

State of California
California Regional Water Quality Control Board
Santa Ana Region

April 22, 2011

ITEM: *10

SUBJECT: Issuance of Waste Discharge Requirements for General Electric Company, GE Francis Street Water Treatment Plant, San Bernardino County, Order No. R8-2011-0019

DISCUSSION:

See attached Fact Sheet

RECOMMENDATIONS:

Adopt Order No. R8-2011-0019 as presented.

COMMENT SOLICITATION:

Comments were solicited from the discharger and the following agencies:

State Water Resources Control Board, Office of the Chief Counsel – David Rice
California Department of Public Health, San Bernardino – Sean MacCarthy
San Bernardino County Environmental Health Services – Terri Williams
San Bernardino County Department of Public Works, Flood Control – Naresh Varma
Santa Ana Watershed Project Authority – Celeste Cantu
Santa Ana River Dischargers Association - Ed Filadelfia
Inland Empire Waterkeeper – Autumn DeWoody
Natural Resources Defense Council – David Beckman
General Electric Company – Lisa Hamilton
AMEC Geomatrix - Paul Deutsch

California Regional Water Quality Control Board Santa Ana Region

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ORDER NO. R8-2011-0019

WASTE DISCHARGE REQUIREMENTS FOR GENERAL ELECTRIC COMPANY GE FRANCIS STREET WATER TREATMENT PLANT SAN BERNARDINO COUNTY

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

Table 1. Discharger Information

Discharger	General Electric Company
Name of Facility	GE Francis Street Water Treatment Plant
Facility Address	501 West Francis Street
	Ontario, CA
	San Bernardino County

The discharge by the General Electric Company's Groundwater Treatment Plant to the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Disposal Site
001	Treated Groundwater	N:1835886.4926	E:6671677.1844	Injection Well
002	Treated Groundwater	N:1835889.5340	E:6672194.7040	Injection Well
003	Treated Groundwater	N:1835612.6973	E:6672195.8099	Injection Well

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	April 22, 2011
This Order shall become effective on:	April 22, 2011

I, Kurt V. Berchtold, Executive Officer, do hereby certify this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on April 22, 2011.

Kurt V. Berchtold
Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 8, SANTA ANA REGION**

ORDER NO. R8-2011-0019

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	General Electric Company
Name of Facility	GE Francis Street Water Treatment Plant
Facility Address	501 West Francis Street
	Ontario, CA
	San Bernardino County
Facility Contact, Title, and Phone	Lisa A. Hamilton, Manager, MidAtlantic/Southeast/Western Regions (610) 992-7885
Mailing Address	640 Freedom Business Center, King Prussia, PA 19406
Type of Facility	Groundwater Cleanup Facility
Amount of Injected Water	Up to 2,000 gallons per minute (gpm)

II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), finds:

A. Background On July 1, 2010, General Electric Company (hereinafter Discharger or GE) submitted a revised report of waste discharge for the proposed discharge of treated groundwater from groundwater cleanup activities associated with its former manufacturing facility in Ontario, California. The discharge consists of treated groundwater from the GE Francis Street Water Treatment Plant (WTP) via injection wells. The treatment plant is located at 501 West Francis Street, Ontario, California, while the injection wells are located at 2025 South Bon View Avenue in Ontario, California.

GE owned and operated a flatiron manufacturing facility at 234 East Main Street in Ontario from 1927 until plant closure in 1982. Groundwater beneath and downgradient of the facility has been impacted primarily by trichloroethylene (TCE) and hexavalent chromium. The contaminant plume extends in a south-southwesterly direction, along the groundwater flow gradient. The depth of groundwater in this area ranges from about 270 feet to 370 feet below ground surface.

B. Facility Description In 1996, GE began operating a groundwater extraction well (EW-1) at the leading edge of the contaminant plume to contain and prevent further migration of the plume. The well is located at 501 West Francis Street in Ontario. In 2002, GE began operating a mid-plume well (EW-2) to cut off further migration of contaminants past the mid-point of the plume. That well is located in

De Anza Park in Ontario. TCE is the primary contaminant in the plume. Hexavalent chromium is present primarily upgradient of EW-2.

Extracted groundwater from EW-1 is conveyed by pipeline to the WTP. Extracted groundwater is also conveyed via a separate double walled pipeline from EW-2 to the WTP. At the WTP, the extracted groundwater from both extraction wells is combined and first treated with an ion exchange resin and then treated with liquid phase granular activated carbon. There are four ion exchange vessels that are configured as two parallel sets in series for reversible series operation with lead vessels used for primary adsorption and the lag vessels used for polishing. The four LGAC vessels are also configured as two parallel sets in series with reversible operation.

The treated groundwater has been discharged via a pipeline for percolation in the Ely Basins, a series of flood control and groundwater recharge basins. However, GE was subsequently notified that the capacity of the Ely Basins was expected to be fully allocated to other uses in the future, and GE had to find an alternative discharge location. GE conducted a screening study of discharge alternatives and, based upon a detailed evaluation, groundwater injection was selected as the preferred option.

- C. Legal Authorities** This Order serves as Waste Discharge Requirements pursuant to Article 4, Chapter 4 of the California Water Code (CWC) (commencing with section 13000).
- 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 and data from monitoring and reporting programs, as well as other available information. Attachment F, which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A, B, C, E, G and H are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA)** The adoption of this order involves the update of waste discharge requirements for an existing discharge and, as such, is exempt from the California Environmental Quality Act (Public Resources Code, section 21100 et. seq.) in accordance with section 15301, Chapter 3, Title 14, California Code of Regulations.
- F. Water Quality Control Plans** The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the plan. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for

groundwater sub basins, now termed “management zones”, new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. This Basin Plan Amendment was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively.

The injection wells overlie the Chino North Groundwater Management Zone, the beneficial uses of which are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Use(s)
001, 002, 003	Chino North Groundwater Management Zone	1. Municipal and domestic supply 2. Industrial service supply 3. Agricultural supply, and 4. Industrial process supply

G. Antidegradation Policy The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in the Staff Report (Attachment F), the permitted discharge is consistent with the antidegradation provisions of State Water Board Resolution No. 68-16.

