IV. Environmental Impact Analysis

H. Hazards and Hazardous Materials

1. Introduction

This section analyzes the Project's potential hazards and hazardous materials impacts that could occur during Project construction and operation. In addition, this section analyzes the Project's incremental contribution to cumulative hazards and hazardous materials impacts from past, present, and probable future projects. The analysis is largely based on the Phase I Environmental Site Assessment Report (Phase I ESA),[1] prepared for the Project by Citadel EHS (Citadel), included in Appendix H-1 of this Draft EIR. Citadel also prepared a supplemental "Phase I Environmental Site Assessment Report – Clarification" letter dated October 12, 2021, which is also provided in Appendix H-1. In addition, a summary of scientific studies on artificial turf (also referred to as synthetic turf) regarding potential effects on human health, prepared by ESA in October 2021, is included in Appendix H-2 of this Draft EIR.

2. Environmental Setting

a) Regulatory Framework

Several plans, regulations, and programs include policies, requirements, and guidelines regarding hazards and hazardous materials at the federal, State, regional, and City of Los Angeles levels. As described below, these plans, guidelines, and laws include the following:

- Resources Conservation and Recovery Act
- Comprehensive Environmental Response, Compensation, and Liability Act
- Occupational Safety and Health Act of 1970
- Toxic Substances Control Act
- Hazardous Materials Transportation Act
- Research and Special Programs Administration Regulations
- Federal Emergency Management Agency
- Disaster Mitigation Act of 2000

[1] Citadel EHS, Phase I Environmental Site Assessment Report, April 30, 2020, revised October 13, 2020. Provided in Appendix H-1 of this Draft EIR.

- Other Hazardous Materials Regulations
- State Policies and Regulations
- California Hazardous Materials Release Response Plans and Inventory Law of 1985
- Hazardous Waste and Substances Sites
- Hazardous Waste Control Law
- License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.
- Underground Storage Tanks Program
- Aboveground Petroleum Storage Act
- Lead Based Paint Regulations
- California Division of Occupational Safety and Health
- The Safe Drinking Water and Toxic Enforcement Act
- California Water Code
- Government Code Section 3229, Division 3 (California Geologic Energy Management Division)
- California Fire Code, Title 24, Part 9, Chapters 33, 50 and 57
- Uniform Fire Code
- California Governor's Office of Emergency Services
- Emergency Managed Mutual Aid (EMMA) System
- South Coast Air Quality Management District Rule 1113
- South Coast Air Quality Management District Rule 1166
- South Coast Air Quality Management District Rule 1403
- Los Angeles County Operational Area Emergency Response Plan
- Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan
- Certified Unified Program Agency
- Los Angeles Fire Code
- Los Angeles Municipal Code (Methane Zones and Methane Buffer Zones)
- Waste Discharge Requirements
- Emergency Management Department, Emergency Operations Organization (EOO), and Emergency Operation Center
- General Plan, Conservation Element

(1) Federal

(a) Resources Conservation and Recovery Act

The federal Resource Conservation and Recovery Act (RCRA) (42 United States Code[USC] Sections 6901-6992k), which amended and revised the Solid Waste Disposal Act, regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. Under RCRA regulations, generators of hazardous waste must register and obtain a hazardous waste activity identification number. RCRA allows individual states to develop their own programs for the regulation of hazardous waste as long as they are at least as stringent as RCRA's.

Underground Storage Tanks (USTs) are regulated under Subtitle I of RCRA and its regulations, which establish construction standards for UST installations installed after December 22, 1988, as well as standards for upgrading existing USTs and associated piping. Since 1998, all non-conforming tanks were required to be either upgraded or closed.

(b) Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980.[2] This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, providing for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also establishes the National Priorities List, which is a list of contaminated sites warranting further investigation by the United States Environmental Protection Agency (USEPA). CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.[3]

(c) Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act of 1970, which is implemented by the federal Occupational Safety and Health Administration (OSHA), contains provisions with respect

2 USEPA, "Superfund CERCLA Overview," https://www.epa.gov/superfund/superfund-cercla-overview Accessed February 25, 2021.

3 USEPA, "Summary of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)," https://www.epa.gov/laws-regulations/summary-comprehensive-environmental-response-compensation-and-liability-act. Accessed February 25, 2021.

to hazardous materials handling. OSHA was created to assure safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance. OSHA provides standards for general industry and construction industry on hazardous waste operations and emergency response. OSHA requirements, as set forth in 29 Code of Federal Regulations (CFR) Section 1910, et. seq., are designed to promote worker safety, worker training, and a worker's right–to-know. The U.S. Department of Labor has delegated the authority to administer OSHA regulations to the State of California. The California OSHA program (Cal/OSHA) (codified in the California Code of Regulations [CCR], Title 8, or 8 CCR generally and in the Labor Code secs. 6300-6719) is administered and enforced by the Division of Occupational Safety and Health (DOSH). Cal/OSHA is very similar to the OSHA program. Among other provisions, Cal/OSHA requires employers to implement a comprehensive, written Injury and Illness Prevention Program (IIPP) for potential workplace hazards, including those associated with hazardous materials.

In addition, pursuant to OSHA, a developer that undertakes a construction project that involves the handling of contaminated site conditions must prepare and implement a Health and Safety Plan (HASP) that sets forth the measures that would be undertaken to protect those that may be affected by the construction project. While a HASP is prepared and implemented pursuant to OSHA, the HASP is not subject to regulatory review and approval, although a HASP is typically appended to a Soil Management Plan if this document is required by the Certified Unified Program Agency (CUPA), which is the City of Los Angeles Fire Department (LAFD) with regard to the Project Site. The HASP, if required, would be prepared in accordance with the most current OSHA regulations, including 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response and 29 CFR 1926, Construction Industry Standards, as well as other applicable federal, State, and local laws and regulations.

(d) Toxic Substances Control Act

In 1976, the federal Toxic Substances Control Act (TSCA) (15 USC Sections 2601–2671) established a system of evaluation in order to identify chemicals which may pose hazards. TSCA is enforced by the USEPA through inspections of places in which asbestos-containing materials (ACMs) are manufactured, processed, and stored and through the assessment of administrative and civil penalties and fines, as well as injunctions against violators. The TSCA establishes a process by which public exposure to hazards may be reduced through manufacturing, distribution, use and disposal restrictions or labeling of products. Polychlorinated Biphenyls (PCB)s are hazardous materials regulated by the USEPA under the TSCA. These regulations ban the manufacture of PCBs although the continued use of existing PCB-containing equipment is allowed. PCBs were formerly used in applications such as hydraulic fluids, plasticizers, adhesives, fire retardants, and electrical transformers, among others. TSCA also contains provisions controlling the continued use and disposal of existing PCB-containing equipment. The disposal of PCB wastes is also regulated by TSCA (40 CFR 761), which contains life cycle provisions

similar to those in RCRA. In addition to TSCA, provisions relating to PCBs are contained in the Hazardous Waste Control Law (HWCL), which lists PCBs as hazardous waste.

Under TSCA, the USEPA has enacted strict requirements on the use, handling, and disposal of ACMs. These regulations include the phasing out of friable asbestos and ACMs in new construction materials beginning in 1979. In 1989, the USEPA banned most uses of asbestos in the country. Although most of the ban was overturned in 1991, the current banned product categories include corrugated paper, rollboard, commercial paper, specialty paper, flooring felt, and any new uses. TSCA also establishes USEPA's Lead Abatement Program regulations, which provide a framework for lead abatement, risk assessment, and inspections. Those performing these services are required to be trained and certified by USEPA).

(e) Hazardous Materials Transportation Act

The U.S. Department of Transportation (USDOT) prescribes strict regulations for the safe transportation of hazardous materials, including requirements for hazardous waste containers and licensed haulers who transport hazardous waste on public roads. The Secretary of the USDOT receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 USC Section 5101 et seq. The Secretary of Transportation is authorized to issue regulations to implement the requ222irements of 49 USC. The Pipeline and Hazardous Materials Safety Administration (PHMSA)[4], formerly the Research and Special Provisions Administration, was delegated the responsibility to write the hazardous materials regulations, which are contained in 49 CFR Parts 100-180.[5] 49 CFR, which contains the regulations set forth by the HMTA, specifies requirements and regulations with respect to the transport of hazardous materials. It requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Under the HMTA, the Secretary of Transportation "may authorize any officer, employee, or agent to enter upon, inspect, and examine, at reasonable times and in a reasonable manner, the records and properties of persons to the extent such records and properties relate to: (1) the manufacture, fabrication, marking, maintenance, reconditioning, repair, testing, or distribution of packages or containers for use by any "person" in the transportation of hazardous materials in commerce; or (2) the transportation or shipment by any "person" of hazardous materials in commerce."

(f) Research and Special Programs Administration

The Research and Special Programs Administration (RSPA) regulations cover definition and classification of hazardous materials, communication of hazards to workers and the

4 U.S. Department of Transportation, Pipeline and Hazardous Materials Transportation Law: An Overview, https://www.phmsa.dot.gov/standards-rulemaking/hazmat/federal-hazardous-materials-transportation-law-overview Accessed February 1, 2022.

5 Title 49 CFR Parts 100 to 185.

public, packaging and labeling requirements, operational rules for shippers, and training. They apply to interstate, intrastate, and foreign commerce by air, rail, ships, and motor vehicles, and also cover hazardous waste shipments. The RSPA's Federal Highway Administration (FHWA) is responsible for highway routing of hazardous materials and highway safety permits. The U.S. Coast Guard regulates bulk transport by vessel. The hazardous material regulations include emergency response provisions, including incident reporting requirements. Reports of major incidents go to the National Response Center, which in turn is linked with CHEMTREC, a service of the chemical manufacturing industry that provides details on most chemicals shipped in the United States.

(g) Federal Emergency Management Agency

The Federal Emergency Management Act (FEMA) was established in 1979 via executive order and is an independent agency of the federal government. In March 2003, FEMA became part of the U.S. Department of Homeland Security with the mission to lead the effort in preparing the nation for all hazards and effectively manage federal response and recovery efforts following any national incident.[6] FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

(h) Disaster Mitigation Act of 2000

The Disaster Mitigation Act (42 USC Section 5121) provides the legal basis for FEMA mitigation planning requirements for State, local, and Indian Tribal governments as a condition of mitigation grant assistance. It amends the Robert T. Stafford Disaster Relief Act of 1988 (42 USC Sections 5121-5207) by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need and creates incentives for state, Tribal, and local agencies to closely coordinate mitigation planning and implementation efforts. This Act reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide and the streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of this Act include:

- Funding pre-disaster mitigation activities;
- Developing experimental multi-hazard maps to better understand risk;
- Establishing state and local government infrastructure mitigation planning requirements;
- Defining how states can assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP); and
- Adjusting ways in which management costs for projects are funded.

The mitigation planning provisions outlined in Section 322 of this Act establish performance-based standards for mitigation plans and require states to have a public

6 *Federal Emergency Management Act,* https://www.fema.gov/about/history, Accessed February 1, 2022.

assistance program (Advance Infrastructure Mitigation [AIM]) to develop county government plans. The consequence for counties that fail to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding 10-year period by the same type of event.

(i) Other Hazardous Materials Regulations

In addition to the USDOT regulations for the safe transportation of hazardous materials, other applicable federal laws that also address hazardous materials include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

(2) State

(a) State Policies and Regulations

The primary state agencies with jurisdiction over hazardous chemical materials management are the California Environmental Protection Agency's (CalEPA) Department of Toxic and Substance Control (DTSC) and the Los Angeles Regional Water Quality Control Board (LARWQCB). Other State agencies involved in hazardous materials management include Cal/OSHA and the State Office of Emergency Services (Cal OES).

Authority for the Statewide administration and enforcement of RCRA rests with DTSC. While DTSC has primary State responsibility in regulating the generation, storage and disposal of hazardous materials, DTSC may further delegate enforcement authority to local jurisdictions. In addition, DTSC is responsible and/or provides oversight for contamination cleanup and administers statewide hazardous waste reduction programs. DTSC operates programs to accomplish the following: (1) manage the aftermath of improper hazardous waste management by overseeing site cleanups; (2) prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly; and (3) evaluate soil, water, and air samples taken at sites.

The storage of hazardous materials in USTs is regulated by the State Water Resources Control Board (SWRCB), which delegates authority to the RWQCB on the regional level, and typically to the local fire department on the local level.

The Cal/OSHA program is administered and enforced by the DOSH. Cal/OSHA is very similar to the federal OSHA program. For example, both programs contain rules and procedures related to exposure to hazardous materials during demolition and

construction activities. In addition, Cal/OSHA requires employers to implement a comprehensive, written IIPP. An IIPP is an employee safety program for potential workplace hazards, including those associated with hazardous materials.

The Cal OES Hazardous Materials (HazMat) section under the Fire and Rescue Division coordinates Statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats. In response to any hazardous materials emergency, the HazMat section staff is called upon to provide state and local emergency managers with emergency coordination and technical assistance.

(b) California Hazardous Materials Release Response Plans and Inventory Law of 1985

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 requires preparation of Hazardous Materials Business Plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures for businesses that handle, store, or transport hazardous materials in amounts exceeding specified minimums (California Health and Safety Code [HSC], Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency (Cal-EMA). The California Highway Patrol (CHP) and California Department of Transportation (Caltrans) enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

(c) Hazardous Waste and Substances Sites

Government Code Section 65962.5, amended in 1992, requires the CalEPA to develop and update annually the Hazardous Waste and Substances Sites (Cortese List), which is a list of hazardous waste sites and other contaminated sites. The Cortese List is a planning document used by the State, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements pertaining to providing information about the location of hazardous materials release sites. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1. List of Hazardous Waste and Substances sites from the DTSC Envirostor database (HSC Sections 25220, 25242, 25356, and 116395);

2. List of open and active leaking underground storage tank (LUST) Sites by County and Fiscal Year from the SWRCB GeoTracker database (HSC Section 25295);
3. List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273[e] and 14 CCR Section 18051);
4. List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (California Water Code [CWC] Sections 13301 and 13304); and
5. List of hazardous waste facilities subject to corrective action pursuant to HSC Section 25187.5, identified by the DTSC.

