

Industrial and Sanitary Outfalls 2019 NPDES Permit Re-Application Outfall 03A027 Fact Sheet

Utilities and Infrastructure (U&I)
Strategic Computing Complex (SCC) Cooling Towers



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List of Tables

- Sources for Discharges to Outfall 03A027
- Wastewater Treatment Codes Assigned to Outfall 03A027
- List of Treatment Chemicals used in the Operations that Contribute to Outfall 03A027
- Flow Rates and Frequencies for Discharges to Outfall 03A027
- Potential Future Flow Rates and Frequencies for Outfall 03A027
- Potential Pollutants by Source for Outfall 03A027
- List of Independent Laboratories Used for NPDES Water Analysis

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2019 NPDES PERMIT RE-APPLICATION

Outfall 03A027 Fact Sheet

1.0 OUTFALL LOCATION [Section I]

Outfall ID No.:	03A027	Outfall Location:	Technical Area 3
Category:	03A, Treated Cooling Water Discharges	Originating Structure for the Discharge:	TA-3-2327, Strategic Computing Center (SCC)
Flow Type:	Intermittent	Receiving Stream:	Perennial Reach of Sandia Canyon, Water Quality Segment 20.6.4.126 NMAC
Longitude:	106° 19' 09" W	Latitude:	35° 52' 26" N

2.0 FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES [Section II]

Outfall 03A027 is located at TA-3 and discharges to a perennial reach of Sandia Canyon in Water Quality Segment 20.6.4.126 NMAC. The outfall is capable of discharging treated cooling water that originates from the Strategic Computing Complex (SCC) at TA-3-2327. Attachment A provides a location map. The cooling tower blow-down is comprised of potable water and/or recycled Sanitary Wastewater System (SWWS) effluent from the Sanitary Effluent Reclamation Facility (SERF) that is treated by the cooling tower water treatment system. Table 1 identifies the discharge source, the source location, and source composition.

TA	Building	Source Type	Transportation Mode (Piping, Truck etc.)	Discharge Source	Source Composition
3	2327	Cooling	Piping	SCC Cooling Towers	Treated Cooling Tower Blowdown Potable Water Used as Makeup Water SERF Effluent Used as Makeup Water <ul style="list-style-type: none"> - SERF Treatment Chemicals - SWWS Treatment Chemicals and Chemicals identified on Influent Waste Stream Profile Forms

SCC = Strategic Computing Complex; SERF = Sanitary Effluent Reclamation Facility; SWWS = Sanitary Wastewater System

2.1 Process Schematic and Water Balance [II.A]

A process schematic line drawing that shows the outfall sources and route taken by water is provided in Attachment B. This drawing includes all operations that contribute treated cooling water to the discharge at Outfall 03A027. A water balance is also provided on the process schematic with average flows. The water balance is based upon data collected from operations personnel.

2.2 Water Treatment Processes [II.B]

The SCC currently has ten cooling towers that provide cooling water to the chillers and heat exchangers to support cooling of computers, equipment, and the building office areas. Makeup water is fed to the tower basins, circulated through the facility chillers and heat exchangers, and routed back to the cooling towers approximately 2-3 times before it is blown down and recharged with fresh makeup water. The cooling towers are maintained by two identical water treatment systems that draw a small amount of water from the basin discharge line (for circulation and/or blowdown) into a process logic controller and monitoring system to determine conductivity and chlorine content. This system determines the amount water treatment chemicals and makeup water added to the tower basins. It also determines the amount and rate of blowdown from the tower. Table 2 identifies the wastewater treatment codes associated with the water treatment system. Attachment C provides photographs of the outfall, cooling towers, and the wastewater treatment equipment.

Source	Treatment Code	Description	Justification
SCC Cooling Towers	2-E	Dechlorination	Chlorine Scavenger Chemicals are Added
	2-H	Disinfection (other)	Chemicals are added to Control Microorganisms
	2-L	Reduction	Chemicals that are Antiscalant and Corrosion Inhibitors are Added

SCC = Strategic Computing Complex;

The water treatment processes identified in Table 2 utilize chemicals to monitor the water quality in the cooling tower, control corrosion, limit biological growth, and de-chlorinate blowdown prior to discharge. Table 3 provides a list of the chemicals used to treat the water.

Source	Chemical Name	Reason for Use	Toxic Pollutant and/or Hazardous Substances Table 2C-3 or 2C-4	
SCC Cooling Towers	Bromine Tablets	Biocide	Bromo-chloro-5,5-dimethyl hydantoin (chlorine source)	2C-4
	HACH 203832	Sulfuric Acid Solution 19.2N	Sulfuric Acid	2C-4
	HACH 1407028	Free Chlorine Reagent	Sodium Phosphate Dibasic	2C-4
			EDTA	2C-4
	HACH 2076053	Molybdovanadate Reagent	Sulfuric Acid	2C-4
	HACH 2105669	Total Chlorine Reagent	Sodium Phosphate Dibasic	2C-4
	HACH 2263411	Total Chlorine Indicator	Sulfuric Acid	2C-4
	HACH 2263511	Total Chlorine Buffer Solution	Sodium Hydroxide	2C-4
			EDTA	2C-4
	HACH 2297255	Compound for Free and Total Chlorine Analyzers	NA	NA
	HACH 2314011	Free Chlorine Indicator Solution for CL-17 Analyzer	Toluene	2C-4
	HACH 2314111	Free Chlorine Buffer for CL-117 Analyzer	NA	NA
	HACH 2756549	pH Storage Solution	Sodium Phosphate Dibasic	2C-4
	WEST C-358P	Corrosion Inhibitor & Antiscalant	Potassium Hydroxide	2C-4
	WEST C-825	pH control (neutralization)	Sodium Bisulfite	2C-4
	WEST R-630	Dechlorination	Sodium Bisulfite	2C-4
Bright Dyes FLT Yellow/Green Liquid	Water Line & Drain Tracing Dye	NA	NA	
Bright Dyes FLT Yellow/Green Tablet	Water Line & Drain Tracing Dye	NA	NA	
SERF Treatment Chemicals ^a	40% Ferric Chloride	Promote Precipitation	Ferric Chloride	2C-4
	25% Magnesium Chloride	Promote Precipitation	Magnesium Chloride	NA
	33% Hydrochloric Acid	pH Adjustment	Hydrochloric Acid	2C-4
	35% Sodium Hypochlorite	Clean/Disinfect RO Units	Sodium Hypochlorite	2C-4
	25% Sodium Hydroxide	pH Adjustment	Sodium Hydroxide	2C-4
	38% Sodium Bisulfite	Injected prior to the RO Unit as a de-chlorinating Agent.	Sodium Bisulfite	2C-4
	Perma Treat PC-510T	RO Unit Antiscalant Polymer	Sodium Nitrite	2C-4