H. Monitoring and Reporting Section 13267 of the CWC authorizes the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement State requirements. This Monitoring and Reporting Program is provided in Attachment E.

I. 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 to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

K. 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.

IT IS HEREBY ORDERED, that Order No. 95-62 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 California Water Code (commencing with section 13000) and regulations adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A. The discharge of waste other than treated groundwater, storm water, municipal water, or purge water is prohibited. Municipal water may be added to the well during redevelopment activities that will occur periodically.
- B. The discharge of wastewater at a location or in a manner different from those described in this Order is prohibited.
- C. The bypass or overflow of untreated wastewater or wastes to surface waters or drainage courses is prohibited
- D. The discharge of any substances in concentrations toxic to animal or plant life in the affected receiving water is prohibited.
- E. There shall be no visible oil and grease in the discharge.
- F. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Unless otherwise specified hereinafter, compliance with the following effluent limitations shall be measured at a representative monitoring location as described in Attachment E.

1. The discharge of wastewater shall maintain compliance with the following limitations:

Constituent	Average Monthly Concentration Limit ¹
Tetrachloroethylene (PCE) ²	5 µg/l
Trichloroethylene (TCE)	5 µg/l
1,1,1-Trichloroethane (1,1,1-TCA)	200 µg/l
Chromium as Chromium VI or Total Chromium	50 µg/l

2. The pH of the discharge shall be within the range of 6.0 and 9.0 pH units.
3. The discharge of treated water through injection wells shall not cause a degradation of the groundwater quality.

V. RECEIVING WATER LIMITATIONS

The discharge shall not cause the underlying groundwater to be degraded, to cause water quality objectives to be exceeded, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. PROVISIONS

A. Standard Provisions

1. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

¹ Average monthly concentration limit means the highest allowable average of daily pollutant discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of measurements.

² Tetrachloroethylene is synonymous to perchloroethylene.

2. In the event the Discharger does not comply or will be unable to comply for any reason with any prohibition, discharge limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone at (951) 782-4130 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in the monthly Self-Monitoring Report, unless the Regional Water Board waives confirmation or requires, orally or in writing, a written notification within five business days. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.
3. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by section 13050 of the California Water Code.
4. The Discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.
5. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncomplying discharge.
6. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following.
 - a. Violation of any terms or conditions of this Order;
 - b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.
7. The Discharger shall file with the Regional Water Board a Report of Waste Discharge at least 140 days before making any material change in the character, location, or volume of the discharge. A material change includes, but is not limited to, the following:
 - a. Adding a new source resulting in a change in the character of the waste.
 - b. Significantly changing the disposal method or location, such as changing the disposal to another drainage area or water body.
 - c. Significantly changing the method of treatment.
 - d. Increasing the treatment plant design capacity beyond that specified in this Order.
8. The Discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

9. The Discharger shall optimize chemical additions needed in the treatment process to meet waste discharge requirements so as to minimize total dissolved solid increases in the treated wastewater.
10. The Regional Water Board and other authorized representatives shall be allowed:
 - a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;
 - b. Access to copy any records that are kept under the conditions of the Order;
 - c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the Water Code.
11. Compliance with the effluent limitations shall be based on Minimum Levels in Attachment H of this order
12. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., weekly, monthly, quarterly), that sample shall serve to characterize the discharge for the entire interval.
13. The Discharger must comply with all of the requirements of this Order. Any violation of this Order constitutes a violation of the California Water Code and is grounds for enforcement action, termination of this Order, revocation and reissuance of this Order, denial of an application for reissuance of this Order; or a combination thereof.
14. The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control including sludge use, disposal facilities, and related appurtenances that are installed or used by the discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory controls, appropriate quality assurance procedures, effective performance, adequate funding, adequate staffing and training, and adequate process controls. This provision requires the operation of back up or auxiliary facilities or similar systems that are installed by a discharger only when the operation is necessary to achieve compliance with the requirements of this Order.
15. The Discharger shall develop an "Operation and Maintenance Manual (O&M Manual)". If an O&M Manual has been developed, the discharger shall update it as necessary to conform to latest plant changes and requirements. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:
 - a. Description of the treatment plant, table of the organization showing the number of employees, duties and qualifications and plant attendance

- schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
- b. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
 - c. Description of laboratory and quality assurance procedures.
 - d. Process and equipment inspection and maintenance schedules.
 - e. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharger will be able to comply with requirements of this Order.
 - f. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.
16. The Discharger shall report any discharge of waste that may endanger health or the environment. Any information shall be provided to the Executive Officer (909-782-4130) and the California Emergency Management Agency (800-852-7550), if appropriate, as soon as the discharger becomes aware of the circumstances. A written report shall be submitted within five (5) days and shall contain a description of the discharge and its cause, the period of discharge, including exact dates and times and, if the discharge has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the discharge.

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. This monitoring and reporting program may be modified by the Executive Officer at any time during the term of this Order, and may include an increase or a reduction in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected. Any increase in the number of parameters to be monitored, the frequency of the monitoring or the number and size of samples to be collected may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

C. Special Provisions

The injection wells will require periodic maintenance that includes back flushing and redevelopment. Water generated during maintenance activities may be discharged to the West Cucamonga Flood Control Channel and then to the Ely Basins. GE proposes to perform maintenance activities during dry weather periods, if possible. However, if maintenance activities are conducted during the rainy season, GE shall manage the discharge so as not to cause an overflow from the Ely Basins into Cucamonga Creek.

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.

B. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

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, 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, the Discharger may be considered out of compliance for that parameter for that single sample. Non-compliance for each sample may 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).

