California Regional Water Quality Control Board
Central Valley Region

ORDER NO. R5-2006-0013
NPDES NO. CA0083861

WASTE DISCHARGE REQUIREMENTS
FOR
AEROJET-GENERAL CORPORATION
INTERIM GROUNDWATER EXTRACTION AND TREATMENT SYSTEMS
ARGET, GET E/F, GET H, INTERIM GET H, GET K, INTERIM GET K,
GET L, GET L1, SAILOR BAR PARK WELL, CHETTENHAM WELL,
AND LOW THREAT DISCHARGES
SACRAMENTO COUNTY

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Aerojet-General Corporation
Name of Facility	Interim Groundwater Extraction and Treatment Systems ARGET, GET E/F, GET H, Interim GET H, GET J, GET K, Interim GET K, GET L, GET L1, Sailor Bar Park Well, Chettenham and Low-Threat Discharges
Facility Address	Aerojet Road
	Sacramento, CA 95813-6000
	Sacramento County

The Discharger is authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Outfall 001	Treated Groundwater from ARGET, GETE/F, GET J	38º, 38’, 01” N	121º, 16’, 05” W	Buffalo Creek to American River
Outfall 002*	Treated Groundwater from GET L	38º, 36’, 45” N	121º, 18’, 20” W	Drainage Ditch to American River
Outfall 002A*	Treated Groundwater from GET L1	38º, 37’, 32” N	121º, 18’, 15” W	Drainage Ditch to American River
Outfall 003*	Treated Groundwater from GET K	38º, 36’, 52” N	121º, 18’, 14” W	Drainage Ditch to American River
Outfall 004	Treated Groundwater from Interim GET K	38º, 36’, 05” N	121º, 18’, 57” W	Drainage Ditch to American River

Outfall 005*	Treated Groundwater from Chettenham Well and Future GET H	38º, 34', 43" N	121º, 19', 37" W	Boyd Station Channel to American River
Outfall 006	Treated Groundwater from GET H and Interim GET H	38º, 31', 53" N	121º, 19', 36" W	Morrison Creek
Outfall 007	Treated Groundwater from Sailor Bar Well	38º, 37', 59" N	121º, 14', 21" W	Sailor Bar Pond
Outfall 008*	Treated Groundwater from Various GETs	38º, 38', 6" N	121º, 13', 13" W	Drainage Ditch to American River at Natomas Stilling Basin
Outfall 009*	Treated Groundwater from Various GETs			Alder Creek – Tributary to the American River

*Future outfall

This Order was adopted by the Regional Board on:	**26 January 2006**
This Order shall become effective on:	**26 January 2006**
This Order shall expire on:	**1 January 2011**
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Board have classified this discharge as a major discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, **not later than 180 days in advance of the Order expiration date** as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No.R5-2004-0027 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the CWC and regulations adopted thereunder, and the provisions of the federal CWA, and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements herein.

I, Kenneth D. Landau**,** Acting Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 26 January 2006.

Original Signed by:
KENNETH D. LANDAU, Acting Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 5, CENTRAL VALLEY REGION

ORDER NO. R5-2006-0013
NPDES NO. CA0083861

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I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Aerojet-General Corporation
Name of Facility	Interim Groundwater Extraction and Treatment Systems
Facility Address	Aerojet Road Sacramento, CA 95814-6000 Sacramento County
Facility Contact, Title, and Phone	Mr. Chris Fennessey, (916) 355-3341
Mailing Address	P.O. Box 13200 Sacramento, CA 95813-6000
Type of Facility	Groundwater Extraction and Treatment Plants
Facility Design Flows	ARGET – 5.4 million gallons per day (mgd) – Discharge 001,Outfall 001 GET E/F – 8.64 mgd – Discharge 002, Outfall 001 GET H – 6.39 mgd – Interim Discharge 003, Outfall 006, longterm – Discharge 004, Outfall 006 and/or 005 GET J – 7.17 mgd – Discharge 005, Outfall 001 GET K – 0.72 mgd interim – Discharge 006, Outfall 004; 5.76 mgd long-term – Discharge 007, Outfall 004 GET L/L1 – 2.88 mgd – Discharge 008/009, Outfall 002/002A Sailor Bar Pond – 0.36 mgd – Discharge 010, Outfall 007 Chettenham – 0.86 mgd, Discharge 011, Outfall 005

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. **Background.** The Aerojet-General Corporation (hereafter, Discharger) is currently discharging under Order No. R5-2004-0027 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0083861. The Discharger submitted a Report of Waste Discharge, dated 11 April 2005 and supplemental information dated 28 April 2005 and 12 May 2005**,** and applied for a NPDES permit revision to discharge up to 34.65 mgd of treated groundwater from up to eleven groundwater extraction and treatment systems (GETs), with two of them being temporary.

This permit also allows Aerojet to discharge low-threat discharges consisting of such monitor well, extraction well and water supply well development water, purge water and extraction and supply well aquifer test water. Those discharges are subject to similar effluent limitations as established for the GETs.

B. **Facility Descriptions.** The Discharger currently owns and operates six groundwater extraction and treatment systems (hereafter "Facilities") that discharge treated groundwater to surface waters in accordance with an NPDES permit. Five additional facilities are being designed for construction in 2005/6.

a. ARGET (Discharge 001). The American River Study Area (ARSA) treatment system is on the Aerojet site. The facility consists of ultraviolet/peroxide treatment to reduce concentrations of

volatile organic compounds (VOCs) and 1,4-dioxane, and air-stripping to remove any remaining VOCs. See Attachment C-1.

b. GET E/F (Discharge 002). The GET E/F facility is also on Aerojet property. It uses biological reduction to remove perchlorate, ultraviolet light to destroy NDMA, and air stripping to remove VOCs from up to 6000 gpm of influent. There is also a sand filter, clarifier and bag filters for solids control. The solids from the clarifier are discharged to the sanitary sewer under a permit. The GET E/F facility has been in operating in its current configuration since 2000. See Attachment C-2.
c. GET H (Discharge 003/004). The interim GET H facility (Discharge 003) found on Reserve Drive in Rancho Cordova uses resin-adsorption to remove perchlorate and granular activated carbon (GAC) to remove VOCs gpm. The interim system is being expanded to include a second temporary treatment system on Reserve Drive. The long-term GET H system (Discharge 004), currently being designed and constructed, utilizes the same treatment methods, but will treat a greater flow of extracted groundwater, approximately 4450 gpm. The long-term GET H system is anticipated to be on-line by January 2006 and will be in the north-central section of Mather Field. See Attachments C-3 and C-4.
d. GET J (Discharge 005). The GET J system is similar to GET H, but with the addition of ultraviolet treatment for the destruction of NDMA and particulate filtration to help the ultraviolet system. The system is designed to treat 4950 gpm and is found on Pyrites Way in Gold River. See Attachment C-5.
e. GET K (Discharge 006/007). The interim GET K (Discharge 006) uses ion-exchange (resin bed adsorption) to remove perchlorate and GAC to remove VOCs. The long-term GET K system (Discharge 007) will add ultraviolet light and particulate removal for treatment of NDMA from an influent of 4000 gpm. The interim GET K facility is on Zinfandel Drive and the long-term facility will be closer to the river, both in Rancho Cordova. See Attachment C-6 and C-7.
f. GET L/L1 (Discharge 008/009). GET L (Discharge 008) is in Carmichael, near Ancil Hoffman Park and GET L1 (Discharge 009) is northeast of GET L. The facility will initially treat for NDMA using ultraviolet light. If, in the future, VOCs and/or perchlorate are determined to found to be approaching the extraction wells in the groundwater, VOC and/or perchlorate treatment will be added utilizing the same processes described above. See Attachments C-8 and C-9.
g. Sailor Bar Park (Discharge 010). The Sailor Bar Park system provides for removal of VOCs by GAC on a water supply well for the pond on Sailor Bar Park. The park is on the north side of the American River adjacent to the village of Fair Oaks.
h. Chettenham (Discharge 011). The Discharger is currently negotiating with California American Water Company (CalAm), owner of the Chettenham Well, to use the Chettenham Well on an interim basis as an extraction point to control a portion of the groundwater pollution. Wellhead treatment consisting of ion exchange for perchlorate removal would be installed on the well and the discharge to the Boyd Station Channel. Currently there are only trace levels of perchlorate below the effluent limitation in the well and the Discharger may choose to operate the Chettenham well without wellhead treatment for a period of time. See Attachment C-11.
i. Purge and Aquifer Test Waters. The Discharger develops and purges wells prior to sampling and conducts aquifer tests on extraction/supply wells to determine aquifer characteristics to allow GET systems to be designed. These activities take place over vast areas on and off the Discharger's property. The purge water is generally low in volume (100's – 5000 gallons) and is

provided treatment prior to discharge. Treatment is provided on the discharges to remove the pollutants of concern.

Treated groundwater is discharged from Discharges 001, 002 and 005 to Buffalo Creek (tributary to the American River), from Discharges 003 and 004 to Morrison Creek (tributary to the Sacramento River), from Discharges 006, 007, 008, 009 and 011 are to drainage channels to the American River, and Discharge 010 is to a pond in Sailor Bar Park (see table on cover page), waters of the United States and part of the Sacramento-San Joaquin Delta (Delta) within the American River and Sacramento River watersheds. Sacramento County requested during development of the previous permit to allow for the potential discharge from some or all of the GETs covered in this permit to Alder Creek, to assist in their reuse of the treated groundwater. The previous permit and this permit include a provision allowing for the discharge to Alder Creek pending completion of an acceptable study of the potential thermal impacts on Alder Creek. Attachment B-1provides a map describing the locations of the Facilities. Attachments C-1 through C-11 provide wastewater flow schematics of the Facilities.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

D. **Background and Rationale for Requirements**. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through G,which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the CWC. The Department of Toxic Substances Control certified a final Negative Declaration and Initial Study for the American River Study Area project in accordance with CEQA and State CEQA Guidelines. The Board has reviewed the negative declaration and these waste discharge requirements will mitigate or avoid any significant impacts on water quality due to the discharges from the ARGET facility.

F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations that protect the beneficial uses of the receiving waters. The Regional Water Board has considered the factors listed in CWC §13241 in establishing these requirements. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable

numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

The Basin Plan at page II-2.00 states that the beneficial uses of any specifically identified water body generally applies to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Buffalo Creek and Alder Creek, or Morrison Creek, tributary to the American River and Sacramento River, respectively, but does identify present and potential uses for the American and Sacramento Rivers. These beneficial uses are municipal and domestic supply (MUN); agricultural supply, irrigation and stock watering (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning (SPWN); wildlife habitat (WILD). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in this Fact Sheet, beneficial uses applicable to the American River, Sacramento River, Buffalo Creek, Alder Creek, Morrison Creek and Sailor Bar Park Pond are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001, 002 and 005	Buffalo Creek and Alder Creek, Tributary of the American River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.
003	Morrison Creek, Tributary of the Sacramento River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.
004, 006, 007, 008, 009, 011 and 012	American River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.
010	Sailor Bar Pond, Potentially tributary to American River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.

The Basin Plan includes a Wastewater Reuse Policy that encourages the reclamation and reuse of wastewater, including treated groundwater resulting from a cleanup action, where practicable. Those reuse options include municipal and industrial supply, crop irrigation, groundwater recharge, and wetland restoration. At this time, demonstrated cost-effective options that provides for reuse of the treated groundwater have been identified in the Discharger's Reuse Plan, but will likely not be implemented until Spring 2009. The Discharger and Sacramento County have entered into an agreement whereby the water discharged from the GETs is transferred to the County. The County is

currently developing a project for reuse of the treated groundwater that will proceed through the CEQA process.

Until it is feasible for the GET discharges to be reused, discharge to the American River and Sacramento River, and their tributaries, for a limited duration is a reasonable use of the treated groundwater on an interim basis since it implements the goals of cleaning up the aquifer, restoring its beneficial uses, and preventing additional public supply wells from being polluted as other alternatives are considered.

