



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## Los Angeles Regional Water Quality Control Board

October 2, 2017

Mr. David Dassler  
The Boeing Company  
5800 Woolsey Canyon Road  
Canoga Park, CA 91304

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
CLAIM NO. 7009 0820 0001 6812 4361

**NOTIFICATION OF ENROLLMENT IN GENERAL WASTE DISCHARGE REQUIREMENTS AND MONITORING AND REPORTING REQUIREMENTS FOR INJECTION OF TREATED GROUNDWATER FROM MULTIPLE EXTRACTION WELLS INTO WELL WS-5, SANTA SUSANA FIELD LABORATORY, THE BOEING COMPANY, 5800 WOOLSEY CANYON ROAD, CANOGA PARK, CALIFORNIA, 91304 (FILE NO. 16-137, CI-10310, ORDER NO. R4-2014-0187, SERIES NO. 095, GLOBAL ID WDR100039573)**

Dear Mr. Dassler:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses of water within major portions of Los Angeles and Ventura Counties, including the property referenced above.

The Boeing Company (hereinafter Discharger) is the responsible party for the environmental remedial activities at the property at 5800 Woolsey Canyon Road, Canoga Park, California (Site). The Site, also known as the Santa Susana Field Laboratory (SSFL), includes several Los Angeles County Tax Assessor parcels. The discharge point is well WS-5, In Los Angeles County Tax Assessor parcel 685-0-051-12, at 34.2319°N, 118.6819°W.

The Department of Toxic Substances Control (DTSC) is the lead agency overseeing the environmental remediation at the Site. DTSC, in a March 12, 2013 letter, with the subject *Approval to Implement the Groundwater Interim Measures Work Plan, Santa Susana Field Laboratory*, approved implementation of the July 14, 2008, *Work Plan (Revision 2), Groundwater Interim Measures, Santa Susana Field Laboratory*, and the February 2009, *Addendum to Revision 2 of the Groundwater Interim Measures, Santa Susana Field Laboratory*. The injection of treated groundwater, extracted from 13 wells, into well WS-5 is part of the Groundwater Interim Measures approved in the March 12, 2013 letter. DTSC determined, on March 6, 2013, that the implementation of the Groundwater Interim Measures Work Plan was exempt from the California Environmental Quality Act (CEQA).

On March 23, 2016, the Discharger submitted, *Report of Waste Discharge, Injection of Treated Groundwater at WS-5 Santa Susana Field Laboratory* (ROWD), dated January 2016, to the Regional Board, seeking coverage under Regional Board Order No. R4-2014-0187 - General Waste Discharge Requirements for In-Situ Groundwater Remediation and Groundwater Re-Injection (General WDRs) for the injection of treated groundwater into well WS-5. The ROWD proposes that groundwater will be pumped from 13 wells (C-2, C-3, HAR-1, RD-45A, RD-45B, RD-45C, RD-77, RD-99, RD-129, and WS-6) in areas of known groundwater pollution. Pumped

groundwater will be piped to an existing filtration system. The filtration sequence includes fabric bag particulate filters, ion exchange metals removal vessels, *Advanced Oxidation Process* (AOP) vessels that remove organic compounds, liquid-phase granular activated carbon vessels that further reduce organic compounds, perchlorate-specific ion exchange vessels, and a pre-injection, effluent neutralization/chemistry adjustment section. The AOP uses hydrogen peroxide and ultraviolet light to destroy organic compounds, including trichloroethene (TCE), 1,4-dioxane, and n-Nitrosodimethylamine (NDMA). The filtration system has operated intermittently since 2010 to treat groundwater extracted from well WS-9A. Groundwater samples from well WS-9A contained approximately 1,000 µg/L TCE. Effluent from the treatment system did not contain TCE above the detection limit of 0.026 µg/L. The treatment system is expected to produce similar results for TCE and the other analytes in the commingled treated groundwater from the 13 extraction wells. The treated groundwater will be injected into the Chatsworth Formation using well WS-5, at a maximum rate of approximately 100 gallons per minute. Well WS-5 is cased from the surface to 57 feet below grade (bg), and is open hole from 57 feet bg to 2,304 feet bg. In an August 23, 2016 letter, the DTSC documented its support for injection of treated groundwater at well WS-5, as proposed in the ROWD.

The Executive Officer of the Regional Board has completed review of the ROWD and determined that the proposed discharge is eligible to be covered by the General WDRs because the discharge meets the criteria specified in the General WDRs, Section A. Eligibility, Subsection 2, a – c. Specifically, the groundwater discharges have a threat to water quality rating of 3-A; the Discharger has an approved Remedial Action Plan; and any materials discharged are listed in the General WDRs. Therefore, this letter provides notification that the Executive Officer has determined that you are now enrolled under General WDRs Order No. R4-2014-0187 and you must comply with the General WDRs and the associated Monitoring and Reporting Program (MRP).

In adopting the General WDRs, the Regional Board concurrently approved a Mitigated Negative Declaration in conformance with CEQA. The General WDRs includes the mitigation measures set forth in the Mitigated Negative Declaration. Compliance with the General WDRs and the associated MRP is consistent with the CEQA determination. No further CEQA analysis is required.

Enclosed is a copy of the requirements that apply to the discharge, consisting of General WDRs Order No. R4-2014-0187 (Series No. 095), and Monitoring and Reporting Program (MRP) No. CI-10310. You are obligated to comply with the General WDRs and the MRP. Among other provisions, the General WDRs specify that the discharge shall not cause the mineral constituents of the receiving groundwater at the compliance point, at the monitoring wells outside the application area, to reach concentrations in excess of applicable limits (Simi Valley Groundwater Basin, confined aquifers and San Fernando Valley Groundwater Basin, west of Hwy 405) given in Attachment B of General WDRs Order No. R4-2014-0187. The groundwater quality objectives are 800 milligrams per liter (mg/L) total dissolved solids, 300 mg/L sulfate, 100 mg/L chloride, and 1.0 mg/L boron.

To protect groundwater quality and public health near well WS-5 the treatment system effluent shall meet the discharge limits defined as the drinking water Maximum Contaminant Levels (MCLs) in Attachments A-1, A-2, A-3, and A-4, and the Notification Levels (NLs) in Attachment A-5. For any exceedance of these limits, the Discharger shall immediately suspend the injection and notify the Regional Board within 24 hours of knowledge of the exceedance by either telephone or electronic mail. The notification shall be followed by a written report within one week of the

exceedance. The Discharger, in the next regularly scheduled monitoring report, shall also confirm this information. **Any exceedance of a discharge limit may result in immediate termination of the Waste Discharge Requirements.** In addition to the analytes set forth in Attachments A-1 through A-5, that include the applicable MCLs and NLs that also appear in Attachment A-6, you shall monitor treatment system effluent for all additional Priority Pollutants set forth in Attachment A-6.

MRP No. CI-10310 requires you to implement the monitoring program beginning on the effective date of this enrollment (September 26, 2017) in compliance with Regional Board Order No. R4-2014-0187. In addition to the analytes set forth in Attachments A-1 through A-5, that include the applicable MCLs and NLs that also appear in Attachment A-6, you shall monitor treatment system effluent for all additional Priority Pollutants set forth in Attachment A-6.

When submitting monitoring or technical reports to the Regional Board in accordance with the MRP, do not combine other reports with your monitoring reports. Submit each type of report as a separate document. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR**100039573**. See Electronic Submittal for GeoTracker Users, dated December 12, 2011 at:

<http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20Office%20for%20GT%20Users.pdf>

To avoid paying future annual fees, you must submit a written request for termination of your enrollment under the General WDRs in a separate letter, when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

Failure to comply with the terms or conditions of the General WDRs or associated MRP may result in the imposition of civil liabilities, imposed either administratively by the Regional Board or judicially by the Superior Court in accordance with Water Code section 13268, 13308, or 13350 or other applicable laws.

If you have any additional questions, please contact the Project Manager, Mr. Peter Raftery at (213) 620-6156 (Peter.Raftery@waterboards.ca.gov) or the Unit Chief, Dr. Eric Wu at (213) 576-6683 (Eric.Wu@waterboards.ca.gov).

Sincerely,



Samuel Unger, P.E.  
Executive Officer

Enclosure and cc lists begin on next page

Enclosures: 1) Attachment A-1  
2) Attachment A-2  
3) Attachment A-3  
4) Attachment A-4  
5) Attachment A-5  
6) Attachment A-6  
7) General WDR Order No. R4-2014-0187  
8) Monitoring and Reporting Program No. CI-10310

cc: Gerard Abrams, Department of Toxic Substances Control  
Steve Armann, U.S. Environmental Protection Agency  
Caroline Aslanian  
Sutida Bergquist, State Water Resources Control Board, Division of Drinking Water  
William Preston Bowling  
Tim Brehm, SSFL Community Advisory Group  
Margery Brown  
Paul Carpenter, Department of Toxic Substances Control  
Ben Carrier, Paul Hastings LLP  
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David Cooper, U.S. Environmental Protection Agency  
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Deborah Glik, University of California, Los Angeles  
Cindi Gortner  
Robert Greger, California Department of Public Health  
Megan Hilfer, Boeing Company  
Daniel Hirsch, Committee to Bridge the Gap  
Loren Henning, U.S. Environmental Protection Agency  
Becky Hayat, Natural Resources Defense Council  
Steve Hsu, California Department of Public Health  
Stephanie Jennings, U.S. Department of Energy  
Ted Johnson, Water Replenishment District of Southern California  
Steve Johnson, Heal the Bay  
John Jones, U.S. Department of Energy  
Buck King, Department of Toxic Substances Control  
Bonnie Klea  
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Linda Parks, County of Ventura  
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Jennifer Stanfield, National Aeronautics and Space Administration  
Michael Stenstrom, University of California, Los Angeles  
Senator Henry Stern  
Robyn Stuber, U.S. Environmental Protection Agency  
Bill Taylor, U.S. D.O.E., Savannah River Site  
Alec Uzemeck, SSFL Community Advisory Group  
Christina Walsh, People Policy  
Peter Weiner, Paul Hastings LLP  
Damon Wing, County of Ventura  
Kenneth Wong, United States Army Corps of Engineers  
Ronald B. Ziman, SSFL Community Advisory Group  
Peter D. Zorba, National Aeronautics and Space Administration  
Kerby Zozula, Ventura County Air Pollution Control District

## Attachment A-1

**Maximum Contaminant Levels  
Inorganic Chemicals  
specified in Table 64431-A of Section 64431 of Title 22 of the CCR**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
Aluminum	1.
Antimony	0.006
Arsenic	0.010
Asbestos	7 MFL*
Barium	1.
Beryllium	0.004
Cadmium	0.005
Chromium	0.05
Cyanide	0.15
Fluoride	2.0
Hexavalent chromium	0.010
Mercury	0.002
Nickel	0.1
Nitrate (as nitrogen)	10.
Nitrate+Nitrite (sum as nitrogen)	10.
Nitrite (as nitrogen)	1.
Perchlorate	0.006
Selenium	0.05
Thallium	0.002

\* MFL=million fibers per liter; MCL for fibers exceeding 10 µm in length.