ATTACHMENT G – POLLUTANT MONITORING TRIGGER LIST

Table 1

Chemical	Maximum Contaminant Level	Unit
Inorganic Chemicals		
Aluminum	1	mg/L
Antimony	0.006	mg/L
Arsenic	0.010	mg/L
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	MFL
Barium	1	mg/L
Beryllium	0.004	mg/L
Cadmium	0.005	mg/L
Chromium, Total	0.05	mg/L
Cyanide	0.15	mg/L
Fluoride	2	mg/L
Mercury (inorganic)	0.002	mg/L
Nickel	0.1	mg/L
Nitrate (as NO ₃)	45	mg/L
Nitrite (as N)	1 as N	mg/L
Nitrate + Nitrite	10 as N	mg/L
Perchlorate	0.006	mg/L
Selenium	0.05	mg/L
Thallium	0.002	mg/L
Copper	1.3	mg/L
Lead	0.015	mg/L
Organic Chemicals		
(a) Volatile Organic Chemicals (VOCs)		
Benzene	0.001	mg/L
Carbon tetrachloride	0.0005	mg/L
1,2-Dichlorobenzene	0.6	mg/L
1,4-Dichlorobenzene (p-DCB)	0.005	mg/L
1,1-Dichloroethane (1,1-DCA)	0.005	mg/L
1,2-Dichloroethane (1,2-DCA)	0.0005	mg/L
1,1-Dichloroethylene (1,1-DCE)	0.006	mg/L
cis-1,2-Dichloroethylene	0.006	mg/L

Table 1

Chemical	Maximum Contaminant Level	Unit
trans-1,2-Dichloroethylene	0.01	mg/L
Dichloromethane (Methylene chloride)	0.005	mg/L
1,2-Dichloropropane	0.005	mg/L
1,3-Dichloropropene	0.0005	mg/L
Ethylbenzene	0.3	mg/L
Methyl tertiary butyl ether (MTBE)	0.013	mg/L
Monochlorobenzene	0.07	mg/L
Styrene	0.1	mg/L
1,1,2,2-Tetrachloroethane	0.001	mg/L
Tetrachloroethylene (PCE)	0.005	mg/L
Toluene	0.15	mg/L
1,2,4-Trichlorobenzene	0.005	mg/L
1,1,1-Trichloroethane (1,1,1-TCA)	0.2	mg/L
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	mg/L
Trichloroethylene (TCE)	0.005	mg/L
Trichlorofluoromethane (Freon 11)	0.15	mg/L
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1.2	mg/L
Vinyl chloride	0.0005	mg/L
Xylenes	1.75	mg/L
(b) Non-Volatile Synthetic Chemicals (SOCs)		
Alachlor	0.002	mg/L
Atrazine	0.001	mg/L
Bentazon	0.018	mg/L
Benzo(a)pyrene	0.0002	mg/L
Carbofuran	0.018	mg/L
Chlordane	0.0001	mg/L
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	mg/L
Dalapon	0.2	mg/L
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	mg/L
Di(2-ethylhexyl)adipate	0.4	mg/L
Di(2-ethylhexyl)phthalate (DEHP)	0.004	mg/L
Dinoseb	0.007	mg/L
Diquat	0.02	mg/L
Endrin	0.002	mg/L
Endothal	0.1	mg/L

Table 1

Chemical	Maximum Contaminant Level	Unit
Ethylene dibromide (EDB)	0.00005	mg/L
Glyphosate	0.7	mg/L
Heptachlor	0.00001	mg/L
Heptachlor epoxide	0.00001	mg/L
Hexachlorobenzene	0.001	mg/L
Hexachlorocyclopentadiene	0.05	mg/L
Lindane	0.0002	mg/L
Methoxychlor	0.03	mg/L
Molinate	0.02	mg/L
Oxamyl	0.05	mg/L
Pentachlorophenol	0.001	mg/L
Picloram	0.5	mg/L
Polychlorinated biphenyls (PCBs)	0.0005	mg/L
Simazine	0.004	mg/L
2,4,5-TP (Silvex)	0.05	mg/L
2,3,7,8-TCDD (dioxin)	3×10^{-8}	mg/L
Thiobencarb	0.07	mg/L
Toxaphene	0.003	mg/L
Disinfectant Byproducts		
Total trihalomethanes (TTHM)	0.080	mg/L
Bromodichloromethane		mg/L
Bromoform		mg/L
Chloroform		mg/L
Dibromochloromethane		mg/L
Haloacetic acids (five) (HAA5)	0.060	mg/L
Monochloroacetic Acid		mg/L
Dichloroacetic Acid		mg/L
Trichloroacetic Acid		mg/L
Monobromoacetic Acid		mg/L
Dibromoacetic Acid		mg/L
Bromate	0.010	mg/L
Chlorite	1.0	mg/L

Table 2

ITEM	CHEMICAL CONSTITUENT	Concentration (mg/L)
1	Boron	1
2	n-Butylbenzene	0.26
3	sec-Butylbenzene	0.26
4	tert-Butyl benzene	0.26
5	Carbon disulfide	0.16
6	Chlorate	0.8
7	2-Chlorotoluene	0.14
8	4-Chlorotoluene	0.14
9	Dichlorodifluoromethane (Freon 12)	1
10	1,4-Dioxane	0.003
11	Ethylene glycol	14
12	Formaldehyde	0.1
13	HMX	0.35
14	Isopropylbenzene	0.77
15	Manganese	0.5
16	Methyl isobutyl ketone (MIBK)	0.12
17	Naphthalene	0.017
18	N-Nitrosodiethylamine (NDEA)	0.00001
19	N-Nitrosodimethylamine (NDMA)	0.00001
20	N-Nitrosodi-n-propylamine (NDPA)	0.00001
21	Propachlor	0.09
22	n-Propylbenzene	0.26
23	RDX	0.0003
24	Tertiary butyl alcohol (TBA)	0.012
25	1,2,3-Trichloropropane (1,2,3-TCP)	0.000005
26	1,2,4-Trimethylbenzene	0.33
27	1,3,5-Trimethylbenzene	0.33
28	2,4,6-Trinitrotoluene (TNT)	0.001
29	Vanadium	0.05

ATTACHMENT H – MINIMUM LEVELS

MINIMUM LEVELS IN PPB (µg/l)

Table 1- VOLATILE SUBSTANCES¹	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (<i>Bromomethane</i>)	1.0	2
Methyl Chloride (<i>Chloromethane</i>)	0.5	2
Methylene Chloride (<i>Dichloromethane</i>)	0.5	2
1,1,1,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in this Attachment that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in the PQL Table.