Source	Chemical Name	Reason for Use	Toxic Pollutant and/or Hazardous Substances Table 2C-3 or 2C-4	
	Bright Dyes FLT Yellow/Green Liquid	Water Line & Drain Tracing Dye	NA	NA
	Bright Dyes FLT Yellow/Green Tablet	Water Line & Drain Tracing Dye	NA	NA
SWWS Treatment Chemicals ^b	Clarifloc C-6265	Polymer Flocculation Agent	NA	NA
	Dog Food	Food Source for Microorganisms	NA	NA
	Glycerin	Carbon Source for Microorganisms	NA	NA
	Sodium Bisulfite	Dechlorination	Sodium Bisulfite	2C-4
	Soda Ash [Na ₂ CO ₃]	Add Alkalinity	Sodium carbonate	NA
	Sodium Chloride	Chlorine Source for Disinfection Using the MIOX System	Chlorine	2C-4
	Sulfur Dioxide	Dechlorination	NA	NA
	Bright Dyes FLT Yellow/Green Liquid	Water Line & Drain Tracing Dye	NA	NA
	Bright Dyes FLT Yellow/Green Tablet	Water Line & Drain Tracing Dye	NA	NA
<p>a. See the permit application section provided for Outfall 001 for the Safety Data Sheets associated with SERF.</p> <p>b. See the permit application section provided for Outfall 13S for the Safety Data Sheets associated with SWWS.</p> <p>EDTA = Ethylene Diamine Tetraacetic Acid; MIOX = mixed oxide; NA = not applicable; RO = reverse osmosis; SCC = Strategic Computing Complex; SERF = Sanitary Effluent Reclamation Facility; SWWS = Sanitary Wastewater System</p>				

The blowdown from the SCC Cooling Towers can be routed to discharge at Outfall 03A027; discharge at Outfall 001; the Reuse Tank at the Power Plant for recycle at SERF; or discharge to the SWWS treatment plant. The route of the blowdown is determined by demand, volume, and outfall/equipment availability. Attachment E provides the Safety Data Sheets (SDS) associated with the water treatment system at the SCC Cooling Towers. The permit application sections provided for Outfalls 001 and 13S provide the SDSs for SERF and the SWWS, respectively.

2.3 Discharge Rate and Frequency [II.C]

The discharge rates and frequencies for Outfall 03A027 are provided in Table 4.

Source ^{a, b}	Frequency		Flow Rates and Volumes				
	Days/Week	Months	Average (MGD)	Maximum (MGD)	Average Volume (GPD)	Maximum Volume (GPD)	Duration (days)
SCC Cooling Towers (10 towers)	7	12	0.051	0.105	50,679	104,804	365

- a. Blowdown from the SCC Cooling Towers may be routed to Outfall 03A027, Outfall 001, or the SWWS as needed to allow for water recycling, construction, and/or maintenance activities.
- b. Calculated between October 2017 and September 2016.

GPD = gallons per day; MGD = million gallons per day; SCC = Strategic Computing Complex

3.0 PRODUCTION [Section III]

Section III is not applicable to Outfall 03A027.

4.0 IMPROVEMENTS [Section IV]

The SCC is currently adding 5 additional cooling towers to its cooling system. These towers will utilize the existing water treatment system and makeup water supply described in Section 2.3. A Notice of Change will be submitted for these future changes prior to their implementation and impact to the outfall. Table 5 provides an estimate for the future flow rates and frequencies of makeup water and blowdown when the new towers come online. Attachment B provides a proposed schematic and water balance for the future configuration.

Source	Frequency		Flow Rates and Volumes				
	Days/Week	Months	Average (MGD)	Maximum (MGD)	Average Volume (GPD)	Maximum Volume (GPD)	Duration (days)
SCC Cooling Towers (15 Towers)	7.0	12	0.076	0.157	74,436	201,056	365

GPD = gallons per day; MGD = million gallons per day; SCC = Strategic Computing Center

5.0 INTAKE AND EFFLUENT CHARACTERISTICS [Section V]

5.1 Analytical Data [V.A, B, and C]

The analytical results provided for the Outfall 03A027 Permit Reapplication on the Form 2C were provided from the following sources:

- Samples collected on August 29, 2018 and shipped to an independent laboratory for analysis.
- Field samples collected and analyzed on August 29, 2018 for temperature, residual chlorine, and pH.
- Field samples collected and analyzed on February 4, 2019 for sulfite.
- Discharge monitoring report summary for Outfall 03A027 from October 2014 to September 2018 (Attachment D).
- Hardness = 26 mg/L (CaCO₃)

5.2 Potential Pollutants [V.D]

The treatment chemicals associated with the SCC Cooling Tower water treatment system, the use of potable water, and the reuse of SWWS effluent that has been conditioned at the SERF constitutes the pollutant load of the discharge to Outfall 03A027. Table 6 identifies the Table 2C-3 and 2C-4 pollutants by discharge source. It also identifies those pollutants (if any) that were detected in the analytical results from the samples collected for the 2019 Permit Renewal Application.

Source	POTENTIAL Toxic Pollutant and/or Hazardous Substances Table 2C-3 or 2C-4		Analytical Data Results from Operational Samples Collected for Outfall 03A027 ^a
SCC Cooling Tower Water Treatment Chemicals	EDTA	2C-4	pH = 7.4 – 9.1 S.U.
	Potassium Hydroxide	2C-4	pH = 7.4 – 9.1 S.U.
	Sodium Bisulfite	2C-4	Sulfite 6.0 mg/L
	Sodium Hydroxide	2C-4	pH = 7.4 – 9.1 S.U.
	Sodium Phosphate Dibasic	2C-4	Total Phosphorus = 3.55 mg/L
	Sulfuric Acid	2C-4	pH = 7.4 – 9.1 S.U.
	Toluene	2C-4	Not Detected (VOC)
Potable Makeup Water	Chlorine	2C-4	Total Residual Chlorine = 0
			Total Residual Chlorine = 0
SERF Effluent Makeup Water - Treatment Chemicals Used at SERF	Ferric Chloride	2C-4	Chloride = 68.9 mg/L Iron was not detected.
	Hydrochloric Acid	2C-4	pH = 7.4 – 9.1 S.U.

