Preliminary Environmental Assessment Report Communications Hill School, San Jose

Prepared for:

Franklin McKinley School District
San Jose, California

June 9, 2022

Prepared by:
McCloskey Consultants, Inc.

PRELIMINARY ENVIRONMENTAL ASSESSMENT REPORT

Communications Hill School

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FRANKLIN MCKINLEY SCHOOL DISTRICT

Prepared by:

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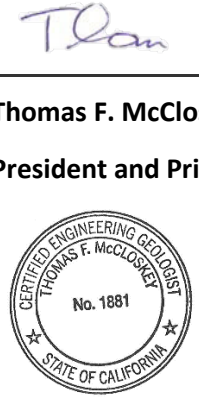

EXECUTIVE SUMMARY

On behalf of the Franklin McKinley School District (District), McCloskey Consultants, Inc. (MCI) has prepared this Preliminary Environmental Assessment (PEA) Report for the proposed school planned at Llanos de Los Robles Avenue, in San Jose, Santa Clara County, California (the "Site") (Figure 1). San Jose is located in the central portion of Santa Clara County, south of the southern San Francisco Bay.

The number of classrooms and student attendance is unknown at this time. The proposed school Site is approximately 8 acres and is within the much larger 300-acre residential development of Communications Hill in San Jose.

This PEA is an initial evaluation that provides the information necessary to determine if conditions exist at the Site that could pose a risk to human health or the environment. Under Senate Bill 475 (1989), the preparation of a PEA is a formal step in the site review process of the Department of Toxic Substances Control (DTSC). This report is to be reviewed by the DTSC to determine the need for further action at the Site. It will also be made available for public review and comment/questions.

Prior to DTSC involvement in the project, there were several investigations and planning documents. These were presented to the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) to create a Soil Management Plan (SMP) for mitigation activities in the Phase II project area (MCI, 2017a), which includes the planned school area, followed by a Soil Management Completion Report documenting the grading and mitigation activities (MCI, 2020b).

Summary of Previous Assessment and Soil Sampling

The proposed school Site is within a much larger Communications Hill 300-acre property. The entire property was largely undeveloped through the 1970s. Cattle grazing occurred sporadically prior to that time. The surrounding area to the northwest included the old Hillsdale mercury mine which was a small underground cinnabar mine starting as early as 1847 through approximately 1855 (California Gold Rush era). Quarrying operations for baserock were conducted to the northeast from approximately 1973 through the 1980s. From 2017 to 2019, a large portion of the area, including the future school area, was mass graded for future development as part of Phase II development. The school Site during the last few years has been largely utilized as a laydown yard for construction equipment and materials staging for on-going residential development.

A number of Site investigations have been conducted at the property to evaluate the rock, soil, groundwater, sediment and surface water at the Site for a number of potential compounds of environmental concern. The potential concerns included the following:

- **Hillsdale Mine Underground Mine Workings**

  The Hillsdale Mine was a small underground cinnabar mine starting as early as 1847 through approximately 1855 (Gold Rush era) located near the proposed school Site. Underground workings of the Hillsdale Mine are still present and begin about 300 feet to the northwest of the proposed school. Underground workings have been explored and surveyed and do not appear to extend beneath the proposed school Site.

- **Former Ore Processing Areas**

  Former ore processing areas were identified at two locations on the property. One processing area is partially investigated and is located approximately 800 feet northwest and downhill of the proposed school Site in a current open space area. The second former ore processing area was located more than 350 feet north of the proposed school Site and was removed during the Phase II mass grading operations.

- **Silica Carbonate Bedrock**

  Silica carbonate bedrock is the host rock for veins of mercury-containing cinnabar and the closest, in place surface outcrop is about 225 feet to the northwest from the Site, as shown on Figure 2. The closest reworked silica carbonate is buried at least 15 feet deep and is located beyond the northeast corner of the proposed school boundary, also shown on Figure 2. This material was buried as engineered fill during Phase II mass grading because of the potential to contain mercury exceeding the USEPA RSL of 23 mg/kg for mercury salts.

- **Elemental Mercury**

  During Phase II grading one of the former ore processing smelters was found and contained residual elemental mercury in soils and bricks. Under SFBRWQCB oversight, this material was consolidated, wrapped, and sealed within heavy-duty HDPE. The seams were heat welded to prevent vapor from escaping and to prevent contact with water. The top of the encapsulation cell is 24 feet bgs and 250 feet east-northeast of the Site as shown on Figure 2.

- **Naturally-Occurring Asbestos**

  Asbestos is a naturally-occurring, fibrous silicate mineral, and is a known carcinogen when exposure occurs at high concentrations over a long period of time. Naturally-occurring asbestos (NOA) most frequently occurs in and immediately adjacent to areas of ultramafic

(igneous and metamorphic rocks with high iron and magnesium concentrations) rock outcrops. Geologic mapping of the Communications Hill area has documented the presence of serpentinite rock containing NOA (as chrysotile) at concentrations as high as 15 to 30 percent. This concentration exceeds the DTSC School Unit asbestos threshold concentration screening criteria above which capping is required to control long-term fiber emissions. Future grading plans at the Site include capping of exposed NOA material with 1 to 5 feet of replacement soils that do not exceed DTSC criteria for NOA or any other contaminant.

Sampling and Results Summary

In 2019 following the Phase II mass grading at the Site, 11 confirmation soil samples were collected in the upper 3 feet of exposed materials at the proposed school Site and analyzed for total mercury using XRF methods. The results indicated that no samples exceeded the mercury USEPA RSL for residential uses of 23 mg/kg.

One sediment sample (Pond-1) was collected within the planned school area on February 14, 2022 during a Site visit by the DTSC. Water and sediment from street sweeping discharge was accumulated in a small area. The sample was analyzed for petroleum hydrocarbons in the diesel and motor oil ranges, semi-volatile organic compounds (SVOCs), and CAM 17 metals. Detected concentrations were compared to DTSC modified Screening Levels (DTSC-SLs) presented in the DTSCs Office of Human and Ecological Risk ("HERO") guidance document Human Health Risk Assessment (HHRA) Note 3 dated June 2020 (HERO, 2020), Regional Screening Levels (RSLs) established by the USEPA Region 9 (USEPA, May 2020), and regional naturally occurring arsenic background studies (Duvergé, 2011).

The following summarizes the results of the PEA additional sampling:

- Total petroleum hydrocarbons as motor oil exceeded the USEPA RSL. (The chain of custody note indicated the soil sample contained asphalt).
- No semi-volatile organic compounds were detected in the sample exceeding DTSC-SLs or USEPA RSLs. The detection limit of one compound, dibenz(a,h)anthracene (0.035 mg/kg) exceeded the HERO HHRA Note 3 Screening Level of 0.028 mg/kg.
- Mercury was not detected above laboratory analytical reporting limits, or above the USEPA RSL of 23 mg/kg.
- CAM17 Metals were not detected exceeding the exceeding DTSC-SLs or USEPA RSLs in the sediment sample analyzed.

Conclusions and Recommendations

Many investigations have been conducted across the 300-acre Communications Hill development since 1991 to evaluate the rock, soil, surface water and groundwater for a number of potential

environmental contaminants of concern, as listed in the Reference section of this report. Much of this work was performed under SFRWQCB guidance and oversight. Based on these investigations, mercury containing silica carbonate bedrock and former historical mine workings are located north and northwest of the Site, respectively. No silica carbonate bedrock or reworked silica carbonate bedrock underlies the proposed school Site. Engineered fill underlies the Site including serpentinite, sandstone and claystone bedrock materials from the 2017 to 2019 Phase II mass grading of the project. Confirmation samples were collected in the upper 3 feet of the Site, and analyzed for total mercury. The confirmation samples indicated all concentrations were less than the USEPA RSL of 23 mg/kg for mercury (salts) at the Site.

Geologic mapping of the Communications Hill area has documented the presence of serpentinite rock containing NOA (as chrysotile) at concentrations as high as 30 percent. The concentrations detected exceed the DTSC Schools Division asbestos threshold concentration above which capping is required to control long-term fiber emissions.

One sediment sample collected in the southwest corner of the Site by MCI during a site visit with the DTSC in February 2022 generally did not detect metals, SVOCs, CAM17 metals, or TPH-diesel exceeding the USEPA RSLs or the HERO HHRA Note 3 concentrations except for a single semi-volatile compound. TPH motor oil was identified in the sediment sample at 417 mg/kg, exceeding the USEPA RSL of 96 mg/kg for residential uses, however, the lab notes indicated that asphalt was present within the sample.

The following concerns are present that will require a response action to mitigate the potential health hazard:

- **Naturally-Occurring Asbestos** – NOA is present on the Site at concentrations that exceed the DTSC school guidance, and to prevent future exposures, all soils will need to be capped with either classroom buildings, hardscape, artificial turf, or with clean import fill soils 6 inches to 1 foot in thickness minimum that is approved prior to import to the Site. In addition, during construction activities that are earth disturbing, dust control and monitoring will be needed as well as long-term operations and maintenance practices to control any future NOA fiber emissions.

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APPENDICES

Appendix A Laboratory Analytical Reports

1.0 INTRODUCTION

On behalf of the Franklin McKinley School District (District), McCloskey Consultants, Inc. (MCI) has prepared this Preliminary Environmental Assessment (PEA) Report for a proposed new school at Communications Hill, located northwest of the intersection of Llano de los Robles Avenue and Lina Street in San Jose, Santa Clara County, California (the "Site") (Figure 1). The proposed 8-acre school Site is within a much larger 300-acre development of Communications Hill in San Jose. San Jose is in the central portion of Santa Clara County, south of the southern San Francisco Bay. Under Senate Bill 475 (1989), the preparation of a PEA is a formal step in the site evaluation process of the California Department of Toxic Substance Control (DTSC) School Site Mitigation Unit.

A Scoping Meeting was performed on January 31, 2022. Participants included José Salcedo, DTSC, Schools Program Unit Chief), Letitia Shen (DTSC, Schools Program Project Manager), Alicia Taylor (DTSC Toxicologist), Peter Ruttan (DTSC, Registered Geologist), Jason Vann (Assistant Superintendent, Business Services, Franklin McKinley School District), John Dominguez (School Site Solutions), Tom McCloskey (McCloskey Consultants), Jake Zepeda (McCloskey Consultants), Pete Smith (HMH Engineers), Rob Bettencourt (Property Owner), and Peter Lezak (KB Homes).