ML Usage: The ML value in this Attachment represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.

Note: chemical names in parenthesis and italicized is another name for the constituent.

¹ The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

MINIMUM LEVELS IN PPB (µg/l)

Table 2 – Semi-Volatile Substances²	GC	GCMS	LC
2-Chloroethyl vinyl ether	1	1	
2 Chlorophenol	2	5	
2,4 Dichlorophenol	1	5	
2,4 Dimethylphenol	1	2	
4,6 Dinitro-2-methylphenol	10	5	
2,4 Dinitrophenol	5	5	
2- Nitrophenol		10	
4- Nitrophenol	5	10	
4 Chloro-3-methylphenol	5	1	
2,4,6 Trichlorophenol	10	10	
Acenaphthene	1	1	0.5
Acenaphthylene		10	0.2
Anthracene		10	2
Benzidine		5	
Benzo (a) Anthracene (1,2 Benzanthracene)	10	5	
Benzo(a) pyrene (3,4 Benzopyrene)		10	2
Benzo (b) Flouranthene (3,4 Benzofluoranthene)		10	10
Benzo(g,h,i)perylene		5	0.1
Benzo(k)fluoranthene		10	2
bis 2-(1-Chloroethoxy) methane		5	
bis(2-chloroethyl) ether	10	1	
bis(2-Chloroisopropyl) ether	10	2	
bis(2-Ethylhexyl) phthalate	10	5	
4-Bromophenyl phenyl ether	10	5	
Butyl benzyl phthalate	10	10	
2-Chloronaphthalene		10	
4-Chlorophenyl phenyl ether		5	
Chrysene		10	5
Dibenzo(a,h)-anthracene		10	0.1
1,2 Dichlorobenzene (semivolatile)	2	2	
1,3 Dichlorobenzene (semivolatile)	2	1	
1,4 Dichlorobenzene (semivolatile)	2	1	
3,3' Dichlorobenzidine		5	
Diethyl phthalate	10	2	
Dimethyl phthalate	10	2	
di-n-Butyl phthalate		10	
2,4 Dinitrotoluene	10	5	
2,6 Dinitrotoluene		5	
di-n-Octyl phthalate		10	
1,2 Diphenylhydrazine		1	
Fluoranthene	10	1	0.05
Fluorene		10	0.1
Hexachloro-cyclopentadiene	5	5	
1,2,4 Trichlorobenzene	1	5	

MINIMUM LEVELS IN PPB (µg/l)

Table 2 - SEMI-VOLATILE SUBSTANCES²	GC	GCMS	LC	COLOR
Pentachlorophenol	1	5		
Phenol ³	1	1		50
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
N-Nitroso diphenyl amine	10	1		
Phenanthrene		5	0.05	
Pyrene		10	0.05	

Table 3-- INORGANICS⁴	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

² With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.

³ Phenol by colorimetric technique has a factor of 1.

⁴ The normal method-specific factor for these substances is 1, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

MINIMUM LEVELS IN PPB ($\mu\text{g/l}$)

Table 4- PESTICIDES – PCBs ⁵	GC
Aldrin	0.005
alpha-BHC (<i>a</i> -Hexachloro-cyclohexane)	0.01
beta-BHC (<i>b</i> -Hexachloro-cyclohexane)	0.005
Gamma-BHC (<i>Lindane</i> ; <i>g</i> -Hexachloro-cyclohexane)	0.02
Delta-BHC (<i>d</i> -Hexachloro-cyclohexane)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)

DCP - Direct Current Plasma

COLOR - Colorimetry

⁵ The normal method-specific factor for these substances is 100, therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

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.

Existing Discharger means any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., an existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of this Policy).

A "grab" sample is defined as any individual sample collected in less than 15 minutes.

A **composite sample** is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

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).

12-Month Average Effluent Limitation: the highest allowable average of monthly discharges over last twelve months, calculated as the sum of all monthly discharges measured during last twelve months divided by the number of monthly discharges measured during that time period.

Best Management Practices (BMPs) are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and non-structural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Infeasible means not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Load Allocation (LA) is the portion of receiving water's total maximum daily load that is allocated to one of its nonpoint sources of pollution or to natural background sources.

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost-effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to CWC Section 13263.3(d), shall be considered to fulfill the PMP requirements. The following reporting protocols and definitions are used in determining the need to conduct a Pollution Minimization Program (PMP). Reporting protocols in the Monitoring and Reporting Program, Attachment E, Section X.B.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A. A Reporting Level (RL) is the ML associated with an analytical method selected by the Discharger that is authorized for monitoring effluent limitations under this Order.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code Section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the SWRCB or RWQCB.

Process Optimization means minor changes to the existing facility and treatment plant operations that optimize the effectiveness of the existing treatment processes.

Public Entity includes the federal government or a state, county, city and county, city, district, public authority, or public agency.

Reporting Level (RL) is the ML corresponding to an approved analytical method for reporting a sample result that is selected either from Appendix 4 of the SIP by the Regional Water Board in accordance with Section 2.4.2 of the SIP or established in accordance with Section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

