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BEFORE THE ARIZONA CORPORATION COMMISSION
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COMMISSIONERS

KRISTIN K. MAYES, Chairman

2010 SEP -2 P 4: 02

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AZ CORP COMMISSION
DOCKET CONTROL

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BOB STUMP

IN THE MATTER OF THE APPLICATION OF
GLOBAL WATER – PALO VERDE UTILITIES
COMPANY FOR THE ESTABLISHMENT OF JUST AND
REASONABLE RATES AND CHARGES FOR UTILITY
SERVICE DESIGNED TO REALIZE A REASONABLE
RATE OF RETURN ON THE FAIR VALUE OF ITS
PROPERTY THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. SW-20445A-09-0077

IN THE MATTER OF THE APPLICATION OF
VALENCIA WATER COMPANY – GREATER
BUCKEYE DIVISION FOR THE ESTABLISHMENT OF
JUST AND REASONABLE RATES AND CHARGES FOR
UTILITY SERVICE DESIGNED TO REALIZE A
REASONABLE RATE OF RETURN ON THE FAIR
VALUE OF ITS PROPERTY THROUGHOUT THE
STATE OF ARIZONA

DOCKET NO. W-02451A-09-0078

IN THE MATTER OF THE APPLICATION OF
WILLOW VALLEY WATER CO. FOR THE
ESTABLISHMENT OF JUST AND REASONABLE
RATES AND CHARGES FOR UTILITY SERVICE
DESIGNED TO REALIZE A REASONABLE RATE OF
RETURN ON THE FAIR VALUE OF ITS PROPERTY
THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-01732A-09-0079

IN THE MATTER OF THE APPLICATION OF
GLOBAL WATER – SANTA CRUZ WATER COMPANY
FOR THE ESTABLISHMENT OF JUST AND
REASONABLE RATES AND CHARGES FOR UTILITY
SERVICE DESIGNED TO REALIZE A REASONABLE
RATE OF RETURN ON THE FAIR VALUE OF ITS
PROPERTY THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-20446A-09-0080

IN THE MATTER OF THE APPLICATION OF
WATER UTILITY OF GREATER TONOPAH FOR
THE ESTABLISHMENT OF JUST AND REASONABLE
RATES AND CHARGES FOR UTILITY SERVICE
DESIGNED TO REALIZE A REASONABLE RATE OF
RETURN ON THE FAIR VALUE OF ITS PROPERTY
THROUGHOUT THE STATE OF ARIZONA

DOCKET NO. W-02450A-09-0081

Notice of Filing Tariffs

Arizona Corporation Commission
DOCKETED

SEP 2 2010

DOCKETED BY

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1 IN THE MATTER OF THE APPLICATION OF
2 VALENCIA WATER COMPANY – TOWN DIVISION
3 FOR THE ESTABLISHMENT OF JUST AND
4 REASONABLE RATES AND CHARGES FOR UTILITY
5 SERVICE DESIGNED TO REALIZE A REASONABLE
6 RATE OF RETURN ON THE FAIR VALUE OF ITS
7 PROPERTY THROUGHOUT THE STATE OF ARIZONA

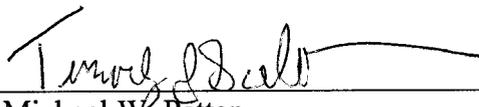
DOCKET NO. W-01212A-09-0082

Notice of Filing Tariffs

5 Global Water – Palo Verde Utilities Company, Global Water – Santa Cruz Water
6 Company, Valencia Water Company – Town Division, Valencia Water Company – Greater
7 Buckeye Division, Water Utility of Greater Tonopah and Willow Valley Water Co. (collectively,
8 the “Global Utilities”) submit the attached source control tariffs approved by the Commission at
9 its August 30, 2010 Open Meeting.

10 RESPECTFULLY SUBMITTED this 2nd day of September 2010.

11 ROSHKA DEWULF & PATTEN, PLC

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13 By 
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Attorneys for Global Utilities

19 Original +13 copies of the foregoing
20 filed this 2nd day of September 2010, with:

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22 Arizona Corporation Commission
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24 Phoenix, AZ 85007

25 Copies of the foregoing hand-delivered/mailed
26 this 2nd day of September 2010 to:

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GLOBAL WATER RESOURCES (GWR)**CODE OF PRACTICE****GWR-CP-EX-DEF****DEFINITIONS****PROHIBITED WASTE**

Prohibited Waste means material or wastestreams that shall not be discharged to collection systems operated by GWR. Specifically, this includes:

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.