The Site conditions and history are based on numerous Site investigations conducted across the larger 300-acre Communications Hill development. The environmental investigations prior to 2017 were summarized in the Soil Management Plan Communication Hill 2 Phase II (MCI, 2017a). The environmental investigations include the following:

- Tetratech, Inc., August 29, 1992. Phase I Mercury Investigation Results, Communication Hill Specific Plan, San Jose, California.
- Draft Additional Phase II Environmental Sampling Report, Communication Hill East (MCI, 2013);
- Communication Hill 2 Project, Summary of Environmental Investigations, San Jose, California (MCI, 2014);
- Subsurface Sampling and Total Mercury Testing, Communications Hill Phase 2 Area (MCI, 2017b);
- Communications Hill Phase II, Addendum to the August 29, 2017 Soil Management Plan – Consolidation Area (MCI, 2018a);
- Communications Hill Phase II, Documentation of Corrective Actions for the Suspected Ore Processing Area and Stormwater Controls (MCI, 2018b);
- Furnace Materials Management Plan (MCI, 2018c);
- *CDE/CCR Title 5, Geologic and Safety Hazards Evaluation, Communications Hill School Site, APNs 455-90-031 & -036, San Jose, Santa Clara County, CA 95136 (MCI, 2020a); and,*

- Soil Management Completion Report, Communications Hill 2 Phase II (MCI, 2020b).

The documents are publicly available online at the San Francisco Bay Regional Water Quality Control Boards (SFRWQCB) Geotracker website, and were available to the DTSC for review.

These documents were reviewed by the DTSC prior to the initiation of the PEA scoping meeting and this PEA report.

1.1 Project Description

The Franklin McKinley School District is proposing toconstruct a new school at the Site at the northwest intersection of Llano de los Robles Avenue and Lina Street. The number of classrooms and student attendance is unknown at this time.

1.2 Purpose and Objectives

Under Senate Bill 475 (1989), the preparation of a PEA is a formal step in the review process of the DTSC Schools Unit. This report is to be reviewed by the DTSC to determine the need for further action at the Site.

The purpose of sampling during a PEA investigation is to identify if chemicals or naturally-occurring compounds are present that could represent health or hazard risks for the planned future school use. The data obtained are used to evaluate the degree of risk presented by the compounds identified, and ultimately to evaluate appropriate response actions are needed render a property suitable for school uses.

Specific objectives of this PEA include:

- Determining if hazardous substances (including naturally-occurring substances) are present at the Site;
- Estimating the potential threat to human health and/or the environment posed by the Site conditions;
- Determining if an expedited response action is needed to reduce existing threats to human health or the environment;
- Completing preliminary project scoping activities to determine data gaps and identify possible mitigation strategies; and,
- Assessing and providing for the informational needs of the community.

This PEA was prepared in general accordance with the following documents:

- *Preliminary Endangerment Assessment Guidance Manual,* State of California, Environmental Protection Agency, January 1994 - latest revision October 2015;

- *Interim Guidance, Evaluation of School Sites with Potential Soil Contamination as a Results of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers,* latest update September 12, 2006;
- *Interim Guidance Naturally-Occurring Asbestos (NOA) at School Sites,* latest revision September 24, 2004; and,
- *Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals* (January 16, 2009).

1.3 Organization of Report

This PEA report is organized, as follows:

- **Section 2.0** - Presents a Site description and identifies the physical setting of the Site vicinity, the current Site and vicinity land use, and the contact information for the Site;
- **Section 3.0** - Summarizes the Site operational history, hazardous waste management information, background research performed to evaluate Site conditions, previous Phase II sampling and previous mitigation activities;
- **Section 4.0** - Discusses the potential compounds of environmental concern (COCs);
- **Section 5.0** - Discusses the environmental setting, including physical aspects of the Site and vicinity affecting chemical transport pathways in soil, water, and air;
- **Sections 6.0 and 7.0** - Present the Soil Management Plan sampling results and laboratory Quality Assurance/Quality Control (QA/QC) methods employed in this evaluation, respectively; and,
- **Sections 8.0 and 9.0** - Presents human health and ecological screening evaluations, respectively, based on the results of the sampling;
- **Section 10.0** - Discusses activities performed for public awareness;
- **Section 11.0** - Presents conclusions and recommendations of the investigations; and,
- **Sections 12.0 and 13.0** - Present report limitations and references utilized in preparation of this report.

2.0 SITE DESCRIPTION

The Site information provided is based on the results of numerous environmental assessments across the larger property at Communications Hill designed to identify potential environmental contaminants of concern. The historically mined areas were extensively evaluated during these investigations for their potential to impact the 300-acre development are summarized herein. Complete copies of these investigations are available on the Geotracker website (SFRWQCB, 2022).

2.1 Site Identification and Vicinity

The planned school Site is roughly rectangular in shape and occupies 8.09 acres total. The Site is surrounded to the north by rough graded Communications Hill, to the east by Lina Street and new residential units, to the south by Saint Florian Way, and ungraded land to the west (Figure 2). The Site is designated by the San Clara County Assessor's Office (SCCAO) as assessor's parcel numbers (APN) 455-90-031 and 455-90-036. Site has a SFRWQCB Geotracker ID number of T10000007018 and a DTSC EnviroStor database identification number of 60003186, and the DTSC database Site Code 204332.

2.2 Current Site Use

From 2017 to 2019 the planned school Site and area was mass graded for future construction. Since then, the school Site has been largely utilized for construction equipment and materials staging for the on-going residential developments.

2.3 Current Site Vicinity Land Use

The Site is in a residential area of San Jose. The school is bordered to the east and south by single-family residential neighborhoods, and partially graded land to the north and west.

2.4 Site Contact

The contact information for the Site representative is:

Mr. Jason Vann
Assistant Superintendent, Business Services
Franklin-McKinley School District
645 Wool Creek Drive
San Jose, California 95112
Office: (408) 283-6064
Fax: (408) 283-6024
Cell Phone: (669) 237-0424
Email: jason.vann@fmsd.org

2.5 Physical Setting

2.5.1 Topography

Based on review of the proposed school site grading plan from HMH and KB Home for Communications Hill, the Site elevation ranges from approximately 360 feet above mean sea level (MSL) along the southern perimeter to 316 feet above MSL on the northern perimeter. Communication Hill is a prominent, linear hill that trends northwest/southeast. Topography at the school Site is generally flat after having been partially during Phase II. A steep cut slope is currently present on the southern boundary. A prominent knob is also currently present which will be removed to create a level pad.

2.5.2 Geology

The Santa Clara Valley is at the southern end of the San Francisco Bay Block located between the San Andreas and Calaveras Faults, and is filled with up to 1,500 feet of basin and alluvial sediment deposits eroded from the Santa Cruz Mountains and the Diablo Range. The uplift of the Coast Ranges and deposition of sediments have occurred in the last few million years, from Pleistocene to Holocene time, indicating very rapid erosion of the upland ranges to form the thick and young sedimentary deposits in the valley. Thrust and reverse faults are important in that they are largely responsible for much of its hilly topography, where the effects of transpression are evident (MCI, 2020b). The Site is situated on an elongated bedrock high that rises several hundred feet above the low lying flat alluvial plain of the Santa Clara Valley and trends from northwest to southeast.

The geologic units at Communications Hill include the Franciscan Complex, alluvial sediments, and artificial fill. A cap of soil 24 inches thick was added for quarry reclamation purposes across exposed bedrock where quarried. Topographically elevated areas are mostly underlain by ultramafic serpentinite bedrock that contains naturally-occurring asbestos (NOA). Alluvial sediments are present in the flat, northern perimeter of the Phase II area development.

The dominant NOA in the serpentinite bedrock is chrysotile and is visible in hand samples as veins with cross-fibers. The Franciscan Complex bedrock at the proposed school Site includes serpentinized ultramafic basalt. Other bedrock in the area includes sandstone, claystone, siltstone, and occasional breccia. A band of silica carbonate is in contact with serpentinite and sandstone on the western side of the lower Phase II development. Where silica carbonate is in contact with serpentinite it is steeply dipping and the serpentinite appears pervasively sheared in many places. The silica carbonate has abundant vertical fractures and contains many calcite, dolomite, and quartz veins (MCI, 2020b). The silica carbonate also contains cinnabar (mercury sulfide) present as thin lenses and narrow bands.

During the Phase II development mass grading operations from 2017 to 2019, the location of the silica carbonate vein was identified in contact with sandstone, serpentinite, and claystone, and was documented in detail when encountered. The mapped extent of the silica carbonate in the Phase II development is presented on Figure 2.

2.5.3 Soils

Soils in the vicinity of the Site are categorized by the USDA Soil Conservation Service as Botella. Botella soils are well-drained, moderately coarse-grained soils consisting of clay loam (MCI, 2020a).

2.5.4 Groundwater

Groundwater was encountered only in the flat alluvial areas on the eastern edge of Phase II, at a depth of 23 feet and 43 feet below ground surface (bgs). The shallower depth was found in a boring drilled near the quarry pond (outside the Phase II area), which represents a localized high point in the regional groundwater. East of the Site, at the Santa Clara County Fairgrounds, the depth to first groundwater is typically over 80 feet bgs. There is also groundwater in the bottom of the existing mine workings, at roughly 125 feet bgs as measured from the top of the bedrock ridge above the mine workings (MCI, 2020). Several bedrock springs are also present in the area on the northern flanks of the bedrock ridge.

3.0 SITE BACKGROUND

3.1 Operational History and Status

3.1.1 Historical and Current Site Land Use

Based on a review of historical aerial photographs and topographic maps, the school Site was largely undeveloped through the 1970s. Grazing occurred sporadically during that time. Quarrying operations for baserock were conducted in the area from approximately 1973 through the 1980s but not on the school Site. From 2017 to 2019 the school Site was partially graded for future construction. The school Site during the last couple of years has been largely utilized for construction equipment and materials staging for the on-going residential development.