The remediation project has a potential effect on the sustainable yield of the groundwater basin from which the extraction fields takes its water. The Discharger, in accordance with requirements of a previous version of this Order, evaluated the sustainable yield of the aquifer south of the American River in a report dated 12 September 2003. That report stated that there would be an additional drawdown in the eastern part of Sacramento County in the vicinity of OU-3 of up to 30 feet. Implementation of the reuse alternatives contained in the Reuse Plan will help substantially mitigate the impact of the withdrawal of groundwater for remediation purposes. The required evaluations allowed the Regional Board to determine whether there are additional environmental impacts of the Discharger's pumping and will encourage the reuse of treated groundwater consistent with the Wastewater Reuse Policy set forth in the Basin Plan.

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal* and *Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

J. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*)*. The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

K. **Compliance Schedules and Interim Requirements.** This permit has interim effluent limits for perchlorate at ARGET and for NDMA at GET J. The interim effluent limitation for perchlorate at ARGET is 8 µg/L until 1 January 2009, or earlier if perchlorate treatment has been added to

ARGET. The interim effluent for NDMA at GET J is 0.008 µg/L until 1 January 2008. See Attachment F, Sections IV(E)(1) and VII(1)(3).

L. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR Section 131.12 and State Water Board Resolution 68-16.

M. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

N. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

O. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

P. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity for a public hearing and to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

Q. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

R. This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on VOCs, perchlorate, and NDMA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent

limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Standard Provision I.G of Attachment D, Federal Standard Provisions.

C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

D. Discharge of wastewater to Outfall 008 and 009 is prohibited until approved by the Executive Officer. Completion of an adequate assessment of the thermal impacts associated with those discharges at those two outfalls is required before consideration of approval by the Executive Officer.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012

1. **Final Effluent Limitations**

   a. **Discharger Point 001**.

      i. The discharge of effluent from the ARGET facilities shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 001	mgd	5.0	5.4	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.02	0.03	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.016	0.022	--	--
1,4-Dioxane	µg/L	3	6	--	--
	lbs/day	0.125	0.26	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.000083	0.00043	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.167	0.26	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.46	0.73	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

b. **Discharge Point 002**

i. The discharge of effluent from the GET E/F facilities shall maintain compliance with the following effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location M-002, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 002	mgd	8.64	8.64	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.037	0.050	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.028	0.036	--	--
1,4-Dioxane	µg/L	3	6	--	--
	lbs/day	0.23	0.43	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.00015	0.00072	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.300	0.43	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Copper	µg/L	11	17	--	--
	lbs/day	0.82	1.22	--	--
Acetaldehyde	µg/L	5	5	--	--
	lbs/day	0.38	0.36	--	--
Formaldehyde	µg/L	50	50	--	--
	lbs/day	3.7	3.6		
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

c. **Discharge Point 003**

i. The discharge of effluent from the Interim GET H facilities shall maintain compliance with the following effluent limitations at Discharge Point 003, with compliance measured at Monitoring Location M-003, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 003	mgd	6.39	6.5	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.027	0.038	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.020	0.027	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.21	0.33	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.59	0.92	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

d. **Discharge Point 004**

i. The discharge of effluent from the GET H facilities shall maintain compliance with the following effluent limitations at Discharge Point 004, with compliance measured at Monitoring Location M-004, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 004	mgd	6.39	6.5	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.027	0.038	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.020	0.027	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.21	0.33	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.59	0.92	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

e. **Discharge Point 005**

i. The discharge of effluent from the GET J facilities shall maintain compliance with the following effluent limitations at Discharge Point 005, with compliance measured at Monitoring Location M-005, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 005	mgd	7.17	7.2	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.03	0.042	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.023	0.030	--	--
1,4-Dioxane	µg/L	3	6	--	--
	lbs/day	0.18	0.36	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.00012	0.00060	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.24	0.36	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.66	1.02	--	--
pH	standard units	--	--	6.5	8.5
Chlorform	µg/L	3.0	5.0		
	lbs/day	0.18	0.3		

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

f. **Discharge Point 006**

i. The discharge of effluent from the Interim GET K facilities shall maintain compliance with the following effluent limitations at Discharge Point 006, when measured at Monitoring Location M-006, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 006	mgd	0.58	0.72	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.0024	0.0042	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.0018	0.003	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.000001	0.00006	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.019	0.036	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.053	0.10	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

g. **Discharge Point 007**

i. The discharge of effluent from the GET K facilities shall maintain compliance with the following effluent limitations at Discharge Point 007, with compliance measured at Monitoring Location M-007, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 007	mgd	5.76	5.8	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.024	0.027	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.015	0.020	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.000078	0.00039	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.16	0.235	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.43	0.67	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

h. **Discharge Point 008**

i. The discharge of effluent from the GET L facilities shall maintain compliance with the following effluent limitations at Discharge Point 008, with compliance measured at Monitoring Location M-008, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 008	mgd	1.73	1.73	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.0072	0.010	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.00055	0.0072	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.000029	0.00014	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.058	0.087	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.16	0.22	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

i. **Discharge Point 009**

i. The discharge of effluent from the GET L1 facilities shall maintain compliance with the following effluent limitations at Discharge Point 009, with compliance measured at Monitoring Location M-009, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 009	mgd	1.3	1.3	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.0054	0.076	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.004	0.0054	--	--
N-nitrosodimethylamine	µg/L	0.002	0.010	--	--
	lbs/day	0.00002	0.0001	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.043	0.065	--	--
Total Copper	µg/L	11	17	--	--
	lbs/day	0.12	0.18	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

j. **Discharge Point 010**

i. The discharge of effluent from the Sailor Bar Park Well facilities shall maintain compliance with the following effluent limitations at Discharge Point 010, with compliance measured at Monitoring Location M-010, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 010	mgd	0.18	0.36	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	010	--	--
	lbs/day	0.00076	0.00152	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.00057	0.0015	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.006	0.018	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

k. **Discharge Point 011**

i. The discharge of effluent from the Chettenham Well facilities shall maintain compliance with the following effluent limitations at Discharge Point 011, with compliance measured at Monitoring Location M-011, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Discharge 011	mgd	0.86	1.1	--	--
Volatile Organic Contaminants[1]	µg/L	0.5	0.7	--	--
	lbs/day	0.0036	0.0064	--	--
1,2-Dichloroethane	µg/L	0.38	0.5	--	--
	lbs/day	0.0027	0.0046	--	--
Perchlorate	µg/L	4	6	--	--
	lbs/day	0.029	0.055	--	--
pH	standard units	--	--	6.5	8.5

[1] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

ii. Survival of aquatic organisms in 96-hour bioassays shall be no less than 70% for any one bioassay and 90% for the median of any three or more consecutive bioassays.

l. **Discharge Point 012 - Purge and Aquifer Test Waters**

i. The discharge of purge water and aquifer test water from monitor wells, extraction wells, and supply wells shall maintain compliance with the following effluent limitations with compliance measured at Monitoring Point M-012, as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Total Maximum Discharge[1]	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow – Per Monitor Well	mgd	0.01	0.01		
Flow – Per Aquifer Test[1]	million gallons	11.5	1.15		
Volatile Organic Contaminants[2]	µg/L	--	5.0	--	--
1,4-Dioxane	µg/L		10		
N-nitrosodimethylamine	µg/L		0.020	--	--
Perchlorate	µg/L		12		
pH	standard units	--	--	6.5	8.5

[1] Based on an aquifer test at 800 gpm for a duration of 4 days.
[2] All volatile organic constituents listed in EPA Methods 8010/8020 or 8260. The concentration of each constituent shall not exceed 0.5 µg/L.

2. **Interim Effluent Limitations**

a. **Effective immediately and ending on 1 January 2009, or until the treatment system to remove perchlorate at the ARGET facility is constructed, whichever is sooner,** the discharge of treated effluent from the ARGET facility shall maintain compliance with the following effluent limitation for perchlorate at Discharge Point 001, as described in the attached Monitoring and Reporting Program (Attachment E). This interim effluent limitation shall apply in lieu of the corresponding final effluent limitation for perchlorate specified during the time period indicated in this Order.

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
perchlorate	µg/L	11	11	--	--

b. **Effective immediately and ending on 1 January 2008,** the discharge of treated effluent from the GET J facility shall maintain compliance with the following effluent limitation for NDMA at Discharge Point 005, as described in the attached Monitoring and

Reporting Program (Attachment E). This interim effluent limitation shall apply in lieu of the corresponding final effluent limitation for perchlorate specified during the time period indicated in this Order.

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
N-nitrosodimethylamine	µg/L	0.008	0.010	--	--

B. Land Discharge Specifications – Not Applicable
C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving surface water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Alder Creek, Buffalo Creek, Morrison Creek, and the American River:

1. **Bacteria***:* The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

2. **Dissolved Oxygen**: The monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation. The DO concentration shall not be reduced below 7.0 mg/L at any time.

3. **Oil and Grease**: Oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.

4. **Color**: Discoloration that causes nuisance or adversely affects beneficial uses.

5. **pH**: The ambient pH to be depressed below 6.5, nor raised above 8.5, nor changes in normal ambient pH levels to be exceeded by more than 0.5 units. A monthly averaging period may be used for determining compliance with the above 0.5 receiving water pH limitation.

6. **Temperature**: The natural receiving water temperature to increase more than 5°F.

7. **Settleable Matter**: Substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

8. **Radioactivity**:

    a. Radionuclides to be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.

    b. Concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

9. Toxicity: Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.

10. Biostimulatory Substances: Biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

11. Floating Material: Floating material in amounts that cause nuisance or adversely affect beneficial uses.

12. Sediment: Suspended sediment load and suspended sediment discharge rate altered in such a manner to cause nuisance or adversely affect beneficial uses.

13. Suspended Sediment: Suspended sediment concentrations that cause nuisance or adversely affect beneficial uses.

14. Taste and Order: Taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

15. Turbidity: Changes in turbidity that cause nuisance or adversely affect beneficial uses. Turbidity attributable to controllable water quality factors to exceed the following:

    a. More than 1 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs.

    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

    c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.

    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

16. Pesticides:

    a. Pesticides in individual or combined concentrations that adversely affect beneficial uses.

b. Pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.

c. Total identifiable persistent chlorinated hydrocarbon pesticides in concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.

d. Concentrations exceeding those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.)

e. Concentrations exceeding the lowest levels technically and economically achievable.

f. Concentrations exceeding the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

g. Concentrations of thiobencarb in excess of 1.0 mg/L.

17. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by the California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, California Code of Regulations (CCR), Division 3, Chapter 14.

b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

i. Violation of any term or condition contained in this Order;
ii. Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and

iv. A material change in the character, location, or volume of discharge.

The causes for modification include:

i. **New regulations**. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

ii. **Land application plans**. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

iii. **Change in sludge use or disposal practice**. Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 04(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. Controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

j. Safeguard to electric power failure:

   i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, failure of electric power, the discharge shall comply with the terms and conditions of this Order.

   ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

   iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

k. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water Board a technical report on its preventive (failsafe) and contingency

(cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions, which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by **31 January.** A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

m. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

i. Unless otherwise specified, all metals shall be reported as Total Metals.

ii. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

iii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).

n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

p. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

q. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

r. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.

B. Monitoring and Reporting Program Requirements

The discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments

thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. If after review of effluent monitoring results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective, or the discharge is causing groundwater degradation, this Order may be reopened and effluent limitations added for the subject constituents.

c. The Discharger may request the Executive Officer to reopen the permit to request a reduction in monitoring, if appropriate.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Chronic Whole Effluent Toxicity Requirements.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds numeric toxicity trigger levels established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE workplan, and take actions to mitigate the impact of the discharge and prevent recurrence of the toxicity. A TRE is a site-specific study conducted in a stepwise process to identify source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes the requirements for the Discharger to develop and submit a TRE Workplan and also the procedures for accelerated chronic toxicity monitoring and TRE initiation.

(i) **Toxicity Reduction Evaluation (TRE) Workplan. Within 90 days of the effective date of this Order,** the Discharger shall submit to the Regional Water Board a TRE Workplan for approval by the Executive Officer. The TRE Workplan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Workplan shall be developed in accordance with EPA guidance and shall contain adequate detail to allow the Discharger to immediately implement a TRE as required in this Provision.

