7 HAZARDS AND HAZARDOUS MATERIALS

7.1 INTRODUCTION

The Hazards and Hazardous Materials chapter of the EIR describes existing and potentially occurring hazards and hazardous materials within the proposed project area. The chapter includes a discussion of potential impacts posed by such hazards to the environment, as well as to workers, visitors, and residents within and adjacent to the project area. Per the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (*CBIA*), the California Supreme Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment – and not the environment's impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions." (*Id.* at pp. 377-378.).

The Hazards and Hazardous Materials chapter is primarily based on information drawn from the Phase I Environmental Site Assessment (ESA) prepared for the project site by Professional Service Industries, Inc. (PSI) (see Appendix H),[1] the Phase II ESA (see Appendix I),[2] the Final Preliminary Endangerment Assessment (see Appendix J),[3] the Removal Action Work Plan (RAW) (see Appendix K)[4] prepared by Cornerstone Earth Group, the Final Voluntary Cleanup Agreement[5] between the United Auburn Indian Community (UAIC) and the California Department of Toxic Substances Control (DTSC), and the Placer County General Plan[6] and associated EIR.[7] Impacts related to the project's potential to impair implementation of or physically interfere with an adopted emergency response plan are addressed in Chapter 9, Transportation and Circulation, of the EIR.

7.2 EXISTING ENVIRONMENTAL SETTING

The following section includes a definition of hazardous materials, descriptions of the existing conditions associated with the project site related to hazards and hazardous materials, and a description of surrounding land uses.

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1 Professional Service Industries, Inc. *Report of Phase I Environmental Site Assessment*. November 23, 2015.
2 Cornerstone Earth Group. *Limited Phase II Soil Quality Evaluation 3141 Taylor Road Loomis, California*. December 22, 2016.
3 Cornerstone Earth Group. *Final Preliminary Endangerment Assessment Report*. November 16, 2017.
4 Cornerstone Earth Group. *Draft Removal Action Work Plan*. June 5, 2018.
5 Department of Toxic Substances Control. *Final Voluntary Cleanup Agreement for the United Auburn Indian Community Tribal School, Located at 3141 Taylor Road, Placer County, California, 95650*. May 25, 2017.
6 Placer County. *Countywide General Plan Policy Document*. August 1994 (updated May 2013).
7 Placer County. *Countywide General Plan EIR*. July 1994.

Hazardous Substances

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, State, or local regulatory agency or if it has characteristics defined as hazardous by such an agency. The DTSC defines hazardous waste, as found in the California Health and Safety Code, Section 25141(b), as follows:

> […] its quantity, concentration, or physical, chemical, or infectious characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

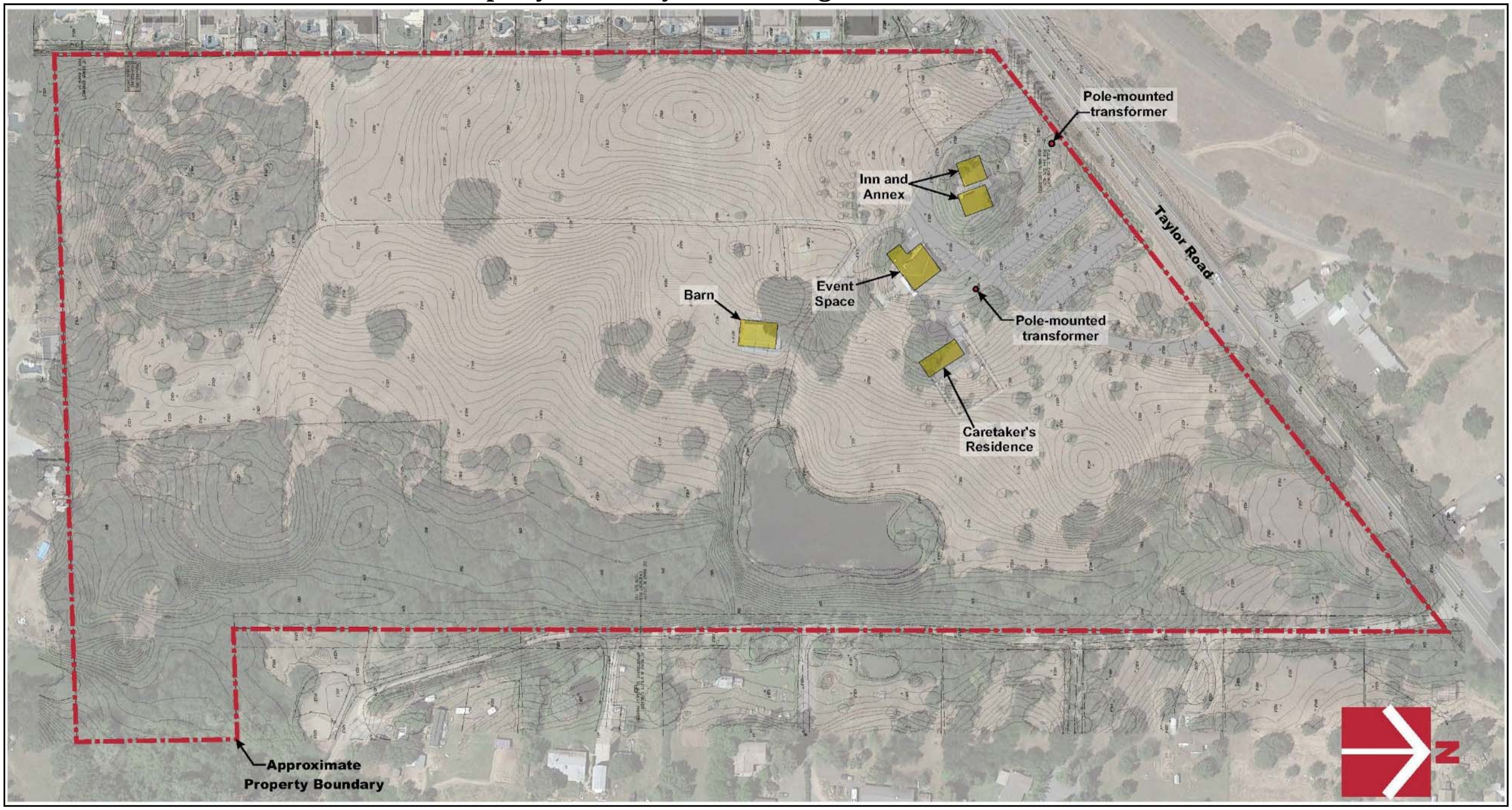
Project Site Conditions

The 45-acre project site is located at 3141 Taylor Road in unincorporated Placer County, adjacent to the Town of Loomis. The site is within the Horseshoe Bar/Penryn Community Plan area, on the southwest corner of Taylor Road and Tumble Lane. As shown in Figure 7-1, the project site is currently developed with five structures: two two-story buildings formerly used as an inn and annex, a single-story event space, a caretaker's residence, a detached garage, and a maintenance barn. Small quantities of lubricants, oils, gasoline, and herbicides are located within the barn. The remainder of the site is undeveloped. A septic tank associated with the existing on-site structures is located on the project site and a water well is located in the garden on the northwestern portion of the project site. Septic systems have the potential to affect subsurface soils associated with the effluent from the systems and/or any potentially faulted septic tanks. In addition, abandoned wells may pose a health and safety hazard if improperly sealed or not sealed at all. Hazardous material release incidents related to the septic tank and water well were not reported. Based on the prior site usage, the septic tank and water well are not likely to have had any significant effects on groundwater quality beneath the site.

Based on the information presented in the Phase I ESA, approximately 24 acres of the site appears to have been occupied by an orchard and a residence in 1906. The review of aerial photographs indicate that the residence appears to be in the same location as the current inn and annex. The event center, barn, and caretaker's residence appear to have been developed between 1966 and 1984. Additionally, by 1966, the orchard appeared to be diminishing in extent and density of trees, although remnants of apparent orchard trees are visible on aerial photographs through 2005.

The potential hazards associated with the project site are described in further detail below.

Figure 7-1
Property Boundary and Existing On-Site Structures



Pole-mounted Transformers

As shown on Figure 7-1, two pole-mounted transformers are located on the northern portion of the site; one near Taylor Road and one near the event building. A potential exists that polychlorinated biphenyls (PCBs), a persistent organic pollutant, may have been used within the transformers. PCBs are man-made chemicals commonly used in the past as coolants and lubricants. PCBs have a range of toxicity and are found as a clear to yellow, heavy, oily liquid or waxy solid. PCBs were frequently used as insulation in electrical equipment because of their stability, low water solubility, high boiling point, low flammability, and low electrical conductivity. Prior to 1978, when manufacturing was banned due to toxicity and pollution concerns, PCBs were often used in the manufacture of transformers and capacitors, and leaks or releases from transformers producing contaminated areas have been documented. The age of the transformer does not necessarily indicate the presence or absence of impacts to soil from PCBs, as releases of PCBs from a previous transformer may have occurred before its replacement. Once released to the environment, PCBs bind to soil particles and are very persistent.