3.1.2 Property Ownership

Original ownership of the Communications Hill 300-acre property (including the Site) was provided in the questionnaire of the Phase I Environmental Site Assessment Update (MCI, 2012), and in January 2022 during the DTSC PEA Agenda scoping meeting. Previous property owners included Richard Carroll (seasonal cattle grazing prior to and through the 1970s). The current ownership is MTA Properties LP. The Site use by prior owners was a dairy with cattle grazing, and

was also used as a quarry. The property (including the Site) is currently owned by MTA Hillsdale, L.P.

3.1.3 Prior Surrounding Land Use

Based on a review of historical aerial photographs and topographic maps, the entire Site was largely undeveloped through the 1970s. The surrounding area to the northwest included the old Hillsdale mercury mine, a small underground cinnabar mine starting as early as 1847 through approximately 1855 (Gold Rush era) to the late 1940s or early 1950s. Grazing also occurred sporadically in the area. Quarrying operations for baserock were conducted at the Site and surrounding Communications Hill property from approximately 1973 through the 1980s by the Raisch Company. Residential development in the surrounding area increased from the mid-2010's through the present, and by 2021 the surrounding area to the east was built out with residential structures. Presently, residential development is increasing to the south. To the west and north of the Site, the land remains undeveloped and partially graded.

3.1.4 Zoning

According to the City of San Jose zoning map, the Site is zoned as agricultural and planned development, A(PD), and the Site vicinity is zoned PD and public quasi-public, PQP (City of San Jose, 2022).

3.1.5 Water Supply and Use

Municipal potable water for the Site would be provided by San Jose Water Company.

3.2 Hazardous Substance/Waste Management Information

3.2.1 Site Activities

A reconnaissance of the Site was conducted by Mr. Tom McCloskey on February 14, 2022 following the Agenda for PEA Scoping Meeting by the DTSC on January 31, 2022. Mr. McCloskey was accompanied by the DTSC personnel Ms. Letitia Shen, and Mr. Peter Ruttan. No Site access limitations were encountered. The planned school Site was partially graded and used as a construction laydown yard with storage containers and raw materials for construction of new residential units.

One sediment sample (Pond-1) was collected on February 14, 2022 from a low areas with accumulated water and sediment from street cleaning operations (Figure 2). The sample was analyzed for total petroleum hydrocarbons (TPH) in the diesel and motor oil ranges, semi-volatile organic compounds (SVOCs), and CAM 17 metals. Except for TPH motor oil, no petroleum range hydrocarbons, or semi-volatile organic compounds were detected in the sample exceeding DTSC-SLs or USEPA RSLs. TPH motor oil was identified in the sediment sample at 417 mg/kg which

exceeds the USEPA RSL of 96 mg/kg for non-carcinogenic child screening level. Mercury was not detected exceeding the laboratory analytical reporting limits. Sample results are presented in Tables 2 and 3 of this PEA report.

During the previous Phase I ESA (MCI, 2012) for the proposed 300-acre Communication Hill Development, questionnaires were completed by the property manager, Mr. Rob Bettencourt on behalf of MTA Properties LP and MTA Hillside, LP and MTA Curtner LP, and the KB Home South Bay, Inc. project manager Mr. Jeffrey McMullen. Mr. Bettencourt and Mr. McMullen were not aware of any indications of contamination on the Site, and reported no knowledge of environmental cleanup liens, activity and land use limitations, or pending, threatened or past litigation or administrative proceedings related to hazardous substances or petroleum products at the Site. No significant hazardous materials or waste facilities are within ¼ mile of the Site and no significant permitted air emissions facilities located on or within ¼ mile of the Site (MCI, 2020a). A PG&E 60 kV overhead transmission line and 21 kV under build distribution line traverse the Site, and KB Home is planning to move the lines to the north and west and establish a 100-foot setback zone from the power lines of all school facilities.

3.2.2 Regulatory Database Research

During the environmental safety hazards evaluation of the Site as presented in the CDE/CCR Title 5 Geologic and Safety Hazards Evaluation report (MCI, 2020a), an *Environmental Data Resources (EDR) Radius Map™ Report with GeoCheck®* (EDR Radius Report) was obtained and reviewed to help establish if hazardous materials incidents, radon gas, and/or oil and gas wells have been reported on the Site or in the immediate area of the Site. The following sections outline the results of the research.

3.2.2.1 Site Regulatory Status

The proposed school Site was not listed in any of the other databases in the EDR regulatory agency database report (MCI, 2020a), indicating no significant environmental concerns on the Site.

In addition to requesting files available at the local regulatory agencies, the on-line State Water Quality Control Board (SWQCB) Geotracker database and the California Department of Toxic Substances Control (DTSC) Envirostor database were reviewed on April 22, 2022. The Envirostor database listed the Phase II Grading Soil Management Completion Report (MCI, 2020b), the CDE/CCR Title 5 Geologic and Safety Hazards Evaluation (MCI, 2020a), and the sediment sampling results for the planned school Site collected on February 14, 2022 (See Section 3.2.1).

3.2.2.2 Vicinity Land Use and Hazardous Materials

Information contained in the database search report did not reveal the presence of vicinity properties appearing likely to have significantly impacted the Site.

3.2.3 Federal and State Radon Screening

Federal and State radon screening test data for the Site zip code of 95136 are included in the EDR Geocheck database report of the Phase I ESA. Based on information provided, one Federal and three State radon screening tests have been performed within the Site zip code (95136). The Federal radon screening test of the 1st floor living area reported average radon activity at 0.400 pCi/l, beneath the USEPA recommended action level of 4 pCi/l. State tests reported no radon concentrations exceeding the 4 pCi/l action level. Santa Clara County is reported in Federal EPA Radon Zone 2, with average indoor radon levels between 2 and 4 pCi/l.

Based on the radon test data, there appears to be a low potential for radon accumulation within future buildings on the Site.

3.3 Summary of Previous Environmental Investigations and Mitigation

The proposed school Site is within a much larger Communications Hill 300-acre property. A number of Site investigations have been conducted at the property starting in 1991 to evaluate the rock, soil, groundwater, sediment and water at the Site for a number of potential environmental contaminants of concern. A complete list of investigations is included in Section 13, References.

The contaminants of concern identified during the investigations at the Communications Hill property include the following:

- Mercury in bedrock at the mine area and areas northwest of the mine;
- Mercury and nickel in a former ore processing area;
- Petroleum hydrocarbons in fill soils at the northeastern property boundary;
- Widespread NOA across the Site.

3.3.1 Mercury in Bedrock

The first hazardous materials environmental site investigation was performed to evaluate the Site for presence of mercury in the vicinity of the Hillsdale Mine in support of the Communications Hill Specific Plan (Terratech, 1991). The cinnabar ore vein outcrops as a narrow band of silica-carbonate altered rock that pinches out at both ends. The sampling performed consisted of the collection of

nine surface samples from outcrops of silica carbonate host rock within the Hillsdale Mine area. The sampling results ranged from 0.77 mg/kg to 22.9 mg/kg. An additional 24 bedrock samples were collected in 2009 (SES, 2009) to confirm and to supplement the nine earlier samples collected. Testing indicated mercury concentrations exceeded USEPA RSLs of 23 mg/kg for mercury salts and residential uses at three locations. The hazardous waste threshold of 20 mg/kg was exceeded at two locations in the mine area, and at one location in the extreme northwest corner of the Site.

Ten samples were collected for selective sequential extraction (SSE) of mercury in 2017 (Brown and Caldwell, 2017). The samples included an array of materials from the Phase II area of Communications Hill, including silica carbonate, sandstone, siltstone, serpentinite, and artificial fill (brown clayey gravel, black gravelly clay, and bluish black clay). Four of ten samples exceeded 1 mg/kg total mercury (Method 7471B). No calcines or other processed waste rock was encountered during sampling. None of the samples collected and analyzed for total mercury exceeded the USEPA RSL for residential uses. Of the four samples submitted for SSE analysis, fractions F-5 and F-6 fractions constituted 60 to nearly 90% of the reported mercury. Both F-5 and F-6 are insoluble in water suggesting that cinnabar and crystalline mercury are the predominant forms of mercury.

The proposed school site is south of the surface expression of the silica carbonate vein. The school Site is also to the southeast of the historical mine workings. This material is not present at the proposed Site and is not a potential health hazard due to surface exposures. Silica carbonate moved during mass grading was carefully monitored and was placed in deep fills and capped with a minimum of 15 feet of non-mercury containing fill soils. The closest lateral extent of fills with silica carbonate is shown on Figure 2.

3.3.3 Former Ore Processing Area Evaluation and Mitigation

A mine map from 1943 showed an ore crusher and furnace located near the former main mine portal (Figure 2), and the slab of this structure is also visible in historic aerial photographs. A number of borings were completed in the main mine portal area during the 2009 investigation (SES, 2009), and additional borings were completed in 2013 to evaluate the lateral and vertical extent of elevated mercury and nickel concentrations (MCI, 2013). The detected mercury concentrations exceeded the USEPA RSLs for residential uses, but not commercial/industrial RSLs. The nickel concentrations were elevated but did not exceed either standard for direct exposure. Solubility testing showed that nickel from one sample exceeded the hazardous waste concentrations.

3.3.4 Calcines Investigation

Heating of cinnabar to release mercury produces a waste rock called “calcines” that is pink to gray in color and can retain elevated mercury concentrations. Nine exploratory borings were completed across the lower areas of the Site where fill was suspected, and 16 soil samples were collected for mercury analysis of possible suspect material (SES, 2009). Mercury concentrations were detected

in the samples collected, but all concentrations were well below the regulatory thresholds and are generally consistent with the typical naturally occurring background concentrations (SES, 2009). No calcines or other processed waste rock were encountered during the Phase II mass grading of the Site.

3.3.5 Petroleum Hydrocarbons in Fill

During sample collection for mercury analysis in 2009 (SES, 2009; MCI, 2012), a buried layer of black soils 3 to 4 feet deep was found at two locations near the northeastern property boundary of Communications Hill adjacent to the railroad tracks.

The suspect soils were analyzed for petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals and revealed only total petroleum hydrocarbons as motor oil (TPHmo) as a contaminant. Based on the analytical data, the 2009 Phase II report concluded that if the areas of the Site with the hydrocarbon-impacted lenses of soil was to be used for commercial/industrial purposes as planned, if grading was to result in the final depth of the lenses to be less than 3 meters, the impacted soil should be removed. However, the approved Phase II SMP determined that no special handling was needed to reuse this soil as general fill.