Flammable or Explosive Waste

Any waste 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.

Reactive Waste

Any waste which, by itself or in combination with another substance, is capable of causing or contributing to an undesirable physical or chemical reaction when introduced to sanitary sewer systems, including: endothermic reactions, exothermic reactions, precipitation etc.

Obstructive Waste

Any 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.

Corrosive Waste

Any waste 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.

High Temperature Waste

A high temperature waste is:

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

Biomedical Waste

Any of the following categories of biomedical waste: human anatomical waste, animal waste, untreated microbiological waste, waste sharps and untreated human blood and body fluids.

Miscellaneous Prohibited Wastes

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. 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 APP or AzPDES discharge permit or any other act, 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; or
- d. may cause biosolids to fail criteria for beneficial land application.

RESTRICTED WASTE

Restricted waste means wastes that may be permitted to be discharged to collection systems operated by GWR, but have specific criteria which must be met prior to that discharge. These include:

Food Waste

Any non-domestic waste from cooking and handling of food that, at the point of discharge into a sewer, contains particles larger than 0.5 centimeters in any dimension.

Radioactive Waste

Any waste containing radioactive materials that, at the point of discharge into a sewer, exceeds radioactivity limitations as established by regulatory agencies.

pH Waste

Any non-domestic waste which, at the point of discharge into a sewer, has a pH lower than 6 or higher than 9.0, as determined by either a grab or a composite sample.

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 GWR, or one or more of its agents, as a tracer.

Miscellaneous Restricted Wastes

Any of the following wastes:

- a. seawater
- b. PCBs
- c. chlorinated phenols¹
- d. pesticides
- e. tetrachloroethylene

Specified Waste

Any waste which, at the point of discharge into a sewer, contains any contaminant at a concentration in excess of the limits set out AAC R18-4 *et seq.* or as more specifically defined in the tables below. All concentrations are expressed as total concentrations which includes all forms of the contaminant, whether dissolved or undissolved. The concentration limits apply to both grab and composite samples. Contaminant definitions and methods of analysis are outlined in standard methods.

RESTRICTED WASTE – DEFINITION OF LIMITS CONVENTIONAL CONTAMINANTS [mg/L]	
Biochemical Oxygen Demand (BOD)	350
Chemical Oxygen Demand (COD)	700
Oil and Grease ²	100
Suspended Solids	350

RESTRICTED WASTE – DEFINITION OF LIMITS ORGANIC CONTAMINANTS [mg/L]	
Benzene	0.004

¹ Chlorinated phenols include:

- chlorophenol (ortho, meta, para)
- dichlorophenol (2,3, 2,4-, 2,5-, 2,6-, 3,4-, 3,5-)
- trichlorophenol (2,3,4-, 2,3,5-, 2,3,6-, 2,4,5-, 2,4,6-, 3,4,5-)
- tetrachlorophenol (2,3,4,5-, 2,3,4,6-, 2,3,5,6-)
- pentachlorophenol

² Total oil and grease includes oil and grease (hydrocarbons) (see Organic Contaminants Table)

RESTRICTED WASTE – DEFINITION OF LIMITS ORGANIC CONTAMINANTS [mg/L]	
Ethyl Benzene	0.56
Toluene	0.8
Xylenes	8
Polynuclear Aromatic Hydrocarbons (PAH) ³	0.0002
Phenols	0.001
Oil and Grease (hydrocarbons)	15

RESTRICTED WASTE -- DEFINITION OF LIMITS INORGANIC CONTAMINANTS [mg/L]	
Antimony (Sb)	0.0048
Arsenic (As)	0.010
Barium (Ba)	1.6
Beryllium (Be)	0.0032
Cadmium (Cd)	0.004

³ Note: Polynuclear Aromatic Hydrocarbons (PAH) include:

- a. naphthalene benzo(a)anthracene
- b. acenaphthylene chrysene
- c. acenaphthene benzo(b)fluoranthene
- d. fluorene benzo(k)fluoranthene
- e. phenanthrene benzo(a)pyrene
- f. anthracene dibenzo(a,h)anthracene
- g. fluoranthene indeno(1,2,3-cd)pyrene
- h. pyrene benzo(g,h,i)perylene

