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Recording Requested By:
United Technologies Corporation
EH&S 9FS-MS101
9 Farm Springs Road
Farmington, CT 06032
Attention: Director of Remediation Program

When Recorded, Mail To:
Renee Purdy, Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY

UNITED TECHNOLOGIES CORPORATION, CANOGA AVENUE FACILITY
ASSESSOR'S PARCEL NUMBER (APN): 2139-001-003, 2139-001-004, and 2139- 001-007
6633 CANOGA AVENUE, CANOGA PARK, CALIFORNIA
LARWQCB SITE CLEANUP PROGRAM NO. 0237A

This Covenant and Environmental Restriction on Property ("Covenant") is made as of the 29 day of July, 2019 by United Technologies Corporation ("Covenantor"), the Owner of record of that certain property identified as APN 2139-001-003, 2139-001-004, and 2139- 001-007 and situated at 6633 Canoga Avenue in Canoga Park, County of Los Angeles, State of California, which is more particularly described in Exhibit A and Exhibit B attached hereto and incorporated herein by this reference (hereinafter referred to as the "Burdened Property"), for the benefit of the California Regional Water Quality Control Board, Los Angeles Region ("Board"), with reference to the following facts:

A. Nature of Covenant. This Covenant is an environmental covenant provided for by Civil Code section 1471 and required by the Board pursuant to Water Code section 13304 for partial closure because the Board has determined that the Burdened Property is not suitable for unrestricted use and that a land use restriction is necessary for the protection of present or future human health, safety, or the environment as result of the presence of hazardous materials, as defined in section 25260 of the Health and Safety Code, in the soil and/or groundwater at the Burdened Property.

B. Contamination of the Burdened Property. The soil and soil vapor at the Burdened Property was contaminated by wastes/contaminants discharged during the historical manufacturing operations including metals molding, machining, cleaning, degreasing, and plating for the manufacturing of rocket engines and related systems conducted on the Burdened Property. The contamination on the Burdened Property originally consisted of

inorganic and organic chemicals including volatile organic compounds (VOCs), [primarily trichloroethene (TCE)], heavy metals, total petroleum hydrocarbons (TPH), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs), which above certain concentrations are considered hazardous materials. All soil identified with chemicals exceeding the soil remediation goals (SRGs) above the water table was remediated by means of soil excavation and off-site disposal, thereby reducing contamination in soil to levels that meet approved, risk-based Site-specific SRGs which are protective of both groundwater quality and human health. Concentrations of VOCs in soil gas are elevated in portions of the Burdened Property and the Board will require remedial actions, or mitigative actions through appropriate land use controls, which include engineering controls (physical) and institution controls (social) to address potential vapor intrusion concerns prior to considering approval of any unrestricted land uses of the Burdened Property.

Groundwater beneath the Burdened Property is impacted with VOCs, primarily trichloroethene, mainly from on-site sources and suspected minor contributions from off-site sources. The combination of a groundwater extraction and treatment system and enhanced in-situ bioremediation technologies have been implemented to reduce the concentrations and mass of VOCs in groundwater. Additional groundwater remediation activities will be evaluated and conducted as necessary and required to further remediate the VOC-impacted groundwater.

C. Exposure Pathways. The residual contaminants addressed in this Covenant are present in the soil gas and groundwater at the Burdened Property. Without the remediation measures which have been performed on the Burdened Property, and the required mitigation actions through engineering controls, exposure to these contaminants could take place under a residential land-use scenario via indoor air inhalation by humans. The risk of public exposure to the contaminants has been appropriately addressed or eliminated by the remediation actions and the requirements set forth in this Covenant, including but not limited to the requirement for mitigation actions through engineering controls described herein.

D. Land Uses and Population Potentially Affected. The Burdened Property is currently vacant, and currently zoned for mixed use. The Burdened Property is adjacent to properties that currently are used for commercial and residential land uses.

E. Disclosure and Sampling. Disclosure of the presence of hazardous materials on the Burdened Property has been made to the Board and extensive sampling of the Burdened Property has been conducted. Information regarding the Burdened Property's characterization and remediation can be found on the Board's GeoTracker website, with the Global ID SL204281528.

F. Use of Burdened Property. Covenantor desires and intends that in order to benefit the Board, and to protect present and future human health, safety, or the environment, the Burdened Property shall be used in a manner consistent with this Covenant as to avoid potential harm to persons or property that might result from any hazardous materials that might remain deposited on portions of the Burdened Property.

ARTICLE I
GENERAL PROVISIONS

1.1 Provisions to Run with the Land. This Covenant sets forth protective provisions, covenants, conditions and restrictions (collectively referred to as "Restrictions") upon and subject to which the Burdened Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. These Restrictions are reasonably necessary to protect present and future human health or safety or the environment as a result of the presence of hazardous materials at the Burdened Property. Each and all of the Restrictions shall run with the land and pass with each and every portion of the Burdened Property, and shall apply to, inure to the benefit of, and bind the respective successors, assigns, and lessees thereof for the benefit of the Board and all Owners and Occupants. Each and all of the Restrictions: (a) are imposed upon the entire Burdened Property, unless expressly stated as applicable to a specific portion of the Burdened Property; (b) run with the land pursuant to Civil Code section 1471; and (c) are enforceable by the Board.