(d) Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) empowers DTSC to administer the State's hazardous waste program and implement the federal program in California. CCR Titles 22 and 23 address hazardous materials and wastes. Title 22 defines, categorizes, and lists hazardous materials and wastes. Title 23 addresses public health and safety issues related to hazardous materials and wastes and specifies disposal options.

(e) License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.

Caltrans regulates hazardous materials transportation on all interstate roads. Within California, the State agencies with primary responsibility for enforcing federal and State regulations and for responding to transportation emergencies are the CHP and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

(f) Underground Storage Tanks Program

The State regulates USTs through a program pursuant to HSC, Division 20, Chapter 6.7, and CCR Title 23, Division 3, Chapter 16 and Chapter 18. The State's UST program regulations include among others, permitting USTs, installation of leak detection systems and/ or monitoring of USTs for leakage, UST closure requirements, release reporting/ corrective action, and enforcement. Oversight of the Statewide UST program is assigned to the SWRCB which has delegated authority to the RWQCB and typically on the local level, to the fire department. The Los Angeles Fire Department (LAFD) administers and enforces federal and state laws and local ordinances for USTs at the Project Site. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors. If a release affecting groundwater is documented, the project file is transferred to the appropriate RWQCB for oversight.

(g) Aboveground Petroleum Storage Act

In 1989, California established the Aboveground Petroleum Storage Act instituting a regulatory program covering aboveground storage tanks (ASTs) containing specified

petroleum products (HSC Sections 25270–25270.13). The Aboveground Petroleum Storage Act applies to facilities with storage capacities of 10,000 gallons or more or are subject to oil pollution prevention and response requirements under 40 CFR Part 112. Under the Aboveground Petroleum Storage Act, each owner or operator of a regulated AST facility must file biennially a storage statement with the SWRCB disclosing the name and address of the AST facility; the contact person for the facility; and the location, size, age, and contents of each AST that exceeds 10,000 gallons in capacity and that holds materials that are at least five percent petroleum. In addition, each owner or operator of a regulated AST must prepare a Spill Prevention Control and Countermeasure Plan in accordance with federal and State requirements (40 CFR Part 112 and HSC Section 25270.5[c]). The responsibility for inspecting ASTs and ensuring that Spill Prevention Control and Countermeasure Plans have been prepared lies with the RWQCBs.

(h) Lead Based Paint Regulations

Lead-based paint (LBP) is defined as any paint, varnish, stain, or other applied coating that has a one milligram per square centimeter (mg/cm2) (5,000 microgram per gram [µg/g] or 0.5% by weight) or more of lead. The US Consumer Product Safety Commission (16 CFR 1303) banned paint containing more than 0.06 percent lead for residential use in 1978. Buildings built before 1978 are much more likely to have LBP.

The demolition of buildings containing LBPs is subject to a comprehensive set of California regulatory requirements that are designed to assure the safe handling and disposal of these materials. Cal/OSHA has established limits of exposure to lead contained in dusts and fumes, which provides for exposure limits, exposure monitoring, and respiratory protection, and mandates good working practices by workers exposed to lead, particularly since demolition workers are at greatest risk of adverse exposure. Lead-contaminated debris and other wastes must also be managed and disposed of in accordance with applicable provisions of the California HSC

(i) California Division of Occupational Safety and Health

Cal/OSHA is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials (8 CCR, Section 1529). Among other requirements, Cal/OSHA requires entities handling specified amounts of certain hazardous chemicals to prepare injury and illness prevention plans and chemical hygiene plans and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this Project because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

(j) Safe Drinking Water and Toxic Enforcement Act

The Safe Drinking Water and Toxic Enforcement Act (HSC Section 25249.5, et seq.), Proposition 65, lists chemicals and substances believed to have the potential to cause cancer or deleterious reproductive effects in humans. It also restricts the discharges of

listed chemicals into known drinking water sources above the regulatory levels of concern, requires public notification of any unauthorized discharge of hazardous waste, and requires that a clear and understandable warning be given prior to a known and intentional exposure to a listed substance.

(k) California Water Code

The CWC authorizes the SWRCB to implement provisions of the Clean Water Act, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In regard to construction dewatering discharge analysis and treatment, groundwater may be encountered during deeper excavations for the subterranean parking structure, building foundations, or other subterranean building components. Under the CWC, discharges of any such groundwater to surface waters, or any point sources hydrologically connected to surface waters, such as storm drains, is prohibited unless conducted in compliance with a Waste Discharge Requirement (WDR) permit. In addition to the CWC, these permits implement and are in compliance with the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program. In accordance with these legal requirements, dewatering, treatment, and disposal of groundwater encountered during construction activities would be conducted in accordance with the LARWQCB's Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, pursuant to adopted Order No. R4-2013-0095, or any other appropriate WDR permit identified by the LARWQCB.[7] Compliance with an appropriate WDR permit would include monitoring, treatment (if appropriate), and proper disposal of any encountered groundwater in accordance with applicable water quality standards. If, for example, extracted groundwater contains total petroleum hydrocarbons (TPH) or other petroleum breakdown compounds in concentrations exceeding water quality standards, compliance with legal requirements would mandate treatment to meet published State water quality standards prior to discharge into a storm drain system.

(l) Government Code Section 3229, Division 3 (California Geologic Energy Management Division)

In compliance with Section 3229, Division 3 of the California Public Resources Code, before commencing any work to abandon any well, the owner or operator shall request approval from the California Geologic Energy Management Division (CalGEM), formerly the Division of Oil, Gas, and Geothermal Resources (DOGGR), via a written notice of intention to abandon the well.

[7] Los Angeles Regional Water Quality Control Board, Order No. R4-2013-0095, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties, June 6, 2013.

(m) California Fire Code, Title 24, Part 9, Chapters 33, 50 and 57

The 2019 California Fire Code (CFC), written by the California Building Standards Commission, is based on the 2018 International Fire Code (IFC). The IFC is a model code that regulates minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The IFC addresses fire prevention, fire protection, life safety, and safe storage and use of hazardous materials in new and existing buildings, facilities, and processes.

The CFC, Chapter 9 of Title 24 of the CCR, was created by the California Building Standards Commission based on the International Fire code and is updated every three years. The overall purpose of the CFC is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the wildland–urban interface and fire hazard areas. The CFC also provides regulations and guidance for local agencies in the development and enforcement of fire safety standards.

(n) Uniform Fire Code

The Uniform Fire Code (UFC), Article 80 (UFC Section 80.103 as adopted by the State Fire Marshal pursuant to HSC Section 13143.9), includes specific requirements for the safe storage and handling of hazardous materials. These requirements are intended to reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following specific design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition;
- Spill control in all storage, handling, and dispensing areas; and
- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire suppression system for a period of 20 minutes in the event of catastrophic spill.

(o) California Governor's Office of Emergency Services

In 2009, the State passed legislation creating the Cal OES and authorized it to prepare a Standard Emergency Management System (SEMS) program (Title 19 CCR Section 2401 *et seq.*), which sets forth measures by which a jurisdiction should handle emergency disasters. In California, SEMS provides the mechanism by which local governments request assistance. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. Cal OES coordinates the State's preparation for, prevention of, and response to major disasters, such as fires, floods, earthquakes and terrorist attacks. During an emergency,

Cal OES serves as the lead State agency for emergency management in the State. It also serves as the lead agency for mobilizing the State's resources and obtaining federal resources. Cal OES coordinates the State response to major emergencies in support of local government. The primary responsibility for emergency management resides with the local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the State through the Statewide mutual aid system (see discussion of Mutual Aid Agreements, below). California Emergency Management Agency (Cal-EMA) maintains oversight of the State's mutual aid system.

(p) Emergency Managed Mutual Aid System

Cal OES developed the Emergency Managed Mutual Aid (EMMA) System in response to the 1994 Northridge Earthquake. The EMMA System coordinates emergency response and recovery efforts along the coastal, inland, and southern regions of California. The purpose of EMMA is to provide emergency management personnel and technical specialists to afflicted jurisdictions in support of disaster operations during emergency events. Objectives of the EMMA Plan is to provide a system to coordinate and mobilize assigned personnel, formal requests, assignment, training and demobilization of assigned personnel; establish structure to maintain the EMMA Plan and its procedures; provide the coordination of training for EMMA resources, including SEMS training, coursework, exercises, and disaster response procedures; and to promote professionalism in emergency management and response. The EMMA Plan was updated in November 2012 and supersedes the 1997 EMMA Plan and November 2001 EMMA Guidance.

(3) Regional

(a) South Coast Air Quality Management District Rule 1113

South Coast Air Quality Management District (SCAQMD) Rule 1166, Architectural Coating, requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

(b) South Coast Air Quality Management District Rule 1166

SCAQMD Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil, requires that an approved mitigation plan be obtained from SCAQMD prior to commencing any of the following activities: 1) the excavation of a UST or piping which has stored volatile organic compounds (VOCs); 2) the excavation or grading of soil containing VOC material including gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOCs; 3) the handling or storage of VOC-contaminated soil [soil which registers >50 parts per million (ppm) or greater using an organic vapor analyzer (OVA) calibrated with hexane] at or from an excavation or grading site; and 4) The treatment of VOC-

contaminated soil at a facility. This rule sets requirements to control the emission of VOCs from excavating, grading, handling and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

(c) South Coast Air Quality Management District Rule 1403

SCAQMD Rule 1403, Asbestos Emissions from Renovation/Demolition Activities, regulates asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures, and handling and clean up procedures. Rule 1403 applies to owners and operators involved in the demolition or renovation of structures with ACMs, asbestos storage facilities, and waste disposal sites.

(d) Los Angeles County Operational Area Emergency Response Plan

The County of Los Angeles developed the Emergency Response Plan (ERP) to ensure the most effective allocation of resources for the maximum benefit and protection of the public in time of emergency. The ERP does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with them. Instead, the operational concepts reflected in this plan focus on potential large-scale disasters like extraordinary emergency situations associated with natural and man-made disasters and technological incidents which can generate unique situations requiring an unusual or extraordinary emergency response. The purpose of the ERP is to incorporate and coordinate all facilities and personnel of the County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient Operational Area organization capable of responding to any emergency using a SEMS, mutual aid and other appropriate response procedures. The goal of the ERP is to take effective life-safety measures and reduce property loss, provide for the rapid resumption of impacted businesses and community services, and provide accurate documentation and records required for cost-recovery.

(e) Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan (ALUC)

In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the ALUC and for coordinating the airport planning of public agencies within the county. ALUC coordinates planning for the areas surrounding public use airports. The Los Angeles County Airport Land Use Plan (dually titled Comprehensive Land Use Plan) provides for the orderly expansion of Los Angeles County's public use airports and the area surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating this plan, the Los Angeles County ALUC has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

(4) Local

(a) Certified Unified Program Agency

The primary local agency with responsibility for implementing federal and State laws and regulations pertaining to hazardous materials management is the Los Angeles County Department of Public Health, Environmental Health Division. The Los Angeles County Department of Health is the Certified Unified Program Agency (CUPA) for the County of Los Angeles. A CUPA is a local agency that has been certified by CalEPA to implement the six State environmental programs within the local agency's jurisdiction. This program was established under the amendments to the California HSC made by Senate Bill 1082 in 1994. The six consolidated programs are:

- Hazardous Materials Release Response Plan and Inventory (Business Plans);
- California Accidental Release Prevention (CalARP);
- Hazardous Waste (including Tiered Permitting);
- USTs;
- Above Ground Storage Tanks (ASTs) (Spill Prevention Control and Countermeasures [SPCC] requirements); and
- UFC Article 80 Hazardous Material Management Program (HMMP) and Hazardous Material Identification System (HMIS).

As the CUPA for the County of Los Angeles, the Los Angeles County Department of Public Health, Environmental Health Division maintains the records regarding location and status of hazardous materials sites in the county and administers programs that regulate and enforce the transport, use, storage, manufacturing, and remediation of hazardous materials. By designating a CUPA, Los Angeles County has accurate and adequate information to plan for emergencies and/or disasters and to plan for public and firefighter safety.

A Participating Agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. The Los Angeles County Health Department, Environmental Health Division has designated the LAFD as a Participating Agency. The LAFD monitors the storage of hazardous materials in the City for compliance with local requirements. Specifically, businesses and facilities that store more than threshold quantities of hazardous materials as defined in California HSC Code Chapter 6.95 are required to file an Accidental Risk Prevention Program with LAFD. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. LAFD also has the authority to administer and enforce federal and State laws and local ordinances for USTs. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors.

In addition, the LAFD, in their role as the CUPA, also oversees and addresses issues relating to the presence and handling of contaminated soils that may be present at the Project Site. Any such hazardous materials that may be encountered would be managed (using tools, such as a Soil Management Plan [SMP]) in accordance with all relevant and applicable federal, State, and local laws and regulations that pertain to the use, storage, transportation and disposal of hazardous materials and waste. The SMP, if required, would describe the methodology to identify and manage (reuse or off-site disposal) contaminated soil during soil excavation and/or construction. The SMP would also provide protocols for confirmation sampling, segregation and stockpiling, profiling, backfilling, disposal, guidelines for imported soil, and backfill approval from the City's Department of Building and Safety (DBS). The SMP would also describe the methodology to manage underground features that may be encountered during construction. In addition, the LAFD may consult with other agencies (e.g., DTSC and the LARWQCB) if the nature of the contamination warrants the involvement of these agencies.