RESTRICTED WASTE – DEFINITION OF LIMITS INORGANIC CONTAMINANTS [mg/L]	
Chloride (Cl)	1500
Chromium (Cr)	0.08
Cobalt (Co)	5
Copper (Cu)	0.0175
Cyanide (Cn)	0.0079
Fluoride (F)	3.2
Iron (Fe)	50
Lead (Pb)	0.006
Manganese (Mn)	5
Mercury (Hg)	0.0002
Molybdenum (Mo)	5
Nickel (Ni)	0.08
Selenium (Se)	0.002
Silver (Ag)	0.0992
Sulfate (SO ₄)	1500
Sulfide (S)	0.05
Thallium (Tl)	0.0016
Zinc (Zn)	0.138

GLOBAL WATER RESOURCES**CODE OF PRACTICE****GWR-CP-EX-001****RV PARK OPERATIONS****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 GWR-CP-EX-DEF.

DISCHARGE REGULATIONS

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

- a. oil and grease in a concentration that is in excess of 100 milligrams per litre as analyzed in a grab sample;
- b. suspended solids in a concentration that is in excess of 350 milligrams per litre as analyzed in a grab sample;
- c. 5-day biochemical oxygen demand (BOD₅) in a concentration that is in excess of 350 milligrams per liter in a grab sample; or
- d. exceeds the limits established in GWR-CP-EX-DEF for restricted wastes; or
- e. includes prohibited waste, special waste, stormwater, 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:

- a. 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 in accordance with the manufacturer's or engineer's operating instructions. Discharge from that facility which is directed to a GWR operated collection system 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 ADWF (in USGPM) of the receiving treatment facility.
- b. 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 previously discharged at an approved facility and are presently empty.

RECORD KEEPING AND RETENTION

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

- a. all disposals of RV waste into a dedicated pre-treatment facility;
- b. Pre-treatment facility inspection and maintenance activities including:
 - I. the date of inspection or maintenance;
 - II. the maintenance conducted; and
 - III. the type and quantity of material removed from the facility;
- c. 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 to GWR Staff.

Failure to comply with this Code of Practice could result in termination of service, requirement of a Industrial Discharger Service Agreement and/or required monthly cleaning manifest, inspections, and monitoring.

GLOBAL WATER RESOURCES (GWR)**CODE OF PRACTICE****GWR-CP-EX-002****FOOD SERVICE OPERATIONS****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 as a primary or secondary business operation.

This code of practice applies to:

- a. operators of a food services operation that adds kitchen equipment that has the potential to discharge 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 GWR-CP-EX-DEF; or
- c. any food service operation, as determined by the GWR.

Definitions are included in GWR-CP-EX-DEF.

DISCHARGE REGULATIONS

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

- a. oil and grease in a concentration that is in excess of 100 milligrams per liter as analyzed in a grab sample;
- b. suspended solids in a concentration that is in excess of 350 milligrams per liter as analyzed in a grab sample;
- c. 5-day biochemical oxygen demand (BOD5) in a concentration that is in excess of 350 milligrams per liter in a grab sample;
- d. exceeds the limits established in GWR-CP-EX-DEF for restricted wastes;
- e. includes prohibited waste, special waste, stormwater, or uncontaminated water; or
- f. Sanitary wastes are not allowed to be connected to sewer lines intended for grease interceptor service.

GREASE INTERCEPTORS/GREASE TRAPS

Grease interceptors/grease traps are required to be installed and maintained by the Owner/Operator of food service operations within the collection system of GWR facilities. Grease interceptor installations and grease traps shall conform to the requirements of this Code of Practice.

Design

The rated flow capacity of each grease interceptor and/or grease trap installed in food services establishments shall not be less than the maximum discharge flow from all plumbing fixtures connected to the grease interceptor/grease trap that will discharge simultaneously.

The rated flow capacity of each grease interceptor/grease trap must be established using the *Plumbing and Drainage Institute standard PDI-G101* or equivalent test as approved by GWR's engineer.

Each grease interceptor/grease trap must have either:

- a. an internal flow control fitting, or
- b. a flow control fitting installed on the inlet line¹.

All grease interceptors/grease traps must be labeled with information containing the rated flow capacity of the unit. The label shall be permanently affixed and visible following installation. Where a permanently affixed and visible label is not possible or practical, manufacturer and installation drawings of the grease interceptor/grease trap shall be maintained at the site and shall be available for inspection by GWR staff on request.

