommended to CCA to interconnect the existing reservoirs in order to provide system redundancy and operational flexibility.

Project Director, Zone 4J Waterline Replacement, Phoenix, AZ. The City of Phoenix has selected Valentine Environmental Engineers, LLC to provide design and bid phase services for the construction of approximately 5,000 feet of 4 to 12-inch potable water and fire services mains in Zones 4J and 5J within the Town of Paradise Valley (TPV). The waterlines are located in the TPV along Cheney Drive, Hummingbird Lane, Foothills Drive South and Ironwood Drive. The new potable water mains will replace existing water mains throughout the service areas. The approximate lengths for each size of pipe are as follows:

- 550 lineal feet of 4-inch pipeline
- 520 lineal feet of 6-inch pipeline
- 4,200 lineal feet of 12-inch pipeline

Project Manager, Big Bend Acres Reservoir, Arizona American Water Company, Bullhead City, Arizona. Design of new 250,000 Gallon reservoir with demolition of existing bolted steel tank reservoir downtown Bullhead city.

Project Director, Town of Gilbert Well 21 Arsenic Treatment Facility. Valentine and Garney Construction, as a Design-Build (DB) Team, were selected to design and construct a 2 MGD arsenic treatment facility for Well 21 that is located in an affluent neighborhood in the Town of Gilbert. Valentine prepared a signed, sealed and County approved design within 2 months in order to facilitate this fast track DB project. The arsenic treatment system, manufactured by Severn Trent, was designed as a low profile tank configuration in order to maintain the facility below the existing site wall. The arsenic treatment system consists of two 10-foot vessels in series, a backwash/rinse tank, backup chlorination and ancillary piping, valves and

bypass system. The construction cost for this project is \$1.8 million.

Project Manager, Water Remote Facilities Chlorination Study, City of Phoenix. Purpose of the project was to assess current methods of chlorination at remote distribution sites and evaluate all feasible alternatives for chlorination. The City of Phoenix currently utilizes chlorine gas, tablet feeder and chlorine generation technologies at their remote facilities sites. Alternatives analysis included advantages and disadvantages development, criteria scoring, and 25 year net present worth analysis. The alternatives that were evaluated included chlorine gas with containment, tablet feeder, chlorine generation, and sodium hypochlorite solution. Chlorine gas with containment and sodium hypochlorite scored the most favorable and were the most cost effective technologies. Interviews with major municipalities within Arizona and the Southwest were also performed to document remote facilities chlorination practices.

Project Engineer, Papago Reservoir Chlortainer, Phoenix, AZ. Valentine developed signed and sealed bid documents for retrofit of the 150-lb cylinder chlorine at the Papago reservoir site to a chlorine containment system. The system has been in operation for several years and has received accolades from both operations and engineering staff, as well as the Phoenix Fire Department.

Project Director, Meritage Homes/Beazer Homes and Arizona American Water Company, Sedella Water Campus. Valentine performed the design for Zone 1 (6,500 gpm) booster pump station and Zone 2 (6,000 gpm) booster pump station, a 1,015 gpm well pump and three 1.5 MG reservoirs, Arsenic treatment, Nitrate treatment, two chlortainer systems, hydro pneumatic/surge tanks and a 3,000 Amp electrical service. The construction cost for this project is \$7.3M.

Project Engineer, Paradise Valley Pump Station Siting Study and Conceptual Design, City of Phoenix, AZ. Performed a study to determine pump station layouts and locations for thirteen

pump stations in the City of Phoenix service area of Paradise Valley. Pump stations are being upgraded to meet City of Phoenix design standards and to accommodate build-out domestic requirements and facilitate dedicated fire flow systems (1500 gpm). The study evaluated recommendations for implementation of these systems. Valentine developed the conceptual pump station layouts and site plans for each pump station. Valentine performed Surge 2000 and WaterCAD hydraulic models of the distribution system to determine chlorine decay and water hammer analyses.

Project Manager, City of Phoenix, Val Vista Water Treatment Plant Chemical Feed System Automation – Flow meter Evaluation Design.

As a sub consultant to Bay Area Instrument and Electric, Valentine performed process mechanical evaluations for the installation of flow metering technologies at the influent to the pre sedimentation basins, influent to the final sedimentation basins and effluent of the filters. The process mechanical evaluations included evaluating different types of flow metering technologies for each location, performing conceptual design and cost evaluations and summarizing the results in a project memorandum. Valentine also performed evaluations of the chemical feed systems to determine if the flow meters were appropriately installed according to manufacturer's recommendations. This project allowed Valentine to become very familiar with the plant and develop relationships with the operations staff and engineering staff.

Principal-in-Charge, City of Phoenix, Val Vista Water Treatment Plant Electronic Vendor O&M Manuals Project.

Valentine performed the conversion of paper vendor Operations and Maintenance Manuals to electronic format for incorporation into the City's Information Access System. Valentine performed a walk down of the entire facility to collect manuals, locate all equipment in each process area and verify if the equipment has or does not have a vendor O&M manual. Once all O&M manual material related to the equipment are

collected, Valentine organized and formatted the manual according to City of Phoenix requirements. Valentine then coordinated the scanning of the manual into pdf format. The manuals were then uploaded into the City's IAS system. The upload tool was also developed as part of this project.

Principal in Charge, Central Groundwater Treatment Facility (CGTF) Plant Upgrades Project, Scottsdale, AZ.

Valentine provided project management and design services for this CM@Risk project for the CGTF located in Scottsdale, AZ. The project provided \$1.5M worth of replacement and upgrades to various plant processes and equipment. The air stripping tower was rehabilitated with a new coating system, upgraded mist eliminator system, distribution tray modifications and replacement of tower packing structural supports. The air stripping tower acid cleaning system was redesigned to allow for greater acid recycle by replacing the existing recirculation pump and modifying the acid cleaning distribution header. Other improvements to the facility included process air blower VFDs, modifications to process air blower piping, 20,000 gallon surge tank installation and site painting.

Project Engineer, Arsenic Treatment Facility Associated Pipelines Project, Scottsdale, AZ.

Valentine Environmental Engineers (Valentine) designed 18 miles of 42" – 16" Arsenic Treatment Transmission Main and associated pipelines located within the WAPA/APS corridor between Pima and Deer Valley Road, and aligned within the right-of-way along Miller Road, Happy Valley Road and Jomax Road. This design also included a new 28-MGD booster pump station and additional pumps at Booster Pump Stations 55B and 55A. In addition, piping, pump and equalization tank modifications were provided at 5 well sites. Valentine also designed a 2.5 MG reservoir at well site 115. Total project construction cost is \$34,000,000.

Project Engineer, Zone 3 Southeast 16-inch Water Transmission Main, Phoenix, AZ.

Valentine developed signed and sealed Bid Documents for 8,000 lineal feet of transmission main on 32nd Street between Ray Road and

Equestrian Trail. The design required construction adjacent to a school, bore and jacking concrete box culverts (5 locations), 404 permitting, and County permit acquisition.

Project Engineer, Paradise Valley Pump Station Siting Study and Conceptual Design, City of Phoenix, AZ. Performed a study to determine pump station layouts and locations for thirteen pump stations in the City of Phoenix service area of Paradise Valley. Pump stations are being upgraded to meet City of Phoenix design standards and to accommodate build-out domestic requirements and facilitate dedicated fire flow systems (1500 gpm). The study evaluated recommendations for implementation of these systems. Valentine is developing conceptual pump station layouts and site plans for each pump station. Valentine is also performing Surge 2000 and WaterCAD hydraulic models of the distribution system to determine chlorine decay and water hammer analyses. **Reference:** Mr. Stan Tax (602) 262-7690; Mr. Bill Mead (480) 348-3529.

Project Engineer, Greenway Water Treatment Plant Design, City of Peoria. Conceptual through detailed Design Engineer for the 16 mgd self-backwashing, declining rate biologically active filters (BAF) and air scour/blower system. This is the first installation of the BAF filter system in Arizona.

Project Manager, Well Site 140 Aquifer Storage and Recovery Well, City of Scottsdale, Scottsdale, AZ. This project added an additional direct injection and recovery well, Well Site 140, to the City of Scottsdale's water distribution and supply system. Well Site No. 140 was designed, constructed, and outfitted in preparation for deep-well injection and recovery by Valentine. This well will be operated remotely and connected to the City's SCADA system.

The project included hydrogeologic services including a site characterization study, well permitting, well drilling bid document preparation, logging, water quality sampling, flow testing and monitoring well design. In addition, the project

included the design of the well site, including preliminary site layouts, well pump and overall system hydraulic analysis, well pump design, recovery well discharge piping and appurtenances, injection piping with flow meter and sleeve valve to reduce the incoming pressure to a pressure suitable for deep-well injection, well purging appurtenances, discharge holding tank and associated pumping system for controlled discharge to the sewer, well site support systems design and site civil design. Native plant inventory, landscaping design, and aesthetic perimeter wall was designed for the site as well.

Project Manager, Kingman State Prison Well Site, Hale Mills Corporation and (HMC) and Management Training Corporation (MTC), Kingman, AZ. Valentine Environmental Engineers, LLC, performed the design, construction administration and permitting of a new well site to serve the Kingman State Prison. The well site included a 1000 gpm recovery well. Valentine performed the design of the well pump, well outfitting, site civil design, water transmission main to the existing on site reservoir and permitting. Valentine performed hydraulic analyses to determine well pump design criteria and utilized WATERCAD software for overall water distribution system modeling.

Valentine utilized a subconsultant for hydrogeological services including well drilling permitting, well bid documents, logging, water quality sampling and flow testing.

Project Manager, Valley Vista Well No. 13, Arsenic Treatment Facility, American Water Company, Phoenix, AZ. Design, permitting and construction administration services associated with a new 400 gpm arsenic treatment facility for the Arizona Water Company Valley Vista Well #13. Valentine provided design of a pre-filter system, absorptive media arsenic treatment system, backwash storage tank, yard piping improvements and E&I Systems to support the new infrastructure.

Project Manager, Chaparral Water Treatment Plant – Miscellaneous Modifications, City of Scottsdale, Scottsdale, AZ. Valentine provided

analyses, calculations and design services for the following miscellaneous modifications at the Chaparral WTP:

- Step Feed Chlorination System to feed chlorine between membranes and GAC contactors; booster pump, chemical feed line and chemical diffuser design
- Raw water intake structure screening facility replacement preliminary investigation - Valentine analyzed potential screening manufacturers and footprint requirements, costs and waste stream impacts to improve algae removal
- GAC Slurry Pumps Redesign - Existing slurry pumps were under designed; Valentine re-analyzed system hydraulics and mode of operations, selected new pumps and provided new design layout
- Air release valve assessment and selection

Project Manager/Engineer, Booster Pump Station 68 Upgrades, City of Scottsdale, Scottsdale, AZ. This below-grade pump station on a small site is located in a high-end north Scottsdale neighborhood. The station required pump upgrades and also solutions for noise abatement as the adjacent homeowner was experiencing vibration noise. Valentine evaluated the system demand in the area and performed new pump selections; which resulted in the selection of more efficient pumps that will operate at the required conditions. The old pumps were oversized and were operated at minimum VFD turndown, resulting in wasted energy and exacerbating the vibration and noise issues. Valentine also developed a design to limit noise through sound absorbing rubber pads below the pumps, spring mounted air compressor and pipe isolation at wall penetrations with rubber expansion joints. The City required a fast track analysis and design so that construction could begin prior to the high demand months. The contractor provided a temporary bypass to accommodate the construction.

Project Manager, Papago Buttes Domestic Water Improvements District Arsenic Treatment Facility. Design, permitting and construction administration of a 430 gpm arsenic treatment system for Wells 6 and 7 in the Papago

Buttes Domestic Water Improvements District. The arsenic treatment process consists of two parallel 6 foot diameter tanks with Bayoxide E33 adsorptive media manufactured by Severn Trent. A bag filtration system was designed for filtration of backwash/rinse water. This allows for recycling of backwash/rinse water back to the raw water storage tank. Valentine also designed the transfer pump station to convey water from the raw water storage tank through the arsenic treatment system.

Permitting services included acquisition of the Approval to Construct and Approval of Construction with the Arizona Department of Environmental Quality. Construction administration services included RFIs, shop drawing review, inspection and record drawings.

Principal in Charge, Golden Valley Water Improvement District Well # 2 Arsenic Treatment Facility. This project involved design, permitting and construction services for the installation of a 1 mgd arsenic treatment system at Well #2 in the Golden Valley Water Improvement District. The treatment process consists of two parallel 8-foot diameter tanks with Bayoxide E33 adsorptive media manufactured by Severn Trent. A pH adjustment system was required at this site to extend media life.

Permitting services included acquisition of the Approval to Construct and Approval of Construction with the Arizona Department of Environmental Quality. Construction administration services included RFIs, shop drawing review, inspection and record drawings.

Project Manager, Adaman Mutual Water Company Site 1B Arsenic Treatment Facility. Site master planning and arsenic treatment system design, permitting and construction administration services were provided for Well Site 1B. The Adaman Mutual Water Company and the City of Good-year have negotiated an agreement that will require the water company to deliver 10 mgd of water to the City. The water company's main potable supply well 6A was under mandate by EPA for the additional of arsenic treatment by January 2009. The arsenic treatment facility was located at well site 1B and was master planned for a build-out

treatment capacity of 1,020 gpm. In this first phase, two parallel 8-foot diameter tanks with Bayoxide E33 adsorptive media manufactured by Severn Trent were designed and installed. Backwash was conveyed to an on site irrigation water line. A pH adjustment system and sodium hypochlorite feed system were provided for media maintenance and to extend media life. The sodium hypochlorite feed system also serves to provide disinfection prior to distribution. Valentine also designed the interconnect waterline between well 6A and the water company's reservoir and master planned the site for the addition of booster pumps, a reservoir and other ancillary facilities.

Permitting services included acquisition of the Approval to Construct and Approval of Construction with Maricopa County Environmental Services Department and coordination with EPA. Construction administration services included RFIs, shop drawing review, inspection and record drawings.

Project Manager, Corrections Corporation of America La Palma Water Production Facility, Eloy, AZ. Valentine designed the 250 gpm well, 500,000 gallon storage tank, booster pump station and water softening system for the La Palma Correctional Center in Eloy, Arizona. CCA needed to move quickly with the water production facility design and construction. Thus, design and construction of the water campus had to proceed quickly, even before well drilling was complete. The facility was designed with a water softening system because it was anticipated that the water quality would be similar to CCA's existing three wells. Once new source water quality data was received, it became evident that the water did not need to be softened, but required arsenic treatment instead. At this point, the already

installed Siemens water softening units required conversion to arsenic treatment. Valentine evaluated alternative media replacement options including Severn Trent, Adedge and Siemens. Adedge arsenic removal media was selected for system retrofit. Valentine performed design modifications, permitting and construction administration services for the retrofit.

Principal in Charge, Maricopa Domestic Water Improvements District Well No. 5. Valentine designed a 400 gpm arsenic treatment system at Well No. 5 in the Maricopa Domestic Water Improvements District. The arsenic treatment system consisted of two parallel 6 foot diameter tanks with Bayoxide E33 media. A bag filtration system and backwash holding tank was also be provided at this site.

Project Engineer, District 5 – Nelson Road and I-10 Water Main Crossing, Gila River Indian Community, Sacaton, AZ. One of the challenges the Gila River Indian Community faces is U.S. Interstate 10, which cuts through the center of the community.

Valentine prepared engineering design drawings, plans & specifications, for the construction of a sixteen-inch (16") water main that crossed under U.S. Interstate 10, along the North side of Nelson Road (north & west of the Casa Blanca Road, Exit 175, Pinal County, Arizona). Valentine planned and communicated with the Arizona Department of Transportation (ADOT) to obtain the necessary standard requirements for this project. This project consisted of approximately 425 lineal feet of 16" waterline and 416 lineal feet of 36" steel casing bore and jack underneath U.S. Interstate 10.

WASTEWATER & RECLAIMED WATER RELATED EXPERIENCE

Project Manager, Russell Ranch WRF (RRWRF) Rehabilitation and Upgrades, EPCOR Arizona Water, Litchfield Park, AZ. Valentine analyzed options for the expansion of the RRWRF, analyzed options for immediate improvements to

repair structural components and improve operations and provided design and permitting services for the immediate improvements and plant expansion. The immediate improvements included the installation of a new head works

screen, replacement of air header piping, structural improvements to process tank, and new air control valves and dissolved oxygen analyzers. The expansion design consisted of the addition of an equalization basin, additional process tank and associated pumps and blowers and upgrades to the chemical storage and feed facilities.

Project Manager, Jomax WRF Plantwide Assessment, City of Peoria, AZ. Valentine analyzed options for operational and energy improvements to a number of systems in the WRF including odor control, process aeration and solids handling. Valentine prepared concept plans, 25 year net present worth costs and pros/cons list for each alternative evaluated. Valentine prepared a summary report which the City is utilizing as a baseline for the development of capital projects for the WRF.

Project Manager, Southeast Water Reclamation Plant Aeration Upgrades. This project is similar to one of many recent projects Valentine has performed in the Southwest for optimization of energy as related to the aeration system at local wastewater treatment facilities. Process aeration accounts for up to 40% of a facilities energy demand. Use of outdated and oversized aeration technology often exacerbates the use of energy for this much needed process. Valentine evaluated the City's SEWRP aeration system and found that the existing process of centrifugal blowers and coarse bubble aeration could be optimized through the use of turbo blowers and fine bubble aeration. After completion of the study, Valentine performed the design of the retrofits and provided construction administration services for this project. Significant Maintenance of Plant Operations (MOPO) planning was required to facilitate the construction while maintaining the plant in service. The retrofits are expected to have a six year payback and will save the City over \$7M in operations and maintenance costs over the next 25 years. In the first two years of operation, the City saved over \$150,000 annually in energy as compared to the old method of aeration.

Project Manager, San Diego Replacement Facility, San Diego, CA. Support facility design services were provided for this 2,200 bed

detention center. The support facilities designed focused on water savings technologies with a 10-year or less payback. The water savings technologies implemented on this project put CCA at the forefront of green water use. System designs included a water softening system, a laundry water recycling system, a shower water treatment system with treated water booster pump station, shower collection and reclaimed water distribution lines throughout the campus and on site screening and grinding system for pre-treatment of sewage prior to off-site sewer discharge. The treated shower water will be utilized for toilet flushing at all inmate cells.

Project Manager, Kingman State Prison Sacramento Road WWTP Expansion, Management and Training Corporation. The 1,500 bed expansion of this prison required the design of a WWTP expansion at MTC's Sacramento Road WWTP. The design was for a 0.35 mgd Class A water reclamation plant including headworks with screening/grinding, sequencing batch reactors (in earthen lined basins), effluent chlorination/dechlorination chemical feed systems and sludge dewatering. Existing aerated lagoon basins were converted to effluent recharge basins. Site civil services for drainage, grading and paving, and on site sewerlines from the new prison to the WRF were provided. Valentine provided permitting (APP permit amendment, aerated lagoon clean closure, sewerlines approval to construct) and construction administration services for all portions of the work.

Project Manager, Eloy Detention Center WRP Expansion, Corrections Corporation of America. This required the design of a WWTP expansion at CCA's Eloy Detention Center. Valentine designed a 0.6 mgd Class A+ water reclamation plant including headworks with screening/grinding, activated sludge basins with secondary clarification, process air blower building incorporating turbo blower technology, cloth media filters and effluent chlorination/dechlorination chemical feed systems. Site civil services for drainage, grading

and paving, and on site sewerlines from the new prison to the WRF.

Project Manager, Wishing Well Water Reclamation Facility Improvements Project, Arizona American Water Company. Valentine performed the design of \$2.8M worth of improvements to the Wishing Well WRF including a new headworks consisting of a fine screen and grit removal basin, upgrades of the existing coarse bubble aeration system to fine bubble aeration, replacement of the blowers with new high performance Turbo blowers, addition of new secondary clarification facilities, upgrades to the existing chlorination.

Project Manager, Gainey Ranch WRF Tertiary Treatment Upgrades, City of Scottsdale. Valentine provided evaluation, design and construction administration services for retrofits tertiary treatment systems at the 1.7 mgd Gainey Ranch WRF. The existing traveling bridge filters were reaching their serviceable life, the existing UV system was operationally challenging, a semi-permanent sodium hypochlorite feed system required upgrading, the electrical room had experienced years of corrosion and deterioration, and the existing administration building required upgrade and expansion. Valentine evaluated alternative filtration and disinfection strategies through examination of both capital and O&M costs and system advantages and disadvantages. Disk filtration and vertical, low pressure UV were recommended and designed. The operations staff was reluctant to move forward with UV disinfection as they facility had already utilized two different UV technologies unsuccessfully. Valentine performed a detailed and diligent analysis of potential UV technologies, resulting in the shortlist of a few viable technologies for the facility. Table top demonstrations and visits to existing facilities assisted the team in selecting the most viable UV system for the WRF. The administration building expansion consisted of expanding the office space, lunch room and upgrading the electrical room. This project was performed via the CMAR delivery method.

Project Manager, Gainey Ranch WRF Secondary Treatment Upgrades, City of Scottsdale. Scottsdale rehired Valentine to evaluate and upgrade the secondary treatment process at the Gainey Ranch WRF. Secondary treatment upgrades included replacing the existing bioreactor jet aeration system with fine bubble aeration, upgrading scum handling and WAS pumping facilities and adding process control analyzers (DO and MLSS) to the bioreactors to optimize process air supply and SRT control. This project was delivered via the JOC delivery method (multiple JOCs).

Project Director, 91st Avenue WWTP Support Systems Upgrades Project, Phoenix, AZ. Valentine provided project management and design services for upgrades to various processes at the 91st Avenue WWTP. Valentine's efforts focused on evaluating various options for improving rock and grit removal at the UP01 headworks rock box and design of gates at the influent channels.. Valentine also led a pilot evaluation of proprietary sewer cleaning equipment at the UP01 headworks rock box and evaluated it's ability to remove material. Valentine also managed and coordinated the efforts of their electrical sub consultant who performed the design for \$2M in electrical upgrades including blower building 1 and 3 switchgear replacement and replacement of corroded conduit at various locations throughout the plant.

Project Manager, Toilet Flushing and Treatment Facility, Global Water. Valentine performed the design and construction administration of an enhanced treatment pilot plant and booster pump station for treatment and delivery of Class A⁺ effluent from the Palo Verde WRP to the Global Water Center of Excellence. Recycled water is used for toilet flushing and landscape irrigation. The enhanced treatment pilot plant will be used to study color and odor removal to maximize the aesthetics of the recycled water for use in toilet flushing.

Project Director, 91st Avenue WWTP/23rd Avenue WWTP JO Assistance and Process

Assistance, Phoenix, AZ (December 2005 to March 2009). Valentine continued to provide process, design and construction administration services in support of the Job Order programs at the 23rd Avenue and 91st Avenue WWTPs. Designs completed under this phase include 91st Avenue WWTP sodium bisulfite solution diffuser modifications, 23rd Avenue WWTP plant wide caulking, process instrumentation trouble shooting services, and IMLR Pump System Hydraulics trouble shooting analysis services.

Project Engineer/Manager, 111th Avenue Lift Station Assessment, Arizona American Water. Valentine performed an assessment of the 111th Avenue Sewage Lift Station for Arizona American Water. The 111th Avenue Sewage Lift Station was constructed in 1967 and has a maximum capacity of 320 gallons per minute and a wet well (manhole) capacity of 1,000 gallons. Valentine performed the pump station assessments and made recommendations for rehabilitation of:

- Site components – lift station location and surrounding features
- Structural components – hatch, ladder, interior walls, floor, roof lifting lugs, manhole and steel tank
- Mechanical components – pumps, piping, air compressor and supports
- Electrical and Instrumentation components – conduit, wiring, terminations and control system.

Project Manager, Agua Fria Linear Recharge Project Phase 2, Phoenix, AZ. Valentine Environmental Engineers (Valentine) is performing conceptual evaluations of 18 pipeline alignment alternatives and 8 pump station alternatives for delivery of effluent from the 91st Avenue WWTP for recharge along the Agua Fria River.

Project Manager, 91st Avenue WWTP/23rd Avenue WWTP Improvements Planning, Phoenix, AZ. (March 2003 – November 2005) Valentine provided project management and design services for the various JO projects at the 91st Avenue and 23rd Avenue WWTPs. Valentine

managed 30 JOs and provided design services for a variety of process mechanical plant upgrades and modifications. Completed projects include the Primary Scum Pumping Modifications, Plant 2B Isolation Gates, Solids Handling Facility Centrate Pipe Replacement Project, Plant 2B and 3A RAS Screw Pumps Modifications Project, 23rd Avenue WWTP Centrate Return Modifications and 23rd Avenue WWTP Chlorine Scrubber Piping Replacement and Modifications.