(b) Los Angeles Fire Code

At the local level, the LAFD monitors the storage of hazardous materials for compliance with local requirements. Specifically, businesses and facilities that store more than threshold quantities of hazardous materials as defined in Chapter 6.95 of the California Health and Safety Code are required to file an Accidental Risk Prevention Program with the LAFD.[8] This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. The LAFD also issues permits for hazardous materials handling and enforces California's Hazardous Materials Release Response Plans and Inventory Law (HSC Section 25500 et seq.). Basic requirements of California's Hazardous Materials Release Response Plans and Inventory Law include the development of detailed hazardous materials inventories used and stored on-site, a program of employee training for hazardous materials release response, identification of emergency contacts and response procedures, and reporting of releases of hazardous materials. Any facility that meets the minimum reporting thresholds (i.e., a mixture containing a hazardous material that has a quantity at any one time during the reporting year that is equal to, or greater than, 55 gallons for materials that are liquids, 500 pounds for solids, or 200 cubic feet for compressed gas) must comply with the reporting requirements and file a Business Emergency Plan (BEP) with the local administering agency.[9]

The LAFD also administers the Fire Life Safety Plan Check and Fire Life Safety Inspections interpreting and enforcing applicable standards of the Fire Code, Title 19, Uniform Building Code, City, and National codes concerning new construction and

8 The CalARP program encompasses both the federal "Risk Management Program," established in the Code of Federal Regulations, Title 40, Part 68, and the State of California program, in accordance with the Title 19 of the California Code of Regulations, Division 2, Chapter 4.5.

9 California Health & Safety Code, Division 20, Chapter 6.95, Article 1; California Code of Regulations, Title 19, Sections 2620-2732; California Code of Regulations, Title 24, Part 9, Section 80.115; Los Angeles Municipal Code, Article 7 of Chapter V, Section 57.120.1, and 57.120.1.4

remodeling. As part of the Fire Life Safety Plan Check and Fire Life Safety Inspections, businesses that store hazardous waste or hazardous materials in amounts exceeding the thresholds noted above are subject to review.

Section 91.7109.2 of the Los Angeles Municipal Code (LAMC) requires LAFD notification when an abandoned oil well is encountered during construction activities and requires that any abandoned oil well not in compliance with existing regulations be re-abandoned in accordance with applicable rules and regulations of CalGEM.

(c) Los Angeles Municipal Code (Methane Zones and Methane Buffer Zones)

LAMC Section 91.7101 et. seq., also known as the Los Angeles Methane Seepage Regulations, establishes requirements for buildings and paved areas located in methane zones and methane buffer zones. Requirements for new construction within such zones include methane gas sampling and, depending on the detected concentrations of methane and gas pressure at the site, application of design remedies for reducing potential methane impacts. The required methane mitigation systems are based on the site Design Level, with more involved mitigation systems required at the higher Site Design Levels. The required methane mitigation systems are designed so that when properly implemented, they reduce methane-related risks to a less than significant level.

(d) Waste Discharge Requirements

Effective on December 28, 2012, the LARWQCB adopted Order No. R4-2012-0175, NPDES Permit No. CAS004001, WDR for Municipal Separate Storm Sewer System (MS4) Discharges into the Coastal Watersheds of Los Angeles County. The permit establishes new performance criteria for new development and redevelopment projects in the coastal watersheds of Los Angeles County (with the exception of the City of Long Beach). Stormwater and non-storm water discharges consist of surface runoff generated from various land uses, which are conveyed via the municipal separate storm sewer system and ultimately discharged into surface waters throughout the region ("storm water" discharges are those that originate from precipitation events, while "non-storm water" discharges are all those that are transmitted through an MS4 Stormwater Permit and originate from non-precipitation events). Discharges of stormwater and non-storm water from the MS4s, or storm drain systems, in the Coastal Watersheds of Los Angeles County convey pollutants to surface waters throughout the Los Angeles Region. Non-storm water discharges through an MS4 in the Los Angeles Region are prohibited unless authorized under an individual or general NPDES permit; these discharges are regulated by the Los Angeles County NPDES Permit, issued pursuant to Clean Water Act (CWA) Section 402. Coverage under a general NPDES permit such as the Los Angeles County permit can be achieved through development and implementation of a project-specific SWPPP.

(e) Emergency Management Department, Emergency Operations Organization, and Emergency Operation Center

The City of Los Angeles EMD is comprised of four divisions and two units including Administrative Services Division, Communications Division, Community Emergency Management Division, Operations Division, Planning Unit, and Training Exercise Unit. The EMD works with City departments, municipalities and with community-based organizations to ensure that the City and its residents have the resources and information they need to prepare, respond, and recover from emergencies, disasters and significant events. The Emergency Operations Organization (EOO) is the operational department responsible for the City's emergency preparations (planning, training and mitigation), response and recovery operations. The EOO centralizes command and information coordination to enable its unified chain-of-command to operate efficiently and effectively in managing the City's resources.

The Emergency Operation Center (EOC) is the focal point for coordination of the City's emergency planning, training, response and recovery efforts. EOC processes follow the National All-Hazards approach to major disasters such as fires, floods, earthquakes, acts of terrorism and large-scale events in the City that require involvement by multiple City departments.

(f) City of Los Angeles General Plan Conservation Element

The City of Los Angeles General Plan includes a Conservation Element adopted in September 2001. Policies relevant to hazards and hazardous materials are shown in **Table IV.H-1**, *Relevant General Plan Conservation Element Policies*, below.

TABLE IV.H-1
RELEVANT GENERAL PLAN CONSERVATION ELEMENT POLICIES

Policy	Description
Policy 1	Continue to encourage energy conservation and petroleum product reuse.
Policy 3	Continue to protect neighborhoods from potential accidents and subsidence associated with drilling, extraction and transport operations, consistent with California Department of Conservation, Division of Oil and Gas requirements.

SOURCE: City of Los Angeles Department of City Planning, Conservation Element of the City of Los Angeles General Plan, September 26, 2001.

b) Historical Site Conditions

The historic conditions of the Project Site are summarized below from the Phase I ESA.

In the late 1920s, the Project Site was relatively undeveloped with the exception of two small structures on the northeastern corner of the Project Site that were demolished by the late 1930s. During the 1930s, the Project Site and adjacent property to the southeast

were occupied as a horse-riding academy, with the academy offices located at the adjacent property. The Project Site was cleared of the horse tracks in the 1940s and remained undeveloped until the late 1950s when the Project Site was developed as a golf course with structures located in the northeastern and southwestern portions, including the Weddington Golf & Tennis clubhouse and a golf shop. One of the structures at the Project Site was demolished by the late 1960s, and a roof shelter, likely the driving range canopy, was built. Tennis courts and a tennis shack were built in the 1970s, and the Project Site has remained as a golf course through the present time.

c) Existing Conditions

(1) Existing Site Improvements

The Project Site is currently improved with a nine-hole golf course, a clubhouse building with a café, a putting green, a driving range, 16 tennis courts with a tennis shack, several sheds and gated areas for maintenance, associated surface parking areas, and landscaping including non-native turf grass.

(2) Potentially Hazardous Materials/Conditions on the Project Site and Surrounding Areas

Based on research, testing, and monitoring conducted as part of the Phase I ESA, assessments are provided below as to whether any of the following three types of hazardous conditions, defined by American Society for Testing and Materials (ASTM) Standard of Practice E1527-13, occur on the Project Site:

- **Recognized Environmental Conditions (RECs):** A REC is considered to be the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.
- **Controlled Recognized Environmental Conditions (CRECs):** A CREC is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a no further action letter or equivalent or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, activity and use limitations, institutional controls, or engineering controls).

- **Historical Recognized Environmental Conditions (HRECs):** A HREC is considered to be a past release of any substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, activities and use limitations, institutional controls, or engineering controls).

(a) Hazardous Materials Database Review

As part of the Phase I ESA, State and local regulatory agency hazardous materials databases were reviewed by Environmental Data Resources, Inc. (EDR), a hazardous materials records search company, for known or suspected contaminated sites and for sites that store, generate, or use hazardous materials on and within the vicinity of the Project Site. These databases list properties by location and provide information regarding past use and the presence of hazardous materials and/or conditions. The database search was conducted in accordance with ASTM requirements, including applicable search radius requirements (1/8 to 1 mile, depending on the database). The full Radius Map Report provided by EDR can be found in Appendix K of the Phase I ESA, included as Appendix H-1, of this Draft EIR. Relevant listings applicable to the Project Site and adjacent and nearby properties are discussed below.

(i) Project Site

According to EDR, the Project Site was identified on the Facilities Index System/Facility Registry System (FINDS), the Enforcement and Compliance History Information (ECHO), and the Hazardous Waste Tracking System (HWTS) databases. The Project Site was identified on these databases due to its being a hazardous generator of universal waste and a chemical storage facility, which includes typical hazardous materials (i.e., fuels, paints, solvents, etc.) associated with maintenance of a golf course. The Project Site was also identified as a RCRA Non-Generator in June 2007. No violations were reported on these databases.

In addition to the above, the Project Site was identified on the California Environmental Reporting System (CERS) database as a chemical storage facility and hazardous waste generator. Hazardous waste generated include waste and mixed oil in 2007, 2011, and 2015. Minor violations were reported and are generally associated with failure to complete, implement, and electronically submit a business plan (from 2015 to 2018) and failure to keep a copy of manifests for at least three years from the date the waste was accepted by the initial transporter (in 2019). The violations were returned to compliance and do not represent an environmental concern. In addition, the appearance of the Project Site as a hazardous waste generator reflects proper disposal of waste, such as used motor oil, and does not represent a significant environmental concern.

The Project Site was also identified on the current UST database as inactive and on the Los Angeles Hazardous Materials Listing as active. Furthermore, according to reviewed documents provided by LAFD, a 500-gallon UST was removed from the Project Site in

1995 just south of the tennis courts near the adjacent LAFD site boundary, under the supervision of LAFD. Based on the lack of reported spills or leaks, these listings are not considered to represent a REC. However, a No Further Action (NFA) letter was not located and for this reason, the former UST is considered to represent a HREC. While a NFA letter was not located, laboratory results indicated that the soil samples collected at the bottom of the tank pit, the spoils pile, and under the dispenser did not exceed action levels.[10]

(ii) Off-Site Adjacent and Nearby Properties

According to the Phase I ESA, a gasoline station is located within approximately 0.125 mile south-southeast of the Project Site. This gasoline station was identified as a LUST site when a gasoline leak was discovered in 1989. The case was completed and closed by the LARWQCB in 1998. An additional gasoline leak impacting soil only at this gasoline station was discovered and reported in 2003.

In addition, two former dry cleaners were identified in the vicinity of the Project Site. The first is located 525 feet south of the Project Site. According to SCAQMD's FINDS database, this facility operated dry cleaning equipment containing tetrachloroethylene (PCE) with permits to operate issued in 1983 and 1999. While PCE was used at this facility, no spills, leaks, or violations were reported. The second is located 549 feet west-southwest of the Project Site, and this facility operated dry cleaning equipment containing PCE with permits to operate issued in 1985, 1992, and 1993. As with the other dry cleaning facility above, no spills, leaks, or violations were reported.

Based on the distance from the Project Site and that the Los Angeles River is situated in between acting as a hydraulic barrier, the identified gasoline station and former dry cleaners are not considered a HREC. Other properties included in the database searches are located at sufficient distances and/or do not include environmental conditions that would otherwise cause potential hazardous conditions at the Project Site.

(b) Field Reconnaissance Results

(i) Project Site

As part of the Phase I ESA, a field reconnaissance was conducted and consisted of an inspection of the Project Site and a perimeter survey of the surrounding properties. Routine janitorial and maintenance supplies were observed in containers sized for commercial use and properly stored with no signs of staining or leaking. A vehicle with a 100-gallon plastic tank was observed on-site, which contains a mix of pesticides and water for golf course maintenance. No on-site hazardous conditions were observed within the golf course due to the use of pesticides. Four compressed gas cylinders with helium and/or oxygen were observed. Also, numerous 55-gallon drums were observed,

[10] "Phase I Environmental Site Assessment Report – Clarification", prepared by Citadel, letter dated October 12, 2021, provided in Appendix H-1 of this Draft EIR.

including: two gasoline drums, one diesel drum, one motor oil drum, waste paint with sand mixture drum, used motor oil drum, and two empty drums. In addition, various 5-gallon containers for gasoline (4) and grease (1), along with other small containers for fungicides, fertilizers, paints, and grease were observed. The tank, drums, gas cylinders and other containers do not present a significant hazardous condition at the Project Site.

A small area of 24 square feet surrounded by concrete blocks was observed near the clubhouse where an eight-foot pit was dug approximately 15 years ago to contain runoff from the golf ball washer. The pit was not effective and was backfilled shortly after it was dug. The former pit is not expected to represent a REC. A sump was instead installed as a permanent solution and is also located near the clubhouse. The sump is approximately 200 gallons in size and is used to collect runoff from the golf ball washer. The water in the sump is pumped back to the surface to water the lawn. The sump is not expected to represent an REC.

Minor dark stains, likely associated with fuel-related materials, were observed on the pavement and on a wooden platform. The stains appear to be a *de minimis* condition.

A 55-gallon grease container was observed at the Project Site located southwest of the clubhouse. The grease is from the on-site café and is reportedly collected monthly. The storage and handling of this material is not expected to represent a REC.

(ii) Adjacent and Nearby Properties

No hazardous materials were observed as part of the field reconnaissance on adjacent or nearby properties that would present a significant environmental concern to the Project Site.

(c) Underground Storage Tanks (USTs)

No USTs or above ground storage tanks were observed on the Project Site. As discussed above, according to reviewed documents provided by LAFD, a 500-gallon UST was removed from the Project Site in 1995. While a NFA letter was not located, laboratory results indicated that the soil samples collected at the bottom of the tank pit, the spoils pile, and under the dispenser did not exceed action levels.[11] Nonetheless, since a NFA letter was not located for this former UST, the former UST is considered to represent a HREC.

(d) Asbestos-Containing Materials (ACMs)

The structures on the Project Site, including the clubhouse and tennis shack were constructed prior to the asbestos ban that came into effect in 1989. Thus, it is possible that ACM is present in the buildings.

[11] "Phase I Environmental Site Assessment Report – Clarification", prepared by Citadel, letter dated October 12, 2021, provided in Appendix H-1 of this Draft EIR.

(e) Lead-Based Paint (LBP)

The structures on the Project Site, including the clubhouse and tennis shack were constructed prior to the ban of using lead-based paint in 1978. Thus, it is possible that LBP is present in the on-site structures.