Table 6
Potential Pollutants by Source for Outfall 03A027

Source	POTENTIAL Toxic Pollutant and/or Hazardous Substances Table 2C-3 or 2C-4		Analytical Data Results from Operational Samples Collected for Outfall 03A027 ^a
	Magnesium Chloride	2C-4	Chloride = 68.9 mg/L Magnesium = 2050 mg/L
	Sodium Bisulfite	2C-4	Sulfite 6.0 mg/L
	Sodium Hydroxide	2C-4	pH = 7.4 - 9.1 S.U.
	Sodium Hypochlorite	2C-4	Chloride = 68.9 mg/L
	Sodium Nitrite	2C-4	Nitrate/Nitrite = 0.95 mg/L
SWWS Treated Effluent - Treatment Chemicals Used at SWWS	Acetic Acid	2C-4	pH = 7.4 - 9.1 S.U.
	Calcium Hypochlorite	2C-4	Chloride = 68.9 mg/L
	Chlorine	2C-4	Total Residual Chlorine = 0
	Sodium Bisulfite	2C-4	Sulfite 6.0 mg/L
	Sodium Hydroxide	2C-4	pH = 7.4 - 9.1 S.U.
	Sodium Hypochlorite	2C-4	Chloride = 68.9 mg/L
SWWS Treated Effluent - Chemicals identified on Influent Waste Stream Profile Forms	Acetic Acid	2C-4	pH = 7.4 - 9.1 S.U.
	Acetone	2C-4	Not Analyzed ^c
	Ammonia	2C-4	0.112 mg/L
	Aniline	2C-3 & 2C-4	Not Analyzed ^c
	Benzene	2C-4	Not Detected (VOC)
	Benzoic acid	2C-4	pH = 7.4 - 9.1 S.U.
	Calcium Hypochlorite	2C-4	Chloride = 68.9 mg/L
	Carbon Disulfide	2C-3 & 2C-4	Not Analyzed ^c
	Chlorine	2C-4	Total residual chlorine = 0
	Chloroform	2C-4	Not Detected (VOC)
	Cresol	2C-3 & 2C-4	Not Analyzed ^c
	Ethylbenzene	2C-4	Not Detected (VOC)
	Polychlorinated Biphenyls ^b	2C-4	Not Detected
	Phenol	2C-4	5.03 ug/L
	Phosphoric Acid	2C-4	pH = 7.4 - 9.1 S.U.
	Potassium Hydroxide	2C-4	pH = 7.4 - 9.1 S.U.
	Sodium	2C-4	Not Analyzed ^c
	Sodium Bisulfite	2C-4	Sulfite 6.0 mg/L
	Sodium Hydroxide	2C-4	pH = 7.4 - 9.1 S.U.
	Sodium Hypochlorite	2C-4	Chloride = 68.9 mg/L
	Sodium Nitrite	2C-4	Nitrate/Nitrite = 0.95 mg/L
	Strontium	2C-3	Not Analyzed ^c
	Styrene	2C-3 & 2C-4	Not Analyzed ^c
Toluene	2C-4	Not Detected (VOC)	
Uranium	2C-3	Not Analyzed ^c	
Vanadium	2C-3	Not Analyzed ^c	

- Results are from operational samples collected from the cooling tower blowdown at the SCC. Currently the effluent from the SCC is routed to Outfall 001.
- Results were obtained using the EPA Aroclor Method 608.3 as required by the Form 2C. Low concentrations of PCBs have been detected in the waters discharged for treatment at SWWS and in the discharged to Outfall 001 using the Congener Method.
- The potential pollutant was not analyzed because it is not specifically called out on the Form 2C.

EDTA = Ethylene Diamine Tetra-Acetic Acid; PCB = polychlorinated biphenyls; SCC = Strategic Computing Center; SERF = Sanitary Effluent Reclamation Facility; SVOC = semi-volatile organic compounds; S.U. = Standard Units; SWWS = Sanitary Wastewater System; VOC = Volatile Organic Compound

The safety data sheets associated with the chemicals used to treat water at the SCC, SWWS, and SERF are provided in Attachment E.

6.0 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS [Section VI]

Section VI is not applicable to Outfall 03A027.

7.0 BIOLOGICAL TOXICITY TESTING DATA [Section VII]

Whole Effluent Toxicity (WET) 7 Day Chronic Toxicity was performed on March 16, 18, and 20 of 2015 to determine the results at a critical dilution of 23% using a dilution series of 10%, 13%, 17%, 23%, and 31%. The WET including the following criteria as required by the permit:

- Ceriodaphnia dubia, 3-hr composite, 1/5 Years (term)
- Pimephales promelas, 3-hr composite, 1/5 Years (term)

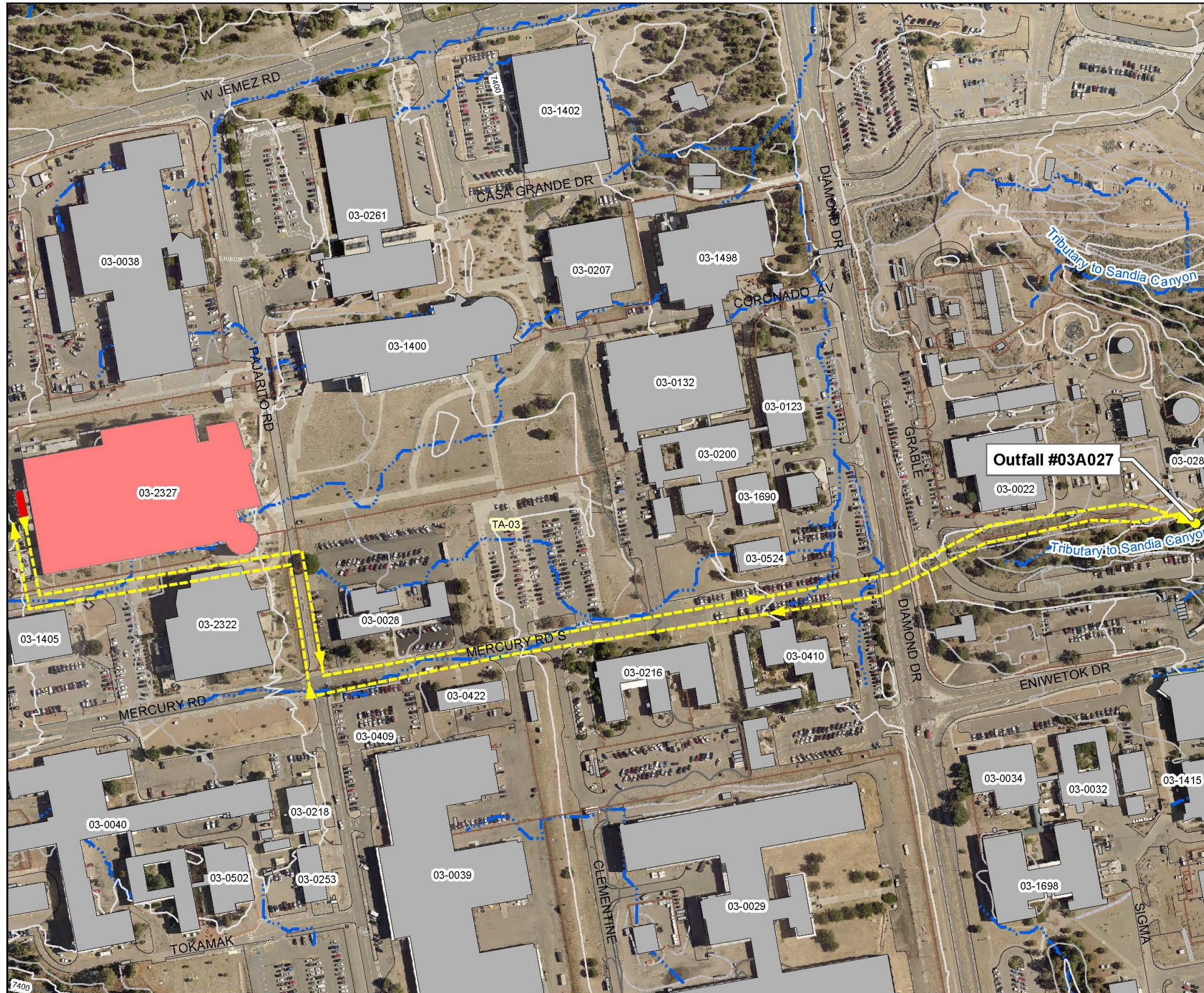
The WET test results indicated that the effluent from Outfall 03A027 passed the test for both Ceriodaphnia dubia and Pimephales promelas and no further testing has been performed. See the WET Test Summary Report provided in Attachment D of the Fact Sheet provided with the permit application.