Principal In Charge, 23rd Avenue WWTP Facility Master Plan As-Built Drawings, Phoenix, AZ. Principal in Charge for the creation of Architectural, Civil, HVAC, Mechanical, Plumbing, Landscaping, and Structural Master Drawings Set for the 23rd Avenue WWTP. The work included collecting construction record drawings for all plant projects from initial construction to present. With the use of a database tool, drawings were reviewed for master set applicability, inventoried, renamed, numbered, and formatted by area of plant. The drawings were then scanned, re-drawn, or formatted in AutoCAD 2004. Drawings were then provided with Water Services Department Standard Format title blocks.

Principal In Charge, 91st Avenue WWTP Facility Master Plan As-Built Drawings, Phoenix, AZ. Principal In Charge for the creation of Architectural, Civil, HVAC, Mechanical, Plumbing, Landscaping, and Structural Master Drawings Set for the 23rd Avenue WWTP. The work included collecting construction record drawings for all plant projects from initial construction to present. With the use of a database tool, drawings were reviewed for master set applicability, inventoried, renamed, numbered, and formatted by area of plant. The drawings were then scanned, re-drawn, or formatted in AutoCAD 2004. Drawings were then provided with Water Services Department Standard Format title blocks.

Project Manager, 91st Avenue WWTP Primary Scum Pumping Automation Design, Phoenix, AZ. Project Manager for the design of automated primary scum pumping at Plants 1, 2 and 3.

Automated scum pumping will be achieved via sonic level indication with backup float level indication.

Project Manager, 23rd Avenue WWTP Digester Overflow Hydraulics Study, Phoenix, AZ. For this study, Valentine analyzed methods to improve overflow pipe redundancy, digester re-seeding, digester cleaning and separate digester feed for thickened waste activated sludge. Valentine also developed preliminary opinion of construction costs for the various digester system improvements and developed a draft study report.

Project Engineer/Manager, Northwest Valley Regional Water Reclamation Facility, Various Projects, Arizona American Water. Valentine has been providing design and study services for the following:

- Valentine performed an assessment of the decant pump station at the NWVWRWF to determine methods to increase capacity from 575 gpm to over 800 gpm. Teresa performed influent flow calculations, wetwell size calculations and pump hydraulic/system head curve evaluations for capacity upgrade options
- Valentine developed an expansion phase plan including opinion of probable construction costs for build-out flow of 11.0 MGD

Project Director, Town of Gilbert, Neely Water Reclamation Facility Sludge Force Main. Valentine performed design and construction administration services for 2.5 miles of 8-inch sludge force main from Neely Water Reclamation Facility to the Mesa trunk line sewer system at Baseline and Cooper Roads. The project was successfully constructed and is in operation.

Project Engineer, Yavapai County Justice Facility WWTP Upgrade Project, Phase 1 - Detailed Design and Permit Acquisition. Valentine performed the detailed design of upgrade facilities including SBR system, Effluent Pressure Filtration, UV Light Disinfection, Aerobic

Sludge Digestion, and Leach Field Effluent Disposal. Valentine also prepared a Major Modification Application for the existing WWTP APP permit.

Project Engineer, Yavapai County Justice Facility WWTP Upgrade Project, Phase 1 - Effluent Disposal Alternative and Recommendation (2002). Valentine performed this study that evaluated three effluent disposal options for the Yavapai County Camp Verde Justice Facility WWTP. Three methods evaluated were:

- Leach Fields
- Vadose Zone Wells
- Spreading Ponds

Study involved examination of plant water quality, site hydrogeology, regulatory requirements and cost. Based on the evaluation, leach fields were selected.

Project Manager, 23rd Avenue WWTP Digester Mixing Improvements Design, City of Phoenix, AZ. This project evaluated methods to control foaming in the 23rd Avenue WWTP anaerobic digesters. The work included a digester foaming evaluation to identify potential foaming causes and solutions. The team determined that improvements to the mechanical mixing system would be the most cost-effective short-term solution. Valentine designed the addition of a high discharge mixing point and nozzle to each of the four digesters to improve tank mixing and foam collapsing.

Assistant Project Manager, Agua Fria Linear Recharge Project Phase 1, Phoenix/SROG. Assistant Project Manager for this study which entailed evaluating alternatives for groundwater recharge of 91st Avenue WWTP effluent along the Agua Fria River. Teresa led the Water Resources Technical Committee for this project who are addressing water quality, quantity and recharge issues.

Project Manager, 91st Avenue Wastewater Treatment Plant Multi-Phase Digestion Preliminary Design, Phoenix, AZ. Project Manager for the preliminary design entailing the

retrofit of the existing digester heating system (heat exchangers, hot water pumps, etc.) to meet the heating requirements of the acid-phase and methane-phase thermophilic reactors. The design also included a new transfer pump station to transfer sludge from the acid-phase to the methane-phase reactors, significant process control modifications and miscellaneous gas and sludge piping modifications.

Project Manager, 91st Avenue WWTP Multi-Phase Phase Digestion Feasibility Study, Phoenix, AZ. Project Manager for the 91st Avenue Wastewater Treatment Plant multi-phase phase Digestion Sludge Digestion Feasibility Study, City of Phoenix, Arizona. Teresa led a team of process experts and subconsultants to determine the impact of phased digestion on the plant. The results of the study were favorable for both two- and three-phase digestion. The study found that it is economically and physically feasible to modify to phased digestion and increase the capacity of the existing digesters.

Process Engineer, Cave Creek WRP Startup and Commissioning, Phoenix, AZ. Teresa led the process evaluation and process startup of the Cave Creek WRP. Special considerations were required for startup due to lower than expected influent flow. In order to minimize settling in channels and basin zones, hydraulic calculations and modifications to basin/conveyance channel configurations were performed.

Project Manager/Engineer, 23rd Avenue WWTP Ammonium Sulfate Feed System Facilities Project, Phoenix, AZ. Project Manager and Lead Design Engineer for the design of the system to be used in conjunction with the chlorination system to allow for chlorination of the wastewater to control TTHM formation. The ammonium sulfate feed system design will allow for the reuse of abandoned chemical feed facilities. This system is significantly safer to operate and maintain than an aqua ammonia feed facility.

Project Manager/Engineer, 91st Avenue Wastewater Treatment Plant Emergency

Chlorine Scrubber Modifications, Phoenix, AZ. Project Manager and Lead Design Engineer for the design involving upgrading the existing chlorine scrubber capacity and modifications to system instrumentations and controls.

Project Engineer, Clark County Sanitation District Treatment Facilities, City of Las Vegas, Nevada. Lead Engineer for the process and instrumentation design, on-line instrumentation to optimize process efficiency and control descriptions. Design includes new BNR activated sludge basins, circular secondary clarifiers, RAS/WAS pump station, chemical feed facilities, and scum pumping.

Project/Process Engineer, West Area Water Reclamation Facility. City of Glendale, AZ. Developed and performed ranking analysis for selection of process units/configurations for preliminary, primary, secondary, tertiary and groundwater recharge. Performed conceptual and detailed design of the selected extended aeration process for nitrogen removal, RAS/WAS pump station, and process air blower facility.

Process Engineer, Sun City Water Reclamation Facility Expansion Evaluation, Sun City, AZ. Process Specialist responsible for a performance evaluation of an existing trickling filter facility, and evaluating options for converting and expanding the facility to a BNR facility. Teresa was also responsible for the conceptual design of the selected activated sludge process and denitrification filter.

Process Engineer, Green Valley, Arizona, Green Valley Wastewater Treatment Plant Project. Process Specialist providing analysis of treatment processes for waste activated sludge treatment design of DAF thickening, aerobic digestion and vacuum bed dewatering units.

Process Engineer, Ina Road Wastewater Treatment Plant Tertiary Treatment Study, Tucson, Arizona. Process Design Leader for the assessment of tertiary treatment requirements to produce 20,000 AF of reclaimed water for restricted and open access reuse.

Project Engineer, Advanced Water Treatment Facility City of San Diego, California. Performed preliminary and detailed design of vertical turbine conveyance pump station and chlorination facilities.

Seoul, South Korea, Yang Pyung Wastewater Treatment Plant: Process Design Leader for the design which consisted of an upgrade and expansion of an activated sludge process to a modified Bardenpho process.

City of Inch'on Supporting Community Wastewater Treatment Plant, Seoul, Korea. Process Design Leader for a new BNR treatment facility for the City of Inch'on. Performed a detailed analysis of BNR technologies and conceptual design of the selected A2/O process.

Project Manager/Senior Project Engineer, Water Distribution and Sewer Collection System Improvement, City of Scottsdale, Scottsdale, AZ (Performed under our 2007-2010 On-Call Services Contract). Valentine provided design, permitting, bid phase services and as needed construction administration services for water distribution and sewer collection system improvements projects from 2007 to date. Design services included survey, geotechnical investigations, WaterCAD modeling, design calculations, drawing and specification preparation, utility coordination, and HEC-RAS analysis and scour calculations. The projects listed below were completed under this contract.

- Hayden Road 16" Waterline and Roadway Improvements (3,300 ft)
- Happy Valley 8" Sewer line (6,300 ft)
- Hayden Rd/Happy Valley 12" Waterline and Roadway Improvements (1,400 ft)
- La Vida 6"/8" Waterline Replacement and Roadway Improvements (2,100 ft)
- Troon Irrigation Pumping System
- Waterfront Odor Control & Sewer Improvements Design
- SRP Canal Pump Station Upgrades and Water Unloading Station for Westworld

- Carefree Ranch 6" Waterlines Replacement Project (11,100 ft)
- Dynamite Road 8" Sewer Line (4,000 ft).

Project Manager, Collection and Wastewater Treatment Plant Odor Control Study, City of Scottsdale, Scottsdale, AZ (Performed under our 2011 On-Call Services Contract). Valentine performed an odor control study focused on optimizing and improving the odor control along the City's forcemains, pumpback stations and wastewater treatment facilities. The City currently utilizes ferrous chloride addition at their sewage lift stations to control odors along the sewers, at intermediate pump stations and at the headworks of the downstream wastewater treatment facilities. Valentine investigated alternatives to the costly and corrosive use of ferrous chloride. Criteria for selection of preferred alternatives included operations and maintenance costs and requirements, degree of infrastructure modifications, and safety and handling. The preferred alternatives that were selected for further evaluation were magnesium hydroxide, ferrous chloride/peroxide and superoxygenation. Superoxygenation was found to be the most cost effective on a 25-year net present worth analysis and offers the City many benefits including chemical free odor control, ease of implementation into existing pump stations, corrosion control, and highest degree of odor mitigation. Valentine and the City piloted a superoxygenation technology between one Pumpback and a wastewater treatment facility and after two weeks of testing, 60 to 70% reduction in hydrogen sulfide odors occurred at the treatment facility headworks. Valentine completed a 15 % design and study report for implementation at the City's five Pumpback stations.

Prime Consultant, Eloy Detention Center 0.9 MGD Wastewater Treatment Plant Expansion, Corrections Corporation of America (CCA) Eloy, AZ. Valentine performed design services for the 0.9 MGD expansion to the Eloy Detention Center's WWTP. Valentine provided permit services for the 208 Amendment and Significant Amendment to the APP permit on a fast track schedule. Valentine also assisted CCA with

bidding the project and early procurement of equipment to facilitate the schedule. The following facilities/permits were involved:

- Headworks consisting of sewage grinder and screen
- Package above grade (Davco) WWTP consisting of surge tank, activated sludge treatment with nitrogen removal, secondary clarification
- Disk filtration and chlorine gas disinfection

Fast track permitting efforts for the APP permit, permit to construct, Eloy building permit, 208 Plan Amendment and grey water reuse permit.

Project Manager, Las Sendas Sulfide Control Station, City of Mesa, Mesa, AZ. Valentine performed design and construction administration services for a Sulfide Control Station (SCS) to serve the sanitary sewer collection system along Sossaman and McDowell Roads. The SCS provides ferric chloride solution feed to two existing sewer manhole locations; one on Sossaman Road and the other on McDowell Road. The SCS is comprised of ferric chloride storage, handling and feed systems. Valentine also performed site development of the one acre site including grading, paved vehicle access drive, site perimeter wall, landscaping, irrigation, stormwater retention and stormwater drainage system. Valentine also facilitated reviews and approvals from the City of Mesa Design Review Board, Building and Safety and the County Health Department (Permit to Construct).

Prime Consultant, District 4-Wild Horse Pass New Hotel & Casino Sewage Lift Station & Forcemain, Gila River Indian Community, Sacaton, AZ. Valentine Environmental Engineers, LLC provided project management & coordination, preparation of detailed construction drawings and specifications for sewage lift station and force main for the new Wild Horse Pass Hotel & Casino. This project consisted of 196 lineal feet of 18" sewer main pipe, 809 lineal feet of 8" sewer force main pipe, one six-foot (6') diameter diversion manhole, and one four-foot (4') diameter manhole, two ten-foot (10') diameter wet wells, four (4) pumps, and two (2) valve vaults. The

sewage lift station site included a 100kw standby generator, electrical equipment w/canopy, and transformer within the site footprint. The two wet wells are interconnecting to prevent overflow, in the event of pump failure. This lift station was also designed with a bypass system which allows continual operation of the new Wild Horse Pass Hotel & Casino. A separate double-swing gate allows access by the local electrical company access to the transformer.

Project Manager, District 4-Wastewater Improvements, Gila River Indian Community, Sacaton, AZ. Valentine provided engineering design and preparation of detailed construction drawings and specifications for the District 4 Wastewater Treatment Plant improvements. This project consisted of approximately 6,985 lineal feet of six-inch (6") sewer force main including crossing the Maricopa Floodway right-of-way, rehabilitation of two (2) sewage lift stations and the new Stotonic WWTP. The new Stotonic WWTP has a capacity of 0.21 mgd with dual primary / secondary lagoons and evaporation ponds for bypass operations. The Stotonic and Gila Butte lift stations consists of two (2) manholes, six-foot (6') diameter wet well with two pumps, electrical equipment w/canopy, standby generator, and transformer all within the site footprint.

Project Manager, Global Water Resources, Southeast Lift Station, Maricopa, Arizona. The purpose of this project was to design and install an Interim Lift Station, related gravity sewer piping and force main that will convey wastewater to the Global Water Palo Verde Utilities Company Southeast Water Reclamation Plant that is currently under construction. The Interim Lift Station will collect and pump sewage from an incoming 30-inch sewer line and pump it via a 16-inch/18-inch diameter force main to a 30-inch gravity sewer that discharges to the Palo Verde Water Reclamation Plant. The lift station is sized to accommodate initial, startup flows from local residential areas currently in the planning stage. The Interim Lift Station will be possibly replaced in the future by a larger lift station located in a different location and sized to accommodate build-out sewage flows

from local residential areas. Major facilities included for the Interim Lift Station are:

- Drop Manhole with removable trash basket for the incoming gravity sewer.
- Lift station wet well manhole with submersible pumps.
- Odor control facility to provide vapor phase odor control for head space of the wet well and screen manhole.
- Ancillary facilities including force main yard piping and electrical and instrumentation equipment.

Project Manager, Global Water Resources, Southwest Lift Station, Maricopa, Arizona. Design of an interim lift station and related force main within the Global Water Palo Verde Utilities Company Southwest Water Reclamation Plant Campus II. The interim lift station collects and pump sewage from the incoming 33-inch and 48-inch sewer lines into the Southwest Water Reclamation Plant. The lift station is sized to accommodate initial, startup flows and will be replaced in the future by a larger lift station sized to accommodate build-out sewage flows. Major facilities included for the interim lift station are:

- Drop Manhole with removable trash baskets for incoming sewer mains.
- Lift station wet well manhole with submersible pumps.
- Odor control facility to provide odor control for head space of the two manholes.
- Ancillary facilities including force main yard piping and electrical and instrumentation equipment.

The Gila River Indian Community continually provides social services to its community members. As part of these services, the Gila River Indian Community has constructed a new Domestic Violence Shelter as part a master planned development.

Valentine provided engineering design and preparation of detailed construction drawings and specifications for approximately 1,400 lineal feet of eight-inch (8") sewer line and 2,300 lineal

feet of twelve-inch (12") sewer line which was connected to the existing sewer system; 10,500 lineal feet of twelve-inch (12") diameter water main which has connected to the existing water distribution system. The sewer main alignment parallels Pear Road, from south of Seed Farm Road to the new South Access Road. The water main connects just south of Seed Farm Road runs south along Pear Road, turns east along South Access Road, turns north along Ocotillo Road, and west along Bluebird Road.

The new Domestic Violence Shelter facilities connect to these utilities. The sewer line and waterline also provides for additional future growth and expansion of the development area. These utilities will provide sewer and water services for a future youth development site and a future property and supply site. The sewer main and water main provides a connection to the existing water distribution system currently serving Sacaton and the Gila River Indian Community.

EXHIBIT TV-DT2

FINAL DRAFT MEMORANDUM

To: Liberty Utilities
From: Teresa Valentine, PhD, PE, BCEE
Valentine Environmental Engineers, LLC
RE: Boulders Waste Water Treatment Plant (WWTP) Decommissioning and
Boulders WWTP Force main, Lift Station and Bypass Sewer – Cost
Evaluation
Date: June 10, 2019

1.0 Introduction

The purpose of this memo is to provide an analysis of the work required and the costs incurred for the closure of the Boulders WWTP. Liberty Utilities "Black Mountain Sewer Company" (Liberty Utilities) provided drawings, bid tabulations and change order costs for two elements related to the closure of the Boulders WWTP:

- Decommissioning of the Boulders WWTP
- Boulders WWTP Force main, Lift Station and Bypass Sewer (required to divert the sewage from the decommissioned WWTP to the City of Scottsdale)

In addition to the construction costs, a summary of design costs was also provided.

The work required and costs for each element were evaluated to determine if they were reasonable and prudent.

2.0 Decommissioning of the Boulders WWTP

The closure of the wastewater treatment plant is a necessary part of decommissioning. The Arizona Department of Environmental Quality oversees the closure and post-closure of wastewater treatment or water reclamation facilities which must be performed in accordance with the Arizona Administrative Code R18-9-A209.

The decommissioning of a wastewater treatment plant typically involves removing existing buildings, removing or filling in below grade treatment tanks, removing above grade treatment tanks, removing equipment, piping and appurtenances, and electrical and instrumentation systems including motors, instruments, conduits, and panels. Process tanks will require removal of sludge, cleaning, inspection and possibly testing prior to demolition.

The site will also typically require backfilling (where below grade tanks and piping have been removed), regrading and may require landscaping in order to return the site to the Community's desired conditions.

I reviewed the Boulders WWTP Decommissioning Plans by Hazen, dated November 2018. The Boulders WWTP was approximately a 120,000 gallon per day facility located on approximately a 22,000 square foot site. These plans included the following general items:

- Removal of sludge
- Disinfection and cleaning of structures
- Demolition and removal of yard piping
- Demolition of the following treatment systems including their below grade (or above grade) tanks, equipment and electrical/instrumentation systems:
 - Influent Lift Station
 - Influent Flow Splitter
 - Influent Bar Screens
 - Biological Treatment Systems
 - Filters
 - Chlorine Contact Basin
 - Effluent Pump Station
 - Odor Control System
- Demolition of the following buildings:
 - Influent Lift Station Building
 - Blower Building and Control Room
 - Chlorine Contact Basin Shade Structure
 - Miscellaneous structures such as equipment sheds and storage sheds
- Fence demolition
- Backfill, regrading and compaction
- Landscaping

Notable in the scope of work is the removal of below grade systems such as piping and treatment tanks rather than leaving in place and filling in. I queried Liberty Utilities about this item, and the complete removal of these systems was at the request of the Boulders Homeowner's Association (HOA) and the Town of Carefree. These two stakeholders requested the property be restored to a condition no less than that of a vacant residential lot.

The scope of work presented in the Hazen plans represents work required to restore the site to a vacant residential lot. This would require the removal of all site components, below and above grade, for the lot to be reused for residential construction purposes. There are no other likely alternatives given this requirement.

Liberty Utilities obtained competitive bids for the WWTP decommissioning. I was provided two bid tabs for review and they are summarized as follows:

- \$1,090,401 – Archer Western Construction dated November 16, 2018
- \$1,357,765 – Achen Gardner Construction, LLC dated November 16, 2018

Archer Western was the qualified, low bidder and performed the work. I find the WWTP decommissioning bid to be reasonable considering the work required, the size of the facility and the current Arizona construction climate.

Archer Western submitted several change requests for the work covering salvage equipment removal for the Liberty Utilities, road usage fees, vibration and noise

monitoring, temporary camera, viewing platform and landscaping adjustments. The total change request amount was \$63,356.50. The requested items are not unreasonable and are typical items that arise during construction. The change order request is less than 10% of the original bid which is also a reflection that the plans were clear on scope.

3.0 Boulders WWTP Force Main, Lift Station and Bypass Sewer

The closing of the Boulders WWTP required Liberty Utilities to design and construct systems that would direct the sewage to a different treatment plant. In my review of the project, I found the following options to be possible for treatment of the sewage from the Boulders WWTP service territory:

- Option 1. Extend gravity sewer and/or add a lift station/force main and connect into the Cave Creek system for eventual treatment at Cave Creek's treatment plant.
- Option 2. Extend gravity sewer and/or add a lift station/force main and connect into the City of Scottsdale for eventual treatment at the City of Scottsdale Water Campus WWTP.
- Option 3. Build a new treatment plant in a new location and extend gravity sewer and/or force mains to the new treatment plant.

It is important to note the following features of the existing system (that were in place for many years prior to the Boulders WWTP closure):

- The northern portion of the Liberty Utilities service territory is generally treated at the Boulders WWTP.
- The existing Commercial Lift Station primarily serves the northern portion of the Liberty Utilities services territory. It discharged into the Boulders gravity system where its flow would be directed to the Boulders WWTP.
- The southern portion of the Liberty Utilities service territory is collected and conveyed to the City of Scottsdale for treatment.
- Overflow to the City of Scottsdale also occurred at the Boulders WWTP. Flows over 120,000 gpd were routed to the City of Scottsdale via existing gravity sewers within the Boulders for eventual connection to an existing gravity line in Scottsdale Road. Liberty Utilities and the City of Scottsdale had (and continue to have) a sewage capacity agreement in place for sewage treatment at the City of Scottsdale Water Campus Water Reclamation Facility.
- The existing Commercial Lift Station discharged into the Boulders gravity system where its flow would be directed to the Boulders WWTP.

Option 1, connecting to Cave Creek, was explored by Liberty Utilities, involved the following conceptual modifications to the Liberty Utility collection system:

- Upgrades to several lift stations within the Town of Cave Creek service territory as well as Liberty Utilities' Commercial Lift Station.
- Addition of both gravity lines and force mains to direct the flow to the Town of Cave Creek.
- Capacity buy-in charges and future connection fees

The following summarizes the cost impacts and advantages/disadvantages of this alternative:

- The Town of Cave Creek (Town) was asking \$4,022,225 for a capacity purchase at their water reclamation facility.
- Additionally, Liberty Utilities indicated that the Town requested an additional \$8,000 connection fee per new customer. Liberty Utilities has indicated that 97 customers have been added to their system over the past three years. This would have added an additional cost of approximately \$766,000, with additional costs as customers are added in the future.
- The Town was also requesting upgrades to the Sunset, Stagecoach, El Pedregal lift stations and odor control at Commercial and Rancho Manana Lift Stations. This was estimated at a cost of \$1,054,200 per the Brian McBride April 9, 2015 cost estimating table.
- Additions of force main and gravity lines would be required; this was estimated to cost \$422,400 (per Brian McBride cost analysis of April 9, 2015).
- Commercial Lift Station upgrades were estimated at \$408,800 (per Brian McBride April 9, 2015 Cost Analysis.)
- This project would still have still required the decommissioning of the Boulders WWTP, a cost of \$1,153,757
- The engineering services associated with the upgrades listed in bullets 3 through 6 above are \$243,132 (assumes engineering services are 8% of the estimated construction cost)
- This project would have required Liberty Utilities to engage in another capacity agreement and long-term arrangement, in addition to the one already in place with the City of Scottsdale.
- This option had several advantages in that it would have assisted the Town of Cave Creek with another source of flow to their underloaded and underfunded wastewater treatment plant. It would have also brought effluent back to serve the golf course, although that line would have been an addition cost.
- From my discussions with Liberty Utilities, the schedule began to become an issue for this option. It became evident to Liberty Utilities that the Town of Cave Creek timeframe would likely not meet their schedule requirements for taking the Boulders WWTP offline.
- This project is estimated to begin at a cost of approximately \$8.95M and included cost uncertainties (future connection costs).

Option 2, connect to the City of Scottsdale, includes the following key features, costs and advantages and disadvantages (this option was ultimately performed by Liberty Utilities):

- Upgrade and replacement of the existing Commercial Lift Station.
- Addition of a new 6-inch force main from the Commercial Lift Station (along Cave Creek Road and Tom Darlington) to the City of Scottsdale connection point at Tom Darlington and East Westland Road – this new force main was approved and preferred by the Town of Carefree.
- Re-routing of a force main and addition of some gravity sewers to bypass the Boulders WWTP, allowing it to be taken off-line.
- This option builds upon the already existing relationship with the City of Scottsdale who accepts flow from Liberty Utilities' southern service territory for a lower

capacity fee (\$10/gallon) than that offered by the Town of Cave Creek. Capacity purchase fees for this option are \$1,200,000.