(f) Polychlorinated Biphenyls (PCBs)

A potential source of PCB is the pole-mounted transformer located in the southeastern corner of the Project Site. No labels were observed, and no staining or leaking was identified. In addition, due to the age of the clubhouse building (constructed in 1956), PCBs could be in its building materials, such as caulking, putty, and glazing.

(g) Subsurface Soil and Soil Gas Contamination

(i) Pesticides

Given the long-term occupancy and use of land as a golf course and the current usage and storage of pesticides at the Project Site, on-site soil may contain pesticides, which is considered to be an environmental concern per the Phase I ESA. According to the USEPA, "health effects of pesticides depend on the type of pesticide. Some, such as the organophosphates and carbamates, affect the nervous system. Others may irritate the skin or eyes. Some pesticides may be carcinogens. Others may affect the hormone or endocrine system in the body."[12] However, the USEPA also states that "people are likely to be exposed to only very small amounts of pesticides – too small to pose a risk" and that "[b]efore approving a pesticide, EPA sets limits on how the pesticide may be used, how often it may be used, what protective clothing or equipment must be used, and so on. These limits are designed to protect human health and the environment."[13] According to the USEPA, pesticides also "have the potential to contaminate drinking water supplies… and can make their way into ground water or surface water systems that feed drinking water supplies."[14] The USEPA states that "[w]hether these contaminants pose a health risk depends on how toxic the pesticides are, how much is in the water, and how much exposure occurs on a daily basis."[15] Thus, existing adverse health effects to users of the existing site facilities from pesticides currently used at the Project Site may be small but would be dependent on a number of factors, including the type of pesticides used, frequency, method

[12] U.S. Environmental Protection Agency, Human Health Issues Related to Pesticides, https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/human-health-issues-related-pesticides, last updated on March 7, 2017. Accessed January 14, 2021.

[13] U.S. Environmental Protection Agency, Human Health Issues Related to Pesticides, https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/human-health-issues-related-pesticides, last updated on March 7, 2017.Accessed January 14, 2021.

[14] U.S. Environmental Protection Agency, Drinking Water and Pesticides, https://www.epa.gov/safepestcontrol/drinking-water-and-pesticides, last updated on June 19, 2017. Accessed January 14, 2021.

[15] U.S. Environmental Protection Agency, Drinking Water and Pesticides, https://www.epa.gov/safepestcontrol/drinking-water-and-pesticides, last updated on June 19, 2017. Accessed January 14, 2021.

and quantity of application, and user exposure. However, this potential condition was not identified as a REC in the Phase I ESA.

(ii) Leaking Underground Storage Tanks

As discussed above, the hazardous materials database review revealed that LUSTs at off-site and nearby properties do not present a hazardous condition to the Project Site due to their distance from the Project Site and the Los Angeles River's location in between the LUST and the Project Site which serves as a hydraulic barrier.

(iii) Methane, Oil, and Gas

According to the City's Department of Building and Safety, the Project Site is not located within a Methane Zone or Methane Buffer Zone.[16] According to CalGEM online mapping system (CalGEM Well Finder), no oil or natural gas wells are located on or adjacent to the Project Site, indicating that methane is not considered to be a significant environmental concern in this area. The nearest well is approximately 1.8 miles northeast of the Project Site, but the status for the well is inactive and plugged. The well was drilled to a depth of 2,995 feet in April 1961 and was abandoned in January 1962.[17] Similar to CalGEM, the City has also indicated that no oil wells are located on the Project Site.[18]

(3) Schools

There are no Los Angeles Unified School District (LAUSD) elementary, middle, or high schools located within one-quarter mile of the Project Site. The nearest Los Angeles Unified School District (LAUSD) school to the Project Site is Millikan Middle School at 5401 Sunnyslope Avenue, 1.6 miles (as the crow flies) to the northwest of the Project Site. The following non-LAUSD elementary, middle, or high schools are within one quarter mile of the Project:

- Harvard-Westlake Upper School, 3700 Coldwater Canyon Avenue (0.39 mile, as the crow flies, southwest of the Project Site)
- Campbell Hall School, 4533 Laurel Canyon Boulevard (0.58 mile, as the crow flies, northeast of the Project Site)

[16] City of Los Angeles Department of City Planning, Zoning Information and Mapping Access System (ZIMAS), Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

[17] Citadel EHS, Phase I Environmental Site Assessment Report, April 30, 2020, revised October 13, 2020, pages 12 and 13. Provided in Appendix H-1 of this Draft EIR.

[18] City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

(4) Airports

There are no airports or airstrips located within two miles of the Project Site. The nearest airport is the Hollywood Burbank Airport (also known as the Bob Hope Airport), located 4.5 miles northeast of the Project Site.

(5) Emergency Preparedness

Disaster routes are transportation routes designated by the County, such as freeways, highways, or arterial routes, that are pre-identified for use during times of crisis.[19] These routes are utilized to bring in emergency personnel, equipment, and supplies to impacted areas in order to save lives, protect property and minimize impact to the environment. During a disaster, these routes have priority for clearing, repairing and restoration over all other roads. The County states that "Disaster Routes are not Evacuation Routes. Although an emergency may warrant a road be used as both a disaster and evacuation route, they are completely different. An evacuation route is used to move the affected population out of an impacted area." Evacuation routes depend on the nature and location of the emergency or disaster. None of the streets within or adjacent to the Project Site are County-designated disaster routes.[20] The nearest County-designated disaster route is along the east/west-trending Ventura Boulevard, 0.13 mile south of the Project Site, and is designated as a secondary disaster route. The second nearest County-designated disaster route is along the north/south-trending Laurel Canyon Boulevard, 0.55 mile east of the Project Site, and is designated as a secondary disaster route. The closest designated primary disaster route is US-101, located 0.73 mile to the north of the Project Site.

The City of Los Angeles General Plan Safety Element includes a Critical Facilities & Lifeline Systems map (Exhibit H), which provides designated disaster routes within the City. The Project Site is not located along a City-selected disaster route.[21] Although no City-designated selected disaster routes border the Project Site, the east/west-trending Ventura Boulevard located 0.13 mile to the south and the east/west-trending Moorpark Street located 0.25 mile to the north are designated selected disaster routes.[22] The nearest north/south trending selected disaster routes are Laurel Canyon Boulevard 0.55 mile to the east of Whitsett Avenue and Woodman Avenue 1.25 miles to the west of Whitsett Avenue.

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19 County of Los Angeles, Disaster Routes, Los Angeles County Operational Area, https://dpw.lacounty.gov/dsg/DisasterRoutes/, accessed October 27, 2020.

20 County of Los Angeles, City of Los Angeles Valley Area Disaster Routes, 2017.

21 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, Exhibit H, Critical Facilities & Lifeline Systems, adopted November 26, 1996.

22 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, Exhibit H, Critical Facilities & Lifeline Systems, adopted November 26, 1996.

(6) Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) maps identify fire hazard severity zones in State and local responsibility areas for fire protection. In addition, LAFD designates lands within the City as a Very High Fire Hazard Severity Zone (VHFHSZ) based on criteria that include fuel loading, slope, fire weather, and other relevant factors. The Project Site is in a highly urbanized area and is not located within an area designated by CAL FIRE or LAFD as a VHFHSZ.[23] The Project Site is also not located within an area designated by the City as a wildland fire hazard area.[24,25] However, the foothills of the Santa Monica Mountains, located south of the Project Site to the south of Ventura Boulevard, 0.13 mile to the south of the Project Site, are designated as a local responsibility area by CAL FIRE and Mountain Fire District by the City.[26,27] In addition, the Ventura Boulevard corridor and a narrow edge along the north side of the Los Angeles River between approximately Fulton Avenue and Laurel Canyon Drive are designated as Fire Buffer Zones.[28] The area south of the Los Angeles River, directly across from the Project Site and continuing into the Santa Monica Mountains is located in a VHFHSZ.[29] VHFHSZs are primarily located in the hilly and mountainous regions of the City of Los Angeles where wildland fires originating on brush-covered undeveloped hillsides can be affected by urban development and vice versa.

3. Project Impacts

a) Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, a project would have a significant impact related to hazards and hazardous materials if it would:

Threshold (a): Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

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23 CAL FIRE, California Fire Hazard Severity Zone Viewer, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed December 14, 2020.

24 City of Los Angeles Department of City Planning, General Plan Safety Element, Exhibit D: Selected Wildlife Hazard Areas, adopted November 26, 1996.

25 City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

26 CAL FIRE, California Fire Hazard Severity Zone Viewer, https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414, accessed December 14, 2020.

27 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, adopted November 26, 1996, Exhibit D – Selected Wildfire Hazard Areas in the City of Los Angeles.

28 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, adopted November 26, 1996, Exhibit D – Selected Wildfire Hazard Areas in the City of Los Angeles.

29 City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

Threshold (b): Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

Threshold (c): Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

Threshold (d): Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

Threshold (e): For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, results in a safety hazard or excessive noise for people residing or working in the project area;

Threshold (f): Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

Threshold (g): Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G questions.

The L.A. CEQA Thresholds Guide identifies the following criteria to evaluate impacts associated with hazards and hazardous materials:

(1) Risk of Upset/Emergency Preparedness

- Compliance with the regulatory framework;
- The probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance;
- The degree to which a project may require a new, or interfere with an existing, emergency response or evacuation plan, and the severity of the consequences; and
- The degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance.

(2) Human Health Hazards

- Compliance with the regulatory framework for the health hazard;
- The probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance; and
- The degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance.

b) Methodology

The evaluation of hazardous conditions and materials is based primarily on the Phase I ESA prepared for the Project by Citadel EHS, which is included in Appendix H-1 of this Draft EIR.

The Phase I ESA identified the presence of hazardous materials occurring on the Project Site, the potential hazards posed by such materials, and recommendations for addressing identified potential hazards. The Phase I ESA was conducted in accordance with the ASTM E1527-13, Standard Practice for Environmental Site Assessments, requirements for assessing the presence or potential presence of above-ground and subsurface hazardous materials at the Project Site, as well with the requirements of 40 CFR, Part 312, Standards and Practices for All Appropriate Inquiry.

Tasks performed for the Phase I ESA included (1) a Project Site inspection to verify current Project Site conditions and check for visible evidence of previously disposed and/or currently present hazardous waste, surface contamination, USTs/ASTs, suspect PCBs, and other environmental hazards; (2) a visual survey of adjacent properties and immediate vicinity; (3) review of currently and readily available documents, including maps, aerial photographs, governmental databases of known hazardous waste sites and USTs, other consultant report (if any), fire insurance maps, and other accessible records; (4) review of results from a search of available and current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls; and (5) consultation with appropriate governmental agencies having jurisdiction related to past history of the Project Site, complaints, or incidents in the immediate area and permits that may have been issued.

The Project would install artificial turf fields designed to simulate the experience of practicing and playing on grass fields. The artificial turf to be installed under the Project would consist of four components: fiber, infill, backing, and underlayment. Generally, certain components of artificial turf may contain or emit compounds that could pose a risk to health. Potential health impacts from artificial turf components are evaluated by providing a discussion of the composition of artificial turf and the compounds of concern regarding human health. An overview of the general concepts in evaluating human health risk is provided, followed by a discussion of several research studies that assessed the potential risks of exposure to compounds of concern from artificial turf material (refer to Appendix H-2 of this Draft EIR for a more detailed discussion of these research studies).

The human health risk evaluation for the Project includes several components, including data evaluation to characterize the chemicals present and their concentrations; an exposure assessment to evaluate what receptors could be exposed to the chemicals and through which pathways (i.e., inhalation, ingestion, dermal contact); and a risk characterization. The risk characterization includes the assessment of non-carcinogenic (non-cancer) and carcinogenic (cancer) risks to potential on-site receptors on the artificial turf fields. Potential exposure pathways for the chemicals present on or in the artificial turf and crumb rubber include breathing (i.e., inhalation exposure), skin contact with the material (i.e., dermal exposure), and/or ingestion of the material (i.e., ingestion exposure). Carcinogenic compounds are not considered to have dose levels below which there are no risks. Any exposure, therefore, will have some associated risk. Incremental health risks associated with exposure to carcinogenic compounds is defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration. To evaluate potential non-cancer health risks, the Hazard Index is calculated by dividing the maximum modeled concentration of a compound at the maximum impacted sensitive receptor by the Reference Exposure Level (REL), which is the concentration at or below which no adverse non-cancer health effects are known or expected to occur for that compound. Based on the available studies and assessments, the potential for the Project's artificial turf to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials is discussed.

c) Project Design Features

The following Project Design Feature is applicable to the Project.

> **HAZ-PDF-1: Artificial Turf Formulation.** The artificial turf fiber, backing, and underlayment installed on the Project Site will not have a lead concentration level higher than 50 parts per million as determined using a testing protocol in accordance with U.S. Environmental Protection Agency Method 30508; U.S. Environmental Protection Agency Method 6010c or alternatively Method 6020A will be used to analyze digestate.

d) Analysis of Project Impacts

Threshold (a): Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

(1) Impact Analysis

(a) Construction

Construction of the Project would involve the demolition and removal of existing improvements, including the tennis shack, tennis courts, court lighting, driving range features, golf course features, and paved areas, as described in Chapter II, *Project Description*, of this Draft EIR. Note that the existing clubhouse, golf ball-shaped light

standards , and putting green would not be demolished as part of this Project; however, the clubhouse would involve some interior renovations to address deferred maintenance and improve the visitor experience. Renovation work would primarily consist of expanding restroom capacity, increasing the percentage of the building occupied by the café, establishing an interpretive display of the Property's history, and bringing the building into compliance with ADA access requirements. During the demolition and construction phase, construction equipment and materials may include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. All materials would be used, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions in accordance with best management practices (BMPs) contained in the required Stormwater Pollution Prevention Plan (SWPPP). It is reasonably anticipated that materials would be used, stored, and disposed of in consumer quantities and in accordance with applicable laws and regulations and manufacturers' instructions. The Project, including paint and solvent used on the new mixed-use buildings, would comply with SCAQMD Rule 1113. Compliance with applicable federal, State, and local requirements concerning the handling, storage, and disposal of hazardous waste would reduce the potential to release contaminants. In addition, all construction work would be performed consistent with applicable OSHA Safety and Health Standards and Cal/OSHA requirements to ensure the safety and well-being of construction workers.