1.2 Concurrence of Owners and Lessees Presumed. After the date of recordation hereof, all purchasers, lessees, and possessors of all or any portion of the Burdened Property shall become Owners or Occupants as defined herein and shall be deemed by their purchase, leasing, or possession of the Burdened Property to be bound by the Restrictions and to agree for and among themselves, their heirs, successors, and assignees, and the agents, employees, and lessees of such owners, heirs, successors, and assignees, that the Restrictions herein established must be adhered to for the benefit of the Board and all Owners and Occupants, and that the interest of all Owners and Occupants of the Burdened Property shall be subject to the Restrictions.

1.3 Incorporation into Deeds and Leases. Covenantor desires and covenants that the Restrictions shall be incorporated in and attached to each and all deeds and leases of all or any portion of the Burdened Property. Recordation of this Covenant shall be deemed binding on all successors, assigns, and lessees, regardless of whether a copy of this Covenant has been attached to or incorporated into any given deed or lease.

1.4 Purpose. It is the purpose of this instrument to convey to the Board real property rights as specified in this Covenant, which will run with the land, to facilitate the remediation of past environmental contamination and to protect present and future human health, safety, or the environment by reducing the risk of exposure to residual hazardous materials.

ARTICLE II
DEFINITIONS

2.1 Board. "Board" shall mean the California Regional Water Quality Control Board, Los Angeles Region and shall include its successor agencies, if any.

2.2 Improvements. "Improvements" shall mean all buildings, structures, roads, driveways, gradings, re-gradings, and paved areas, constructed or placed upon any portion of the

Burdened Property.

2.3 Occupant or Occupants. "Occupant" or "Occupants" shall mean Owners and those persons entitled by ownership, leasehold, or other legal relationship to the right to use and/or occupy all or any portion of the Burdened Property.

2.4 Owner or Owners. "Owner" or "Owners" shall mean the Covenantor and Covenantor's successors in interest who hold title to all or any portion of the Burdened Property.

ARTICLE III
DEVELOPMENT, USE, AND CONVEYANCE OF THE BURDENED PROPERTY

3.1 Restrictions on Development and Use. Covenantor promises to restrict the use of the Burdened Property as follows:

a. Development and use of the Burdened Property shall be restricted to industrial, commercial and/or office space uses;

b. No residence for human habitation shall be permitted on the Burdened Property;

c. No hospitals, medical clinics, assisted living facilities or nursing homes shall be permitted on the Burdened Property;

d. No daycare, public or private schools for persons under 21 years of age shall be permitted on the Burdened Property;

e. No care or community centers for children or senior citizens, or other uses that would involve the regular congregation of children or senior citizens, shall be permitted on the Burdened Property;

f. Any excavation conducted on the Burdened Property shall be performed pursuant to an appropriate and fully implemented Health and Safety Plan.

g. All uses and development of the Burdened Property shall be consistent with the Soil Management Plan (including future amendments thereto), which is hereby incorporated herein by reference. All uses and development shall preserve the integrity of any cap, any remedial measures taken, or remedial equipment installed, and any groundwater monitoring system installed on the Burdened Property pursuant to the requirements of the Board, unless otherwise expressly permitted in writing by the Board;

h. No occupiable structures (e.g., commercial buildings) without mitigation through an approved vapor intrusion engineering control system shall be permitted on the Burdened Property;

i. The restrictions on the development and use of the Burdened Property set forth in

Section 3.1(a) through (e) shall not be removed without the Board's oversight of any additional investigation and remediation or vapor mitigation that the Board might determine to be necessary. In the event that vapor risks are addressed through additional investigation and remediation, such activities must be conducted under the supervision of the Board, and approved by the Board, in order for the restrictions in Section 3.1(a) through (e) to be removed. In the event that vapor risks are addressed through vapor mitigation, a soil vapor mitigation plan proposing vapor intrusion engineering controls and associated confirmation sampling must be submitted to and approved by the Board. If the approved soil vapor mitigation plan is implemented at the Burdened Property in accordance with then-applicable laws, regulations, policies and guidelines of the Board, the restrictions on the Burdened Property set forth in Section 3.1(a) through (e) may be removed. The Board approved vapor intrusion engineering controls shall be installed in all occupiable Improvements on the Burdened Property in accordance with the requirements set forth in Section 3.1(j) below;

j. Vapor intrusion engineering controls shall include, at a minimum, (1) a high density, impermeable membrane in or under the slabs of the Improvements designed to prevent vapor intrusion, and (2) a subslab vapor control designed to actively vent or depressurize the area under the slabs of the Improvements. Such vapor intrusion engineering controls shall be designed, installed, tested, operated, monitored and maintained consistent with the then-applicable laws, regulations, policies and guidelines of the Board, and shall be subject to the written approval of the Board. Any development and use of the Burdened Property shall preserve the integrity of any vapor intrusion engineering controls installed, operated, monitored and maintained on the Burdened Property pursuant to the requirements of the Board;