- City of Scottsdale did not require any additional funding to improve their pumping or treatment systems to accept the additional flow from Liberty Utilities
- The final cost of the above upgrades (lift station, force mains and Boulder WWTP bypass piping) was \$5,548,827.
- The final cost for the decommissioning of the Boulders WWTP was \$1,153,757.
- Engineering fees for the lift stations and force mains and Boulders WWTP closure were \$518,190 (the engineering services were slightly under 8% of the final construction cost).
- The total plant closure construction costs are calculated to be approximately \$8.42M.

Option 3, building a new wastewater treatment plant, has the following requirements, cost impacts and advantages/disadvantages:

- This alternative would have required locating and purchasing property for a new wastewater treatment plant that would minimize impacts to the community; this would have been a very difficult endeavor.
- The cost to purchase the property is estimated at \$100,000/acre or \$500,000 assuming a five-acre lot (property with necessary set backs as required by the Arizona Department of Environmental Quality).
- A new wastewater treatment plant with full noise and odor control and tertiary treatment necessary for effluent disposal would have been required, estimated to range from \$35 to \$40 per gallon or \$4.2M to \$4.8M.
- Locating, designing, permitting and construction of new effluent disposal or pipelines back to Boulders would also have been required. Assuming the disposal facilities could be located on the treatment plant site, effluent disposal construction costs are estimated to range from \$1M to \$1.5M.
- Gravity line extensions or force main additions would have been necessary, and it is difficult to estimate the cost of these items without having a known treatment plant location.
- The timeframe for property siting/purchase, permitting, design and construction is significant and may not have been feasible given the order to close the plant by November 2018.
- This project increases the potential for additional odors as well as impacts to aesthetics and noise due to the water reclamation plant relocation.
- This project would still have required the decommissioning of the Boulders WWTP, which cost \$1,153,757
- The engineering services associated with the upgrades listed in bullets 3, 4 and 8 above are estimated to range between \$508,300 and \$596,300 (assumes engineering services are 8% of the estimated construction cost)
- Without including the cost of unknown collection system extensions/additions and odor control, Option 3 costs are estimated to begin at \$7.36M to \$8.55M.

Table 1 below provides a brief description of each option presented and its associated costs.

Table 1. Cost Summary
**Boulders Waste Water Treatment Plant (WWTP) Decommissioning and Boulders WWTP Force main, Lift Station and Bypass Sewer – Cost Evaluation
Liberty Utilities**

Cost Summary	Option 1	Option 2	Option 3
Description	Extend gravity sewer and/or add a lift station/force main and connect into the Cave Creek system for eventual treatment at Cave Creek's treatment plant	Extend gravity sewer and/or add a lift station/force main and connect into the City of Scottsdale for eventual treatment at the City of Scottsdale Water Campus WWTP	Build a new treatment plant in a new location and extend gravity sewer and/or force mains to the new treatment plant
Capacity Purchase Costs	\$4,902,225	\$1,200,000	-
Connection Fees	\$766,000	-	-
Lift Station Upgrades	\$1,054,200	-	Necessary, but unable to determine at this time
Force Main and Gravity Line Additions	\$422,400	\$5,548,828	Necessary, but unable to determine at this time
Commercial Lift Station Upgrades	\$408,800		-
Boulder WWTP Bypass Pumping	-		-
Boulders WWTP Decommissioning	\$1,153,757	\$1,153,757	\$1,153,757
Property Purchase Costs	-	-	\$500,000
New WWTP	-	-	\$4,200,000 - \$4,800,000
Effluent Disposal Construction Costs	-	-	\$1,000,000 - 1,500,000
Engineering Fees	\$243,132	\$518,190	\$508,300 - \$596,300
Total Estimated Costs	Starting at \$8,950,514	\$8,420,775	Starting at \$7,362,057 - \$8,550,057

Option 2, connect to the City of Scottsdale, in my estimation, is a more cost effective and viable solution than Option 3, a new water reclamation facility. The new water reclamation facility would have very likely been greater in cost given the starting cost listed above in Table 1, which does not include sewer/force main infrastructure that is not estimable at this time. Furthermore, this option does not offer the best solution for the community in terms of reducing noise and maintaining the aesthetics of the community.

Option 1, connect to the Town of Cave Creek, is estimated at a beginning cost of \$8.95M, is more cost effective than option 3, build a new WWTP. Option 1 is however, not as cost effective as Option 2, connect to the City of Scottsdale. Furthermore, it is my understanding through discussions with Liberty Water that this option also posed scheduling issues and future uncertain costs, that required Liberty Utilities to focus on other cost effective, timely solutions, such as Option 2, connect to the City of Scottsdale.

In summary, of the options that I reviewed and that were available to Liberty Utilities, Option 2, connecting to the City of Scottsdale, was the most cost effective and viable solution, it offered the least long-term impact to the community and was preferred by the Town of Carefree. In my opinion, the Utility utilized the most prudent option available to them for the rerouting and treatment of the Boulders WWTP flow.

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8 Attorneys for Liberty Utilities (Black Mountain Sewer) Corp.

9 **BEFORE THE ARIZONA CORPORATION COMMISSION**

10
11 IN THE MATTER OF THE APPLICATION
OF LIBERTY UTILITIES (BLACK
12 MOUNTAIN SEWER) CORP., AN
ARIZONA CORPORATION, FOR A
13 DETERMINATION OF THE FAIR VALUE
OF ITS UTILITY PLANTS AND
14 PROPERTY AND FOR INCREASES IN ITS
RATES AND CHARGES FOR UTILITY
15 SERVICE BASED THEREON.

DOCKET NO: SW-02361A-19-

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18 **DIRECT TESTIMONY**
19 **OF**
20 **LETICIA WASHINGTON**
21

22 **June 27, 2019**
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1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY.**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Leticia Washington. My business address is 12725 W. Indian School
4 Road, Suite D-101, Avondale, Arizona 85392.

5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6 A. I have been employed by Liberty Utilities Co. ("Liberty Utilities") since October
7 2017. I am currently the Manager of Rates and Regulatory Affairs for Arizona
8 and Texas.

9 **Q. WHAT ARE YOUR RESPONSIBILITIES AS MANAGER OF RATES**
10 **AND REGULATORY AFFAIRS?**

11 A. My responsibilities include preparing and processing rate applications and other
12 regulatory filings for Liberty Utilities' Arizona and Texas utilities. I also set
13 department goals, oversee development plans, analyze earnings for Liberty
14 Utilities' Arizona and Texas utilities, and I review capital expenditures and
15 NARUC account assignments to ensure compliance.

16 **Q. WHAT WAS YOUR EDUCATION AND EMPLOYMENT PRIOR TO**
17 **LIBERTY UTILITIES?**

18 A. I earned a Bachelor of Science in Finance from Arizona State University. Prior
19 to joining Liberty Utilities, I held various positions in the Finance and Accounting
20 organization for 18 years at Arizona Public Service Company. My latest position
21 was the Accounting Supervisor of Revenue and Regulatory Accounting. I was
22 responsible for oversight of annual and/or quarterly reporting filings with the
23 Arizona Corporation Commission ("Commission") and the Federal Energy
24 Regulatory Commission; oversight of electric revenues and the revenue
25 recognition policy; and the coordination, preparation, and/or review the financial
26 information and schedules in rate case filings.

1 **Q. HAVE YOU TESTIFIED BEFORE THIS OR ANY OTHER COMMISSION?**

2 A. I have presented written testimony before the Public Utility Commission of Texas
3 for one of Liberty Utilities' regulated Texas utilities, Liberty Utilities (Silverleaf
4 Water) LLC (Docket No. 49676). This will be my first time testifying before the
5 Commission.

6 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
7 **PROCEEDING?**

8 A. The purpose of my direct testimony is to support Liberty Black Mountain's
9 request for new wastewater rates by addressing the shared services model and cost
10 allocation methods employed by all companies within the Algonquin Power &
11 Utilities Corp. ("APUC")/Liberty Utilities family of companies. In my testimony,
12 I explain the APUC and Liberty Utilities corporate cost allocation model and the
13 benefits of our shared services model to Liberty Black Mountain and the other
14 regulated utilities operated by Liberty Utilities. In addition, I explain indirect
15 overhead ("INDOH"), Liberty Utilities' capitalized INDOH rate, and justification.
16 I will also address Liberty Black Mountain's request for approval of a purchased
17 power adjuster mechanism ("PPAM"), a property tax adjuster mechanism
18 ("PTAM"), a wastewater treatment adjuster mechanism ("WTAM"), a low
19 income tariff, a deployed service member tariff and other tariff changes being
20 requested by the Company.

21 **II. OVERVIEW OF LIBERTY UTILITIES' SHARED SERVICES MODEL.**

22 **Q. PLEASE DESCRIBE THE LIBERTY UTILITIES BUSINESS MODEL.**

23 A. Liberty Black Mountain is under the APUC and Liberty Utilities umbrella of
24 companies. Liberty Utilities' ultimate parent company is APUC, which is
25 publicly traded on the New York and Toronto stock exchanges. APUC is a large
26 North American diversified generation, transmission and distribution utility

1 holding company with \$10 billion in assets, including utility subsidiaries serving
2 over 760,000 gas, water, wastewater and electric utility customers in the United
3 States.

4 APUC has two major operating subsidiaries, Liberty Power and Liberty
5 Utilities. Liberty Power is an unregulated entity that provides renewable power
6 generation from facilities owned throughout the United States and Canada.¹
7 Liberty Utilities owns and operates regulated water, wastewater, gas and electric
8 utilities in thirteen states divided into three operating regions (East, Central and
9 West).² Liberty Utilities uses a decentralized approach to operating its regulated
10 utility business, which emphasizes the importance of local management and local
11 control of day-to-day business operations. This approach is premised on a belief
12 that utility services are best delivered locally, and this is especially true for
13 customer service, employee and regulatory functions and community outreach
14 activities.

15 **Q. IF LIBERTY UTILITIES USES LOCAL MANAGEMENT WITH LOCAL**
16 **CONTROL TO MAKE DECISIONS LOCALLY, WHY DOES THE**
17 **COMPANY ALSO NEED SHARED CORPORATE SERVICES?**

18 A. In addition to access to capital, Liberty Black Mountain benefits from leveraging
19 synergies and economies of scale across multiple entities to achieve cost
20 efficiencies in utility business operations. Liberty Black Mountain and its

21
22 ¹ As of April 2017, Algonquin Power Co. ("Algonquin Power") started doing business under the name Liberty Power.

23 ² Arizona is located in Liberty Utilities' West Region. Besides Liberty Black Mountain, Liberty Utilities
24 owns six other Arizona utilities: Liberty Utilities (Bella Vista Water) Corp., Liberty Utilities (Entrada
25 Del Oro Sewer) Corp., Liberty Utilities (Gold Canyon Sewer) Corp., Liberty Utilities (Litchfield Park
26 Water & Sewer) Corp. ("Liberty Litchfield Park"), Liberty Utilities (Rio Rico Water & Sewer) Corp. and
Cordes Lakes Water Co. As mentioned, the Arizona utilities, including Liberty Black Mountain, are
wholly owned by Liberty Utilities (Sub) Corp., and Liberty Utilities (Sub) Corp. is a wholly owned, direct
subsidiary of Liberty Utilities.

1 customers benefit from improved corporate governance and management
2 oversight and more rigorous and effective internal controls over financial and
3 operating activities. For example, treasury, information technology, insurance and
4 risk management are provided centrally, allowing Liberty Black Mountain to rely
5 on a service group with broad experience utilizing standardized methods. The
6 result is a better run utility able to maintain safe and reliable utility services
7 everywhere Liberty Utilities serves.

8 **Q. HOW DOES LIBERTY BLACK MOUNTAIN RECEIVE ALLOCATIONS**
9 **FOR SHARED SERVICES?**

10 A. Liberty Utilities employs a shared services model that allocates costs to entities
11 under the APUC umbrella of companies. The shared services model and cost
12 allocation methodologies are set forth in the APUC Cost Allocation Manual
13 (“CAM”) dated January 1, 2017.³ The CAM outlines the services provided
14 throughout the entire organization, including the regulated utilities, who provides
15 these services, and the methods used to distribute the costs for those services. Our
16 cost allocation process applies a reasonable and common sense approach. Costs
17 allocated include those that benefit a specific group of entities and the indirect
18 costs for services that benefit the entire organization. The indirect cost allocation
19 methodologies under the CAM (as described further below) are applied only after
20 all direct charges have been assigned to Liberty Black Mountain and other
21 subsidiaries. In other words, the allocations deal only with remaining costs that
22 are not specific to a particular operating entity but benefit all or a group of
23 companies within APUC ownership.

24
25
26 ³ A copy of the 2017 CAM is attached as **Exhibit LW-DT1**.

1 Allocating costs is a two-step process. The first step is to split all costs
2 between the unregulated businesses (Liberty Power) and the regulated businesses
3 (Liberty Utilities). The second step is to allocate the costs to the individual
4 entities, including Liberty Black Mountain, to determine utility-specific costs.
5 The CAM outlines these methods of direct charge and cost allocations between
6 (1) APUC and its affiliates, Liberty Power (formerly Algonquin Power) and
7 Liberty Utilities; (2) Liberty Utilities Canada and Liberty Power/Liberty Utilities;
8 (3) Liberty Utilities Canada and its regulated utility subsidiaries; (4) LUSC and
9 Liberty Power/Liberty Utilities; (5) LUSC and its regulated utility subsidiaries;
10 and (6) regional allocations.

11 **Q. WHAT CHANGES WERE MADE TO THE CAM IN 2017?**

12 A. Changes made to the 2017 CAM include: (1) the Utility Four-Factor Methodology
13 set forth in Table 2 of the CAM was changed from an equal weighting of 25 percent
14 to weighting equal to 40, 20, 20 and 20 percent of Customer Count, Utility Net
15 Plant, Non-Labor Expenses, and Labor Expenses; (2) wording changes to reflect
16 that Algonquin Power is now doing business under the name Liberty Power and
17 that Liberty Power employees in Canada are now employed by LUC in 2017;
18 (3) the addition of two new LABS services of technical support and utility
19 planning that may be provided in the future; (4) the development of a CAM Team
20 to oversee the management of the CAM; and (5) implementation of CAM
21 company-wide training.

22 **Q. HAVE THE LIBERTY UTILITIES CAM AND COST ALLOCATION**
23 **METHODOLOGIES BEEN PREVIOUSLY APPROVED BY ONE OR**
24 **MORE PUBLIC UTILITY COMMISSIONS?**

25 A. Yes. Liberty Utilities has received favorable treatment of its CAM and cost
26 allocations in Arizona as well as in Texas.

1 **Q. IS THE CAM CONSISTENT WITH NARUC?**

2 A. Yes, the CAM is based on the following guidelines set by the National Association
3 of Regulatory Utility Commissioners ("NARUC"):

- 4 1. To the maximum extent practicable, in consideration of
5 administrative costs, costs should be collected and
6 classified on a direct basis for each asset, service or
7 product provided (NARUC Guidelines at 2, § B.1).
- 8 2. The general method for charging indirect costs should
9 be on a fully allocated cost basis. Under appropriate
10 circumstances, regulatory authorities may consider
11 incremental cost, prevailing market pricing or other
12 methods for allocating costs and pricing transactions
13 among affiliates (NARUC Guidelines at 2, § B.2).
- 14 3. To the extent possible, all direct and allocated costs
15 between regulated and non-regulated services and
16 products should be traceable on the books of the
17 applicable regulated utility to the applicable Uniform
18 System of Accounts. Documentation should be made
19 available to the appropriate regulatory authority upon
20 request regarding transactions between the regulated
21 utility and its affiliates (NARUC Guidelines at 2,
22 § B.3).
- 23 4. The allocation methods should apply to the regulated
24 entity's affiliates in order to prevent subsidization from,
25 and ensure equitable cost sharing among, the regulated
26 entity and its affiliates, and vice versa (NARUC
Guidelines at 2-3, § B.4).
5. All costs should be classified to services or products,
which, by their very nature, are regulated, non-
regulated, or common to both (NARUC Guidelines at 3,
§ B.5).
6. The primary cost driver of common costs, or a relevant
proxy in the absence of a primary cost driver, should be
identified and used to allocate the cost between
regulated and non-regulated services or products
(NARUC Guidelines at 3, § B.6).
7. The indirect costs of each business unit, including the
allocated costs of shared services, should be spread to
the services or products to which they relate using
relevant cost allocators (NARUC Guidelines at 3,
§ B.7).

1 The CAM follows these cost allocation principles and, as a result, provides for the
2 reasonable allocation of prudently incurred corporate costs and shared services to
3 Liberty Black Mountain.

4 **Q. CAN YOU DEFINE DIRECT AND INDIRECT COSTS, PLEASE?**

5 A. Yes. Direct and indirect are defined as follows:

6 Direct charges (sometimes referred to as assigned costs) are
7 costs incurred by one company for the exclusive benefit of, or
8 specifically identified with, one or more other companies, and
9 which are directly charged (or assigned) to the company or
10 companies that specifically benefited. This is consistent with
the NARUC Guidelines which define "Direct Costs" as "costs
which can be specifically identified with a specific service or
product."

11 Indirect charges (sometimes referred to as allocated costs) are
12 costs incurred by one company that are for the benefit of either
13 (a) all of the APUC companies or (b) all of the regulated
14 companies, and which are charged to the benefited companies
15 using a methodology and set of logical allocation factors that
16 establish a reasonable link between cost causation and cost
recovery. Again, this is consistent with the NARUC
Guidelines where "Indirect Costs" are defined as "costs that
cannot be identified with a particular service or product. This
includes but not limited to overhead costs, administrative,
general, and taxes."

17 **Q. WHAT COSTS ARE ALLOCATED UNDER THE CAM?**

18 A. Costs relating to financial services, human resources, internal audit, compliance
19 and access to capital markets are all allocated in accordance with the CAM.
20 Various service centers within our business model provide these and other services
21 necessary for our regulated utilities to provide utility service to customers.
22 By service centers, I mean an entity or department within the APUC/Liberty
23 Utilities family of companies that provides shared services to other affiliates. For
24 example, APUC provides strategic management, corporate governance, financial
25 controls, and access to capital markets to all entities under the APUC umbrella.
26

Liberty Utilities Canada (“LUC”)⁴ provides operations, customer experience, regulatory strategy, and executive management to the regulated utilities owned and operated by Liberty Utilities. LUC also has a shared services business unit called Liberty Algonquin Business Services (“LABS”) that provides shared services benefitting both regulated and unregulated businesses within APUC (i.e., Liberty Utilities and Liberty Power). The services LABS provides include legal, finance, human resources, treasurer, compliance, health and safety, IT and communications services. Liberty Utilities Service Corp. (“LUSC”), a wholly owned subsidiary of Liberty Utilities, is where most regulated utility employees in the U.S. are or will be employed. The shared services provided by LUSC include, but are not limited to, operations, treasury, tax, accounting, IT, regulatory, human resources, and insurance. Finally, Liberty Utilities utilizes regional entities that provide services to the regulated utilities within each region, including customer service, legal, regulatory, finance and accounting, or other similar services. Liberty Black Mountain is located within the Liberty Utilities West region.

III. DESCRIPTION OF SHARED SERVICES AND SERVICE CENTERS.

Q. THANK YOU, MS. WASHINGTON. CAN YOU OFFER ADDITIONAL DETAILS CONCERNING THE SERVICE CENTERS AND THE SHARED SERVICES THEY PROVIDE?

A. Yes, I will start with APUC at the top. As the ultimate corporate parent, APUC provides financial, strategic management, corporate governance, administrative and support services to Liberty Utilities and Liberty Power. As a publicly traded

⁴ LUC is a wholly owned subsidiary of APUC. LUC is the parent company of Liberty Utilities. Liberty Black Mountain is a wholly owned subsidiary of Liberty Utilities (Sub) Corp. Liberty Utilities (Sub) Corp. is a wholly owned subsidiary of Liberty Utilities. Liberty Utilities is the holding company for the regulated utilities in thirteen states.

1 holding company, APUC also provides access to capital markets, which makes
2 capital for infrastructure investment available. APUC sells units to public
3 investors on the Toronto ("TSX") and New York ("NYSX") stock exchanges in
4 order to generate the funding and capital necessary for Liberty Utilities'
5 subsidiaries to invest in infrastructure. In connection with the provision of these
6 financing and governance services, APUC incurs the following types of costs:
7 (i) strategic management costs (board of director, third-party legal services,
8 accounting services, tax planning and filings, insurance, and required auditing);
9 (ii) capital access costs (communications, investor relations, trustee fees, escrow
10 and transfer agent fees); (iii) financial control costs (audit and tax expenses); and
11 (iv) administrative (rent, depreciation, general office costs). These APUC costs
12 are pooled and allocated to Liberty Utilities and Liberty Power using the "multi-
13 factor" method summarized in Table 1 of the CAM.

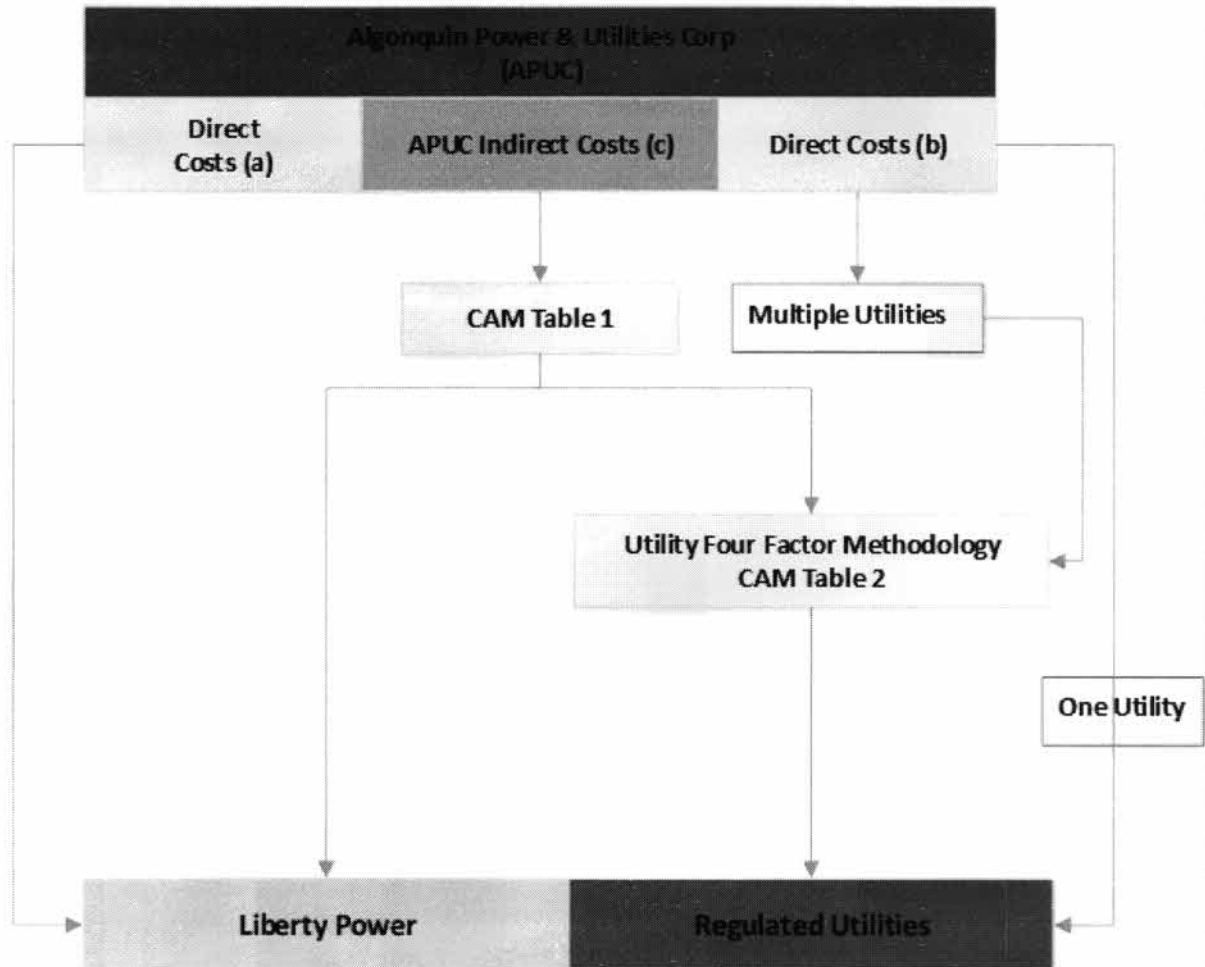
14 **Q. HOW DO LIBERTY BLACK MOUNTAIN AND THE OTHER**
15 **REGULATED UTILITIES IN ARIZONA BENEFIT FROM THESE**
16 **ACTIVITIES BY APUC?**

17 A. The services provided by APUC are necessary for Liberty Utilities and its
18 regulated subsidiaries to have access to capital markets for capital projects. This
19 case is an excellent illustration. The customers and community wanted the
20 wastewater treatment plant closed, it cost over \$10 million and the Company never
21 had to work to raise the necessary capital. But maintaining that sort of access to
22 capital has a continuing cost, and that is the primary source of the costs allocated
23 down from APUC.