Asbestos and Lead Materials

Asbestos is a material that was commonly used in heating and electrical insulation because of the material's resistance to fire and heat. However, later discoveries found that, when inhaled, the material caused serious illness. For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation (boiler insulation, pipe lagging, and related materials) and surface materials must be designated as "presumed asbestos-containing material" unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act.

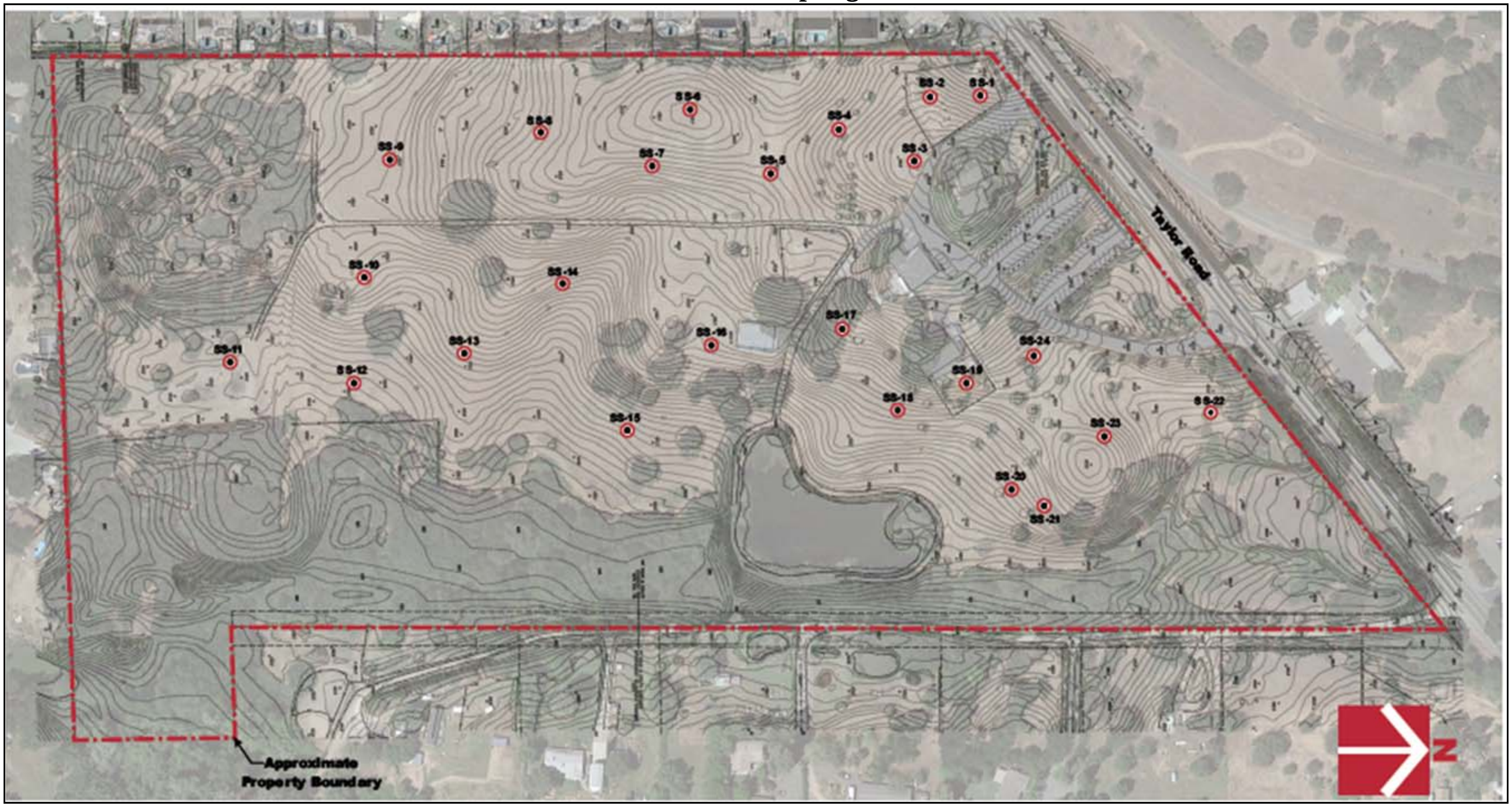
Lead is also a highly toxic material that may cause a range of serious illnesses, and in some cases death. Lead was most commonly used in paint. Lead-based paints could be present in structures built prior to 1970. In 1978, the Consumer Product Safety Commission banned the use of lead as an additive to paint. Typically, exposure of construction workers to lead from older vintage paint could occur during renovation, maintenance, or demolition work.

Due to the age of the existing on-site structures, the possibility exists that asbestos-containing materials and lead-based paint have been used in the construction of such structures.

Soil Contamination

Due to the historical agricultural activities conducted on the project site, a Phase II ESA was prepared for the project to evaluate the surface soil for residual contamination associated with such. As part of the Phase II ESA, near-surface soil sampling was conducted for soils within the former orchard area of the project site to a depth of approximately 0.5 feet (see Figure 7-2). The soil samples were analyzed for organochlorine pesticides (OCPs), and pesticide-related metals (arsenic, lead, and mercury).

Figure 7-2
Phase II ESA Soil Sampling Locations



The results were compared to the residential screening levels (DTSC-SL) recommended in the DTSC Office of Human and Ecological Risk (HERO) guidance document *Human Health Risk Assessment Note 3*. For parameters and compounds where DTSC-SLs are not established, the detected compounds were compared to the Regional Screening Levels (RSLs) established by the U.S. Environmental Protection Agency (USEPA) Region 9. According to the Phase II ESA results, concentrations in the soil of all OCPs, lead, and mercury were found to be less than the applicable screening levels. However, the concentrations of arsenic detected in several of the soil samples exceeded published background levels.

Summary of Phase II ESA Soil Analytical Data

The results of the Phase II ESA soil analysis are summarized below:

- Dichlorodiphenyltrichloroethane (DDT) was detected in 22 of 24 soil samples at concentrations up to 0.138 milligrams per kilogram (mg/kg). The residential RSL for DDT is 1.9 mg/kg. The DDT detected in the site's topsoil does not appear to pose a significant risk to human health for the planned school use.
- Dichlorodiphenyldichloroethane (DDD) was detected in two of 24 soil samples at concentrations up to 0.0186 mg/kg. The residential RSL for DDD is 2.2 mg/kg. The DDD detected in the site's topsoil does not appear to pose a significant risk to human health for the planned school use.
- Dichlorodiphenyldichloroethylene (DDE) was detected in 24 of 24 soil samples at concentrations ranging up to 0.522 mg/kg. The residential RSL for DDE is 1.6 mg/kg. The DDE detected in the site's topsoil does not appear to pose a significant risk to human health for the planned school use.
- Total DDT (the sum of DDT, DDD and DDE) was detected at concentrations of less than 1.0 mg/kg in the 24 soil samples analyzed.
- Other OCPs were not detected.
- Lead was detected in 28 of 28 discrete samples ranging from 3.75 mg/kg to 79.8 mg/kg, below the DTSC-SL for lead of 80 mg/kg.
- Arsenic was detected in 24 of 24 samples at concentrations ranging from 4.07 mg/kg and 29.2 mg/kg. Arsenic was detected exceeding the established threshold of 12 mg/kg, set in the DTSC document *Interim Guidance for Sampling Agriculture Properties* (DTSC, 2008), in six of 24 samples analyzed.
- Mercury was not detected above the laboratory reporting limits.

Based on the results of the Phase II ESA regarding arsenic concentrations in the soil, Cornerstone Earth Group recommended that UAIC discuss the site with the DTSC to evaluate their requirements for oversight.

Voluntary Cleanup Agreement

Following discussion with DTSC, on May 25, 2017, the UAIC entered into a Voluntary Cleanup Agreement (VCA) with DTSC, pursuant to Health and Safety Code Section 25355.5(a)(1)(C), which authorizes DTSC to enter into an enforceable agreement to oversee the investigation and/or remediation of a release or threatened release of any hazardous substance at or from the site. The VCA required preparation of a Preliminary Endangerment Assessment (PEA) to determine whether a release or threatened release of hazardous substances exists at the site that poses a threat to human health or the environment.