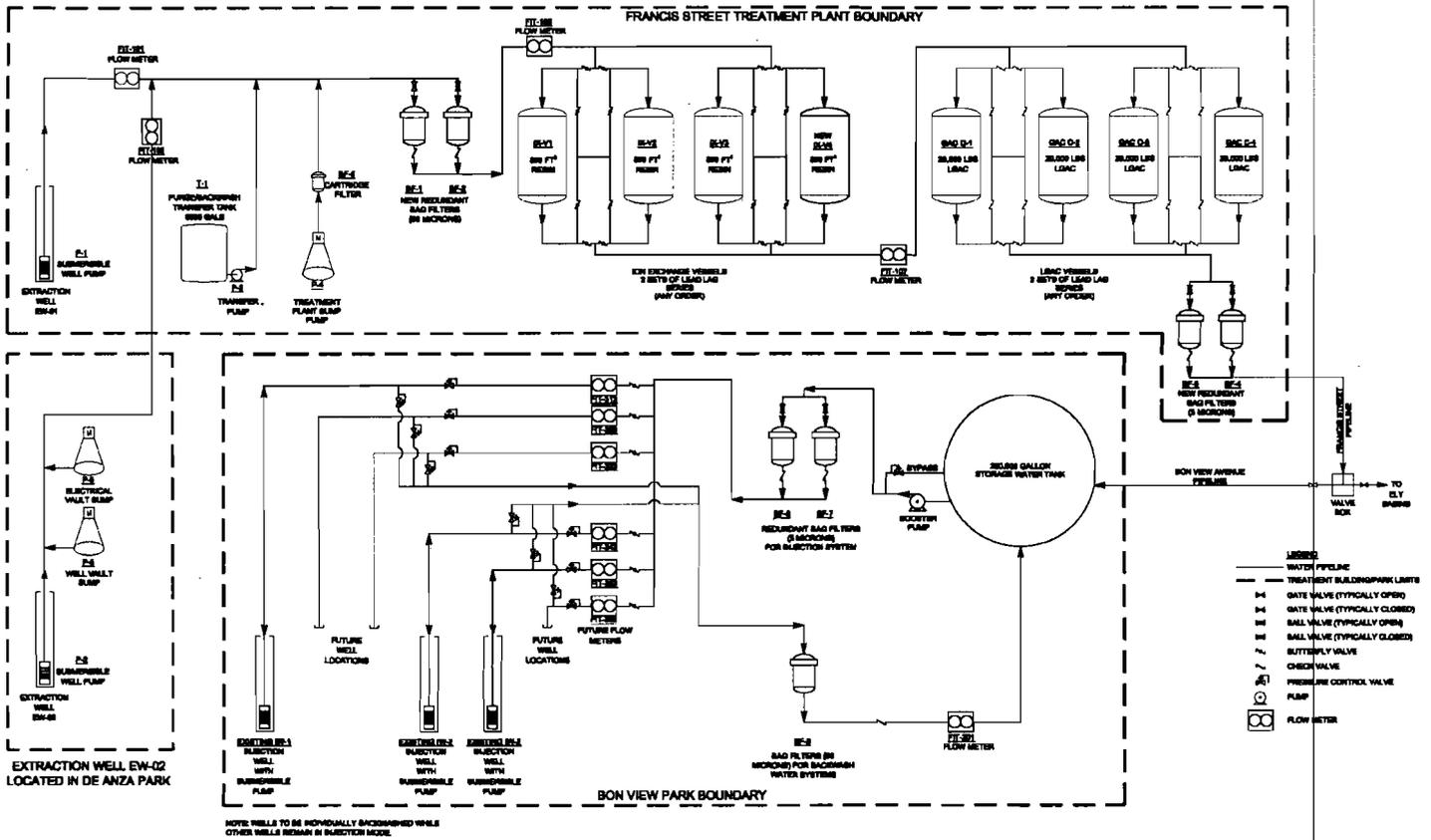
Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a RWQCB basin plan.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

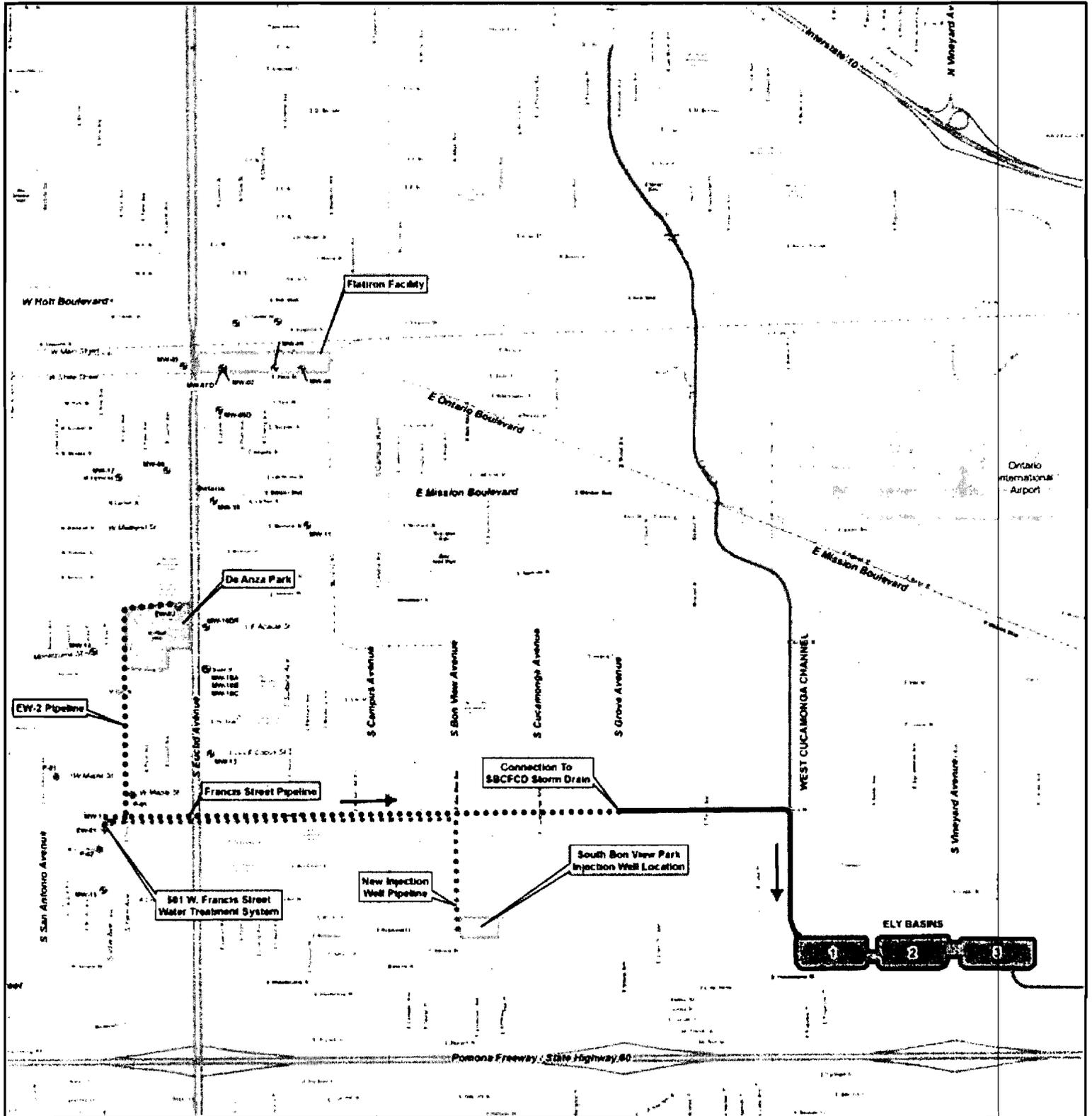
Use Attainability Analysis is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological and economic factors as described in 40 CFR 131.10(g) (40 CFR 131.3, revised as of July 1, 1997).