24 **Q. WOULD YOU PLEASE ILLUSTRATE COST ALLOCATION FROM**
25 **APUC?**

26 A. Generally, APUC allocates costs under the CAM as set forth in the following flow

chart (Figure 2 of the CAM):



Notes:

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to one or more specific regulated companies.
- (c) Costs that benefit all regulated operations.

Q. WHAT SPECIFIC TYPES OF COSTS DOES APUC INCUR TO MAINTAIN CONTINUOUS ACCESS TO CAPITAL FOR INVESTMENT IN UTILITY INFRASTRUCTURE?

A. Many of the costs incurred by APUC are requirements of being a publicly traded

1 entity on the TSX and NYSE.⁵ As a publicly traded entity, APUC must issue
2 certain communications under TSX and NYSE rules and regulations. For
3 example, Section 714 of the TSX Company Manual states “TSX may delist the
4 securities of a listed issuer that has failed to comply with the TSX’s Timely
5 Disclosure Policy ... or with disclosure requirements under any securities law to
6 which the issuer is subject.” Additionally, Section 406 of the TSX Company
7 Manual in part states “[i]t is a cornerstone policy of the Exchange that all persons
8 investing in securities listed on the Exchange have equal access to information
9 that may affect their investment decisions.... Companies whose securities are
10 listed on the Exchange are legally obligated to comply with the provisions on
11 timely disclosure...” Finally, Ontario Securities Commission National Policy 51-
12 201 states in Section 4.5 “Companies who do not comply with an exchange’s
13 requirements could find themselves subject to an administrative proceeding before
14 a provincial securities regulator.”

15 These requirements and related costs are no different than publicly traded
16 companies on the NYSE, including some of the sample companies used to
17 determine cost of capital in Arizona rate cases. NYSE’s Listed Company Manual,
18 Section 202.05 states “[a] listed company is expected to release quickly to the
19 public any news or information which might reasonably be expected to materially
20 affect the market for its securities. This is one of the most important and
21 fundamental purposes of the listing agreement which the company enters into with
22 the Exchange.” These costs are a necessary and unavoidable part of a publicly
23 traded entity’s cost of doing business.

24
25
26 ⁵ Copies of these pertinent provisions of the TSX and NYSE rules are attached as **Exhibit LW-DT2**.

1 **Q. THANK YOU. PLEASE CONTINUE WITH YOUR DISCUSSION OF**
2 **THE SHARED SERVICE PROVIDERS AND SHARED SERVICES.**

3 A. Generally, LUC and LUSC provide services to regulated utilities that can be
4 categorized as: (a) specifically to Liberty Utilities and its regulated subsidiaries,
5 and (b) to the entire organization through the LABS shared services business unit.
6 I will first address services specific to Liberty Utilities and its regulated entities.

7 Certain corporate employees are grouped as dedicated employees
8 providing services to all or a group of utilities within Liberty Utilities. These
9 services are found within the following departments of LUC: executive,
10 regulatory strategy, operations, and customer experience. The LUSC employees
11 dedicated to providing services to utilities currently do so in some of the following
12 areas: operations, treasury, tax, accounting, IT, regulatory, human resources, and
13 insurance, and can provide other services as outlined in Table 5 of the CAM. LUC
14 and LUSC will assign both direct labor (through timesheets) and direct non-labor
15 attributable to a specific utility. Costs incurred for the benefit of all of its regulated
16 assets (*i.e.*, indirect costs) are allocated using the Utility Four-Factor Methodology
17 described in Table 2 below. The allocation of these services is described below.

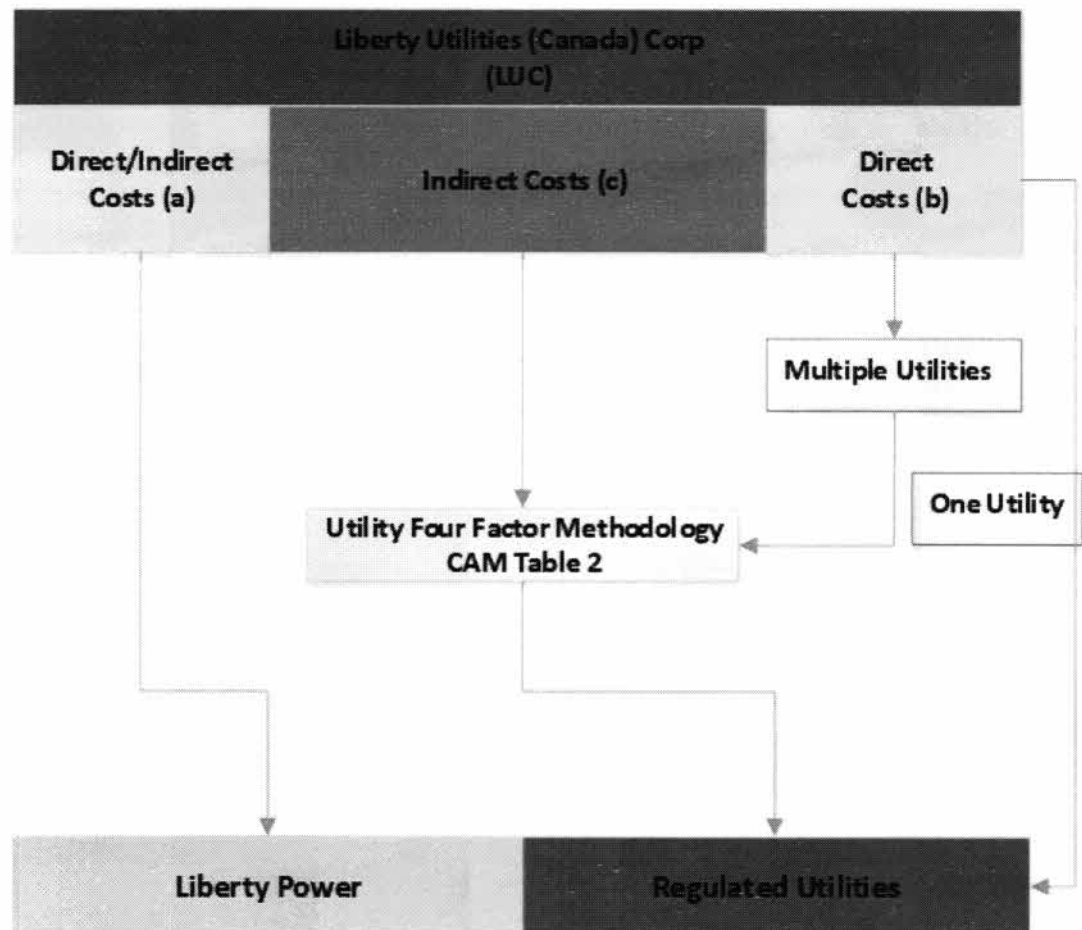
18 **Table 2: Utility Four-Factor Methodology Factors and Weightings**

19
20 **CAM Table 2: Utility Four-Factor Methodology Factors and Weightings**

Factor	Weight
Customer Count	40%
Utility Net Plant	20%
Non-Labor Expenses	20%
Labor Expenses	20%
Total	100%

1 **Q. WHAT ALLOCATION METHOD IS USED TO ALLOCATE THESE**
2 **COSTS TO THE REGULATED UTILITIES?**

3 **A.** Under the CAM, the allocation of costs from LUC is illustrated in the following
4 flowchart (Figure 3 of the CAM):



- 22 (a) Costs (direct and indirect) that are directly assignable to unregulated companies.
23 (b) Costs that are directly assignable to one regulated company, or that benefit all regulated operations.
24 (c) Costs that benefit all regulated operations.

25 Again, consistent with the fundamental design of our cost allocation
26 methodology, LUC and LUSC will also direct charge or assign costs that can be

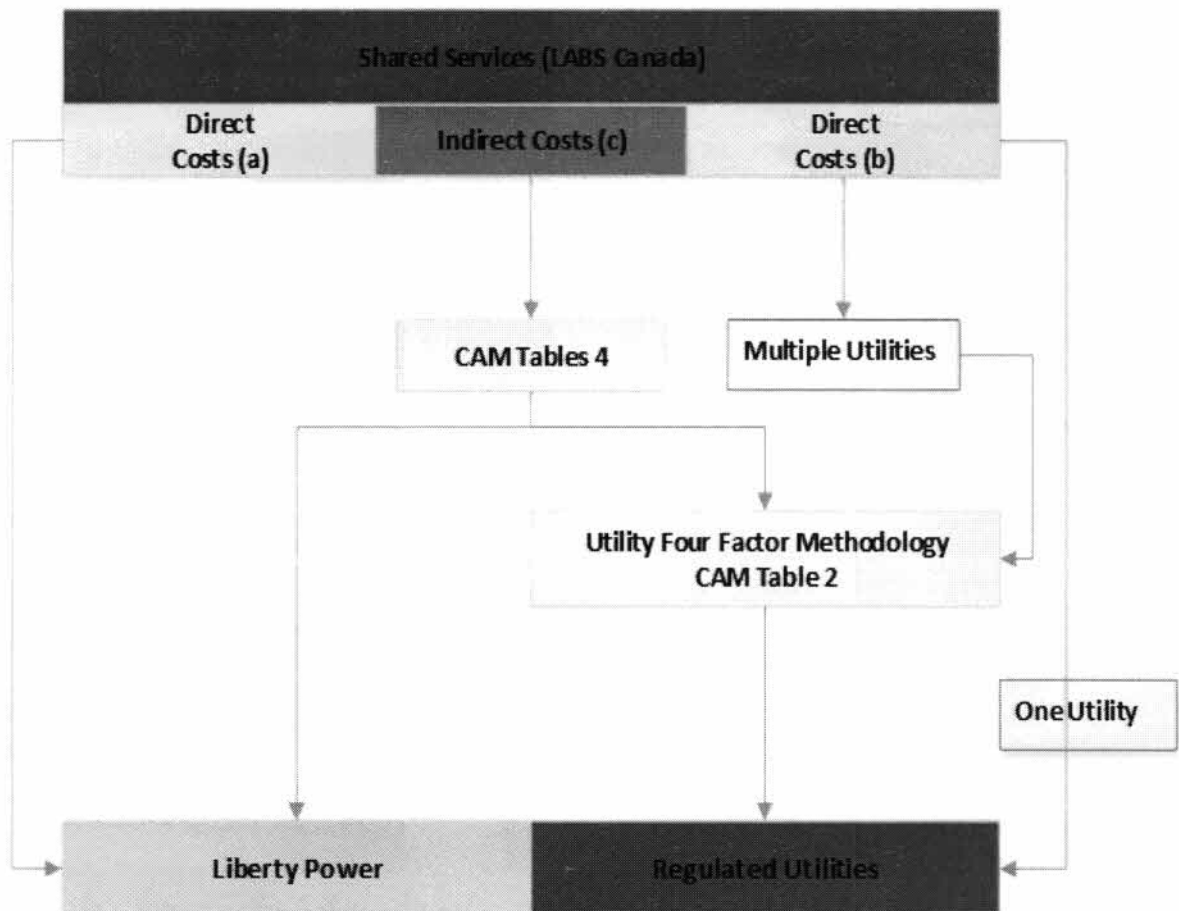
1 directly attributable to a specific utility. Likewise, costs related to services that
2 are applicable to all utilities, allocable to multiple utilities, or are indirect costs
3 that cannot be directly attributed to an individual utility are allocated using the
4 Utility Four-Factor Methodology set forth in Table 2 of the CAM. The Utility
5 Four-Factor Methodology allocates costs by relative size and scope of the utilities.
6 The methodology involves four allocating factors, or drivers: (1) Utility Net Plant;
7 (2) Total Customers; (3) Non-Labor Expenses; and (4) Labor Expenses, with each
8 factor assigned as shown in Table 2 above.

9 **Q. WHAT ABOUT LABS SHARED SERVICES?**

10 A. As stated above, LABS is a business unit found organizationally within LUC and
11 LUSC that serves both regulated and unregulated entities. The LABS services are
12 outlined in Tables 4a and 4b of the CAM. Specific examples of these services
13 include: (i) budgeting, forecasting, and issuing consolidated and standalone
14 financial statements; (ii) treasury functions including cash management (including
15 electronic fund transfers, cash receipts processing), and managing short-term
16 borrowings and investments with third parties; (iii) development of human
17 resource policies and procedures; (iv) selection of information systems and
18 equipment for accounting, engineering, administration, customer service,
19 emergency restoration and other related functions; (v) development, placement
20 and administration of insurance coverages and employee benefit programs,
21 including group insurance and retirement annuities, property inspections and
22 valuations for insurance; (vi) internal audit providing assurance and advisory
23 services in the areas of governance, risk management and internal control, and
24 (vii) purchasing services including requests for proposals and similar solicitations,
25 and vendor and vendor-product evaluations. The allocation of these services is
26 described below.

1 **Q. WHAT METHODOLOGY IS USED TO ALLOCATE LABS COSTS?**

2 A. Under the CAM, the allocation of costs from LABS is shown in the following
3 flowchart (Figure 4 of the CAM):



21 **Notes:**

- 22 (a) Costs that are directly assignable to unregulated companies.
23 (b) Costs that are directly assignable to one or more regulated companies.
24 (c) Costs that benefit both unregulated and regulated operations.

25 Consistent with the fundamental CAM principles I explained a little earlier,
26 direct charges from LABS that can be directly attributable to a specific utility are
directly assigned and indirect costs are allocated using the “multi-factor”

1 methodology shown in Tables 4a and 4b of the CAM. Tables 4a and 4b include:
2 (a) each type of cost incurred by shared services functions within LUC that is to
3 be allocated between regulated and unregulated parts of the business; (b) the
4 factors used to allocate each type of cost between regulated and unregulated
5 activity; (c) the rationale for selecting the factors that are used for allocation; and
6 (d) examples of the specific allocated costs. Those factors are designed to closely
7 align costs with the driver of the activity.

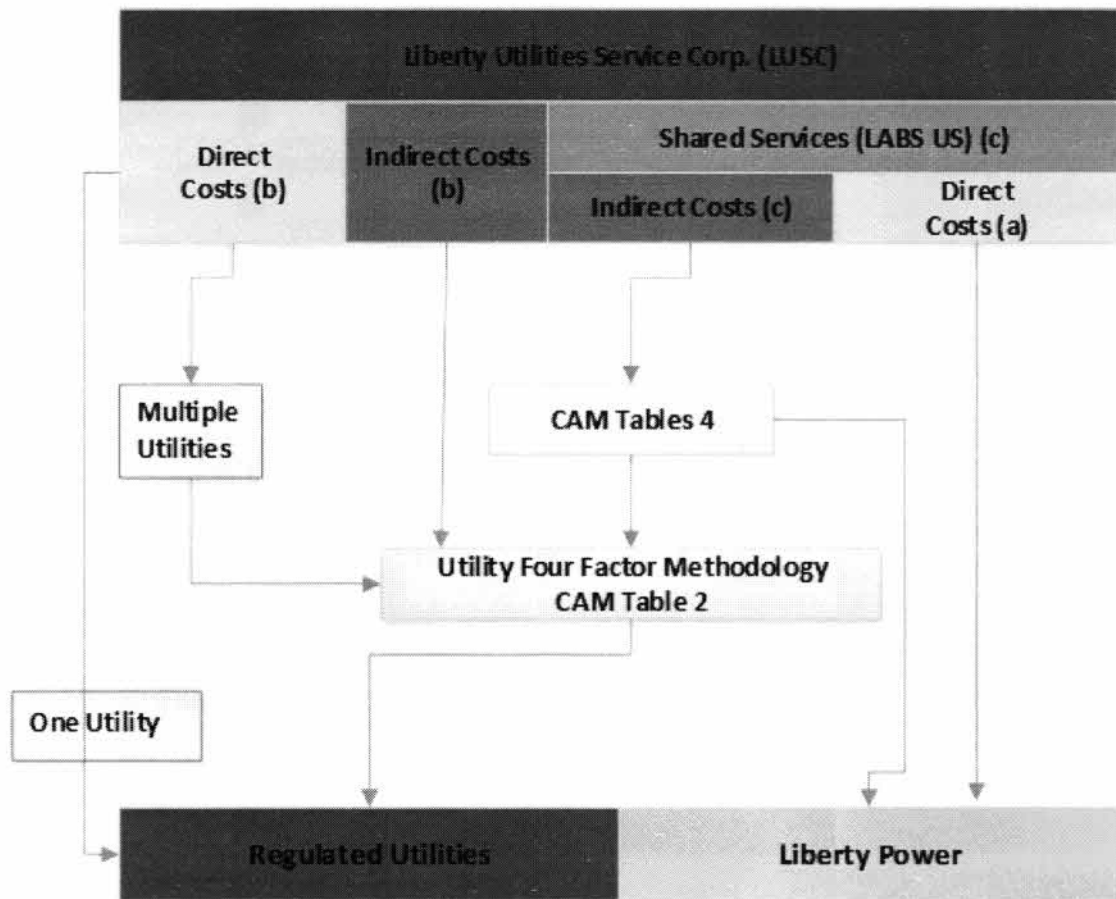
8 **Q. IS THIS WHERE STEP TWO OF THE TWO-STEP PROCESS HAPPENS?**

9 A. Yes. Once indirect costs are allocated between Liberty Power and Liberty
10 Utilities, the indirect labor and indirect non-labor costs, including indirect capital
11 costs, attributable to Liberty Utilities are then reallocated to its regulated utilities
12 using the Utility Four-Factor Methodology set forth in Table 2 of the CAM as
13 indicated above.

14 **Q. HOW DOES LUSC FIT INTO THE SHARED SERVICES MODEL?**

15 A. LUSC is where most regulated utility employees in the United States are or will
16 be employed. This streamlines administration of payroll across the U.S. based
17 companies. Employee costs, such as salaries, benefits, insurance, etc. are paid by
18 LUSC and direct charged to the extent possible to the regulated utility for which
19 the employee performs dedicated work. As described above, within LUSC there
20 are individuals who provide shared services (listed in Tables 4a, 4b, and 5 of the
21 CAM) grouped in two categories: (1) services that benefit both Liberty Utilities
22 and Liberty Power businesses (i.e., LABS U.S. employees) and (2) services that
23 benefit some or all of the regulated utilities within Liberty Utilities. As per the
24 principles of the CAM, the LUSC shared services employees will direct charge
25 their services when they are directly attributable to a specific affiliate company.
26 Costs that benefit both the Liberty Utilities entities and Liberty Power are

allocated as per Tables 4a and 4b, and then allocated to the regulated utilities as per the Utility Four-Factor Methodology (Table 2 of the CAM). The dedicated shared services to the regulated utilities are allocated using Utility Four-Factor methodology (Table 2 of the CAM). Figure 5 of the CAM illustrates the LUSC cost distributions:



Notes:

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to one or more regulated companies.
- (c) Costs that benefit both unregulated and regulated operations.

1 **Q. WHAT SPECIFIC BENEFITS DO LIBERTY BLACK MOUNTAIN AND**
2 **THE OTHER REGULATED UTILITIES IN ARIZONA RECEIVE FROM**
3 **THE SHARED SERVICES YOU'VE DESCRIBED BY LUC, LUSC AND**
4 **LABS THAT ARE NOT PROVIDED BY APUC AS DESCRIBED ABOVE?**

5 A. The significant benefits include:

- 6 1. **Access to Skilled Strategic Management.** This means Liberty Black
7 Mountain enjoys access to wide ranging expertise and resources that are
8 typically not available to small utilities. That is a direct result of the
9 nationwide utility footprint of Liberty Utilities and our shared services
10 model.
- 11 2. **Controls and Processes.** Through this business model, controls and
12 processes are in place to ensure that accounting methodologies are
13 consistent with generally accepted accounting principles and fully adhere
14 to Sarbanes-Oxley compliance and other appropriate internal controls.
15 That means Liberty Black Mountain benefits from sound accounting,
16 capital investment and operational expertise.
- 17 3. **Lower Costs and Economies of Scale.** By sharing resources with other
18 utilities, Liberty Black Mountain enjoys the benefits of lower overall cost
19 structures while at the same time maintaining a local flavor in its day-to-
20 day operations and customer contact.

21 **Q. ARE SHARED SERVICES COSTS ALLOCATED FROM THE**
22 **REGIONAL OR STATE UTILITY LEVEL?**

23 A. Yes. In 2017, Liberty Utilities organized into three operation regions—West,
24 Central and East. The West region currently consists of water and wastewater
25 utilities located in Arizona, Texas, and California, and one electric utility located
26 in California. Within the regions, certain services (e.g., finance, legal, regulatory,

1 government relations) are provided to optimize resources and provide oversight
2 of local/regional functions. For example, the finance/accounting function for the
3 West region is a regional function that focuses on providing general accounting
4 support for the operations of all the utilities within that region. The employees in
5 the West region finance group are located in Arizona and California and are
6 classified as regional employees. These costs and services are directly assigned
7 to the extent possible and distributed over the utilities within the state or region
8 for which they are provided. Any services and costs that cannot be directly
9 assigned are allocated to the utilities within the region or state using the Regional
10 Four-Factor Methodology (25 percent weighting for the factors of: customer
11 count, utility net plan, non-labor expenses, and labor expenses).

12 **Q. DO YOU BELIEVE THAT THE SHARED SERVICES COSTS YOU HAVE**
13 **DESCRIBED ABOVE ARE REASONABLE AND NECESSARY COSTS**
14 **OF SERVICE FOR LIBERTY BLACK MOUNTAIN?**

15 A. Yes, absolutely. The shared services I've described and the benefits received by
16 Liberty Black Mountain are reasonable and necessary for the Company to provide
17 safe and reliable sewer utility services at a fair and reasonable cost for the reasons
18 I discussed in this section of my testimony, and these costs are allocated using a
19 reasonable and rationale methodology as I address further in the next section of
20 my direct testimony.

21 **Q. WHAT WAS THE CORPORATE COST EXPENSE ALLOCATION**
22 **AMOUNT FOR LIBERTY BLACK MOUNTAIN IN THE TEST YEAR?**

23 A. The corporate cost expense allocation was \$131,553 for Liberty Black Mountain
24 in the 2018 test year. This equates to each customer paying just under \$5 per
25 month for the benefits mentioned above.

1 **IV. ALLOCATION OF INDIRECT OVERHEAD (INDOH).**

2 **Q. WHAT IS INDOH?**

3 A. Indirect overhead, or INDOH as it is often abbreviated, is a means of apportioning
4 labor and related services as part of the cost of plant, i.e., rate base. Under
5 accepted rate making, indirect overhead is the capitalization of services provided
6 in support of capital activities and projects. For example, the Engineering and
7 Development Services departments in Arizona provide engineering and
8 development services for capital projects. Their costs are direct charged to capital
9 projects and, in turn, capitalized.

10 **Q. WHAT ABOUT CORPORATE COSTS?**

11 A. With respect to corporate services and costs, INDOH refers to that portion of
12 administration and general (A&G) costs that support capital projects and, in turn,
13 are capitalized.

14 **Q. WHY CAN'T LIBERTY UTILITIES JUST CAPITALIZE SUCH COSTS**
15 **DIRECTLY WITH THE ASSOCIATED CAPITAL PROJECTS?**

16 A. Because it would fail to capture the indirect costs associated with the process of
17 asset creation and management of capital projects and activities. Various
18 departments are tasked with overseeing and managing capital projects and these
19 departments exist to support capital projects. Therefore, there needs to be a way
20 to capitalize and recover those costs of capital investment in used and useful plant.
21 The same is true of the senior management, accounting and regulatory personnel
22 at APUC and LUC that provide services that support capital projects. Those are
23 all capital improvement costs that also should be capitalized.

1 **Q. BUT AREN'T THE SALARIES FOR ALL THESE EMPLOYEES**
2 **INCLUDED IN LIBERTY BLACK MOUNTAIN'S REVENUE**
3 **REQUIREMENT?**

4 A. Not directly, and not in full, and that is the way shared services models achieve
5 economies of scale. Liberty Black Mountain could not afford to hire skilled labor
6 in all of the service areas covered by the shared service centers on a stand-alone
7 basis. But, under our shared services approach, the Company obtains all of those
8 benefits for a proportionate share of the total cost.