During Phase II mass grading of the larger Communications Hill property, a small pocket of impacted soils containing hydrocarbons were identified at the northeastern property boundary. The impacted area was delineated, removed via excavation, and disposed off-Site (MCI, 2020b).

3.3.6 Spring Water and Quarry Pond Sampling at the Historical Mine

The first sampling of surface water at the Site was for the water draining from the former mine portal (see Figure 2) which was analyzed first in March 2007 (SES, 2009) for CAM 17 metals, gasoline through diesel range petroleum hydrocarbons, chlorinated volatile organic compounds, and methyl mercury. No petroleum hydrocarbons or VOCs where detected exceeding their respective laboratory detection limits. Arsenic, barium, chromium, nickel and vanadium were detected exceeding their respective laboratory detection limits. The arsenic result of 6.0 µg/L does not exceed the current lowest SFRWQCB ESL for estuary aquatic habitat goal of 36 µg/L (SFRWQCB, 2019 Rev 2). This concentration does exceed the Surface Water Quality Standard for Bioaccumulation and Human Consumption of Aquatic Organisms (SFRWQCB, 2019 Rev. 2) of 0.140 µg/L, but this concentration is extremely low and the criteria does not apply to this Site where no human consumption of aquatic organisms is taking place. The detected barium, chromium, nickel and vanadium concentrations were all less than all SFRWQCB ESLs for aquatic habitat. Total mercury was not detected exceeding the laboratory detection limit. The methyl mercury result of 0.0027 µg/L was just less than the current SFRWQCB ESL for aquatic habitat goal of 0.003 µg/L (SFRWQCB, 2019 Rev. 2).

Because of the initial methyl mercury results from the former mine portal sampling, this water, the spring water, and the quarry pond waters were sampled and analyzed for methyl mercury for six continuous quarters during 2007 and 2008 (SES, 2009). As stated before, one of the springs emanates from the former main haul line portal for the mine, and the other spring is in an area north of the mine and it drains to the quarry pond, as shown on Figure 2. The quarry pond can contain water year-round under normal rainfall conditions. The sampling results were compared to the SFRWQCB ESL goals for aquatic habitats (SFRWQCB, 2019 Rev. 2). The methyl mercury results from the quarterly sampling did not exceed the ESLs except for a sample that was collected near the bottom of the pond in December, 2008. The concentration detected was 0.0036 µg/L which slightly exceeds the regulatory threshold of 0.003 µg/L.

Both springs and the quarry pond were also sampled in March, 2009, and the samples analyzed for CAM 17 metals and pH. None of the sample results exceeded the current SFRWQCB ESL goal for fresh water aquatic habitats. The pH in all samples was slightly alkaline ranging from 8.08 to 8.28.

Water from inside the mine was also sampled on a one-time basis in December 2008 and was analyzed for CAM 17 metals. None of the concentrations exceeded the current SFRWQCB ESL goals for fresh water estuary aquatic habitats (SFRWQCB, 2019 Rev. 2).

3.3.7 Groundwater Sampling in the Phase II Lower Southeast Area

A previous Phase I Environmental Site Assessment (SES, 2007) conducted at the Site identified a small, former maintenance shop in lower, flat area in the southeastern corner of the Site. A old plan of this shop indicated that solvents had been stored there. To evaluate this area, a boring was advanced to refusal on hard bedrock approximately 34 feet below ground surface, and no groundwater was observed in the boring. A soil sample was collected from a moist silty clay layer at a depth of six feet and was analyzed for chlorinated volatile organic compounds as well as benzene, toluene, ethylbenzene, and xylene. No compounds were detected exceeding the laboratory detection limits (SES, 2009).

Extensive borings for geotechnical investigations were conducted at the Site, and groundwater was only encountered just west of the quarry pond at a depth of 23 feet below ground surface (Cornerstone, 2014). The geotechnical report anticipated groundwater levels in the lower alluvium areas at the Site to be on the order of 30 to 50 feet below ground surface. Based on the work done, this may only apply in the area of the quarry pond during normal rainfall years. Just east of this Site at the Santa Clara County Fairgrounds, the depth to first groundwater is commonly over 80 feet below ground surface.

3.3.8 Quarry Cap Sampling

During the reclamation of the former Azevedo Quarry, Raisch Products Company placed generally 2 feet of imported soil to cap over exposed bedrock prior to hydroseeding. No documentation of the sources of the import soil was available and no testing for the presence of contamination appears to have been performed. During a 2013 investigation to evaluate the soils for the presence of man-made compounds and for NOA, a small track excavator was used to excavate 20 potholes over approximately 130 acres of the planned Phase II development (MCI, 2013).

At least one sample was collected from each of the 20 locations and analyzed for CAM 17 metals (EPA Test Methods 6010/7471), organochlorine pesticides (OCPs) (EPA Test Method 8081) which are persistent compounds that can remain at elevated concentrations for many years. Discolored soil was observed at depth in only one pothole location (TP-10) and the samples were also analyzed for semi-volatile organic compounds (EPA Test Method 8270 SIM), and gasoline, diesel and motor oil range total petroleum hydrocarbons (EPA Test Methods 8260 and 8015B with a silica gel clean-up).

No pesticides, petroleum range hydrocarbons, or semi-volatile organic compounds were detected in the cap samples that exceeded CHHSLs or SFRWQCB ESLs including the very restrictive protection of groundwater. Lead was detected at only one cap sampling location (80 mg/kg) that equals the regulatory standards for residential use. Mercury was detected in only one discrete stockpile sample of 18 mg/kg which is less than the USEPA RSL for residential uses. NOA was detected in some of the cap samples.

3.3.9 Stockpile Sampling in the Lower Phase II Area

On the Phase II area of the Communications Hill property, six stockpiles were located in the lower quarry area and were composed of mixed aggregate and soils. To evaluate the stockpiles for contamination, composite samples were collected from each stockpile for lab analyses (MCI, 2013). The number of composite samples collected was based on the approximate size of the stockpile. Four, 4-point composites from the largest four stockpiles, two 4-point composites from a smaller stockpile, and one 4-point composite from smallest stockpile to the northeast were collected. The stockpile samples were analyzed for CAM 17 metals (EPA Test Methods 6010/7471), OCPs (EPA Test Method 8081), semi-volatile organic compounds (EPA Test Method 8270 SIM), and NOA by plane light microscopy (PLM), CARB 435 1000-Point Count.

The organochlorine pesticide results showed that all of the composite samples had detectible concentrations of 4,4'-DDD, 4,4'-DDE, and/or 4,4'-DDT that ranged from 0.0039 milligrams per kilogram (mg/Kg) up to 0.190 mg/Kg. These concentrations are well below their respective single compound USEPA RSLs for residential uses. Alpha chlordane, technical chlordane, and gamma chlordane were also detected in two of the samples collected and concentrations were also well

below their respective single compound USEPA RSLs. Because chlordane was detected exceeding ¼ of the single compound USEPA RSLs in composite sample SP-4-2, the discrete samples from composite SP-4-2 were each analyzed to evaluate the chlordane concentration in each sample. None of the concentrations detected in the discrete samples exceeded their respective residential USEPA RSLs.

Ten metals (arsenic, barium, chromium, cobalt, copper, lead, mercury, nickel, vanadium and zinc) had detectable concentrations from the composited samples collected from the stockpiles. Except for arsenic and mercury, the metals concentrations were less than the USEPA RSLs for residential uses in all soil samples analyzed. Concentrations of arsenic were detected exceeding laboratory detection limits in just two of the soil samples. Arsenic concentrations were detected in the samples ranging from 1.8 mg/Kg to 7.0 mg/Kg which is consistent with naturally occurring concentrations. Mercury concentrations were detected in two stockpile composite samples (SP-6-1 and SP-6-2) exceeding ¼ of the single compound USEPA RSLs for residential uses. The discrete samples were each therefore analyzed to determine possible elevated concentrations of mercury. The mercury concentrations detected in the discrete samples ranged from <0.5 mg/kg to 9.5 mg/kg with one concentration detected at 51 mg/Kg. This mercury concentration exceeded the current USEPA RSLs for residential uses of 23 mg/Kg.

Semi-volatile compounds were only detected in one of the composite samples collected from the stockpiles exceeding the laboratory reporting limits. The concentrations detected in the soil samples did not exceeded any of their respective USEPA ESLs for residential uses.

Chrysotile fibers were detected exceeding the 0.10% detection limit in two of the nineteen stockpile soil samples analyzed by the PLM (CARB 435 1,000 Point Count) method. None of the concentrations detected exceed the BAAQMD limit of 0.25%.

Based on these results, the stockpile soils were reused as general fill during Phase II mass grading generally in the lower, northern area of the Site.

3.3.10 Naturally-Occurring Asbestos

Naturally-occurring asbestos in rock has been identified across the property that exceeds the BAAQMD and DTSC Schools Program acceptable risk guidelines at most locations. The lab analyses performed on bedrock samples show concentrations that range from 11.25% to 30% using Polarized Light Microscopy (PLM) methods (SES, 2009). Some native colluvial soils have also been sampled outside the Phase II area and concentrations are non-detectable using Transmission Electron Microscopy (TEM) methods.

3.4 Previous Mitigation Activities

3.4.1 Phase II Mass Grading - 2017 through 2019

Because of the possible presence of elevated concentrations of naturally occurring mercury, soils and rock encountered during Phase II mass grading were sampled 20 to 30 times per day to help identify any elevated mercury. Suspect silica carbonate materials with mercury were buried deeply (15 feet minimum) in fill keyways and benches to avoid any of this material from being exposed near the surface. The process to test and control mercury is described in detail in the Phase II Completion Report (MCI, 2020b).

After mass grading the entire Phase II area was sampled at a minimum frequency of two samples per acre in the upper 3 feet of final grade, and analyzed using Xray Fluorescence Unit (XRF) to document the absence of elevated mercury concentrations. Sampling locations in the vicinity of the school Site are included on Figure 2. Confirmation laboratory analytical soil samples were collected and analyzed at a rate of one per 20 XRF measurements (see Table 1). No soil samples exceeding residential USEPA RSLs for mercury (23 mg/kg) were identified on the proposed Site.