Preliminary Endangerment Assessment

Prior to conducting the PEA, DTSC approved a PEA Work Plan (approval letter dated June 29, 2017). The PEA Work Plan described the following areas of potential concern (AOCs) that required additional investigation.

Areas of Potential Concern

The areas of potential concern that required additional investigation are discussed in further detail below.

PCBs

As previously discussed, a potential exists that PCBs may have been used within the on-site transformers. PCBs are discussed in further detail above.

Lead Paint, Pest Control, PCB Building Materials

Soil adjacent to former and existing structures that have been painted with lead-containing paint and/or have caulking containing PCBs around windows could contain lead and/or PCBs as a result of the weathering and/or peeling of painted and/or caulked surfaces. Soil near wood-framed structures could contain OCPs if pesticides containing OCPs were used to control termites. Due to the age of the existing and former structures, a potential exists that residual concentrations of lead, PCBs, and/or OCPs may be present in the shallow soil near the former and existing structures.

Pond Sediment Sampling

The site topography generally slopes to the northeast towards the on-site pond. During prior heavy rainfall events, overland flow could have transported surface soil to the pond. DTSC staff requested sampling of the sediment in the pond to determine if OCPs or pesticide-related metals have been transported and deposited in the pond.

Arsenic in Soil

As noted above, arsenic was detected in soil samples collected in December 2016 potentially exceeding published regional background levels. The greatest concentration of arsenic was detected in sample SS-12 at 29.2 mg/kg. Step-out samples were collected around the sample to determine the lateral extent of the elevated arsenic detected.

Naturally Occurring Asbestos (NOA)

Asbestos occurs naturally in ultramafic rock. The six-regulated asbestos-form minerals include: Chrysotile, Amosite, Crocidolite, Tremolite, Anthophyllite, and Actinolite. When those materials or other asbestos-form minerals are disturbed in connection with construction or grading, asbestos-containing dust can be generated. Exposure to asbestos can result in health ailments. The DTSC 2004 interim guidance document, *NOA at School Sites*, recommends soil sampling when a proposed school site is located within a 10-mile radius of an NOA geologic formation.

The site is located within the Sierra Nevada geomorphic province, a tilted fault block almost 400 miles long that is characterized by intrusions of granitic rocks and block faulting along its eastern boundary. The site is located on the western slope of the Sierra Nevada mountain range.

Based on the review of readily available geologic maps, the nearest ultramafic geologic formation that may contain NOA is located approximately four-and-a-half miles east of the site. Another ultramafic outcrop is mapped approximately eight miles north-northeast of the site.

Soil in areas downslope of ultramafic NOA-containing rock may contain NOA because of ultramafic particles transported by gravitational and hydrologic processes. The ultramafic geologic formation outcrops are separated from the site by the American River, other topographic lows, and ridges. Because of the intervening elevation lows and ridges between the ultramafic outcrops and the site, transport of soil/sediment from the outcrops to the site is not considered likely. Therefore, NOA is not suspected to be present in soil beneath the site.

California Assessment Manual (CAM) 17 Metals

Surface soil samples collected in December 2016 were analyzed for arsenic, lead, and mercury as an initial soil quality screening. Accordingly, DTSC required additional analyses for 17 CAM metals as part of the PEA.

PEA Soil Sampling

As part of the PEA, additional soil sampling was conducted in July 2017, including deeper samples at previously collected locations per the Phase II ESA, as well as samples from locations on the site not previously tested as part of the Phase II ESA, such as the exterior perimeter of the on-site buildings, within the pond, and near the on-site transformers. In addition, samples were collected in undeveloped areas of the site to determine the site's specific background concentration of arsenic. PEA sampling locations are shown in Figure 7-3, and can be described as follows:

- Samples collected in December 2016 (SS-1 through SS-24) were resampled and analyzed for CAM 17 metals;
- Seven samples (SS-25 through SS-31) were collected at the exterior perimeter of the inn and annex buildings;
- Five samples (SS-32 through SS-36) were collected at the exterior perimeter of the event space;
- Six samples (SS-37 through SS-42) were collected at the exterior perimeter of the caretaker's residence;
- Four samples (SS-43 through SS-46) were collected at the exterior perimeter of the barn;
- Three samples (SS-47 through SS-49) were collected from the pond sediment;
- Two samples (SS-50 through SS-51) were collected from the areas of the on-site transformers;
- Four step-out samples (SS-12A through SS-12D) were collected from the sample location from December 2016 that had the greatest concentration of arsenic (SS-12);
- Six samples (SS-4, -6, -8, -12, -16, and -22) were collected at previously collected arsenic locations at deeper levels; and
- Four samples (BG-1 through BG-4) were collected from undeveloped areas of the site (areas of the site that do not appear to have been occupied by orchards or otherwise developed, based on review of historic aerial photographs) to determine the site's background arsenic concentrations.

Summary of PEA Soil Analytical Data

The soil analytical results of the PEA are summarized below:

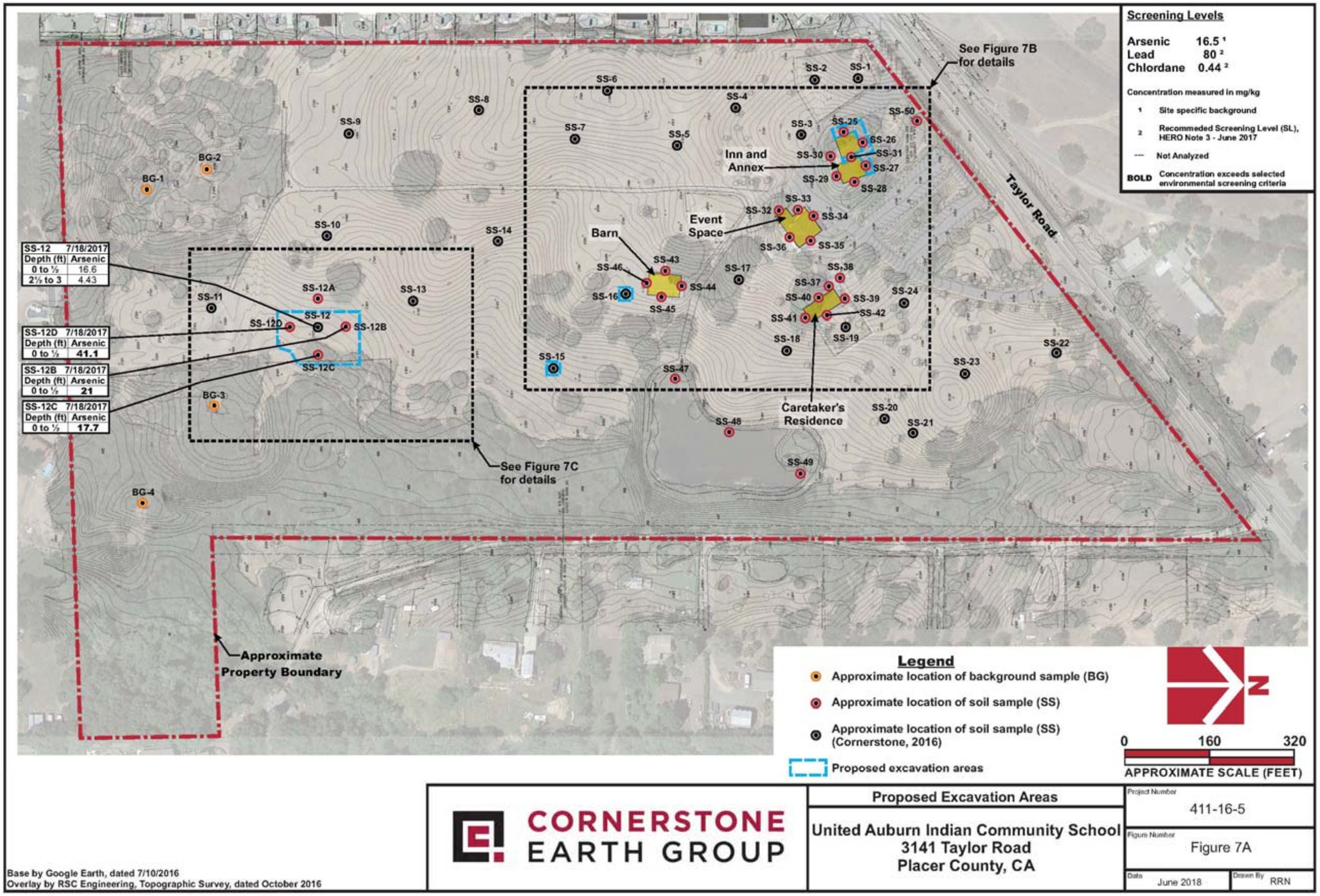
<u>Arsenic Background Sample Concentrations</u>

- Arsenic was detected in four of four background samples (BG-1 through BG-4) at concentrations ranging from 4.29 to 5.20 mg/kg.