Access manholes, with a minimum diameter of 24 inches, shall be provided over each grease interceptor chamber and sanitary tee. The access manholes shall extend to finished grade and be designed and maintained to prevent water inflow or infiltration. The manholes shall also have readily removable covers to facilitate inspection, grease removal, and wastewater sampling activities. Design Flow Rates

The operator of a food services operation must calculate the maximum discharge flowrate to a grease interceptor by adding together the flowrates from each fixture that will discharge simultaneously using the following method to estimate the flowrate from each fixture:

- a. for sinks, calculate the total volume of each sink and assign a drain time of one minute;
- b. for exhaust hoods with an automatic cleaning cycle, measure the discharge flowrate or use the manufacturers estimate of peak discharge flowrate during the automatic wash cycle;
- c. for floor drains, estimate the flowrate using the following table:

GREASE INTERCPTOR SIZING

Floor Drain Diameter (Inches)	Drain Rate (GPM)
2	22
3	37.5
4	45

- d. for drains on other equipment, use the table in Section (c) or if the drain size is less than 2 inches in diameter either:
 - I. measure the discharge flowrate, or
 - II. refer to manufacturers estimated peak discharge flowrate, or
 - III. use a minimum of 22 GPM; and

¹ The flow control fitting must be sized to limit the flow to a rate that is no more than the rated flow capacity of the grease interceptor.

GREASE TRAP SIZING (INTERNAL)

Fixture Outlet or Trap Size (Inch)	Drainage Fixture	GPM	PDI Size grease Trap
1 ¼	1	7.5	10
1 ½	2	15	15
2	3	22	25
2 ½	4	30	35
3	5	37.5	50
4	6	45	50

Where the rated flow capacity of a grease interceptor/grease trap is exceeded by the maximum discharge flow rate from all plumbing fixtures that will be discharged simultaneously to the grease interceptor/grease trap, the operator of a food services operation must:

- a. install a grease interceptor/grease trap that has a rated flow capacity equal to or greater than the maximum discharge flowrate from all plumbing fixtures connected to the grease interceptor/grease trap that will discharge simultaneously; or
- b. install additional grease interceptors/grease traps so that the maximum discharge flowrate from fixtures connected to each grease interceptor/grease trap that will discharge simultaneously does not exceed the rated flow capacity of the grease interceptor; or
- c. have a plan approved by GWR's engineer showing how the discharge of waste will be managed.

Installation
GREASE INTERCEPTORS

A grease interceptor must be located so that it is readily and easily accessible for inspection and maintenance. A sampling point shall be installed as follows:

- a. a sampling tee shall be located either at the outlet of the grease interceptor or downstream of the grease interceptor at a location upstream of any discharge of other waste;
- b. the sampling tee shall be not less than 4 inches in diameter, and shall be installed so that it opens in a direction at right angles to and vertically above the flow of the sewer pipe; and
- c. the sampling tee shall be readily and easily accessible at all times for inspection.

GREASE TRAPS

A grease trap must be installed as close as possible to the FOG laden water. It must be installed so maintenance can be easily performed. The cover must be removed periodically to remove the FOG, so the grease trap must be installed to provide this access.

Automatic Grease Recovery Units (AGRU)

This equipment automatically separate and remove grease, fat, and oil from drain water flow. The device allows incidental food solids and other debris found in the entering water to be separated from the grease and pumped out of the solids retention area to the drain. The entire process is controlled automatically by a timer.

- a. Enough clearance should be available to be able to remove and service the internal baffling.
- b. The Flow Control Fitting furnished with a PDI Certified Interceptor must be installed in the waste line ahead of the interceptor.
- c. It should be located beyond the last connection from the fixture and as close as possible to the underside of the lowest fixture to minimize the effects of head pressure.
- d. All installation recommendations are subject to the approval of the local plumbing code authority

Maintenance

An operator of a food services operation shall maintain all grease interceptors/grease trap installed in connection with the food services operation in accordance with the manufacturer's recommendations so that the grease interceptors function properly.

An operator of a food services operation must not permit oil and grease to accumulate in a grease interceptor/grease trap in excess of the lesser of six inches or 25% of the wetted height of the grease interceptor/grease trap.

An operator of a food services operation shall not dispose of oil and grease from a grease interceptor/grease trap to a sewer. All cleaning or grease removal shall be accomplished by employing vacor trucks or other means to preclude any grease from entering the collection system.

An operator of a food services operation must not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water or other agents to facilitate the passage of oil and grease through a grease interceptor without the express written consent of GWR.