8.0 CONTRACT ANALYSIS INFORMATION [Section VIII]

Samples from the SCC Cooling Tower Blowdown were collected on August 29, 2018 for the Form 2C constituents required by the permit application forms. These samples were submitted to independent laboratories as summarized in in Table 7.

Laboratory Name	Address and Contact Info	Analytes
GEL Laboratories LLC	2040 Savage Road Charleston SC 29407 (843) 556-8171	Biological Oxygen Demand, General Chemistry, Pesticides, Polychlorinated Biphenyls, Radiochemistry, Semi-volatile Organic Compounds, Total Metals, Total Suspended Solids, Volatile Organic Compounds
New Mexico Water Testing Laboratory, Inc.	401 North Coronado Ave Española, NM 87532 (505) 929-4545	E.coli
Cape Fear Analytical LLC	3306 Kitty Hawk Road Suite 120 Wilmington, NC 28405 (910) 795-0421	TCDD (Dioxin)
Pacific EcoRisk	2250 Cordelia Rd. Fairfield, CA 94534 (707) 207-7760	Whole Effluent Toxicity

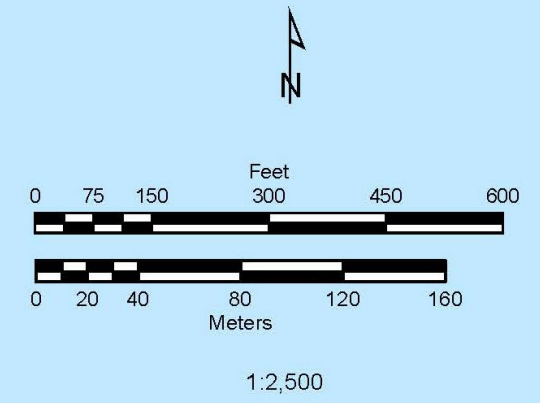
ATTACHMENT A: Location Map for Outfall 03A027



NPDES Permit Re-Application Project
TA-03 Building 2327
Outfall #03A027

Legend

NPDES Outfall	Dirt Roads
Outfall Flow	Paved Roads
Springs	Source Structures
Drainages	Building Served by Source
100ft Contours	Structures
20ft Contours	LANL Boundary
10ft Contours	Technical Areas
Fences	



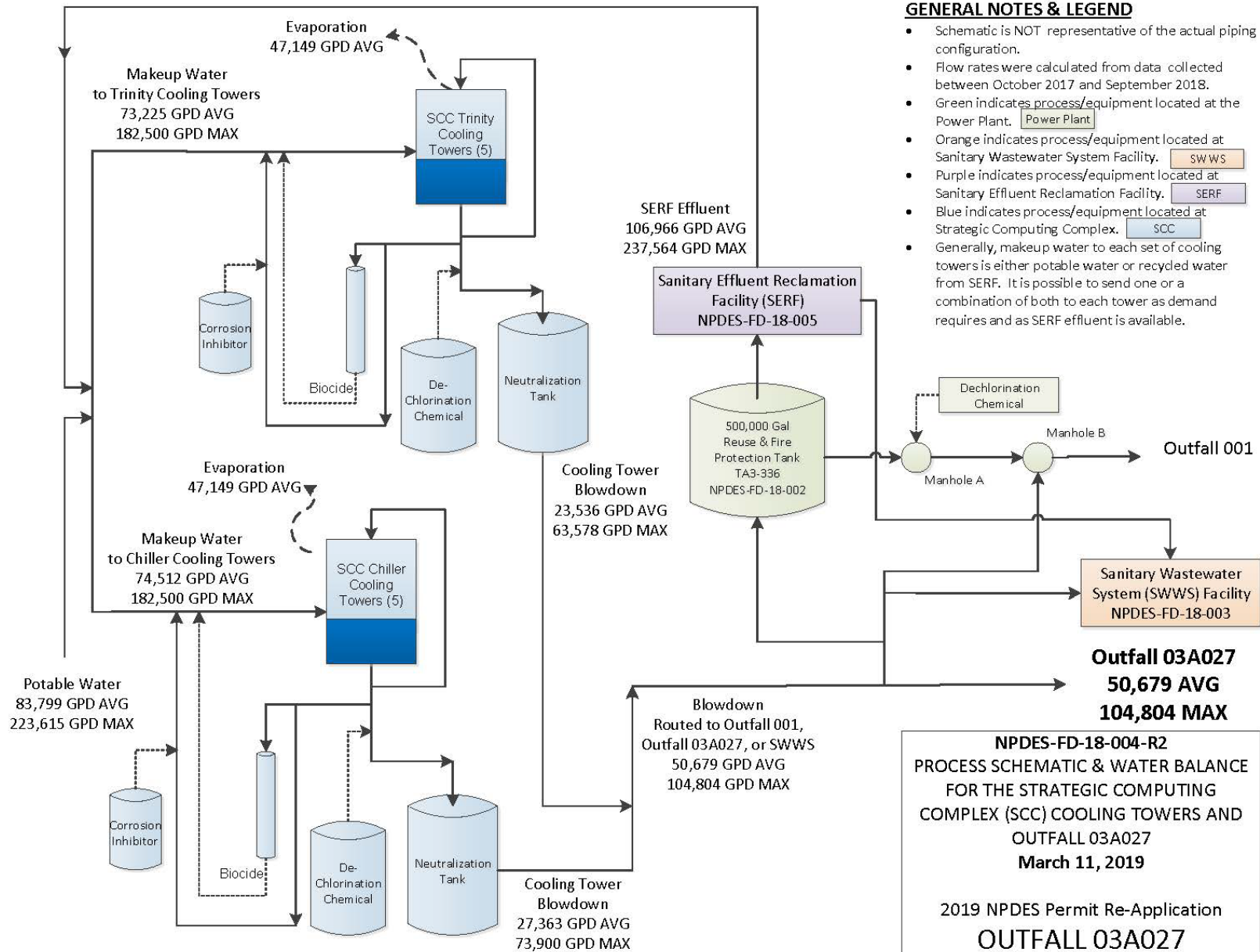
State Plane Coordinate System
New Mexico, Central Zone, US Feet
NAD 1983 Datum, NGVD 1929