9 **Q. DOES NARUC ALLOW CAPITALIZATION OF INDOH?**

10 A. Yes, under NARUC USOA Account Instruction 20(A), "[a]ll overhead
11 construction costs, such as engineering, supervision, general office salaries and
12 expenses, construction engineering and supervision by others than the accounting
13 utility, legal expenses, insurance, injuries and damages, relief and pensions, taxes
14 and allowances for funds used during construction shall be charged to particular
15 jobs or units on the basis of the amounts of such overheads reasonably applicable
16 thereto, so that each job or unit shall bear its equitable proportion of such costs
17 and that the entire costs of the unit, both direct and overhead, shall be deducted
18 from the plant accounts at the time the property is retired." Instruction 20(B)
19 further provides that "[a]s far as practicable, the determination of payroll charges
20 includible in construction overheads shall be based on time card distribution
21 thereof. Where this procedure is impractical, special studies shall be made
22 periodically of the time of supervisory employees devoted to construction
23 activities so that only such overhead costs as have a definite relation to
24 construction shall be capitalized. The addition to direct construction costs of
25 arbitrary percentages or amounts to cover assumed overhead costs is not
26 permitted."

1 **Q. HAS LIBERTY UTILITIES COMPLIED WITH THOSE NARUC**
2 **REQUIREMENTS?**

3 A. Yes. In 2018, Liberty Utilities conducted a capitalization survey to determine the
4 amount of time spent by employees of APUC and LUC in support of capital
5 projects for utilities. That detailed survey outlines the departments and activities
6 provided in support of capital projects. The survey and its results are attached to
7 my direct testimony as **Exhibit LW-DT3**. As a result of that survey, Liberty
8 Black Mountain has used a 32.08 percent INDOH rate for indirect overhead.

9 **Q. DID LIBERTY UTILITIES DO ANYTHING TO VERIFY THE**
10 **ACCURACY AND REASONABLENESS OF THE INDOH SURVEY?**

11 A. After completion of that INDOH survey, Liberty Utilities hired PA Consulting
12 Group to conduct an independent analysis of that INDOH survey. A copy of PA
13 Consulting's April 8, 2019 report is attached to my direct testimony as **Exhibit**
14 **LW-DT4**. As set forth in that report, "the approach used by the Company in
15 completing the APUC/LUC indirect overhead study is reasonable and within
16 common industry practices, and the calculated INDOH percentages for
17 APUC/LUC (32.55 percent for 2018 and 32.08 percent for 2019) resulting from
18 the study are reasonable."⁶

19 **Q. THANK YOU. WHAT IS THE INDOH RATE APPLIED TO,**
20 **MS. WASHINGTON?**

21 A. For the corporate costs incurred at APUC and LUC that get allocated down to
22 Liberty Utilities (Sub) Corp., 32 percent of those costs are capitalized as INDOH.
23 From there, those INDOH costs are allocated to individual Arizona utilities,
24 including Liberty Black Mountain, each month based on active Construction
25

26 ⁶ Exhibit LW-DT4 at 4.

1 Work in Progress (CWIP).

2 **Q. DOES THAT MEAN THERE IS SOME SORT OF DOUBLE RECOVERY**
3 **ON 32 PERCENT OF THE ALLOCATED COSTS, MS. WASHINGTON?**

4 A. Not at all. Thirty-two percent of the allocated costs are capitalized because the
5 shared services do not just generate operating expenses, they support capital
6 projects. The portion of the shared services costs that support capital projects
7 should be included in rate base and the remainder, roughly 68 percent using the
8 current INDOH rate, are operating expenses.

9 **Q. DO YOU BELIEVE A 32 PERCENT INDOH RATE IS REASONABLE**
10 **AND JUSTIFIED?**

11 A. Yes. Liberty Utilities conducted an extensive and detailed survey of the time spent
12 by corporate employees in support of capital projects. In today's utility industry,
13 the importance of capital activities can't be understated. The PA Consulting
14 Group report establishes that a 32 percent INDOH rate is well within accepted
15 industry standards for regulated utilities. Overall, I believe customers benefit
16 from the capital support activities provided by personnel at APUC and LUC,
17 which in turn allow Liberty Black Mountain and all of our Arizona utilities to have
18 continued and guaranteed access to capital markets and capital funding. I also
19 would note that the increase in the INDOH rate from the previous 21 percent rate
20 to 32 percent decreases operating expenses in the test year by a like amount.

21 **Q. WHAT WOULD HAPPEN IF THE COMMISSION DID NOT APPROVE**
22 **SUCH A LEVEL OF CAPITALIZED OVERHEAD?**

23 A. To the extent that the Commission did not approve the 32 percent capitalization
24 rate for INDOH in the test year, or declined to include some or all of the INDOH
25 in rate base, then that amount of corporate costs would need to be added to Liberty
26 Black Mountain's operating expenses in the test year. Again, these are part of the

1 reasonable and prudent cost of capital projects and this is a fair method for their
2 recovery.

3 **Q. DO YOU BELIEVE IT IS FAIR TO ADD ROUGHLY \$1 MILLION TO**
4 **THE COST OF THE CLOSURE OF THE BOULDERS WWTP FOR**
5 **INDOH?**

6 A. Yes, I do. The plant closure project took Liberty Black Mountain a decade to
7 accomplish and there was continuous corporate support for that project at multiple
8 levels. If we do not add INDOH to the costs, then we would be asking the
9 corporate parents to subsidize almost 10 percent of the cost of that project. I look
10 at it in this manner – if Liberty Black Mountain had had to pay a third-party to
11 provide all of the support for the closure of the Boulders WWTP that its corporate
12 partners provided, those contractors would have charged at least 18-24 percent of
13 the cost as administration and overhead, pretty standard in large construction
14 projects. Liberty Utilities provided all of the necessary support for under
15 10 percent of the cost of the plant closure. Yes, I think it is fair.

16 **V. TARIFF CHANGES.**

17 **Q. IS LIBERTY BLACK MOUNTAIN PROPOSING ANY CHANGES OR**
18 **MODIFICATIONS TO ITS TARIFF?**

19 A. Yes. The Company is proposing a low income tariff, a deployed military
20 personnel tariff, and other tariff changes. A copy of the new proposed tariff is
21 attached to the rate application as Attachment 2. Some changes in the proposed
22 tariff are intended to further our effort to standardize all of the tariffs for Liberty
23 Utilities' operating subsidiaries in Arizona. Standardizing our tariffs is intended
24 to promote efficiency by streamlining administration and accounting for all of our
25 Arizona utilities, and reducing confusion. Other changes are intended to mirror
26 recent tariff additions and improvements approved by the Commission for other

1 utilities.

2 **Q. WILL YOU SUMMARIZE THE PROPOSED CHANGES?**

3 A. Yes.

4 Rates: The Company's proposed new rates have been inserted
5 consistent with Mr. Bourassa's H schedules.

6 Additional Charges: The Company is proposing to increase
7 the insufficient funds fee from \$10 to \$25.

8 Influent Meter Installation: The Company is proposing to
9 install influent meters at cost for non-residential customers in
10 the event water data is not available from the water service
11 provider.

12 Taxes and Assessments: The Company is proposing to collect
13 developers' share of income taxes related to contributed and/or
14 advanced funds. This change is complies with the Gross-up
15 Sharing Method policy adopted by the Commission in
16 Decision No. 76974.

17 Termination of Service: The Company is proposing to add
18 language to state that Liberty Black Mountain has authority to
19 terminate service due to violations of the Company's
20 wastewater terms and conditions, presence of public health
21 hazards, or non-payment for wastewater services.

22 Customer Assistance Programs: The Company is seeking to
23 add a low income tariff and a deployed military personnel
24 tariff.

25 **Q. PLEASE EXPLAIN THE NEED FOR AND BENEFITS OF THESE
26 TARIFF CHANGES.**

27 A. The rates change is needed in order for the Company to earn a fair return on and
28 of its investment in the utility's infrastructure and operating expenses as discussed
29 in Mr. Bourassa's testimony. The changes to additional charges, influent meter
30 installation, and taxes and assessments are intended to create better alignment
31 between cost drivers and payment of said costs. This means costs caused by
32 specific cost drivers are paid by the customer who caused and/or benefited from
33 the situation instead of spreading the costs to all or a class of customers to the

1 greatest extent possible. Lastly, the addition of the customer assistance programs
2 will further standardize low income tariffs across all the Arizona utilities as well
3 as begin to expand the available assistance to customers, including military
4 personnel and deployed service members.

5 **Q. WHAT CHANGES IS LIBERTY BLACK MOUNTAIN PROPOSING FOR**
6 **ITS PRE-TREATMENT TARIFF?**

7 A. Liberty Black Mountain requests two changes to its Industrial Pretreatment Tariff.
8 First, the Company has added language in the Industrial Pre-Treatment Program
9 to specifically identify the enforcement actions that may be taken by the Company
10 relating to compliance with the tariff requirements, and the Company also has
11 included a section on enforcement timeframes. Those tariff changes will provide
12 better clarity to customers qualifying as Industrial Users under the Industrial Pre-
13 Treatment Program relating to enforcement actions for non-compliance. Second,
14 we have added language in the statement of charges to allow the Company to
15 recover its costs incurred for customers that qualify as Industrial Users and are
16 subject to compliance with the Company's Industrial Pretreatment Program. On
17 this issue, we have included language requiring such Industrial Users to pay the
18 actual costs incurred by Liberty Black Mountain relating to our review of such
19 customer's discharges, and actual costs incurred by Liberty Black Mountain for
20 engineering and design of necessary Pre-Treatment requirements and agreements.
21 That language is necessary for Liberty Black Mountain to recover its costs
22 incurred for customers that require Pre-Treatment of wastewater discharges.

23 **VI. ADJUSTER MECHANISMS.**

24 **Q. IS THE COMPANY SEEKING APPROVAL OF ANY ADJUSTER**
25 **MECHANISMS?**

26 A. Yes. The Company is seeking approval of three adjuster mechanisms: (1) a

1 PPAM, (2) a PTAM, and (3) a WTAM.

2 **Q. THANK YOU. WOULD YOU PLEASE SUMMARIZE THE PPAM?**

3 A. The PPAM allows Liberty Black Mountain to increase or decrease rates in order
4 to address changes in purchased power costs resulting from changes in the rates
5 charged by APS, our electric utility provider. These changes in APS's rates only
6 come about due to an order of the Commission, which, again, is something beyond
7 our control.

8 **Q. WHAT IS THE PURPOSE OF THE PPAM AND HOW DOES THE PPAM**
9 **WORK?**

10 A. The proposed PPAM would allow Liberty Black Mountain to pass-through those
11 increases or decreases without going through a general rate case.

12 **Q. IS PURCHASED POWER A SIGNIFICANT EXPENSE FOR THE**
13 **COMPANY?**

14 A. Yes, purchased power is a significant expense of Liberty Black Mountain in
15 providing wastewater service to customers, and the rates APS charges are entirely
16 beyond the Company's control.

17 **Q. HOW DOES THE PPAM ACTUALLY WORK?**

18 A. Under the PPAM, the increases or decreases in power costs will be allocated on a
19 per customer basis and passed-through to customers as a separate line item on the
20 customer bill. The PPAM Plan of Administration ("POA"), attached to the
21 Application as Attachment 3, outlines the implementation and filing requirements
22 as well as how the surcharge will be computed. The form of the PPAM is
23 consistent with the form of PPAM approved in Decision No. 76799 (August 15,
24 2018) for Liberty Litchfield Park and in a number of other unaffiliated water and
25 wastewater utility rate cases.⁷

26 ⁷ E.g., *Arizona Water Company*, Decision No. 76598 (February 26, 2018); *Pima Utility Company*,

1 **Q. AND THE PPAM LOWERS THE COMPANY'S RATES FOR SERVICE**
2 **IF APS' ELECTRIC RATES GO DOWN?**

3 A. Yes, adjusters like the PPAM are fair because they work whether costs go up or
4 down. This is likely one of the reasons that the Commission has approved and
5 recognized purchased power and other similar adjusters for electric and gas
6 utilities for many years.

7 **Q. DOES THE PTAM WORK IN A SIMILAR MANNER?**

8 A. Yes, the only difference is that the PTAM would allow rates to adjust, up or down,
9 based on changes in the property tax rate and/or assessment ratios. Like the rates
10 for power charged by APS, these factors are outside of our control. Also, like
11 increases in purchased power, increases in property taxes, if unrecovered, will
12 undermine the Company's ability to earn its authorized return. The PTAM
13 addresses this in a manner similar to that in which the PPAM addresses changes
14 in the rates for power.

15 **Q. IS THERE A PTAM POA TOO?**

16 A. Yes. The PTAM POA, attached to the Application as Attachment 4, outlines
17 implementation and filing requirements as well as how the surcharge will be
18 computed.

19 **Q. WHAT IS THE PURPOSE OF THE WTAM?**

20 A. The proposed WTAM allows the Company to pass through increases or decreases
21 in its wastewater treatment costs due to changes in City of Scottsdale's non-
22 uniform discharger, large volume and industrial user charges.

23 **Q. HOW DOES THE WTAM WORK?**

24 A. The increases or decreases in wastewater treatment costs related to the
25

26

Decision No. 76540 (January 3, 2018).

1 aforementioned charges will be allocated on a per customer basis and passed-
2 through to customers as a separate line item on the customer bill. The WTAM
3 POA, attached to the Application as Attachment 5, outlines the implementation
4 and filing requirements as well as how the surcharge will be computed.

5 **Q. DON'T ADJUSTERS REMOVE THE UTILITY'S INCENTIVE TO**
6 **DILIGENTLY MANAGE THEIR OPERATING EXPENSES?**

7 A. Absolutely not. I've heard that suggestion before and I disagree with the premise.
8 Setting aside that profitable companies diligently manage their business expenses
9 if they want to stay profitable, the expenses proposed for adjusters are necessary
10 and reasonable costs of service that are almost entirely out of the Company's
11 control. How are we failing to manage the rate we pay APS for power? Or the
12 federal tax rate or state property tax rates? And why would businesses trying to
13 make a profit pay extra money for these operating expenses? There would be no
14 benefit to our customers, shareholders, or employees to do so, which I believe
15 reflects that the argument that operating expenses will run rampant if utilities are
16 allowed to have adjuster mechanisms just doesn't make sense.

17 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

18 A. Yes.
19
20
21
22
23
24
25
26

EXHIBIT LW-DT1

ALGONQUIN POWER & UTILITIES CORP.

COST ALLOCATION MANUAL

V2017 Effective: January 1st, 2017

COST ALLOCATION MANUAL

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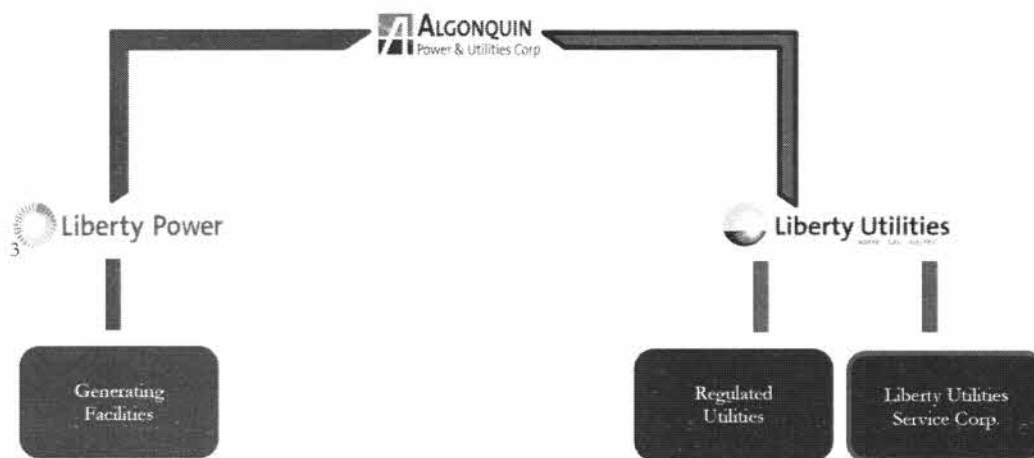
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1. INTRODUCTION

The purpose of this manual is to provide a detailed explanation of services provided by Algonquin Power & Utilities Corp (“APUC”) and its affiliates to other entities within the APUC family of businesses and to describe the Direct Charge¹ and Indirect Charge² Methodologies used for those services. The following organization chart identifies, at a high level, the corporate structure of APUC.

Figure 1: Simplified APUC Corporate Structure



This Cost Allocation Manual (“CAM”) has been completed in accordance and conformance with the *NARUC Guidelines for Cost Allocations and Affiliate Transactions* (“NARUC Guidelines”). More specifically, the founding principles of this Cost Allocation Manual are to a) directly charge as much as possible to the entity that procures any specific service, and b)

¹ Direct charges (sometimes referred to as assigned costs) are costs incurred by one company for the exclusive benefit of, or specifically identified with, one or more other companies, and which are directly charged (or assigned) to the company or companies that specifically benefited. Under the NARUC Guidelines, “Direct Costs” are defined as “costs which can be specifically identified with a specific service or product.”

² Indirect charges (sometimes referred to as allocated costs) are costs incurred by one company that are for the benefit of either (a) all of the APUC companies or (b) all of the regulated companies, and which are charged to the benefited companies using a methodology and set of logical allocation factors that establish a reasonable link between cost causation and cost recovery. Under the NARUC Guidelines, “Indirect Costs” are defined as “costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative, general, and taxes.”

³ As of April 2017, Algonquin Power Co. (APCo) is doing business under the name Liberty Power. All Liberty Power employees in Canada will become employed by Liberty Utilities (Canada) Corp. in 2017. Liberty Power employees in the United States will remain employed by Algonquin Power Fund (America) Inc.

to ensure that unauthorized subsidization of unregulated activities by regulated activities, and vice versa, does not occur. For ease of reference, the NARUC Guidelines are attached as Appendix 1.

Costs allocated can take the form of: direct labor, direct material, direct purchased services and indirect charges (as described in Tables 1, 4a and 4b in this CAM). These costs are charged by the providing party to the receiving part at fully distributed costs.

2. THE APUC CORPORATE STRUCTURE

APUC owns a widely diversified portfolio of independent power production facilities and regulated utilities⁴ consisting of water distribution, wastewater treatment, electric and gas distribution utilities. While power production facilities are located in both Canada and the United States, regulated distribution utility operations are located in the United States.⁵ APUC is publicly traded on the New York Stock Exchange and the Toronto Stock Exchange⁶. APUC's structure as a publicly traded holding company provides substantial benefits to its regulated utilities through access to capital markets.

APUC is the ultimate corporate parent that provides financial and strategic management, corporate governance, and oversight of administrative and support services to Liberty Utilities (Canada) Corp. ("LUC") and its subsidiaries as well as to Algonquin Power Co. ("APCo") d/b/a Liberty Power and its subsidiaries. The services provided by APUC are necessary for all affiliates, including LUC and the regulated utility subsidiaries of Liberty Utilities Co. (referred to as "Liberty Utilities"), to have access to capital markets for capital projects and operations. These services are expensed at APUC and are performed for the benefit of Liberty Power and Liberty Utilities and their respective businesses.

APUC and its affiliates benefit from APUC's expertise and access to the capital markets through the use of certain shared services, which maximizes economies of scale and minimizes redundancy. In short, it provides for maximum expertise at lower costs. Further,

⁴ All distribution and transmission utilities are owned, either directly or indirectly, by Liberty Utilities Co., which is itself indirectly owned by Liberty Utilities (Canada) Corp.

⁵ Algonquin Tinker Gen Co. owns transmission assets in New Brunswick, Canada, which are subject to regulation by the New Brunswick Energy and Utilities Board.

⁶ Common shares, preferred shares, and instalment receipts of APUC are traded on the Toronto Stock Exchange under the symbols AQN, AQN.PRA, AQN.PR.D, and AQN.IR. APUC's common shares are also listed on the New York Stock Exchange under the symbol AQN. Additional corporate information can be found at the company's website, algonquinpower.com.

the use of shared expertise allows each of the entities to receive a benefit it may not be able to achieve on a stand-alone basis such as strategic management advice and access to capital at more competitive rates.

3. SCOPE OF SERVICES FROM APUC AND HOW THOSE COSTS ARE DISTRIBUTED

This section provides an overview of the services provided from APUC, and method used to distribute the associated costs for these services throughout the organization.

3.1 Services and Cost Allocation from APUC to Liberty Utilities and Liberty Power

3.1.1 Description of APUC Services and Costs

APUC provides benefits to its subsidiaries by providing financing, financial control, legal, executive and strategic management and related services. APUC charges labor rates for these shared services at cost, which is the dollar hourly rate per employee as recorded in APUC's payroll systems, grossed up for burdens such as payroll taxes, health benefits, retirement plans, other insurance provided to employees, and other employee benefits. These labor costs are charged directly to the entity incurring these costs based on timesheets to the extent possible. If labor is for the benefit of all subsidiaries then the allocation methodologies used for indirect costs are applied. See Appendix 2 for a more detailed discussion of the costs incurred by APUC.

APUC also charges non-labor services which includes Financing Services. Financing Services means the selling of units to public investors in order to generate the funding and capital necessary (be it short term or long term funding, including equity and debt) for the entire organization, including subsidiaries of Liberty Utilities and Liberty Power, as well as providing legal services and other associated costs in connection with the issuance of debt and equity.

In connection with the provision of Financing Services, APUC incurs the following types of costs: (i) strategic management costs (board of director, third-party legal services, accounting services, tax planning and filings, insurance, and required auditing); (ii) capital access costs (communications, investor relations, trustee fees, escrow and transfer agent fees); (iii) financial control costs (audit and tax expenses); and (iv) other administrative costs (examples: rent, depreciation, general office costs).

The capital raised by APUC is used by Liberty Utilities (and its regulated subsidiaries) and Liberty Power for current and future capital investments. The services provided by APUC are critical and necessary to Liberty Utilities and its regulated subsidiaries and Liberty Power because without those services they would not have a readily available source of capital funding. Further, relatively small utilities may have difficulty attracting capital on a stand-alone basis.

Indirect costs from APUC, excluding corporate capital, are pooled and allocated to LUC (and subsequently, to LUC's subsidiaries) and Liberty Power using the method summarized in Table 1. Each corporate cost type, or function, has been reviewed to properly identify the factors driving those costs. Each function or cost type is typically driven by more than one factor and each has been assigned an appropriate weighting. Table 1 includes a brief commentary on the rationale for each cost driver and weighting, along with examples for each cost type.

The services provided by APUC optimize the performance of the utilities, keeping rates low for customers while ensuring access to capital is available. If the utilities did not have access to the services provided by APUC, they would be forced to incur associated costs for financing, capital investment, audits, taxes and other similar services on a stand-alone basis, which would substantially increase such costs. Simply put, without incurring these costs, APUC would not be able to invest capital in its subsidiaries, including the regulated utilities.

Table 1: Summary of Corporate Allocation Method of APUC Indirect Costs

Type of Cost	Allocation Methodology		Rationale	Examples
Legal Costs	Net Plant	33.3%	This function is driven by factors which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of	Employee labor and related administration and programs; Third party legal services
	Number of Employees	33.3%		
	O&M	33.3%		

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			employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	
Tax Services	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by a variety of factors that influence the size and relative tax complexity, including Revenues, O&M and Net Plant. Tax activity can be driven by each of these factors.	Employee labor and related administration and programs, including Third party tax advice and services
Audit	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by a variety of factors that influence the size and complexity of Audit, including Revenues, O&M and Net Plant. Audit activity can be driven by each of these factors.	Employee labor and related administration and programs, including third party accounting and audit services
Investor Relations	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and	Employee labor and related administration and programs,

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			scope of each affiliate - Revenues, Net Plant and O&M costs.	including third party Investor day communications and materials
Director Fees and Insurance	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Board of Director fees, insurance and administration
Licenses, Fees and Permits	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Escrow and Transfer Agent Fees	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs
Other Professional Services	Revenue O&M Net Plant	33.3% 33.3% 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Third party costs

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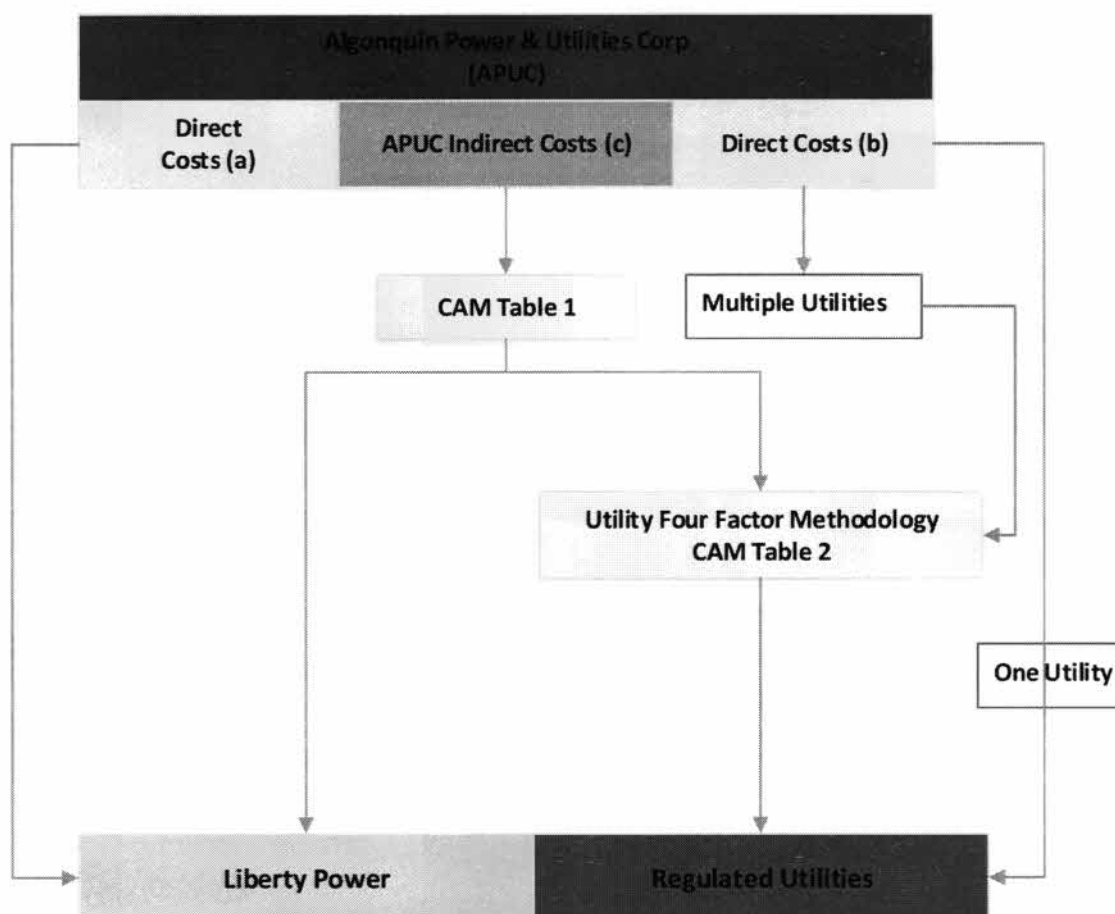
Other Administration Costs	Oakville Employees 50% Total Employees 50%	This function is driven by factors which are indicative of number of employees.	Office administration costs. Employee labor and related administration
Executive and Strategic Management	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

Notwithstanding the above, if a charge is related either solely to the regulated utility business or to the power generation business Liberty Power, then all of those costs will be direct charged, or assigned, to the business segment for which they are incurred. If a cost can be directly attributable to a specific entity, it will be directly charged to that entity.