Connections to Grease Interceptors/Grease trap

An operator of a food services operation shall have the following fixtures connected to the grease intercept/trap system:

- a. sinks used for washing pots, pans, dishes, cutlery and kitchen utensils;
- b. drains serving self-cleaning exhaust hoods installed over commercial cooking equipment;
- c. drains serving commercial cooking equipment that discharges oil and grease;
- d. drains serving a garbage compactor used to compact waste that may contain, or be contaminated with, food waste; or
- e. other fixtures that discharge wastewater containing oil and grease.

The following fixtures shall not be connected to a grease interceptor/grease trap:

- a. garburators, potato peelers and similar equipment discharging solids;
- b. toilets, urinals and hand sinks;
- c. automatic dishwashers²

² An automatic dishwasher may be connected to a grease interceptor/grease trap provided that there are no other fixtures connected to the grease interceptor/grease trap and the grease interceptor/grease trap is sized to accept the maximum discharge flowrate specified by the dishwasher manufacturer.

GLOBAL WATER RESOURCES**CODE OF PRACTICE****GWR-CP-EX-003****DRY CLEANING OPERATIONS****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 GWR-CP-EX-DEF.

DISCHARGE REGULATIONS

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

- a. Tetrachloroethylene;
- b. petroleum solvents;
- c. Lint
- d. exceeds the limits established in GWR-CP-EX-DEF for restricted wastes; or
- e. includes prohibited waste, special waste, stormwater, or uncontaminated water.

An operator of a dry cleaning operation that generates wastewater containing tetrachloroethylene or petroleum solvent shall either:

- a. Collect and transport the wastewater from the dry cleaning operation for off-site waste management; or
- b. Install and maintain a solvent/water separator and holding tank in accordance with this Code of Practice.

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 GWR operated sewage facility

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.

An operator of a dry cleaning operation must check the contents of the holding tank after the specified period of time has elapsed to determine whether the wastewater contains any visible residual solvent. If there is no visible residual solvent in the holding tank, the contents may be discharged to the sewer.

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.

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 shall:

- a. install spill containment facilities in all chemical storage areas and around all dry cleaning machines;
- b. 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;
- c. inspect all dry cleaning equipment for liquid leaks at least once per day.
- d. keep all equipment clean to ensure that leaks are visible.

The following areas and items are to be checked for leaks:

- a. hose connections, unions, couplings and valves
- b. machine door gasket and seating
- c. filter head gasket and seating
- d. pumps
- e. base tanks and storage
- f. solvent/water separators
- g. filter sludge recovery
- h. distillation unit
- i. diverter valves
- j. saturated lint in lint baskets
- k. holding tanks
- l. 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.

RECORD KEEPING AND RETENTION

The following information shall be recorded in the record book:

- a. record of all inspections done by the operator, employees or other hired personnel;
- b. record of any liquid leaks detected and remedial action taken;

- c. record of solvent/water separator cleaning;
- d. record of holding tank cleaning and solvent transfer; and
- e. record of all other equipment maintenance and repair.

Every dry cleaning operation must keep a record book on site for inspection with records from the previous two years and must be available to GWR Staff upon request.

GLOBAL WATER RESOURCES**CODE OF PRACTICE****GWR-CP-EX-004****PHOTOGRAPHIC IMAGING OPERATIONS****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 GWR-CP-EX-DEF.

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 5 milligrams per litre (mg/L) as analyzed in a grab sample;
- b. exceeds the limits established in GWR-CP-EX-DEF for restricted wastes; or
- c. includes prohibited waste, special waste, stormwater, or uncontaminated water.

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 5 mg/L or less where valid analytical test data has been submitted to, and accepted by, the Engineer.

OPERATION

An operator of a photographic imaging operation shall:

- a. install and maintain silver recovery technology according to the manufacturer's or supplier's recommendations.
- b. collect all liquid waste containing silver in a holding tank and must deliver this waste to the chemical recovery cartridges using a metering pump.
- c. 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 5 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
- 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^{1 2 3}:

- 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;

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.

² 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.

³ 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.

- 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, 5 mg/L.

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.

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.

Records are required to be available to a GWR inspector on request.

GLOBAL WATER RESOURCES**CODE OF PRACTICE****GWR-CP-EX-005****DENTAL OPERATIONS****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.

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 stormwater ; or
- b. exceeds the limits established in GWR-CP-EX-DEF for restricted wastes.