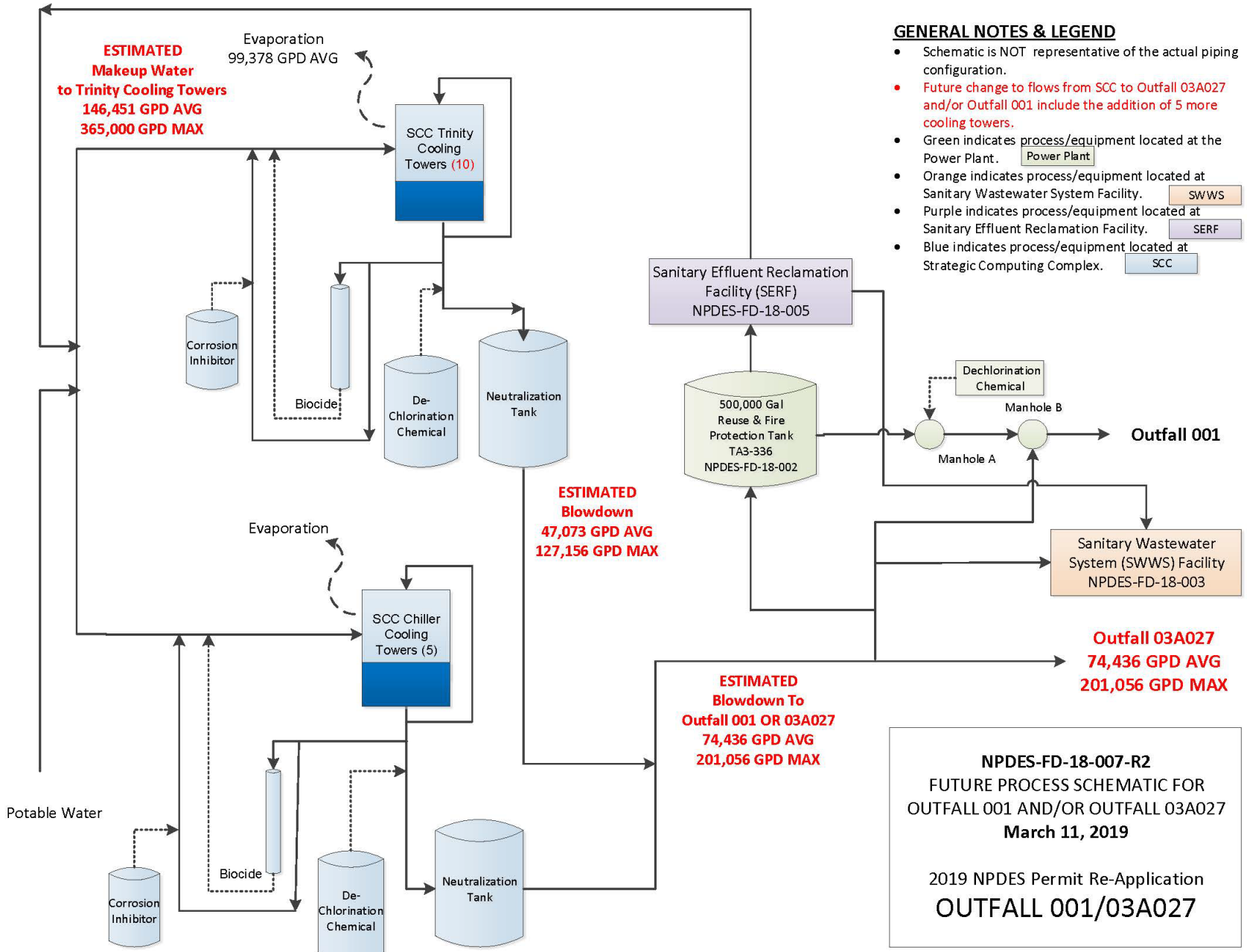
Map Updated By: Bethann McVicker, IF-PROG
Map #18-129-10 21 February 2019

Disclaimer: This map was created for work processes associated with the Water Quality & RCRA. All other uses for this map should be confirmed with LANL EPC-RCRA staff.

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ATTACHMENT B: Process Schematics and Water Balances for Outfall 03A027





ATTACHMENT C: Photographs

Photograph ID No.	Photograph Title
NPDES-03A027-18-002	Outfall 03A027 Condition at Discharge Location
NPDES-03A027-18-003	Outfall 03A027 Receiving Stream Perennial Reach of Sandia Canyon, Water Quality Segment Number 20.6.4.126 NMAC
NPDES-03A027-18-004	SCC Chiller Cooling Towers
NPDES-03A027-18-005	SCC Chiller Cooling Towers - Raw Chemical Feed
NPDES-03A027-18-006	SCC Chiller Cooling Towers - Corrosion Inhibitor Feed Tank
NPDES-03A027-18-007	SCC Chiller Cooling Towers - Dechlorination Chemical Feed Tank
NPDES-03A027-18-008	SCC Chiller Cooling Towers - Neutralization Tank
NPDES-03A027-18-009	SCC Chiller Cooling Towers - Brominator
NPDES-03A027-18-010	SCC Trinity Cooling Towers
NPDES-03A027-18-011	SCC Trinity Cooling Towers – Dechlorination Chemical Feed Tank
NPDES-03A027-18-012	SCC Trinity Cooling Towers - Brominators
NPDES-03A027-18-013	SCC Trinity Cooling Towers – pH Adjustment Chemical Feed Tank
NPDES-03A027-18-014	SCC Trinity Cooling Towers – Corrosion Inhibitor Feed Tank
NPDES-03A027-18-015	SCC Trinity Cooling Towers – Neutralization Tank