<u>Former Orchard Areas</u>

- Arsenic was detected in 34 of 34 samples analyzed ranging from 4.43 to 41.1 mg/kg, with two samples exceeding the site background concentration of 17.5 mg/kg (see below section discussing the arsenic background evaluation for the site).
- Lead was detected in 34 of 34 samples analyzed ranging in concentration from 11.8 to 121 mg/kg, with one sample (SS-16, 0 – ½ foot) exceeding the residential DTSC-SL of 80 mg/kg.

Figure 7-3
Soil Sample Locations, Arsenic Results, and Proposed Excavation Areas



- The remaining metal concentrations detected were below the respective screening levels or published background levels.
- Concentrations of DDD, DDE, DDT, Total DDT were detected at concentration below the respective residential screening levels.

Soil Adjacent to Structures

- Arsenic was detected in 22 of 22 soil samples analyzed ranging from 2.6 mg/kg to 13.2 mg/kg, with none of the samples exceeding the site background level.
- Lead was detected in 22 of 22 soil samples at concentrations ranging from 3.96 mg/kg to 260 mg/kg, with four samples exceeding the residential DTSC-SL of 80 mg/kg. All four of the samples exceeding 80 mg/kg were collected from the exterior perimeters of the inn and annex buildings.
- The remaining metal concentrations detected were below the respective screening levels or published background levels.
- Chlordane was detected in 9 of 22 samples collected ranging in concentrations from 0.304 mg/kg to 1.49 mg/kg. One sample, SS-26, collected in the upper ½ foot of soil, near the inn and annex, detected chlordane at a concentration exceeding the residential DTSC-SL of 0.44 mg/kg.
- Concentrations of DDD, DDE, DDT, Total DDT, alpha-chlordane, dieldrin, heptachlor, heptachlor epoxide were detected at concentration below the respective residential screening levels.
- PCBs were not detected in any of the 18 of 18 soil samples collected from the perimeters of the inn and annex, event center or caretaker's residence.

Pond Sediment

- Arsenic was detected in three of three soil samples analyzed ranging from 1.08 mg/kg to 5.37 mg/kg.
- Lead was detected in three of three soil samples at concentrations ranging from 1.36 mg/kg to 11.2 mg/kg.
- The remaining metal concentrations detected also were below the respective screening levels or published background levels.
- Concentrations of DDE, DDT and Total DDT were detected at concentration below their respective residential screening levels. Other OCPs were not detected.
- PCBs were not detected in the pond sediment samples.

Soil Beneath Transformers

- PCBs were not detected in soil samples collected beneath the two pole-mounted transformers.

Arsenic Site-Specific Background Level and Bioavailability Assessment

The following section discusses the arsenic site-specific background level and the bioavailability assessment conducted as part of the PEA.

Arsenic Background Level

Natural background concentrations of arsenic are often well above the health-based DTSC screening level of 0.11 mg/kg; however, DTSC generally does not require cleanup of metals in soil to below background levels. An evaluation of background arsenic concentrations was performed using site arsenic data in accordance with DTSC guidance. The 95th and 99th percentiles of the background population were calculated as 16.5 mg/kg and 17.5 mg/kg, respectively. Because the background dataset is large (n=65), the data are considered robust, and the distribution is well defined, the 99th percentile of 17.5 mg/kg is considered representative of the site-specific background.

Arsenic Bioavailability Assessment

Most human health risk assessments assume that arsenic is highly bioavailable (absorbable by the body), likely leading to an overestimate of risk. When arsenic is present in soil, the arsenic associates with other minerals. The associations reduce the solubility of arsenic, thereby reducing the bioavailability of arsenic and resulting toxicity. To address that issue, DTSC has developed a recommended methodology, the California Arsenic Bioaccessibility (CAB) method, to evaluate a site-specific relative bioavailability (RBA). The RBA is a ratio that compares the bioavailability of arsenic in soil to that of arsenic in water. A site-specific RBA can replace the default assumption used in risk assessment equations resulting in a more refined estimate of risk. The site-specific RBA also can be used to develop a health-risk based cleanup goal for arsenic.

Cornerstone Earth Group submitted an Arsenic Bioavailability Work Plan to DTSC on August 28, 2017. On September 7, soil samples were collected from five locations that were previously sampled (BG-1, SS-3, SS-12D, SS-23 and SS-43), from the surface to a depth of approximately one-half foot (or six inches). The soil samples were submitted and analyzed.

The results showed a low RBA in the majority of the samples. Only samples from the vicinity of location SS-12 (B, C, and D), which are in the former orchard area, have arsenic concentrations detected above the site-specific background level. Based on the CAB assessment results, samples with arsenic above background levels at the site appear to be more bioavailable, which likely reflects anthropogenic sources. Based on the low bioavailability of lower concentration soils and the apparent limited extent of soils with concentrations above background levels, removal of soil from the vicinity of sample SS-12 would be health-protective for the proposed land use.

PEA Conclusion

DTSC approved the PEA on November 16, 2017. Because lead and the OCP compound chlordane were found at concentrations exceeding screening levels in the soils from the perimeter of the inn and annex buildings, which were likely related to lead-based paint on former building materials and pest control spraying, the PEA concluded that the soils around the perimeter of the existing inn and annex buildings be removed. In addition, only samples from the vicinity of location SS-12 (B, C, and D), SS-15 and SS-16 within the former orchard area, had arsenic exceeding the site-specific background level. Accordingly, the PEA recommends such locations be considered for a removal action. Removal of soils from the vicinity of SS-12, SS-15 and SS-16 is expected to be health-protective for the proposed land use. The site-specific 95 UCL for arsenic would be considerably lower and well within background levels once soils in the vicinity of SS-12, SS-15 and SS-16 are removed.

April 2018 Supplemental Soil Sampling

Wetland mapping by the project biologist identified wetlands located in close proximity to the southernmost soil removal area (see SS-12 in Figure 7-3). To evaluate whether the initial soil removal area can be configured to avoid the wetland area, on April 23, 2018, Cornerstone field personnel collected soil samples from five locations within and near the wetlands using handsampling equipment.

Arsenic was detected above the cleanup goal of 16.5 mg/kg in 2 of 5 samples (SS-100 [21 mg/kg] and SS-200 [48 mg/kg]). Concentrations detected decreased significantly within the wetland area.[8] Based on analytical data collected to date, Cornerstone proposed, and DTSC agreed, to delineate the initial excavation extent to avoid the wetland (as shown in Figure 7-3; see SS-12).[9] In accordance with the RAW, the final excavation extent will be based on laboratory analyses of verification soil samples. For purposes of this EIR, it has been conservatively assumed in the Biological Resources chapter that the wetland may need to be ultimately impacted.

Removal Action Work Plan

With the exception of arsenic, the cleanup goals selected for the on-site contaminants of concern are the residential screening levels (DTSC-SL) recommended in the DTSC HERO guidance document Human Health Risk Assessment Note 3. For compounds where DTSC-SLs are not established, the selected cleanup goals are the RSLs established by the USEPA Region 9. Accordingly, the cleanup goal for lead is the screening level of 80 mg/kg recommended by Human Health Risk Assessment Note 3, and the cleanup goal for

8 Cornerstone Earth Group. *Supplemental Soil Quality Evaluation, 3141 Taylor Road, Loomis, California*. May 10, 2018.

9 California Department of Toxic Substances Control. *Acceptance of the Supplemental Soil Quality Evaluation for the Planned Tribal School Site Located at 3141 Taylor Road, Placer County, California*. May 16, 2018.

chlordane is the screening level of 0.44 mg/kg recommended by Human Health Risk Assessment Note 3.
For arsenic, as stated previously, natural background concentrations of arsenic are often well above the health-based DTSC screening level of 0.11 mg/kg, as is the case for the project site. DTSC generally does not require cleanup of arsenic in soil to below background levels. The 95th and 99th percentiles of the background arsenic were calculated as 16.5 mg/kg and 17.5 mg/kg, respectively. The 99th percentile concentration was determined to be representative of site background. As a health-protective measure, UAIC has elected to use the 95th percentile, 16.5 mg/kg, as the arsenic cleanup goal. DTSC has concurred with this arsenic clean-up goal for the project site.