As described in Chapter II, *Project Description*, of this Draft EIR, under the Project, the clubhouse would involve some interior renovations to improve its usability and address deferred maintenance. In addition, demolition of the tennis shack would be required. Due to the age of the clubhouse and tennis shack, which were constructed prior to the ACM and LBP ban, these hazardous materials, as well as PCBs may be present on-site. However, it is not uncommon for construction activities to encounter these potential hazards. ACM, LBP, and PCB are highly regulated. Testing of any suspected buildings or portions thereof for ACM, LBP, and PCB is part of standard construction practice at the time of demolition and/or renovation. In the event that ACM and/or LBP is discovered, their removal would be subject to specific and detailed SCAQMD and Cal/OSHA requirements to ensure the proper training, containment, handling, notification, and disposal of these materials by licensed asbestos and LBP abatement contractors. Similarly, PCB-containing lighting ballasts and/or any other building materials, such as caulking, putty, and glazing that may contain PCBs, would be removed and disposed of in accordance with standard applicable regulations. Compliance with regulatory requirements would ensure that impacts associated with ACM, LBP, and PCB would be less than significant.

Based on the above, impacts related to the routine transport, use, or disposal of hazardous materials during demolition and construction of the Project would be less than significant.

(b) Operation

The Project would involve the operation of school athletic facilities, including fields, a gymnasium, pool, tennis courts, and the continued operation of the existing clubhouse and café and putting green. These uses would require the use and storage of small quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, pool supplies, pesticides (for the putting green and landscaping) and other household-type materials. The Project does not include any industrial land uses. The use of these materials would be in small quantities and in accordance with the manufacturers' specifications for use, storage, and disposal of such products, which have been formulated to avoid substantial exposure hazards. Compliance with applicable federal, State, and local requirements concerning the handling, storage and disposal of hazardous waste would reduce the potential to release contaminants. **As such, impacts related to the routine transport, use, or disposal of hazardous materials during operation of the Project would be less than significant.**

(c) Operation – Artificial Turf

The Project would replace the golf course and other existing uses with new athletic and recreational facilities, including outdoor athletic fields utilizing artificial grass as a sustainable alternative to turf grass, thereby reducing irrigation water demand and avoiding the use of pesticides associated with the current golf course.

(i) Composition of Artificial Turf

The artificial turf to be installed with the Project would consist of four components: fiber, infill, backing, and underlayment. The fiber would consist of polyethylene and would be grass-like in appearance attached to a backing to imitate a playing field. The infill provides stability and would be comprised of approximately 30 percent by weight of tire-derived styrene butadiene rubber (SBR) and approximately 70 percent by weight of sand. The fiber and infill would be supported by a backing made up of a combination of permeable woven and unwoven polypropylene fabrics that provide strength and vertical drainage. Underlayment would consist of a drainage tile or an aggregate rock base.

The infill SBR, also referred to as "recycled tire crumb rubber" (or "crumb rubber"), is commonly manufactured from recycled tires. The crumb rubber (mixed with sand) is added for ballast, support for the artificial grass blades, and as cushioning for field users. Compounds in the tires of potential concern include polycyclic aromatic hydrocarbons (PAHs); zinc and zinc oxide; iron and manganese; barium; lead; and chromium. Modern day production of SBR material from tires includes a step to remove 99 percent of the steel belting and bead material, which results in lower levels of lead, iron, manganese, and chromium in the SBR material relative to earlier products.[30]

[30] CalRecycle/OEHHA, Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products, January 2007.

If there are potential hazards from exposure to crumb rubber, as analyzed below, such hazards might occur from inhalation, ingestion, or contact with crumb rubber particulates. Particulate matter is a class of air pollutants that consists of solid (including metals) and liquid airborne particles in an extremely small size range. Ambient air quality standards have been adopted at the federal (National Ambient Air Quality Standards [NAAQS]) and State (California Ambient Air Quality Standards [CAAQS]) level for respirable particulate matter (PM10) less than 10 microns in diameter and fine particulate matter (PM2.5) less than 2.5 microns in diameter. Refer to Section IV.B, *Air Quality*, of this Draft EIR for additional information regarding potential adverse health impacts from PM10 and PM2.5.

Crumb rubber may also emit trace to low levels of VOCs and semi-volatile organic compounds (SVOCs) (including PAHs and phthalates) into the air, depending upon outdoor air temperatures.[31] PAHs and phthalates refers to groups of compounds, some of which have been identified by OEHHA as compounds known to have a risk of causing cancer or reproductive toxicity.[32]

The sand portion of the infill would contain crystalline silica. Crystalline silica is a common mineral found in many naturally occurring materials such as sand, concrete, stone and mortar. OEHHA has identified crystalline silica as a compound known to have a risk of causing cancer, chronic obstructive pulmonary disease, kidney disease, and silicosis, which is an incurable lung disease.[33,34] The potential hazards related to crystalline silica are also discussed below.

According to the USEPA, concerns have also been raised about the potential for exposure to microbial pathogens at artificial turf fields. The concerns raised are in regard to a potential hazard from exposure to microbiological pathogens, such as methicillin-resistant *Staphylococcus aureus* (MRSA),[35] which if valid could lead to difficulty in treating infections.

In 2008, the California Attorney General's office and the Center for Environmental Health initiated legal action against two synthetic turf companies under California Proposition 65. The action called for turf manufacturers to reformulate their products to eliminate the lead risk to children. In 2010, the Attorney General and the turf companies reached a final

31 U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

32 OEHHA, Safe Drinking Water and Toxic Enforcement Act of 1986, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity, January 3, 2020.

33 OEHHA, Safe Drinking Water and Toxic Enforcement Act of 1986, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity, January 3, 2020.

34 U.S. Department of Labor, Silica, Crystalline, https://www.osha.gov/silica-crystalline/background-info. Accessed February 1, 2021.

35 U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

settlement on the lawsuits, and the settlements limit the lead content of any synthetic turf product to be installed in California to 50 milligrams per kilogram (mg/kg) or less, equivalent to 50 parts per million (ppm) or less.[36] The limit is below the California Department of Public Health lead abatement certification program standards that defines "lead-contaminated soil" as soil in children's play areas that contains lead equal to or in excess of 400 ppm[37] and below the DTSC screening level for residential soil of 80 ppm.[38] The settlement follows settlements with another synthetic turf manufacturer from the previous year and are the nation's first enforceable standards applicable to lead in synthetic turf.[39]

(ii) Artificial Turf Studies

The following discussion provides a summary of scientific studies including from government agencies and studies that utilize government agency analysis methodologies on artificial turf regarding potential effects on human health. Additional details regarding these studies are provided in Appendix H-2 of this Draft EIR.

(a) 2007 Integrated Waste Management Board Study

In 2007, the California Integrated Waste Management Board (now known as the California Department of Resources Recycling and Recovery or CalRecycle) published a report prepared under contract by the State's Office of Environmental Health Hazard Assessment (OEHHA) assessing potential risks to children using outdoor playground and track surfaces constructed from recycled waste tires.[40] The report, titled *Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products*, evaluated health risk associated with children's potential exposure to chemicals in the play surfaces via ingestion and skin sensitization as a result of dermal contact. Based on OEHHA's analysis of 46 studies, for non-cancer risks, the study found that only exposure to zinc exceeded its health-based risk screening level; however, OEHHA concluded that it is unlikely that exposure would produce adverse health effects because symptoms related to zinc ingestion develop over a period of weeks when zinc is ingested daily, and the potential ingested dose of zinc from activity on an artificial field would be less than the Recommended Dietary Allowance of 3 milligrams per day (mg/day) and the Tolerable Upper Intake Level of 7 mg/day for a 3-year-old child. Based on OEHHA's analysis of

[36] Superior Court of California for the County of Alameda, *People of the State of California, et. al. v. Beaulieu et. al.*, Consent Judgement as to Defendant Beaulieu Group, LLC, Case No. RG08-407310, June 11, 2010.

[37] Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1, Section 35036.

[38] Department of Toxic Substances Control, Human Health Risk Assessment (HHRA) Note Number 3, June 2020.

[39] Artificial Grass Market News, California AG's Prop 65-Artificial Turf Grass Settlements Final, July 16, 2010.

[40] CalRecycle/OEHHA, Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products, January 2007.

ingestion of loose tire shreds, the cancer risk resulting from ingestion of 10 grams of tire shreds would be 3.7 in 100 million, which is considerably less than the *de minimis* level of 1 in 1,000,000.

Based on OEHHA's analysis of health risks associated with ingestion of chemicals picked up on the hands and subsequently ingested, OEHHA found that none of the chemical concentrations exceeded health-based screening levels. Only one of the chemicals of potential concern (chrysene) is a carcinogen. Assuming that youths, age 1 to 12, would use the playgrounds, the increased cancer risk resulting from chrysene would be 2.9 in a million, which is at the low end of the acceptable range of 1 in 1,000,000 to 100 in 1,000,000.

Regarding skin sensitization, OEHHA contracted with a laboratory to perform skin sensitization testing of tire-derived surfacing, and found that these surfaces would not cause skin sensitization in children.

(b) 2009 Office of Environmental Health Hazard Assessment Study

In 2009, OEHHA published a report assessing the health effects associated with chemicals measured in the air above artificial turf fields.[41] The risk evaluation concluded that the increased cancer risk ranged from 1.6 to 8.7 in 1,000,000, which is at the low end of the acceptable range of 1 in 1,000,000 to 100 in 1,000,000. However, the risks cited by the study may be higher than would occur outdoors because the samples were obtained from indoor fields where air dispersion would not be as great. Indeed, as analyzed in the 2019 USEPA study, described in subsection (e) below, indoor concentrations of SVOCs ranged from 1.5 to 10 times higher than outdoor measurements.[42]

(c) 2010 California Department of Resources Recycling and Recovery Study

In 2010, the California Department of Resources Recycling and Recovery (CalRecycle) published a report[43] assessing the human health risks posed by VOCs and particulates in the air above outdoor artificial turf fields containing recycled crumb rubber infill. A human health risk evaluation was conducted for VOCs of concern and concluded that all exposures were below health-based screening levels. For the evaluation of particulates, permission was obtained from three San Francisco Bay Area cities to perform air sampling at city fields during soccer games or practices. All three fields consisted of new

41 OEHHA, Chemicals and particulates in the air above the new generation of artificial turf playing fields, and artificial turf as a risk factor for infection by methicillin-resistant *Staphylococcus aureus* (MRSA), Literature review and data gap identification, July 2009.

42 U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

43 CalRecycle/OEHHA, Safety Study of Artificial Turf Containing Crumb Rubber Infill Made from Recycled Tires: Measurements of Chemicals and Particulates in the Air, Bacteria in the Turf, and Skin Abrasions Caused by Contact with the Surface, October 2010.

generation artificial turf containing crumb rubber infill made from recycled tires. Based on the sampling data, the study found similar concentrations of PM2.5 upwind of the fields as directly on the fields and that, therefore, there is no public health concern related to particulate matter or heavy metals associated with particulate matter at the artificial fields.

(d) 2017 Gradient Study

A research study was published in 2017 in Environmental Research, a peer-reviewed environmental science and health journal. The study, titled *Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields*,[44] conducted a comprehensive literature review to identify studies containing information about the concentrations of chemicals in recycled rubber or air sampling data to be used in the study's risk assessment. The study used the compiled data and conducted a screening-level analysis to identify the chemicals of potential concern (COPCs) for the risk assessment. The study compared the maximum detected concentrations of chemicals found in recycled rubber and air samples (the 95 percent upper confidence limit on the mean [UCLM] or the maximum detected concentration in the dataset) against USEPA's risk-based Regional Screening Levels (RSLs) for residential soil (in the absence of any recycled-rubber-specific screening criteria) and air. The USEPA RSLs are risk-based values derived from equations, exposure parameters and factors that represent Reasonable Maximum Exposure (RME) conditions for long-term/chronic exposures.[45] RME conditions are conservative for screening for recreational exposure scenarios because the exposure frequency and duration for soccer players and spectators (the receptors of concern in the study's risk assessment) are lower than those for typical residential exposures. The study evaluated several exposure scenarios to account for the variety of people (i.e., receptors) that might interact with recycled rubber via artificial turf and represent RME conditions. The receptors associated with outdoor scenarios included: youth outdoor soccer player (ages six to 18 years); adult spectator; and child spectator. For context, data was also collected on the background levels of chemicals found in natural soil, as many of the chemicals often found in recycled rubber are also found in soil.

The results of the analysis in the study found that for recycled rubber fields, the cancer risks for all modeled receptors were below the USEPA *de minimis* risk of 1 in 1,000,000. The highest identified excess cancer risks were for the child spectator scenario, at 0.9 in 1,000,000. The study found that non-cancer target-organ-specific Hazard Indices for all modeled receptors were also below USEPA's acceptable hazard guidelines (e.g., Hazard Index < 1).

[44] Michael K. Peterson, Julie C. Lemay, Sara Pacheco Shubin, Robyn L. Prueitt, Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields, Environmental Research, Volume 160, 2018, Pages 256-268, ISSN 0013-9351.

[45] U.S. Environmental Protection Agency, Regional Screening Levels (RSLs) - User's Guide, Section 3. Using the SL Tables, May 2020, https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide, accessed December 14, 2020.