An operator of a dental operation that produces liquid waste from photographic imaging containing silver shall also comply with the requirements of GWR-CP-EX-004.

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 under the provisions of ISO 11143.

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.

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 in the ISO 11143 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 0.1 mg/L or lower, indicates that the total concentration of mercury in the discharge from the amalgam separator is greater than, or equal to, 2 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, into the sewer collection system.

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, operation and maintenance 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 ISO 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 to GWR Staff upon request.

GLOBAL WATER RESOURCES (GWR)**CODE OF PRACTICE****GWR-CP-EX-035****AUTOMOBILE WASH AND REPAIR OPERATIONS****PURPOSE**

This Code of Practice defines the requirements for managing waste discharged directly or indirectly into a sewer connected to a wastewater facility from automobile wash and repair or facilities employing automobile wash and repair as a primary or secondary business operation.

This code of practice applies to:

- a. Operators of automobile washes with floor drains that collect oil, grease and sand.
- b. Operators of automotive repair shops with floor drains that collect oil, grease and sand as a secondary influent.

DISCHARGE REGULATIONS

An operator of an auto wash and/or repair must not discharge waste, which at the point of discharge into a sewer, contains:

- a. Oil and grease concentrations that are in excess of 100 milligrams per liter as analyzed into a grab sample;
- b. Sand, rocks or dirt which could interfere with the collection system.
- c. Additives used to break down surfactant loads shall comply with GWR Definitions Code of Practice – GWR-CP-EX-DEF.
- d. At no time shall rain water be allowed to enter the collection system via floor drains.

SAND AND OIL INTERCEPTORS

Sand and oil interceptors are required to be installed and maintained by the Owner of the automobile wash or repair operations within the collection system of **GWR** facilities. Sand and oil interceptors shall conform to the requirements of this Code of Practice.

Design

Sand and oil interceptors shall be designed by using the 2000 International Plumbing Code (IPC) IPC 1003.3.4.2

Sand and oil interceptors shall have a minimum capacity of six (6) cubic feet for the first 100 square feet of area to be drained, plus 1 square foot for each additional 100 square feet of area to be drained.

Installation

A sand and oil interceptor must be located so that it is readily and easily accessible for inspection and maintenance. A sampling point shall be installed as follows:

- a. A sampling tee shall be located at the outlet of the sand and oil interceptor or downstream of the interceptor at a location upstream of any discharge of other waste;
- b. The sampling tee shall be not less than 10.2 cm (4 inches) in diameter, and shall be installed so that it opens in a direction at right angles to and vertically above the flow of the sewer pipe; and
- c. The sampling tee shall be readily and easily accessible at all times for inspection.

Maintenance

An operator of an automobile wash or repair operation shall maintain all sand and oil interceptors in accordance with the manufacturer's recommendations so that the sand and oil interceptor functions properly.

An operator of an automobile wash or repair operation must not permit sand and oil to accumulate in a sand and oil interceptor in excess of the lesser of six (6) inches or 25% of the wetted height of the interceptor.

An operator of an automobile wash or repair operation shall not dispose of oil and grease from a interceptor to a sewer. All cleaning shall be accomplished by employing vacuor trucks or other means to preclude any sand or oil from entering the collection system.

An operator of an automobile wash or repair operation must not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water or other agents to facilitate the passage of sand or oil through a sand and oil interceptor.

Connections to Sand and Oil Interceptors

An operator of an automobile wash or repair operation shall have the following fixtures connected to the sand and oil interceptor system:

- a. All floor drains, wash sinks and washing machines.

The following fixtures shall not be connected to a sand and oil interceptor:

- a. Toilets, urinals and hand sinks
- b. Storm drains

SAMPLING

At the request of GWR, the operator of an automobile wash or repair operation shall confirm the operation of any sand and oil interceptor via analytical testing. This testing shall be performed by an accredited laboratory, and paid for by the owner of the sand and oil interceptor.

RECORDKEEPING AND RETENTION

An operator of an automobile wash or repair operation must keep a record at the auto wash or repair operation of all sand and oil interceptor inspection and maintenance activities including:

- a. The date of inspection or maintenance;
- b. The maintenance conducted;
- c. The type and quantity of the material removed from the sand and oil interceptor; and
- d. The location of disposal of the material removed from the sand and oil interceptor.

The records shall be retained for a period of two years, and shall be available on request to GWR Staff.

