CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

January 22, 2014

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

Certified Mail
Return Receipt Required
Claim No. 7010 3090 0002 1022 0878

REVISED MONITORING AND REPORTING PROGRAM NO. CI-8947 – RAYTHEON COMPANY (FORMER HUGHES MISSILE SYSTEMS COMPANY), 8433 FALLBROOK AVENUE, CANOGA PARK, CALIFORNIA (FILE NO. 94-45, ORDER NO. R4-2007-0019, SERIES NO. 092, CI-8947, GLOBAL ID. WDR100000976)

Dear Mr. Samorano:

On September 9, 2009, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) enrolled you under general Waste Discharge Requirements (WDR Order No. R4-2007-0019) with a Monitoring and Reporting Program (MRP) No. CI-8947 for injection of carbon sources/electron donors to treat volatile organic compounds (VOCs) and injection of calcium polysulfide to reduce hexavalent chromium in groundwater.

On behalf of Raytheon Company, Oneida Total Integrated Enterprises, LLC submitted the *Corrective Action Plan Addendum No. 4 Work Plan for In Situ Chemical Oxidation* (Work Plan), dated May 2013, for injection of sodium permanganate to further treat residual VOCs within the Northwest Area of the site. On June 18, 2013, Regional Board Site Cleanup staff approved the Work Plan. The total injection volume is limited to 93,150 gallons of 4% sodium permanganate solution at 7 proposed injection points at depths approximately between 30 and 50 feet below ground surface. It is expected that three Injection events will occur over two-year period.

In the *Enhanced In Situ Bioremediation and In Situ Chemical Reduction Progress Report Second Quarter of 2013*, dated August 15, 2013, Raytheon Company requested removal of the MRP requirements for the former Hazardous Waste Storage Area (HWSA). Based on the review of the groundwater monitoring results from June 2010 to June 2013, the Regional Board Executive Officer issued no further active chromium groundwater remediation for the former HWSA in a letter dated December 30, 2013. Therefore, the MRP requirements specifically for the former HWSA can be eliminated.

In addition, Raytheon Company requested that the following parameters be removed from the MRP at Former Building 269 Area:

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

Based on the review of the sampling data collected from May 2011 to June 2013, Regional Board staff determined that the subject parameters have been stable from pre-injection through post-injection groundwater sampling events and can be eliminated for all future monitoring events at Former Building 269 Area.

The revised MRP, which incorporates injection of the sodium permanganate and modification to the monitoring requirements, is enclosed. The next monitoring report is due on **April 15, 2014** as required in the revised MRP. Please 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 WDR100000976. ESI training video is available at: https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b

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 for further details 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 (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

Samuel Unger, P.E.
Executive Officer

Enclosure: Revised Monitoring and Reporting Program No. CI-8974 dated January 22, 2014

cc: Mr. Jacques Marcillac, Oneida Total Integrated Enterprises

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

ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019 (SERIES NO. 092)
FILE NO. 94-45

I. MONITORING AND REPORTING REQUIREMENTS

A. Raytheon Company (hereinafter Discharger) shall implement this Monitoring and Reporting Program (MRP) on the effective date (January 22, 2014) under Regional Board Order No. R4-2007-0019. The next monitoring report under this program shall be received at the Regional Board by **April 15, 2014**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

Monitoring Period	Report Due
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 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*".

II. DISCHARGE MONITORING PROGRAM

The monitoring reports shall contain the following information regarding the injection activities:

1. Location map showing injection points used for the sodium permanganate solution.

2. Written and tabular summary defining depth of injection points, quantity of the sodium permanganate solution injected at each injection point, and total amount of the sodium permanganate solution injected at the Site.

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

III. GROUNDWATER MONITORING PROGRAM

A. In Situ Chemical Oxidation at Northwest Area

A groundwater monitoring program shall be implemented to evaluate impacts associated with the injection activity. Groundwater samples shall be collected from monitoring wells MW-39, MW-40, MW-41, MW-42 and RW-01 (Figure 1). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by specified schedules from all 5 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
Permanganate	mg/L	grab	Baseline and quarterly after injection
Volatile Organic Compounds	µg/L	grab	Baseline and quarterly after injection

B. Enhanced In Situ Bioremediation (EISB) at Former Building 269 Area

The injection activities were completed in May 2011. The Discharger shall continue to conduct semi-annually sampling events after the EISB injections for monitoring wells CM-4D, CM-16, and MW-38 (Figure 2) for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
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 Organic Carbon	mg/L	grab	Semi-annually
Total Dissolved Solids	mg/L	grab	Semi-annually
Sulfate	mg/L	grab	Semi-annually
Chloride	mg/L	grab	Semi-annually
Boron	mg/L	grab	Semi-annually
Nitrate and Nitrite	mg/L	grab	Semi-annually
Volatile Organic Compounds	µg/L	grab	Semi-annually

C. Enhanced In Situ Bioremediation (EISB) at Former Tank T3 Area

The injection activities were completed in September 2012. The Discharger shall continue to conduct semi-annually sampling events after the EISB injections for monitoring wells RW-11, RW-14, and RW-15 (Figure 3) for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
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 Organic Carbon	mg/L	grab	Semi-annually
Total Dissolved Solids	mg/L	grab	Semi-annually
Sulfate	mg/L	grab	Semi-annually
Chloride	mg/L	grab	Semi-annually
Boron	mg/L	grab	Semi-annually
Nitrate and Nitrite	mg/L	grab	Semi-annually
Volatile Organic Compounds	µg/L	grab	Semi-annually

All groundwater monitoring reports must include, at 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 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.

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 WDR100000976.