k. Any development and use of the Burdened Property shall preserve the integrity of any groundwater monitoring well system installed on the Burdened Property pursuant to the requirements of the Board, unless otherwise expressly permitted in writing by the Board;

l. No Owner or Occupant shall drill, bore, otherwise construct, or use a well on the Burdened Property for the purpose of extracting water for any use, including but not limited to, domestic, potable, or industrial uses, unless expressly permitted in writing by the Board; nor shall the Owner or Occupant permit or engage any third party to do such acts;

m. The Owner and/or Occupant shall notify the Board of each of the following: (1) the type, cause, location and date of any disturbance to groundwater monitoring well system installed on the Burdened Property pursuant to the requirements of the Board, which could affect the ability of use of monitoring wells, and (2) the type and date of repair of such disturbance. Notifications to the Board shall be made by registered mail within ten (10) working days of both the date of discovery of such disturbance and the date of completion of repairs;

o. The Covenantor agrees that the Board, and any persons acting pursuant to Board orders, shall have reasonable access to the Burdened Property for the purposes of inspection, surveillance, maintenance, or monitoring as provided in Division 7 of the Water Code; and

p. No Owner or Occupant shall act in any manner that threatens or is likely to aggravate or contribute to the existing contaminated conditions of the Burdened Property. All use and development of the Burdened Property shall preserve the integrity of any capped areas and accordance with the Soil Management Plan.

q. Any development or use of the Burdened Property that involves any activities that disturb soil on or groundwater under the Burdened Property, including but not limited to excavation, grading, trenching, dewatering or drilling activities, shall be subject to the requirements of the Soil Management Protocol in Exhibit C attached hereto and incorporated herein by this reference.

3.2 Enforcement. Failure of an Owner or Occupant to comply with any of the Restrictions set forth in Paragraph 3.1 above shall be grounds for the Board, by the authority of this Covenant, to require that the Owner or Occupant modify or remove, or cause to be modified or removed, any Improvements constructed in violation of that Paragraph. Violation of this Covenant shall also be grounds for the Board to file civil actions against the Owner or Occupant as provided by law. Nothing in this Covenant shall limit the Board's authority under Division 7 (commencing with section 13000) of the Water Code or other applicable laws.

3.3 Notice in Agreements. After the date of recordation hereof, all Owners and Occupants shall execute a written instrument which shall accompany all purchase agreements or leases relating to all or any portion of the Burdened Property. Any such instrument shall contain the following statement:

> The land described herein contains hazardous materials in the soils and/or groundwater under the property, and is subject to a Covenant and Environmental Restriction on Property dated as of _____, 20___, and recorded on _____, 20___, in the Official Records of Los Angeles County, California, as Document No. _____, which Covenant and Environmental Restriction on Property imposes certain covenants, conditions, and restrictions on usage of the property described herein. This statement is not a declaration that a hazard exists.

ARTICLE IV
VARIANCE, TERMINATION, AND TERM

4.1 Variance. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a written variance from the provisions of this Covenant.

4.2 Termination. Any Owner or, with the Owner's written consent, any Occupant may apply to the Board for a termination of the Restrictions as they apply to all or any portion of the Burdened Property.

4.3 Term. Unless terminated in accordance with Paragraph 4.2 above, by law or otherwise,

this Covenant shall continue in effect in perpetuity.

ARTICLE V
MISCELLANEOUS

5.1 No Dedication Intended. Nothing set forth herein shall be construed to be a gift or dedication, or offer of a gift or dedication, of the Burdened Property or any portion thereof to the general public.

5.2 Notices. Whenever any person gives or serves any notice, demand, or other communication with respect to this Covenant, each such notice, demand, or other communication shall be in writing and shall be deemed effective (a) when delivered, if personally delivered to the person being served or an official of a government agency being served, or (b) three (3) business days after deposit in the mail if mailed by United States mail, postage paid certified, return receipt requested, and addressed:

If To: "Covenantor"
United Technologies Corporation
EH&S 9FS-MS101

9 Farm Springs Road
Farmington, CT 06032
Attention: Director of Remediation Program

If To: "Board"
Regional Water Quality Control Board
Los Angeles Region
Attention: Executive Officer
320 W. 4th Street, Suite 200
Los Angeles, California 90013

5.3 Partial Invalidity. If any portion of the Restrictions or terms set forth herein is determined by a court having jurisdiction to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.4 Recordation. This instrument shall be executed by the Covenantor and by the Executive Officer of the Board. This instrument shall be recorded by the Covenantor in the County of Los Angeles within ten (10) days of the date of execution.