The RAW evaluated three removal action alternatives for mitigating the threat to human health and the environment posed by the contaminants of concern in the on-site soils and soil vapor at the site. The alternatives include the following:

- Alternative 1 – No action.
- Alternative 2 – Excavation and on-site consolidation of arsenic, lead, and OCP-impacted soil; excavation and disposal of arsenic exceeding site-specific background of 16.5 mg/kg.
- Alternative 3 – Excavation and off-site disposal of lead and OCP-impacted soil exceeding environmental screening criteria; excavation and disposal of arsenic exceeding site-specific background of 16.5 mg/kg.

Alternative 1 would not involve the removal or capping of the impacted soil at the site. Under Alternative 2, the arsenic, lead, and OCP-impacted soil would be excavated, consolidated on-site, and capped with hardscape surfaces (e.g. asphalt pavement or concrete). Institutional controls including a deed restriction and long-term operation and maintenance plan would be implemented. Alternative 3 is similar to Alternative 2 except that the arsenic, lead, and OCP-impacted soil would be excavated and disposed at an off-site permitted facility. The remedial excavations would be backfilled with imported soil that meets the environmental screening criteria.

The removal action alternatives were evaluated for effectiveness based on the following: performance and reliability to eliminate or reduce the risk associated with the contaminants of concern; overall protection of public health and the environment; long- and short-term effectiveness; reduction of toxicity, mobility, or volume through treatment; and ability to meet the remedial action objectives and goals.

Based on the evaluation of the alternatives, Alternative 1 was determined to be considered ineffective and not implementable. Although Alternative 2 was considered effective and implementable, a deed restriction would be required, which could increase the project construction schedule. Alternative 2 was also less cost-effective than Alternative 3. Therefore, Alternative 3 was chosen, as Alternative 3 would not impact the overall project schedule and would be more cost-effective than Alternative 2. The schedule efficiencies with Alternative 3 have to do with the fact that contaminated soil would be off-hauled, thus allowing school construction to proceed as expeditiously as possible. This is in contrast to Alternative 2 which would delay school construction while the contaminated soils are contained and capped on-site. In addition, Alternative 3 was the most conservative of the alternatives, because arsenic exceeding the background concentration, and lead and OCP-impacted soil exceeding environmental screening criteria, would be removed from the site. Thus, the potential for ongoing exposure to on-site lead and OCP-impacted soil would be eliminated.

Surrounding Land Uses

Land uses surrounding the project site include a single-family residential subdivision (Legacy Lane) to the west, within the Town of Loomis, rural residential developments to the south and east, and additional rural single-family residences to the north of the site, across Taylor Road and to the south of the nearby railroad tracks. A commercial boat repair business (Cal's Marine Power Center) is situated to the east of the single-family residences, north of the intersection of Taylor Road and Tumble Lane. A multi-family development (The Orchard) is located adjacent to the southeast corner of the project site. Other nearby land uses include Del Oro High School located approximately 0.13-mile to the southwest and Smart Start Preschool located approximately 0.20-mile to the south.

7.3 REGULATORY CONTEXT

Many agencies regulate hazardous substances. The following discussion contains a summary of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the U.S. Environmental Protection Agency (USEPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control Act;
- Clean Air Act;
- Occupational Safety and Health Act;
- Federal Insecticide, Fungicide, and Rodenticide Act;
- Comprehensive Environmental Response, Compensation, and Liability Act;
- Guidelines for Carcinogens and Biohazards;
- Superfund Amendments and Reauthorization Act Title III;
- Resource Conservation and Recovery Act;
- Asbestos Hazard Emergency Response Act;
- Residential Lead-Based Paint Hazard Reduction Act;
- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the U.S. Environmental Protection Agency (USEPA) under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the DTSC was authorized to implement the State's hazardous waste management program for the USEPA. The USEPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

State Regulations

The Cal-EPA and the California SWRCB establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State laws include the following:

- Public Safety/Fire/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act;
- Porter-Cologne Water Quality Control Act;
- Senate Bill 1241;
- Risk Management Program;
- Process Safety Management Program;
- Cortese List: Government Code Section 65962.5(a);
- California Vehicle Code Section 31303;
- California Health and Safety Code; and
- California Accidental Release Program.

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Local Regulations

Relevant goals and policies from the Placer County General Plan and other local guidelines and regulations related to hazards and hazardous materials are discussed below. The Horseshoe Bar/Penryn Community Plan does not contain specific goals or policies related to hazards and hazardous materials.

<u>Placer County General Plan</u>

The following policies from the Placer County General Plan are applicable to the proposed project:

Policy 8.C.3. The County shall require that new development meets state, County, and local fire district standards for fire protection.

Policy 8.C.5 The County shall ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce the potential loss of life and property in accordance with state and local codes and ordinances.

Policy 8.C.11 The County shall continue to work cooperatively with the California Department of Forestry and Fire Protection and local fire protection agencies in managing wildland fire hazards.

Policy 8.D.1. The County shall ensure that new development around airports does not create safety hazards such as lights from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Policy 8.G.1. The County shall ensure that the use and disposal of hazardous materials in the County complies with local, state, and federal safety standards.

Policy 8.G.2 The County shall discourage the development of residences or schools near known hazardous waste disposal or handling facilities.

Policy 8.G.3 The County shall review all proposed development projects that manufacture, use, or transport hazardous material for compliance with the County's *Hazardous Waste Management Plan* (CHWMP).

<u>Placer County Environmental Health Department</u>

The Placer County Environmental Health Department (PCEHD) is the Certified Unified Program Agency for local implementation of CalARP and several other hazardous materials and hazardous waste programs. PCEHD is responsible for regulating hazardous materials business plans and chemical inventory, hazardous materials storage, hazardous materials management plans, and risk management plans. The hazardous materials business plan program requires businesses in Placer County to prepare business emergency response plans if hazardous materials storage equals or exceeds 55 gallons of liquid, 500 pounds of solid, or 200 cubic feet of gas. The goal of PCEHD is to protect human health and the environment by ensuring that hazardous materials and hazardous waste are properly managed.

The PCEHD distributes the information in the hazardous materials business plans and business emergency response plans to emergency response agencies, such as fire departments and Hazardous Materials Response Teams. The PCEHD helps to facilitate the resources necessary for first responders to emergency incidents using emergency response plans and training responders for preparedness.

7.4 Impacts and Mitigation Measures

The following section describes the standards of significance and methodology used to analyze and determine the proposed project's potential impacts related to hazards and hazardous materials. A discussion of the project's impacts, as well as mitigation measures where necessary, is also presented.

Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of the Draft EIR, an impact is considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine handling, transport, use, or disposal of hazardous or acutely hazardous materials;
- 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;
- Emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school;
- 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 create a significant hazard to the public or the environment;
- 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, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area;
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;
- Create any health hazard or potential health hazard; and/or
- Expose people to existing sources of potential health hazards.

<u>Issues Not Discussed Further</u>

It should be noted that the Initial Study prepared for the proposed project (see Appendix C) determined that development of the proposed project would result in no impact or a less-than-significant impact related to the following impacts:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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, create a significant hazard to the public or the environment;

- 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, result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

For the reasons cited in the Initial Study, the impacts discussed above are not analyzed further in this EIR.

Method of Analysis

The project site conditions have been compared to the standards of significance presented above in order to determine the project's impact significance. Site conditions and potential project impacts are based primarily on the Phase I ESA, the Phase II ESA, and the PEA conducted for the proposed project.

Phase I ESA

The goal of a Phase I ESA is to identify whether recognized environmental conditions (RECs) exist at a property, where RECs are defined by ASTM as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a 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 Phase I ESAs meet or exceed the requirements of the ASTM "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05." The Phase I ESA for the proposed project site included a site reconnaissance, a vapor encroachment screening, interviews, as well as a client questionnaire to obtain information about the uses and conditions of the project site. Additionally, a review of aerial photographs, historical topographic maps, street directories, and information provided by an environmental database firm was performed to determine the past use of the project site.

Phase II ESA

On December 16, 2016, Cornerstone Earth Group collected 24 near-surface soil samples from across the former agricultural area of the site, with approximately one sample per acre. Sample frequency of the former agricultural area was selected in general accordance with the DTSC *Interim Guidance for Sampling Agricultural Fields for School Sites*. Samples were collected from the natural ground surface to a depth of approximately one-half foot using hand-sampling equipment.

PEA

As part of the PEA, additional soil sampling was performed to address areas identified by DTSC for further evaluation. On July 18, 2017, Cornerstone Earth Group implemented the sampling and analyses plan presented in the DTSC-approved PEA Work Plan. Soil samples were collected in the areas shown in Figure 7-3.