## Attachment A-2

**Maximum Contaminant Levels  
Radionuclides  
specified in Table 64442 of Section 64442 and Table 64443 of Section 64443  
of Title 22 of the CCR**

<i>Radionuclide</i>	<i>Maximum Contaminant Level</i>
Radium-226	5 pCi/L (combined radium-226 & -228)
Radium-228	
Gross Alpha particle activity (excluding radon and uranium)	15 pCi/L
Uranium	20 pCi/L
Beta/photon emitters	4 millirem/year annual dose equivalent to the total body or any internal organ
Strontium-90	8 pCi/L (= 4 millirem/yr dose to bone marrow)
Tritium	20,000 pCi/L (= 4 millirem/yr dose to total body)

### Attachment A-3

**Maximum Contaminant Levels  
Organic Chemicals  
specified in Table 64444-A of Section 64444 of Title 22 of the CCR**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
(a) Volatile Organic Chemicals (VOCs)	
Benzene	0.001
Carbon Tetrachloride (CTC)	0.0005
1,2-Dichlorobenzene	0.6
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane (1,2-DCA)	0.0005
1,1-Dichloroethene (1,1-DCE)	0.006
Cis-1,2-Dichloroethylene	0.006
Trans-1,2-Dichloroethylene	0.01
Dichloromethane	0.005
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Ethylbenzene	0.3
Methyl-tert-butyl-ether	0.013
Monochlorobenzene	0.07
Styrene	0.1
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene (PCE)	0.005
Toluene	0.15
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane -	0.005
Trichloroethylene (TCE)	0.005
Trichloroflubromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
Xylenes (m,p)	1.750*



**Attachment A-3 (continued)**

**Maximum Contaminant Levels  
Organic Chemicals  
specified in Table 64444-A of Section 64444 of Title 22 of the CCR**

<i>Chemical</i>	<i>Maximum Contaminant Level, mg/L</i>
(b) Non-Volatile Synthetic Organic Chemicals	
Alachlor	0.002
Atrazine	0.001
Bentazon	0.018
Benzo(a)pyrene	0.0002
Carbofuran	0.018
Chloradane	0.0001
2,4-D	0.07
Dalapon	0.2
1,2-Dibromo-3-chloropropane	0.0002
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalate	0.004
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor Epoxie	0.00001
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lindane	0.0002
Methoxychlor	0.03
Molinate	0.02
Oxamyl	0.05
Pentachlorophenol	0.001
Picloram	0.5
Polychlorinated Biphenyls	0.0005
Simazine	0.004
Thiobencarb	0.07
Toxaphene	0.003
2,3,7,8-TCDD (Dioxin)	3x10 <sup>-8</sup>
2,4,5-TP (Silvex)	0.05

\*MCL is for either a single isomer or the sum of the isomers.

Attachment A-4

**Secondary Maximum Contaminant Levels  
“Consumer Acceptance Contaminant Levels”  
specified in Table 64449-A of Section 64449 of Title 22 of the CCR**

<i>Constituents</i>	<i>Maximum Contaminant Levels/Units</i>
Aluminum	0.2 mg/L
Color	15 Units
Copper	1.0 mg/L
Foaming Agents (MBAS)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methyl- <i>tert</i> -butyl ether (MTBE)	0.005 mg/L
Odor—Threshold	3 Units
Silver	0.1 mg/L
Thiobencarb	0.001 mg/L
Turbidity	5 Units
Zinc	5.0 mg/L

## Attachment A-5

### Division of Drinking Water State Water Resources Control Board Drinking Water Notification Levels

Chemical	Notification Level (milligrams per liter)
Boron	1
n-Butylbenzene	0.26
sec-Butylbenzene	0.26
tert-Butylbenzene	0.26
Carbon disulfide	0.16
Chlorate	0.8
2-Chlorotoluene	0.14
4-Chlorotoluene	0.14
Diazinon	0.0012
Dichlorodifluoromethane (Freon 12)	1
1,4-Dioxane	0.001
Ethylene glycol	14
Formaldehyde	0.1
HMX	0.35
Isopropylbenzene	0.77
Manganese	0.5
Methyl isobutyl ketone (MIBK)	0.12
Naphthalene	0.017
N-Nitrosodiethylamine (NDEA)	0.00001
N-Nitrosodimethylamine (NDMA)	0.00001
N-Nitrosodi-n-propylamine (NDPA)	0.00001
Propachlor**	0.09
n-Propylbenzene	0.26
RDX	0.0003
Tertiary butyl alcohol (TBA)	0.012
1,2,3-Trichloropropane (1,2,3-TCP)	0.000005
1,2,4-Trimethylbenzene	0.33
1,3,5-Trimethylbenzene	0.33
2,4,6-Trinitrotoluene (TNT)	0.001
Vanadium	0.05

## Attachment A-6

### Appendix A to 40 CFR, Part 423--126 Priority Pollutants

001 Acenaphthene	047 Bromoform (tribromomethane)	090 Dieldrin
002 Acrolein	048 Dichlorobromomethane	091 Chlordane (technical mixture and metabolites)
003 Acrylonitrile	051 Chlorodibromomethane	092 4,4-DDT
004 Benzene	052 Hexachlorobutadiene	093 4,4-DDE (p,p-DDX)
005 Benzidine	053 Hexachloromyclopentadiene	094 4,4-DDD (p,p-TDE)
006 Carbon tetrachloride (tetrachloromethane)	054 Isophorone	095 Alpha-endosulfan
007 Chlorobenzene	055 Naphthalene	096 Beta-endosulfan
008 1,2,4-trichlorobenzene	056 Nitrobenzene	097 Endosulfan sulfate
009 Hexachlorobenzene	057 2-nitrophenol	098 Endrin
010 1,2-dichloroethane	058 4-nitrophenol	099 Endrin aldehyde
011 1,1,1-trichloroethane	059 2,4-dinitrophenol	100 Heptachlor
012 Hexachloroethane	060 4,6-dinitro-o-cresol	101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
013 1,1-dichloroethane	061 N-nitrosodimethylamine	102 Alpha-BHC
014 1,1,2-trichloroethane	062 N-nitrosodiphenylamine	103 Beta-BHC
015 1,1,2,2-tetrachloroethane	063 N-nitrosodi-n-propylamin	104 Gamma-BHC (lindane)
016 Chloroethane	064 Pentachlorophenol	105 Delta-BHC (PCB-polychlorinated biphenyls)
018 Bis(2-chloroethyl) ether	065 Phenol	106 PCB-1242 (Arochlor 1242)
019 2-chloroethyl vinyl ether (mixed)	066 Bis(2-ethylhexyl) phthalate	107 PCB-1254 (Arochlor 1254)
020 2-chloronaphthalene	067 Butyl benzyl phthalate	108 PCB-1221 (Arochlor 1221)
021 2,4, 6-trichlorophenol	068 Di-N-Butyl Phthalate	109 PCB-1232 (Arochlor 1232)
022 Parachlorometa cresol	069 Di-n-octyl phthalate	110 PCB-1248 (Arochlor 1248)
023 Chloroform (trichloromethane)	070 Diethyl Phthalate	111 PCB-1260 (Arochlor 1260)
024 2-chlorophenol	071 Dimethyl phthalate	112 PCB-1016 (Arochlor 1016)
025 1,2-dichlorobenzene	072 1,2-benzanthracene (benzo(a)anthracene)	113 Toxaphene
026 1,3-dichlorobenzene	073 Benzo(a)pyrene (3,4-benzopyrene)	114 Antimony
027 1,4-dichlorobenzene	074 3,4-Benzofluoranthene (benzo(b) fluoranthene)	115 Arsenic
028 3,3-dichlorobenzidine	075 11,12-benzofluoranthene (benzo(b) fluoranthene)	116 Asbestos
029 1,1-dichloroethylene	076 Chrysene	117 Beryllium
030 1,2-trans-dichloroethylene	077 Acenaphthylene	118 Cadmium
031 2,4-dichlorophenol	078 Anthracene	119 Chromium
032 1,2-dichloropropane	079 1,12-benzoperylene (benzo(ghi)perylene)	120 Copper
033 1,2-dichloropropylene (1,3-dichloropropene)	080 Fluorene	121 Cyanide, Total
034 2,4-dimethylphenol	081 Phenanthrene	122 Lead
035 2,4-dinitrotoluene	082 1,2,5,6-dibenzanthracene (dibenzo(h) anthracene)	123 Mercury
036 2,6-dinitrotoluene	083 Indeno (1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)	124 Nickel
037 1,2-diphenylhydrazine	084 Pyrene	125 Selenium
038 Ethylbenzene	085 Tetrachloroethylene	126 Silver
039 Fluoranthene	086 Toluene	127 Thallium
040 4-chlorophenyl phenyl ether	087 Trichloroethylene	128 Zinc
041 4-bromophenyl phenyl ether	088 Vinyl chloride (chloroethylene)	129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)
042 Bis(2-chloroisopropyl) ether	089 Aldrin	
043 Bis(2-chloroethoxy) methane		
044 Methylene chloride (dichloromethane)		
045 Methyl chloride (dichloromethane)		
046 Methyl bromide (bromomethane)		