In the event that organizational realignments occur, resulting in certain other services or costs to come from APUC, any allocations (if any) will be done as per the “Executive and Strategic Management” line in Table 1 above until the CAM is updated.

3.1.2 Description of the APUC Cost Flows

Please refer to Figure 2 for a diagram of the various flows of costs from APUC.

Figure 2: Illustration of APUC Corporate Cost Distributions

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to one regulated company, or that benefit all regulated operations.
- (c) Costs that benefit both unregulated and regulated operations.

As illustrated in Figure 2 and as described above, APUC incurs three types of costs that are passed on to its direct and indirect subsidiaries. The first type is APUC's costs that directly benefit a particular specific unregulated company, which are directly assigned to that unregulated company (i.e., Liberty Power or one of its subsidiaries). The second type is APUC's costs that directly benefit a particular regulated company, which are directly assigned to that regulated company⁷. The third type are APUC's remaining costs that benefit the entire

⁷ This could be directly to LUC (which would subsequently be allocated over utility subsidiaries of LUC) or to a specific utility for which the service was necessary.

enterprise (both regulated and unregulated), which are allocated between regulated and unregulated company groups pursuant to CAM Table 1. Information within Table 1 includes: (a) each type of cost incurred by APUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and unregulated activity; (c) the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual utility companies using the Utility Four-Factor allocation methodology set forth in CAM Table 2 (described below), resulting in utility-specific allocated charges from APUC.

For an example of how an APUC invoice would be assigned or allocated, please see Appendix 3.

Certain costs, which are incurred for the benefit of APUC's businesses, are not allocated to any utility subsidiary. These costs include certain corporate travel and certain overheads.

4. SCOPE OF SERVICES PROVIDED BY LUC AND HOW COSTS ARE DISTRIBUTED

This section provides an overview of the services and the cost methodology for LUC.

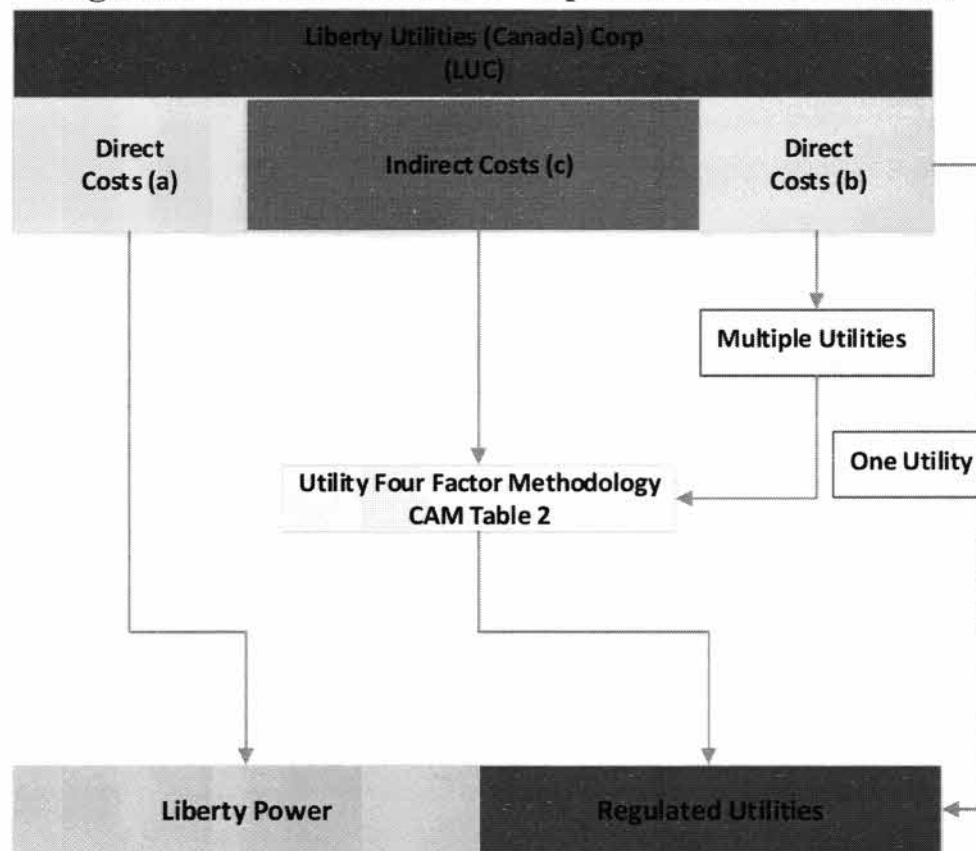
4.1 Overview of LUC Services and Costs

Various services and methods of cost distribution arise from LUC and can be categorized as those provided: (a) specifically to regulated utilities, (b) specifically to Liberty Power, or (c) to the entire organization (under the business unit of Liberty Algonquin Business Services ("LABS")). Figure 3 identifies the flow of costs from dedicated utility support and dedicated Liberty Power staff within LUC. Figure 4 identifies the flow of costs from the shared business and corporate services staff and functions ("LABS") within LUC. Both Figures 3 and 4 are depicted below in this section.

As illustrated in Figure 3, LUC incurs three types of costs. The first type is an LUC cost that directly benefits a particular Liberty Utilities affiliate (i.e., regulated company), which is directly assigned to that regulated company. The second type is an LUC cost that benefits all of the Liberty Utilities regulated companies, and which is allocated using the Utility Four-Factor Methodology described in CAM Table 2. The third type is a cost that only benefits and is directly charged to Liberty Power. All three of these cost types are described in section 4.2 below.

As illustrated in Figure 4, shared services costs arising from LUC are those from shared services⁸ that benefit both the regulated group of companies and the unregulated group of companies within the APUC family; which are allocated between the two groups pursuant to the methodology described in section 4.3 and as set forth in CAM Table 4.

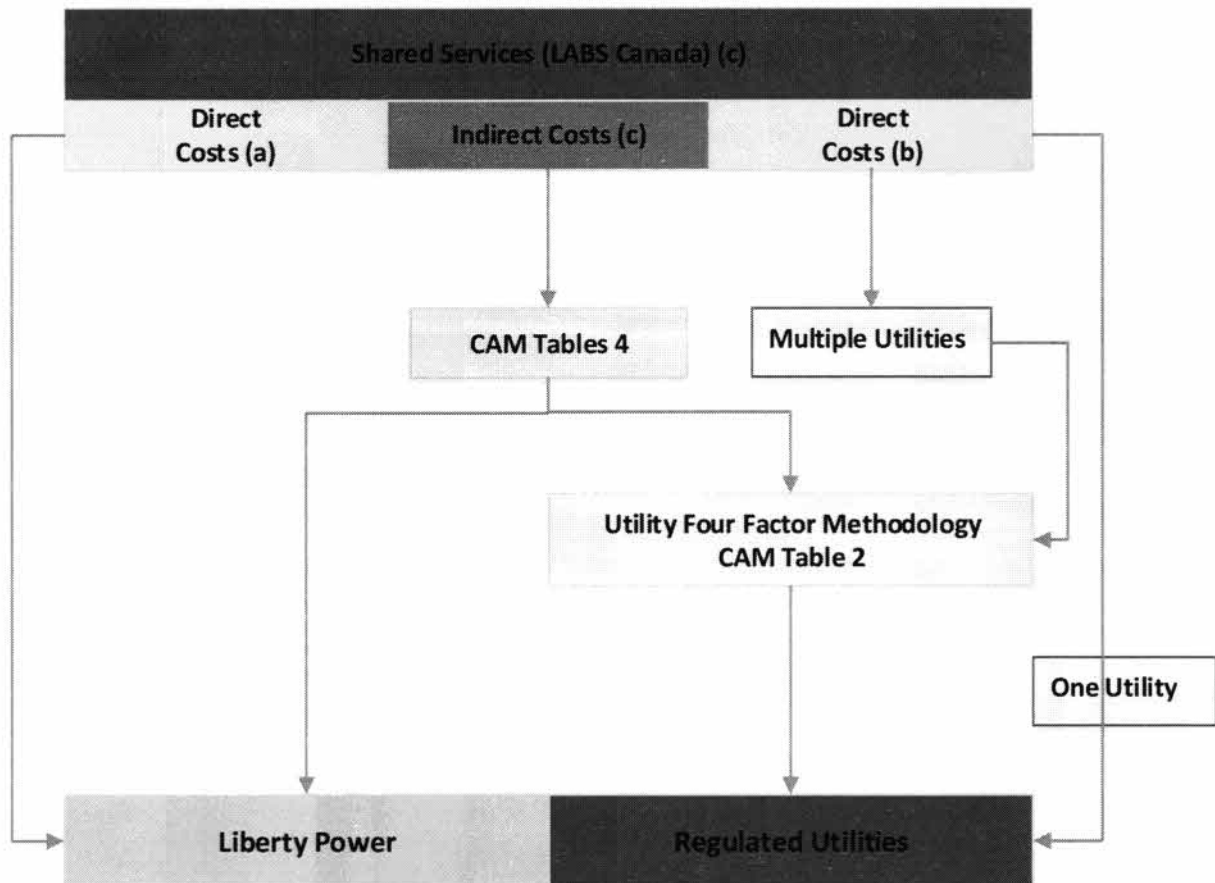
Figure 3: Illustration of LUC Corporate Cost Distributions



Notes:

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to one or more specific regulated companies.
- (c) Costs that benefit all regulated operations.

⁸ As discussed later, shared support services that benefit both regulated and unregulated businesses within APUC are provided within Liberty Algonquin Business Services (“LABS”), which is a business unit with staff employed within LUC and LUSC. Shared services staff serve both regulated and unregulated entities. LABS staff within the corporate office in Canada are employed within LUC; LABS staff in the US are employed within LUSC. As new U.S.-based utilities are added to the Liberty-Algonquin organization, there could be a transitional period in which some of these shared services staff and functions may also remain employed within the new utility until such time that they may be transitioned to become an employee of Liberty Utilities Service Corp. (“LUSC”).

Figure 4: Illustration of LUC Shared Services Cost Distributions**Notes:**

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to one or more regulated companies.
- (c) Costs that benefit both unregulated and regulated operations.

4.2 LUC Services and Costs Provided to Liberty Utilities and Liberty Power

4.2.1 Services to Liberty Utilities

LUC provides services to Liberty Utilities such as: executive, regulatory strategy, energy procurement, operations, utility planning, administration, and customer experience.

LUC will assign costs that can be directly attributable to a specific utility. These include direct labor and direct non-labor costs. However, because the indirect LUC costs cannot be directly attributed to an individual utility, LUC allocates its indirect labor and indirect non-labor costs, including capital costs, to its regulated utilities using a Utility Four-Factor Methodology⁹. LUC uses the Utility Four-Factor Methodology to allocate costs incurred for the benefit of all of its regulated assets (“System-Wide Costs”) to all of its utilities.

The Utility Four-Factor Methodology allocates costs by relative size and scope of the utilities. The methodology used by LUC involves four allocating factors, or drivers: (1) Utility Net Plant; (2) Total Customers; (3) Non-Labor Expenses; and (4) Labor Expenses, with each factor assigned an equal weight, as shown in Table 2 below.

Table 2: Utility Four-Factor Methodology Factors and Weightings

Factor	Weight
Customer Count	40%
Utility Net Plant	20%
Non-Labor Expenses	20%
Labor Expenses	20%
Total	100%

LUC uses the Utility Four-Factor Methodology to allocate to its regulated utilities the system-wide indirect labor and indirect non-labor costs within LUC (from its utility-dedicated staff, and from the shared services functions within LUC).

Table 3 provides a simplified hypothetical example to demonstrate how the Utility Four-Factor Methodology would be calculated based on ownership of only two hypothetical utilities.

⁹ Please note, indirect costs sent to utilities via the 4-factor will consist of 1) indirect costs from LUC’s utility-dedicated staff and services, plus 2) the indirect costs from APUC, 3) the indirect costs retained within LUC from LABS (the shared services staff and services within LUC), and 4) the indirect costs allocated from LUSC.

Table 3: Utility Four-Factor Methodology Example

Factor	Utility 1	Utility 2	Total All Utilities	Utility 1 % of Total	Factor Weight	Utility 1 Allocation
Utility Net Plant (\$)	727	371	1098	66%	20%	13%
Customer Count (#)	6000	2000	8000	75%	40%	30%
Labor Expenses (\$)	57	32	89	64%	20%	13%
Non-Labor Expenses (\$)	108	41	149	72%	20%	14%
Total Allocation						71%

As can be seen from these hypothetical numbers in Table 3, Utility 1 would be allocated 71% of the total indirect costs incurred by LUC, based on its relative size and application of the Utility Four-Factor Methodology. Utility 2 would be allocated the remaining 29%. LUC has developed and utilized this methodology to better allocate costs, recognizing that larger utilities require more time and management attention and incur greater costs than smaller ones.

On occasion there may be costs which are incurred for the benefit of two or more utilities, but not all of the utilities. These costs are directly assigned to utilities as per the vendor invoice, or, if the invoice doesn't specify a share for each utility, the Utility Four-Factor Methodology is used. In this situation, the weighting is determined by only including the utilities that benefited from the service and excluding the utilities that did not receive the service. For an example of how an LUC invoice would be assigned or allocated, please see Appendix 4.

4.2.2 LUC Services to Liberty Power.

A sub-set of LUC employees provide dedicated services to Liberty Power such as: executive, energy services, asset management, business development, and operations. All costs (labor and non-labor) incurred for these services will be directly charged to Liberty Power (no

indirect costs are allocated from this group). Labor costs are tracked through timesheets and directly charged to Liberty Power.

4.3 Shared Services from LUC

The last type of costs arising from LUC are those from shared services¹⁰ that benefit both the regulated group of subsidiary companies owned by Liberty Utilities and Liberty Power.

Consistent with the organization practices described earlier, shared services and costs (within LUC¹¹) are assigned when they are directly attributable to a specific affiliate company (such as a specific distribution utility) or business unit¹² (such as Liberty Utilities or Liberty Power). Labor charges for LUC shared services staff are assigned using timesheets that depict the amount of time that is to be direct charged to either Liberty Utilities or Liberty Power (or a specific subsidiary within Liberty Utilities, or Liberty Power).

Please refer to Figure 4 above for a diagram of the various flows of costs that may arise from the shared services staff and functions within LUC¹³.

Indirect costs for services from the shared services functions that cannot be directly assigned are allocated between the regulated and unregulated business units, Liberty Utilities and Liberty Power, pursuant to the methodology set forth in CAM Tables 4a and 4b. Similar to Table 1, Tables 4a and 4b include: (a) each type of cost incurred by shared services functions within LUC that is to be allocated between regulated and unregulated parts of the business; (b) the factors used to allocate each type of cost between regulated and unregulated activity; (c) the rationale for selecting the factors that are used for allocation; and (d) examples of the specific allocated costs. The costs allocated to the regulated companies as a group are then reallocated to individual companies using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUC.

¹⁰ Liberty Algonquin Business Services (“LABS”) is a business unit found organizationally within LUC and LUSC that serves both regulated and unregulated entities. The LABS business unit provides shared services throughout the organization. LABS employees and functions provided from Canada are employed within LUC; LABS employees and functions located in the U.S. are typically employed within LUSC.

¹¹ As will be discussed further in section 5, shared services to the entire APUC organization are also provided from staff within LUSC.

¹² To clarify, if a LABS service is for only one specific organization, such as the unregulated generation business, Liberty Power, the cost will be directly charged to that business unit.

¹³ Sometimes referred to as “LABS Canada.”

For an example of how an invoice or cost within LUC's shared services (LABS) would be assigned or allocated, please see Appendix 5.

4.3.1 Business Services and Corporate Services

LUC shared services that would be provided to the entire company, i.e., Liberty Power and Liberty Utilities, are internally referenced under two names - Business Services and Corporate Services. The services and functions within each category are shown in the tables below¹⁴. Indirect costs from Business Services and Corporate Services are allocated using the following methodology shown in Tables 4a and 4b, respectively, which are designed to closely align the costs with the driver of the activity.

Table 4a: Summary of Corporate Allocation Method of LUC¹⁵ Business Services Indirect Costs

Type of Cost	Allocation Methodology	Rationale	Examples
Information Technology	Number of Employees 90% O&M 10%	IT function is driven by factors which include number of employees and O&M. The larger the number of employees, the more support, software and IT infrastructure is required.	Enterprise wide support, architecture, etc. Third party fees
Human Resources	Number of Employees 100%	HR function is driven by number of employees. A greater number of employees requires	HR policies, payroll processing, benefits,

¹⁵ And LUSC shared services functions.

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		additional HR support	employee surveys
Training	Number of Employees 100%	Training is directly proportional to the number of employees per function	Courses, lectures, in house training sessions by third party providers
Facilities and Building Rent	Oakville Employees 100%	Office space occupied by employees accurately reflects space requirements of each subsidiary	Corporate office building
Environment, Health, Safety and Security	Number of Employees 100%	EHSS training, etc. is directly proportional to the number of employees per function	Enterprise wide programs, employee labor and related administration
Procurement	O&M 50% Capital Expenditures 50%	Procurement function is based on typical proportion of expenditures	Enterprise wide support and related administration
Executive and Strategic Management	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

Technical Services	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate-Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity
Utility Planning	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the scope of each affiliate Management - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

Table 4b: Summary of Corporate Allocation Method of LUC¹⁶ Corporate Services Indirect Costs

Risk Management	Net Plant 33.3% Revenue 33.3% O&M 33.3%	This function is driven by factors which reflect the relative size and complexity of Risk Management - Revenues, Net Plant and O&M costs.	Employee labor and related administration, Software platform, fees and administration
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¹⁶ And LUSC shared services functions.

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Financial Reporting, Planning and Administration	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and complexity of Financial Reporting and Admin. - Revenues, Net Plant and O&M costs.	Employee labor and related administration and third party fees
Treasury	Capital Expenditures 25% O&M 50% Net Plant 25%	Treasury activity is typically guided by the amount of necessary capex/plant for each utility, and operating costs/cash flow	Third party financing, employee labor and related administration and programs
Internal Audit	Net Plant 25% O&M 75%	This function is driven by factors which reflect the relative size and complexity of Internal audit activity. Larger Plant and operating costs of a given facility drive more activity from IA.	Third party fees, employee labor and related administration and programs
External Communications	Total Employees 100%	Communications cost is directly proportional to the number of employees	Enterprise wide support and related administration
Legal Costs	Net Plant 33.3%	This function is driven by factors	Employee labor and related

	Number of Employees 33.3% O&M 33.3%	which include Net Plant, as typically the higher the value of plant, the more legal work it attracts; similarly, a greater number of employees are typically more indicative of larger facilities that require greater levels of attention; and O&M costs tend to be a third factor indicative of size and legal complexity.	administration and programs, including third party legal
Compliance	Revenue 33.3% O&M 33.3% Net Plant 33.3%	This function is driven by factors which reflect the relative size and scope of each affiliate - Revenues, Net Plant and O&M costs.	Employee labor and related administration that is not directly attributable to any entity

5. LIBERTY UTILITIES SERVICE CORP.

This section provides an overview of some of the services (as outlined in Table 5) and the cost methodology for Liberty Utilities Service Corp. (“LUSC”).

Most U.S.-based utility employees are employed by LUSC and are dedicated to serve particular utilities. All employees’ labor costs, such as salaries, and associated labor costs, such as benefits, insurance etc. are to be paid by LUSC and direct charged to the company to which the employee is dedicated and performs work. Services provided by employees within LUSC

to each regulated utility shall be distributed on a time sheet basis to the extent possible. In infrequent instances where time sheeting may not be possible, the allocation factors shown in Tables 4a and 4b are to be used, as will be explained below.

5.1 Shared Services from LUSC

LUSC employs some individuals who provide shared services (listed in Table 5 below). Costs distributed by LUSC will include those from shared services employees: (a) where the function benefits both Liberty Utilities and Liberty Power businesses and (b) where the function benefits some or all of the regulated utilities within Liberty Utilities (e.g., energy procurement services).

Consistent with the organizational shared services practices described earlier, shared services and costs (within LUSC) are assigned when they are directly attributable to a specific affiliate company (such as a specific distribution utility, for example) or business unit (such as Liberty Utilities or Liberty Power). Labor charges for LUSC shared services staff are assigned using timesheets that depict the amount of time that is to be direct charged to either Liberty Utilities or Liberty Power (or a specific subsidiary within Liberty Utilities or Liberty Power).

The type of U.S. shared services that benefits both Liberty Utilities and Liberty Power businesses is referred to as LABS U.S. The LABS U.S. indirect costs for services from the shared services staff and functions within LUSC that cannot be directly assigned are allocated between the regulated and unregulated business units, Liberty Utilities and Liberty Power, and are distributed in the same manner per CAM Tables 4a and 4b described for shared services staff and functions within LUC. Consistent with the practices within LUC, the costs allocated from LUSC to the regulated companies as a group (i.e. to Liberty Utilities) are then reallocated to individual utility companies within the Liberty Utilities structure using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUSC.

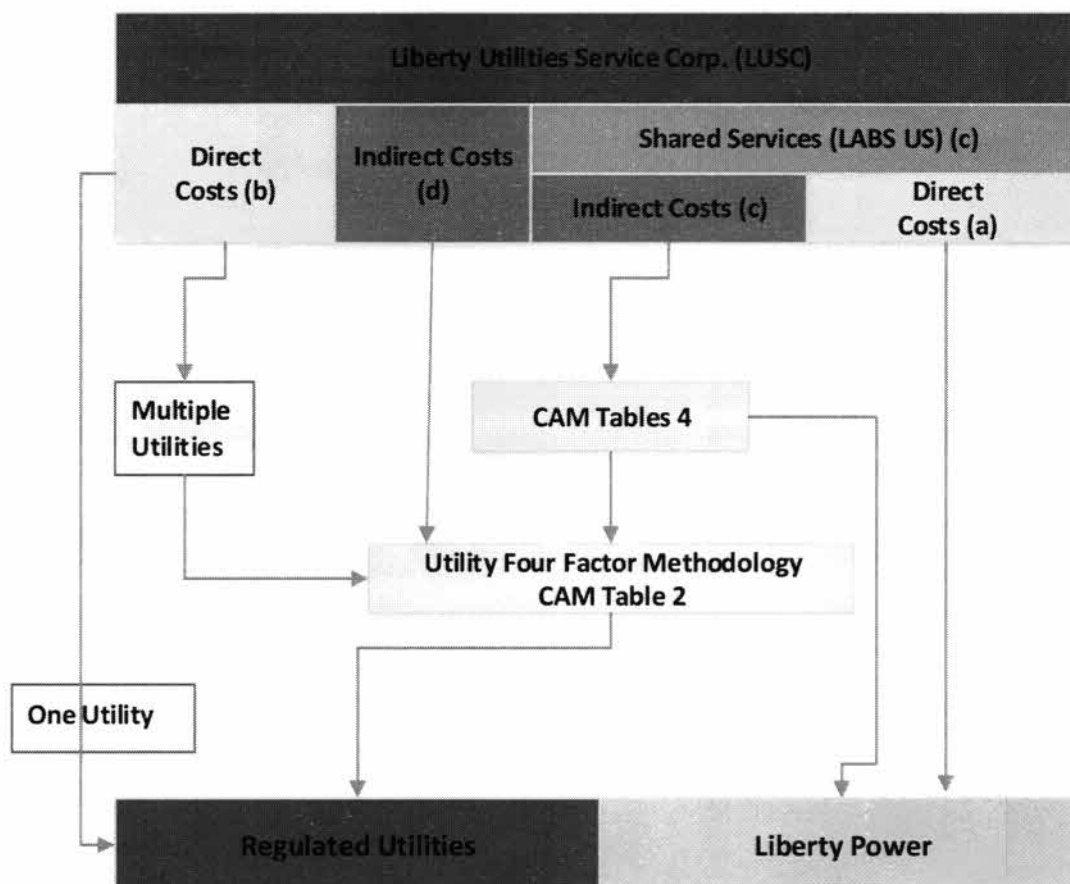
The indirect costs from the U.S. shared services that only benefit the regulated utilities are distributed using the Utility Four-Factor Methodology set forth in CAM Table 2, resulting in utility-specific allocated charges from LUSC.