In addition, Cornerstone Earth Group performed a bioavailability assessment on September 7, 2017. Soil samples were collected from five locations that were previously sampled, from the surface to a depth of approximately one-half foot. The soil samples were analyzed using the Standard Operating Procedure for the California Arsenic Bioaccessibility method. The results are discussed in the Environmental Setting Section.

Human Health Risk Screening Evaluation

As part of the PEA process, DTSC typically requires that a human health screening level evaluation be performed in general accordance with the methods outlined in DTSC's PEA Guidance Manual. The screening human health risk evaluation outlined in the PEA Guidance Manual is intended to be a health-conservative evaluation of potential risks posed by chemicals at a site. For example, the evaluation assumes a site will be used for residential purposes regardless of actual or intended land use. Non-cancer hazard quotients (HQs) and incremental lifetime cancer risks (ILCRs) are estimated using an established human health risk-based residential screening concentration. The screening concentrations are based on a target HQ of 1.0 and a target ILCR of one in a million (1×10-6).

The screening levels used in the evaluation are residential RSLs unless a DTSC-SL is available. The soil screening levels assume exposure via incidental soil ingestion, dermal contact with soil, and inhalation of vapors or resuspended particulates in ambient air. Screening levels are available for the majority of the compounds detected in soil samples collected at the site. Cancer risks and non-cancer indices for arsenic, lead and detected OCPs are summarized in Table 7-1 below. Other CAM 17 metals were detected below residential screening levels and published background levels and, therefore, were not included in Table 7-1.

As shown in the table, arsenic, lead, and chlordane concentrations exceed the applicable cancer screening criteria, as well as the cancer risk target. Arsenic and lead also exceed the applicable non-cancer screening criteria and non-cancer hazard index. All other constituents are below the applicable screening criteria, cancer risk target, and non-cancer hazard index target.

Detailed methodology and results of the PEA and bioavailability assessment are included in Appendix J to this EIR.

Table 7-1
Cancer Risks and Non-Cancer Indices

Parameter	Cancer Screening Criteria[1]	Non-Cancer Screening Criteria [1]	Maximum Detected Concentration	Cancer Risk	Non-Cancer Hazard Index
Arsenic	0.11 mg/kg	0.4 mg/kg	41.1 mg/kg (max detect)	3.7 x 10^{-4}	102.5
Arsenic	0.11 mg/kg	0.4 mg/kg	17.5 mg/kg (background)	1.6 x 10^{-4}	43.8
Lead	80 mg/kg	80 mg/kg	263 mg/kg	(a)	(a)
Chlordane	0.43 mg/kg	35 mg/kg	1.49 mg/kg	3.5 x 10^{-6}	0.043
Dieldrin	0.033 mg/kg	3.9 mg/kg	0.00149 mg/kg	4.5 x 10^{-8}	3.8 x 10^{-4}
Heptachlor	0.13 mg/kg	39 mg/kg	0.00786 mg/kg	6 x 10^{-8}	2 x 10^{-4}
Heptachlor Epoxide	0.07mg/kg	1 mg/kg	0.00621 mg/kg	8.9 x 10^{-8}	0.00621
4,4-DDE	2.0 mg/kg	NE	0.522 mg/kg	2.6 x 10^{-7}	NC
4,4-DDD	2.3 mg/kg	NE	0.0186 mg/kg	8.1 x 10^{-9}	NC
4,4-DDT	1.9 mg/kg	37 mg/kg	0.267 mg/kg	1.4 x 10^{-7}	0.0072
Total Cancer Risk (including maximum arsenic detected)				3.7 x 10^{-4}	--
Total Cancer Risk (including estimated background arsenic [b])				1.6 x 10^{-4}	--
Total Cancer Risk (excluding arsenic)				**3.9 x 10^{-6}**	--
Total Hazard Index (including maximum arsenic detected)				**--**	102.6
Total Hazard Index (including estimated background arsenic [b])				**--**	43.9
Total Hazard Index (excluding arsenic)				**--**	**0.05**

[1] Screening criteria based on USEPA 9 RSL or DTSC-SL.
(a) = A cancer risk and hazard index are not estimated for lead. Instead, the maximum concentration detected is compared to the residential CHHSL of 80 mg/kg.
(b) = Background arsenic estimated at 17.5 mg/kg (99 percentile).
NC = Not Calculated

Source: Cornerstone Earth Group, 2017.

Removal Action Work Plan

The RAW includes recommendations for proper removal of the contaminated soils on the site, including best management practices that are required to be implemented during remediation in order to ensure that the remediation activities do not create any health or environmental hazards. Because the UAIC entered into a VCA with the DTSC, the applicant would be required to remediate the site to the satisfaction of the DTSC prior to construction of the proposed school. The RAW was prepared in general accordance with the California Health and Safety Code Section 25323.1. Additionally, in order to implement the recommendations contained in the PEA Report and to satisfy regulatory requirements, the RAW included a description of the nature and extent of the COC at the site, the goals to be achieved by the remedial action, and the general steps that would be taken to implement the selected remedial alternative.

April 2018 Supplemental Soil Sampling

To evaluate whether the initial soil removal can be configured to avoid the wetland in close proximity to the southernmost soil removal area, on April 23, 2018, Cornerstone field personnel collected soil samples from five locations within and near the wetlands using hand sampling equipment. Cornerstone collected soil samples from the approximate upper six inches of soil in accordance with the sampling protocol presented in the June 28, 2017 PEA Work Plan. The collected samples were placed in an ice chilled cooler and transported to the project laboratory under chain of custody control. The five soil samples collected were analyzed for arsenic (EPA Test Method 6010B).

Project Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project in comparison with the standards of significance identified above.

7-1 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment; create any health hazard or potential health hazard; or expose people to existing sources of potential health hazards. Based on the analysis below and with implementation of mitigation, the impact is *less than significant.*

The following discussion pertains to the site's potential impacts in the event that hazardous materials are accidently released into the environment from sources such as a septic tank, a water well, asbestos and lead-based materials, and soil contaminants.

Septic Tank

As previously discussed, a septic tank is located on the project site. The proposed project would connect to the South Placer Municipal Utility District's sewer system, subject to annexation of the project site into the South Placer Municipal Utility District service area by Placer County LAFCo. Therefore, the on-site septic tank would not be required for use and would need to be properly abandoned prior to development of the site.

Water Well

As previously discussed, a water well exists on the project site. Potable water supply service would be provided by the Placer County Water Agency (PCWA) by way of new 12-inch lateral connections to the PCWA's existing 24-inch water supply main located in Taylor Road. Accordingly, development of the proposed project would not require use of the existing well, and the well would need to be properly abandoned prior to development of the site.

Asbestos and Lead-based Materials

As previously mentioned, due to the age of the on-site structures, the possibility exists for asbestos-containing materials and lead-based materials to be present. Based on the results of sampling conducted on soils from the exterior perimeter of the on-site buildings, concentrations of lead that exceeded residential environmental screening levels were detected, which is likely associated with lead-based paint used on the building materials. Thus, lead-based paint is expected to be present in the on-site structures.

Development of the proposed project would require demolition of the existing structures. During such activities, construction workers could come into contact with, and be exposed to, asbestos-containing materials or lead-based paints if present in the existing structures, such as from asbestos dust, lead paint chips, and lead dust, which pose as inhalation hazards for both construction workers and the surrounding community. In addition, collection and disposal of asbestos-containing materials and lead-based paint debris by untrained personnel could cause asbestos-containing materials and lead-based paint dust emissions to be transported off-site, resulting in the release of hazardous material into the environment. As such, demolition activities associated with the proposed project, specifically related to asbestos-containing materials and lead-based paints associated with the existing on-site structures, could create a significant hazard to the public or the environment through upset conditions involving the release of hazardous materials into the environment.

Soil Contamination

As discussed previously, lead and chlordane were detected at concentrations above the applicable residential DTSC screening levels in the soil samples collected from the exterior perimeters of the inn and annex buildings. In addition, the soil sampling conducted in the areas of the former orchard found concentrations of lead above the applicable residential screening level in one out of 34 samples. The areas of samples SS-12, SS-15, and SS-16 from the former orchard area had concentrations of arsenic that exceeded the site-specific background concentration. Based on the low bioavailability of lower concentrations of arsenic in the soil and the limited extent of soils with concentrations above background concentrations, bioavailability of arsenic in the on-site soils is only expected where arsenic concentrations were found to exceed background levels in the former orchard area.

Without proper removal of the soils around the perimeter of the inn and annex buildings and in the vicinity of the soil samples within the former orchard area that had arsenic concentrations exceeding the site-specific background level, demolition and ground-disturbing activities associated with the proposed project could create a significant hazard to the public or the environment through upset conditions involving the release of hazardous materials into the environment, specifically related to the aforementioned soil contamination (see Figure 7-3).