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

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**ORDER NO. R4-2014-0187  
GENERAL WASTE DISCHARGE REQUIREMENTS  
FOR  
IN-SITU GROUNDWATER REMEDIATION AND GROUNDWATER RE-INJECTION  
(FILE NO. 01-116)**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

1. On January 24, 2002, pursuant to the Porter-Cologne Water Quality Control Act (Cal. Water Code §§ 13000 et seq.), the Regional Board adopted General Waste Discharge Requirements (General WDRs) (Order No. R4-2002-0030) that regulated discharges of waste associated with groundwater remediation at petroleum hydrocarbon fuel, volatile organic compound, and/or hexavalent chromium impacted sites. Those General WDRs have been revised by Order No. R4-2005-0030 adopted on May 5, 2005, and by Order No. R4-2007-0019 adopted on March 1, 2007. Order No. R4-2007-0019 authorized the use of a variety of materials for in-situ remediation purposes, including oxidation/aerobic degradation enhancement compounds, reducing/reductive degradation enhancement compounds, inorganics/nutrients, carbon sources/electron donors, and tracer study compounds.
2. Since then, additional materials for in-situ remediation have come into use at sites throughout the Los Angeles Region to remediate wastes at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. This revision of the General WDRs by this Order No. R4-2014-0187 (Order) is to authorize the use of additional materials that have been effectively used to remediate wastes in groundwater and soil.
3. Attachment A of this Order includes a list of materials that can be used for in-situ soil/groundwater remediation purposes. Newly added or revised remedial materials or amendments include chemical oxidants, chemical oxidant activators, aerobic bioremediation enhancement compounds, anaerobic degradation enhancement compounds, reduction degradation enhancement compounds, metals precipitation/stabilization compounds, surfactants/co-solvents, bioaugmentation organisms, tracer study compounds, and buffer solutions and pH adjusters.
4. The California Water Code (CWC), section 13260, subdivision (a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community waste water collection system, which could affect the quality of the waters of the State, shall file a Report of Waste Discharge with the Regional Board. The Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes.

September 11, 2014

5. Section 13263, subdivision (i) of the CWC provides that a Regional Board may prescribe general waste discharge requirements for discharges produced by similar operations, involving similar types of wastes, and requiring similar treatment standards.
6. The dischargers regulated by this Order are more appropriately regulated by general WDRs than individual WDRs because the Regional Board regulates many sites using this type of process, the cleanup of these type of sites is of high priority, the issuance of individual WDRs is time-consuming without providing additional benefit, and the types of treatment used result in similar impacts that can reasonably be regulated with general WDRs. In addition, the adoption of general WDRs for in-situ groundwater remediation/cleanup or the extraction of polluted groundwater with above ground treatment and the return of treated groundwater to the same aquifer zone would: a) simplify the application process for dischargers, b) allow more efficient use of Regional Board staff time, c) minimize the time needed for Regional Board approval of waste discharges by enabling the Executive Officer to notify the discharger of the applicability of the general WDRs, d) enhance the protection of surface water quality by eliminating the discharge of treated groundwater to surface waters, e) preserve water resources by re-injection of treated groundwater into aquifers, and f) provide a level of protection comparable to individual, site-specific WDRs. This Order does not preclude the adoption of individual WDRs where appropriate.
7. Wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants, are found in groundwater at various sites throughout the Los Angeles Region and cause or threaten to cause adverse impacts to existing and potential beneficial uses of the region's groundwater resources. Remediation/cleanup of groundwater at these sites includes the use and application of chemical, biological, and physical treatment processes, such as chemical oxidation, chemical oxidant activation, aerobic bioremediation, anaerobic bioremediation, chemical reduction, metals precipitation/stabilization, surfactants/co-solvents, buffering and pH adjustment, or groundwater pump and treat technology with the return of treated groundwater to the same aquifer zone in some cases.
8. The application of such materials or amendments may result in the discharge of waste and may cause unintended adverse impacts to groundwater quality. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. Groundwater quality will be monitored before addition of any materials, during treatment, and after treatment is completed to verify no long-term adverse impact to water quality.
9. The implementation of in-situ remediation may require a small-scale pilot testing program or demonstration study prior to the design and implementation of a full-scale remediation project. The discharges from pilot test programs or demonstration studies are also covered under this Order.
10. *The Water Quality Control Plan, for the Los Angeles Region*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains prohibitions;

contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Water Board). Pursuant to section 13263(a) of the CWC, waste discharge requirements must implement the Basin Plan.

11. The designated beneficial uses of underlying groundwater include:
  - a. Municipal and domestic water supply (MUN);
  - b. Agricultural water supply (AGR);
  - c. Industrial service supply (IND);
  - d. Industrial process supply (PRO); and
  - e. Groundwater recharge.
  
12. The Basin Plan establishes numerical and narrative water quality objectives (WQOs) for surface and groundwater within the basin, and recognizes that WQOs are achieved primarily through the Regional Board's adoption of waste discharge requirements and enforcement orders. Where numerical WQOs are listed, these are limits necessary for the reasonable protection of beneficial uses of the water. Where compliance with narrative WQOs is required, the Regional Board will, on a case-by-case basis, adopt numerical limits in orders, which will implement the narrative objectives to protect beneficial uses of the waters of the State. Beneficial uses for individual hydrologic sub-areas are specified in the Basin Plan. See Attachment B (Table 3-13 from the updated 2013 Basin Plan) for WQOs for selected constituents in regional groundwater.
  
13. State Water Board Resolution No. 92-49 ("Policies and Procedures for Investigation and Cleanup and Abatement of Dischargers Under Water Code Section 13304")(Resolution No. 92-49) requires the Regional Board to require actions for cleanup and abatement of discharges that cause or threaten to cause pollution or nuisance to conform to the provisions of State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California")(Resolution No. 68-16) and the Basin Plan. Pursuant to Resolution No. 92-49, the Regional Board shall ensure that dischargers are required to clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or if background levels of water quality cannot be restored, the best water quality which is reasonable and which complies with the Basin Plan including applicable WQOs.
  
14. Resolution No. 68-16 requires the Regional Board in regulating discharges to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and potential beneficial uses, and will not result in water quality less than that described in plans and policies (e.g., quality that exceeds WQOs). Temporal degradation of groundwater may occur at sites subject to this Order within the defined treatment zone due to the use of amendments. The temporary degradation allowed by this Order is consistent with Resolution No. 68-16 since (1) the purpose is to accelerate and enhance

remediation of groundwater pollution and such remediation will benefit the people of the State; (2) the discharge facilitates a project to evaluate the effectiveness of cleanup technology in accord with Resolution No. 92-49; (3) the degradation is limited in scope and duration; (4) best practicable treatment and control, including adequate monitoring and hydraulic control to assure protection of water quality, are required; and (5) the discharge will not cause WQOs to be exceeded beyond the treatment zone and it is expected that increases in concentrations above WQOs caused by the treatment will be reduced over time.

15. The discharges of wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants (such as hexavalent chromium), at many sites within the Los Angeles Region affects groundwater sources. Many of the groundwater zones contain general mineral content (total dissolved solids, chloride, sulfate, and boron, etc.) at concentrations that are considered to be naturally occurring and not the result of pollution that may exceed Basin Plan WQOs for these constituents. Treated groundwater that exhibits general mineral content that is naturally occurring and exceeds Basin Plan Objectives may be returned to the same groundwater aquifers from which it is withdrawn, with concentrations not exceeding the original background concentrations for the site. Re-injection of treated groundwater containing materials or amendments authorized by this Order and that may exhibit general mineral content exceeding the original background concentrations may be returned to the same groundwater aquifer within the treatment zone for the purpose of remediating groundwater, if it does not exacerbate the existing groundwater pollution.
16. Treated groundwater that is discharged to surface waters is prohibited unless subject to a separate National Pollutant Discharge Elimination System (NPDES) Permit.
17. This Order is applicable to groundwater remediation projects at petroleum hydrocarbon fuel, volatile organic compound, and inorganic contaminant impacted sites. Persons subject to this Order must pay an annual fee based on the threat to water quality and complexity of the discharge. The Executive Officer has determined that this Order is intended to regulate groundwater discharges that have a threat to water quality of Category 3 and Complexity rating of A for a combined rating of 3-A.
18. Discharges with a rating of 3-A contain wastes that could degrade water quality or cause a minor impairment of designated beneficial uses within the application area of the receiving groundwater. The discharges covered by these requirements are required to comply with a groundwater monitoring program as set forth in this Order.
19. The requirements contained in this Order were established by considering, and are consistent with, the applicable water quality control plans, policies, and regulations, and compliance with this Order will protect and maintain the existing beneficial uses of the receiving groundwater.
20. This Order does not relieve dischargers of any regulatory requirements from other governmental agencies.