The cancer risk results for the natural soil field analysis indicate that, for each scenario (excluding the adult spectator), cancer risks associated with exposure to natural soil fields were consistent with (but higher than) those from exposure to recycled rubber fields. Similarly, the non-cancer hazard results for the recycled rubber scenarios were consistent with (but generally lower than) those from exposure to natural soil fields. The study explained that while the finding that estimated cancer risks are higher for natural soil than recycled rubber may seem counterintuitive, analysis of the 95th percentile natural background levels of several carcinogens in soil were noted to be either higher (e.g., arsenic) or similar (e.g., PAHs) to the 95% UCLM levels found in recycled rubber and that the relative risks should be interpreted with caution since the 95th percentile and the 95% UCLM are not the same statistic. The study further stated that "considering the low bioaccessibility of these chemicals from rubber, it is not surprising that the risks from exposure to these chemicals in soil are higher than those from rubber."[46] The study went on to clarify the following:

> *The cancer risks we calculated for the natural soil field exposure scenarios analysis were sometimes significantly higher than those from recycled rubber. This result is not intended to imply that playing on grass fields or playgrounds on natural soil would result in actual risk to receptors. We performed this analysis primarily to illustrate that employing US EPA's conservative standard risk assessment practices to assess surfaces that are considered to be "safe" or "natural" by most people can result in risk values that are higher than expected. Evaluating the results of the natural soil and recycled rubber risk assessments using the RME assumptions side-by-side provides context for the risks calculated for exposure to recycled rubber. The relevant interpretation is that both types of surfaces fall within acceptable risk and hazard guidelines and should not be considered to pose a public health issue.*[47]

In summary, the study concluded that the multipathway risk assessment for recycled rubber in synthetic turf fields found that cancer risks and non-cancer hazards were within the acceptable limits set by USEPA, even assuming RME conditions, and that the bio-accessibility of COPCs may actually be higher in natural soil fields. The study acknowledges that while there are limitations and uncertainties in the risk assessment, they are likely compensated for by the use of exposure assumptions that are intended to provide conservative cancer risk and non-cancer hazard results. The study concluded that the multipathway risk assessment demonstrates that the use of synthetic turf fields

[46] Michael K. Peterson, Julie C. Lemay, Sara Pacheco Shubin, Robyn L. Prueitt, Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields, Environmental Research, Volume 160, 2018, Page 264, ISSN 0013-9351.

[47] Michael K. Peterson, Julie C. Lemay, Sara Pacheco Shubin, Robyn L. Prueitt, Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields, Environmental Research, Volume 160, 2018, Page 264, ISSN 0013-9351.

containing recycled rubber infill would not result in unacceptable risks or hazards to adults or children under USEPA's risk assessment guidelines.

(e) 2019 U.S. Environmental Protection Agency Study

The Centers for Disease Control and Prevention (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) and the USEPA, in collaboration with the Consumer Product Safety Commission (CPSC), has conducted a multi-agency research effort to characterize the constituents in crumb rubber. The study, released in July 2019, collected tire crumb rubber infill material from 40 artificial turf fields located across the United States from both indoor and outdoor fields.[48] The analyses found a range of metals, SVOCs, VOCs and bacteria in and on tire crumb rubber infill material. The bacteria finding was anticipated, as bacteria are present in soil and on surfaces in indoor environments. The analysis found higher concentrations of total bacteria in outdoor fields relative to indoor fields, but a gene commonly associated with the human skin microbiome (i.e., Staphylococcus aureus) was detected more often in indoor fields than outdoor fields.[49] With respect to artificial turf and natural turf, the USEPA cites to a study in which researchers found 2 of 30 samples (7 percent) collected from synthetic turf were positive for a species of Staphylococcus compared to 6 of 12 samples (50 percent) collected from natural turf and concluded that the current generation of synthetic turf containing crumb rubber infill harbors fewer bacteria than natural turf.[50]

The findings of the study support the premise that while many chemicals are present in the recycled tire crumb rubber, as one might expect and as also regularly occur in many household products, exposure may be limited based on what is released into air or biological fluids. The study also found that levels of many organic chemicals also tended to be higher for indoor fields compared to outdoor fields, suggesting that exposures may be greater at indoor artificial turf fields.

(f) New York State Studies

The New York State Department of Environmental Conservation conducted a series of studies to assess potential impacts from crumb rubber infill material in synthetic turf fields, including the potential for release of pollutants into the air. The report, released in 2009, is titled *An Assessment of Chemical Leaching, Releases to Air and Temperature at*

[48] U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

[49] U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

[50] U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

Crumb-Rubber Infilled Synthetic Turf Fields.[51] Air sampling at the two turf fields during active play detected low concentrations of chemicals anticipated to be found based on previous sampling; however, most of these chemicals were also detected in the upwind, ambient air and could not conclusively be associated with emissions from the turf field. Regarding particulate matter, data from this study did not indicate a meaningful difference between upwind and downwind measurements. Based on the air sampling data, potential non-cancer risks from target chemicals were below a hazard quotient of 1 for all chemicals and generally well below a value of 1 (i.e., did not exceed the reference concentrations used to evaluate non-cancer health risks). Potential cancer risks exceeded the target of 1 in 1,000,000 for four chemicals: benzene and three forms of pentadiene. However, the estimated risks of the on-field samples were similar to those for the upwind, background samples and could not be attributed to turf emissions. The New York State Department of Health concluded that because there was no consistent pattern in the measurements of the chemicals at either field and exposures would not be continuous, there was not a public health concern regarding cancer effects.

(g) Connecticut Studies

In 2010, five Connecticut agencies under a joint agreement completed a study of synthetic turf fields to assess health and environmental risks from off-gassing and leaching of chemicals in crumb rubber materials. The components of the study included the following:

- Measurement of air concentrations of approximately 200 chemicals at five fields during active play,[52]
- Performance of a human health risk assessment based on measured air concentrations,[53]
- Measurements of off-gassing and leaching of chemicals under defined laboratory conditions,[54]
- Measurements of leaching of metals in stormwater runoff from turf fields,[55] and
- Peer review by an expert panel.[56]

[51] Lim, Ly, & Walker, Randi, An assessment of chemical leaching, releases to air and temperature at crumb-rubber infilled synthetic turf fields. New York State Department of Environmental Conservation (NYDEC), 2009.

[52] University of Connecticut Health Center, Artificial Turf Field Investigation in Connecticut, Final Report, July 27, 2010.

[53] Connecticut Department of Public Health, Human Health Risk Assessment of Artificial Turf Fields Based Upon Results from Five Fields in Connecticut, July 28, 2010.

[54] Connecticut Agricultural Experimental Station, 2009 Study of Crumb Rubber Derived From Recycled Tires, Final Report, revised May 4, 2010.

[55] Connecticut Department of Environmental Protection, Artificial Turf Study, Leachate and Stormwater Characteristics Final Report, July 2010.

[56] Connecticut Academy of Science and Engineering, Committee Report: Peer Review of an Evaluation of the Health and Environmental Impacts Associated with Synthetic Turf Playing Fields, June 15, 2010.

Ambient air sampling was performed at four outdoor turf fields, one indoor turf field, and at upwind background locations near each field in July 2009. The study concluded that the cancer risks were only slightly above USEPA *de minimis* levels of 1 in 1,000,000 for all scenarios evaluated, including children playing at the indoor facility, the scenario with the highest exposure, which is within typical risk levels from ambient pollution sources and below target risks associated with many air toxics regulatory programs. Chronic non-cancer risks were not elevated above a Hazard Index of 1; for acute risk, the hazard index was close to 1 for children playing at the indoor field. The study concluded that outdoor and indoor synthetic turf fields are not associated with elevated health risks, but recommended that adequate ventilation be provided at indoor field facilities to prevent accumulation of VOCs and SVOCs in indoor air.

(h) Bainbridge Island Evaluation

A 2008 evaluation conducted on behalf of the Bainbridge Island Metro Parks and Recreation District and the Bainbridge Island School District in Washington State used available scientific literature to provide an assessment of potential human health risks associated with use of synthetic turf containing tire crumb.[57] For the evaluation's assessed age groups, none of the estimated cancer risks exceeded *de minimis* excess cancer risk of 1 in 1,000,000, and the combined non-cancer hazard index for each chemical was a maximum of 0.05, far below a Hazard Index of 1.

(i) Artificial Turf and Silica Sand

According to the U.S. Department of Labor, crystalline silica is a common mineral found in many naturally occurring materials and can be found in sand, concrete, stone and mortar as well as finished products such as glass, pottery, ceramics, bricks, concrete and artificial stone.[58] The most common form of crystalline silica is quartz,[59] which is found in common beach sand. Inhalation of very small crystalline silica particles potentially increase the risk of developing silica-related diseases, including: silicosis, an incurable lung disease that can lead to disability and death; lung cancer; chronic obstructive pulmonary disease (COPD); and kidney disease.[60] An air monitoring study was conducted by FieldTurf International, Inc., *Air Monitoring Report, Quartz Silica* (2001),[61] to measure for respirable quartz silica at a multipurpose artificial turf playing field located

[57] Winward Environmental LLC, Initial Evaluation of Potential Human Health Risks Associated with Playing on Synthetic Turf Fields on Bainbridge Island, 2008.

[58] U.S. Department of Labor, Silica, Crystalline, https://www.osha.gov/silica-crystalline. Accessed February 7, 2021.

[59] U.S. Department of Labor, Crystalline Silica Exposure, Health Hazard Information for General Industry Employees, 2002, https://www.osha.gov/Publications/osha3176.html, accessed February 7, 2021.

[60] U.S. Department of Labor, Silica, Crystalline, https://www.osha.gov/silica-crystalline/background-info, accessed February 1, 2021.

[61] FieldTurf International, Inc., Air Monitoring Report, Quartz Silica, La Jolla High School, La Jolla, California, March 20, 2001.

at La Jolla High School in La Jolla, California. The laboratory analysis of the air samples collected did not detect quartz silica.

According to the United States Department of Labor, "being near sand or other silica-containing materials is not hazardous. The hazard exists when specific activities create respirable dust that is released into the air."[62] Activities such as abrasive blasting with sand; sawing brick or concrete; sanding or drilling into concrete walls; grinding mortar; manufacturing brick, concrete blocks, or ceramic products; and cutting or crushing stone are associated with the potential generation of respirable crystalline silica dust. These activities are not associated with artificial turf fields or physical education and sports activities that would occur on artificial turf fields.

(j) Artificial Turf and Staphylococcus aureus Studies

A study was conducted by The Pennsylvania State University, titled *A Survey for the Presence of Staphylococcus aureus in the Infill Media of Synthetic Turf.*[63] *Staphylococcus aureus* is a bacterium that is a common inhabitant of human skin and can cause various types of skin or soft tissue infections. The study found generally lower numbers of total microbes present in the infill or fibers of the synthetic turf systems tested compared to natural turfgrass rootzones and *Staphylococcus aureus* was not found on any of the playing surfaces.

Another study was conducted by The Pennsylvania State University, titled *Human health issues on synthetic turf in the USA*.[64] The study surveyed 20 infilled artificial turf fields was conducted to determine microbial population and presence of *Staphylococcus aureus* bacteria. *Staphylococcus aureus* colonies were found on other tested surfaces that athletes commonly come into contact with, including blocking pads, used towels, and weight equipment. The studies determined that concern that infilled synthetic turf harbors and provides a breeding ground for *Staphylococcus aureus* is unwarranted.

(iii) Impact Determinations

Impacts related to the routine use of the synthetic turf would be significant if the use resulted in adverse health effects due to inhalation of vapors and particulates from the synthetic turf, ingestion of the synthetic turf, dermal contact with the synthetic turf materials, or inappropriate use of detergents and disinfectants to maintain the field. Impacts related to routine disposal of hazardous materials could occur because the turf

62 U.S. Department of Labor, Silica, Crystalline, https://www.osha.gov/silica-crystalline/background-info. Accessed February 1, 2021.

63 McNitt, A.S., Petrunak, D.M. and Serensits, T.J., A Survey for the Presence of *Staphylococcus aureus* in the Infill Media of Synthetic Turf. Acta Hortic. 783, 567-572, 2008.

64 Serensits, T.J., A.S. McNitt, and D.M. Petrunak, Human health issues on synthetic turf in the USA, Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology published online 13 June 2011.

requires disposal or recycling at the end of its useful life, which is typically a life span of approximately 8 years or more.[65] Each of these potential impacts is discussed below.

(a) Inhalation of Vapors and Particulates

Several studies discussed above evaluated health risks associated with inhalation of vapors and particulate matter above artificial turf containing SBR. A summary of the major findings from the studies is provided in **Table IV.H-2**, *Summary of Health Risk Findings from Studies of the Inhalation of Vapors and Particulate Matter above Artificial Turf*.

TABLE IV.H-2
SUMMARY OF HEALTH RISK FINDINGS FROM STUDIES OF THE INHALATION OF VAPORS AND PARTICULATE MATTER ABOVE ARTIFICIAL TURF

Study	Health Risk Finding
2009 OEHHA Study	Increased cancer risk ranged from 1.6 to 8.7 in 1,000,000, which is at the low end of the acceptable range of 1 in 1,000,000 to 100 in 1,000,000.
2010 CalRecycle Study	Human health risk evaluation was conducted for VOCs of concern and concluded that all exposures were below health-based screening levels. Sampling data of three artificial turf fields found similar concentrations of PM2.5 upwind of the fields as directly on the fields and that, therefore, there is no public health concern related to particulate matter or heavy metals associated with particulate matter at artificial fields.
2017 Gradient Study	The study found cancer risks were below the USEPA de minimus risk of 1 in 1,000,000. The study found that non-cancer target-organ-specific Hazard Indices for all modeled receptors were also below USEPA's acceptable hazard guidelines (e.g., Hazard Index < 1).
2009 New York State Study	The study did not detect an increase of volatile organic vapors above background levels, with the exception of 2-methyl, butadiene in one of the eight samples. The increased cancer risk level would be 8 in 1,000,000 for this chemical. However, because it was not consistently detected in the air samples and exposures were not continuous, there was no public health risk resulting from exposures to turf materials. The 2009 New York study did not identify an increase in PM10 particulates in the air space above turf fields and found that PM10 concentrations were typical of background levels.
2010 Connecticut Study	The study included a health risk assessment for a total of 27 chemicals and concluded that the cancer risks were only slightly above de minimis levels for all scenarios evaluated, with the highest exposure scenario associated with children playing at the indoor facility. The calculated cancer risks were reported to be within typical risk levels from ambient pollution sources. The highest hazard index for acute risk was close to 1 for children playing at the indoor field. The study concluded that outdoor and indoor synthetic turf fields are not associated with elevated health risks.

