Public Notice of
Groundwater Remediation

Former Raytheon Facility
93 Castilian Drive
Goleta, CA

August 1, 2018

The Water Board is providing this notification to the landowners, residents/tenants, and interested parties near this groundwater cleanup site to notify you of upcoming cleanup actions, and to solicit comments. This notification describes the site history and proposed cleanup actions.

El Consejo Regional de la Costa Central para el Control de Calidad de Agua está proporcionando esta notificación a inquilinos y propietarios, y las partes interesadas del área circundante al sitio de limpieza del suelo y las aguas subterráneas para notificarles de las acciones futuras de limpieza, y solicitar comentarios. Esta notificación describe los antecedentes del sitio, y acciones de limpieza propuestas. Si desea obtener información en español, póngase en contacto con Hector Hernandez al (805) 542-4641.

Introduction

The Central Coast Regional Water Quality Control Board (Water Board) is the regulatory agency responsible for overseeing soil, soil vapor, and groundwater investigation and cleanup at the Former Raytheon facility (Site), located at 93 Castilian Way in Goleta (Figure 1). The responsible party, Raytheon Company (Raytheon), recently submitted a remedial action plan addendum #1 (RAP) to address chlorinated solvents in groundwater near the suspected source area. Groundwater has been impacted with tetrachloroethene (PCE) and associated biodegradation products [collectively called chlorinated volatile organic compounds (cVOCs)]. In the RAP, Raytheon proposes injecting a chemical oxidant into the subsurface to break down the cVOCs into harmless byproducts. The purpose of this notification is to provide the public with a summary of Raytheon's planned activities to remediate groundwater beneath the Site and to seek comments on the planned activities.

Background

Soil and groundwater investigations began at the Site in 1987 when it was first discovered that the subsurface in the northwest area of the property had been impacted with metals and cVOCs. Raytheon began monitoring groundwater in 2003. Raytheon has implemented several pilot tests to assess potential groundwater cleanup methods. In 2007, Raytheon tested using bioremediation to clean the groundwater. In 2017, Raytheon attempted to extract and treat impacted groundwater and soil vapor as a potential cleanup method.

Proposed Remedial Action

In the RAP, Raytheon proposes *in situ* chemical oxidation (ISCO) treatment by injecting sodium permanganate (an oxidant) into groundwater. The oxidant chemically breaks down the cVOCs upon contact to inert byproducts (carbon dioxide, chloride, and water). The overall cleanup objective is to reduce cVOC concentrations in shallow groundwater that may present a threat to human health and the environment. Prior to beginning ISCO injection activities, a licensed drilling subcontractor will install 4 injection wells at the Site. The oxidant diluted with water will be injected in these 4 proposed injection wells and an existing injection well (Figure 2). The remedial activities are anticipated to begin in the fourth quarter of 2018 with approximately one week to install injection wells and then two to four weeks to complete the oxidant injections.

Work will occur during normal business hours. Specialists experienced with the technology will perform the injections under a Health and Safety plan.

Depending on progress of cleanup, as determined by groundwater sampling results, additional oxidant injections may be needed in the future. Water Board staff will oversee the project and determine when the cleanup has been completed and if additional injections or other remediation efforts are needed in the future.

Public Comment Period

The public has 30 days to comment on Raytheon's proposed cleanup strategy, as summarized in this fact sheet. A copy of the April 13, 2018 Remedial Action Plan Addendum #1 and associated Site reports are available on GeoTracker at the following website address:

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0608315080

Open the "Site Maps/Documents" tab on the webpage and scroll to the appropriate title and date to access the desired document. If you would like more information, need a hardcopy of a report, or wish to comment on the information provided, please contact Karyn Steckling at the Water Board.

All interested parties are required to submit their comments to the Water Board in writing on or before **September 4, 2018**, for Water Board staff consideration. Comments should be addressed to:

Ms. Karyn Steckling
Central Coast Water Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
Tel: (805) 549-3465
karyn.steckling@waterboards.ca.gov