Water Effect Ratio (WER) is an appropriate measure of the toxicity of a material obtained in a site water divided by the same measure of the toxicity of the same material obtained simultaneously in a laboratory dilution water.

ATTACHMENT B – FLOW SCHEMATIC



ATTACHMENT C – VICINITY MAP



Attachment E – Monitoring and Reporting Program

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ATTACHMENT E– MONITORING AND REPORTING PROGRAM (MRP)

CWC section 13267 authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement California regulations.

I. GENERAL MONITORING PROVISIONS

- A. All sampling and sample preservation shall be in accordance with the current edition of “Standard Methods for the Examination of Water and Wastewater” (American Public Health Association) and/or with EPA’s guidelines for sampling, collection and preservation.
- B. In accordance with the provision of Water Code section 13176, chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health or at laboratories approved by the Regional Water Board's Executive Officer,.
- C. The Discharger shall have and implement an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.
- D. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.
- E. 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. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

F. Monitoring and reporting shall be in accordance with the following:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The monitoring and reporting of influent and effluent shall be done more frequently as necessary to maintain compliance with this Order and or as specified in this Order.
3. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.
4. A "grab" sample is defined as any individual sample collected in less than 15 minutes.
5. Daily samples shall be collected on each day of the week.
6. Monthly samples shall be collected on any representative day of each month.

II. INFLUENT MONITORING

A sampling station shall be established where representative samples of the influent to the treatment plant can be obtained. The following shall constitute the influent monitoring program:

Table 1. Influent Monitoring

Constituent	Type of Sample	Units	Minimum Frequency of Sampling
Total Dissolved Solids	Grab	mg/l	Monthly
Nitrate as nitrogen	Grab	mg/l	Monthly
Trichloroethylene (TCE)	Grab	µg/l	Monthly
Tetrachloroethylene (PCE)	Grab	µg/l	Monthly
1,1,1-Trichloroethane (1,1,1-TCA)	Grab	µg/l	Monthly
Chromium as Chromium VI or total Chromium	Grab	µg/l	Monthly

III. EFFLUENT MONITORING REQUIREMENTS

1. A sampling station shall be established and located where representative samples of the discharge can be obtained. The following shall constitute the effluent monitoring program:

Table 2. Effluent Monitoring

Constituent	Type of Sample	Units	Minimum Frequency of Sampling
Flow	Flow meter	GPD	Daily
pH	Grab	pH units	Monthly
Total Dissolved Solids	Grab	mg/l	Monthly
Nitrate as Nitrogen	Grab	mg/l	Monthly
Trichloroethylene (TCE)	Grab	µg/l	Monthly
Tetrachloroethylene (PCE)	Grab	µg/l	Monthly
1,1,1-Trichloroethane (1,1,1-TCA)	Grab	µg/l	Monthly
Chromium as Chromium VI or total Chromium	Grab	µg/l	Monthly

V. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VI. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE

VII. SURFACE WATER MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. OTHER MONITORING REQUIREMENTS

A. Water Supply Monitoring – No Applicable

B. Biosolids Monitoring – Not Applicable

C. Stormwater Monitoring – Not Applicable

D. Groundwater Monitoring – Not Applicable

IX. REPORTING REQUIREMENTS

A. Reporting Requirements

1. All analytical data shall be reported with method detection limit¹ (MDLs) and with identification of either reporting level or limits of quantitation (LOQs).
2. Laboratory data for effluent samples must quantify each constituent down to the approved reporting levels for specific constituents. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data are unavailable or unacceptable.
3. Discharge monitoring data shall be submitted in a format acceptable by the Regional Water Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order.
4. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.
5. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.
6. The discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Water Board at any time. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling, and/or measurements;

¹ The standardized test procedure to be used to determine the method detection limit (MDL) is given at Appendix B, "Definition and Procedure for the Determination of the Method Detection Limit" of 40 CFR 136.

- c. The laboratory which performed the analyses;
 - d. The date(s) analyses were performed;
 - e. The individual(s) who performed the analyses;
 - f. The analytical techniques or methods used, including any modification to those methods;
 - g. All sampling and analytical results, including
 - i. units of measurement used;
 - ii. minimum reporting limit for the analysis (minimum level);
 - iii. results less than the reporting limit but above the method detection limit (MDL);
 - iv. data qualifiers and a description of the qualifiers;
 - v. quality control test results (and a written copy of the laboratory quality assurance plan);
 - vi. dilution factors, if used; and
 - vii. sample matrix type.
 - h. All monitoring equipment calibration and maintenance records;
 - i. All original strip charts from continuous monitoring devices;
 - j. All data used to complete the application for this Order; and,
 - k. Copies of all reports required by this Order.
 - l. Electronic data and information generated by the Supervisory Control And Data Acquisition (SCADA) System.
7. All reports and/or information submitted to the Regional Water Board shall be signed by a responsible officer or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

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 (SMRs) using the Water Board's California Integrated Water Quality System (CIWQS) or Geo Tracker. Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described in subsections B.2 and B.3., below.
2. The Discharger shall submit monthly reports via e-mail to the assigned Regional Water Board staff by the 30th day of each month. The monthly reports shall include a copy of the laboratory reports for samples collected during the previous month, as well as a brief description of system performance.