[65] FieldTurf, Built to Last, https://fieldturf.com/en/why-fieldturf/durability/. Accessed February 1, 2021.

TABLE IV.H-2
SUMMARY OF HEALTH RISK FINDINGS FROM STUDIES OF THE INHALATION OF VAPORS AND PARTICULATE MATTER ABOVE ARTIFICIAL TURF

Study	Health Risk Finding
	The 2010 Connecticut study did not identify an increase in PM10 particulates in the air space above turf fields and found that PM10 concentrations were typical of background levels.
Bainbridge Island Evaluation	The evaluation concluded that outdoor synthetic turf fields would not result in vapors or particulate matter that would cause an exceedance of health-based cancer risk threshold levels of 1 in 1,000,000 or a noncancer hazard index of 1.

SOURCES:

OEHHA, Chemicals and particulates in the air above the new generation of artificial turf playing fields, and artificial turf as a risk factor for infection by methicillin-resistant *Staphylococcus aureus* (MRSA), Literature review and data gap identification, July 2009;

CalRecycle/OEHHA, Safety Study of Artificial Turf Containing Crumb Rubber Infill Made from Recycled Tires: Measurements of Chemicals and Particulates in the Air, Bacteria in the Turf, and Skin Abrasions Caused by Contact with the Surface, October 2010;

Michael K. Peterson, Julie C. Lemay, Sara Pacheco Shubin, Robyn L. Prueitt, Comprehensive multipathway risk assessment of chemicals associated with recycled ("crumb") rubber in synthetic turf fields, Environmental Research, Volume 160, 2018, Pages 256-268, ISSN 0013-9351;

Lim, Ly, & Walker, Randi, An assessment of chemical leaching, releases to air and temperature at crumb-rubber infilled synthetic turf fields. New York State Department of Environmental Conservation (NYDEC), 2009;

University of Connecticut Health Center, Artificial Turf Field Investigation in Connecticut, Final Report, July 27, 2010; Connecticut Department of Public Health, Human Health Risk Assessment of Artificial Turf Fields Based Upon Results from Five Fields in Connecticut, July 28, 2010; Connecticut Agricultural Experimental Station, 2009 Study of Crumb Rubber Derived From Recycled Tires, Final Report, revised May 4, 2010; Connecticut Department of Environmental Protection, Artificial Turf Study, Leachate and Stormwater Characteristics Final Report, July 2010; Connecticut Academy of Science and Engineering, Committee Report: Peer Review of an Evaluation of the Health and Environmental Impacts Associated with Synthetic Turf Playing Fields, June 15, 2010;

Winward Environmental LLC, Initial Evaluation of Potential Human Health Risks Associated with Playing on Synthetic Turf Fields on Bainbridge Island, 2008.

As summarized in the table, the 2009 OEHHA study, 2010 study by CalRecycle, 2017 Gradient study, 2009 New York State study, 2010 study by the Connecticut, and Bainbridge Island evaluation all concluded that outdoor synthetic turf fields would not result in vapors or particulate matter that would cause an exceedance of health-based risk threshold levels. **On the basis of the results of the above studies, Project impacts related to the inhalation of vapors and particulates in the air space above an artificial turf field would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

(b) Ingestion of Synthetic Turf Products

Several studies discussed above evaluated health risks associated with the ingestion of artificial turf products. A summary of the major findings from the studies is provided in **Table IV.H-3**, *Summary of Health Risk Findings from Studies of the Ingestion of Artificial Turf Products*.

As summarized in the table, the 2007 Integrated Waste Management Board study (now known as CalRecycle and prepared under contract by OEHHA), 2017 Gradient study, and Bainbridge Island evaluation all concluded that the estimated cancer risks for ingestion would either not exceeded *de minimis* excess cancer risk of 1 in 1,000,000 or would be small in magnitude so as not to present an unacceptable increase in risk, and non-cancer risks would either not exceed the hazard index of 1 or would be small in magnitude so as not to present an unacceptable health hazard. **On the basis of the results of the above studies, Project impacts related to ingestion of artificial turf products would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

TABLE IV.H-3
SUMMARY OF HEALTH RISK FINDINGS FROM STUDIES OF THE INGESTION OF ARTIFICIAL TURF PRODUCTS

Study	Health Risk Finding
2007 CalRecycle Study	The literature-based study found that the non-cancer hazard index associated with ingestion of a 10-gram piece of shredded tire would be 6.9 for all metals considered in the analysis but would be reduced to 1.8 when zinc is excluded. OEHHA determined that health effects related to zinc ingestion is unlikely as effects require weeks to develop with daily zinc ingestion over the Recommended Dietary Allowance. The increased cancer risk was 1.2 in 10,000,000, less than the de minimis level of 1 in 1,000,000. The gastric simulation experiment (considered more representative of actual conditions) determined the hazard index was 2.2, sufficiently close to a hazard index of 1 that the risk would was deemed not to represent a serious non-cancer hazard. The increased cancer risk was 3.7 in 100,000,000, less than the de minimis level of 1 in 1,000,000. Health risks from ingestion via hand-to-surface-to-mouth activity were below chronic screening values, and the increased cancer risk of 2.9 in 1,000,000 was determined by OEHHA to be acceptable because of the small magnitude.
2017 Gradient Study	The study concluded that the multipathway risk assessment for cancer risks and non-cancer hazards were below the USEPA de minimus risk of 1 in 1,000,000 and a hazard index of 1.
Bainbridge Island Evaluation	The Bainbridge Island evaluation concluded that none of the estimated cancer risks for ingestion exceeded *de minimis* excess cancer risk of 1 in 1,000,000, and non-cancer risks did not exceed the hazard index of 1.

SOURCES:

CalRecycle/OEHHA, Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products, January 2007;

Michael K. Peterson, Julie C. Lemay, Sara Pacheco Shubin, Robyn L. Prueitt, Comprehensive multipathway risk assessment of chemicals associated with recycled (“crumb”) rubber in synthetic turf fields, Environmental Research, Volume 160, 2018, Pages 256-268, ISSN 0013-9351;

Winward Environmental LLC, Initial Evaluation of Potential Human Health Risks Associated with Playing on Synthetic Turf Fields on Bainbridge Island, 2008.

(c) Dermal Contact with Artificial Turf Products

The 2007 Integrated Waste Management Board Study (now known as CalRecycle and prepared under contract by OEHHA), the 2017 Gradient Study, and the Bainbridge Island Evaluation discussed above all found that dermal contact with surfaces comprised of recycled tires or crumb tire would not cause skin sensitization in children, nor would contact with these surfaces be expected to elicit skin reactions in children already sensitized to latex. The studies concluded that none of the estimated cancer risks for dermal contact would cause an exceedance of health-based risk levels. Additionally, the 2017 Gradient study concluded that the multipathway risk assessment (child spectator/youth soccer player inhalation, ingestion, and dermal) for recycled rubber in synthetic turf fields found that cancer risks and non-cancer hazards were within the acceptable limits set by USEPA. **Based on the above, Project impacts related to dermal contact would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

(d) Exposure to Respirable Crystalline Silica

As discussed previously, an air monitoring and laboratory analysis of an artificial turf field in Southern California did not detect respirable quartz silica while physical education and sports activities were occurring on the artificial turf field. Furthermore, the potential for the generation of respirable quartz silica is associated with activities such as abrasive blasting with sand; sawing brick or concrete; sanding or drilling into concrete walls; grinding mortar; manufacturing brick, concrete blocks, or ceramic products; and cutting or crushing stone. None of these activities are associated with artificial turf fields or physical education and sports activities that would occur on artificial turf fields. **Based on the above, impacts related to exposure to respirable crystalline silica on artificial turf would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

(e) Exposure to Staphylococcus aureus

The 2019 USEPA study discussed above found higher concentrations of total bacteria in outdoor fields relative to indoor fields, but a gene commonly associated with the human skin microbiome (i.e., Staphylococcus aureus) was detected more often in indoor fields than outdoor fields.[66] The Pennsylvania State University study did not find *Staphylococcus aureus* colonies present on any field in its survey. **Based on the above, Project impacts related to exposure to *Staphylococcus aureus* on artificial turf would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

[66] U.S. Environmental Protection Agency, Synthetic Turf Field Recycled Tire Crumb Rubber Research Under the Federal Research Action Plan, Final Report Part 1–Tire Crumb Rubber Characterization Volume 1, EPA/600/R-19/051.1, July 2019.

(f) Use of Hazardous Materials for Field Maintenance

In contrast to typical natural turf fields to which pesticides, herbicides, and fungicides are regularly applied, the Project's artificial turf fields would be periodically cleaned and maintained with water or a solution of soap and water, but no disinfectants would be used. Although small amounts of solvents and adhesives could be required to make minor repairs, they would not be used in large quantities but only in spot applications at the specific repair location. **On the basis of this, Project impacts related to the use of hazardous materials for field maintenance would be less than significant because evidence does not support a conclusion of a significant increase in health risk.**

(g) Disposal of Artificial Turf

Synthetic turf has a life span of approximately 8 years or more,[67] and must be replaced at the end of its useful life. The disposal of the used turf components (fibers, infill, underlayment, and backing), in accordance with hazardous waste standards in 22 CCR 66261.20 et seq., would have to demonstrate that none of the CCR Title 22 metals concentrations exceed the California Total Threshold Limit Concentration (TTLC), which is used to classify a hazardous waste, with the exception of zinc. In addition, the infill materials would have to be analyzed for soluble metals and demonstrate that none of the soluble metals concentrations materials exceed the Soluble Limit Threshold Concentration (STLC). Although zinc levels could exceed the TTLC, disposal of the turf consistent with the management of used tires would ensure disposal as a non-hazardous material in accordance with CCR Title 22. The metals to be included in the soluble analysis include lead, zinc, and total chromium, as well as any metal in which the total metals concentration is equal to or exceeds by 10 times the STLC. In addition to compliance with applicable disposal regulations, artificial turf consists of material that can be recycled at the end of its useful life. **Compliance with applicable regulatory requirements would ensure that Project impacts related to disposal of artificial turf would be less than significant.**

(2) Mitigation Measures

Impacts regarding the routine transport, use, or disposal of hazardous materials during construction and operation of the Project, including the use of artificial turf as a playing surface, were determined to be less than significant. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

Impacts regarding the routine transport, use, or disposal of hazardous materials during construction and operation of the Project, including the use of artificial turf as a playing surface, were determined to be less than significant without mitigation. Therefore, no

[67] FieldTurf, Built to Last, https://fieldturf.com/en/why-fieldturf/durability/. Accessed February 1, 2021.

mitigation measures were required or included, and the impact level remains less than significant.

Threshold (b): Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

(1) Impact Analysis

Project construction would involve the use of hazardous materials, such as fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures. Mishandling of these materials could expose construction workers or the public to unknown hazardous materials should such materials be present. However, as noted above, Project construction would be required to adhere to a SWPPP with BMPs that include measures to safely store, transport, and dispose of hazardous materials, such that adverse effects from upset and accident conditions would be minimized. In the unlikely event that such a release would occur, the SWPPP contains BMPs that would address spill response protocols to reduce potential exposure risks to less-than-significant levels.

(a) Subsurface Soil and Soil Gas Contamination

Based on the field reconnaissance described above, no RECS were observed on the Project Site. However, as discussed below, a 500-gallon UST was removed from the Project Site and is considered to a HREC. Also, as described above, the hazardous materials database review revealed that off-site and nearby properties do not present a hazardous condition to the Project Site. Further, no hazardous materials were observed as part of the field reconnaissance on off-site or nearby properties that would present a significant environmental concern to the Project Site.

As described above, the Project Site is not located within a Methane Zone or Methane Buffer Zone.[68] The nearest well is 1.8 miles northeast of the Project Site, but the status for the well is inactive and plugged. Similar to CalGEM, the City has also indicated that no oil wells are located on the Project Site.[69] Thus, vapor encroachment from methane, oil, or gas is not a significant concern at the Project Site.

Given the long-term occupancy of a golf course and the current usage and storage of pesticides at the Project Site, on-site soil may contain pesticides, representing an environmental concern related to construction worker exposure to pesticides. However, this concern did not meet the criteria to be defined as an REC in the Phase I ESA. Furthermore, according to reviewed documents provided by LAFD, a 500-gallon UST was

[68] City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

[69] City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

removed from the Project Site in 1995, under the supervision of LAFD. Laboratory results indicated that the soil samples collected at the bottom of the tank pit, the spoils pile, and under the dispenser of the UST did not exceed action levels. Based on the lack of reported spills or leaks, the former UST is not considered to represent a REC. However, a NFA letter was not located and the former UST is conservatively considered to represent a HREC, in which contaminated soils or soil vapor could occur in the underlying soils on the Project Site near the previously removed UST. Thus, if contaminated soils from past pesticide use or the previously removed UST, along with soil vapors, are encountered during construction activities, construction works could potentially be exposed to hazardous conditions. As the Project would require grading and excavation of the Project Site, including a net cut/fill volume of approximately 250,000 cubic yards (unadjusted), these grading activities could result in the exposure of construction works to hazardous conditions associated with contaminated soils or soil vapor. **As such, the Project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving hazardous materials as a result of contaminated soils, and impacts would be potentially significant.**

(b) ACM, LBP, and PCB

As described above under the impact analysis for Threshold (a), development of the Project would require interior renovations of the clubhouse and demolition of the tennis shack. Due to the age of the clubhouse and tennis shack, which were constructed prior to the ACM and LBP ban, these hazardous materials as well as PCBs, may be present on-site. However, it is not uncommon for construction activities to encounter these potential hazards. ACM, LBP, and PCB are highly regulated. Testing of any suspected buildings or portions thereof for ACM, LBP, and PCB is part of standard construction practice at the time of demolition and/or renovation. In the event that ACM and/or LBP are discovered, their removal would be subject to specific and detailed SCAQMD and Cal/OSHA requirements to ensure the proper training, containment, handling, notification, and disposal of these materials by licensed asbestos and LBP abatement contractors. Similarly, PCB-containing lighting ballasts and/or any other building materials, such as caulking, putty, and glazing that may contain PCBs would be removed and disposed of in accordance with standard applicable regulations. **Compliance with regulatory requirements would ensure that Project impacts associated with ACM, LBP, and PCB would be less than significant.**

(2) Mitigation Measures

The following mitigation measures address impacts related to potential contaminated soils related to pesticide use and the former 500-gallon UST:

> **HAZ-MM-1: Soil Management Plan**. Prior to the issuance of grading permits, Harvard-Westlake School shall retain a qualified environmental consultant to prepare a Soils Management Plan (SMP), which shall be submitted to the Los Angeles Department of Building and Safety (LADBS) and Los Angeles Regional Water Quality Control Board (LARWQCB), as necessary, for review and approval.