21. In accordance with the Governor's Executive Order requiring any proposed activity be reviewed to determine whether such activity will cause additional energy usage, this Regional Board has determined that implementation of these General WDRs will not result in a change in energy usage exceeding what would be used if site-specific WDRs were issued for cleanup at the impacted sites.
22. The Regional Board is the lead agency for this project pursuant to the California Environmental Quality Act (Public Resources Code section 21000 et seq.) and has conducted an Initial Study in accordance with section 15063 of the "State CEQA Guidelines" at California Code of Regulations, title 14, section 15000 et seq. Based upon the Initial Study, the Regional Board prepared a Mitigated Negative Declaration concluding that the project will not have a significant adverse effect on the environment and the Regional Board incorporates Resolution No. R14-008 adopting the Mitigated Negative Declaration and approving the Environmental Checklist in this Order. The Mitigated Negative Declaration identifies environmental impacts that are less than significant with mitigation measures regarding (1) Air Quality, (2) Geology and Soils, (3) Hydrology and Water Quality, and (4) Transportation and Traffic. The Mitigated Negative Declaration identifies the mitigation measures and the actions to be taken to reduce the impacts to less than significant. The Dischargers are required by this Order to obtain and comply with applicable permits of other agencies. This Order includes a monitoring and reporting program to assure protection of water quality.
23. The discharges authorized in this Order are exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, set forth in the Title 27, California Code of Regulations (CCR), section 20005 et seq. (hereafter Title 27), which allows a conditional exemption from some or all of the provisions of Title 27. The exemption, pursuant to Title 27 CCR Section 20090(b), is based on the following:
  - i. The Regional Water Board is issuing waste discharge requirements.
  - ii. The discharge is in compliance with the applicable Basin Plan.
  - iii. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5 and Chapter 11 as a hazardous waste.

Section 20090(d) allows exemption for a project to clean up a condition of pollution that resulted from an unauthorized discharge of waste based on the following:

- iv. The application of amendments to groundwater is at the direction of the Regional Board to cleanup and abate conditions of pollution or nuisance resulting from the unauthorized discharge of waste;
- v. Wastes removed from the immediate place of release must be discharged according to the Title 27 regulations; and
- vi. The cleanup actions intended to contain wastes at the place of release shall implement the Title 27 regulations to the extent feasible.

24. Section 13267(b) of the California Water Code provides that:

“In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish under penalty of perjury, technical or monitoring program reports which the Regional Board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring these reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”

The technical reports required by this Order and the attached Monitoring and Reporting Program are necessary to assure compliance with this Order. The Discharger operates the facility that discharges the waste subject to this Order.

25. The Regional Board has notified interested agencies and persons of its intent to prescribe General WDRs for the discharges covered under these General WDRs, and has provided them with an opportunity to submit written comments and provide oral testimony at a public hearing.
26. The Regional Board, in a public meeting, heard and considered all comments pertaining to the tentative General WDRs.

**IT IS HEREBY ORDERED THAT** dischargers authorized under this Order shall meet the provisions contained in Division 7 of the California Water Code, and regulations adopted here under, by complying with the following:

**A. ELIGIBILITY**

1. A discharger may seek coverage under this Order for:
  - a. Existing and future discharges to soil and groundwater of remediation compounds for the purpose of the cleanup of wastes at petroleum hydrocarbon fuel, volatile organic compound, and/or inorganic contaminant impacted sites and similar discharges in pilot studies or full-scale applications.
  - b. Re-injection, percolation or infiltration of treated groundwater from a pump and treat remediation system(s). Treated groundwater may be used for

irrigation and/or dust control provided that the treated groundwater meets the applicable discharge limits for recycling and reuse.

2. To be covered under this Order, a discharge must meet the following criteria:
  - a. The Executive Officer must find, based on the Report of Waste Discharge submitted pursuant to Provision C, that the groundwater discharges for which coverage under this Order are sought have a threat to water quality of Category 3 and Complexity rating of A for a combined rating of 3-A, using the rating criteria noted on the Regional Board website.
  - b. The discharger must have an approved Remedial Action Plan (RAP). The discharger shall submit a copy of the approved RAP including any conditions of implementation with the Report of Waste Discharge for application of the General WDRs. At a minimum, the RAP shall comply with any requirements of a cleanup and abatement order issued by the Regional Board and include the following site-specific information:
    - The background water quality of the aquifer of the groundwater remediation site(s) including constituents of concern, total dissolved solids, sulfates, chlorides, nitrogen (NH<sub>4</sub>, NO<sub>3</sub>, NO<sub>2</sub>), chemical oxygen demand, biochemical oxygen demand, phosphorus, pH, dissolved metals, nutrients, dissolved oxygen, dissolved carbon dioxide, methane, temperature, iron, and oxidation-reduction potential;
    - Information on any potential adverse impacts to groundwater quality, and whether the impacts will be localized and short-term;
    - The results of any pilot testing performed for the treatment technology used;
    - Site-specific geology (lithology and physical parameters) and hydrogeologic parameters, hydrologic report;
    - Infiltration rate;
    - Characterization and extent of the wastes, including petroleum hydrocarbon fuel, volatile organic compounds, and inorganic contaminants;
    - Description of the treatment system(s);
    - Adequate groundwater monitoring network with historical groundwater monitoring report;
    - Description of the aerial extent of the application area and identification of monitoring wells to be used to determine water quality upgradient, within the application area, downgradient from the application area and identify the compliance point;
    - Material Safety Data Sheet (MSDS) information and other product technical information for any materials to be used for cleanup;

- Application rate(s), material type(s) and applied concentrations;
  - Evaluation of loading rates for nitrogen compounds, total dissolved solids, sulfate, and chloride compounds; and
  - GeoTracker database update whenever applicable.
- c. This Order authorizes the materials listed in Attachment A to be used for in-situ remediation purposes. The materials listed in Attachment A do not represent all chemicals that might be used in remediation, rather they meet all criteria specified in section 3 below. Any by-product or impurity of any product containing compounds listed in Attachment A is not authorized by this Order and such materials shall not be used for injection under this Order. Compounds listed under one category can also be used under another category.
3. The Executive Officer is delegated the authority to revise and update the list periodically to add materials that meet the following criteria:
- a. Effective to remediate targeted constituents;
  - b. Minimum degradation of water quality (including toxicity and by-product evaluation) that will not cause or contribute to exceedance of WQOs;
  - c. Protective of human health and safety (including prohibition of human/animal pathogens);
  - d. Availability on the market for a minimum of three years.
4. The monitoring program shall be sufficient to identify changes in geochemistry that may alter the potential occurrence of transference of chromium (III) into chromium (VI), or vice versa, during the oxidation or reduction process in the in-situ remediation under these WDRs.
5. For the purpose of replacement of existing individual WDRs with coverage under this Order, renewal is effective upon issuance of a notification of coverage by the Executive Officer and issuance of a new monitoring and reporting program.
6. When individual WDRs with more specific requirements are issued to a discharger, the applicability of this Order to that discharger is automatically terminated on the effective date of the individual WDRs.

## **B. AUTHORIZATION**

To be authorized to discharge under this Order, the discharger must submit a Report of Waste Discharge in accordance with the requirements of Part C of this Order. Upon receipt of the Report of Waste Discharge, the Executive Officer shall determine the completeness of the Report of Waste Discharge and the applicability of this Order to such a discharge. If

the discharge is eligible, the Executive Officer shall notify the discharger that the discharge is authorized under the terms and conditions of this Order and prescribe an appropriate monitoring and reporting program. For new discharges, the discharge shall not commence until receipt of the Executive Officer's written determination that the discharge is eligible to be covered by this Order and has issued a site-specific monitoring and reporting program.

### **C. REPORT OF WASTE DISCHARGE**

1. Deadline for Submission
  - a. New dischargers seeking coverage under this Order shall file a complete Report of Waste Discharge that includes all information identified in Items A.1 and A.2 above at least 90 days before planned commencement of any discharge.
  - b. Existing dischargers covered under individual WDRs may seek coverage under this Order by submitting a Report of Waste Discharge that includes all information identified in Items A.1 and A.2. Coverage under this Order will not occur until the discharger receives notification from the Executive Officer.
2. Forms for Report of Waste Discharge
  - a. Dischargers shall use the appropriate forms (Standard Form 200) or equivalent forms approved by the State Water Resources Control Board or the Executive Officer of the Los Angeles Regional Board.
  - b. The discharger, upon request, shall submit any additional information that the Executive Officer deems necessary to determine whether the discharge meets the criteria for coverage under this Order, and/or in prescribing an appropriate monitoring and reporting program.
  - c. The Report of Waste Discharge shall be accompanied by the first annual fee (if appropriate) in accordance with the current version of California Code of Regulation, Title 23, Division 7, Chapter 9, Waste Discharge Report and Requirements Article 1 fees for a discharge. The check or money order shall be made payable to the "State Water Resources Control Board" and submitted to the Regional Water Quality Control Board – Los Angeles Region.

### **D. DISCHARGE PROHIBITIONS**

1. The discharge of wastes, amendments, or other materials other than those which meet eligibility requirements in Part A of this Order and listed in Attachment A, is

prohibited unless the discharger obtains coverage under another general WDR or an individual site-specific WDR that regulates the discharge of such wastes.

2. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.
3. Creation of a pollution, contamination, or nuisance, as defined by section 13050 of the CWC, is prohibited.
4. The surfacing or overflow of wastes from the treatment system at any time and at any location is prohibited.
5. The disposal of wastes in geologically unstable areas or so as to cause earth movement is prohibited.
6. The discharge of amendments or wastes to surface water or surface water drainage courses is prohibited.
7. The discharge of amendments or wastes to land or groundwater in areas other than that proposed for remediation is prohibited.
8. The discharge of wastes or amendments to property that is not under the control of the Discharger is prohibited. The "area under the control" of the Discharger is defined to be at the borders of the treatment zone at areas owned by the Discharger and/or where the Discharger holds an agreement for purposes of investigation and remediation.
9. The migration of any by-products produced as part of the treatment process beyond the boundaries of the property owned or controlled by the discharger as defined above in Item 8 of Section D or to surface waters is prohibited.

