# Los Angeles Regional Water Quality Control Board

January 17, 2020

Ms. Shantal Der Boghosian
Northrop Grumman Corporation
101 Continental Boulevard
El Segundo, California 90245
shantal.derboghosian@ngc.com

Certified Mail
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Claim No. 7018 2290 0001 8905 2985

**REVISED MONITORING AND REPORTING PROGRAM NO. CI-10267 – FORMER TRW HAWTHORNE FACILITY, 14520 SOUTH AVIATION BOULEVARD, HAWTHORNE, CALIFORNIA (FILE NO. 16-110, ORDER NO. R4-2014-0187, SERIES NO. 081, CI-10267, GLOBAL ID. WDR 100039515)**

Dear Ms. Der Boghosian:

On December 2, 2016, the Los Angeles Regional Water Quality Control Board (Regional Water Board) enrolled Northrop Grumman Corporation (Discharger) under General Waste Discharge Requirements (WDR) for In-Situ Groundwater Remediation and Groundwater Re-injection, Order No. R4-2014-0187, with a Monitoring and Reporting Program (MRP) No. CI-10267 for injection of electron donors, pH buffer, and bioaugmentation culture for groundwater remediation of volatile organic compounds at the subject site.

The Discharger submitted the *Request for Modifications to Approved Remedial Action Plan for Groundwater Remediation using Enhanced Anaerobic Dechlorination* (Request) dated September 30, 2019 to propose installing one additional injection well DIW-03 and using diammonium phosphate as an additional injection material for the optimization of groundwater remediation activities. On December 12, 2019, the Regional Water Board Site Cleanup Unit staff approved the Request.

It is estimated that 10,000 pounds of diammonium phosphate will be injected into six injection wells (DEW-01, DEW-04, DIW-01, DIW-02, DIW-03, and RCP-04) at depths from approximately 100 to 130 feet below ground surface.

The revised MRP, which incorporates the additional injection well and the additional injection material, is enclosed. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the revised MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100039515. Please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

For all parties who upload electronic documents to State Database GeoTracker, it is no longer necessary to email a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies to our office. The Regional Board will no longer accept documents (submitted by either hard copy or email) already uploaded to GeoTracker. Please see Electronic Submittal to the Los Angeles Regional Board 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, please submit a written request for termination of your enrollment under the general WDR in a separate letter when the project is completed and the WDR 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.

If you have any questions, please contact the Project Manager, Dr. Ann Chang at (213) 620-6122 (ann.chang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (eric.wu@waterboards.ca.gov).

Sincerely,

Renee Purdy
Executive Officer

Enclosure: Revised Monitoring and Reporting Program No. CI-10267 dated January 17, 2020

cc: Mr. Matthew J. Carfagno, Orion Environmental Inc., mcarfagno@orionenv.com

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

**REVISED MONITORING AND REPORTING PROGRAM NO. CI-10267**
**FOR**
**FORMER TRW HAWTHORNE FACILITY**
**14520 SOUTH AVIATION BOULEVARD, HAWTHORNE, CALIFORNIA**

**ENROLLMENT UNDER REGIONAL WATER BOARD**
**ORDER NO. R4-2014-0187 (SERIES NO. 081)**
**FILE NO. 16-110**

## I. MONITORING AND REPORTING REQUIREMENTS

A. Northrop Grumman Corporation (hereinafter Discharger) shall implement this Monitoring and Reporting Program (MRP) on the effective date (January 17, 2020) under Regional Water Board Order No. R4-2014-0187. The next monitoring report shall be received at the Regional Water Board by **April 30, 2020**. Subsequent monitoring reports shall be received at the Regional Water Board according to the following schedule:

| Monitoring Period | Report Due |
|---|---|
| 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 Water 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 Water Board Order No. R4-2014-0187 "*Monitoring and Reporting Requirements*".

## II. DISCHARGE MONITORING PROGRAM

A. The monitoring reports shall contain the following information for the injection activities:

1. Location map showing injection points used for electron donors, pH buffer, diammonium phosphate, and bioaugmentation culture.

2. Written and tabular summary defining depth of injection points, quantity and concentration of electron donors, pH buffer, diammonium phosphate, and bioaugmentation culture injected at each injection point, and total amount of electron donors, pH buffer, diammonium phosphate, and bioaugmentation culture injected at the Site.

3. Visual inspection at each injection point shall be conducted and recorded during the injection.

B. The monitoring reports shall contain the following information for the active groundwater recirculation system:

1. Location map showing extraction wells and injection wells used for the active groundwater recirculation system.

2. Written and tabular summary defining depth of extraction wells, quantity of groundwater extracted at each extraction well, and total amount of groundwater extracted at the Site.

3. Written and tabular summary defining depth of injection wells, quantity of groundwater injected at each injection well, and total amount of groundwater injected at the Site.

## III. GROUNDWATER MONITORING PROGRAM

A groundwater monitoring program shall be implemented to evaluate impacts associated with the injection activity. Groundwater samples shall be collected from monitoring wells EW-2, GW-13, GW-23, GW-30, GW-31, PMW-1D, PMW-2D, and PMW-4D (Figure 1). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by a monitoring frequency specified in the schedule below from all eight monitoring wells for the following groundwater parameters:

| CONSTITUENT | UNITS | TYPE OF SAMPLE | MINIMUM FREQUENCY OF ANALYSIS |
|---|---|---|---|
| Dissolved Oxygen | mg/L | grab | Baseline and quarterly after injection |
| Oxidation-Reduction Potential | millivolts | grab | Baseline and quarterly after injection |
| pH | pH units | grab | Baseline and quarterly after injection |
| Specific Conductivity | mS/cm | grab | Baseline and quarterly after injection |
| Temperature | °C | grab | Baseline and quarterly after injection |
| Turbidity | NTU | grab | Baseline and quarterly after injection |
| Total Organic Carbon | mg/L | grab | Baseline and quarterly after injection |
| Total Dissolved Solids | mg/L | grab | Baseline and quarterly after injection |
| Sulfate | mg/L | grab | Baseline and quarterly after injection |
| Chloride | mg/L | grab | Baseline and quarterly after injection |
| Boron | mg/L | grab | Baseline and quarterly after injection |
| Nitrate and Nitrite | mg/L | grab | Baseline and quarterly after injection |
| Volatile Organic Compounds | µg/L | grab | Baseline and quarterly after injection |

| CONSTITUENT | UNITS | TYPE OF SAMPLE | MINIMUM FREQUENCY OF ANALYSIS |
|---|---|---|---|
| Dissolved Gases (methane, ethane, and ethene) | µg/L | grab | Baseline and quarterly after injection |
| *Dehalococcoides* species | cells/mL | grab | Baseline and quarterly after injection |

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

a. Well identification, date and time of sampling;
b. Sampler identification, and laboratory identification;
c. Observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

## 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, 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 Water Board Order No. R4-2014-0187 and Monitoring and Reporting Program No. CI-10267 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.

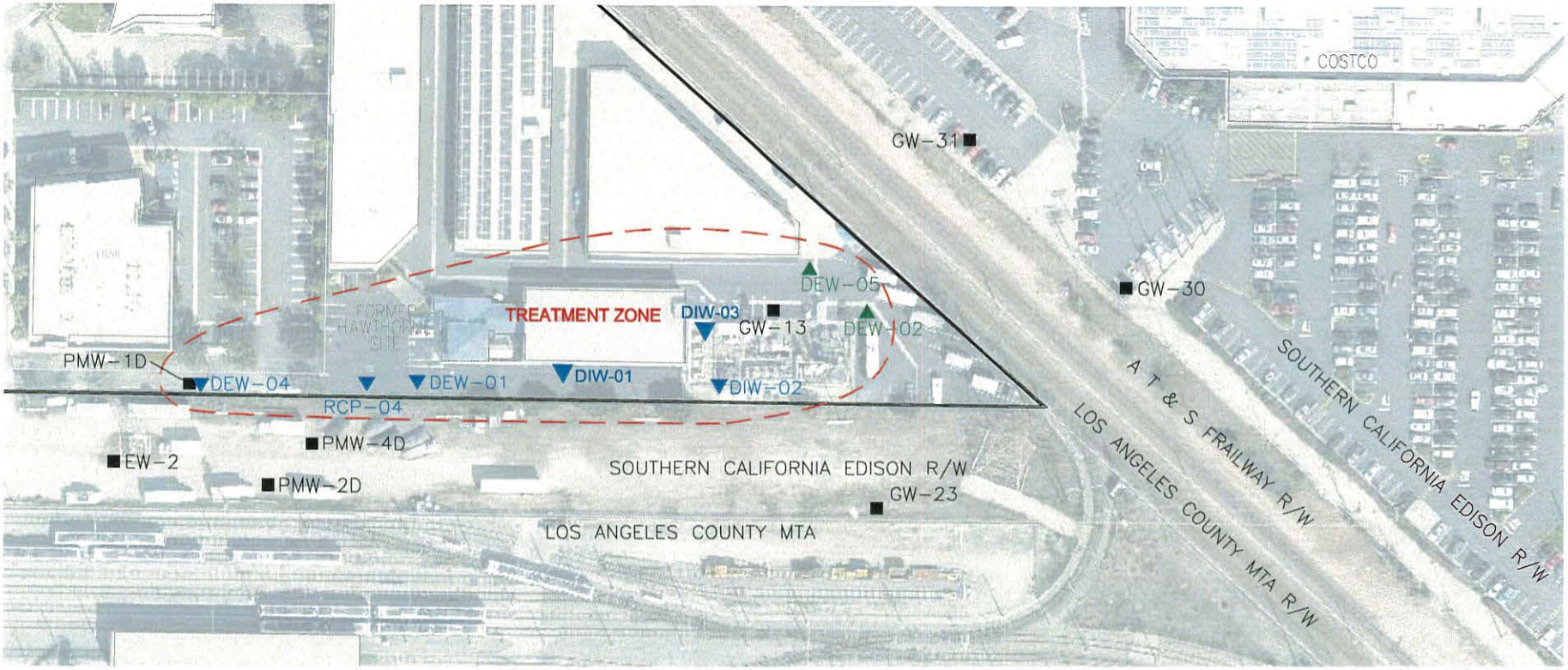
## VII. ELECTRONIC SUBMITTAL OF INFORMATION

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 WDR100039515.

Ordered by: R Purdy

Renee Purdy
Executive Officer

Date: January 17, 2020




Legend

GW-30 ■ Groundwater Monitoring Well Screened in the Deep Interval of the Gage Aquifer

DEW-02 ▲ Groundwater Extraction Well Screened in the Deep Interval of the Gage Aquifer

DEW-01 ▼ Groundwater Injection Well Screened in the Deep Interval of the Gage Aquifer

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FEET

| | | |
|---|---|---|
| ORION<br>Orion Environmental Inc.<br>2955 Redondo Avenue<br>Long Beach, California 90806<br>(562) 888-2755 | FORMER TRW HAWTHORNE SITE<br>ENHANCED ANAEROBIC DECHLORINATION TREATMENT ZONE | PROJECT 02HAW10-14<br>FIGURE 1 |

12/30/2019 5:17PM 02HAW11H10100.dwg