4.0 POTENTIAL COMPOUNDS OF CONCERN

Based on results of the review of historical documents, historical practices, sampling, and interviews conducted during the environmental investigations, the potential environmental concerns for the Site are limited to the presence of naturally occurring asbestos.

Asbestos is a naturally-occurring, fibrous silicate mineral, and is a known carcinogen when exposure occurs at high concentrations over a long period of time. Naturally-occurring asbestos (NOA) most frequently occurs in and immediately adjacent to areas of ultramafic (igneous and metamorphic rocks with high iron and magnesium concentrations) rock outcrops.

Geologic mapping of the Communications Hill area has documented the presence of serpentinite rock containing NOA (as chrysotile) at concentrations as high as 30 percent. That concentration exceeds the DTSC Schools Division asbestos threshold concentration above which capping is required to control long-term fiber emissions.

Future mass grading at the planned school Site will include either removal of the upper 1 to five feet of NOA soil and rock or leaving the Site 1 to 5 feet low to accommodate capping with fill soils that do not contain NOA exceeding DTSC Schools guidelines.

5.0 ENVIRONMENTAL SETTINGS

This section describes Site environmental conditions that could potentially influence the transport of contaminants from the source through identified potential exposure pathways to an exposed individual or environmental receptor.

5.1 Factors Related to Soil Pathways

5.1.1 Site and Surrounding Area Topography

The school Site is partially graded but requires additional cut and fill which will render the Site generally flat. The current, eastern portion is Site is currently flat and has an elevation of approximately 330 feet above MSL, and has a proposed Site elevation of 322 feet above MSL. The vicinity topography slopes towards the north. The Site boundaries north and east are not currently delineated in the field.

5.1.2 Evidence of Environmental Impacts

A number of Site investigations have been performed since 1991 to evaluate if contamination was present on the larger Communications Hill property, including the planned school Site. Soil, sediment, bedrock, and groundwater, and surface water were evaluated for a number of potential environmental contaminants of concern, and are summarized in Section 3.3.

Mercury and NOA were identified as naturally occurring contaminants of potential concern. During grading and redevelopment of the proposed school Site, engineered fill was placed and confirmation sampling was performed on soils within the upper 3 feet. The confirmation sampling was performed to verify that mercury containing soils were not placed in the upper soils at the Site. Confirmation sampling detected no mercury concentrations in confirmation samples collected at the Site. The mitigation and sampling activities are summarized in Section 3.4.

5.1.3 Site Geologic Setting and Soil Types

San Jose is located on a bedrock ridge rising above the alluvial plain of the surrounding Santa Clara Valley. Santa Clara County is in the Coast Ranges geomorphic province, which is characterized by northwest-trending mountain ranges and valleys subparallel to the San Andreas Fault System.

Serpentinite is the predominant rock type at the Site and vicinity, along with sedimentary rock. Silica carbonate, which may contain mercury, also is present. Based on information contained in the Environmental Data Resources Database Report (EDR Radius Report) prepared for the CDE/CCR Title 5 Geologic and Safety Hazards Evaluation report (MCI, 2020a), soils in the vicinity

of the Site are categorized by the USDA Soil Conservation Service as Botella. Botella soils are well-drained, moderately coarse-grained soils consisting of clay loam (MCI, 2020a).

Though a prominent bedrock ridge, the Site is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin. The surrounding aquifer system in the subbasin consists primarily of Pleistocene-Holocene age Alluvium. The Pleistocene-Holocene Alluvium is the most significant water-bearing formation in the Subbasin.

Based on hydrogeological information available for the Site vicinity, shallow groundwater in alluvium is expected at depths of greater than 40 feet (MCI, 2020a). Several bedrock springs are present on the slopes of the bedrock ridge. In alluvium the groundwater flow direction in the immediate vicinity of the Site is generally northerly to northwesterly, based on local topography.

5.1.4 Site Accessibility

Undeveloped but graded land border the Site to the north and west, parcels undergoing residential development border the Site to the south and east, and the Communications Hill Tower borders to the southwest. The Site can be accessed from the southern portion of the property on Llano de los Robles Avenue, south of Communications Hill Boulevard and west of Lina Street.

5.1.5 Preventive Measures

The planned school Site is currently undeveloped and partially graded. No permanent structures are on the Site. The temporary structures as part of the construction laydown yard will be removed during the development of the Site. More grading will need to be done at the school Site and upwind to the west and therefore measures implemented to mitigate and to monitor releases of NOA during development. This includes perimeter dust monitoring for asbestos fibers.

5.1.6 Nearest Potentially Affected Areas

The planned development of the Site includes new construction of the proposed school grounds. Multiple single-family residential buildings are located within 1 mile of the Site, and single-family residential structures are being constructed east and south of the school Site. The closest sensitive receptors are the single-family residential structures east of the Site.

No schools were identified within one mile of the Site.

5.2 Factors Related to Water Pathways

5.2.1 Potential Migration Pathways to Groundwater

The primary migration pathway of potentially hazardous substances on the Site is via transport of dissolved chemicals through the unsaturated zone to groundwater. First groundwater below the school Site is expected to be at least 100 feet beneath ground surface and generally likely flows north. The COCs at the Site include mercury (as mercury sulfide) and NOA, which have very low solubility (mercury) to insoluble (NOA) and mobilities in soil and are not expected to be capable of significant downward migration into the soil column. Therefore, the likelihood of transport of potentially hazardous substances at the Site to groundwater is very low.

5.2.2 Potential Migration Pathways to Surface Water Bodies

The most likely migration pathway of potentially hazardous substances to surface water bodies is through stormwater runoff, and subsequent discharge to nearby surface waters. The nearest surface water in the watershed is Coyote creek located 1.5 miles to the northeast. There are extensive sediment control facilities built into the project to prevent sediment discharge and to prevent the formation of methyl mercury. Therefore, the likelihood of transport of potentially hazardous substances to surface water bodies is very low.

5.2.3 Preventive Measures

The planned development is expected to include Site grading and construction and rainfall is expected during the winter months. Transport via surface runoff to storm drains is a potential concern. During grading and construction, a variety of best management practices will be employed to comply with existing State and local stormwater regulations to control potential runoff and reduce erosion and sediment transport. A Storm Water Pollution Prevention Plan will be in place during mass grading and construction activities overseen by the City of San Jose.

5.3 Factors Related to Air Pathways

5.3.1 Potential Release Mechanisms

During mass grading and construction, soils will be exposed until construction is finished. Wind transport of affected soils and NOA are anticipated potential pathway for a release of fibers to air.

5.3.2 Prevailing Wind Direction and Velocity

The daily prevailing wind direction in the Site vicinity experiences mild variation throughout the year. According to Weatherspark.com, the wind in San Jose is most often from the west between February and November, and from the north between early November and mid-February. Wind

speeds average more than 7.0 miles per hour. The windiest month of the year is June, with an average hourly wind speed of 8.0 miles per hour.

5.3.3 Local Climate Information

According to Weatherspark.com, the average monthly precipitation in the San Jose area ranges from a low of 0 inches in late-July, to a high of 3.9 inches in mid-February. The rainy season in the area generally is from October to May. The temperature at the Site throughout the year generally ranges from 44 to 82 degrees Fahrenheit.

5.3.4 Timing of Release Mechanisms

During mass grading and construction soil and rock will be disturbed during normal work hours, and the exposure potential varies upon the activity and could result in a potential release of NOA fiber particles into the air.

5.3.5 Potentially Affected Areas

If not controlled the immediate Site vicinity could be affected by the release of NOA fibers dispersed by wind.

5.3.6 Preventive Measure

During construction, engineering controls (e.g., dust abatement, plastic sheeting, etc.) will be put into place to control airborne particles. Perimeter NOA monitoring will also be performed during earth disturbing activities to evaluate the effectiveness of the dust control measures.

6.0 PEA SAMPLING AND ANALYSIS

The primary objective of sampling during a PEA investigation is to identify if chemicals or naturally-occurring substances are present at the Site that could represent health or hazard risks for the planned future school use. During grading and development of the proposed school Site before the PEA was initiated, engineered fill was placed and confirmation sampling targeted the upper 3 feet of engineered fill soils on a grid sample density of one sample per 150 feet. The confirmation sampling was performed to verify that mercury containing soils were not placed in the upper 3 feet of soils. No elevated concentrations of mercury were detected in the confirmation samples. A summary of confirmation sampling is presented in Section 3.4, and was included in the Phase II Soil Management Completion Report (MCI, 2020b).

A sediment sample was collected by MCI on February 14, 2022, from a pond in the future school area that was created by street sweeper dumping. The sample was analyzed for CAM 17 metals (EPA Test Methods 6010/7471), semi-volatile organic compounds (EPA Test Method 8270 SIM), and TPH diesel and motor oil (EPA Test Method SW8015M). Metals concentrations were below the

USEPA RSL, HERO Note 3, and total threshold limit concentration (TTLC) for hazardous waste classification. Semi-volatile organic compounds were not detected above their respective USEPA RSL, HERO Note 3, or DTSC screening levels with the exception of dibenz(a,h)anthracene, which was non-detect at 0.035 mg/kg. The DTSC screening level is 0.028 mg/kg for dibenz(a,h)anthracene. The concentration of TPH motor oil was detected at 417 mg/kg, above the USEPA RSL of 96 mg/kg for residential uses. Note that the upper 5 feet of soils at the Site are planned for removal and/or replacement with clean import fill soils during future grading of the Site.

7.0 QUALITY ASSURANCE/QUALITY CONTROL

Laboratory analytical data from the sample collected at the Site were reviewed for data quality and usability in the risk evaluation. The PEA confirmation sample was analyzed at Torrent Laboratory, Inc. in Milpitas, California.

7.1 Sample Receipt and Hold Times

The laboratory work order numbers for the sampling include the following: 2202167 Rev: 1. The samples were collected on February 14, 2022 and received by the laboratory on the same day. No adverse sample handling conditions were reported by the laboratory upon receipt of the samples. All samples were extracted and analyzed within the specified hold times.