Figure 5 below depicts the various flows of costs from LUSC.

Table 5 – List of Shared Services provided by Liberty Utilities Service Corp.

Customer Care and Billing
IT/Tech Support
Human Resources
Gas Control
Legal
Compliance
Regulatory & Government Relations
Environmental, Health, Safety and Security
Procurement
Operations
Engineering; Dispatch and Control
Outage Management
GIS/Mapping
Vegetation Management
Energy Procurement
Accounting and Finance
Managerial
Utility Planning
Customer Communication

Figure 5: Illustration of LUSC Cost Distributions



Notes:

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to regulated companies.
- (c) Costs that benefit both unregulated and regulated operations.

The allocation methodology may be adjusted based on the number of participating utilities. For example, Customer Service representatives who serve only the New Hampshire utilities will only have their indirect costs allocated, if any, to the two utilities within New Hampshire. Labor costs associated with energy procurement are directly billed to the utilities requiring energy procurement services using timesheets.

6. COST DISTRIBUTION AT THE REGIONAL OR STATE UTILITY LEVEL

Within the Liberty Utilities organization, the organizational structure and reporting relationships may evolve as the organization grows and develops. Costs and services provided to the regional or state utility level from other corporate entities are directly assigned to the extent possible and distributed over the utilities within the state or region for which they are provided. Any services and costs which cannot be directly assigned will be allocated to the utilities within the region or state using the Regional Four-Factor Methodology (25% weighting for the factors of: customer count, utility net plan, non-labor expenses, and labor expenses), unless another method of allocation is legally required.

In addition, each of the regulated entities will distribute costs amongst their affiliated entities in accordance with applicable laws/rules and affiliated service agreements. These cost allocation methods are consistent with the principles of this CAM.

7. CORPORATE CAPITAL

APUC or LUC will make capital investments such as corporate headquarters, IT systems, etc. that benefit the various operating businesses. The costs of these investments may be distributed monthly in the form of an intercompany operating expense charge, that captures the depreciation expense and cost of capital associated with the particular assets, or an alternate method of capital allocation based on the particular needs of the project. All costs associated to service the investment will be allocated to Liberty Power and Liberty Utilities, if applicable, typically based on the allocation method from which the capital investment is made. For example, if the capital investment is made in Human Resources then the allocation methodology used for Human Resources to allocate non-capital indirect costs as shown in Table 4a will be used to allocate the charge associated with the corporate capital expenditures, including the cost of capital, depreciation, and all other associated costs. From time to time, the distribution of costs associated with a corporate capital investment may use an alternate

method. Any corporate capital charges allocated or assigned to LUC are then reallocated to individual Liberty Utilities distribution utilities, or a sub-set of one or multiple distribution utilities, using the Utility Four-Factor Methodology set forth in CAM Table 2.

8. CAM TEAM AND TRAINING

The oversight of the CAM is the responsibility of the corporate Regulatory Department. Any updates or revisions are coordinated and completed by this Department. A CAM Team will be created consisting of trained employees to oversee the operations and management of the CAM principles throughout the organization.

The CAM, and any support material, is available to all employees via the Company intranet. Employee training on the CAM will be provided via the Company's Learning Management System.

9. AUDIT, RECORD KEEPING & AFFILIATE TRANSACTION RULES

Records of each company will be maintained such that all affiliate transactions are auditable. The records will document the cost of transactions, the methods used to distribute the costs, and descriptions of the services provided. The records will be retained for a minimum of three years or as required by law or regulation. The regulator will have access to records, consistent with applicable laws, regarding transactions between the regulated utility and its affiliates. All companies subject to affiliate transaction rules, whether state or federal, will comply with such requirements.

10. UPDATING ALLOCATIONS

Allocation percentages¹⁷ are updated annually. These annual updates to the allocation percentages are based on the most recent audited financial statements and other actual, year-end information. The updated percentages come into effect each April 1st and are valid through to the following March 31st. The Utility Four-Factor Methodology allocation percentages are also updated as an entity is either acquired or sold.

¹⁷ To clarify, the factors and weightings are expected to remain constant. It is the underlying information used to calculate the allocation percentages that is updated annually, such as the most recent net plant figures, or the most recent numbers of employees, for example.

11. APPENDICES

APPENDIX 1 - NARUC GUIDELINES FOR COST ALLOCATIONS

Guidelines for Cost Allocations and Affiliate Transactions:

The following Guidelines for Cost Allocations and Affiliate Transactions (Guidelines) are intended to provide guidance to jurisdictional regulatory authorities and regulated utilities and their affiliates in the development of procedures and recording of transactions for services and products between a regulated entity and affiliates. The prevailing premise of these Guidelines is that allocation methods should not result in subsidization of non-regulated services or products by regulated entities unless authorized by the jurisdictional regulatory authority. These Guidelines are not intended to be rules or regulations prescribing how cost allocations and affiliate transactions are to be handled. They are intended to provide a framework for regulated entities and regulatory authorities in the development of their own policies and procedures for cost allocations and affiliated transactions. Variation in regulatory environment may justify different cost allocation methods than those embodied in the Guidelines.

The Guidelines acknowledge and reference the use of several different practices and methods. It is intended that there be latitude in the application of these guidelines, subject to regulatory oversight. The implementation and compliance with these cost allocations and affiliate transaction guidelines, by regulated utilities under the authority of jurisdictional regulatory commissions, is subject to Federal and state law. Each state or Federal regulatory commission may have unique situations and circumstances that govern affiliate transactions, cost allocations, and/or service or product pricing standards. For example, The Public Utility Holding Company Act of 1935 requires registered holding company systems to price "at cost" the sale of goods and services and the undertaking of construction contracts between affiliate companies.

The Guidelines were developed by the NARUC Staff Subcommittee on Accounts in compliance with the Resolution passed on March 3, 1998 entitled "Resolution Regarding Cost Allocation for the Energy Industry" which directed the Staff Subcommittee on Accounts together with the Staff Subcommittees on Strategic Issues and Gas to prepare for NARUC's consideration, "Guidelines for Energy Cost Allocations." In addition, input was requested from other industry parties. Various levels of input were obtained in the development of the Guidelines from the Edison Electric Institute, American Gas Association, Securities and Exchange Commission, the Federal Energy Regulatory Commission, Rural Utilities Service

and the National Rural Electric Cooperatives Association as well as staff of various state public utility commissions.

In some instances, non-structural safeguards as contained in these guidelines may not be sufficient to prevent market power problems in strategic markets such as the generation market. Problems arise when a firm has the ability to raise prices above market for a sustained period and/or impede output of a product or service. Such concerns have led some states to develop codes of conduct to govern relationships between the regulated utility and its non-regulated affiliates. Consideration should be given to any "unique" advantages an incumbent utility would have over competitors in an emerging market such as the retail energy market. A code of conduct should be used in conjunction with guidelines on cost allocations and affiliate transactions.

A. DEFINITIONS

1. Affiliates - companies that are related to each other due to common ownership or control.
2. Attestation Engagement - one in which a certified public accountant who is in the practice of public accounting is contracted to issue a written communication that expresses a conclusion about the reliability of a written assertion that is the responsibility of another party.
3. Cost Allocation Manual (CAM) - an indexed compilation and documentation of a company's cost allocation policies and related procedures.
4. Cost Allocations - the methods or ratios used to apportion costs. A cost allocator can be based on the origin of costs, as in the case of cost drivers; cost-causative linkage of an indirect nature; or one or more overall factors (also known as general allocators).
5. Common Costs - costs associated with services or products that are of joint benefit between regulated and non-regulated business units.
6. Cost Driver - a measurable event or quantity which influences the level of costs incurred and which can be directly traced to the origin of the costs themselves.
7. Direct Costs - costs which can be specifically identified with a particular service or product.

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8. Fully Allocated costs - the sum of the direct costs plus an appropriate share of indirect costs.
9. Incremental pricing - pricing services or products on a basis of only the additional costs added by their operations while one or more pre-existing services or products support the fixed costs.
10. Indirect Costs - costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative and general, and taxes.
11. Non-regulated - that which is not subject to regulation by regulatory authorities.
12. Prevailing Market Pricing - a generally accepted market value that can be substantiated by clearly comparable transactions, auction or appraisal.
13. Regulated - that which is subject to regulation by regulatory authorities.
14. Subsidization - the recovery of costs from one class of customers or business unit that are attributable to another.

B. COST ALLOCATION PRINCIPLES

The following allocation principles should be used whenever products or services are provided between a regulated utility and its non-regulated affiliate or division.

1. To the maximum extent practicable, in consideration of administrative costs, costs should be collected and classified on a direct basis for each asset, service or product provided.
2. The general method for charging indirect costs should be on a fully allocated cost basis. Under appropriate circumstances, regulatory authorities may consider incremental cost, prevailing market pricing or other methods for allocating costs and pricing transactions among affiliates.
3. To the extent possible, all direct and allocated costs between regulated and non-regulated services and products should be traceable on the books of the applicable regulated utility to the applicable Uniform System of Accounts. Documentation should be made available to the appropriate regulatory authority upon request regarding transactions between the regulated utility and its affiliates.

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4. The allocation methods should apply to the regulated entity's affiliates in order to prevent subsidization from, and ensure equitable cost sharing among the regulated entity and its affiliates, and vice versa.
5. All costs should be classified to services or products which, by their very nature, are either regulated, non-regulated, or common to both.
6. The primary cost driver of common costs, or a relevant proxy in the absence of a primary cost driver, should be identified and used to allocate the cost between regulated and non-regulated services or products.
7. The indirect costs of each business unit, including the allocated costs of shared services, should be spread to the services or products to which they relate using relevant cost allocators.

C. COST ALLOCATION MANUAL (NOT TARIFFED)

Each entity that provides both regulated and non-regulated services or products should maintain a cost allocation manual (CAM) or its equivalent and notify the jurisdictional regulatory authorities of the CAM's existence. The determination of what, if any, information should be held confidential should be based on the statutes and rules of the regulatory agency that requires the information. Any entity required to provide notification of a CAM(s) should make arrangements as necessary and appropriate to ensure competitively sensitive information derived therefrom be kept confidential by the regulator. At a minimum, the CAM should contain the following:

1. An organization chart of the holding company, depicting all affiliates, and regulated entities.
2. A description of all assets, services and products provided to and from the regulated entity and each of its affiliates.
3. A description of all assets, services and products provided by the regulated entity to non-affiliates.
4. A description of the cost allocators and methods used by the regulated entity and the cost allocators and methods used by its affiliates related to the regulated services and products provided to the regulated entity.

D. AFFILIATE TRANSACTIONS (NOT TARIFFED)

The affiliate transactions pricing guidelines are based on two assumptions. First, affiliate transactions raise the concern of self-dealing where market forces do not necessarily drive prices. Second, utilities have a natural business incentive to shift costs from non-regulated competitive operations to regulated monopoly operations since recovery is more certain with captive ratepayers. Too much flexibility will lead to subsidization. However, if the affiliate transaction pricing guidelines are too rigid, economic transactions may be discouraged.

The objective of the affiliate transactions' guidelines is to lessen the possibility of subsidization in order to protect monopoly ratepayers and to help establish and preserve competition in the electric generation and the electric and gas supply markets. It provides ample flexibility to accommodate exceptions where the outcome is in the best interest of the utility, its ratepayers and competition. As with any transactions, the burden of proof for any exception from the general rule rests with the proponent of the exception.

1. Generally, the price for services, products and the use of assets provided by a regulated entity to its non-regulated affiliates should be at the higher of fully allocated costs or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.
2. Generally, the price for services, products and the use of assets provided by a non-regulated affiliate to a regulated affiliate should be at the lower of fully allocated cost or prevailing market prices. Under appropriate circumstances, prices could be based on incremental cost, or other pricing mechanisms as determined by the regulator.
3. Generally, transfer of a capital asset from the utility to its non-regulated affiliate should be at the greater of prevailing market price or net book value, except as otherwise required by law or regulation. Generally, transfer of assets from an affiliate to the utility should be at the lower of prevailing market price or net book value, except as otherwise required by law or regulation. To determine prevailing market value, an appraisal should be required at certain value thresholds as determined by regulators.
4. Entities should maintain all information underlying affiliate transactions with the affiliated utility for a minimum of three years, or as required by law or regulation.

E. AUDIT REQUIREMENTS

1. An audit trail should exist with respect to all transactions between the regulated entity and its affiliates that relate to regulated services and products. The regulator should have complete access to all affiliate records necessary to ensure that cost allocations and affiliate transactions are conducted in accordance with the guidelines. Regulators should have complete access to affiliate records, consistent with state statutes, to ensure that the regulator has access to all relevant information necessary to evaluate whether subsidization exists. The auditors, not the audited utilities, should determine what information is relevant for a particular audit objective. Limitations on access would compromise the audit process and impair audit independence.
2. Each regulated entity's cost allocation documentation should be made available to the company's internal auditors for periodic review of the allocation policy and process and to any jurisdictional regulatory authority when appropriate and upon request.
3. Any jurisdictional regulatory authority may request an independent attestation engagement of the CAM. The cost of any independent attestation engagement associated with the CAM, should be shared between regulated and non-regulated operations consistent with the allocation of similar common costs.
4. Any audit of the CAM should not otherwise limit or restrict the authority of state regulatory authorities to have access to the books and records of and audit the operations of jurisdictional utilities.
5. Any entity required to provide access to its books and records should make arrangements as necessary and appropriate to ensure that competitively sensitive information derived therefrom be kept confidential by the regulator.

F. REPORTING REQUIREMENTS

1. The regulated entity should report annually the dollar amount of non-tariffed transactions associated with the provision of each service or product and the use or sale of each asset for the following:
 - a. Those provided to each non-regulated affiliate.
 - b. Those received from each non-regulated affiliate.
 - c. Those provided to non-affiliated entities.

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2. Any additional information needed to assure compliance with these Guidelines, such as cost of service data necessary to evaluate subsidization issues, should be provided.

Source:

<http://www.naruc.org/Publications/Guidelines%20for%20Cost%20Allocations%20and%20Affiliate%20Transactions.pdf>

APPENDIX 2 – DETAILED EXPLANATION OF APUC COSTS

1. APUC STRATEGIC MANAGEMENT COSTS

Strategic management decisions are critical for any public utility. The need for strategic management is even more pronounced for APUC as a publicly traded company, which depends on access to capital funding through public sales of units. APUC seeks to hire talented strategic managers that aid in running each facility owned by the company as efficiently and effectively as possible. This ensures the long term health of each utility and ensures that rates are kept as low as possible without compromising the level of service. It also facilitates each regulated utility's access to necessary capital funding at reduced costs. The costs included in Strategic Management Costs fall into the following categories.

a. Board of Directors

The Board of Directors provides strategic oversight on all company affairs including high level approvals of strategy, operation and maintenance budgets, capital budgets, etc. In addition, the Board of Directors provides corporate governance and ensures that capital and costs are incurred prudently, which ultimately protects ratepayers.

b. General Legal Services

General legal services involve legal matters not specific to any single facility, including review of audited financial statements, annual information filings, Sedar filings, review of contracts with credit facilities, incorporation, tax issues of a legal nature, market compliance, and other similar legal costs. These legal services are required in order for APUC to provide capital funding to individual utilities, without which the utilities could not provide adequate service. Additionally, the services ensure that APUC's subsidiaries remain compliant in all aspects of operations and prevent those entities from being exposed to unnecessary risks.

c. Professional Services

Professional Services including strategic plan reviews, capital market advisory services, ERP System maintenance, benefits consulting, and other similar professional services. By providing these services at a parent level, the subsidiaries are able to benefit from economies of scale. Additionally, some of these services improve APUC's access to capital which benefits all of its subsidiaries.

2. ACCESS TO CAPITAL MARKETS

One of APUC's primary functions is to ensure its subsidiaries have access to quality capital. APUC is listed on the New York Stock Exchange ("NYSE") and the Toronto Stock Exchange ("TSX"), leading financial markets. In order to allow its subsidiaries to have continued access to those capital markets, APUC incurs the following costs. These services and costs are a prerequisite to the subsidiaries continued access to those capital markets.

a. License and Permit Fees

In connection with APUC's participation in the NYSE and the TSX, APUC incurs certain license and permit fees such as Sedar fees, annual filing fees, licensing fees, etc. These licensing and permit fees are required in order to sell units on the NYSE and the TSX, which in turn provides funding for utility operations.

b. Escrow Fees

In connection with the payment of dividends to unit holders, APUC incurs escrow fees. Escrow fees are incurred to ensure continued access to capital and ensure continuing and ongoing investments by shareholders. Without such escrow fees, APUC's subsidiaries would not have a readily available source of capital funding.

c. Unit Holder Communications

Unit holder communication costs are incurred to comply with filing and regulatory requirements of the NYSE and the TSX and meet the expectations of shareholders. These costs include items such as news releases and unit holder conference calls. In the absence of shareholder communication costs, investors would not invest in the units of APUC, and in turn, APUC would not have capital to invest in its subsidiaries. With such communications services, the subsidiaries would not have a readily available source of capital funding.

3. APUC FINANCIAL CONTROLS

Financial control costs incurred by APUC include costs for audit services and tax services. These costs are necessary to ensure that the subsidiaries are operating in a manner that meets audit standards and regulatory requirements, which have strong financial and operational controls, and financial transactions are recorded accurately and prudently. Without these services, the regulated utilities would not have a readily available source of capital funding.

a. Audit Fees

Audits are done on a yearly basis and reviews are performed quarterly on all facilities owned by APUC on an aggregate level. These corporate parent level audits reduce the cost of the stand-alone audits significantly for utilities which must perform its own separate audits. Where stand-alone audits are not required, ratepayers receive benefits of additional financial rigor, as well as access to capital, and financial soundness checks by third parties. Finally, during rate cases, the existence of audits provides staff and intervenors additional reliance on the company records, thus reducing overall rate case costs. The aggregate audit is necessary for the regulated utilities to have continued access to capital markets and unit holders.

b. Tax Services

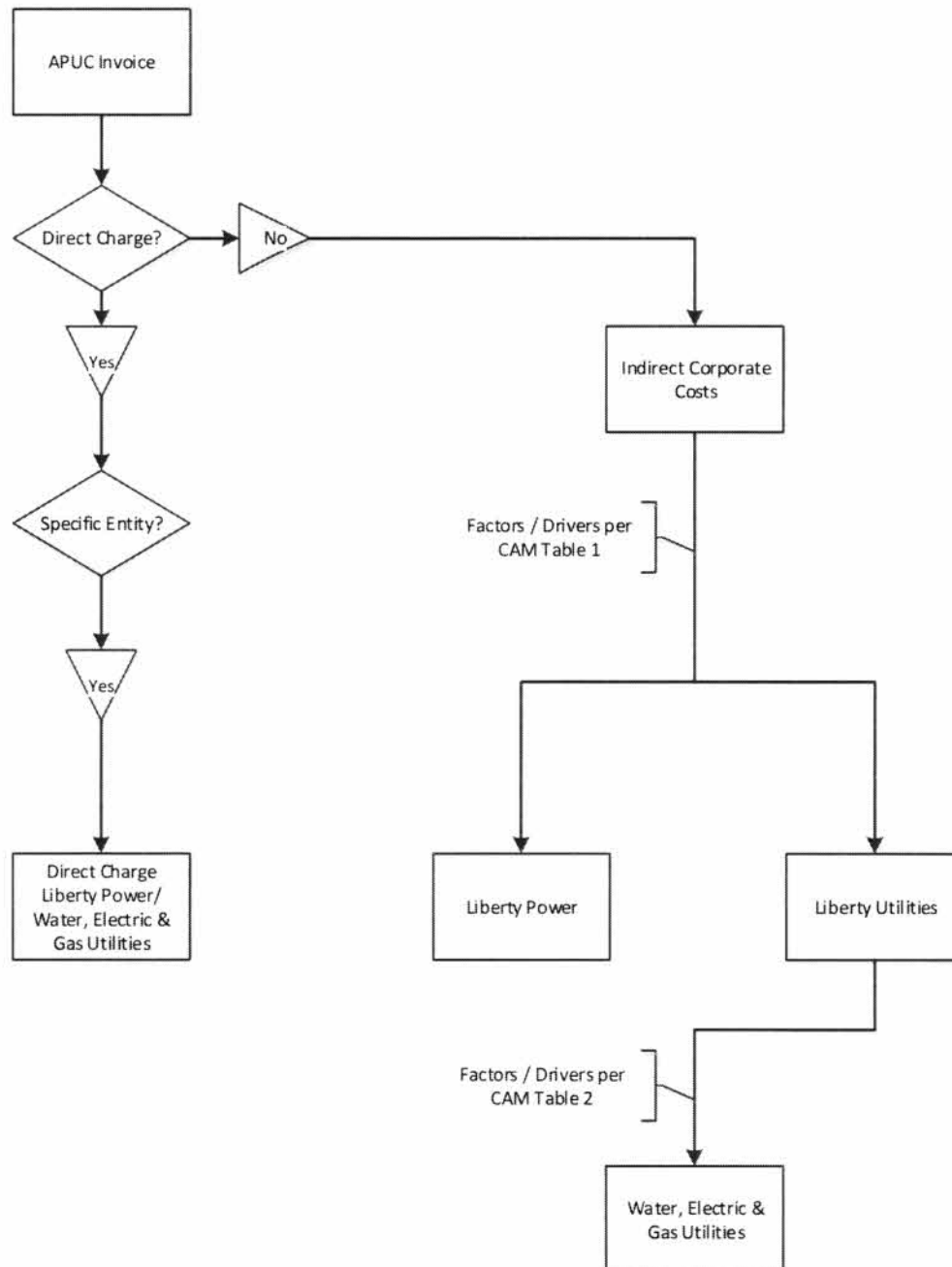
Taxes are paid on behalf of the regulated utilities at the parent level as part of a consolidated United States tax return. Tax services such as planning and filing are provided by third parties. Filing tax returns on a consolidated basis benefits each regulated utility by reducing the costs that otherwise would be incurred by such utility in filing its own separate tax return.

4. APUC ADMINISTRATIVE COSTS

Finally, administrative costs incurred by APUC, in some cases via other corporate entities, such as rent, depreciation of office furniture, depreciation of computers, and general office costs are required to house all the services mentioned above. Without these administrative costs, the employees throughout the APUC organization could not perform their work and provide the necessary services to the regulated utilities. These administrative costs also include training for corporate employees.