CA

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0 2,000

Approx. Scale in Feet

Source: Map data from Google / NAVTEQ, 2007

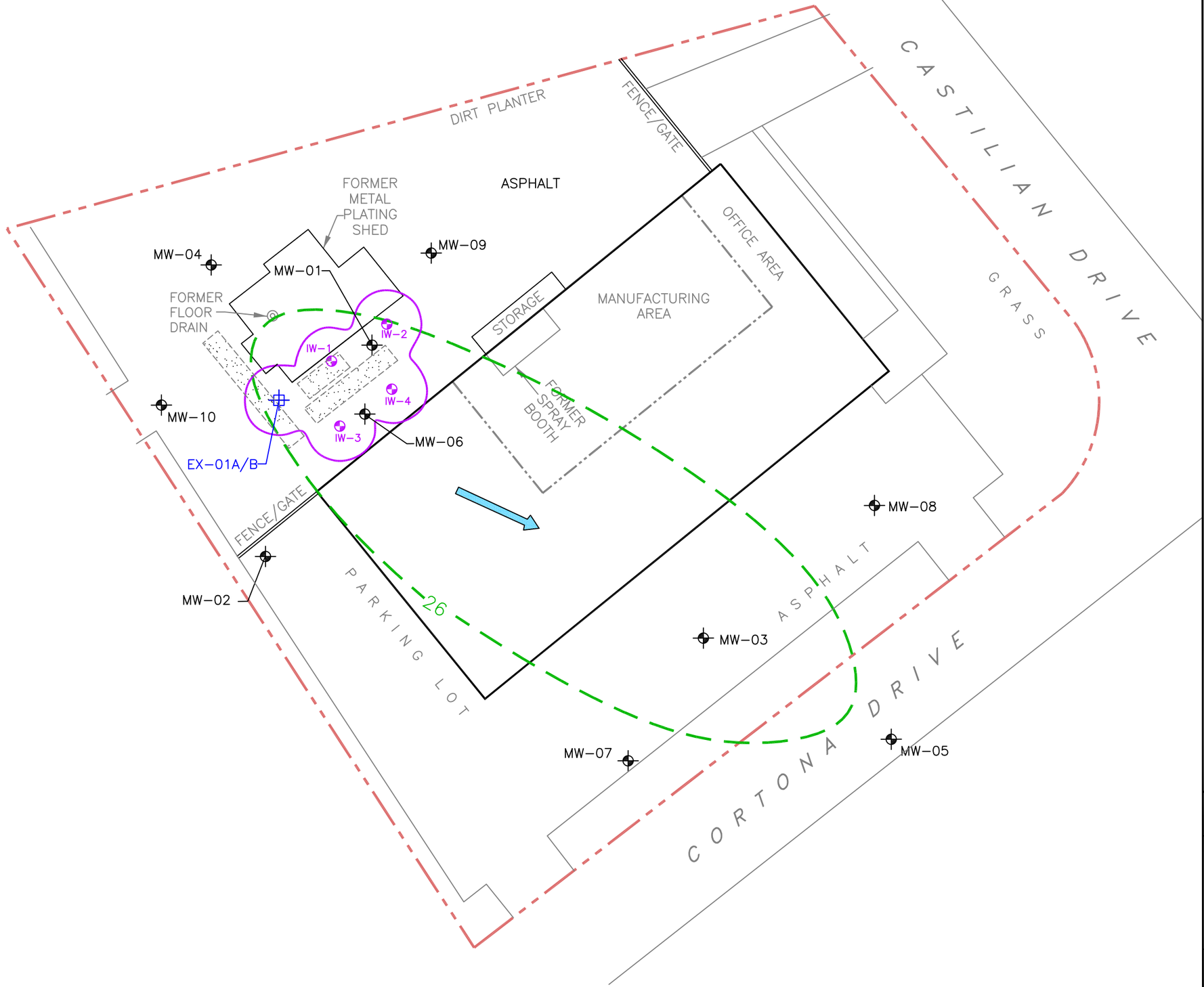
FIGURE 1

Site Location Map

Former Raytheon Facility, 93 Castilian Drive, Goleta, CA

OTIE
An Oneida Nation Company

Site loc map_Castilian Site_v3 2-10



LEGEND

- MW-01 — GROUNDWATER MONITORING WELL
- EX-01 — REMEDIATION WELL
- IW-1 — PROPOSED INJECTION WELL
- EXISTING BUILDING
- EXISTING STORAGE
- SITE BOUNDARY
- 26 — LINE OF ESTIMATED EQUAL PCE CONCENTRATION (ESL for PCE is 26 ug/L)
- HISTORICAL GROUNDWATER FLOW DIRECTION
- ISCO TREATMENT AREA

Notes

1) GROUNDWATER SAMPLES COLLECTED ON OCTOBER 23, 2017.
2) FOR WELLS WITH DUPLICATE PAIRS, THE HIGHER RESULTS ARE SHOWN HERE.
3) FOR NESTED WELLS EX-01A/B, ONLY EX-01B WAS SAMPLED AS EX-01A WAS DRY.
4) PCE = TETRACHLOROETHENE
   TCE = TRICHLOROETHENE
   ESL = SFRWQCB ENVIRONMENTAL SCREENING LEVEL
   ISCO = IN-SITU CHEMICAL OXIDATION
5) MW-09, MW-10, EX-01A/B, BORING GB-8, AND SITE FEATURES WERE SURVEYED ON 11/2/17 BY WM HOLDING, INC.
6) RADIUS OF INFLUENCE SHOWN IS CALCULATED TO BE APPROXIMATELY 13 FEET.

0 40 80

APPROXIMATE SCALE IN FEET

DATE:	FILE NAME:	APPROVED BY:
03/20/18	Fig 2 ISCO area	

PROPOSED ISCO INJECTION AREA

RAYTHEON – CASTILIAN
93 CASTILIAN DRIVE
GOLETA, CALIFORNIA

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FIGURE 2