



California Regional Water Quality Control Board Los Angeles Region



Matthew Rodriquez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

November 4, 2011

Mr. Daniel S. Samorano
Raytheon Company
1151 East Hermans Road
TU, Bldg 845
Tucson, AZ 85706

REVISED MONITORING AND REPORTING PROGRAM NO. CI-8947 – RAYTHEON COMPANY (FORMER HUGHES MISSILE SYSTEMS COMPANY), 8433 FALLBROOK AVENUE, CANOGA PARK, CALIFORNIA (ORDER NO. R4-2007-0019, SERIES NO. 092, CI-8947)

Dear Mr. Samorano:

Los Angeles Regional Water Quality Control Board (Regional Board) staff have reviewed the Request for Reduction in Required Analyses Request for Waste Discharge Requirement Order No. R4-2007-0019 (Series No. 092) dated September 23, 2011, prepared and submitted by Oneida Total Integrated Enterprises, LLC. (OTIE) on behalf of Raytheon Company. OTIE requests that the following parameters be removed from the Monitoring and Reporting Program (MRP) for the Enhanced In-Situ Bioremediation (EISB) program for all future monitoring events:

- Anions: bromide, chloride, nitrite as nitrogen, and orthophosphate; and
- Dissolved cations: arsenic, barium, boron, cadmium, copper, lead, magnesium, manganese, mercury, potassium, selenium, sodium, and zinc.

Based on the review of the monitoring reports submitted, Regional Board staff determined that sufficient data have been collected to establish consistent data trends for the aforementioned parameters. Therefore, the modification to Monitoring and Reporting Program No. CI-8947 is approved for removing analyses of bromide, orthophosphate, arsenic, barium, cadmium, copper, lead, magnesium, manganese, mercury, potassium, selenium, sodium, and zinc for the EISB program at Northwest Area. However, chloride, nitrite as nitrogen, boron must remain on the existing monitoring program because they are required parameters for water quality objectives of groundwater specified in the Basin Plan.

The revised MRP, which incorporates the requested modification, is enclosed. When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to "Compliance File CI No. 8947" which assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

California Environmental Protection Agency

Mr. Daniel S. Samorano
Raytheon Company

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November 4, 2011

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 WDR100000974. ESI training video is available at:

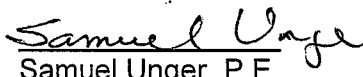
<https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b>

Please note starting from November 1, 2011, you only need to submit the reports to Geotracker. Hard copies will no longer be required to be submitted to the Regional Board office. Please see the attached announcement (Paperless Office Notice dated October 20, 2011) for further details.

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 (achang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov).

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosures:

1. Revised Monitoring and Reporting Program No. CI-8947 dated November 4, 2011
2. Electronic Submittal Required for Correspondence and Reports to the Regional Board dated October 20, 2011

cc: Mr. Jacques Marcillac, Oneida Total Integrated Enterprises

California Environmental Protection Agency

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

REVISED MONITORING AND REPORTING PROGRAM NO. CI-8947
FOR
RAYTHEON COMPANY
(FORMER HUGHES MISSILE SYSTEMS COMPANY)
8433 FALLBROOK AVENUE, CANOGA PARK, CALIFORNIA

ORDER NO. R4-2007-0019 (Series No. 092)
FILE NO. 94-95, SCP NO. 0693

I. MONITORING AND REPORTING REQUIREMENTS

- A. The Discharger shall implement this revised Monitoring and Reporting Program (MRP) on the effective date (November 4, 2011) under Regional Board Order No. R4-2007-0019. The next monitoring report shall be submitted by **February 15, 2012**. Subsequent monitoring reports shall be received by the Regional Board according to the following schedule:

Quarterly

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	May 15
April – June	August 15
July – September	November 15
October – December	February 15

Semi-annually

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	August 15
July – December	February 15

- 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 Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

II. DISCHARGE MONITORING

A. Enhanced In-Situ Bioremediation (EISB) Injection/Discharge

A groundwater monitoring program shall be conducted to evaluate impacts associated with the EISB injection activity. Groundwater samples shall be collected from the following groundwater monitoring wells at each treatment/injection area:

1. Former Tank T3 Area:
 - a. RW-15 – upgradient location,
 - b. RW-14 – within treatment zone, and
 - c. RW-11 – downgradient location.

The injection activities have not started upon the issuance of this revised MRP. The Discharger shall conduct baseline sampling prior to EISB injections, followed by month 1, month 3, month 6, month 9, month 12, and semi-annually sampling events after the EISB injections from all 3 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injection Waste Flow	gallons/day	in-situ	Daily during injection
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	in-situ	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Dissolved Oxygen	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Oxidation-Reduction Potential	millivolts	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
pH	pH units	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Specific Conductivity	mS/cm	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Temperature	°C	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Turbidity	NTU	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Dissolved Solids	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Total Organic Carbon	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Volatile Organic Compounds	µg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Dissolved Gasses (methane, ethane, ethene, and carbon dioxide)	µg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Volatile Fatty Acids	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Major Anions (bromide, chloride, nitrate as nitrogen, nitrite as nitrogen, O-phosphate, and sulfate)	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter
Major Cations (arsenic, barium, boron, calcium, cadmium, chromium, hexavalent chromium, copper, iron, ferrous iron, lead, magnesium, manganese, mercury, potassium, selenium, sodium, and zinc)	mg/l	grab	Baseline, Months 1, 3, 6, 9, 12, and Semi-annually thereafter

2. Northwest Area:

- a. RW-11 – upgradient location,
- b. RW-01 – within treatment zone,
- c. RW-10 – within treatment zone, and
- d. RW-02 – downgradient location.