(ii) **Numeric Toxicity Trigger.** The numeric toxicity trigger is **1 TUc**[2] for any test species. The numeric toxicity trigger is not an effluent limitation, it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity

[1] See Attachment F (Fact Sheet) Section VII.B.2.a. for a list of EPA guidance documents that must be considered in development of the TRE Workplan.

[2] TUc – Chronic toxicity unit. The reciprocal of the effluent concentration that causes no observable effect on the test organism in a chronic toxicity test (TUc=100/NOEC)

monitoring to confirm effluent toxicity, as well as, the threshold to initiate a TRE. The accelerated monitoring specifications are described in subsection (iv), below.

(iii) **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring to confirm the effluent toxicity as required in the Accelerated Monitoring Specifications outlined in subsection iv, below. Any exceedance of the TRE Trigger during accelerated monitoring requires the Discharger to initiate a TRE in accordance with an approved TRE Work Plan. Notwithstanding the accelerated monitoring results, if there is adequate evidence of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(a) In the event the numeric toxicity trigger is exceeded during accelerated monitoring, specific actions the Discharger will take to investigate and identify the cause(s) of toxicity;

(b) In the event the numeric toxicity trigger is exceeded during accelerated monitoring, specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

(c) A schedule for these actions.

(iv) **Accelerated Monitoring Specifications.** If the TRE Trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the exceedance, the Discharger shall initiate accelerated monitoring to confirm effluent toxicity. Accelerated monitoring shall consist of three (3) monthly chronic toxicity tests using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of three (3) consecutive accelerated monitoring tests do not exceed the TRE Trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. Notwithstanding the accelerated monitoring results, if there is adequate evidence of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until three (3) consecutive accelerated tests do not exceed the TRE Trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

(c) If the result of any accelerated toxicity test exceeds the TRE Trigger, the Discharger shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the exceedance of the TRE Trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

1. Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
2. Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
3. A schedule for these actions.

b. **Thermal Impacts Associated with Discharge to Outfall 008 or 009.** The Discharger is not permitted to discharge to Outfall 008 and/or 009 until an adequate thermal impact assessment is completed for Outfall 008 and/or 009 that demonstrates that the discharge will not cause an unacceptable thermal impact on the receiving water. The study must demonstrate that the discharge will meet the Water Quality Objectives for temperature found in the Basin Plan. Those objectives state "the natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not affect beneficial uses" and "at no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above the natural receiving water temperature".

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Compliance Schedules

a. Final Effluent Limitations for Perchlorate at Discharge 001

i. By **1 January 2009**, the Discharger shall provide treatment facilities at the ARGET facility to remove perchlorate to less than 4 µg/L, the AMEL found in IV(A)(1)(a).

b. Final Effluent Limitations for NDMA at Discharge 005

ii. By **1 January 2008**, the Discharger shall provide treatment facilities at the GET J facility to remove NDMA to less than 0.002 µg/L, the AMEL found in IV(A)(1)(e).

5. Construction, Operation and Maintenance Specifications

a. Operations and Maintenance Plan:

Within 60-days of startup of a GET, the Discharger shall certify in writing to the Regional Water Board that it has developed an Operation and Maintenance Plan (O&M). O&M plans have already developed for GET E/F, ARGET, Interim GET H and GET J under previous versions of the permit. The Discharger shall develop and implement the O&M plan to prevent or minimize the generation and discharge of wastes and pollutants to the waters of the United States and waters of the State. The Discharger shall develop and implement an O&M plan consistent with the following objectives:

i. Operations and Maintenance

1) Maintain in-system production and wastewater treatment technologies to prevent the overflow of any floating matter or bypassing of treatment technologies.

2) Inspect the treatment systems on a routine basis in order to identify and promptly repair any damage.

3) Ensure storage and containment of chemicals or other materials to prevent spillage or release into waters of the United States, or waters of the State.

4) Implement procedures for properly containing, cleaning, and disposing of any spilled material.

ii. Recordkeeping

1) Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

v. Training

1) Adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill in order to ensure the proper clean-up and disposal of spilled material.

2) Train staff on the proper operation and cleaning of production and wastewater treatment systems, including training in feeding procedures and proper use of equipment.

The Discharger shall ensure that its operations staff are familiar with the O&M Plan and have been adequately trained in the specific procedures it requires.

b. Solids disposal specifications:

i. Collected screenings, sludges, and other solids, shall be disposed of in a manner approved by the Executive Officer and consistent *with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.

ii. Any proposed change in solids disposal from a previously approved practice (as described in this Order) shall be reported to this office at least 90 days in advance of the change.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

a. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision V.B, Attachment D, and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

c. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision V.E.1 [40 CFR §122.41(l)(6)(i)].

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. Average Monthly Effluent Limitation (AMEL).
If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month. For NDMA and 1,4-dioxane, if the approved Practical Quantitation Level (PQL) is greater than the AMEL, then compliance is met if the monthly average is less than the PQL

B. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day. For NDMA and 1,4-dioxane, if the approved Practical Quantitation Level (PQL) is greater than the MDEL, then compliance is met if the daily value is less than the PQL

C. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

D. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

E. Maximum 1-Hour Average.

If the analytical result of a samples collected within 1-hour are higher than the maximum 1-hour average effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter.

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR Section122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (RWQCB) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.

B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided the laboratory institutes a Quality Assurance-Quality Control Program. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

C. All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Regional Water Board indicating that there has been no activity during the required reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
001	M-001	Effluent from ARGET.
002	M-002	Effluent from GET E/F.
003	M-003	Effluent from GET Interim GET H.
004	M-004	Effluent from GET H.
005	M-005	Effluent from GET J.
006	M-006	Effluent from Interim GET K.
007	M-007	Effluent from GET K.
008	M-008	Effluent from GET L.
009	M-009	Effluent from GET L1.
010	M-010	Effluent from Sailor Bar Park Well System.
011	M-011	Effluent from Chettenham Well System.
012	M-012	Effluent from Low-threat System.
	MINFA	Influent to ARGET
	MINFB	Influent to GET E/F
	MINFC	Influent to Interim GET H
	MINFD	Influent to GET H
	MINFE	Influent to GET J
	MINFF	Influent to Interim GET K
	MINFG	Influent to GET K
	MINFH	Influent to GET L
	MINFI	Influent to GET L1
	MINFJ	Influent to Sailor Bar Park Well System
	MINFK	Influent to Chettenham Well System
	R-001 and R-002	R-001 (upstream) and R-002 (downstream) on American River from discharge of Buffalo Creek into American River at Latitude 38º, 38’, 01” N, Longitude 121º, 16’, 05” W. Outfall 001 is representative of ARGET, GET E/F and GET J discharges (Discharges 001, 002, and 005, respectively.
	R-003 and R-004	R-003 (upstream) and R-004 (downstream) on American River from discharge water from GET L1 (Discharge 009) into American River at Latitude 38º, 37’, 32” N, Longitude 121º, 18’, 15” W.
	R-005 and R-006	R-005 (upstream) and R-006 (downstream) on American River from discharge water from GET L (Discharge 008) into American River at Latitude 38º, 36’, 52” N, Longitude 121º, 18’, 14” W.
	R-006 and R-007	R-006 (upstream) and R-007 (downstream) on American River from discharge water from long term GET K (Discharge 007) into American River at Latitude 38º, 36’, 36” N, Longitude 121º, 18’, 24” W.
	R-008 and R-009	R-008 (upstream) and R-009 (downstream) on American River from discharge water from Interim GET K (Discharge 006) into American River at Latitude 38º, 36’, 05” N, Longitude 121º, 18’, 57” W.
	R-010 and R-011	R-010 (upstream) and R-011 (downstream) on American River from discharge from Chettenham Well (Discharge 011) into American River via the Boyd Station Channel at Latitude 38º, 34’, 43” N, Longitude 121º, 19’, 37” W. May receive water from long term GET H (Discharge 004) in the future

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
	R-012 and R-013	R-012 (upstream) and R-013 (downstream) on Morrison Creek from discharge of drainage ditch to Morrison Creek at Latitude 38º, 31', 53" N, Longitude 121º, 19', 36" W. Outfall 006 represents discharge from interim GET H (Discharge 003 and long term GET H (Discharge 004).
	R-014 and R-015	R-014 (upstream) and R-015 (downstream) on American River from a potential discharge from various GETs into American River via pipeline at Latitude 38º, 38', 06" N, Longitude 121º, 13', 13" W.
	R-016 and R-017	R-016 (upstream) and R-017 (downstream) on Alder Creek from a potential discharge water from various GETs via pipeline into Alder Creek at American River at Latitude 38º, XX', XX" N, Longitude 121º, XX', XX" W.

III. INFLUENT MONITORING REQUIREMENTS

A. The Discharger shall monitor **MINFA, MINFB, and MINFJ** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
VOCs	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Semi-Volatile Organics	µg/L	Grab	Monthly	[4]
1,4-Dioxane	µg/L	Grab	Monthly	[5]
Total Copper	µg/L	Grab	Monthly	[6]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
5. A test method with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical level shall be reported as trace.
6. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.

B. The Discharger shall monitor **MINFC, MINFD and MINFK** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
VOCs	µg/L	Grab	Monthly	[1]
Perchlorate	µg/L	Grab	Monthly	[2]
Semi-Volatile Organics	µg/L	Grab	Monthly	[3]
Total Copper	µg/L	Grab	Monthly	[4]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
3. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.

C. The Discharger shall monitor **MINFE** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
VOCs	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Semi-Volatile Organics	µg/L	Grab	Monthly	[4]
Total Copper	µg/L	Grab	Monthly	[5]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
5. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.

D. The Discharger shall monitor **MINFF, MINFG, MINFH and MINFI** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
VOCs	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Total Copper	µg/L	Grab	Monthly	[4]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations M-001 through M-012

1. The Discharger shall monitor wastewater discharged at **M-001** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[9]
Volatile Organics	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Semi-Volatile Organics	µg/L	Grab	Monthly	[4]
1,4-Dioxane	µg/L	Grab	Monthly	[5]
Total Copper	µg/L	Grab	Monthly	[6]
Flow[7]	mgd	Measure	Continuous	--
Temperature[7]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[7]	µmhos/cm	Grab	Monthly	--
pH[7]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--
Acute Toxicity	% Survival	Grab	Quarterly	[8]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
5. A test method with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
6. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
7. Field Measurements.
8. Acute toxicity testing shall performed as described in Whole Effluent Toxicity Testing Requirements V.A., below.
9. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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2. The Discharger shall monitor wastewater discharged at **M-002** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[13]
Volatile Organics	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Semi-Volatile Organics	µg/L	Grab	Monthly	[4]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[13]
1,4-Dioxane	µg/L	Grab	Monthly	[5]
Total Copper	µg/L	Grab	Monthly	[6]
Flow[7]	mgd	Measure	Continuous	--
Temperature[7]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[7]	µmhos/cm	Grab	Monthly	--
pH[7]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--
PROWL	µg/L	Grab	Monthly	[8]
Formaldehyde	µg/L	Grab	Monthly	[9]
Glyoxal	µg/L	Grab	Monthly	[10]
Acetaldehyde	µg/L	Grab	Monthly	[11]
Acute Toxicity	% Survival	Grab	Quarterly	[12]

3. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
4. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
5. A test method with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
6. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
7. Field Measurements.
8. PROWL analysis with a practical quanitation level no greater than 10 µg/L. All concentrations between the detection level and practical quanitiation level shall bereported as trace.
9. Formaldehyde analysis with a practical quanitation level no greater than 5 µg/L. All concentrations between the detection level and practical quanitiation level shall bereported as trace.
10. Glyoxal analysis with a practical quanitation level no greater than 5 µg/L. All concentrations between the detection level and practical quanitiation level shall bereported as trace.
11. Acetaldehyde analysis with a practical quanitation level no greater than 1µg/L. All concentrations between the detection level and practical quanitiation level shall bereported as trace.
12. Acute toxicity testing shall performed as described in Whole Effluent Toxicity Testing Requirements V.A., below.
13. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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2. The Discharger shall monitor wastewater discharged at **M-003 and M-004** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[7]
Volatile Organics	µg/L	Grab	Monthly	[1]
Perchlorate	µg/L	Grab	Monthly	[2]
Semi-Volatile Organics	µg/L	Grab	Monthly	[3]
Total Copper	µg/L	Grab	Monthly	[4]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[7]
Flow[5]	mgd	Measure	Continuous	--
Temperature[5]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[5]	µmhos/cm	Grab	Monthly	--
pH[5]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--
Acute Toxicity	% Survival	Grab	Quarterly	[6]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
3. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
5. Field Measurements.
6. Acute toxicity testing shall performed as described in Whole Effluent Toxicity Testing Requirements V.A., below.
7. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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3. The Discharger shall monitor wastewater discharged at **M-005** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[8]
Volatile Organics	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Semi-Volatile Organics	µg/L	Grab	Monthly	[4]
Total Copper	µg/L	Grab	Monthly	[5]
Flow[6]	mgd	Measure	Continuous	--
Temperature[6]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[6]	µmhos/cm	Grab	Monthly	--
pH[6]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--
Acute Toxicity	% Survival	Grab	Quarterly	[7]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.