**E. DISCHARGE LIMITATIONS**

1. The discharge of wastes shall not cause the pH of the receiving groundwater at the compliance point, downgradient outside the application area, to be outside the range of 6.5 and 8.5.
2. The discharge of wastes shall not cause the mineral constituents of the receiving groundwater at the compliance point, downgradient outside the application area, to be in excess of applicable limits given in Attachment B. In the letter of determination, the Executive Officer shall indicate the groundwater limitations in Attachment B applicable to the particular discharge, and identify the compliance point(s) for the site.

3. The discharge of wastes shall not cause the concentrations of chemical constituents and radionuclides of the receiving groundwater designated for use as domestic or municipal supply at the compliance point, downgradient outside the application area, to be in excess of the Maximum Contaminant Levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations which are incorporated by reference into the Basin Plan: Table 64431-A of section 64431 (inorganic chemicals, including fluoride), Table 64444-A of section 64444 (organic chemicals), and Table 64442 of section 64442 and Table 64443 of section 64443 (radioactivity). This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect.
4. Treated groundwater recycled and/or reused for irrigation or dust control shall meet the Title 22 Recycle Water Requirement for coliform not to exceed 2.2. most probable numbers per 100 milliliters (MPN/100ml). Wastewater discharged to groundwater basin/subbasin shall meet the Basin Plan objective of 1.1 MPN/100 ml.
5. Waste discharged shall not contain salts, heavy metals, or organic constituents at levels that would cause receiving groundwater at the compliance point, downgradient outside the application area, to exceed the WQOs for groundwater or groundwater that may be in hydraulic connection with surface waters designated for marine aquatic life or body contact recreation.
6. Waste discharged shall not cause the groundwater to contain concentrations of chemical substances or its by-products in amounts that adversely affect any designated beneficial use, outside the application area or treatment zone at the compliance point(s).
7. Waste discharged shall not cause the groundwater to contain residual taste or odor in concentrations that cause nuisance or adversely affect beneficial uses, outside the application area or treatment zone at the compliance point(s).
8. Waste discharged shall not cause the groundwater to contain nitrogen as nitrate-nitrogen plus nitrite-nitrogen ( $\text{NO}_3\text{-N} + \text{NO}_2\text{-N}$ ) that exceeds the background concentrations in groundwater basins, or the Basin Plan's groundwater quality objectives of 45 mg/L as Nitrate ( $\text{NO}_3$ ), or 10 mg/L as nitrate-nitrogen ( $\text{NO}_3\text{-N}$ ), or 1 mg/L as nitrite-nitrogen ( $\text{NO}_2\text{-N}$ ), whichever is lower, outside the application area or treatment zone at the compliance point(s). In a situation where the groundwater may interact with surface water or other aquifers, other relevant regulatory standards may also apply, and then the most protective criteria shall prevail.

**F. PROVISIONS**

1. The Executive Officer may require any discharger authorized under this Order to apply for and obtain individual WDRs with specific requirements. The Executive Officer may require in writing that any discharger authorized to discharge under this Order to apply for individual WDRs by submitting a report of waste discharge.
2. This Order incorporates the attached "Standard Provisions Applicable to Waste Discharge Requirements" (Attachment C). If there is any conflict between provisions stated herein before and the attached "Standard Provisions," those provisions stated herein shall prevail.
3. Adequate facilities shall be provided to divert surface and storm water away from the application area and/or treatment system and areas where any wastes are stored.
4. The application of materials or the re-injection or reuse of treated groundwater shall only be at a site owned or controlled as defined above in Item 8 of Section D by the discharger.
5. Re-injection or reuse of treated groundwater shall be limited to the same aquifer where the impacted groundwater was withdrawn from for treatment. Re-injection of treated groundwater to which materials or amendments have been added shall be limited to the same aquifer and within the treatment zone.
6. All technical reports required herein that involve planning, investigation, evaluation, or design or other work requiring interpretation or 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.
7. The discharge of wastes to or infiltration to a surface water of the State and United States must be covered by a separate NPDES permit.
8. The Discharger may be required to submit technical reports pursuant to California Water Code Section 13267 as directed by the Executive Officer. The technical reports required by this Order are necessary to assure compliance with this Order.



9. This Order does not alleviate the responsibility of the discharger to obtain other applicable local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Additionally, the discharger shall notify the Native American Heritage Commission of any plans to disturb the soil in order to comply with California Environmental Quality Act (CEQA) guidelines as set forth in Section 15064.5(b)(c). Furthermore the discharger is required to provide local information prior to excavation to the California Historical Resources Information System (CHRIS). This will serve as their due diligence record search to provide proximity to Native American historical and archeological resources. The discharger shall also be required to adhere to California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, CEQA Section 15064.5(d) and Section 15064.5 (f) to ensure that mitigation plan provisions are in-place to identify, evaluate and consult with your commission about the discovery and disposition of any recovered human remains or artifacts, should the occasion arise, during the remediation process overseen by this agency.
10. The discharger shall notify Regional Board staff by telephone within 24 hours, followed by written notification within one week, in the event it is unable to comply with any of the conditions of this Order due to:
  - a. Breakdown of waste treatment equipment,
  - b. Accident caused by human error or negligence,
  - c. Other causes such as acts of nature, or
  - d. Site construction or development operations.
11. Any discharger authorized under this Order may request to be excluded from coverage of this Order by applying for individual WDRs.
12. In accordance with section 13263(e) of the California Water Code, these requirements are subject to periodic review and revision by the Regional Board.
13. In accordance with Water Code section 13263(g), these requirements do not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into waters of the state are privileges, not rights.
14. The discharger shall develop a contingency plan and maintain it on site. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment in case of any spill or failure related to the operation or mis-operation of the treatment system.

**G. MONITORING AND REPORTING REQUIREMENTS**

1. The Executive Officer is hereby authorized to prescribe a Monitoring and Reporting Program for each authorized discharger. This program may include participation of the discharger in a regional monitoring program.
2. The discharger shall file with the Regional Board technical reports on self-monitoring work conducted according to the Monitoring and Reporting Program specified by the Executive Officer and submits other reports as requested by the Regional Board.
3. The discharger shall retain records of all monitoring information and data used to complete the Report of Waste Discharge and application for coverage under this Order for at least five years from the date of permit issuance. The retention period shall be extended during any unresolved litigation regarding the discharge or when requested by the Executive Officer.
4. The discharger shall maintain all sampling, measurement, and analytical results, including the date, exact place, and time of sampling or measurement; individual(s) who did the sampling or measurement; the date(s) analyses were done; analysts' names; and analytical techniques or methods used.
5. All sampling, sample preservation, and analyses must be conducted according to test procedures under title 40 Code of Federal Regulations, section 136, unless other test procedures have been specified in this Order or by the Executive Officer.
6. All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Environmental Laboratory Accreditation Program (ELAP) or other state agency authorized to undertake such certification.
7. The discharger shall calibrate and maintain all monitoring instruments and equipment to ensure accuracy of measurements, or shall ensure that both activities will be conducted.
8. In reporting the monitoring data, the discharger shall arrange the data in tabular form so that the date, constituents, and concentrations are readily discernible. The data shall be summarized to demonstrate compliance with waste discharge requirements. Laboratory analytical data from any soil testing and/or groundwater monitoring shall be reported in Electronic Deliverable Format in accordance with California Water Code section 13195 et. seq. requirements, if applicable.
9. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed that will bring the discharge into

full compliance with requirements at the earliest time and submit a timetable for correction.

10. The discharger shall file a report of any material change or proposed change in the character, location, or volume of the discharge.
11. The discharger shall notify this Regional Board within 24 hours by telephone of any adverse condition resulting from the discharge; such notification shall be affirmed in writing within five working days.
12. Whenever wastes, associated with the discharge under this Order, are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or method of transport if other than by hauling); and location of the final point(s) of disposal.
13. Each monitoring report must contain an affirmation in writing that:

"All analyses were conducted at a laboratory certified for such analyses by and in accordance with current USEPA procedures or as specified in this Monitoring and Reporting Program."

14. Each report shall contain the following completed declaration:

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

Executed on the \_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_

\_\_\_\_\_ (Signature)

\_\_\_\_\_ (Title)"

15. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all correspondence and reports required under the WDRs' Monitoring and Reporting Program, including groundwater monitoring

data and discharge location data (latitude and longitude), correspondence, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database.

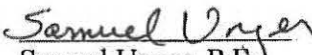
**H. CONTINUATION OF THIS ORDER**

For those dischargers authorized to discharge under this Order, it shall continue in full force and effect until a new order is adopted. This Order will be reviewed periodically.

**I. REAUTHORIZATION**

Upon re-issuance of a new general permit Order, dischargers authorized under this Order shall file a new Report of Waste Discharge within 45 days of notification by the Executive Officer.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 11, 2014.