The injection activities were completed in November 2009. The Discharger shall continue to conduct semi-annually sampling events after the EISB injections from all 4 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	in-situ	Semi-annually
Dissolved Oxygen	mg/l	grab	Semi-annually
Oxidation-Reduction Potential	millivolts	grab	Semi-annually
pH	pH units	grab	Semi-annually
Specific Conductivity	mS/cm	grab	Semi-annually
Temperature	°C	grab	Semi-annually
Turbidity	NTU	grab	Semi-annually
Total Dissolved Solids	mg/l	grab	Semi-annually
Total Organic Carbon	mg/l	grab	Semi-annually
Volatile Organic Compounds	µg/l	grab	Semi-annually
Dissolved Gasses (methane, ethane, ethene, and carbon dioxide)	µg/l	grab	Semi-annually
Volatile Fatty Acids	mg/l	grab	Semi-annually
Major Anions (chloride, nitrate as nitrogen, nitrite as nitrogen, and sulfate)	mg/l	grab	Semi-annually

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Major Cations (boron, calcium, chromium, hexavalent chromium, iron, ferrous iron)	mg/l	grab	Semi-annually

3. Former Bldg 269 Area:

- a. CM-16 – upgradient location,
- b. CM-4D – within treatment zone, and
- c. MW-38 – downgradient location (to be installed).

The injection activities were completed in May 2011. The Discharger shall continue to conduct month 6, month 9, month 12, and semi-annually sampling events after the EISB injections from all 3 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	in-situ	Months 6, 9, 12, and Semi-annually thereafter
Dissolved Oxygen	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Oxidation-Reduction Potential	millivolts	grab	Months 6, 9, 12, and Semi-annually thereafter
pH	pH units	grab	Months 6, 9, 12, and Semi-annually thereafter
Specific Conductivity	mS/cm	grab	Months 6, 9, 12, and Semi-annually thereafter
Temperature	°C	grab	Months 6, 9, 12, and Semi-annually thereafter
Turbidity	NTU	grab	Months 6, 9, 12, and Semi-annually thereafter
Total Dissolved Solids	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Organic Carbon	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Volatile Organic Compounds	µg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Dissolved Gasses (methane, ethane, ethene, and carbon dioxide)	µg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Volatile Fatty Acids	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Major Anions (bromide, chloride, nitrate as nitrogen, nitrite as nitrogen, O-phosphate, and sulfate)	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter
Major Cations (arsenic, barium, boron, calcium, cadmium, chromium, hexavalent chromium, copper, iron, ferrous iron, lead, magnesium, manganese, mercury, potassium, selenium, sodium, and zinc)	mg/l	grab	Months 6, 9, 12, and Semi-annually thereafter

B. In-Situ Chemical Reduction (ISCR) Injection/Discharge

A groundwater monitoring program shall be conducted to evaluate impacts associated with the ISCR injection activity. Groundwater samples shall be collected from the following groundwater monitoring wells within Former HWSA area:

- a. MW-35S and MW-35D – upgradient and crossgradient locations,
- b. MW-32S and MW-32D – within treatment zone,
- c. MW-33 – downgradient location, and
- d. VW-122 – downgradient location.

The injection activities were completed in June 2010. The Discharger shall continue to conduct semi-annually sampling events after the ISCR injections from all 6 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	in-situ	Semi-annually
Dissolved Oxygen	mg/l	grab	Semi-annually
Oxidation-Reduction Potential	millivolts	grab	Semi-annually
pH	pH units	grab	Semi-annually
Specific Conductivity	mS/cm	grab	Semi-annually
Temperature	°C	grab	Semi-annually
Turbidity	NTU	grab	Semi-annually
Total Dissolved Solids	mg/l	grab	Semi-annually
Sulfide	mg/l	grab	Semi-annually
Major Anions (bromide, chloride, nitrate as nitrogen, nitrite as nitrogen, O-phosphate, and sulfate)	mg/l	grab	Semi-annually
Major Cations (arsenic, barium, boron, calcium, cadmium, chromium, hexavalent chromium, copper, iron, ferrous iron, lead, magnesium, manganese, mercury, potassium, selenium, sodium, and zinc)	mg/l	grab	Semi-annually

III. 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.

IV. 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)"

V. PUBLIC DOCUMENTS

All records and reports submitted in compliance with Order No. R4-2007-0019 and Monitoring and Reporting Program No. CI-8947 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.

VI. 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, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database.

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

Date: November 4, 2011