3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Methods 8270 or 500 Series Method, or an equivalent method approved by the Regional Board with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
5. Tst Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
6. Field Measurements.
7. Acute toxicity testing shall performed as described in Whole Effluent Toxicity Testing Requirements V.A., below.
8. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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4. The Discharger shall monitor wastewater discharged at **M-006, M-007, M-008 and M-009** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[7]
Volatile Organics	µg/L	Grab	Monthly	[1]
N-nitrosodimethylamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Total Copper	µg/L	Grab	Monthly	[4]
Flow[5]	mgd	Measure	Continuous	--
Temperature[5]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[5]	µmhos/cm	Grab	Monthly	--
pH[6]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--
Acute Toxicity	% Survival	Grab	Quarterly	[6]

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
5. Field Measurements.
6. Acute toxicity testing shall performed as described in Whole Effluent Toxicity Testing Requirements V.A., below.
7. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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5. The Discharger shall monitor wastewater discharged at **M-010** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[5]
Volatile Organics	µg/L	Grab	Monthly	[1]
Perchlorate	µg/L	Grab	Monthly	[2]
1,4-Dioxane	µg/L	Grab	Monthly	[3]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[5]
Flow[4]	mgd	Measure	Continuous	--
Temperature[4]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen[	mg/L	Grab	Monthly	--
Electrical Conductivity[4]	µmhos/cm	Grab	Monthly	--
pH[4]	Standard	Grab	Monthly	--

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
3. A test method with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
4. Field Measurements.
5. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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5. The Discharger shall monitor wastewater discharged at **M-011** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[4]
Volatile Organics	µg/L	Grab	Monthly	[1]
Perchlorate	µg/L	Grab	Weekly	[2]
Flow[3]	mgd	Measure	Continuous	--
Temperature[3]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen	mg/L	Grab	Monthly	--
Electrical Conductivity[3]	µmhos/cm	Grab	Monthly	--
pH[3]	Standard	Grab	Monthly	--

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
3. Field Measurements.
4. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

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6. The Discharger shall monitor wastewater discharged at **M-012** as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[4]
Volatile Organics	µg/L	Grab	Once per 10,000 gallons purge water for Well Purge Beginning, middle and end of Aquifer Test	[1]
N-nitrosodimethylamine	µg/L	Grab	Once per well purge Beginning, middle and end of Aquifer Test	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[4]
Perchlorate	µg/L	Grab	Once per well purge Beginning, middle and end of Aquifer Test	[3]
1,4-Dioxane	µg/L	Grab	Once per well purge Beginning, middle and end of Aquifer Test	[3]
Flow[4]	gallons	Measure	Continuous	--
Temperature[4]	^{o}F(^{o}C)	Grab	Once per well purge Beginning, middle and end of Aquifer Test	--
pH[4]	Standard	Grab	Once per well purge Beginning, middle and end of Aquifer Test	--

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
4. Field Measurements.

7. If the discharge is intermittent rather than continuous, then on the first day of each such discharge, the Discharger shall monitor and record data for all of the constituents listed above, after which the frequency of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

8. If no discharge occurs at a particular discharge point during the monitoring period, then samples need not be collected for that particular discharge. It must be reported under the reporting program that no sampling was conducted at a particular monitoring point due to no discharge.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform quarterly acute toxicity testing, concurrent with effluent sampling for volatile organics and copper.

2. *Sample Types* – Effluent samples shall be grab samples taken at M-001, M-002, M-003, M-004, M-005, M-006, M-007, M-008 and M-009.

3. *Test Species* – Test species shall be larval stage (0 to 14 days old) fathead minnows (Pimephales promelas).

4. *Methods* – The acute bioassay tests samples shall be conducted in accordance with EPA-821-R-02-012, Fifth Edition, or later amendment with Executive Officer approval. Temperature and pH shall be recorded at the time of bioassay sample collection. No pH adjustment may be made unless approved by the Executive Officer.

5. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 3 business days following notification of test failure.

B. **Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform quarterly chronic toxicity testing for the first 4 quarters and annually thereafter.

2. *Sample Types* – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at effluent monitoring locations M-001 and M-002. The receiving water control shall be a grab sample obtained from the R-001 sampling location.

3. *Sample Volumes* – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. *Test Species* – Chronic toxicity testing measures either lethal or sublethal (e.g. reduced growth, reproduction) effects to experimental test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:

   - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
   - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
   - The green alga, *Selenastrum capricornutum* (growth test).

5. *Methods* – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition,* EPA/821-R-02-013, October 2002, or later amendment with Executive Officer approval.

6. *Reference Toxicant* – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. *Dilutions* – The chronic toxicity testing shall be performed using the 100% effluent, 25% effluent/75% R-001, 10% effluent/90% R-001 and 5%effluent/95% R-001.

8. *Test Failure* – If either the reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002, and its subsequent amendments or revisions, the Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of test failure.

C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Board within 24-hrs after the receipt of the results of an exceedance of a toxicity trigger during regular or accelerated monitoring.

D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:

   a. The results expressed in TUc, measured as 100/NOEC, and also measured as 100/LC50 100/EC_{25}, 100/IC_{25}, and 100/IC_{50}, as appropriate.

   b. The statistical methods used to calculate endpoints;

   c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

   d. The dates of sample collection and initiation of each toxicity test; and

   e. The results compared to the numeric toxicity trigger.

   Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE.

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports, reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Workplan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:

   a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring – American River, Morrison Creek and Alder Creek

1. The Discharger shall monitor the American River at R-001, R-002, R-003, R-004, R-005, R-006, R-007, R-008, R-009, R-010, and R-011, R-014, R-015 and Alder Creek at R-016 and R-017 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[6]
Volatile Organics	µg/L	Grab	Monthly	[1]
N-nitrosodimethlyamine	µg/L	Grab	Monthly	[2]
Perchlorate	µg/L	Grab	Monthly	[3]
Total Copper	µg/L	Grab	Monthly	[4]
Temperature[5]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen[5]	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[5]	µmhos/cm	Grab	Monthly	--
pH[5]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. A test method with a practical quantitation level no greater than 0.005 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
3. A test method with a practical quantitation level no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
4. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
5. Field Measurements.
6. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by Stations R-00l and R-016. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.

2. The Discharger shall monitor Morrison Creek R-012 and R-013 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[5]
Volatile Organics	µg/L	Grab	Monthly	[1]
Perchlorate	µg/L	Grab	Monthly	[2]
Total Copper	µg/L	Grab	Monthly	[3]
Temperature[4]	^{o}F(^{o}C)	Grab	Monthly	--
Dissolved Oxygen[4]	mg/L	Grab	Monthly	--
Turbidity	NTU	Grab	Monthly	--
Electrical Conductivity[4]	µmhos/cm	Grab	Monthly	--
pH[4]	Standard	Grab	Monthly	--
Hardness as $CaCO_3$	mg/L	Grab	Quarterly	--
Total Dissolved Solids	mg/L	Grab	Monthly	--

1. Test Method to be EPA Methods 601and 602 or 8010 and 8020 or 8260, or 500 Series, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 0.5 µg/L. All concentrations between the detection level and practical quanitation level shall be reported as trace.
2. Test Method to be EPA Methods 314.0 or 314.1, or an equivalent method approved by the Regional Board. with a Practical Quantitation Level no greater than 4.0 µg/L. All concentrations between the detection limit and practical quanitation level shall be reported as trace.
3. Test Method to be EPA Method 1638/200.8 or an equivalent method approved by the Regional Board with a practical quantitation limit no greater than 3 µg/L. All concentrations between the detection limit and practical quantitation level shall be reported as trace.
4. Field Measurements.
5. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by Stations R-012 and R-013. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.

3. If no discharge occurs at a particular discharge point during the monitoring period, then receiving water samples associated with that discharge need not be collected for that monitoring period. It must be reported under the reporting program that no sampling was conducted at a particular monitoring point due to no discharge.

B. Groundwater Monitoring – Not Applicable

IX. OTHER MONITORING REQUIREMENTS

A. State Implementation Plan Monitoring

The State Water Resources Control Board (SWRCB) adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Water Boards will require periodic monitoring (at least once prior to issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established.

Accordingly, the Regional Water Board is requiring, as part of this Monitoring and Reporting Program, that the Discharger monitor effluent and analyze the sample for all SIP constituents **one time at least 180 days but no more than 365 days prior to expiration of this Order.** The Discharger must analyze pH and hardness of the effluent at the same time as priority pollutant metals.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.

3. The Discharger shall report to the Regional Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

4. **Within 24-hours** after the Discharger has received information that its discharge exceeds effluent limitations, the Discharger shall notify the Board, City of Sacramento Department of Utilities, and Carmichael Water District. Arden-Cordova Water Service shall be notified if the discharge that is in violation is to Lake Natoma.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given,

the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly, quarterly, and annual Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 15th day of the second month following the end of each calendar month.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Day after permit effective date	All	Fifteenth day of second calendar month following month of sampling
1 / week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Fifteenth day of second calendar month following month of sampling
1 / month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	Fifteenth day of second calendar month following month of sampling
1 / quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 15 August 15 November 15 February 15
1/year	January 1 following (or on) permit effective date	January 1 through December 31	February 15

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

Submit monitoring reports to:
Central Valley Regional Water Quality Control Board 11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114

C. Discharge Monitoring Reports (DMRs)

1. When requested by U.S. EPA, the Discharger shall complete and submit Discharge Monitoring Reports. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger Self Monitoring Reports.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self generated or modified cannot be accepted.

D. Other Reports

1. **Annual Solids Disposal Report.** An annual solids disposal report shall be submitted with annual self-monitoring reports. The report shall describe the annual volume of solids, including spent ion exchange resin and granular activated carbon, generated by the Facility and specify the disposal practices.