The RAW includes recommendations for proper removal of the contaminated soils on the site, including best management practices that are required to be implemented during remediation in order to ensure that the remediation activities do not create any health or environmental hazards. Because the UAIC entered into a VCA with the DTSC, the applicant would be required to remediate the site to the satisfaction of the DTSC prior to construction of the proposed school. The following are summaries of the protocols presented in the RAW that are required to be implemented during excavation and off-site disposal of the arsenic, lead, and OCP-impacted soil at the site. See Appendix K to this EIR for further details of the protocols.

Health and Safety Plan

All contractors would be responsible for operating in accordance with the most current requirements of Title 8, California Code of Regulations, Section 5192 and Title 29, Code of Federal Regulations, Section 1910.120, Standards for Hazardous Waste Operations and Emergency Response (HAZWOPER). On-site personnel would be responsible for operating in accordance with all applicable regulations of the OSHA outlined in 8 CCR General Industry and Construction Safety Orders and 29 CFR 1910 and 29 CFR 1926, Construction Industry Standards, as well as other applicable federal, State, and local laws and regulations. A site-specific Health and Safety Plan (HSP) was prepared as part of the RAW to establish health and safety protocols for personnel working at the site. The HSP meets federal and State of California OSHA standards for hazardous waste operations discussed above.

Dust and Erosion Control

The contractor would be required to use effective means of dust and erosion control to minimize the generation of dust and erosion associated with excavation activities, truck and vehicle traffic onto and off the site, and the effects of ambient wind traversing exposed soil. Work activities, such as clearing, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over disturbed soil surfaces may generate dust and particulate matter whenever exposed soil surfaces are dry. The contractor would eliminate or minimize dust emissions to the maximum extent possible. To accomplish minimal dust emissions, the contractor would implement dust control measures in accordance with Placer County Air Pollution Control District rules and regulations.

The contractor would be required to prepare and implement a detailed Dust Control Plan for all phases of construction that contact contaminated soil. Dust control measures used at the site would include several or more of the following on an as-needed basis:

- Providing equipment and staffing during normal working hours for watering of all exposed or disturbed soil surfaces sufficient to suppress dust plumes;
- Using dust suppressant additives in the water, which can be a small amount of ordinary liquid detergent;
- Covering or wetting of stockpiles of debris, soil, sand, or other materials that can be blown by the wind;

- Misting or spraying water while excavating soil and loading transportation vehicles;
- Minimizing drop heights while loading/unloading excavated soil;
- For track-out prevention, a gravel pad near the site exit would be constructed for vehicle decontamination. Decontamination procedures outlined in Section 6.1.5.2 of the RAW would be followed;
- Wetting inactive portions of the site that have exposed soil surfaces or treating areas with an approved dust suppressant; and
- Suspending earth moving or other dust-producing activities during periods of high winds whenever dust control measures are unable to prevent visible dust plumes.

Any track-out on a paved public road at any location, where vehicles exit the work site, would be cleaned by using wet sweeping or a HEPA filter equipped vacuum device by the end of each work day. Dry sweeping of paved roadways would be prohibited. Watering to control dust would not result in ponded water or runoff. If runoff does occur, the runoff would be contained on-site.

Perimeter Dust Monitoring

Perimeter air monitoring would be conducted at the site to document the effectiveness of dust control measures. Prior to the beginning of soil removal activities, a windsock or anemometer would be used to monitor the wind direction at the site and to help determine the location of monitors along the fence lines. Fence line monitoring would be conducted at three locations: one upwind and two downwind at the site. Each dust monitor would be positioned within the breathing zone at approximately five feet above the ground level. Dust monitoring would be conducted daily during remedial excavation activities, and whenever personal or fence line air monitoring is performed. The RAW would require the following measures to be implemented during remediation activities:

- Real time monitoring of total dust (<10 µm diameter) would be conducted daily throughout the duration of the removal action during activities that may significantly disturb impacted soil.
- The particulate meters would be monitored by the field engineer or geologist to evaluate if excessive dust is migrating off-site.
- The DTSC-recommended work zone action level is five milligrams per cubic meter (mg/m^3). The concentration is half the eight-hour threshold limit value of 10 mg/m^3 for total particulates established by the American Conference of Governmental Industrial Hygienists for occupational exposure. For perimeter dust monitoring, the calculated difference between the upwind and downwind meter would be compared to the DTSC-recommended action level of 0.05 mg/m^3. Trigger levels for dust are established at one-half the action level. Exceedance of the trigger levels would require increased dust mitigation measures until the trigger levels can be achieved.

Excavation of Impacted Soil

The remedial action consists of excavating soil with concentrations of contaminants of concern exceeding site cleanup goals and transportation of the excavated material to permitted off-site facilities for disposal. The preliminary remedial excavation areas are shown on Figure 7-3. Initial excavation depth of approximately two feet is proposed, with approximately 200 cubic yards (CY) of soil removed from the inn and annex building area, and approximately 1,100 CY removed from the SS-12, SS-15, and SS-16 areas. The final excavation extent and depths may vary based on confirmation sampling results.

Soil excavated from each removal area would be placed in its own temporary soil stockpile. Each stockpile would be sampled by a qualified environmental specialist to profile the material for off-site disposal. Following excavation, confirmation soil samples would be collected from the excavations to evaluate if sufficient impacted soil has been removed. Remedial excavation activities would be considered complete when the confirmation samples collected from the remaining in-place soil do not contain concentrations of contaminants of concern that exceed site cleanup goals. The contractor would off-haul the stockpiled material to a permitted waste disposal facility.

Excavated soil would be placed on top of and covered by an "impermeable" liner (6 mil) to reduce infiltration by rainwater and contamination of underlying soil. If a stockpile would remain on-site greater than 48 hours, sandbags would be placed around the stockpile to secure the plastic sheeting. While remaining on-site, stockpiles would be checked daily to verify that they are adequately covered.

Soil Disposal

During loading activities, the contractor would place heavy plastic sheeting beneath the trucks to collect any spilled soil. To avoid spreading of the contamination, after each truck is loaded and prior to moving off the plastic sheeting, the top rails, fences, tires, and all other surfaces with visible dust or soil spilled during loading would be removed by dry brushing methods at the point of loading. The collected soil on the plastic would be periodically removed to avoid the spreading of impacted soil on the truck tires.

The soil would be transported by a licensed transporter. The trucks would be loaded at the site and appropriately covered (tarped) in accordance with DOT regulations. The loaded trucks would use the most direct routes, which would provide the least risk of exposure to surrounding communities, and would avoid the major commute times and residential areas as much as possible. Specifically, the RAW requires the following routes, as set forth in Mitigation Measure 7-1(c) below:

- Loaded trucks will exit the site onto Taylor Road heading north, turn right onto Penryn Road heading south, and turn left onto Boyington Road to merge into westbound Interstate 80.

In addition, the RAW would require appropriate handling and disposal of the potentially hazardous materials, which would ensure that any effects associated with an accidental release of such materials would be minimized and remediated appropriately.

Conclusion

Based on the above, implementation of the proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment, create a health hazard or potential health hazard, and expose people to existing sources of potential health hazards, specifically related to an on-site septic tank and water well, asbestos-containing materials and lead-based paints associated with the existing on-site structures, and soil contamination. As a result, impacts would be considered ***significant***.

Mitigation Measure(s)
Implementation of the following mitigation measures would reduce the above impacts to a *less-than-significant* level.

7-1(a) *Prior to Improvement Plan approval, the applicant shall hire a licensed well contractor to obtain a well abandonment permit from the Placer County Environmental Health Department (PCEHD) for the on-site well, and properly abandon the on-site well, pursuant to Department of Water Resources Bulletin 74-81 (Water Well Standards, Part III), for review and approval by the PCEHD and the Placer County Department of Public Works.*

In addition, prior to Improvement Plan approval, the project applicant shall ensure that any on-site septic systems are abandoned with permit and in compliance with applicable PCEHD standards. Verification of abandonment shall be ensured by the Placer County Community Development Resource Agency.

7-1(b) *Prior to issuance of a demolition permit by the County for any on-site structures, the project applicant shall provide a site assessment that determines whether any structures to be demolished contain lead-based paint or asbestos. If structures do not contain lead-based paint or asbestos, further mitigation is not required; however, if lead-based paint is found, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with California Air Resources Board recommendations and OSHA requirements. If asbestos is found, all construction activities shall comply with all requirements and regulations promulgated through the PCAPD Asbestos Dust Mitigation Plan. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead and/or asbestos. The contractor shall follow all work practice standards set forth in the Asbestos National Emission Standards for Hazardous Air Pollutants (Asbestos*

NESHAP, 40 CFR, Part 61, Subpart M) regulations, as well as Section V, Chapter 3 of the OSHA Technical Manual. Work practice standards generally include appropriate precautions to protect construction workers and the surrounding community, and appropriate disposal methods for construction waste containing lead paint or asbestos in accordance with federal, State, and local regulations subject to approval by the County Engineer.