7.2 Evaluation of MS/MSD

Matrix spike/matrix spike duplicates (MS/MSD) were reviewed, by batch, for completeness and accuracy. The results are summarized below:

- For work order 2202167 Rev: 1 one analytical batch (#463624) was reviewed for the TPH analysis; one analytical batch (#463605) was reviewed for the SVOCs analysis; and one analytical batch (#463675) was reviewed for the CAM17 Metals analysis; and one analytical batch (#463689) was reviewed for the mercury analysis. The LCS% Recovery and LCSD% Recovery was reviewed for all the batches and all compounds were within the % Recovery Limits. The control limits for the analytical batches were 30%.

7.3 Reporting Limits

All undiluted reporting limits were at or below the various specified screening levels. An "x" qualifier for TPH as diesel indicated the diesel result is due to overlapping of oil range organics within the diesel quantified range.

All the samples were analyzed at a standard dilution of 1x, with the exception of the PAHs and SVOCs where samples were diluted 10x to minimize matrix interference and also due to the nature of the matrix (dark, viscous extract).

8.0 HUMAN HEALTH SCREENING EVALUATION

8.1 Naturally-Occurring Asbestos

The NOA concentrations in the bedrock and fill soils at the Site exceed the DTSC Schools Programs guidelines for NOA. Risks to human health are primarily associated with inhaling asbestos fibers, which can become airborne as a result of activities that disturb rock or soil that contains asbestos. Asbestos fibers can cause health effects, including respiratory disease (asbestosis), lung cancer, and mesothelioma. The longer a person is exposed to asbestos and the greater the intensity of exposure, the greater the chances for health problems. All forms of asbestos are considered hazardous. It is difficult to predict airborne asbestos fiber concentrations from the concentration of asbestos fibers in rock or soil. A quantitative human health risk assessment with corresponding cancer risk values cannot be calculated based solely on concentration of asbestos in soil. The strategy to prevent or reduce potential exposures to NOA is to institute mitigative measures based on the presence of NOA in soil or rock at proposed school facilities (DTSC, 2004). To prevent future exposure to Site soils, all soils will be capped with 1 foot on slopes, and up to 5 feet in flat areas with clean import fill soils that is approved prior to import to the Site, and capped with either classroom buildings, hardscape, artificial turf.

9.0 ECOLOGICAL SCREENING EVALUATION

9.1 Site Characterization

As shown on Figure 2, the planned elementary school and Site is currently surrounded on the eastern and southern sides by single-family residential structures under construction, and to the north by the future planned Communications Hill Boulevard, and to the west by future single family residential structures. There are no wildlife habitats in the immediate vicinity of the Site.

9.2 Biological Characterization

Based on current Site usage and the lack of wildlife habitats in the immediate vicinity of the Site, a biological resource report was not deemed necessary.

10.0 PUBLIC PARTICIPATION

The district's current intention is to make the PEA available for public review by Education Code, section 17213.1, subdivision (a)(6A), (or "option A"), where the PEA review is reviewed independently of the California Environmental Quality Act (CEQA) review. Copies of the report will be placed at the Franklin McKinley School District Office, and on DTSC's Envirostor database. A public notice will be placed in the local paper, announcing the availability of the PEA for review, the locations, and the date of the public hearing.

11.0 CONCLUSIONS AND RECOMMENDATIONS

A number of investigations have been conducted across the 300-acre Communications Hill development since 1991 to evaluate the rock, soil, surface water and groundwater for a number of potential environmental contaminants of concern. The proposed 8-acre elementary school Site is within this larger development. The previous environmental assessments were performed prior to the DTSC involvement. Based on these investigations and activity, mercury containing silica carbonate bedrock and underground former historical mine workings are located north and northwest of the Site, respectively. No shallow silica carbonate bedrock underlies the proposed school Site. No other contaminants are present at the proposed school Site.

During the recent grading of the Phase II area for Communications Hill from 2017 to 2019, the proposed school Site was partially graded. Engineered fill was placed on the Site from nearby soils in the Phase II project development, mainly serpentinite, claystone, and sandstone. Confirmation samples were collected in the upper 3 feet of the Site, and analyzed for total mercury. The confirmation samples indicated all mercury concentrations were less than the USEPA RSL of 23 mg/kg for mercury (salts) at the Site.

One sediment sample (Pond-1) was collected by MCI in February 2022 from ponded water created by street sweeper discharge. The lab testing included SVOCs, CAM17 metals, and TPH-diesel and none of these compounds was detected exceeding USEPA RSLs for residential uses. TPH motor oil was identified in the sediment sample at 417 mg/kg which exceeds the USEPA RSL for noncarcinogenic child exposure of 96 mg/kg.

Geologic mapping and testing of the Communications Hill area has documented the presence of serpentinite rock containing NOA (as chrysotile) at concentrations as high as 30 percent. The concentrations detected exceeds the DTSC Schools Division asbestos threshold concentration above which dust controls during construction and capping and long-term operations and maintenance to control long-term fiber emissions.

12.0 LIMITATIONS

This report was prepared for the sole use of Franklin McKinley School District and the California DTSC in evaluating soil quality at the time of this study. We make no warranty, expressed or implied, except that our services have been performed in accordance with environmental principles generally accepted at this time and location. The chemical and other data presented in this report can change over time and are applicable only to the time this study was performed. We are not responsible for data presented by others. The accuracy and reliability of contaminant studies are a reflection of the number and type of samples taken and extent of the analyses conducted and are thus inherently limited and can be dependent upon the resources expended. Chemical analyses were performed for specific parameters during this investigation. Our sampling and analytical plan was designed using accepted environmental principles and our judgment for the performance of a soil quality evaluation and based on the degree of investigation approved by the California DTSC. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information.

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TABLES

Table 1
Communications Hill Proposed School Area Confirmation Sampling Results for Mercury

Date	Sample ID	Sample Depth (feet bgs)	pXRF Mercury (mg/kg)	Fixed Lab Total Mercury (mg/kg)	Lithology
6/5/2019	CSF12	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, mixed with small amount of brown clay
6/5/2019	CSF13	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray
6/5/2019	CSF14	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with white carbonate and mixed with small amount of brown clay
6/5/2019	CSF15	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, mixed with small amount of brown clay
6/5/2019	CSF16	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray
6/5/2019	CSF17	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with some oxidized serpentinite, yellow brown
6/5/2019	CSF30	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with some oxidized serpentinite, yellow brown
6/5/2019	CSF31	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with white carbonate
6/5/2019	CSF32	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray
6/5/2019	CSF33	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with some oxidized serpentinite, yellow brown, mixed with small amount of brown clay
6/5/2019	CSF34	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with white carbonate
6/3/2019	CSF47	0 - 3	*8.76	--	(EF) Serpentinite, olive brown, small amount of brown clay, organics
6/5/2019	CSF48	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray
6/5/2019	CSF49	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, with some oxidized serpentinite, yellow brown
6/5/2019	CSF50	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, mixed with small amount of brown clay
6/5/2019	CSF51	0 - 3	*8.76	--	(EF) Serpentinite, blue gray and yellow brown and purple, with white carbonate
1/31/2019	CSF52	0 - 3	*8.76	--	(Native) Serpentinite, olive gray, with some white carbonates
1/31/2019	CSF55	0 - 3	*8.76	--	(Native) Serpentinite, olive green, purple and olive brown, with some white carbonates, mixed with some brown clay
6/5/2019	CSF56	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, mixed with small amount of brown clay
6/5/2019	CSF57	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, mixed with brown clay
6/5/2019	CSF58	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, small amount of oxidized serpentinite, yellow brown, mixed with small amount of brown clay
6/3/2019	CSF59	0 - 3	*8.76	--	(EF) Serpentinite, olive brown to blue gray, with small amount brown clay
6/3/2019	CSF72	0 - 3	*8.76	--	(EF) Serpentinite, olive brown to blue gray, with small amount brown clay
6/5/2019	CSF73	0 - 3	*8.76	--	(EF) Brown clay with gravels and serpentinite, blue gray and olive brown
6/5/2019	CSF74	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, some oxidized serpentinite, yellow brown, mixed with small amount of brown clay
6/5/2019	CSF75	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, some oxidized serpentinite, yellow brown, mixed with small amount of brown clay
6/22/2018	CSF80	0 - 3	*8.76	--	(Native) Serpentinite, olive brown and Brown Clay
6/22/2018	CSF81	0 - 3	4 +/- 3	ND<0.50	(Native) Serpentinite, olive brown and Brown Clay
6/3/2019	CSF82	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray, w small amount brown clay, organics
6/3/2019	CSF83	0 - 3	*8.76	--	(EF) Serpentinite, olive brown and blue gray mixed with brown clay

NOTES: Native = Native bedrock within Phase II development
EF = Engineered Fill
AF = Artificial Fill
< = Less than reported 3x standard deviation
+/- = plus/minus indicated value
-- = not analyzed
ND = non-detect
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
*8.76 = portable XRF (pXRF) reliable detection limit
(Reference: Soil Management Completion Report, Table 16, Phase II Grading, MCI, 7/1/2020)

McCloskey Consultants
ENVIRONMENTAL & GEOLOGIC ASSESSMENTS

Table 2

Communication Hill Proposed School Area TPHd TPHmo and SVOC Concentrations Sediment Sample - February 14, 2022

(Concentrations in milligrams per kilogram [mg/kg])

Approximate Location	Sample ID	Approximate Sampling Depth	Date Sampled	TPH Diesel	TPH Motor Oil	Anthracene	Acenaphthene	Acenaphthelene	Benzo(a)-anthracene	Benzo(a)-pyrene	Benzo(b)-fluoranthene	Benzo (g,h,i) perylene	Benzo(k)-fluoranthene	Chrysene	Dibenz (a,h)anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methyl-naphthalene	2-Methyl-naphthalene	2-Chloro-naphthalene
Future School	POND-1	0-½'bgs	2/14/2022	48.1 x	**417**	<0.510	<0.510	<0.510	<0.510	<0.036***	<0.510	<0.510	<0.510	<0.510	**<0.035*** **	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510	<0.510	<1.360
Regional Screening Level				**82***	**96****	**18,000**	**3,600**	**NE**	**1.10**	**0.11**	**1.1**	**NE**	**11**	**110**	**0.028**	**2,400**	**2,400**	**1.1**	**2.0**	**NE**	**1,800**	**9.9**	**190**	**4,100**
HERO HHRA Note 3 DTSC SL or USEPA RSLs				**RSL**	**RSL**	**RSL**	**RSL**	**NE**	**RSL**	**RSL**	**RSL**	**NE**	**RSL**	**RSL**	**DTSC-SL**	**RSL**	**RSL**	**RSL**	**RSL**	**NE**	**RSL**	**DTSC-SL**	**DTSC-SL**	**DTSC-SL**