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

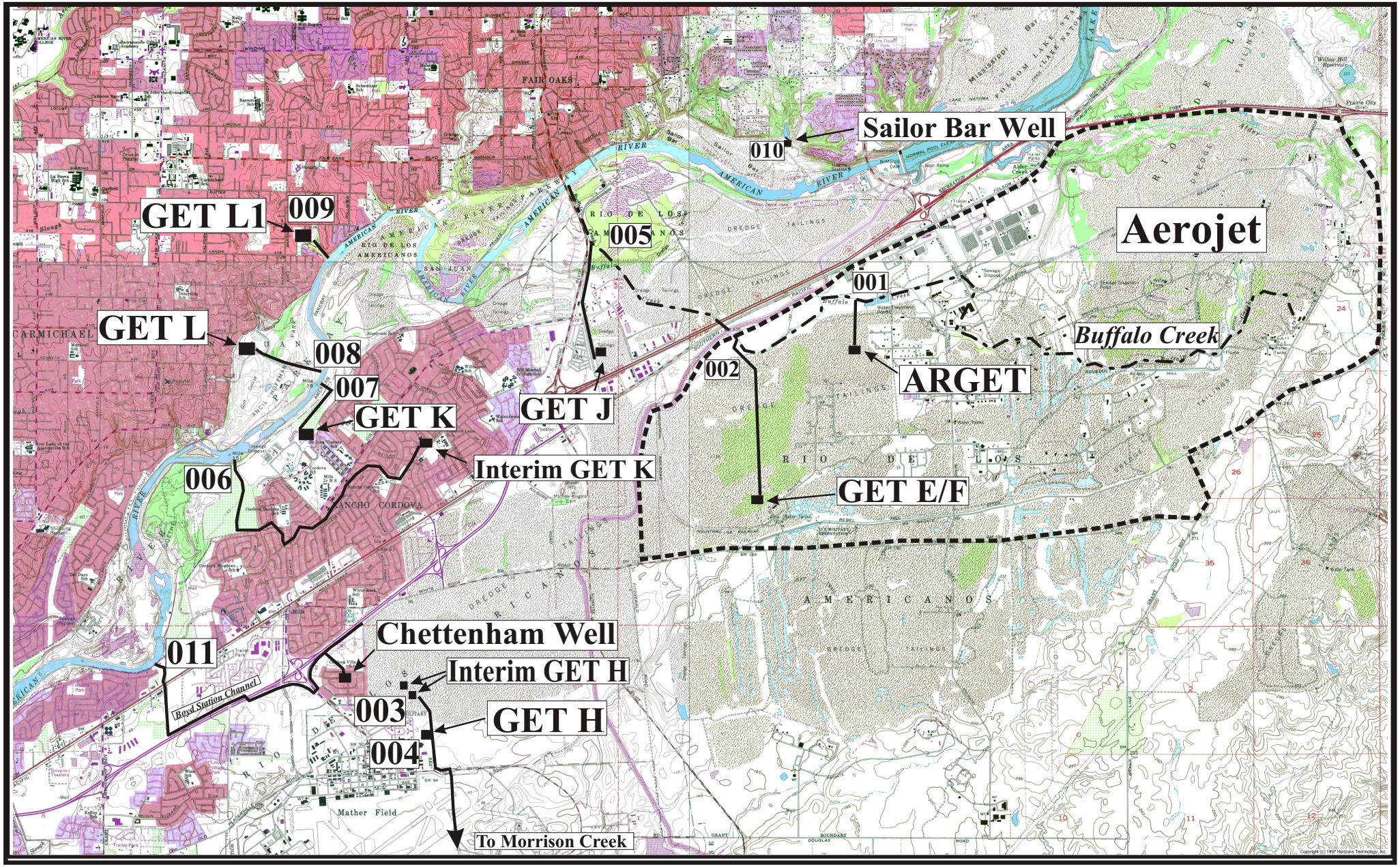
For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

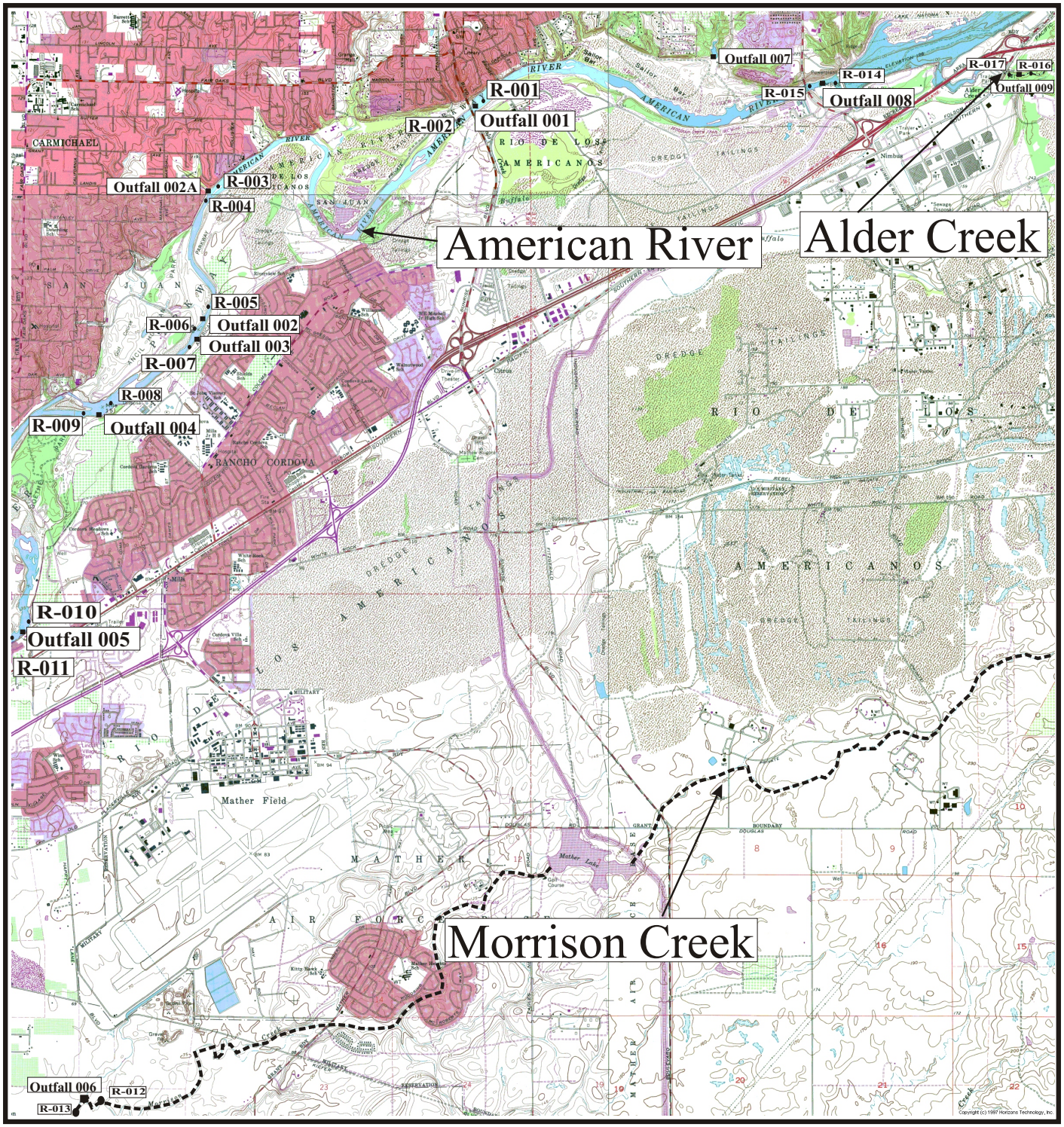
Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

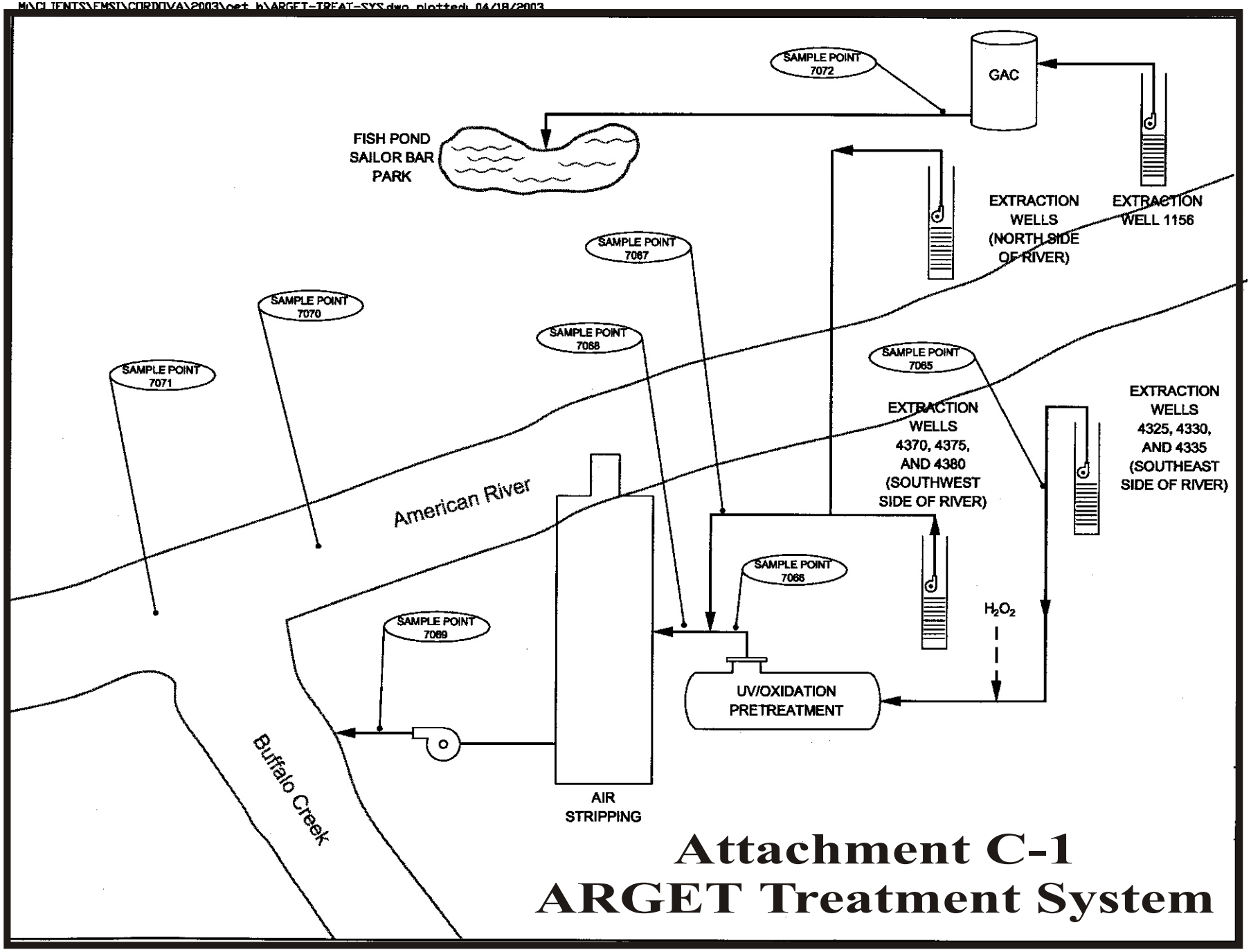
Attachment B-1 - Discharge and GET Locations



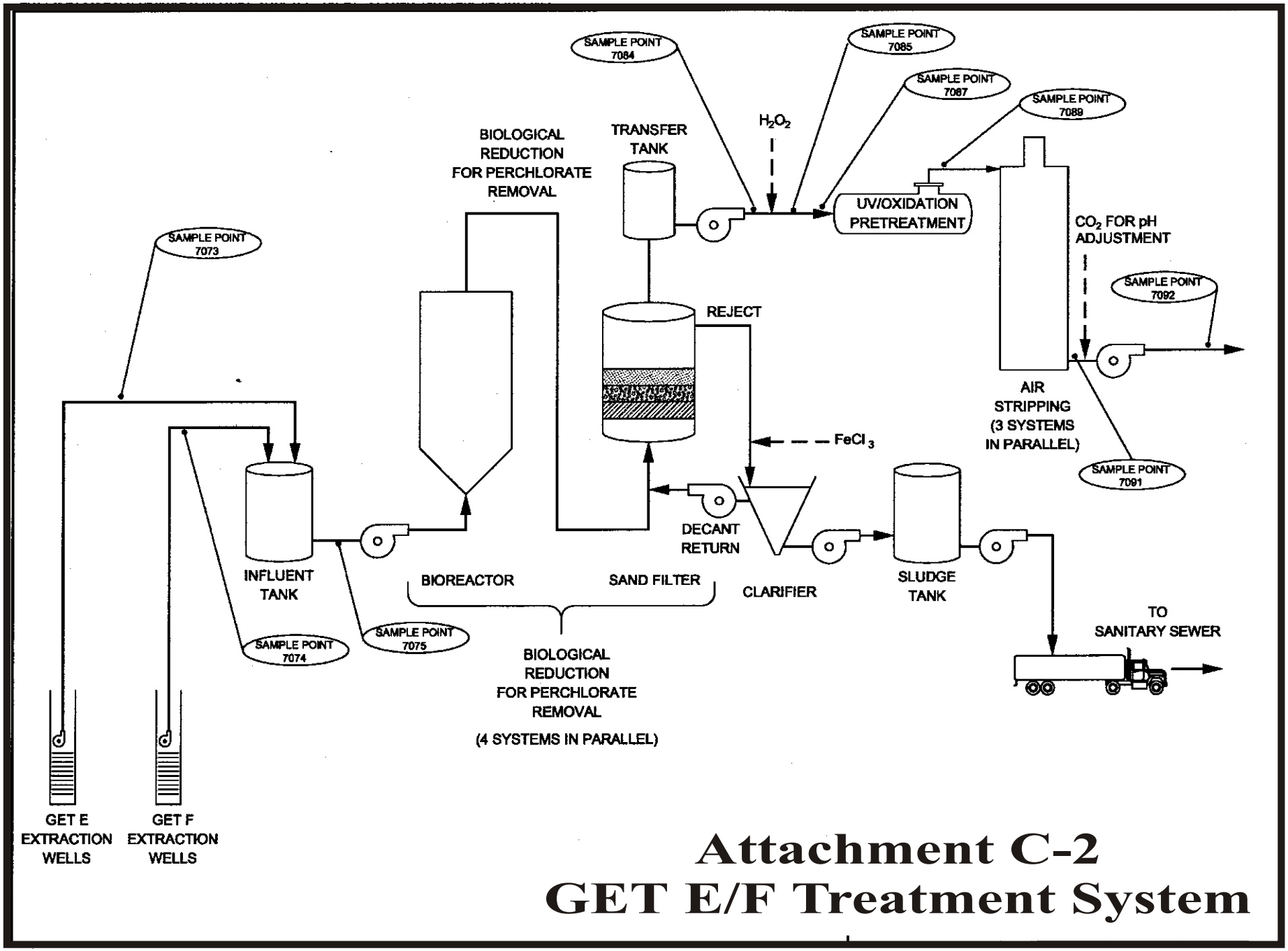
Attachment B-2- Receiving Water Sample Locations