  
Samuel Unger, P.E.  
Executive Officer

**Attachment A**  
**List of Authorized Injection Material Amendments**

*The list below does not represent any endorsement of products or materials by the Regional Water Quality Control Board, Los Angeles Region (Regional Board). Many of the products/materials listed are patented. Users of these products/materials shall comply with any regulations and laws applicable to the use of the products/ materials. Some products/materials may contain by-products or impurities that are not authorized to be used by the Regional Board. Compounds listed under one category can also be used under another category.*

**1. Chemical Oxidants:**

- Fenton's reagent (hydrogen peroxide, ferrous iron catalyst, and pH buffer)
- Hydrogen Peroxide
- Ozone
- Potassium or Sodium Permanganate
- Sodium Percarbonate
- Sodium Persulfate

**2. Chemical Oxidant Activators:**

- Calcium Hydroxide
- Chelating Agents (ferric ethyldiaminetetraacetic acid (EDTA), sodium citrate, sodium malonate, sodium phytate)
- Silica and Silicates (Silicic Acid, Sodium Silicate, Silica Gel)
- Sodium Hydroxide

**3. Aerobic Bioremediation Enhancement Compounds:**

- Calcium Oxide/Peroxide
- Calcium Oxy-hydroxide
- Magnesium (Oxide/Hydroxide/Peroxide)
- Methane (Dissolved Phase)
- Propane (Dissolved Phase)

**4. Anaerobic Degradation Enhancement Compounds:**

- Calcium Sulfate (gypsum)
- Cheese Whey
- Complex organic materials (starch, wood chips, yeast extract, grain milling products)
- Complex Sugars
- Corn Syrup
- Emulsified Vegetable Oil
- Ethanol

- Glucose
- Glycerol esters of fatty acids and poly lactates
- Glycerol Polylactate/Tripolylactate
- Glycerol, Xylitol, Sorbitol
- Guar
- Hematite
- Lactose
- Lecithin
- Magnesium sulfate
- Milk Whey
- Methanol
- Molasses
- Organic Acids (Acetate, Lactate, Propionate, Benzoate, and Oleate)
- Potassium Sulfate
- Propanol
- Sorbitol Cysteinate/Cysteine

**5. Reduction Degradation Enhancement Compounds:**

- Ferrous Chloride
- Ferrous Gluconate
- Ferrous Sulfate
- Sodium Dithionite
- Zero-Valent Iron

**6. Metals Precipitation / Stabilization:**

- Calcium Phosphate
- Calcium Polysulfide
- Ferrous Sulfate
- Sodium Tripolyphosphate (STPP)

**7. Surfactants/Co-solvents:**

- Benzenesulfonic acid
- Dioctyl Sodium Sulfocuccinate
- D-limonene
- Ethoxylated Castor Oils Surfactants
- Ethoxylated Cocamides Surfactants
- Ethoxylated Coco Fatty Acid Surfactants
- Ethoxylated Octylphenolic Surfactants
- Sorbitan Monooleate
- Xanthan Gum

**8. Bioaugmentation Organisms:** *The users shall prove that any bacterial genomes in the original injection form, its degradation form, other impurity or by-product shall not be human/animal pathogens. Genetically-modified organisms (GMO) should not be used.*

- Dehalococcoides Sp.
- Dehalobactor Sp.
- Geobacter
- Methanomethylovorans
- Desulfovibrio
- Desulfobacterium

**9. Tracer Study Compounds:** *The tracer compounds shall be highly contrasting and not reactive with current contaminants to be treated. The tracers may be chloride-based, bromide-based, or fluoride-based salts, or similar materials as approved by the Executive Officer.*

- Calcium Bromide
- Calcium Chloride
- Eosin Dyes
- Fluoride Salts
- Iodide
- Potassium Bromide
- Potassium Iodide
- Rhodamine Dyes
- Sodium Bromide
- Sodium Chloride
- Sodium Fluorescein

**10. Buffer Solutions and pH Adjusters:**

- Calcium Carbonate
- Calcium Magnesium Carbonate
- Potassium Bicarbonate
- Sodium (carbonate/bicarbonate)

## Attachment B

**Table 3-13. Water Quality Objectives for Selected Constituents in Regional Ground Waters<sup>a</sup>.**

BASINS				Objectives (mg/l) <sup>m</sup>			
Basin	Basin No <sup>b</sup>	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
<b>Pitas Point Area<sup>c</sup></b>		<b>Pitas Point Area</b>		<b>None specified</b>			
<b>Upper Ojai Valley</b>	<b>4-1</b>	<b>Ojai Valley</b>	<b>4-1</b>				
Upper Ojai Valley	4-1	Upper Ojai Valley	4-1				
Upper Ojai Valley	4-1	West of Sulfur Mountain Road	4-1	1000	300	200	1.0
Upper Ojai Valley	4-1	Central Area	4-1	700	50	100	1.0
Upper Ojai Valley	4-1	Sisar Area	4-1	700	250	100	0.5
<b>Ojai Valley</b>	<b>4-2</b>	<b>Lower Ojai Valley</b>	<b>4-2</b>				<b>0.5</b>
Ojai Valley	4-2	West of San Antonio-Senior Canyon	4-2	1000	300	200	0.5
Ojai Valley	4-2	East of San Antonio-Senior Canyon	4-2	700	200	50	
<b>Ventura River Valley</b>	<b>4-3</b>	<b>Ventura River Valley</b>	<b>4-3</b>				
Upper Ventura River	4-3.01	Upper Ventura	4-3	800	300	100	0.5
Upper Ventura River	4-3.01	San Antonio Creek Area	4-3	1000	300	100	1.0
Lower Ventura River	4-3.02	Lower Ventura	4-3	1500	500	30	1.5
<b>Santa Clara River Valley<sup>d</sup></b>	<b>4-4</b>	<b>Ventura Central</b>	<b>4-4</b>				
Piru	4-4.06	Santa Clara-Piru Creek Area	4-4				
Piru	4-4.06	Upper Area (above Lake Piru)	4-4	1100	400	200	2.0
Piru	4-4.06	Lower Area East of Piru Creek	4-4	2500	1200	200	1.5
Piru	4-4.06	Lower Area West of Piru Creek	4-4	1200	600	100	1.5
Fillmore	4-4.05	Santa Clara-Sespe Creek Area	4-4				
Fillmore	4-4.05	Topa Topa (upper Sespe) Area	4-4	900	350	30	2.0
Fillmore	4-4.05	Fillmore Area	4-4				
Fillmore	4-4.05	Pole Creek Fan Area	4-4	2000	800	100	1.0
Fillmore	4-4.05	South Side of Santa Clara River	4-4	1500	800	100	1.1
Fillmore	4-4.05	Remaining Fillmore Area	4-4	1000	400	50	0.7
Santa Paula	4-4.04	Santa Clara-Santa Paula Area	4-4				
Santa Paula	4-4.04	East of Peck Road	4-4	1200	600	100	1.0
Santa Paula	4-4.04	West of Peck Road	4-4	2000	800	110	1.0



BASINS			Objectives (mg/l) <sup>m</sup>				
Basin	Basin No <sup>b</sup>	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Oxnard	4-4.02	Oxnard Plain	4-4				
Mound	4-4.03	Oxnard Plain	4-4				
Oxnard	4-4.02	Oxnard Forebay	4-4	1200	600	150	1.0
Oxnard	4-4.02	Confined Aquifers	4-4	1200	600	150	1.0
Oxnard	4-4.02	Unconfined & Perched Aquifers	4-4	3000	1000	500	
<b>Pleasant Valley<sup>c</sup></b>	<b>4-6</b>	<b>Pleasant Valley</b>	<b>4-6</b>				
Pleasant Valley	4-6	Confined Aquifers	4-6	700	300	150	1.0
Pleasant Valley	4-6	Unconfined & Perched Aquifers	4-6				
<b>Arroyo Santa Rosa Valley<sup>c</sup></b>	<b>4-7</b>	<b>Arroyo Santa Rosa</b>	<b>4-7</b>	900	300	150	1.0
<b>Las Posas Valley<sup>c</sup></b>	<b>4-8</b>	<b>Las Posas Valley</b>	<b>4-8</b>				
Las Posas Valley	4-8	South Las Posas Area	4-8				
Las Posas Valley	4-8	NW of Grimes Cyn Rd. & LA Ave. & Somis Rd.	4-8	700	300	100	0.5
Las Posas Valley	4-8	E of Grimes Cyn Rd & Hitch Blvd.	4-8	2500	1200	400	3.0
Las Posas Valley	4-8	S of LA Ave Between Somis Rd & Hitch Blvd.	4-8	1500	700	250	1.0
Las Posas Valley	4-8	Grimes Canyon Rd. & Broadway Area	4-8	250	30	30	0.2
Las Posas Valley	4-8	North Las Posas Area	4-8	500	250	150	1.0
<b>Acton Valley<sup>f</sup></b>	<b>4-5</b>	<b>Upper Santa Clara</b>	<b>4-5</b>				
Acton Valley	4-5	Acton Valley	4-5	550	150	100	1.0
Acton Valley	4-5	Sierra Pelona Valley (Agua Dulce)	4-5	600	100	100	0.5
Acton Valley	4-5	Upper Mint Canyon	4-5	700	150	100	0.5
Acton Valley	4-5	Upper Bouquet Canyon	4-5	400	50	30	0.5
Acton Valley	4-5	Green Valley	4-5	400	50	25	
Acton Valley	4-5	Lake Elizabeth-Lake Hughes Area	4-5	500	100	50	0.5
<b>Santa Clara River Valley East</b>	<b>4-4.07</b>	<b>Eastern Santa Clara</b>	<b>4-4.07</b>				