7-1(c) *Prior to initiation of construction for the UAIC School Project and with an Early Grading Permit from ESD, the project applicant shall provide proof to the County that the arsenic, lead, and chlordane contaminated soils on the site have been remediated to the site cleanup goals identified in Table 1 of the DTSC-approved Removal Action Work Plan (RAW), to the satisfaction of the DTSC. Preliminary remedial excavation areas are shown in Figures 7A, 7B, and 7C of the RAW. All construction personnel carrying out the remediation work shall implement the health and safety protocols set forth in the Site Specific Health and Safety Plan (HSP) included as Appendix B to the RAW. Additional RAW requirements are summarized as follows:*

- *Early Grading Permit:* *Prior to issuance of an Early Grading Permit to allow for the remediation work, the applicant must submit Improvement Plans and any related documents as required by these conditions of approval to the Engineering and Surveying Division (ESD) for review. The review for the initial submittal of the Improvement Plans must be completed by Development Review Committee (DRC) and satisfactorily address issues relating to dust control, tree removal, wetlands, protective fencing, grading, drainage, and erosion control.*

  Upon DRC determination that an Early Grading Permit may be issued, the applicant shall prepare a separate Rough Grading Plan and submit it to ESD for review and approval. Separate plan check, inspection and winterization fees shall be required and shall be based on the engineer's estimate. If Design/Site Review process and/or DRC review is required as a condition of approval for this project, said review shall be completed prior to the submittal of the Early Grading Permit.
- *Site Security:* *The Site shall be fenced and gated with a lock to prevent unauthorized access during the remediation operations.*
- *Risk Reduction Measures:*
  - *Dust and Erosion Control: In addition to implementing dust control measures required by the Placer County Air Pollution Control District (PCAPCD), the contractor shall prepare and implement a detailed Dust Control Plan for all phases of construction that contact contaminated soil. The*

Dust Control Plan must be submitted to the PCACPD prior to the start of earth-disturbing activities. Dust control best management practices are listed in the RAW.

- *Air and Meteorological Monitoring: Air monitoring for particulate matter at the site shall be performed to document worker exposures and off-site migration of dust, during soil removal activities.*
- *Perimeter Dust Monitoring: Perimeter air monitoring shall be conducted at the site to document the effectiveness of dust control measures. Prior to beginning soil removal activities, a windsock or anemometer shall be used to monitor the wind direction at the site and to help determine the location of monitors along the fence lines. Fence line monitoring shall be conducted at three locations: one upwind and two downwind at the site. Each dust monitor shall be positioned within the breathing zone at approximately five feet above the ground level. Dust monitoring shall be conducted daily during remedial excavation activities, and whenever personal or fence line air monitoring is performed. The following shall be required:*
    - *Real time monitoring of total dust (<10 µm diameter) shall be conducted daily throughout the duration of the removal action during activities that may significantly disturb contaminants of concern impacted soil. The monitoring shall be performed using three DataRAM PDR-1000 particulate monitors. The meters log the detected airborne dust concentrations.*
    - *The particulate meters shall be monitored by the field engineer or geologist to evaluate if excessive dust is migrating off-site. Each time the meters are checked, the differences between the average upwind dust concentration and the average downwind concentration shall be calculated.*
    - *The DTSC-recommended work zone action level is five milligrams per cubic meter (mg/m^3). That concentration is half the eight-hour threshold limit value of 10 mg/m^3 for total particulates established by the American Conference of Governmental Industrial Hygienists for occupational exposure. For perimeter dust monitoring, the calculated difference between the upwind and downwind meter shall be compared to the DTSC-recommended action level of 0.05 mg/m^3. Trigger levels for dust are established at one-half the action level. Exceedance of the trigger*

levels would require increased dust mitigation measures until the trigger levels can be achieved.

- *<u>Transportation Procedures:</u>*
  - *The RAW identifies Alternative 3 – Excavation and Off-Site Disposal – as the selected alternative. The following transportation procedures will be followed, based on guidelines contained in the Transportation Plan – Preparation Guidance for Site Remediation (Cal/EPA 1994).*
    - *The soil will be transported by a licensed transporter.*
    - *Loaded trucks will exit the Site onto Taylor Road heading north, turn right onto Penryn Road heading south, and turn left onto Boyington Road to merge into westbound Interstate 80. Excavated soils from the Inn/Annex shall be transported to a Class I Landfill – preliminarily identified in the RAW as Kettleman Hill Landfill. All other excavated soils can be transported to a Class II Landfill – preliminarily identified in the RAW as the Ostrom Road Landfill in Wheatland.*
    - *Prior to the start of transport operations, the transportation contractor's Project Manager will contact an Emergency Response Contractor (ERC), who shall be responsible for contacting all appropriate outside agencies if notified of an emergency by the driver.*
    - *The selected transportation contractor will have an on-going training program for the truck drivers; such a program will be specifically required in the transportation contract.*
- *<u>Soil Removal Completion Report:</u>*
  - *After completion of the remedial action, a Soil Removal Completion Report will be prepared and submitted to DTSC and Placer County Community Development Resources Agency. The report will document that the remedial action has been performed in accordance with this document and will include, at a minimum, the following elements:*
    - *Summary of excavation activities (volume, extent, etc.);*
    - *Procedures, location, and results (i.e., analytical reports) of the confirmation soil sampling;*
    - *Documentation of off-Site transport and disposal of excavated soil (bills of lading, waste manifests); and*
    - *Health and safety and results of air monitoring.*

7-2 Emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school. Based on the analysis below and with implementation of mitigation, the impact is *less than significant*.

The proposed project includes the construction of a pre-kindergarten through eighth grade school. Operations of the proposed project would not include any activities that would involve the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. As such, operations of the proposed project would not emit any hazardous emissions, substances, or waste.

Del Oro High School is located approximately 0.13-mile southeast of the project site and Smart Start Preschool located approximately 0.20-mile south of the project site. As discussed above, based on the age of the on-site structures, the potential exists to encounter asbestos-containing materials and lead-based paints. Mitigation Measure 7-2(b) would require the construction contractor to handle and dispose of any materials containing asbestos or lead-based paints in accordance with all applicable federal, State, and local regulations, which would ensure that construction workers and the surrounding community, including the nearby school, would not be exposed to asbestos-containing materials and lead-based paints during demolition activities.

As also discussed above, contaminated soils exist on-site. Per Mitigation Measure 7-1(c), contaminated soils would be removed and disposed of in accordance with the RAW. While any soil samples collected at the site would be transported from the site for analysis, the size of the samples would be relatively small and would not have the potential to expose the surrounding community, including students at the nearby school, to a substantial concentration of any particular contaminant. The soil would be transported by a licensed transporter. The trucks would be loaded at the site and appropriately covered (tarped) in accordance with DOT regulations. The loaded trucks would use the most direct routes, which would provide the least risk of exposure to surrounding communities, and would avoid the major commute times and residential areas as much as possible. In addition, the RAW would require appropriate handling and disposal of the potentially hazardous materials, which would ensure that any effects associated with an accidental release of such materials would be minimized and remediated appropriately. During remediation activities, soil contaminants could be released into the environment as dust. Dust control methods such as providing equipment and staffing during normal working hours for watering all exposed or disturbed soil surfaces sufficient to suppress dust plumes, using dust suppressant additives in the water, and covering or wetting stockpiles of debris, soil, sand, and other materials are standard procedures referenced in the RAW that would be used. The RAW requires perimeter air monitoring to be conducted at the site to document the effectiveness of dust control measures, and if dust is found to exceed the applicable trigger levels, increase dust measures would be required until trigger levels are achieved. Other methods that would be used to reduce exposure of the surrounding community, including students at the nearby schools, to potential hazards associated with remediation activities would include covering excavated soil with an impermeable liner to reduce infiltration by rainwater and contamination of underlying soil, and backfilling the excavated soil with clean fill. In addition, worker and public health and safety measures mandated by State laws and regulations would apply during remediation activities, thereby minimizing the potential for the above-mentioned exposures to occur.

Without compliance with the requirements mentioned above, the proposed project could emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school, and a ***significant*** impact could occur.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

7-2 *Implement Mitigation Measure 7-1(c).*