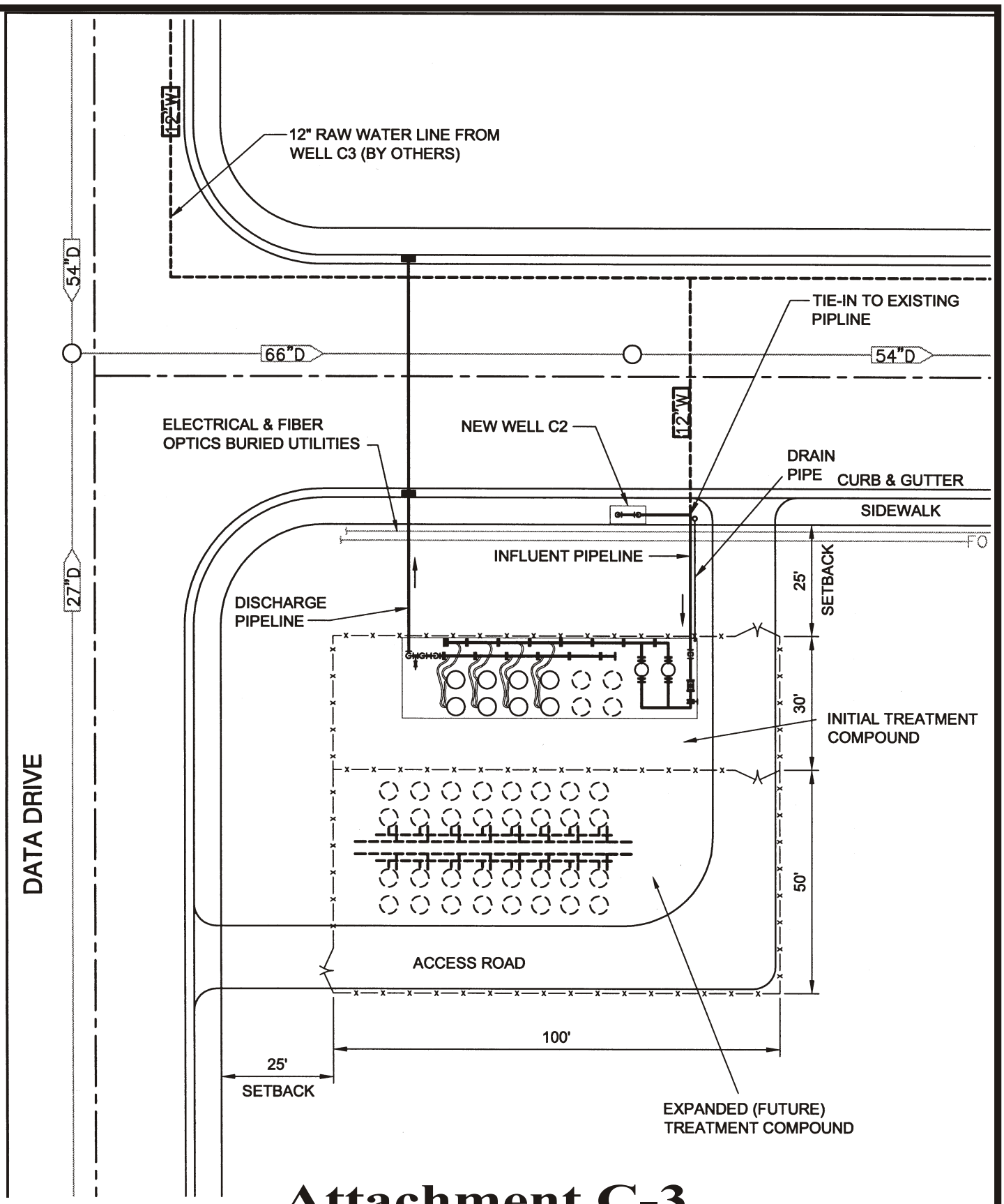
M:\CLIENTS\EMSI\CORDOVA\2003\cet b\ARGET-TREAT-SYS.dwg plotted 04/18/2003