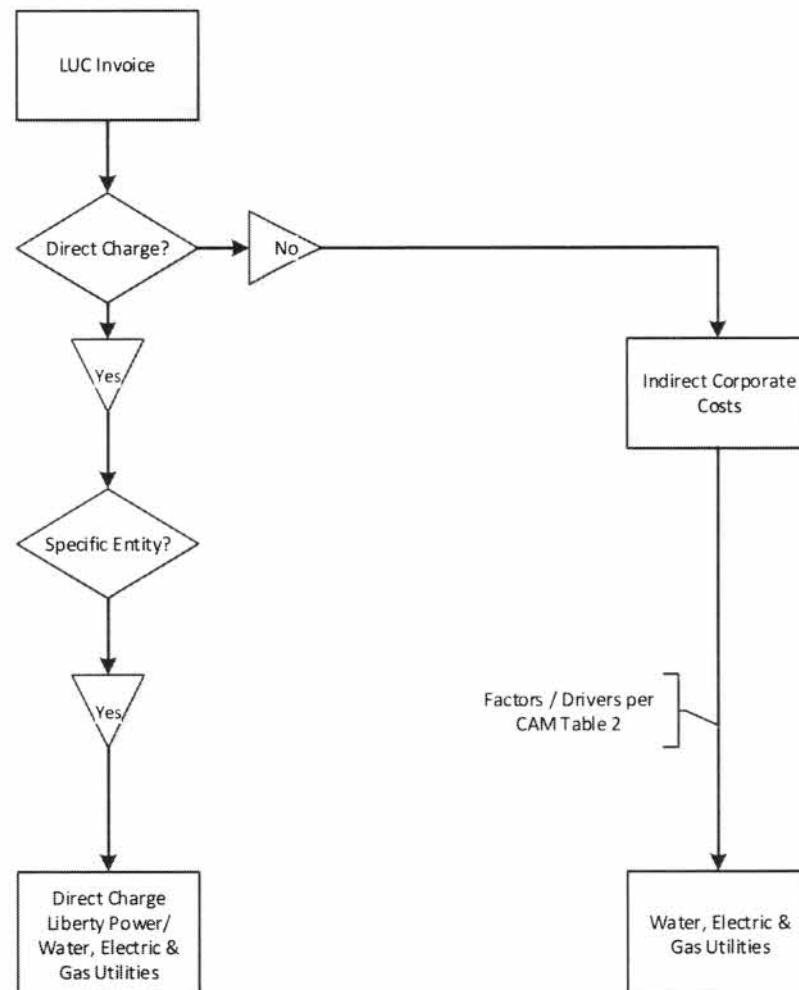
APPENDIX 3 – LIFE OF AN APUC INVOICE

A schematic is provided below showing the trail of an invoice received by APUC for services to be charged to its subsidiaries. The schematic is intended to visually explain the distribution of charges from APUC to Liberty Power and Liberty Utilities companies.



APPENDIX 4 – LIFE OF A LIBERTY UTILITIES INVOICE

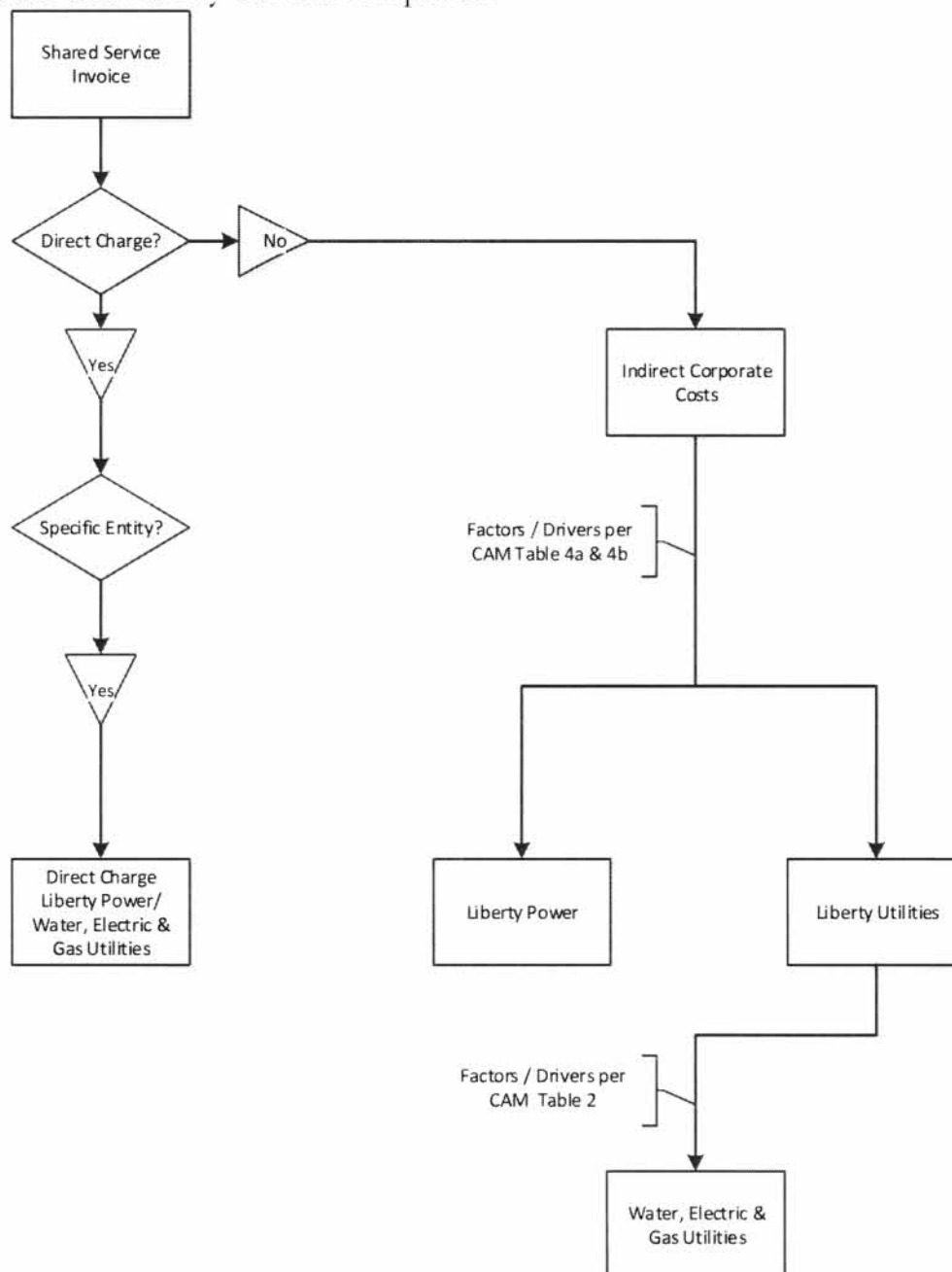
A schematic is provided below showing the trail of an invoice received by Liberty Utilities (LUC) for services to be charged to its utility subsidiaries¹⁸. The schematic is intended to visually explain the distribution of charges from LUC to Liberty Utilities companies.



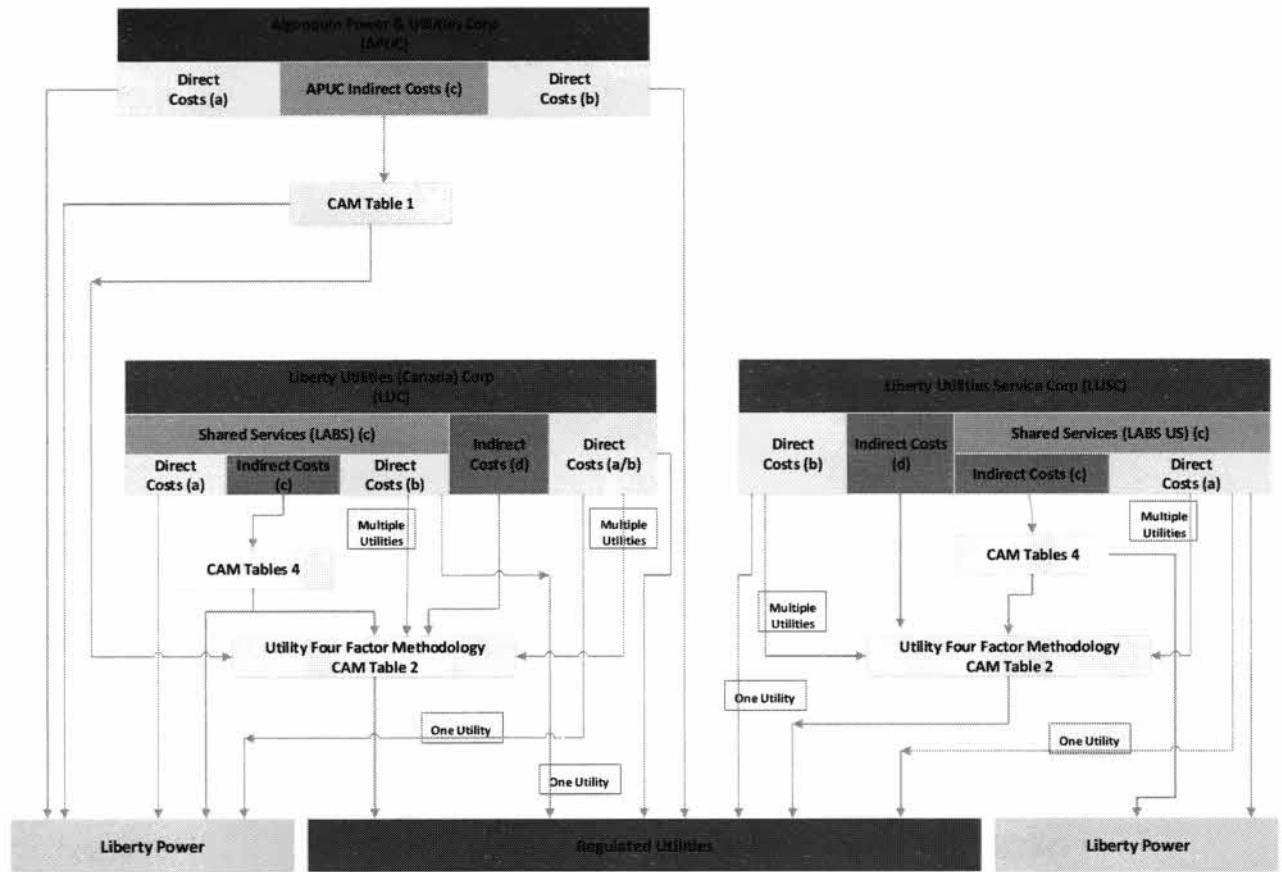
¹⁸ This is for utility-dedicated LUC staff and services (not shared services staff).

APPENDIX 5 – LIFE OF A SHARED SERVICES INVOICE

A schematic is provided below showing the trail of an invoice for shared services provided within Liberty Utilities or LUSC for services to be charged to affiliates and subsidiaries. The schematic is intended to visually explain the distribution of charges from shared services to Liberty Power and Liberty Utilities companies.



APPENDIX 6 – COMPOSITE ILLUSTRATION OF ORGANIZATIONAL COST DISTRIBUTION



Notes:

- (a) Costs that are directly assignable to unregulated companies.
- (b) Costs that are directly assignable to regulated companies.
- (c) Costs that benefit both unregulated and regulated operations.
- (d) Costs that benefit all regulated operations.

APPENDIX 7 – GLOSSARY OF TERMS

Algonquin Power & Utilities Corp. (“APUC”)- is a publicly traded company and the ultimate corporate parent of Liberty Utilities and Liberty Power subsidiaries. It provides financial and strategic management, corporate governance, and oversight of administrative and support services to all its subsidiaries.

Algonquin Power Co. (“Liberty Power”)- is a subsidiary of APUC whose primary business is in energy generation through renewal (solar and wind) sources and thermal generating facilities.

Cost Allocation Manual (CAM) – a document that explains how service company costs are assigned to affiliate companies and explains the nature of the services to be provided between affiliates.

Direct Costs- (sometimes referred to as assigned costs)- costs incurred by one company for the exclusive benefit of, or specifically identified with, one or more other companies, and which are directly charged (or assigned) to the company or companies that specifically benefited.

Fully Distributed Cost (FDC)– means a methodology that examines all costs of an enterprise in relation to all the goods and services that are produced. FDC requires recognition of all costs incurred directly or indirectly used to produce a good or service. Costs are assigned either through a direct or allocated approach. Costs that cannot be directly assigned or indirectly allocated (e.g. general and administrative) must also be included in the FDC calculation through a general allocation.

Indirect Costs- costs that cannot be identified with a particular service or product. This includes but not limited to overhead costs, administrative, general, and taxes.

Liberty Utilities Co.- is a subsidiary of APUC and the direct or indirect owner of regulated utilities.

Liberty Utilities (Canada) Corp. (“LUC”) - is a subsidiary of APUC and employs Canadian-based employees.

Liberty Utilities Service Corp. (“LUSC”)-is a subsidiary of APUC and employs U.S.-based distribution utility employees and those U.S. based employees providing shared services.

COST ALLOCATION MANUAL

Liberty Algonquin Business Services (“LABS”) is a business unit with staff employed within LUC and LUSC. These employees provide shared services to both the utility and non-utility businesses within APUC.

NARUC – National Association of Regulatory Utility Commissioners.

Service Agreement – a written agreement specifying the terms and conditions upon which services are provided to and from affiliated entities.

Utility Four-Factor – is an allocation methodology used to allocate indirect costs to regulated utilities based on the following factors: Utility Net Plant, Customer Count, Non-Labor expenses, and labor expenses.

APPENDIX 8 - VERSION LOG

1. Base Year- January 1 2014
2. V2014, July 1, 2015
3. V2017, January 1 2017 (Includes April 2017 Updates)

EXHIBIT LW-DT2



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Sec. 714.

TSX may delist the securities of a listed issuer that has failed to comply with TSX's Timely Disclosure policy (see Sections 406 to 423.8 and 472 to 475) or with disclosure requirements under any securities law to which the listed issuer is subject. In addition, TSX may delist the securities of a listed issuer that is engaged in the business of mineral exploration, development or production if such listed issuer has failed to comply with TSX's "Disclosure Standards for Companies Engaged In Mineral Exploration, Development & Production" (see Appendix B).

[« Disclosure Policies](#)[Payment of Fees or Charges »](#)

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Sec. 406.

It is a cornerstone policy of the Exchange that all persons investing in securities listed on the Exchange have equal access to information that may affect their investment decisions. Public confidence in the integrity of the Exchange as a securities market requires timely disclosure of material information concerning the business and affairs of companies listed on the Exchange, thereby placing all participants in the market on an equal footing.

The timely disclosure policy of the Exchange is the primary timely disclosure standard for all TSX listed issuers. National Policy 51-201 *Disclosure Standards* of the CSA, "Disclosure Standards", assists issuers in meeting their legislative disclosure requirements. While the legislative and Exchange timely disclosure requirements differ somewhat, the CSA clearly state in National Policy 51-201 *Disclosure Standards* that they expect listed issuers to comply with the requirements of the Exchange.

To minimize the number of authorities that must be consulted in a particular matter, in the case of securities listed on the Exchange, the Exchange is the relevant contact. The issuer may, of course, consult with the government securities administrator of the particular jurisdiction. In the case of securities listed on more than one stock market, the issuer should deal with each market.

The requirements of the Exchange and National Policy 51-201 *Disclosure Standards* are in addition to any applicable statutory requirements. The Exchange enforces its own policy. Companies whose securities are listed on the Exchange are legally obligated to comply with the provisions on timely disclosure set out in section 75 of the OSA and the Regulation under the Act. Reference should also be made to National Instrument 71-102 *continuous Disclosure and Other Exemptions Relating to Foreign Issuers*, National Instrument 55-102 *System for Electronic Disclosure by Insiders*, and National Instrument 62-103 *The Early Warning System and Related Take-Over bid and Insider Reporting Issues*.

In addition to the foregoing requirements, companies whose securities are listed on the Exchange and who engage in mineral exploration, development and/or production, must follow the "Disclosure Standards for Companies Engaged in Mineral Exploration, Development and Production" as outlined in Appendix B of this Manual for both their timely and continuous disclosure.

The Market Surveillance Division monitors the timely disclosure policy on behalf of the Exchange.

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Securities Law & Instruments



PDF Version (/documents/en/Securities-Category5/pol_20020712_51-201.pdf)

NATIONAL POLICY 51-201 DISCLOSURE STANDARDS

Part I - Introduction

1.1 Purpose

(1) It is fundamental that everyone investing in securities have equal access to information that may affect their investment decisions. The Canadian Securities Administrators ("the CSA" or "We") are concerned about the selective disclosure of material corporate information by companies to analysts, institutional investors, investment dealers and other market professionals. Selective disclosure occurs when a company discloses material nonpublic information to one or more individuals or companies and not broadly to the investing public. Selective disclosure can create opportunities for insider trading and also undermines retail investors' confidence in the marketplace as a level playing field.

(2) This policy provides guidance on "best disclosure" practices in a difficult area involving competing business pressures and legislative requirements. Our recommendations are not intended to be prescriptive. We encourage companies to adopt the suggested measures, but they should be implemented flexibly and sensibly to fit the situation of individual companies.

(3) The timely disclosure requirements and prohibitions against selective disclosure are substantially similar everywhere in Canada, but there are differences among the provinces and territories, so companies should carefully review the legislation which is applicable to them for the details.

in government policy that affects most companies in a particular industry does not require an announcement, but if it affects only one or a few companies in a material way, such companies should make an announcement.

4.5 Exchange Policies

(1) The Toronto Stock Exchange Inc. (the "TSX") and the TSX Venture Exchange Inc. ("TSX Venture") each have adopted timely disclosure policy statements which include many examples of the types of events or information which may be material. Companies should also refer to the guidance provided in these policies when trying to assess the materiality of a particular fact, change or piece of information.

(2) The TSX and TSX Venture policies require the timely disclosure of "material information". Material information includes both material facts and material changes relating to the business and affairs of a company. The timely disclosure obligations in the exchanges' policies exceed those found in securities legislation. It is not uncommon, or inappropriate, for exchanges to impose requirements on their listed companies which go beyond those imposed by securities legislation.³¹ We expect listed companies to comply with the requirements of the exchange they are listed on. Companies who do not comply with an exchange's requirements could find themselves subject to an administrative proceeding before a provincial securities regulator.³²

Part V - Risks Associated with Certain Disclosures

5.1 Private Briefings with Analysts, Institutional Investors and other Market Professionals

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About the Listed Company Manual

The New York Stock Exchange Listed Company Manual is the comprehensive rulebook for listed companies. The Manual also details original and continued listing requirements of the Exchange and sets forth NYSE rules and policies on such matters as corporate governance, shareholder communications, and shareholder approval.



Listed Company Manual

Sections

- [General Organization](#)
- [Section 1 - The Listing Process](#)
- [Section 2 - Disclosure and Reporting Material Information](#)
- [Section 3 - Corporate Responsibility](#)
- [Section 4 - Shareholders' Meetings and Proxies](#)
- [Section 5 - Certificates](#)
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- [Section 7 - Listing Applications](#)
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Special Initial Margin and Capital Requirements—

Occasionally, a listed issue may be placed under special initial margin and capital requirements. Such a restriction in no way reflects upon the quality of corporate management, but, rather indicates a determination by the Floor Officials of the Exchange that the market in the issue has assumed a speculative tenor and has become volatile due to the influence of credit, which, if ignored, may lead to unfair and disorderly trading.

The determination to impose restrictions is based on a careful inspection of the trading for the latest one week period, defined as the previous Friday through subsequent Thursday, matched against various criteria. Other factors, such as the capitalization turnover, the ratio of last year's average weekly volume to the volume for the period considered, arbitrage, stop order bans, short position, earnings and recent corporate news are also reviewed.

The restriction itself is aimed primarily at eliminating the extension of credit to those who buy a security and sell it the same day seeking a short term profit. Such customers must have the full purchase value in the account prior to the entry of an order. Concomitantly, a broader requirement is usually imposed on all other margin customers in that they must put up the full purchase price within five business days, rather than only the percentage required by the Federal Reserve Board. Cash customers, of course, must in all instances put up 100% of the cost in seven days.

Amended: September 2, 2015 (NYSE-2015-38).

202.05 Timely Disclosure of Material News Developments

A listed company is expected to release quickly to the public any news or information which might reasonably be expected to materially affect the market for its securities. This is one of the most important and fundamental purposes of the listing agreement which the company enters into with the Exchange.

A listed company should also act promptly to dispel unfounded rumors which result in unusual market activity or price variations.

The issuer of income deposit securities traded as a unit shall publicize any change in the terms of the unit, such as changes to the terms and conditions of any of the components (including changes with respect to any original issue discount or other significant tax attributes of any component), or to the ratio of the components within the unit. Such publication shall be made as soon as practicable in relation to the effective date of the change, and should otherwise be made in accordance with the procedures specified in Section 202.06 below. In addition, the issuer must provide information regarding the terms and conditions of the components of the unit (including information with respect to any original issue discount or other significant tax attributes of any component), and the ratio of the components comprising the unit on its website.

202.06 Procedure for Public Release of Information; Trading Halts

(A) Immediate Release Policy

Information required to be released quickly to the public under Section 202.05 above should be disclosed by means of any Regulation FD compliant method (or

EXHIBIT LW-DT3

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date	Email Response Received from
2200-9860	Executive and Strategic Management	LABS - Executive	George Trisc	10-Sep-18	14-Sep-18	George Trisc
2100-9835	Energy Procurement	LUC - Energy Procurement	William Killeen	13-Aug-18	13-Aug-18	William Killeen
2100-9865	Customer Experience	LUC - Customer Experience	Brent Baker	5-Sep-18	7-Sep-18	Prafull Koli
2200-9800	Information Technology	LABS - Corporate IT	John Lowson	1-Dec-18	19-Nov-18	John Lowson
2200-9801	Information Technology	LABS - Business IT	John Lowson	1-Dec-18	19-Nov-18	John Lowson
2200-9815	Environment, Health, Safety and Security	LABS - EH&S	Timothy Deppmeyer	30-Nov-18	30-Nov-18	Timothy Deppmeyer
2200-9825	Procurement	LABS - Purchasing	Luiza de Camarel	2-Nov-18	2-Nov-18	Luiza de Camarel

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Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date	Email Response Received from
2200-9821	Risk Management	LABS - Insurance & Risk Management	Marianna Michael	23-Aug-18	3-Oct-18	Marianna Michael
2200-9820	Financial Reporting, Planning and Administration	LABS - Accounting & Admin	Todd Mooney	26-Oct-18	26-Oct-18	Irene Trumble
2200-9827	Financial Reporting, Planning and Administration	LABS - FPA	Frank Coscighnato	10-Oct-18	10-Oct-18	Manasa Rao
2200-9822	Treasury	LABS - Treasury	Arthur Kacprzak	4-Oct-18	4-Oct-18	Arthur Kacprzak
2200-9824	Internal Audit	LABS - Internal Audit	Dan Gilpin	16-Nov-18	16-Nov-18	Dan Gilpin
2200-9823	Legal Costs	LABS - Legal	Jen Tindale	10-Oct-18	10-Oct-18	Corinne Brough
2200-9828	Compliance	LABS - Compliance	Lisa Jeffray	4-Oct-18	4-Oct-18	Peter Eichler
2100-9830	Regulatory Strategy	LUC - Regulatory	Gaelana Girardi	31-Oct-18	31-Oct-18	Gaelana Girardi

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Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey signed on Date	Survey Response Email received Date	Email Response Received from
2100-9850	Executive, Operations & Administration	LUC - Operations	Gerald Tremblay	18-Sep-18	1-Nov-18	Gerald Tremblay
2200-9868	Executive and Strategic Management	Strategy	Michael Griffin	11-Sep-18	11-Sep-18	Michael Griffin
2100-9868	Executive, Operations & Regulatory Strategy	LUC - Strategic Planning	Peter Echler	7-Sep-18	7-Sep-18	Peter Echler
2200-9870	External Communications	LABS - Investor Relations & Communication	Ian Tharp	11-Sep-18	11-Sep-18	Ian Tharp
2200-9881	Information Technology	Sustainment	Luisa Read	14-Sep-18	14-Sep-18	Luisa Read

PRIVILEGED & CONFIDENTIAL

Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date	Email Response Received from
2200-9874	Information Technology	Customer First	Luisa Read	14-Sep-18	14-Sep-18	Luisa Read
2200-9875	Information Technology	Transformation-CIS	Katy Cook	2-Nov-18	2-Nov-18	Katy Cook
2200-9876	Information Technology	Transformation-EAM	David Holmes	17-Sep-18	17-Sep-18	David Holmes

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Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date	Email Response Received from
2200-9877	Information Technology	Transformation	David Pasieka	7-Nov-18	7-Nov-18	Gaelana Girardi
2200-9810	Human Resources	LABS - HR	Theresa Pettos			
2200-9811	Human Resources	LABS - Rewards	Punam Maini			
2200-9812	Training	LABS - Learning & Development	Dairna Datchko			
2200-9817	Human Resources	Communications	Dairna Datchko			

Since these departments provide support to the Canadian shared services employees so their % is the overall calculated average

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Company Code & Department Cost Code	Department Category	LUC/LABS Report account descriptions	Person Completing the Survey	Response Survey Signed on Date	Survey Response Email received Date	Email Response Received from
2200-9826	Facilities and Building Rent	LABS - Building	Gary Sommer			
2200-9815	Environment, Health, Safety and Security	LABS - EH&S	Timothy Deppmeyer			

Company Code & Cost Code	Department Category	APUC Report account descriptions	Person Completing the Survey	Response Signed on Date	Survey Response Email received Date	Email Response Received from
1050-9860	Executive and Strategic Management	Vice Chairman	David Bronicheski	5-Nov-18		David Bronicheski
1050-9860	Executive and Strategic Management	Chief Executive Officer	David Bronicheski	5-Nov-18		David Bronicheski
1050-9860	Executive and Strategic Management	Chief Financial Officer	David Bronicheski	5-Nov-18		David Bronicheski

Prepared by

Roshan Ranshinge Date

14-Dec-18

First Review by

Elaine Peach Date

17-Dec-18

Final Review & Approval

Gaetana Girardi Date