<D.L.	Indicates that the compound was not detected at or above stated laboratory method detection
NE	Not established.
(Duplicate)	Duplicate Sample
J	The identification of the analyte is acceptable; the reported value is an estimate.
x	Diesel result due to over-lapping of oil range organice within diesel quanitfied range
TPH	Total Petroleum Hydrocarbons
BOLD	Analytical results exceed screening level
HERO HHRA Note 3	DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-Modified Screening Levels, June 2020.
USEPA RSL	United States Environmental Protection Agency Regional Screening Levels for Residenial Uses (November 2020)
SFBRWQCB ESL	San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels Tier 1, (2019, Rev2)
MDL	Method detection limit
PQL	Practical Quantitation Limit
*	Total Petroleum Hydrocarbons (aromatic medium) for TPH Diesel Range
**	Total Petroleum Hydrocarbons (aromatic high) for TPH Motor Oil Range
***	Non detect value reported to the method detection limit (MDL)

Table 3
Communication Hill Proposed School Area Metals Concentrations Sediment Sample - February 14, 2022

(Concentrations in milligrams per kilogram [mg/kg])

Location	Sample ID	Sample Depth (feet bgs)	Date Sampled	Approximate Soil Type (Fill or Native)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
(Concentrations in milligrams per kilogram [mg/Kg])																					
Proposed School	**POND-1**	0-0.5'	2/14/2022	Fill	<5.0	<0.15***	70.5	<5.00	<5.00	90.5	13.7	33.8	<3.00	<0.50	<5.00	132	<5.00	<1.00	<0.20***	44.1	41.7
USEPA RSL					**31**	**0.68***	**15,000**	**160**	**7.1**	**120,000**	**23**	**3,100**	**400**	**11**	**390**	**1,500**	**390**	**390**	**0.78****	**390**	**23,000**
HHRA HERO Note 3					**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**80**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
TTLC					**500**	**500**	**10,000**	**75**	**100**	**2,500**	**8,000**	**2,500**	**1,000**	**20**	**3,500**	**2,000**	**100**	**500**	**700**	**2,400**	**5,000**
Naturally-Occurring Background Concentration*					**--**	**11.0***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:

CAM 17 metals, arsenic, and lead analyzed using U.S. EPA Method 6010B; EPA Method 7471A (mercury).

bgs	Below ground surface.	USEPA RSL	United States Environmental Protection Agency Regional Screening Levels for Residential Uses (November 2021).
<RDL	Indicates compound was not detected at or above stated laboratory reported detection limits.	HERO HHRA Note 3	DTSC Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3, DTSC-Modified Screening Levels, January 2018.
--	Indicates sample not analyzed.	TTLC	Total threshold limit concentration for hazardous waste classification.
NA	Not applicable.	Native	Indicates concentration exceeds one or more regulatory screening level Native Soil.
*	Cal/EPA does not require cleanup of soil to less than background concentrations. Natural background concentrations of arsenic often exceed the health-based goals in soil.	Fill	Indicates concentration exceeds one or more regulatory screening level Fill Soil.
**	The USEPA RSL for Thallium (Soluble Salts)	J	Estimated concentration. See laboratory analytical reports for other lab qualifiers.
***	Non detect laboratory value reported to the method detection limit (MDL).		

FIGURES

Vicinity Map

Communications Hill School Site
APNs 455-90-031 & -036
San Jose, California

FIGURE 1

McCloskey Consultants

LEGEND:

- Approximate Site Boundary of Proposed Communications Hill School
- Estimated Limit of Quarry Reclamation Area 1995 to 2005 (H.T. Harvey and Associates, May 14, 2008)
- Approximate Location of Bench Fill - Silica Carbonate Burial
- Approximate Boundary of Encapsulation Cell Area
- Approximate Location of Silica Carbonate Bedrock
- Approximate Location of Historical Ore Processing
- Approximate Location of Historical Hillsdale Mine Workings and Mine Adits
- Approximate Confirmation Sampling Location (upper 3 feet). All concentrations less than the USEPA RSL for mercury of 23 mg/Kg.
- Approximate Sediment Sampling Location (upper foot).

Approximate Graphical Scale (Ft.)

0 225 450

Communications Hill Proposed School and Area

Communications Hill 2, Phase II

San Jose, California

FIGURE 2

McCloskey Consultants

Appendix A

Laboratory Analytical Reports

Tom McCloskey
McCloskey Consultants
420 Sycamore Valley Road West
Danville, California 94526
Tel: 925 786 2667
Email: tom@mccloskeyconsultants.com

RE: Communication Hill

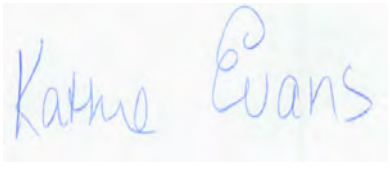
Work Order No.: 2202167 Rev: 1

Dear Tom McCloskey:

Torrent Laboratory, Inc. received 1 sample(s) on February 14, 2022 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991 If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.



Kathie Evans
Project Manager

February 21, 2022
Date

Date: 2/21/2022

Client: McCloskey Consultants

Project: Communication Hill

Work Order: 2202167

CASE NARRATIVE

Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc.

REVISIONS

Report revised to report PAHs by 8270SIM. Analysis was performed on extract used for 8270 analysis (no re-extraction was performed)

Rev. 1 (3/28/22)

Sample Result Summary

Report prepared for: Tom McCloskey
McCloskey Consultants

Date Received: 02/14/22
Date Reported: 02/21/22

Pond-1 2202167-001

Parameters:	Analysis Method	DF	MDL	PQL	Results	Unit
Barium	SW6010B	1	0.055	5.00	70.5	mg/Kg
Chromium	SW6010B	1	0.075	5.00	90.5	mg/Kg
Cobalt	SW6010B	1	0.070	5.00	13.7	mg/Kg
Copper	SW6010B	1	0.20	5.00	33.8	mg/Kg
Nickel	SW6010B	1	0.50	5.00	132	mg/Kg
Vanadium	SW6010B	1	0.10	5.00	44.1	mg/Kg
Zinc	SW6010B	1	0.30	5.00	41.7	mg/Kg
TPH as Diesel (SG)	SW8015B	1	14	32	48.1	mg/Kg
TPH as Motor Oil (SG)	SW8015B	1	51	160	417	mg/Kg

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	7471BP	**Prep Batch Date/Time:**	2/17/22 3:15:00PM
Prep Batch ID:	1139309	**Prep Analyst:**	ATRUONG

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Mercury	SW7471B	1	0.083	0.50	ND		mg/Kg	02/18/22	13:11	BJAY	463689

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3050B	**Prep Batch Date/Time:**	2/17/22 2:55:00PM
Prep Batch ID:	1139297	**Prep Analyst:**	ATRUONG

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Antimony	SW6010B	1	0.050	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Arsenic	SW6010B	1	0.15	1.30	ND		mg/Kg	02/18/22	12:40	ERR	463687
Barium	SW6010B	1	0.055	5.00	**70.5**		mg/Kg	02/18/22	12:40	ERR	463687
Beryllium	SW6010B	1	0.055	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Cadmium	SW6010B	1	0.10	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Chromium	SW6010B	1	0.075	5.00	**90.5**		mg/Kg	02/18/22	12:40	ERR	463687
Cobalt	SW6010B	1	0.070	5.00	**13.7**		mg/Kg	02/18/22	12:40	ERR	463687
Copper	SW6010B	1	0.20	5.00	**33.8**		mg/Kg	02/18/22	12:40	ERR	463687
Lead	SW6010B	1	0.10	3.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Molybdenum	SW6010B	1	0.050	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Nickel	SW6010B	1	0.50	5.00	**132**		mg/Kg	02/18/22	12:40	ERR	463687
Selenium	SW6010B	1	0.22	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Silver	SW6010B	1	0.15	1.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Thallium	SW6010B	1	0.55	5.00	ND		mg/Kg	02/18/22	12:40	ERR	463687
Vanadium	SW6010B	1	0.10	5.00	**44.1**		mg/Kg	02/18/22	12:40	ERR	463687
Zinc	SW6010B	1	0.30	5.00	**41.7**		mg/Kg	02/18/22	12:40	ERR	463687

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3546_PAHSIM	**Prep Batch Date/Time:**	2/15/22 10:59:00AM
Prep Batch ID:	1140194	**Prep Analyst:**	KAURN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Naphthalene	SW8270C	10	66	510	ND		ug/Kg	03/23/22	12:42	MT	464578
2-Methylnaphthalene	SW8270C	10	29	510	ND		ug/Kg	03/23/22	12:42	MT	464578
1-Methylnaphthalene	SW8270C	10	24	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Acenaphthelene	SW8270C	10	24	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Acenaphthene	SW8270C	10	21	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Fluorene	SW8270C	10	34	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Phenanthrene	SW8270C	10	76	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Anthracene	SW8270C	10	68	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Fluoranthene	SW8270C	10	68	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Pyrene	SW8270C	10	70	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Benz[a]anthracene	SW8270C	10	59	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Chrysene	SW8270C	10	63	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Benzo[b]fluoranthene	SW8270C	10	31	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Benzo[k]fluoranthene	SW8270C	10	29	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Benzo[a]pyrene	SW8270C	10	36	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Indeno[1,2,3-cd]pyrene	SW8270C	10	28	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Dibenz[a,h]anthracene	SW8270C	10	35	510	ND		ug/Kg	03/23/22	12:42	MT	464578
Benzo[g,h,i]perylene	SW8270C	10	34	510	ND		ug/Kg	03/23/22	12:42	MT	464578
			Acceptance Limits								
2-Fluorobiphenyl (S)	SW8270C		45 - 125		**0.00**	D	%	03/23/22	12:42	MT	464578
p-Terphenyl-d14 (S)	SW8270C		30 - 125		**0.00**	D	%	03/23/22	12:42	MT	464578