BASINS			Objectives (mg/l) <sup>m</sup>				
Basin	Basin No <sup>b</sup>	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
Santa Clara River Valley East	4-4.07	Santa Clara-Mint Canyon	4-4.07	800	150	150	1.0
Santa Clara River Valley East	4-4.07	South Fork	4-4.07	700	200	100	0.5
Santa Clara River Valley East	4-4.07	Placentia Canyon	4-4.07	700	150	100	0.5
Santa Clara River Valley East	4-4.07	Santa Clara-Bouquet & San Fransisquito Canyons	4-4.07	700	250	100	1.0
Santa Clara River Valley East	4-4.07	Castaic Valley	4-4.07	1000	350	150	1.0
Santa Clara River Valley East	4-4.07	Saugus Aquifer	4-4.07				
<b>Simi Valley</b>	<b>4-9</b>	<b>Simi Valley</b>	<b>4-9</b>				
Simi Valley	4-9	Simi Valley Basin	4-9				
Simi Valley	4-10	Confined Aquifers	4-9	1200	600	150	1.0
Simi Valley	4-11	Unconfined & Perched Aquifers	4-9				
Simi Valley	4-12	Gillibrand Basin	4-9	900	350	50	1.0
<b>Conejo Valley</b>	<b>4-10</b>	<b>Conejo Valley</b>	<b>4-10</b>	<b>800</b>	<b>250</b>	<b>150</b>	<b>1.0</b>
<b>Coastal Plain of Los Angeles</b>	<b>4-11</b>	<b>Los Angeles Coastal Plain</b>	<b>4-11</b>				
Central	4-11.04	Central Basin	4-11	700	250	150	1.0
West Coast	4-11.03	West Coast Basin	4-11	800	250	250	1.5
Hollywood	4-11.02	Hollywood Basin	4-11	750	100	100	1.0
Santa Monica	4-11.01	Santa Monica Basin	4-11	1000	250	200	0.5
<b>San Fernando Valley</b>	<b>4-12</b>	<b>San Fernando Valley</b>	<b>4-12</b>				
San Fernando Valley	4-12	Sylmar Basin	4-12	600	150	100	0.5
San Fernando Valley	4-12	Verdugo Basin	4-12	600	150	100	0.5
San Fernando Valley	4-12	San Fernando Basin	4-12				
San Fernando Valley	4-12	West of Highway 405	4-12	800	300	100	1.5
San Fernando Valley	4-12	East of Highway 405 (overall)	4-12	700	300	100	1.5
San Fernando Valley	4-12	Sunland-Tujunga Area	4-12	400	50	50	0.5
San Fernando Valley	4-12	Foothill Area	4-12	400	100	50	1.0

BASINS			Objectives (mg/l) <sup>m</sup>				
Basin	Basin No <sup>b</sup>	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
San Fernando Valley	4-12	Area Encompassing RT- Tujunga -Erwin-N. Hollywood-Whithall-LA/Verdugo-Crystal Springs-Headworks-Glendale/Burbank Well Fields	4-12	600	250	100	1.5
San Fernando Valley	4-12	Narrows Area (below confluence of Verdugo Wash with the LA River	4-12	900	300	150	1.5
San Fernando Valley	4-12	Eagle Rock Basin	4-12	800	150	100	0.5
<b>San Gabriel Valley<sup>g</sup>/Raymond<sup>h</sup></b>	<b>4-13</b>	<b>San Gabriel Valley</b>	<b>4-13</b>				
Raymond	4-23	Raymond Basin	4-13				
Raymond	4-23	Monk Hill Sub-Basin	4-13	450	100	100	0.5
Raymond	4-23	Santa Anita Area	4-13	450	100	100	0.5
Raymond	4-23	Pasadena Area	4-13	450	100	100	0.5
San Gabriel Valley	4-13	Main San Gabriel Basin	4-13				
San Gabriel Valley	4-13	Western Area <sup>g</sup>	4-13	450	100	100	0.5
San Gabriel Valley	4-13	Eastern Area <sup>g</sup>	4-13	600	100	100	0.5
San Gabriel Valley	4-13	Puente Basin	4-13	1000	300	150	1.0
<b>Upper Santa Ana Valley/San Gabriel Valley</b>	<b>8-2.01<sup>i</sup></b>	<b>Upper Santa Ana Valley</b>	<b>4-14</b>				
San Gabriel Valley	4-13	Live Oak Area	8-2	450	150	100	0.5
San Gabriel Valley	4-13	Claremont Heights Area	8-2	450	100	50	
San Gabriel Valley	4-13	Pomona Area	8-2	300	100	50	0.5
Upper Santa Ana Valley/ San Gabriel Valley	8-2.01/4-13	Chino Area	8-2	450	20	15	
San Gabriel Valley	4-13	Spadra Area	8-2	550	200	120	1.0
<b>Tierra Rejada</b>	<b>4-15</b>	<b>Tierra Rejada</b>	<b>4-15</b>	<b>700</b>	<b>250</b>	<b>100</b>	<b>0.5</b>
<b>Hidden Valley</b>	<b>4-16</b>	<b>Hidden Valley</b>	<b>4-16</b>	<b>1000</b>	<b>250</b>	<b>250</b>	<b>1.0</b>
<b>Lockwood Valley</b>	<b>4-17</b>	<b>Lockwood Valley</b>	<b>4-17</b>	<b>1000</b>	<b>300</b>	<b>20</b>	<b>2.0</b>
<b>Hungry Valley</b>	<b>4-18</b>	<b>Hungry Valley &amp; Peace Valley</b>	<b>4-18</b>	<b>500</b>	<b>150</b>	<b>50</b>	<b>1.0</b>

BASINS			Objectives (mg/l) <sup>m</sup>				
Basin	Basin No <sup>b</sup>	1994 Basin Name	1994 Basin No	TDS	Sulfate	Chloride	Boron
<b>Conejo Valley</b>	<b>4-10</b>	<b>Thousand Oaks Area</b>	<b>4-19</b>	<b>1400</b>	<b>700</b>	<b>150</b>	<b>1.0</b>
<b>Russell Valley</b>	<b>4-20</b>	<b>Russell Valley</b>	<b>4-20</b>				
Russell Valley	4-20	Russell Valley	4-20	1500	500	250	1.0
Thousand Oaks Area	4-19	Triunfo Canyon Area	4-20	2000	500	500	2.0
Thousand Oaks Area	4-20	Lindero Canyon Area	4-20	2000	500	500	2.0
Thousand Oaks Area	4-21	Las Virgenes Canyon Area	4-20	2000	500	500	2.0
<b>Conejo-Tierra Rejada Volcanic Area<sup>i</sup></b>	No DWR#	<b>Conejo-Tierra Rejada Volcanic Area</b>	<b>4-21</b>				
<b>Malibu Valley</b>	<b>4-22</b>	<b>Santa Monica Mountains-Southern Slopes<sup>k</sup></b>	<b>4-22</b>				
Malibu Valley	No DWR#	Camarillo Area		1000	250	250	1.0
Malibu Valley	No DWR#	Point Dume Area		1000	250	250	1.0
Malibu Valley	4-22	Malibu Valley	4-22	2000	500	500	2.0
Malibu Valley	No DWR#	Topanga Canyon Area		2000	500	500	2.0
<b>San Pedro Channel Islands<sup>l</sup></b>	No DWR#	<b>San Pedro Channel Islands</b>					
Anacapa Island	No DWR#	Anacapa Island	No DWR#				
San Nicholas Island	No DWR#	San Nicholas Island	No DWR#	1100	150	350	
Santa Catalina Island	No DWR#	Santa Catalina Island	No DWR#	1000	100	250	1.0
San Clemente Island	No DWR#	San Clemente Island	No DWR#				
Santa Barbara	No DWR#	Santa Barbara Island	No DWR#				

- a. Objectives for ground waters outside of the major basins listed on this table and outlined in Figure 1-9 have not been specifically listed. However, ground waters outside of the major basins are, in many cases, significant sources of water. Furthermore, ground waters outside of the major basins are either potential or existing sources of water for downgradient basins and, as such, objectives in the downgradient basins shall apply to these areas.
- b. Basins are numbered according to Bulletin 118-Update 2003 (Department of Water Resources, 2003).
- c. Ground waters in the Pitas Point area (between the lower Ventura River and Rincon Point) are not considered to comprise a major basin, and accordingly have not been designated a basin number by the California Department of Water Resources (DWR) or outlined on Figure 1-9.
- d. The Santa Clara River Valley (4-4) was formerly Ventura Central Basin
- e. Pleasant Valley (4-6), Arroyo Santa Rosa Valley (4-7) and Las Posas Valley (4-8) Ground Water Basins were former sub-basins of the Ventura Central Basin (DWR, 1980).
- f. Acton Valley Basin was formerly Upper Santa Clara Basin (DWR, 1980)

- g. San Gabriel Valley is a combination of what were formerly the Western and Eastern areas of the Main San Gabriel Basin, and the Puente Basin. All of the groundwater in the former Main San Gabriel Basin is covered by the objectives listed under Main San Gabriel Basin – Eastern Area and Western Area. Walnut Creek, Big Dalton Wash, and Little Dalton Wash separate the Eastern Area from the Western Area (see the dashed line on Figure A2-17 in Appendix II). Any ground water upgradient of these areas is subject to downgradient beneficial uses and objectives, as explained in Footnote a.
- h. Raymond Basin was formerly a sub-basin of the San Gabriel Valley and is now a separate basin.
- i. The border between Regions 4 and 8 crosses the Upper Santa Ana Valley and San Gabriel Valley Ground Water Basins.
- j. Ground water in the Conejo-Tierra Rejada Volcanic Area occurs primarily in fractured volcanic rocks in the western Santa Monica Mountains and Conejo Mountain areas. These areas have not been delineated on Figure 1-9.
- k. With the exception of ground water in Malibu Valley (DWR Basin No. 4-22), ground waters along the southern slopes of the Santa Monica Mountains are not considered to comprise a major basin and accordingly have not been designated a basin number by the California Department of Water Resources (DWR) or outlined on Figure 1-9.
- l. DWR has not designated basins for ground waters on the San Pedro Channel Islands
- m. The Regional Board may grant, at its sole discretion, individual dischargers a variance from the numeric mineral quality objectives for groundwater specified in Table 3-13 under the conditions and procedures specified in "Coastal Aquifer Variance Provision for Mineral Quality Objectives" set forth in the Regional Objectives for Ground Waters.