Ordered by: Samuel Unger

Samuel Unger, P.E.
Executive Officer

Date: January 22, 2014

Legend

- IP-# Injection Well
- MW-# / RW-# Remedial Progress Monitoring Well
- Groundwater Monitoring Well
- Groundwater Recovery Well
- Apparent Groundwater Flow Direction

Notes

N
W E
S

Approximate Scale in Feet

0 50 100

Figure 1
Treatment Injection Area and Remedial Progress Monitoring Program, Northwest Area

Former Canoga Park Facility
8433 Fallbrook Ave., Canoga Park, California

OTIE

Date: January 8, 2014

File: Canoga NW Fig1.dwg

Legend

- IP-# Injection Well
- MW-# / CM-# Remedial Progress Monitoring Well
- Groundwater Monitoring Well
- Groundwater Recovery Well
- Vapor Extraction Well
- Air Sparge/Vapor Extraction Well
- Apparent Groundwater Flow Direction

Notes:

N
W E
S

Approximate Scale in Feet

0 30 60

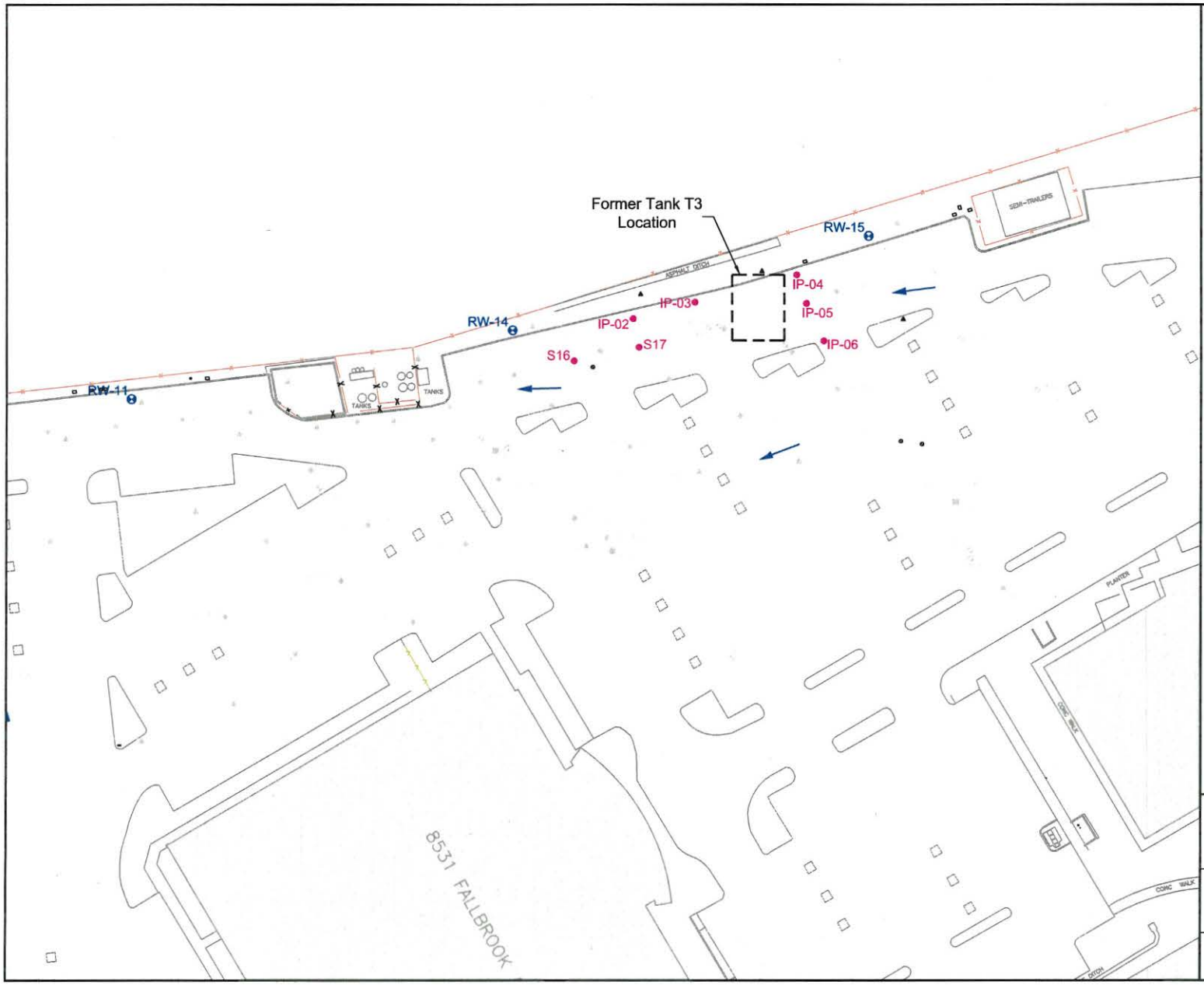
Figure 2
Treatment Area and Remedial Progress Wells
Former Bldg 269 Area

Former Canoga Park Facility
8433 Fallbrook Ave, Canoga Park, California

OTIE

Date: January 8, 2014

File: Canoga Fig 2-3.dwg



Legend

- IP-# / S# — Injection Well
- RW-# — Remedial Progress Monitoring Well
- Groundwater Monitoring Well
- Groundwater Recovery Well
- Vapor Extraction Well
- Former Hazardous Waste Storage Area Monitoring Well
- Air Sparge/Vapor Extraction Well
- Triple Nested Sparge Well
- Apparent Groundwater Flow Direction

Notes:

N
W E
S

Approximate Scale in Feet

0 50 100

Figure 3
Treatment Area and Remedial Progress Wells
Former Tank T3 Area

Former Canoga Park Facility
8433 Fallbrook Ave, Canoga Park, California

OTIE — Onsite Total Integrated Enterprises

Date: January 8, 2014
File: Canoga Fig 2-3.dwg