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Photograph - NPDES-03A027-18-002
Outfall 03A027 Condition at Discharge Location



Photograph - NPDES-03A027-18-003
Outfall 03A027 Receiving Stream Perennial Reach of Sandia Canyon,
Water Quality Segment Number 20.6.4.126 NMAC



Photograph - NPDES-03A027-18-004
SCC Chiller Cooling Towers



Photograph - NPDES-03A027-18-005
SCC Chiller Cooling Towers - Raw Chemical Feed



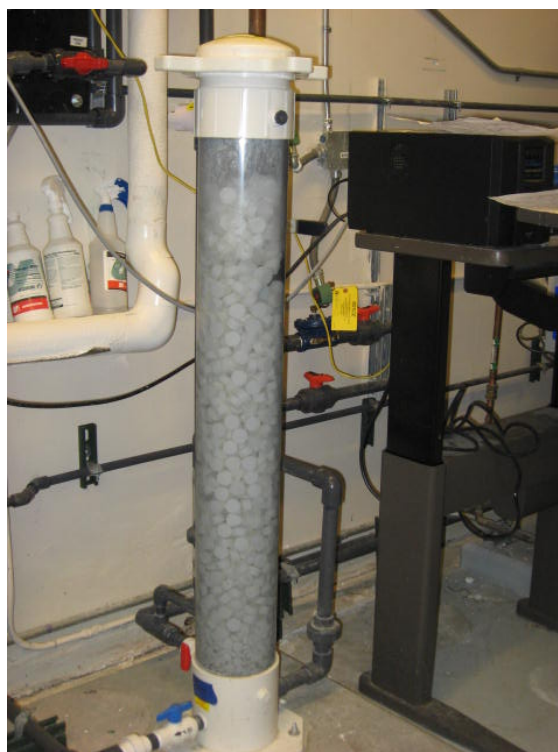
Photograph - NPDES-03A027-18-006
SCC Chiller Cooling Towers - Corrosion Inhibitor Feed Tank



Photograph - NPDES-03A027-18-007
SCC Chiller Cooling Towers - Dechlorination Chemical Feed Tank



Photograph - NPDES-03A027-18-008
SCC Chiller Cooling Towers - Neutralization Tank



Photograph - NPDES-03A027-18-009
SCC Chiller Cooling Towers - Brominator



Photograph - NPDES-03A027-18-010
SCC Trinity Cooling Towers



Photograph - NPDES-03A027-18-011
SCC Trinity Cooling Towers – Dechlorination Chemical Feed Tank



Photograph - NPDES-03A027-18-012
SCC Trinity Cooling Towers - Brominators



Photograph - NPDES-03A027-18-013
SCC Trinity Cooling Towers – pH Adjustment Chemical Feed Tank



Photograph - NPDES-03A027-18-014
SCC Trinity Cooling Towers – Corrosion Inhibitor Feed Tank



Photograph - NPDES-03A027-18-015
SCC Trinity Cooling Towers – Neutralization Tank

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ATTACHMENT D: Summary Discharge Monitoring Report October 2014 – September 2018

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration					Number of Samples	Frequently	Notes
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit			
03A027	TA3-2327	2014	Oct	Flow (Totalized Est.)	0.027965	0.032900	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2014	Nov	Flow (Totalized Est.)	0.022840	0.026400	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2014	Dec	Flow (Totalized Est.)	0.023619	0.031600	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Jan	Flow (Totalized Est.)	0.022339	0.027400	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Feb	Flow (Totalized Est.)	0.023029	0.026400	MGD						28	Daily	Permit Requirement
03A027	TA3-2327	2015	Mar	Flow (Totalized Est.)	0.026155	0.034400	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Apr	Flow (Totalized Est.)	0.026600	0.031200	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2015	May	Flow (Totalized Est.)	0.028423	0.032300	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Jun	Flow (Totalized Est.)	0.034463	0.039100	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2015	Jul	Flow (Totalized Est.)	0.033894	0.040000	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Aug	Flow (Totalized Est.)	0.027181	0.041200	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Sept	Flow (Totalized Est.)	0.020607	0.027800	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2015	Oct	Flow (Totalized Est.)	0.032220	0.051000	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2015	Nov	Flow (Totalized Est.)	0.036513	0.047200	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2015	Dec	Flow (Totalized Est.)	0.038635	0.043300	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Jan	Flow (Totalized Est.)	0.039161	0.042300	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Feb	Flow (Totalized Est.)	0.042517	0.046300	MGD						29	Daily	Permit Requirement
03A027	TA3-2327	2016	Mar	Flow (Totalized Est.)	0.030868	0.045500	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Apr	Flow (Totalized Est.)	0.031647	0.036300	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2016	May	Flow (Totalized Est.)	0.034303	0.039100	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Jun	Flow (Totalized Est.)	0.041623	0.053600	MGD						30	Daily	Permit Requirement
03A027	TA3-2327	2016	Jul	Flow (Totalized Est.)	0.047310	0.052600	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Aug	Flow (Totalized Est.)	0.035823	0.043800	MGD						31	Daily	Permit Requirement
03A027	TA3-2327	2016	Sept	Flow (Totalized Est.)	0.031850	0.033500	MGD						8	Daily	Permit Requirement
03A027	TA3-2327	2016	Oct	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2016	Nov	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2016	Dec	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Jan	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Feb	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Mar	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Apr	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	May	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Jun	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Jul	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Aug	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Sept	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Oct	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Nov	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2017	Dec	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001
03A027	TA3-2327	2018	Jan	Flow (Totalized Est.)	****	****	MGD						0	Daily	Discharged to Outfall 001