5.5 References. All references to Code sections include successor provisions.

5.6 Construction. Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the Covenant to preserve and implement the purpose of this instrument and the policies and purposes of the Water Code. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this

instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK;
SIGNATURES ON FOLLOWING PAGES]

UNITED TECHNOLOGIES CORPORATION

Covenantor: David B. Gorman

Print Name: David B. Gorman, Vice President

Signature: United Technologies Realty, Inc. ~~Authorized Agent~~

Title: _____

Date: 7/29/19

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of ~~California~~ Connecticut
County of ~~Los Angeles~~ Hartford

On July 29, 2019 before me, Renee Morrell, Notary Public
(insert name and title of the officer)

personally appeared David B. Gorman, V.P. of UT Realty, Auth. Agent of United Tech., Corp.
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Renee E. Morrell

Renée E. Morrell
NOTARY PUBLIC
State of Connecticut
My Commission Expires 9/30/2019

California Regional Water Quality Control Board, Los Angeles Region

Print Name: Renee Purdy

Signature: [signature]

Title: Executive Officer

Date: 7/30/19

CERTIFICATE OF ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles

On July 30, 2019 before me, Gwendolyn Rachelle Monroe, Notary Public
(insert name and title of the officer)

personally appeared Renee Purdy,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Gwendolyn Rachelle Monroe (Seal)

GWENDOLYN RACHELLE MONROE
Notary Public - California
Los Angeles County
Commission # 2239011
My Comm. Expires Apr 21, 2022

EXHIBIT A

LEGAL DESCRIPTION OF THE BURDENED PROPERTY

PARCEL 1:
PARCELS "A" AND "B" IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN OF PARCEL MAP L.A. NO. 4168 FILED IN BOOK 105 PAGES 84 AND 85 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 2: *(CONSISTING OF PARCELS 2A AND 2B):*

PARCEL 2A:
LOT 1 OF TRACT NO. 18803, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 544, PAGES 16 AND 17 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THAT PORTION OF SAID LAND, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 1, SAID POINT LYING ON THE EAST LINE OF OWENSMOUTH AVENUE, 80 FEET WIDE, AS SHOWN ON SAID TRACT NO. 18803; THENCE SOUTH 0° 00' 06" WEST 306.64 FEET ALONG SAID EAST LINE TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID EAST LINE SOUTH 0° 00' 06" WEST 478.84 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 20.00 FEET; THENCE SOUTHERLY AND EASTERLY 35.67 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 102° 10' 54" TO A TANGENT LINE, SAID LINE BEING THE NORTHERLY LINE OF VICTORY BOULEVARD, AS SHOWN ON SAID TRACT NO. 18803; THENCE NORTH 77° 49' 12" EAST 486.74 FEET ALONG SAID LINE; THENCE LEAVING SAID LINE NORTH 0° 00' 06" EAST 395.68 FEET TO A POINT LYING SOUTH 89° 59' 54" EAST FROM THE TRUE POINT OF BEGINNING; THENCE NORTH 89° 59' 54" WEST 500.00 FEET TO THE TRUE POINT OF BEGINNING.

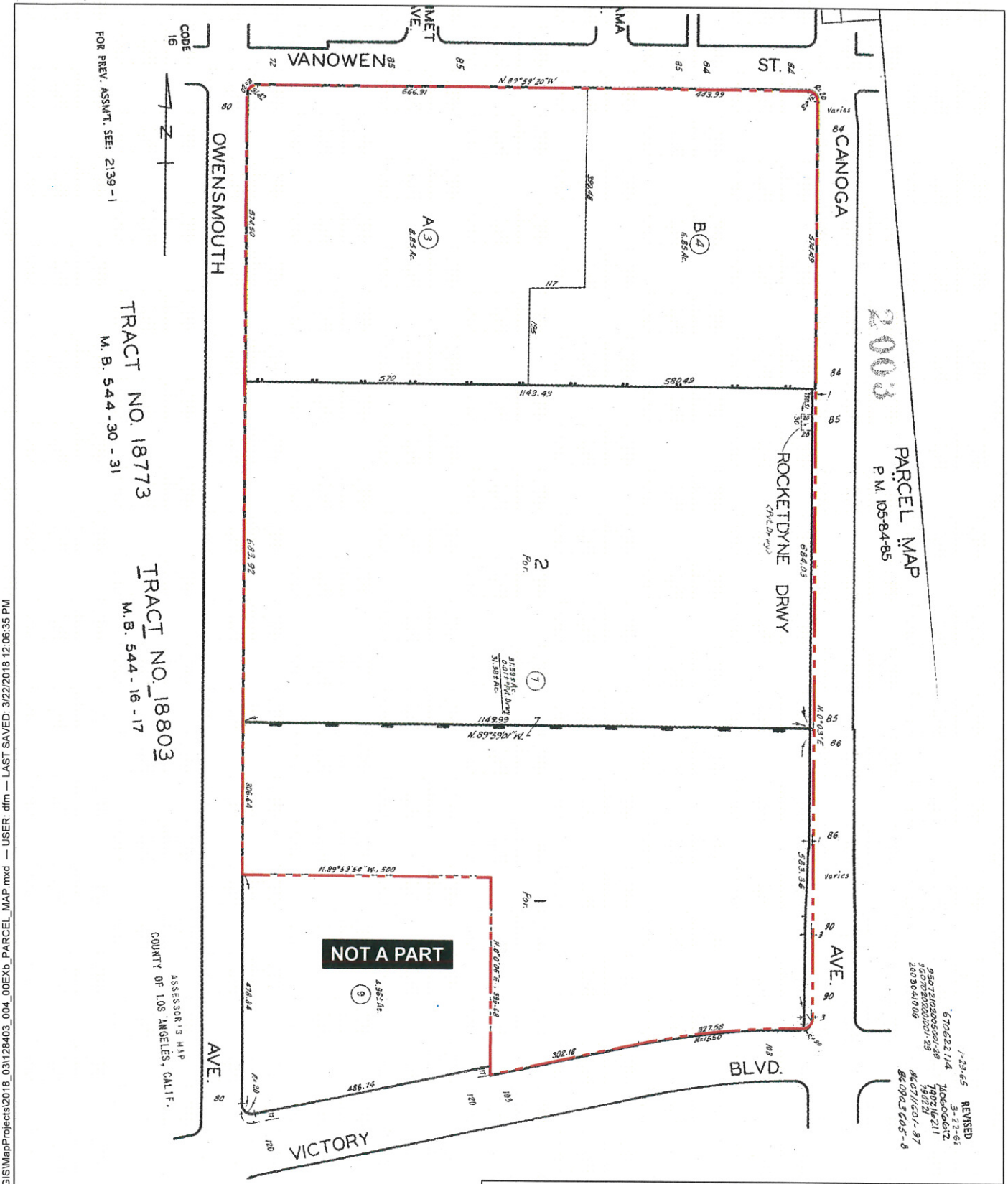
PARCEL 2B:
LOT 2 OF TRACT NO. 18773, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 544, PAGES 30 AND 31 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THE NORTHERLY 6.5 FEET OF SAID LOT 2.