The SMP shall specify soil testing parameters and sampling frequency for areas within the golf course and near the location of the 500-gallon UST removed from the Project Site in 1995. Sampling, testing, and analysis shall be conducted in accordance with appropriate California and local guidelines [e.g., Department of Toxic Substances Control (DTSC), California Environmental Protection Agency (CalEPA), and LARWQCB)]. Any soils qualifying as hazardous waste and/or soils that include concentrations of chemicals that exceed applicable State Office of Environmental Health Hazard Assessment (OEHHA) California Human Health Screening Levels (CHHSL), shall be subject to site-specific soil removal, treatment, and disposal measures included in the SMP to comply with applicable federal, State, and local overseeing agencies requirements to prevent unacceptable exposure of hazardous materials to construction workers, the environment or the public from contaminated soils or soil vapors during construction. The SMP shall also include, but is not limited to, protocols that address the following: screening measures for soil exhibiting impacts, stockpile management, vapor suppression and dust control, surface and groundwater protection, soil stockpile sampling, and exporting of contaminated soils. Upon completion of construction-related soil disturbing activities, Harvard-Westlake School shall obtain a closure letter(s) or No Further Action (NFA) letter from the LADBS, DTSC, LARWQCB, and/or other local or State agencies, as applicable, which states that no further soils testing or remediation is required on the Project Site, including near the former 500-gallon UST that was removed from the Project Site in 1995 just south of the tennis courts near the adjacent LAFD site boundary. The closure letter and/or NFA letter(s) shall at a minimum address the on-site area, including the previously removed 500-gallon UST.

HAZ-MM-2: Health and Safety Plan (HASP): Harvard-Westlake School shall commission a HASP to be prepared in compliance with Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 CFR 1910.120) and Cal/OSHA requirements (8 CCR, General Industry Safety Orders and California Labor Code, Division 5, Part 1, Sections 6300-6719) and submitted for review and approval by the LADBS. The HASP would address, as appropriate, safety requirements that would serve to avoid significant impacts or risks to workers or the public in the event that contaminated soils or elevated levels of subsurface vapors are encountered during grading and excavation. The general contractor shall be responsible for health and safety concerns not related to contaminated soils or soil vapors, such as those associated with standard construction operations (e.g., excavation stability, stockpile placement, heavy equipment operation, etc.).

(3) Level of Significance After Mitigation

Mitigation Measure HAZ-MM-1 via a SMP would ensure short-term construction activities, as well as long-term operation of the Project, does not result in the exposure of hazardous materials to construction workers, the environment or the public from contaminated soils or soil vapors potentially underlying the Project Site. Mitigation Measure HAZ-MM-2 would further protect construction workers from exposure to hazardous materials and

conditions. With implementation of Mitigation Measures HAZ-MM-1 and HAZ-MM-2, potentially significant impacts to the public or the environment from the release of hazardous materials released during upset and/or accident conditions would be reduced to a less-than-significant level.

Threshold (c): Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

(1) Impact Analysis

(a) Construction

As discussed in Subsection IV.H.2.c, Existing Conditions, above, no LAUSD elementary, middle, or high schools are located within one-quarter mile of the Project Site. The nearest LAUSD school to the Project Site is Millikan Middle School at 5401 Sunnyslope Avenue, 1.6 miles (as the crow flies) to the northwest of the Project Site. The nearest private schools to the Project Site are Harvard-Westlake School, 0.39 mile (as the crow flies) to the southwest of the Project Site and Campbell Hall School, 0.58 mile (as the crow flies) to the northeast of the Project Site. However, in a dense metropolitan area, such as Los Angeles, day care centers and/or pre-schools are sometimes associated with civic, business, and residential uses in the area and are considered sensitive receptors to hazardous materials or substances.

Construction of the Project would involve the temporary use of hazardous substances in the form of paint, adhesives, surface coatings and other finishing materials, and cleaning agents, fuels, and oils. All construction materials would be used, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions and are not expected to cause risk to the public or nearby schools. In addition, Project construction activities would include the use of diesel-powered construction equipment, which could generate diesel particulate matter (DPM) emissions. Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing. An analysis of the Project TACs emissions was conducted as part of the analysis in Section IV.B, *Air Quality*, of this Draft EIR, and includes analysis of the sensitive receptors (i.e., schools). As indicated therein, construction activities under the Project with incorporation of Mitigation Measure AQ-MM-1, which includes requirements for construction equipment features that reduce air pollutant emissions, would not expose sensitive receptors to substantial TAC concentrations. In addition, Mitigation Measure HAZ-MM-1 would establish requirements for the handling, management, and disposal of any contaminated soils or soil vapors, if encountered, which would prevent unacceptable exposure to contaminated soils or vapors during construction at any nearby school.

Based on the above, with compliance to applicable federal, State, and local laws and regulations related to environmental protection and the management of

hazardous materials, adherence to manufacturer's instructions for safe handling and disposal of hazardous materials, and implementation of Mitigation Measures AQ-MM-1 and HAZ-MM-1, potentially significant Project impacts regarding hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste during construction of the Project within one-quarter mile of an existing or proposed school would be less than significant.

(b) Operation

Hazardous materials to be used in association with operation of the Project, such as small quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, pool supplies, and other household-type materials, would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. **As such, with compliance to applicable federal, State, and local laws and regulations related to environmental protection and the management of hazardous materials, adherence to manufacturer's instructions for safe handling and disposal of hazardous materials, impacts during operation of the Project as it relates to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste during operation of the Project within one-quarter mile of an existing or proposed school would be less than significant.**

(2) Mitigation Measures

Impacts during construction regarding hazardous emissions or use of acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school during Project construction would be addressed by Mitigation Measures AQ-MM-1 and HAZ-MM-1. Operational impacts were determined to be less than significant. Therefore, no operational mitigation measures are required.

(3) Level of Significance After Mitigation

With implementation of Mitigation Measures AQ-MM-1 and HAZ-MM-1, potentially significant impacts regarding hazardous emissions or use of acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school during Project construction would be reduced to a less-than-significant level. Operational impacts were determined to be less than significant without mitigation. Therefore, no operational mitigation measures were required or included, and the operational impact level remains less than significant.

Threshold (d): Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

(1) Impact Analysis

Government Code Section 65962.5, amended in 1992, requires CalEPA to develop and update annually the Cortese List, which is a list of hazardous waste sites and other

contaminated sites.[70] While Government Code Section 65962.5 makes reference to the preparation of a list, many changes have occurred related to web-based information access since 1992 and information regarding the Cortese List is now compiled on the websites of the DTSC, the State Water Board, and CalEPA. The DTSC maintains the EnviroStor database, which includes sites on the Cortese List and also identifies potentially hazardous sites where cleanup actions (such as a removal action) or extensive investigations are planned or have occurred. As part of the Phase I ESA, a hazardous materials regulatory agency database search was conducted by EDR for the Project Site. While the Project Site was listed in several databases, as described above in Subsection IV.H.2.c, Existing Conditions, above, the Project Site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result, the Project would not create a significant hazard to the public or the environment in this regard. **As such, no impacts related to the creation of a significant hazard to the public or environment would occur as a result of the Project Site being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.**

(2) Mitigation Measures

No impacts would occur regarding the Project Site being on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no mitigation measures are required.

(3) Level of Significance After Mitigation

No impacts would occur regarding the Project Site being on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no mitigation measures were required or included.

Threshold (e): For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?

As discussed in the Initial Study (Appendix A of this Draft EIR), the Project Site is not within an airport land use plan or two miles of a public airport or public use airport. **As a result, the Project would not result in a safety hazard or excessive noise to people residing or working in the Project Site. No impact would occur with respect to Threshold (e). No further analysis is required.**

[70] California Environmental Protection Agency, Cortese List Data Resources, https://www.calepa.ca.gov/sitecleanup/corteselist/, accessed October 28, 2020.

Threshold (f): Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed in the Initial Study (Appendix A of this Draft EIR), no City-designated selected disaster routes border the Project Site. As such, intermittent higher traffic activity generated by the Project during construction or operation would not result in a continuous traffic increase on any of selected disaster routes in the vicinity of the Project Site. **As a result, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Less-than-significant impacts would occur with respect to Threshold (f). No further analysis is required.**

Threshold (g): Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

As discussed in the Initial Study (Appendix A of this Draft EIR), the Project Site is located in an urbanized area and no wildlands are present of the Project Site. The foothills of the Santa Monica Mountains are 0.13 mile to the south of the Project Site and designated as a Mountain Fire District by the City[71] and a VHFHSZ.[72] In addition, the Ventura Boulevard corridor and a narrow edge along the north side of the Los Angeles River between approximately Fulton Avenue and Laurel Canyon Drive are designated as Fire Buffer Zones.[73] However, the urbanized nature of the Ventura Boulevard corridor between the Project Site and the wildland areas of the Santa Monica Mountains, paved parking areas, and the paved Los Angeles River channel between the Project Site and the Mountain Fire District, and the location of the Project Site outside the VHFHSZ and Fire Buffer Zone, would limit the potential for wildland fire hazards spreading from wildlands within the Santa Monica Mountains to the Project Site. **Therefore, the Project would not expose people or structures, directly or indirectly, to a significant risk involving wildland fire. Less-than-significant impacts would occur related to Threshold (g). No further analysis is required.**

e) Cumulative Impacts

(1) Impact Analysis

Generally, the geographic context for cumulative impact analysis of hazards and hazardous materials includes the related projects in the vicinity of the Project that, when

71 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, adopted November 26, 1996, Exhibit D – Selected Wildfire Hazard Areas in the City of Los Angeles.

72 City of Los Angeles Department of City Planning, ZIMAS, Parcel Profile Report [APN Search]: 2375-018-020 and -903. Generated October 27, 2020.

73 City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, adopted November 26, 1996, Exhibit D – Selected Wildfire Hazard Areas in the City of Los Angeles.

viewed together with the Project, could incrementally increase a hazards impact to a significant level. Related projects are listed in Table III and shown in Figure III-1 (see Chapter III, *Environmental Setting*, of this Draft EIR). The five related projects are all located along the Ventura Boulevard corridor, south of the Project and across the Los Angeles River.

Construction and operation of the related projects could reasonably be expected to involve the limited use of potentially hazardous materials typical those used in residential and commercial developments, including gasoline, lubricants, cleaning agents, paints, and pesticides. Each related project would be subject to applicable laws and regulations and manufacturers' specifications to ensure the safe transport, storage, handling, and disposal of such materials.

The related projects are not anticipated to create a significant hazard to the public or environment because the potentially hazardous materials typically used in such developments are limited to relatively small volumes of commonplace materials. In addition, each of these developments would be required to comply with its site-specific development standards and applicable hazardous materials handling and transporting regulations and manufacturer's specifications. Lastly, according to the Phase I ESA, the related project sites are not included on any of the hazardous materials regulatory database listings that could present environmental concerns to the Project Site. **Based on the above, with the recommended mitigation measures, the Project's contribution to cumulative significant hazardous materials impacts regarding the routine transport, use, or disposal of hazardous materials; a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, would not be cumulatively considerable and, thus, cumulative impacts would be less than significant with mitigation.**

The Project would result in less-than-significant impacts regarding being located on a hazardous materials site compiled pursuant to Government Code Section 65962.5 and wildland fires. **Thus, the Project would not have the potential to contribute to cumulative impacts.**

With regards to cumulative impacts on emergency response/evacuation plans, the Project and related projects would be required to prepare construction traffic management plan, which would include street closure information, a detour plan, haul routes, and a staging plan, which would be submitted to the City for review and approval. These plans would account for construction of related projects to minimize traffic conflicts and maintain emergency access on area roadways. As with the Project, related projects would be designed to comply with applicable Los Angeles Building Code and Fire Code requirements, including compliance with LAFD fire apparatus and personnel access requirements. The Project and related projects would also be required to establish,

implement, and maintain on file an emergency response plan, which would be inspected annually by the LAFD. Furthermore, the City revises its emergency response/evacuation plans on a periodic basis, as required, to address increased growth and changes in regulatory requirements. **For these reasons, the Project, together with related projects, would provide adequate accessibility features and would not adversely affect the delivery of emergency services or impair emergency evacuation in the Project vicinity.**

With regard to wildfire, as with the Project, all related project developments would be required to comply with existing City Fire Code and other fire safety requirements, which would minimize potential impacts related to wildfires, particularly for the related projects located in a VHFHSZ. As concluded in the discussion of Project impacts above, the Project would have a less-than-significant impact as it relates to wildfire. **Therefore, no significant cumulative wildfire impacts are anticipated from the development of the Project with other future related projects.**

Based on the above, the Project's contribution to cumulative impacts relative to significant hazards and hazardous materials impacts would not be cumulatively considerable and, thus, cumulative hazards and hazardous materials impacts would be less than significant with mitigation.

(2) Mitigation Measures

Cumulative impacts related to hazards and hazardous materials would be less than significant with implementation of Mitigation Measures AQ-MM-1, HAZ-MM-1, and HAZ-MM-2. No additional mitigation measures to address cumulative impacts are required.

(3) Level of Significance after Mitigation

Cumulative impacts related to hazards and hazardous materials would be less than significant with implementation of Mitigation Measures AQ-MM-1, HAZ-MM-2, and HAZ-MM-2.