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration							Number of Samples	Frequently	Notes
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units				
03A027	TA3-2327	2018	Feb	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Mar	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Apr	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	May	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jun	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jul	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Aug	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
03A027	TA3-2327	2018	Sept	Flow (Totalized Est.)	****	****	MGD							0	Daily	Discharged to Outfall 001	
Maximum 30 Day Average				Flow (Totalized Est.)	0.0473		MGD							344			
30 Day Maximum				Flow (Totalized Est.)		0.0536	MGD							344			
03A027	TA3-2327	2014	Oct	pH				7.6	****	8	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2014	Nov	pH				7.8	****	7.9	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2014	Dec	pH				7.8	****	8	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Jan	pH				7.8	****	8.2	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Feb	pH				7.9	****	8.1	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Mar	pH				7.4	****	7.7	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Apr	pH				7.7	****	8.2	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	May	pH				7.3	****	7.8	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Jun	pH				7.5	****	7.9	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Jul	pH				7.4	****	7.8	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Aug	pH				7.6	****	8.1	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Sept	pH				7.6	****	8.4	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Oct	pH				7.8	****	8.2	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Nov	pH				7.4	****	8	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2015	Dec	pH				7.5	****	8.1	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Jan	pH				8	****	8.4	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Feb	pH				8.2	****	8.4	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Mar	pH				8.1	****	8.3	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Apr	pH				7.9	****	8.2	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2016	May	pH				7.9	****	8.1	S.U.	6.6-8.8	S.U.	4	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Jun	pH				7.9	****	8	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Jul	pH				7.7	****	8.3	S.U.	6.6-8.8	S.U.	5	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Aug	pH				7.9	****	9.1	S.U.	6.6-8.8	S.U.	6	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Sept	pH				8	****	8	S.U.	6.6-8.8	S.U.	1	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Oct	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2016	Nov	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2016	Dec	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jan	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Feb	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Mar	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Apr	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001	

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration								
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units	Number of Samples	Frequently	Notes
03A027	TA3-2327	2017	May	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Jun	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Jul	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Aug	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Sept	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Oct	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Nov	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2017	Dec	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Jan	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Feb	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Mar	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Apr	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	May	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Jun	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
03A027	TA3-2327	2018	Jul	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
	TA3-2327	2018	Aug	pH				****	****	7.7	S.U.	****	****	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Sept	pH				****	****	****	S.U.	6.6-8.8	S.U.	0	Weekly	Discharged to Outfall 001
				pH			30 Day Average	7.65		8.3		6.6	S.U.	105		
				pH			Minimum	7.3				6.6	S.U.	105		
				pH			Maximum			9.1		8.8	S.U.	105		
03A027	TA3-2327	2014	Oct	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement
03A027	TA3-2327	2014	Nov	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2014	Dec	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement
03A027	TA3-2327	2015	Jan	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Feb	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Mar	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Apr	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	May	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Jun	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Jul	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement
03A027	TA3-2327	2015	Aug	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Sept	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement
03A027	TA3-2327	2015	Oct	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Nov	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2015	Dec	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2016	Jan	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2016	Feb	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2016	Mar	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement
03A027	TA3-2327	2016	Apr	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2016	May	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	4	Weekly	Permit Requirement
03A027	TA3-2327	2016	Jun	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration									
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units	Number of Samples	Frequently	Notes	
03A027	TA3-2327	2016	Jul	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	5	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Aug	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	6	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Sept	Chlorine, Total Residual				****	****	0	mg/L	0.011	mg/L	1	Weekly	Permit Requirement	
03A027	TA3-2327	2016	Oct	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2016	Nov	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2016	Dec	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jan	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Feb	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Mar	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Apr	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	May	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jun	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jul	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Aug	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Sept	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Oct	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Nov	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2017	Dec	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jan	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Feb	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Mar	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Apr	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	May	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jun	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jul	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
03A027	TA3-2327	2018	Aug	Chlorine, Total Residual				****	****	0	mg/L	****	****	1	Operational Sample	2019 Permit Application Sample	
03A027	TA3-2327	2018	Sept	Chlorine, Total Residual				****	****	****	mg/L	0.011	mg/L	0	Weekly	Discharged to Outfall 001	
Chlorine, Total Residual					Daily Average				0.0					103			
Chlorine, Total Residual					Maximum 30 Day Average				0						103		
Chlorine, Total Residual					Maximum					0					103		
03A027	TA3-2327	2014	Oct	E.Coli				****	<2.5	6.3	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2014	Nov	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2014	Dec	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Jan	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Feb	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Mar	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Apr	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	May	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Jun	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Jul	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Aug	E.Coli				****	<1.4	2	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration									
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units	Number of Samples	Frequently	Notes	
03A027	TA3-2327	2015	Sept	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Oct	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Nov	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2015	Dec	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Jan	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Feb	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Mar	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Apr	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	May	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Jun	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Jul	E.Coli				****	<1	<1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Aug	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	2	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Sept	E.Coli				****	<1	1	cfu/100ml	548-2507	cfu/100ml	1	2/Month	Permit Requirement	
03A027	TA3-2327	2016	Oct	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2016	Nov	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2016	Dec	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jan	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Feb	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Mar	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Apr	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	May	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jun	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Jul	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Aug	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Sept	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Oct	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Nov	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2017	Dec	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jan	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Feb	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Mar	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Apr	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	May	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jun	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Jul	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
03A027	TA3-2327	2018	Aug	E.Coli				****	****	<1	cfu/100ml	****	****	1	Operational Sample	2019 Permit Application Sample	
03A027	TA3-2327	2018	Sept	E.Coli				****	****	****	cfu/100ml	548-2507	cfu/100ml	0	2/Month	Discharged to Outfall 001	
				E.Coli	Daily Average				1.9						48		
				E.Coli	Maximum 30 Day Average				6.3						48		
				E.Coli	Daily Maximum					6.3					48		
03A027	TA3-2327	2014	Dec	Total Suspended Solids				****	2.1	2.1	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement	