PARCELS 2A AND 2B ABOVE ARE ALSO DESCRIBED IN THAT CERTAIN CERTIFICATE OF COMPLIANCE FOR LOT-LINE ADJUSTMENT RECORDED JUNE 14, 1995 AS INSTRUMENT NO. 95-949206, OFFICIAL RECORDS.

EXHIBIT B

MAP OF THE BURDENED PROPERTY



GIS FILE PATH: U:\32594\Canoga\Global\GIS\MapProjects\2018_03\128403_004_00EXb_PARCEL_MAP.mxd — USER: dfm — LAST SAVED: 3/22/2018 12:06:35 PM

EXHIBIT C: Soil Management Plan

Introduction

This Soil Management Plan (SMP) is incorporated as part of this Environmental Land Use Covenant (ELUC) for the property located at 6633 Canoga Avenue in Canoga Park, California (Site). This SMP establishes a protocol that is required to be used to identify potentially impacted soil or groundwater, confirm if soil impacts require remediation, verify proper handling, placement and/or removal of impacted soil, and manage confirmed soil impacts, soil from beneath the remediated vadose zone or groundwater for the protection of human health and the environment during future development, construction, or maintenance activities that may be performed at the Site.

Background

The Site has undergone extensive soil investigation and remediation activities (Haley & Aldrich, 2017) to address contaminants of concern (COCs) present on the Site as the result of historic releases. A Human Health Risk Assessment (HHRA) was performed and an evaluation of Site-specific groundwater protection levels (GPLs) was completed to develop Site-specific risk-based soil remediation goals (SRGs) for vadose zone soil to be protective of human health and groundwater quality. The methodology used to derive the SRGs was approved by the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) and the California Office of Environmental Health Hazard Assessment (OEHHA) in a letter dated 21 July 2016 (LARWQCB, 2016). The LARWQCB approved SRGs for the vadose zone soil matrix to meet residential risk levels are included in Table 1.

The impacts to vadose zone soil identified by investigations, during site demolition, and through soil remediation activities, have been remediated by removal and off-Site disposal in a manner that meets the LARWQCB- and OEHHA-approved SRGs. Remaining soil in the vadose zone may be disturbed, replaced and relocated on the Site, except in any instance where a potential new vadose zone soil impact is identified during the course of development, construction or maintenance activities. If a new vadose zone soil impact is identified with concentrations of COCs exceeding the SRGs, such exceedances must be addressed to meet the applicable SRGs. Accordingly, soil conditions must be monitored for potential new vadose zone soil impacts whenever soil is disturbed at the Site including during development, construction or maintenance activities.

The ELUC restricts the use of the Site to commercial/industrial land uses, but allows residential land uses so long as approved vapor mitigation engineering controls are installed in all occupiable structures on the Site. Any development and use of the Site must be undertaken in a manner that preserves the integrity of any vapor intrusion engineering controls installed, operated, monitored and maintained on the Site pursuant to the requirements of the LARWQCB.

Saturated soil and groundwater below the vadose zone soil are known to be impacted, or to be potentially impacted, by historic releases from both on-Site and off-Site sources. Any development, construction or maintenance activities that may involve contact with or disturbance of such soil and/or

groundwater will require the implementation of proper handling, analyses, and possible treatment or off-Site disposal of such soil and groundwater if SRGs or applicable groundwater criteria are exceeded. On-Site reuse of soils from below the vadose zone is permitted only if such soils meet the applicable SRGs.