## Attachment C

### STANDARD PROVISIONS APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

- (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

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- (b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
- (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
- (d) Increase in flow beyond that specified in the waste discharge requirements.
- (e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provisions of these requirements are found invalid, the remainder of the requirements shall not be affected. [CWC Section 921]

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10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 1327(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]



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13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

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. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

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15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGE TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

- (a) Any bypass from any portion of the treatment facility.
- (b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- (c) Any treatment plant upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies off all reports required by this Order, and record of all data used

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to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurement;
  - (b) The individual(s) who performed the sampling or measurement;
  - (c) The date(s) analyses were performed;
  - (d) The individual(s) who performed the analyses;
  - (e) The analytical techniques or method used; and
  - (f) The results of such analyses.
19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:
- (1) For a corporation – by a principal executive officer or at least the level of vice president.
  - (2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.
  - (3) For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official.
- (b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this provision.
  - (2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
  - (3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

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Waste Discharge Requirements

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plant shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO  
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-10310  
FOR  
SANTA SUSANA FIELD LABORATORY, INJECTION WELL WS-5  
5800 WOOLSEY CANYON ROAD, CANOGA PARK, CALIFORNIA

ENROLLMENT UNDER REGIONAL BOARD  
ORDER NO. R4-2014-0187 (SERIES NO. 095)  
FILE NO. 16-137

I. MONITORING AND REPORTING REQUIREMENTS

- A. The Boeing Company (hereinafter Discharger) shall implement this Monitoring and Reporting Program (MRP) on the effective date (October 2, 2017) under Regional Board Order No. R4-2014-0187. The first monitoring report shall be received at the Regional Board by **October 30, 2017**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	April 30
April – June	July 30
July – September	October 30
October – December	January 30

- B. If there is no discharge or injection, during any reporting period, the report shall so state. By March 1 of each year, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements.
- C. The Discharger shall comply with requirements contained in Section G of Regional Board Order No. R4-2014-0187 "*Monitoring and Reporting Requirements*".

October 2, 2017

## II. DISCHARGE MONITORING PROGRAM

The Discharger shall conduct a monitoring program on treated groundwater effluent before re-injecting it into the aquifer. The monitoring reports shall contain the following information regarding injection activities:

1. A map showing the locations of the treated groundwater injection well and the monitoring wells required under this program.
2. A written and tabulated summary defining the depth of the injection interval, the quantity of treated groundwater injected each day, and a summary documenting daily operational status of the treatment system and injection well.
3. Treated groundwater samples shall be collected for the following chemical analyses:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Dissolved Solids	mg/L	grab	Quarterly
Sulfate	mg/L	grab	Quarterly
Chloride	mg/L	grab	Quarterly
Boron	mg/L	grab	Quarterly
Volatile Organic Compounds	µg/L	grab	Weekly
Perchlorate	µg/L	grab	Weekly
1,4-Dioxane	µg/L	grab	Weekly
N-Nitrosodimethylamine (NDMA)	ng/L	grab	Weekly

### III. GROUNDWATER MONITORING PROGRAM

The Discharger shall implement a groundwater-monitoring program to evaluate impacts associated with the injection activity. Groundwater samples shall be collected from monitoring wells C-2, C-3, HAR-1, RD-45A, RD-45B, RD-45C, RD-77, RD-99, RD-129, and WS-6 (Figure 1).

All groundwater-monitoring reports must include, at a minimum, the following:

- a. Monitoring well identification, date and time of sampling;
- b. Sampler (person) and laboratory identification;
- c. Observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction;
- d. Documentation that, for each well, groundwater samples were collected from the same depth as prior samples from that well, using the same type of sampling equipment.

The Discharger shall conduct baseline sampling prior to the proposed injection, followed by specified monitoring for all 10 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Dissolved Oxygen	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Oxidation-Reduction Potential	millivolts	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
pH	pH units	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Specific Conductivity	mS/cm	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Temperature	°C	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Turbidity	NTU	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Total Organic Carbon	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Total Dissolved Solids	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Nitrate and Nitrite	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Sulfate	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Chloride	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Boron	mg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Volatile Organic Compounds	µg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
Perchlorate	µg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
1,4-Dioxane	µg/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter
N-Nitrosodimethylamine (NDMA)	ng/L	grab	Baseline, monthly for first 3 months following start of injection, quarterly thereafter

#### IV. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.



**V. CERTIFICATION STATEMENT**

Each report shall contain the following completed declaration:

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

Executed on the \_\_\_\_\_ day of \_\_\_\_\_ at \_\_\_\_\_

\_\_\_\_\_ (Signature)

\_\_\_\_\_ (Title)"

**VI. PUBLIC DOCUMENTS**

All records and reports submitted in compliance with Regional Board Order No. R4-2014-0187 and Monitoring and Reporting Program No. CI-10310 are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger will be treated as confidential.

**VII. ELECTRONIC SUBMITTAL OF INFORMATION**

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data in Electronic Deliverable Format, discharge location data, and searchable Portable Document Format of monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100039573.

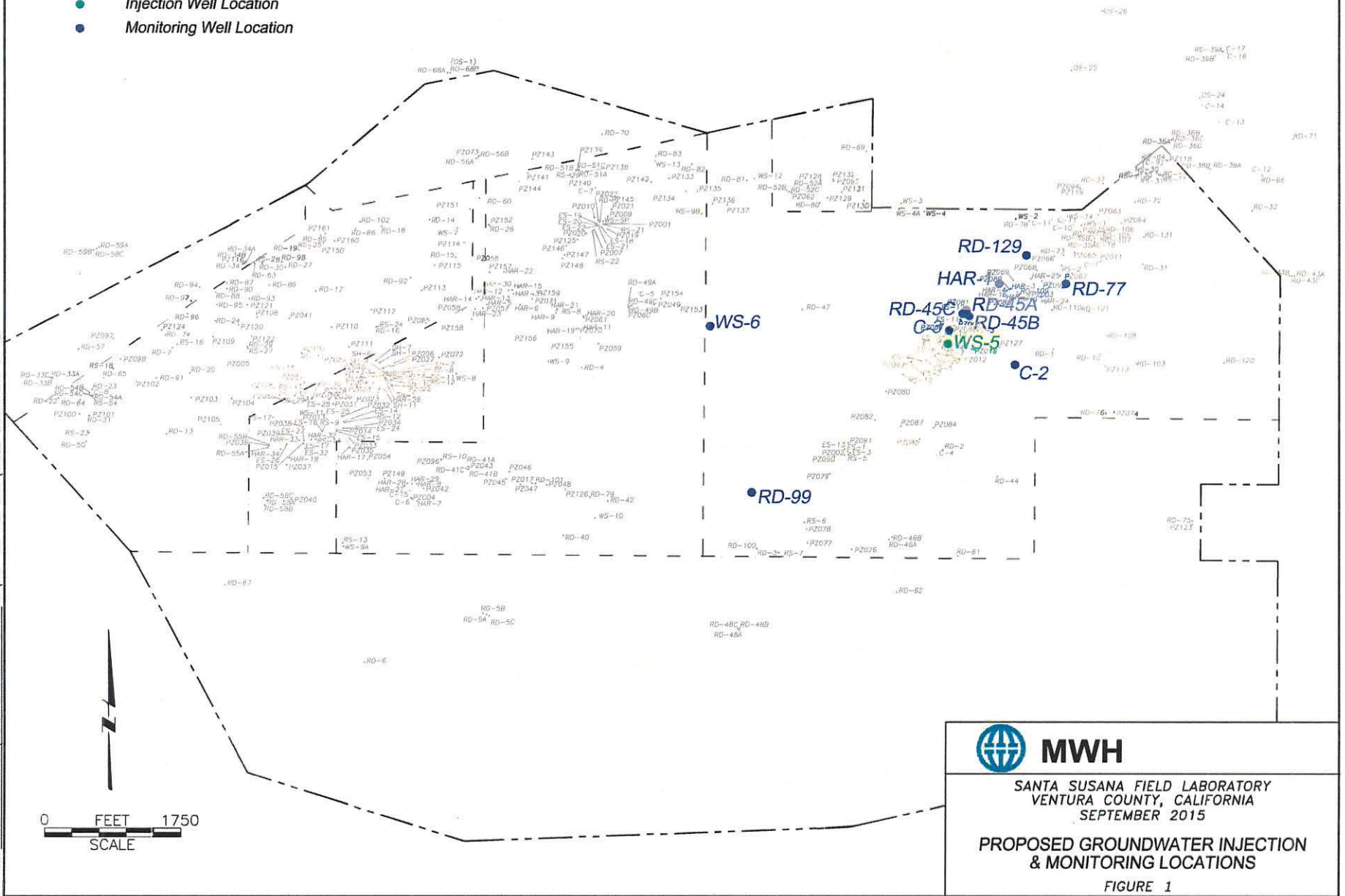
Ordered by:   
Samuel Unger, P.E.  
Executive Officer

Date: October 2, 2017

FILE: CAD\_MILUEBKE\BOEING SANTA SUSANA\WS-06 REPORT\WELL LOCATION 9 15

**Legend**

- Property Boundary
- - - Administrative Area Boundary
- Injection Well Location
- Monitoring Well Location



**MWH**

SANTA SUSANA FIELD LABORATORY  
VENTURA COUNTY, CALIFORNIA  
SEPTEMBER 2015

**PROPOSED GROUNDWATER INJECTION  
& MONITORING LOCATIONS**

FIGURE 1