3. The Discharger shall submit quarterly monitoring reports by the 30th day of April, July, October, and January. The quarterly reports shall consist of hard-copies and shall include the results for all monitoring for the previous calendar quarter. The quarterly reports shall be submitted in accordance with the following requirements:
 - a. 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.
 - b. 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.
 - c. SMRs must be submitted to the Regional Water Board, signed and certified under penalty of perjury to the address listed below:

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

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

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration² of the sample shall also be reported.

² See definition in Attachment "A"

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. The Discharger is to instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

C. Other Reports – Site Spills

1. In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state.
2. In accordance with the requirements of Water Code section 13271, the Discharger shall provide notification to the Office of Emergency Services of the release of reportable amounts of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state. The California Code of Regulations, Title 23, section 2250, defines a reportable amount of sewage as being 1,000 gallons. The phone number for reporting these releases to the Office of Emergency Services is (800) 852-7550.
3. The Discharger shall notify the Regional Water Board of any unauthorized release of hazardous substances from its treatment plant that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two (2) hours after becoming aware of the release. This notification does not need to be made if the Discharger has notified the Office of Emergency Services. The phone number for reporting these releases of sewage to the Regional Water Board is (951) 782-4130. At a minimum, the following information shall be provided:
 - (a) The location, date, and time of the release.

- (b) The water body that received or will receive the discharge.
 - (c) An estimate of the amount of hazardous substances or other waste released and the amount that reached a surface water at the time of notification.
 - (d) If ongoing, the estimated flow rate of the release at the time of the notification.
 - (e) The name, organization, phone number and email address of the reporting representative.
4. As soon as possible, but not later than twenty four (24) hours after becoming aware of an unauthorized discharge of hazardous substances or other waste from its treatment plant to a water of the state, the Discharger shall submit a statement to the Regional Water Board by email at spillreportR8@waterboards.ca.gov. If the discharge is 1,000 gallons or more, this statement shall certify that the State Office of Emergency Services has been notified of the discharge in accordance with Water Code section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:
- (a) Agency and Order No.
 - (b) The location, date, and time of the discharge.
 - (c) The water body that received the discharge.
 - (d) A description of the level of treatment of the hazardous waste substances or other waste discharged.
 - (e) An initial estimate of the amount of sewage or other waste released and the amount that reached a surface water.
 - (f) The Office of Emergency Services control number and the date and time that notification of the incident was provided to the Office of Emergency Services.
 - (g) The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).

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ATTACHMENT F – FACT SHEET

As described in Section II.D. of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. ORDER INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	8 362411001
Discharger	General Electric Company
Name of Facility	GE Francis Street Water Treatment Plant
Facility Address	501 West Francis Street
	Ontario, CA
	San Bernardino County
Facility Contact, Title and Phone	Lisa A. Hamilton, Manager, MidAtlantic/Southeast/Western Regions (610) 992-7885
Authorized Person to Sign and Submit Reports	Lisa A. Hamilton, Manager, MidAtlantic/Southeast/Western Regions (610) 992-7885
Mailing Address	640 Freedom Business Center, King of Prussia, PA 19406
Billing Address	SAME
Type of Facility	Groundwater Cleanup Facility
Threat to Water Quality	2
Complexity	B
Pretreatment Program	N
Reclamation Requirements	N
Facility Permitted Flow	2,000 gallons per minute (gpm)
Facility Design Flow	2,000 gpm
Watershed	Middle Santa Ana River
Receiving Water	Chino North Groundwater Management Zone
Receiving Water Type	Groundwater

On July 1, 2010, General Electric Company (hereinafter Discharger or GE) submitted a revised report of waste discharge for the proposed discharge of treated groundwater from groundwater cleanup activities associated with its former manufacturing facility in Ontario, California. The discharge consists of treated groundwater from the GE Francis Street Water Treatment Plant (WTP) via injection wells. The treatment plant is located at 501 West Francis Street, Ontario, California, while the injection wells are located at 2025 South Bon View Avenue in Ontario, California.

II. FACILITY DESCRIPTION

A. Description of Contaminated Groundwater and its Remediation Process

GE owned and operated a flatiron manufacturing facility at 234 East Main Street in Ontario from 1927 until plant closure in 1982. Groundwater beneath and downgradient of the facility has been impacted primarily by trichloroethene (TCE) and hexavalent chromium. The contaminant plume extends in a south-southwesterly direction, along the groundwater flow gradient. The depth of groundwater in this area ranges from about 270 feet to 370 feet below ground surface.

In 1996, GE began operating a groundwater extraction well (EW-1) at the leading edge of the contaminant plume to contain and prevent further migration of the plume. The well is located at 501 West Francis Street in Ontario. In 2002, GE began operating a mid-plume well (EW-2) to cut off further migration of contaminants past the mid-point of the plume. That well is located in De Anza Park in Ontario. TCE is the primary contaminant in the plume. Hexavalent chromium is present primarily upgradient of EW-2.

Extracted groundwater from EW-1 is conveyed by pipeline to the WTP. Extracted groundwater is also conveyed via a separate double walled pipeline from EW-2 to the WTP. At the WTP, the extracted groundwater from both extraction wells is combined and first treated with an ion exchange resin and then treated with liquid phase granular activated carbon. There are four ion exchange vessels that are configured as two parallel sets in series for reversible series operation with lead vessels used for primary adsorption and the lag vessels used for polishing. The four LGAC vessels are also configured as two parallel sets in series with reversible operation.

The treated groundwater has been discharged via a pipeline for percolation in the Ely Basins, a series of flood control and groundwater recharge basins. However, GE was subsequently notified that the capacity of the Ely Basins was expected to be fully allocated to other uses in the future, and GE had to find an alternative discharge location. GE conducted a screening study of discharge alternatives and, based upon a detailed evaluation, groundwater injection was selected as the preferred option.