Soil Management Plan Components

This SMP includes the following components:

- Soil or Groundwater Pre-Disturbance Activities;
- Observation, Screening, and Identification of Previously Unidentified Impacts;
- Agency Notification;
- Delineation and Characterization of COCs;
- Remediation and Confirmation Sampling;
- Saturated Soil or Groundwater Management;
- Soil Stockpile Management;
- Groundwater Dewatering and Associated Treatment or Disposal;
- Waste Treatment or Disposal;
- Import Soil Evaluation; and
- Permitting and Documentation.

Each of the SMP components listed above is briefly described in the paragraphs below.

Soil or Groundwater Pre-Disturbance Activities

A Site-specific Health and Safety Plan (HASP) must be developed for any activities on the Site that involve Site personnel working with impacted or potentially impacted soil and groundwater. All applicable permits required for excavation and management of impacted soil or groundwater must be obtained. All personnel involved must be properly trained and educated about appropriate actions and safety precautions to be taken at the Site.

Observation, Screening, and Identification of Previously Unidentified Impacts

Soil conditions must be monitored for potential new impacts under any circumstance in which soil or groundwater is disturbed. The general management processes for identifying previously unidentified impacts are as follows:

- Soil conditions will be monitored for indications of potential environmental impacts by appropriate personnel (i.e., a qualified environmental consultant) experienced in identifying

potential impacts in soil. Indicators of such impacts may include stained or discolored soils, the presence of odors, and/or elevated photoionization detector (PID) readings.

- All workers involved in soil excavations must be informed of the potential for encountering previously unidentified impacts in the vadose zone soil, or soil and/or groundwater from below the vadose zone, and instructed on appropriate actions and safety precautions to be taken if any potential impacts are observed.
- Representative grab soil sample(s) will be collected from any suspected impacted soils with at least one sample from the suspected center or worse case area of the suspected impact. Discrete soil matrix samples for chemical analysis may be collected via grab sampling, hand-auguring, and/or borings or excavation equipment.
- Collected samples with unidentified compounds must be analyzed by a State-certified analytical laboratory for COCs on the SRG list in Table 1 using appropriate testing methods including:
    - Total Petroleum Hydrocarbons - Total Carbon Chain (TPH-cc): EPA Method 8015;
    - Volatile Organic Compounds (VOCs): EPA Methods 5035A/8260B;
    - Semi-Volatile Organic Compounds (SVOCs): EPA Methods 8270/8270C;
    - Polynuclear Aromatic Hydrocarbons (PAHs): EPA Method 8310;
    - Polychlorinated Biphenyls (PCBs) and Pesticides: EPA Method 8080;
    - Hexavalent Chromium: EPA Method 7199; and
    - Title 22 Metals: Either EPA Method 6010B, 7470, 7471A, or equivalent.
- Method detection limits and reporting limits will be in accordance with the EPA methods and be appropriate so results can be compared to the SRGs. Analytical data from the soil sample(s) must be compared to the SRGs in Table 1 to determine if the concentrations of any detected COCs exceed the SRGs or if a revised risk-assessment is necessary for any new COCs detected.
- If results of discrete sample analyses are less than the SRGs, soil may be reused on the Site. If test results for any compound are greater than the SRGs or a new chemical is identified that may pose undue risk, the area must be laterally and vertically delineated and all soil with COCs exceeding the SRGs removed from the Site. Agency notification, characterization, and remediation is required as described in the next sections.
- As with soil, if groundwater is generated (e.g. removal from the ground) it must be contained and evaluated for the presence of COCs and managed appropriately including such aspects as characterization, storage, treatment and disposal in accordance with applicable federal, state and local regulations.

Agency Notification

If new COC impacts are discovered in soil or groundwater during Site activities, the LARWQCB is to be notified of the discovery as soon as is reasonably possible.

Delineation and Characterization of COCs

Discrete samples of any new potentially impacted soil will be collected and analyzed in accordance with appropriate methodologies relevant to the soil SRG. Typically, at least one sample will be collected from the suspected center of the potential impacted area and analyzed for the full list of potential compounds. Subsequently, additional lateral and vertical samples will be collected simultaneously using an appropriate collection method and held for analysis until the worst-case sample is analyzed. All other characterization samples must be analyzed for the COC identified in the worst case or center of the sample from the potentially impacted area. Typically, two samples from different depths in the center of the potential impacted will be collected along with three stepout samples. Additional sampling and testing needs will be evaluated based on data from the initial sampling efforts.

Remediation and Confirmation Sampling

Any soil identified as exceeding SRGs will be removed from the Site and disposed of at an appropriate disposal facility. Representative samples of the impacted media will be collected and analyzed to determine the appropriate manner of management in accordance with disposal facility requirements. Upon completion of soil removal (excavation), confirmation samples must be collected and analytical results compared to the SRGs to confirm that any impacted areas have been appropriately addressed. Enough sampling locations (e.g. sidewalls, base) will be selected to determine the extent of the impacts with discrete soil matrix confirmation samples collected at a minimum from the excavation as follows:

- One discrete sample for approximately every 400 square feet of excavation surface area, which is equivalent to collecting bottom samples at 20 feet on center; and
- For excavations greater than 4 feet in depth, additional discrete samples will be collected from sidewalls as deemed appropriate.