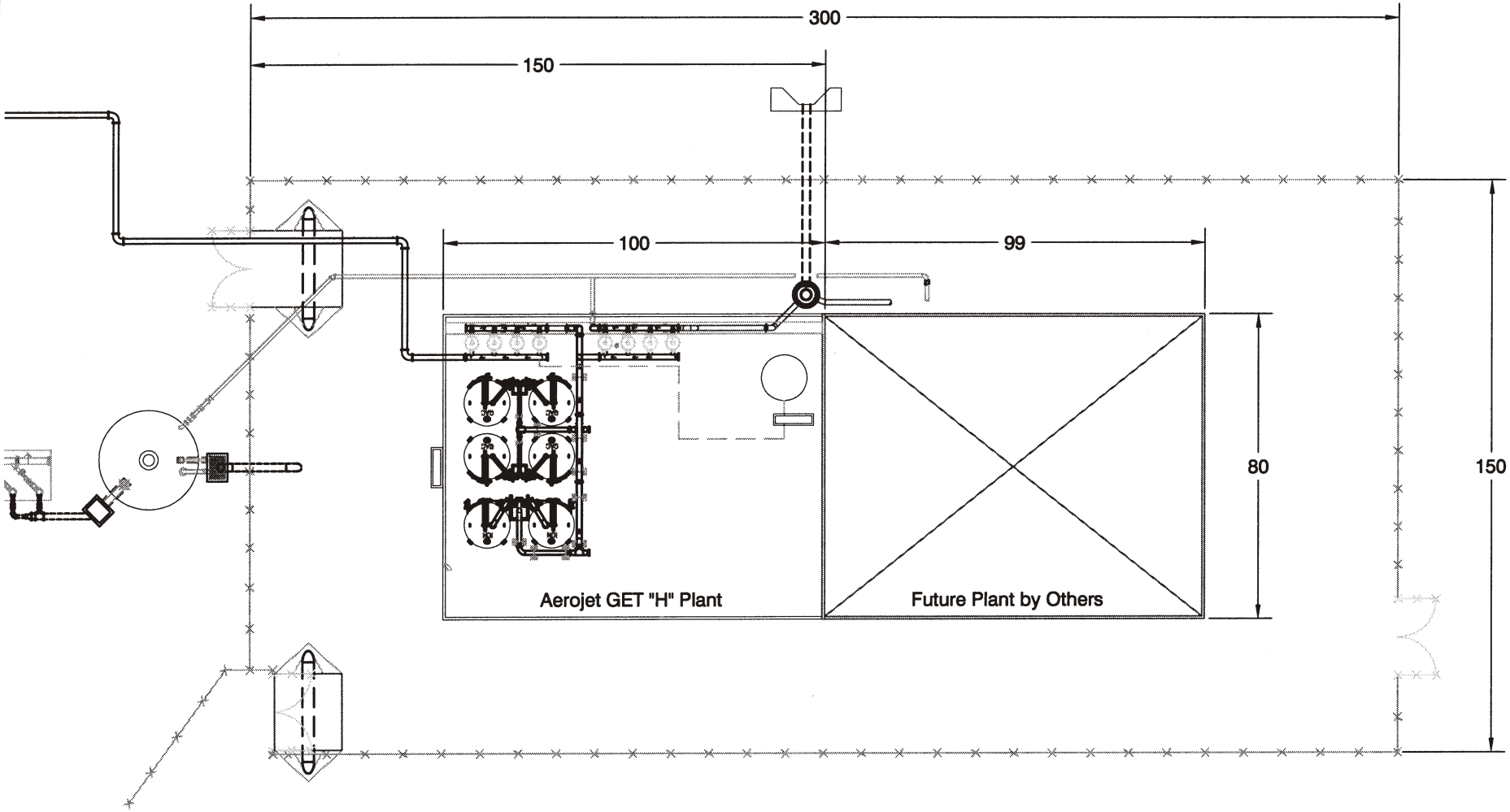
Attachment C-1
ARGET Treatment System



Attachment C-2
GET E/F Treatment System

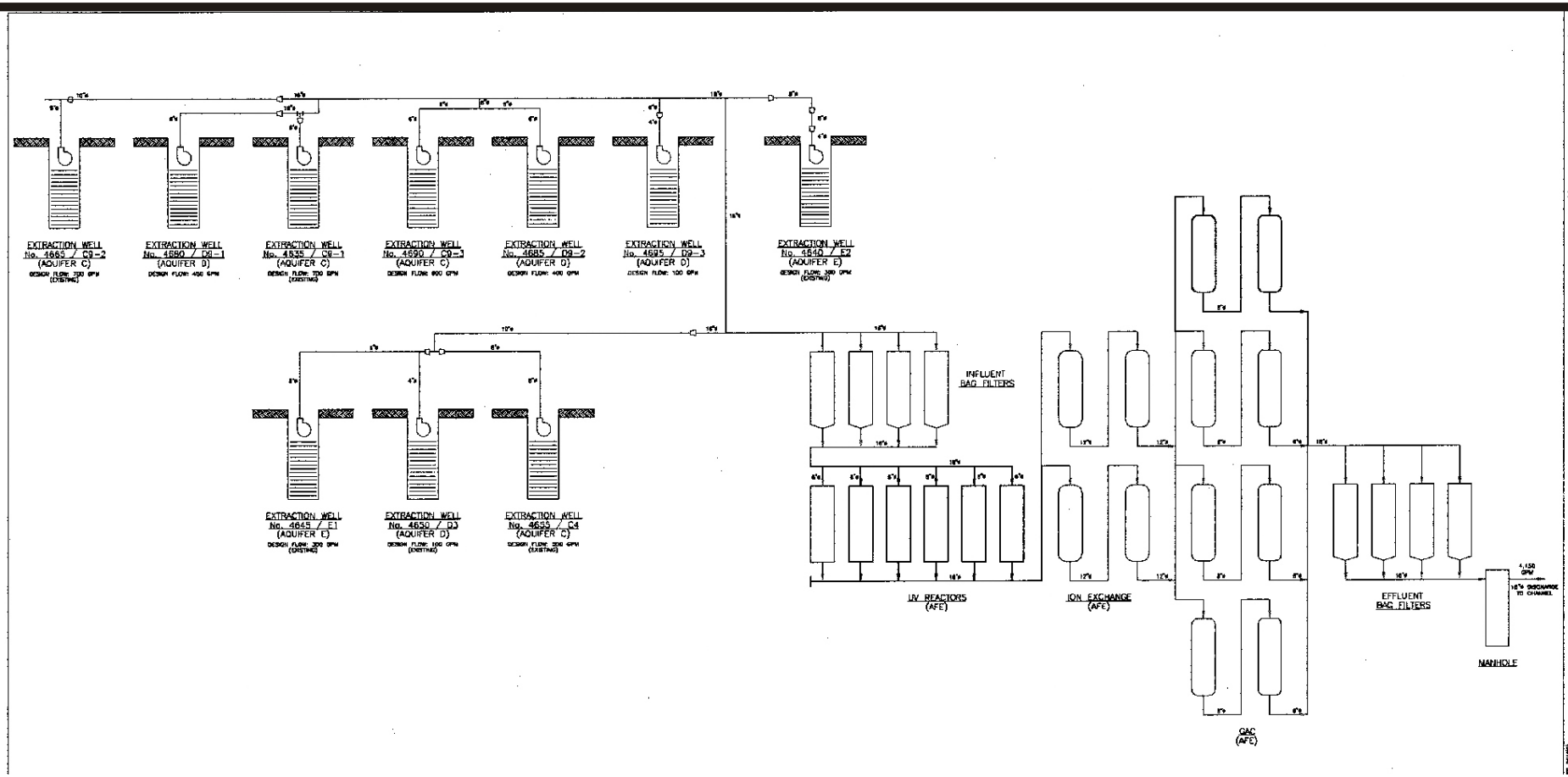


Attachment C-3
Interim GET H Treatment System

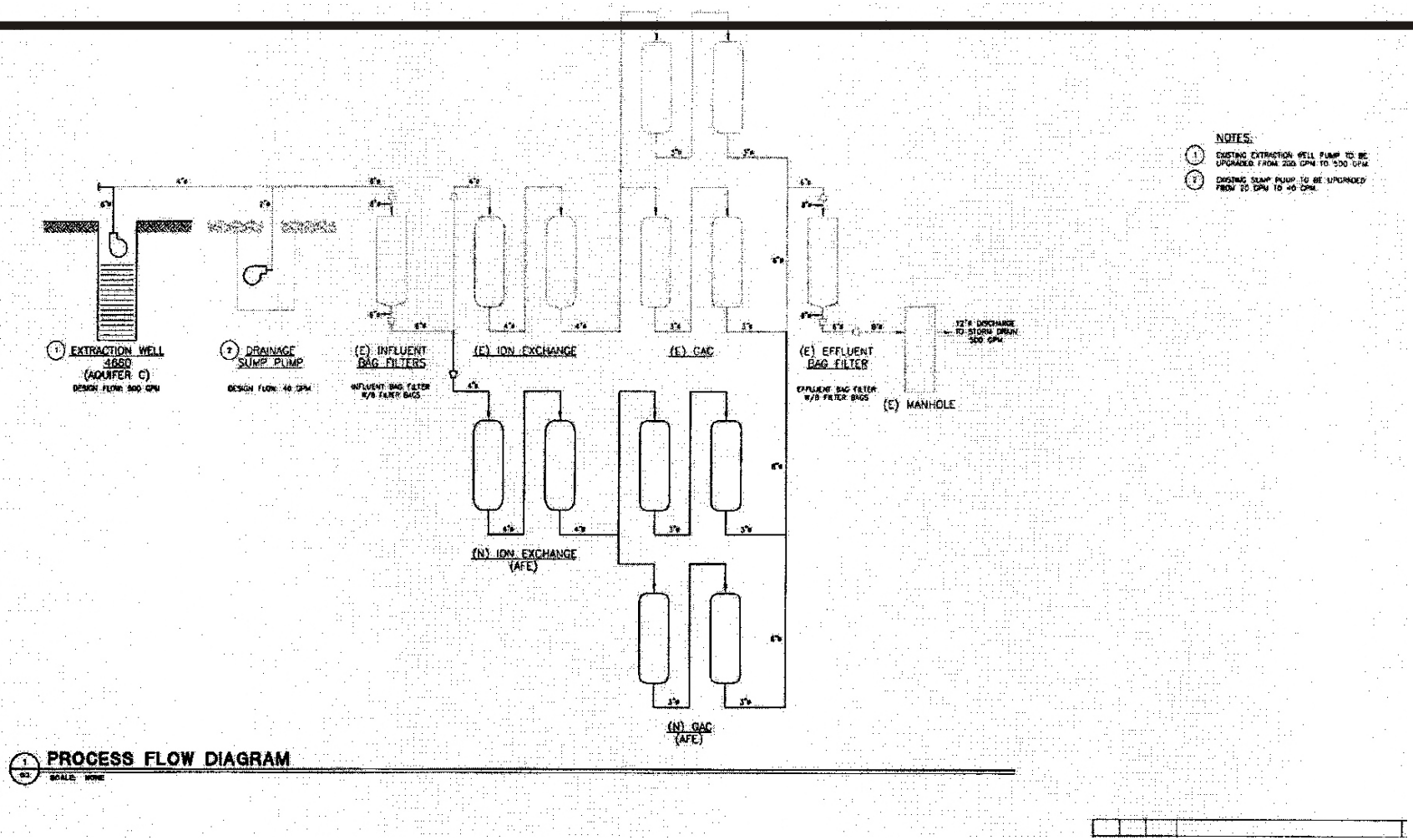


Scale: 1" = 40'

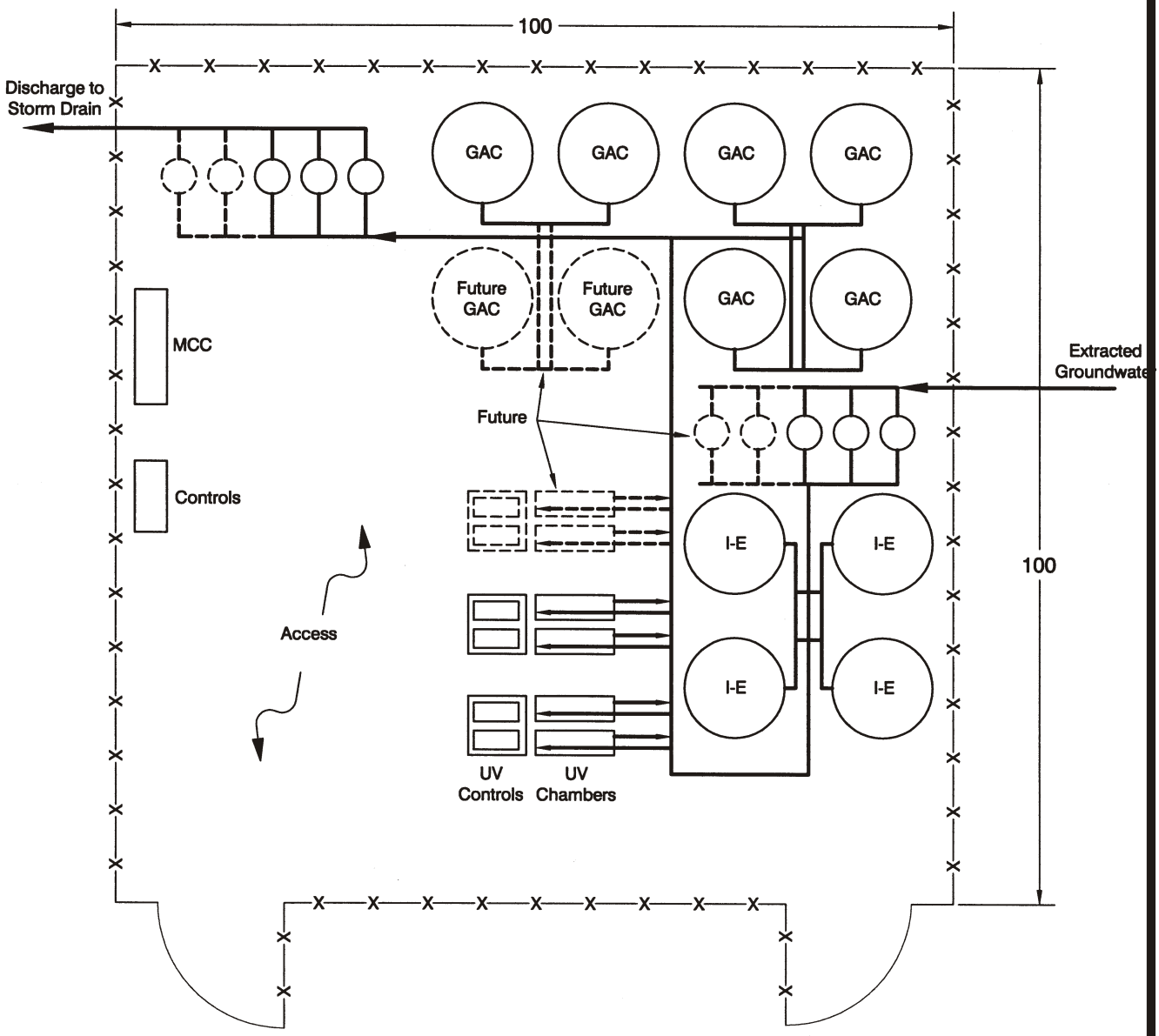
Attachment C-4
GET H Treatment System



Attachment C-5
GET J Treatment System



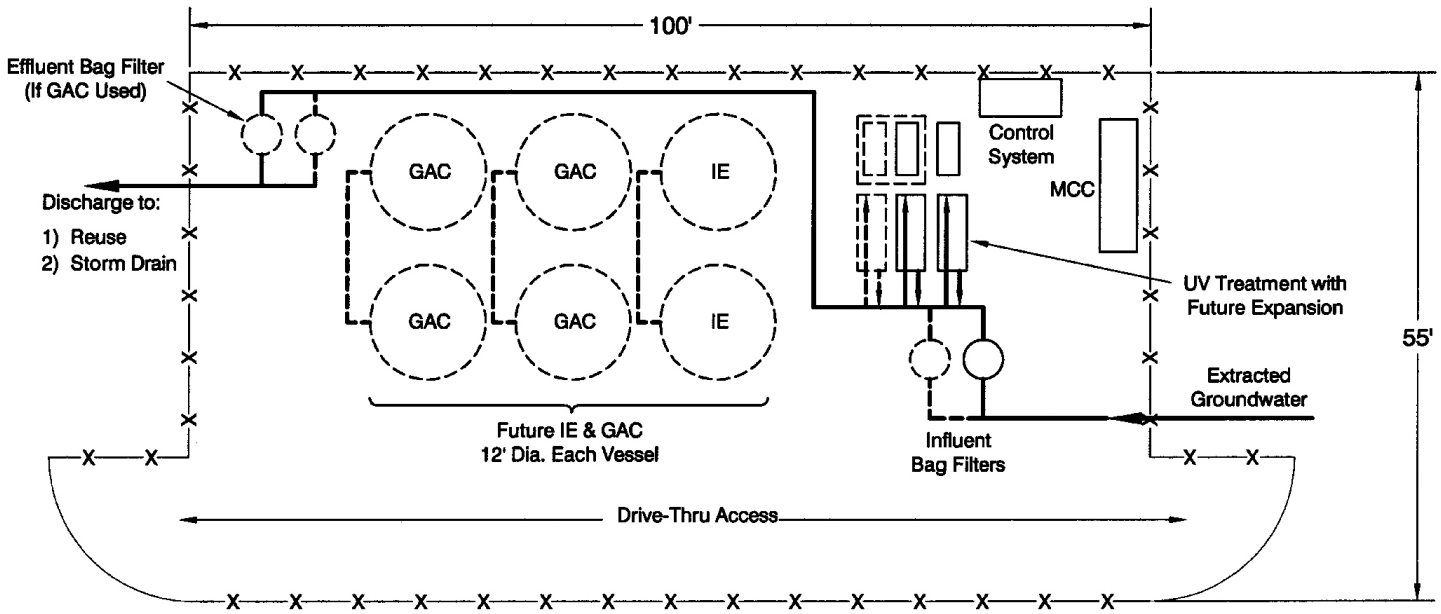
Attachment C-6
Interim GET K Treatment System



Notes: 1. Design capacity is for 3,000 gpm with space to expand to 4,000 gpm if required.