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration								
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units	Number of Samples	Frequently	Notes
03A027	TA3-2327	2015	Mar	Total Suspended Solids				****	2.6	2.6	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Jun	Total Suspended Solids				****	2.3	2.3	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Sept	Total Suspended Solids				****	2	2	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Dec	Total Suspended Solids				****	1.3	1.3	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Mar	Total Suspended Solids				****	1.5	1.5	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Jun	Total Suspended Solids				****	2.2	2.2	mg/L	30 Monthly, 100 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Sept	Total Suspended Solids				****	4.86	5.52	mg/L	30 Monthly, 100 Daily Max	mg/L	2	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Dec	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Mar	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Jun	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Sept	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Dec	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Mar	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Jun	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Aug	Total Suspended Solids				****	1.9	1.9	mg/L	30 Monthly, 100 Daily Max	****	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Sept	Total Suspended Solids				****	****	****	mg/L	30 Monthly, 100 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
Total Suspended Solids					Daily Average				2.3				mg/L	10		
Total Suspended Solids					Maximum 30 Day Average				4.86				mg/L	10		
Total Suspended Solids					Maximum					5.52			mg/L	10		
03A027	TA3-2327	2014	Dec	Phosphorus, Total				****	3.19	3.19	mg/L	20 Monthly, 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Mar	Phosphorus, Total				****	3.19	3.19	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Jun	Phosphorus, Total				****	3.2	3.2	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Sept	Phosphorus, Total				****	3.55	3.55	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2015	Dec	Phosphorus, Total				****	2.04	2.04	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Mar	Phosphorus, Total				****	0.239	0.239	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Jun	Phosphorus, Total				****	0.929	0.929	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Sept	Phosphorus, Total				****	1.55	1.55	mg/L	20 Monthly 40 Daily Max	mg/L	1	Quarterly	Permit Requirement
03A027	TA3-2327	2016	Dec	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Mar	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Jun	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Sept	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2017	Dec	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Mar	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Jun	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
03A027	TA3-2327	2018	Aug	Phosphorus, Total				****	1.87	1.87	mg/L	****	****	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Aug	Phosphorus, Total				****	****	****	mg/L	20 Monthly 40 Daily Max	mg/L	0	Quarterly	Discharged to Outfall 001
Phosphorus, Total					Daily Average				2.20					9		
Phosphorus, Total					Maximum 30 Day Average				3.55					9		
Phosphorus, Total					Maximum					3.55				9		
03A027	TA3-2327	2015	Sept	Chromium VI					0.00641	0.00641	mg/L	NA	NA	1	Term	Permit Requirement
Chromium VI					Daily Average				0.00641					1		
Chromium VI					Maximum 30 Day Average					0.00641				1		
Chromium VI					Maximum					0.00641				1		
03A027	TA3-2327	2015	Sept	Copper				****	0.0181	0.0181	mg/L	NA	NA	1	Yearly	Permit Requirement
03A027	TA3-2327	2016	Sept	Copper				****	0.00847	0.00847	mg/L	NA	NA	2	Yearly	Permit Requirement
03A027	TA3-2327	2017	Sept	Copper				****	****	****	mg/L	NA	NA	0	Yearly	Discharged to Outfall 001

OUTFALL No.	TA - Bldg.	Year	Monitoring Period	Parameter	Quantity or Loading			Quality or Concentration								
					Average	Maximum	Units	Minimum	Average	Maximum	Units	Permit Limit	Units	Number of Samples	Frequently	Notes
03A027	TA3-2327	2018	Aug	Copper				****	0.0163	0.0163	mg/L	NA	NA	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Sept	Copper				****	****	****	mg/L	NA	NA	0	Yearly	Discharged to Outfall 001
Copper					Daily Average				0.0143					4		
Copper					Maximum 30 Day Average				0.0181					4		
Copper					Maximum					0.0181				4		
03A027	TA3-2327	2015	Sept	Aluminum, Total				****	0.0232	0.0232	mg/L	NA	NA	1	Yearly	Permit Requirement
03A027	TA3-2327	2016	Sept	Aluminum, Total				****	0.0156	0.0156	mg/L	NA	NA	1	Yearly	Permit Requirement
03A027	TA3-2327	2017	Sept	Aluminum, Total				****	****	****	mg/L	NA	NA	0	Yearly	Discharged to Outfall 001
03A027	TA3-2327	2018	Aug	Aluminum, Total				****	<0.0193	<0.0193	mg/L	NA	NA	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Sept	Aluminum, Total				****	****	****	mg/L	NA	NA	0	Yearly	Discharged to Outfall 001
Aluminum					Daily Average				0.0194					3		
Aluminum					Maximum 30 Day Average				0.0232					3		
Aluminum					Maximum					0.0232				3		
03A027	TA3-2327	2015	Sept	PCBs, Total				****	0.000269	0.000269	ug/L	0.00064 Monthly Ave, 0.000642 Daily Max	ug/L	1	Yearly	Permit Requirement
03A027	TA3-2327	2016	Sept	PCBs, Total	0.0000065	0.0000065	lbs/day	****	0.0024	0.0024	ug/L	0.00064 Monthly Ave, 0.000642 Daily Max	ug/L	1	Yearly	Permit Requirement
03A027	TA3-2327	2017	Sept	PCBs, Total				****	****	****	ug/L	0.00064 Monthly Ave, 0.000642 Daily Max	ug/L	0	Yearly	Discharged to Outfall 001
03A027	TA3-2327	2018	Sept	PCBs, Total				****	****	****	ug/L	0.00064 Monthly Ave, 0.000642 Daily Max	ug/L	0	Yearly	Discharged to Outfall 001
PCBs, Total					Daily Average				0.0013					2		
PCBs, Total					Maximum 30 Day Average				0.0024					2		
PCBs, Total					Maximum					0.0024				2		
03A027	TA3-2327	2015	Sept	Gross Alpha				****	****	****	pCi/L	NA	NA	0	Term	Not Required
03A027	TA3-2327	2016	Sept	Gross Alpha				****	1.01	1.01	pCi/L	NA	NA	1	Term	Permit Requirement
03A027	TA3-2327	2017	Sept	Gross Alpha				****	****	****	pCi/L	NA	NA	0	Term	Discharged to Outfall 001
03A027	TA3-2327	2018	Aug	Gross Alpha				****	2.79	2.79	pCi/L	NA	NA	1	Operational Sample	2019 Permit Application Sample
03A027	TA3-2327	2018	Sept	Gross Alpha				****	****	****	pCi/L	NA	NA	0	Term	Discharged to Outfall 001
Gross Alpha					Daily Average				1.90		pCi/L			2		
Gross Alpha					Maximum 30 Day Average				2.79		pCi/L			2		
Gross Alpha					Maximum					2.79	pCi/L			2		

2019 NPDES Permit Reapplication - WET Test Summary Report

OUTFALL 03A027

Year	Sample Dates	Fathead Minnow ^a				Ceriodaphnia dubia ^a				Frequency	Driver
		Survival		Growth		Survival		Reproduction			
2015	March 16, 18, 20	NOEC 31%	Pass	NOEC 31%	Pass	NOEC 31%	Pass	NOEC 31%	Pass	Term	Permit Requirement

a. Permit requires a critical dilution of 23% and analysis at (10%, 13%, 17%, 23%, and 31%).

No Observed Lethal Effect Concentration - Defined as the greatest effluent dilution at and below which toxicity that is statistically different from the control

NOEC at the 95% confidence level does not occur.

ATTACHMENT E: Safety Data Sheets

LIST OF SAFETY DATA SHEETS
Bromocide
HACH 1407028
HACH 203832
HACH 2076053
HACH 2105669
HACH 2263411
HACH 2263511
HACH 2297255
HACH 2314011
HACH 2314111
HACH 2756549
WEST C-358P Inhibitor
WEST C-825
WEST R-630
Bright Dyes FLT Yellow/Green Liquid
Bright Dyes FLT Yellow/Green Tablet