If the analytical results of any confirmation sample exceed any one of the SRGs, the sample area will be excavated, the soil properly managed, and the area retested to comply with the confirmation sampling requirements above. This process will be repeated as many times as necessary to verify adequate removal of all impacted soil exceeding SRGs.

Saturated Soil or Groundwater Management

Saturated soil below the vadose zone soil is known to be impacted, or to potentially be impacted, by COCs, and thus requires proper testing and handling in the event it is disturbed by activities on the Site. Any soils excavated from the saturated zone must be appropriately tested to determine if any COC levels in such soils exceed the SRGs. If soil excavated from either the vadose zone or the saturated zone

cannot be reused on the Site, the requirements set forth in the Soil Stockpile Management and Waste Disposal Sections below will be implemented.

Soil Stockpile Management

For any soils that exceed SRGs and must be disposed of off-Site, excavated soils will be placed in stockpiles on polyethylene sheeting, direct loaded into trucks, or placed in roll-off containers. Stockpiled soils will be segregated into the following categories: impacted soils, non-impacted soils and soils that have not yet been characterized. Representative samples of any stockpiled soils will be collected to determine how such soils must be managed (i.e., characterization, disposal, reuse, etc.). Representative sampling of stockpiles soils will be conducted in accordance with standard agency and industry practices, disposal facility requirements, and/or regulatory agency requirements, as appropriate. Typical stockpile sampling frequencies are as follows:

- A minimum of two discrete random soil samples from stockpiles 100 cubic yards or less in volume; or
- One additional soil sample per 100 cubic yards of stockpiled material between 100 and 400 cubic yards of soil.

For containers of soil the following sampling should be performed:

- For 8- and 20-cubic-yard roll-off bins, two discrete soil samples from at or near the centroids of each half of the bin.

Stockpile management will include routine inspections for stormwater runoff controls, fugitive dust and potential VOC emissions in accordance with appropriate stormwater management and air regulatory requirements.

Groundwater Dewatering and Associated Treatment or Disposal

Groundwater at the Site is impacted with VOCs and active remediation activities are being conducted locally to reduce the mass and concentrations. However, this will not eliminate all impacts in saturated soil. Groundwater may be encountered during Site development, construction, and maintenance activities. These activities could result in the need for dewatering efforts. If groundwater dewatering is conducted as a part of construction activities, then appropriate measures (e.g. management, analysis, disposal, permitting, etc.) to address such dewatering activities will be implemented. Regulatory agency or other entity interactions may be required depending on the situation and nature of the dewatering effort.

Waste Treatment or Disposal

Excavated material from soil remediation activities, dewatering activities, or excess material generated by development, construction or maintenance activities that is not going to be reused on-Site will be appropriately handled and characterized pursuant to applicable Federal and state regulations including but not limited to Title 40 Code of Federal Regulations Parts 260 and 761 and California Code of Regulations Title 22, et seq. If determined to contain Toxic Substances Control Act (TSCA) chemicals

and/or hazardous waste, soil or other wastes will be disposed of off-Site at a facility permitted to accept such waste.

Import Soil Evaluation

Only "clean", non-impacted soil that has been adequately tested is considered acceptable for import to the Site from off-Site sources.

Through background review and sampling and analysis, proposed import soil sources identified will be evaluated prior to acceptance, importation, and on-Site placement. The steps of the screening procedures include:

- Source land use review;
- Soil sampling and analysis;
- Acceptance and placement; and
- Documentation.

Prior to any soil being delivered to the Site, soil samples will be collected within the designated import soil volume in accordance with the DTSC import soil advisory (DTSC, 2001), and using standard chain of custody protocols. Samples will be collected at a frequency of at least one representative sample for each import source, and/or:

- One sample per 250 cubic yards for up to 1,000 cubic yards of stockpiled material;
- Four samples for the first 1,000 cubic yards, plus one sample for every additional 500 cubic yards for stockpiled material between 1,000 and 5,000 cubic yards; or
- Four samples for in-place borrow areas of 2 acres or less (DTSC, 2001).

Any soil that is to be imported to the Site will be evaluated to confirm that it meets the SRG criteria established for the Site. The discrete samples of potential fill material will be analyzed for the following parameters:

- TPH-cc: EPA Method 8015;
- VOCs: EPA Method 5035A/8260B;
- SVOCs: EPA Method 8270/8270C;
- PAHs: EPA Method 8310;
- PCBs and Pesticides: EPA Method 8080;
- Hexavalent chromium: EPA Method 7199; and
- Title 22 Metals: Either EPA Methods 6010B, 7470, 7471A, or equivalent.