2. Anticipated to be installed outside; however, depending on use permit constraints may require exterior building.

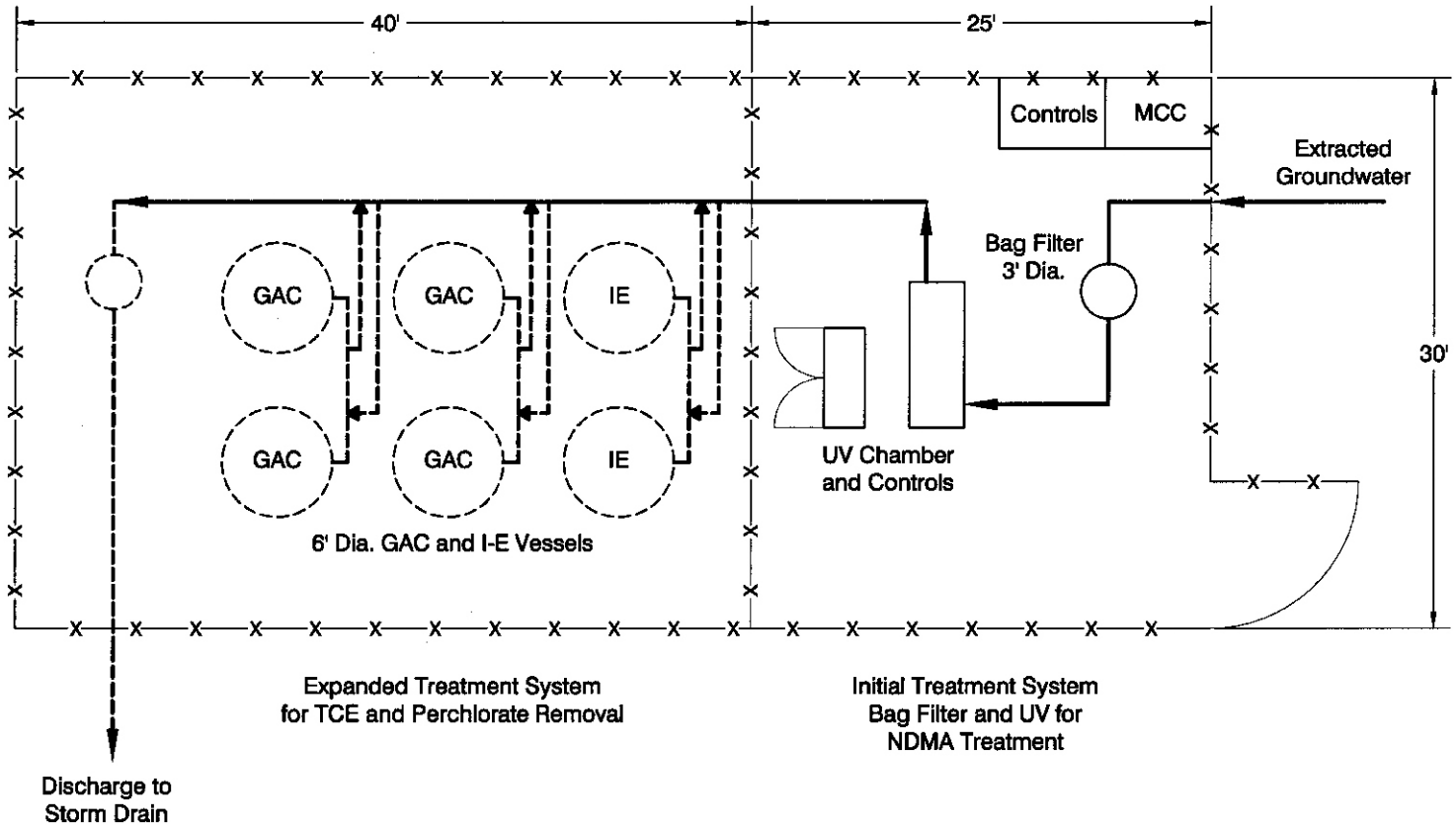
Attachment C-7
GET K Treatment System



Notes:

1. Design capacity set for 900 - 1,000 gpm with space to provided for future components to increase to 2,000 gpm.
2. Ion-exchange and GAC treatment not anticipated with initial start up.
3. Anticipated to be installed in fenced area with no building to house.

Attachment C-8
GET L Treatment System



Notes:
1. Design capacity to treat up to 500 gpm.
2. Initial treatment for NDMA with space considerations for the addition of perchlorate and TCE treatment.
3. Anticipated to be installed in fenced area.

Attachment C-9
GET L1 Treatment System

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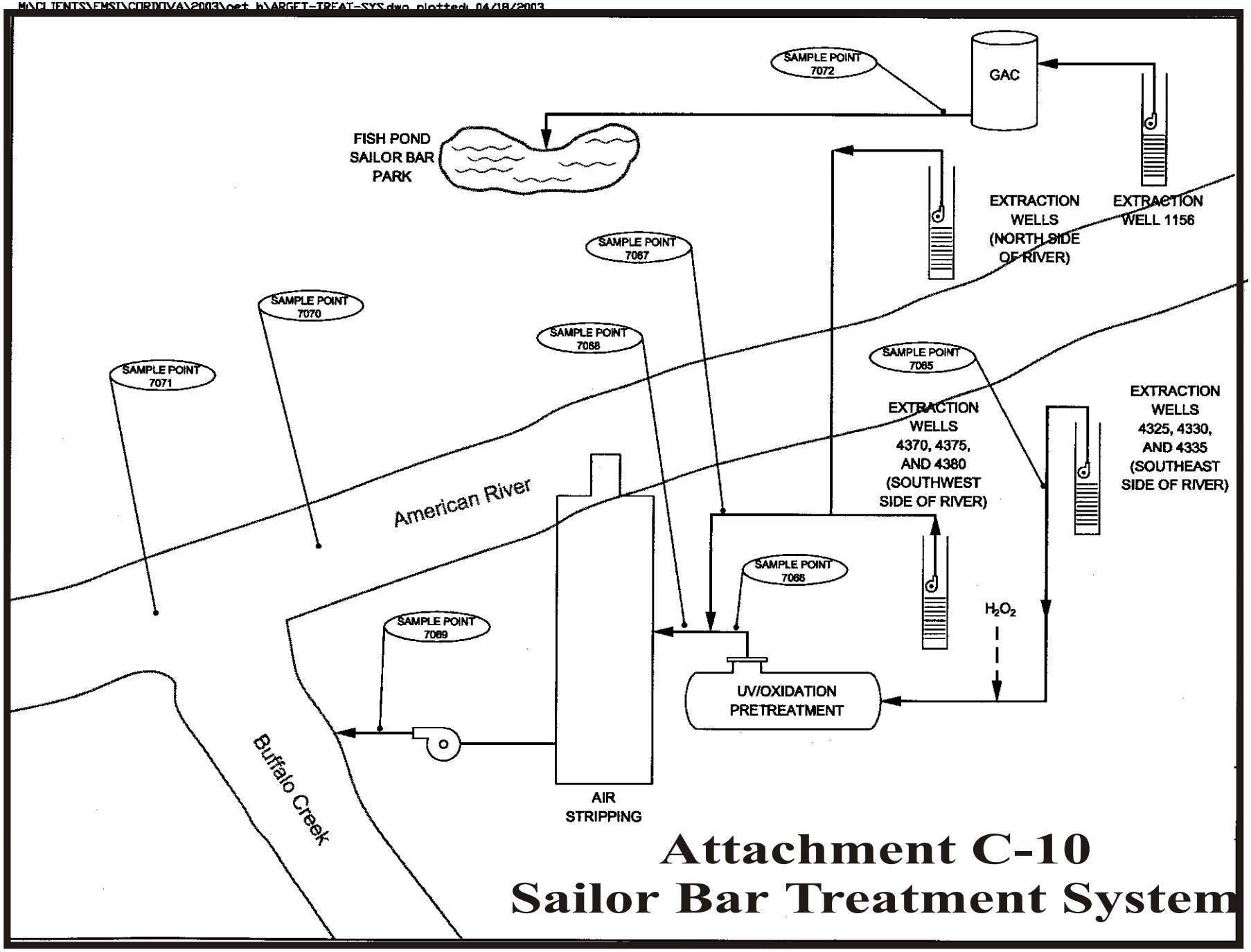
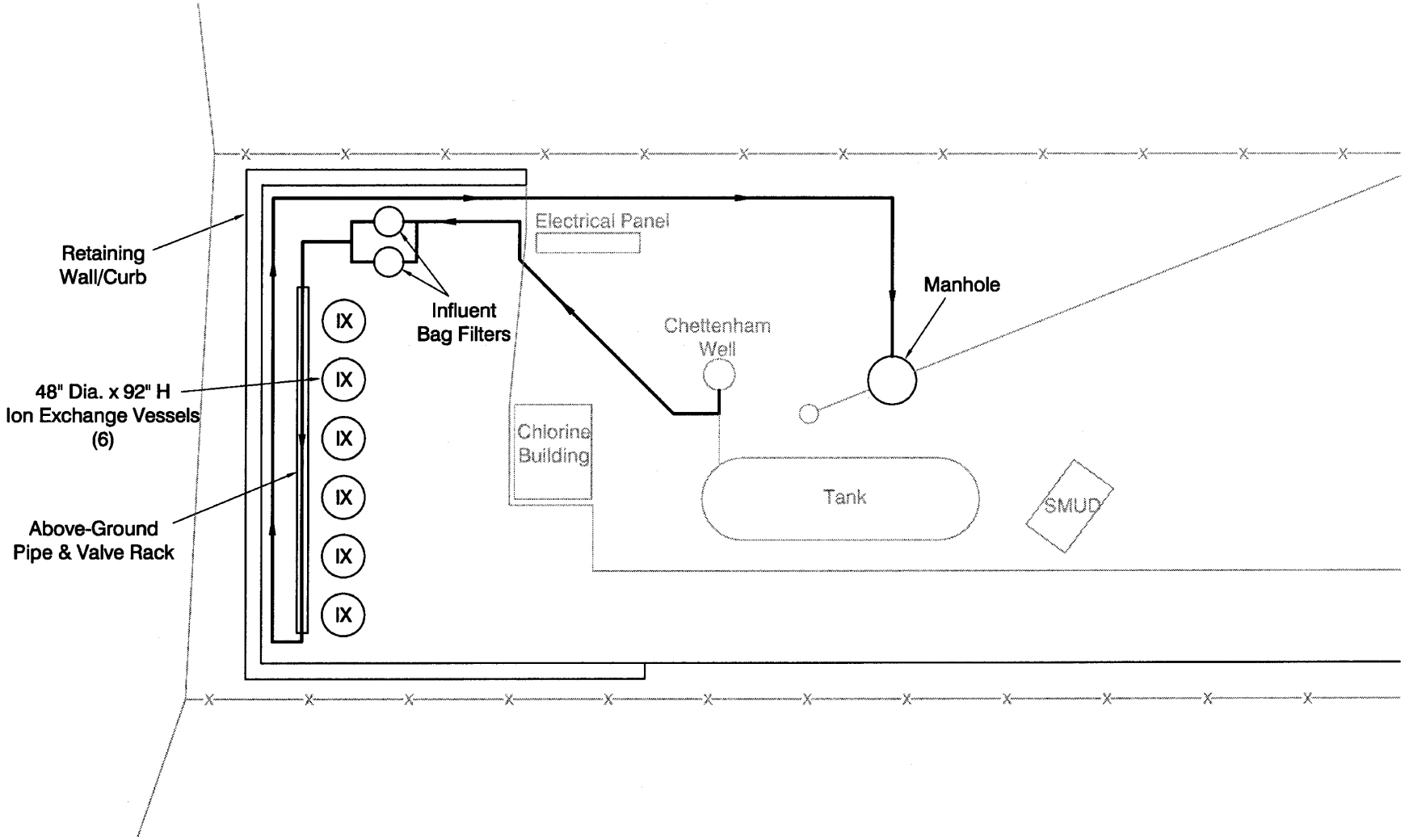


Attachment C-10
Sailor Bar Treatment System



Attachment C-11
Chettenham Treatment System