B. Discharge Points

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

Table 2. Discharge Points

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Disposal Site
001	Treated Groundwater	N:1835886.4926	E:6671677.1844	Injection Well
002	Treated Groundwater	N:1835889.5340	E:6672194.7040	Injection Well
003	Treated Groundwater	N:1835612.6973	E:6672195.8099	Injection Well

C. Stormwater Runoff from this Facility – Not Applicable

D. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent limitations contained in previous Order No. 95-62 are as follows:

Table 3. Historic Effluent Limitations

Constituents	Average Monthly
Trichloroethylene (TCE)	5 µg/l
Tetrachloroethylene (PCE)	5 µg/l
1,1,1-Trichloroethane (1,1,1-TCA)	200 µg/l
Chromium as Chromium VI or total Chromium	50 µg/l

2. Self-Monitoring Report (SMR) effluent data for previous Order No. 95-62 are as follows:

Table 4. Historic Monitoring Data (Highest concentration in the year)

Parameter (units)	Monitoring Data from 2006 – 2010					
	Units	2006	2007	2008	2009	2010
Trichloroethylene (TCE)	µg/l	0	0	<1	0	0
Tetrachloroethylene (PCE)	µg/l	0	0	<1	0	0
1,1,1-Trichloroethane (1,1,1-TCA)	µg/l	0	0	<1	0	0
Chromium as Chromium VI or total Chromium	µg/l	0.0408	0.0036	0.0408	0.011	0.013

E. Compliance Summary

Based on a review of effluent monitoring data submitted by the Discharger for the period from 2006 through 2010, the wastewater discharged from the treatment facility was in compliance with all effluent limitations.

F. Planned Changes – Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC.

B. California Environmental Quality Act (CEQA)

The project involves the update of waste discharge requirements for an existing discharge and, as such, is exempt from the California Environmental Quality Act (Public Resources Code, section 21100 et. seq.) in accordance with section 15301, Chapter 3, Title 14, California Code of Regulations.

C. State Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the plan. More recently, the Basin Plan was amended significantly to incorporate revised boundaries for groundwater sub basins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. This Basin Plan Amendment was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board and Office of Administrative Law (OAL) approved the Amendment on September 30, 2004 and December 23, 2004, respectively.

Discharges from the Facility into the injection wells will affect the Chino North Groundwater Management Zone (GMZ). The beneficial uses of the Chino North GMZ are as follows:

Table 5. Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Use(s)
001, 002, 003	Chino North GMZ	1. Municipal and domestic supply 2. Industrial service supply 3. Agricultural supply, and 4. Industrial process supply

Monitoring by GE has shown areas of high nitrate and total dissolved solids (TDS) concentrations within the contaminant plume and within the injection well discharge area. These high nitrate and TDS concentrations are the result of agricultural activities in the area, not GE Flatiron activities. Therefore, GE is not being held responsible for the removal of nitrates or TDS, unless GE's actions to extract the groundwater and re-inject treated groundwater into the aquifer would result in adverse nitrate and TDS impacts in the groundwater affected by the recharge.

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

- 2. Antidegradation Policy.** State Water Board Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the antidegradation provision of State Water Board Resolution No. 68-16.
- 3. Monitoring and Reporting Requirements.** Section 13267 of the CWC authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement State requirements.

D. Industrial Stormwater Requirements

Pursuant to Section 402(p) of the Clean Water Act and Title 40 of the Code of Federal Regulations (CFR) Part 122, 123, and 124, the State Water Resources Control Board adopted a general NPDES permit to regulate storm water discharges associated with industrial activities (State Board Order No. 97-03-DWQ, NPDES No. CAS000001) adopted on April 17, 1997. The Discharger's stormwater discharges are currently regulated under the General Industrial Storm Water Permit.

IV. Rationale For Effluent Limitations And Discharge Specifications

A. Discharge Prohibitions

The discharge prohibitions are based on the Basin Plan, State Water Resources Control Board's plans and policies, and previous Order No. 95-62 provisions and are consistent with the requirements set for other discharges regulated by other waste discharge requirements adopted by the Regional Water Board.

B. Technology-Based Effluent Limitations

The effluent limits specified in this order are based on values that can be achieved with current technology and are consistent with the requirements set for other discharges regulated by other waste discharge requirements adopted by the Regional Water Board.

C. Water Quality-Based Effluent Limitations (WQBELs) – Not Applicable

D. Best Professional Judgment - Based Effluent Limitations – Not Applicable

E. Reclamation Specifications – Not Applicable

F. Final Effluent Limitations

The discharge of treated wastewater to the injection wells shall maintain compliance with the following limitations.

Table 7. Final Effluent Limitations

Parameter	Units	Discharge Limitations
		Average Monthly
Trichloroethylene (TCE)	µg/l	5
Tetrachloroethylene (PCE)	µg/l	5
1,1,1-Trichloroethane (1,1,1-TCA)	µg/l	200
Chromium as Chromium VI or total Chromium	µg/l	50

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

This order does not specify any receiving water limitations.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 13267 of the California Water Code authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

A. Influent Monitoring

The influent flow should be monitored to identify any pollutants entering the plant to assist with the proper operation of the treatment plant and to help determine the efficiency of the treatment units.

B. Effluent Monitoring

To determine compliance with effluent limitations, all parameters established in this Order must be monitored and tested.

C. Pretreatment Monitoring – Not Applicable

VII. PUBLIC PARTICIPATION

The Regional Water Quality Control Board, Santa Ana Region, is considering the issuance of waste discharge requirements (WDRs) for the General Electric Company's Francis Street Water Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. 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 to submit their written comments and recommendations. Notification was provided through the mailing of the tentative order to persons and agencies known to have an interest in the discharge, as well as the posting of the tentative order on the Regional Water Board website.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on March 25, 2011.

Comments should be submitted either in person or by mail to the staff person listed below:

Najah N. Amin
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: April 22, 2011
Time: 9:00 am
Location: Orange County Water District
18700 Ward Street
Fountain Valley, CA 9270854

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge and WDRs. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address where you can access the current agenda for changes in dates and locations is:
<http://www.waterboards.ca.gov/santaana>.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 9:00 a.m. and 3:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (951) 782-4130.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Najah N. Amin at (951) 320-6362 or namin@waterboards.ca.gov.