Permitting and Documentation

Field notes, maps, chain-of-custody forms, laboratory reports, survey reports, and related materials must be maintained as they pertain to soil and groundwater management at the Site. Copies of waste profile forms and logs of waste shipments must be obtained from any relevant waste disposal facilities. Documentation of activities conducted regarding soil management and dewatering should be preserved and be available to be provided to LARWQCB.

The soil management measures specified herein have been established to minimize human health exposures to property contaminants in soil and must be implemented in accordance with applicable local, state, and federal regulations. The LARWQCB must approve in writing any SMP amendments that modify the management measures specified herein, and the revised SMP shall be promptly recorded to update the SMP attached to the LUC for the property.

Table 1: Soil Remediation Goals for Vadose Zone Soils

Chemical	Soil Remediation Goal (SRG) [a] (mg/kg)
Metals	
Antimony	3.35
Arsenic	7.94
Barium	387
Beryllium	0.932
Cadmium	6.05
Chromium (Total)	38
Hexavalent Chromium	1.8
Cobalt	11.4
Copper	58
Lead	61.5
Mercury	3
Molybdenum	19.9
Nickel	43.9
Selenium	7.75
Silver	6.26
Thallium	0.458
Vanadium	68.8
Zinc*	401
Semi-volatile Organic Compounds (SVOCs)	
1-Methylnaphthalene	0.069
2-Methylnaphthalene	0.15
benzo(a)pyrene	nd
Benzo(b)fluoranthene	nd
Benzo(a)anthracene	nd
Benzo(g,h,i)perylene	0.51
Benzyl alcohol	3.4
bis(2-Ethylhexyl)phthalate	2
Butyl benzyl phthalate	14
Diethyl phthalate	0.378
Dimethyl phthalate	0.66
Di-n-butyl phthalate	4.8
Fluoranthene	3.5
Isophorone	12

Chemical	Soil Remediation Goal (SRG) [a] (mg/kg)
m,p-cresols	1.7
Phenanthrene	0.15
Phenol	0.78
Pyrene	0.48
Total PCBs	0.12
Volatile Organic Compounds (VOCs)	
1,1-Dichloroethane	0.25
1,1-Dichloroethene	1.4
1,1,1-Trichloroethane	8.6
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	2.9
1,2-Dichloroethane	0.041
1,1,2-Trichloroethane	0.1
1,2,3-Trichloropropane	< 0.002
1,2,4-Trimethylbenzene	0.0022
1,3,5-Trimethylbenzene	0.053
2-Butanone	0.045
2-Hexanone	0.002
4-Methyl-2-pentanone	0.0079
Acetone	2.7
Benzene	0.011
Carbon disulfide	0.0057
Chloroform	0.0064
Chloromethane	0.00086
cis-1,2-Dichloroethene	0.3
Dichlorodifluoromethane	0.0016
Ethylbenzene	0.33
Isopropylbenzene (cumene)	0.166
Isopropyltoluene (surrogate=Isopropylbenzene)	0.237
Methylene chloride	0.0029
n-Butylbenzene	0.0054
n-Propylbenzene	0.39
Naphthalene	0.2
sec-Butylbenzene	0.15
Styrene	0.0073
tert-Butyl alcohol	0.18
tert-Butylbenzene	0.00031

Chemical	Soil Remediation Goal (SRG) [a] (mg/kg)
Tetrachloroethene	0.1
Toluene	14
trans-1,2-Dichloroethene	0.0871
Trichloroethene	0.1
Trichlorofluoromethane	0.0074
Xylenes	2.9
Total Petroleum Hydrocarbons (TPH) [b]	
C4-C12 (Gasoline Range - Low Aliphatic/Aromatic)	100
C13-C22 (Diesel Range - Medium Aliphatic/Aromatic)	100
C23-C32 (Oil Range)	1,000

Notes:

mg/kg = milligrams per kilogram
nd = less than laboratory detection limit
[a] The soil remediation goal is the lower of the health protection level and the groundwater protection level.
[b]TPH thresholds identified by the 2006 Cleanup Guidebook (RWQCB, 2006).

References

1. California Regional Water Quality Control Board, Los Angeles Region, 2016b. Approval of The Soil Management Plan, Pratt & Whitney-Rocketdyne, The Former Boeing Canoga Avenue Facility, 6633 Canoga Ave., Canoga Park, CA (SCP No. 0237A, Site ID NO. 2040214) dated 21 July 2016.

2. Department of Toxic Substances Control, 2001. "Information Advisory, Clean Imported Fill Material" dated October 2001.

3. Haley & Aldrich, Inc., 2015. "Final Soil Management Plan for Assessment, Remediation and Confirmation Sampling of Vadose Zone Soils, United Technologies Corporation, Canoga Avenue Facility, Canoga Park, California, LARWQCB Case #0237A, Site ID No. 2040214," dated 19 November 2015.

4. Haley & Aldrich, Inc., 2017. "Soil Remediation Closure Report, United Technologies Corporation, Canoga Avenue Facility, 6633 Canoga Avenue, Canoga Park, California, LARWQCB Case #0237A, Site ID No. 2040214," dated 22 December 2017.