NOTE: In an effort to minimize matrix interference, a smaller sample mass was extracted and the solvent final volume had to be resulting in increased reporting limits. The sample was further diluted due to the nature of the extract (oily and viscous).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3546_BNA	**Prep Batch Date/Time:**	2/15/22 11:34:00AM
Prep Batch ID:	1139197	**Prep Analyst:**	KAURN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
The results shown below are reported using their MDL.											
N-Nitrosodimethylamine	SW8270C	10	6010	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
Phenol	SW8270C	10	5610	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Bis(2-chloroethyl)ether	SW8270C	10	1700	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2-Chlorophenol	SW8270C	10	6110	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
1,3-Dichlorobenzene	SW8270C	10	1680	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
1,4-Dichlorobenzene	SW8270C	10	1870	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzyl Alcohol	SW8270C	10	2620	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
1,2-Dichlorobenzene	SW8270C	10	1730	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2-Methylphenol (o-Cresol)	SW8270C	10	3760	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
N-Methyl-2-Pyrrolidone (NMP)	SW8270C	10	8720	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
3-/4-Methylphenol (p-/m-Cresol)	SW8270C	10	4010	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
N-nitroso-di-n-propylamine	SW8270C	10	1680	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Hexachloroethane	SW8270C	10	2190	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Nitrobenzene	SW8270C	10	1650	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Isophorone	SW8270C	10	1560	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2-Nitrophenol	SW8270C	10	3250	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4-Dimethylphenol	SW8270C	10	2920	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzoic Acid	SW8270C	10	5340	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Bis(2-Chloroethoxy)methane	SW8270C	10	1250	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Bis(2-chloroisopropyl)ether	SW8270C	10	1610	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4-Dichlorophenol	SW8270C	10	5030	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
1,2,4-Trichlorobenzene	SW8270C	10	1520	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Naphthalene	SW8270C	10	1360	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,6-Dichlorophenol	SW8270C	10	4590	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Hexachloro-1,3-butadiene	SW8270C	10	1070	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
4-Chloro-3-methylphenol	SW8270C	10	4330	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
2-Methylnaphthalene	SW8270C	10	1340	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
1-Methylnaphthalene	SW8270C	10	1560	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Hexachlorocyclopentadiene	SW8270C	10	1660	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4,6-Trichlorophenol	SW8270C	10	4610	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4,5-Trichlorophenol	SW8270C	10	4280	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
2-Chloronaphthalene	SW8270C	10	1360	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
1,4-Dinitrobenzene	SW8270C	10	1320	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Dimethyl phthalate	SW8270C	10	1810	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
1,3-Dinitrobenzene	SW8270C	10	1330	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Acenaphthylene	SW8270C	10	1060	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,6-Dinitrotoluene	SW8270C	10	1450	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
1,2-Dinitrobenzene	SW8270C	10	2020	18500	ND		ug/Kg	02/16/22	16:35	MT	463605

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3546_BNA	**Prep Batch Date/Time:**	2/15/22 11:34:00AM
Prep Batch ID:	1139197	**Prep Analyst:**	KAURN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
The results shown below are reported using their MDL.											
Acenaphthene	SW8270C	10	1370	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4-Dinitrophenol	SW8270C	10	9940	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
4-Nitrophenol	SW8270C	10	7010	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
Dibenzofuran	SW8270C	10	1440	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,4-Dinitrotoluene	SW8270C	10	1550	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
2,3,5,6-Tetrachlorophenol	SW8270C	10	3540	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
2,3,4,6-Tetrachlorophenol	SW8270C	10	4030	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Diethylphthalate	SW8270C	10	1750	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
Fluorene	SW8270C	10	1320	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
4-Chlorophenyl-phenylether	SW8270C	10	1190	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
4,6-Dinitro-2-methylphenol	SW8270C	10	1710	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Diphenylamine	SW8270C	10	1670	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Azobenzene	SW8270C	10	14600	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
4-Bromophenyl-phenylether	SW8270C	10	1050	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Hexachlorobenzene	SW8270C	10	1110	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Pentachlorophenol	SW8270C	10	3200	36900	ND		ug/Kg	02/16/22	16:35	MT	463605
Phenanthrene	SW8270C	10	1190	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Anthracene	SW8270C	10	1140	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Carbazole	SW8270C	10	1380	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Di-n-butylphthalate	SW8270C	10	1730	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Fluoranthene	SW8270C	10	1280	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzidine	SW8270C	10	18800	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Pyrene	SW8270C	10	1530	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Butylbenzylphthalate	SW8270C	10	2690	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzo(a)anthracene	SW8270C	10	1260	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
3,3-Dichlorobenzidine	SW8270C	10	15100	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Chrysene	SW8270C	10	1940	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Bis(2-Ethylhexyl)phthalate	SW8270C	10	1960	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
Di-n-Octylphthalate	SW8270C	10	1570	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzo(b)fluorathene	SW8270C	10	1540	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
benzo(k)fluorathene	SW8270C	10	1040	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzo(a)pyrene	SW8270C	10	1260	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Indeno(1,2,3-c,d)pyrene	SW8270C	10	1770	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Dibenzo(a,h)anthracene	SW8270C	10	1630	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Benzo(g,h,i)perylene	SW8270C	10	2130	18500	ND		ug/Kg	02/16/22	16:35	MT	463605
Pyridine	SW8270C	10	5610	92300	ND		ug/Kg	02/16/22	16:35	MT	463605
			Acceptance Limits								
2-Fluorophenol (S)	SW8270C		25 - 121		**0.000**	D	%	02/16/22	16:35	MT	463605

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3546_BNA	**Prep Batch Date/Time:**	2/15/22 11:34:00AM
Prep Batch ID:	1139197	**Prep Analyst:**	KAURN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
The results shown below are reported using their MDL.											
Phenol-d6 (S)	SW8270C		24 - 113		**0.000**	D	%	02/16/22	16:35	MT	463605
2,4,6-Tribromophenol (S)	SW8270C		19 - 122		**0.000**	D	%	02/16/22	16:35	MT	463605
2-Fluorobiphenyl (S)	SW8270C		45 - 143		**0.000**	D	%	02/16/22	16:35	MT	463605
Nitrobenzene-d5 (S)	SW8270C		23 - 120		**0.000**	D	%	02/16/22	16:35	MT	463605
p-Terphenyl-d14 (S)	SW8270C		18 - 137		**0.000**	D	%	02/16/22	16:35	MT	463605

NOTE: In an effort to minimize matrix interference, a smaller sample mass was extracted and the solvent final volume had to be resulting in increased reporting limits. The sample was further diluted due to the nature of the extract (oily and viscous).

Torrent LABORATORY, INC.

SAMPLE RESULTS

Report prepared for: Tom McCloskey
McCloskey Consultants

Date/Time Received: 02/14/22, 1:40 pm
Date Reported: 02/21/22

Client Sample ID:	Pond-1	**Lab Sample ID:**	2202167-001A
Project Name/Location:	Communication Hill	**Sample Matrix:**	Soil
Project Number:			
Date/Time Sampled:	02/14/22 / 12:30		
SDG:			

Prep Method:	3546_TPHSG	**Prep Batch Date/Time:**	2/15/22 10:42:00AM
Prep Batch ID:	1139186	**Prep Analyst:**	KAURN

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel (SG)	SW8015B	1	14	32	**48.1**	x	mg/Kg	02/17/22	2:25	SN	463713
TPH as Motor Oil (SG)	SW8015B	1	51	160	**417**		mg/Kg	02/17/22	2:25	SN	463713
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		**32.9**	S	%	02/17/22	2:25	SN	463713

NOTE: Reporting limits increased due to matrix interference (asphalt)
S - Surrogate recovery outside the laboratory control limit due to matrix interference.
x- Diesel result due to over-lapping of oil range organics within diesel quantified range

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	2202167	**Prep Method:**	3546_TPHSG	**Prep Date:**	02/15/22	**Prep Batch:**	1139186
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463624
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.85	2.0	ND	
TPH as Motor Oil (SG)	3.2	10	ND	
Pentacosane (S)			74.2	

Work Order:	2202167	**Prep Method:**	3546_BNA	**Prep Date:**	02/15/22	**Prep Batch:**	1139197
Matrix:	Soil	**Analytical Method:**	SW8270C	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463605
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
N-Nitrosodimethylamine	46.9	720	ND	
Phenol	43.8	288	ND	
Bis(2-chloroethyl)ether	13.3	144	ND	
2-Chlorophenol	47.7	288	ND	
1,3-Dichlorobenzene	13.1	144	ND	
1,4-Dichlorobenzene	14.6	144	ND	
Benzyl Alcohol	20.5	288	ND	
1,2-Dichlorobenzene	13.5	144	ND	
2-Methylphenol (o-Cresol)	29.3	288	ND	
N-Methyl-2-Pyrrolidone (NMP)	68.0	720	ND	
3-/4-Methylphenol (p-/m-Cresol)	31.3	288	ND	
N-nitroso-di-n-propylamine	13.2	144	ND	
Hexachloroethane	17.1	144	ND	
Nitrobenzene	12.8	144	ND	
Isophorone	12.2	144	ND	
2-Nitrophenol	25.4	288	ND	
2,4-Dimethylphenol	22.8	288	ND	
Benzoic Acid	41.7	288	ND	
Bis(2-Chloroethoxy)methane	9.79	144	ND	
Bis(2-chloroisopropyl)ether	12.6	144	ND	
2,4-Dichlorophenol	39.3	288	ND	
1,2,4-Trichlorobenzene	11.8	144	ND	
Naphthalene	10.6	144	ND	
2,6-Dichlorophenol	35.8	288	ND	
Hexachloro-1,3-butadiene	8.34	144	ND	
4-Chloro-3-methylphenol	33.8	288	ND	
2-Methylnaphthalene	10.4	144	ND	
1-Methylnaphthalene	12.2	144	ND	
Hexachlorocyclopentadiene	12.9	144	ND	
2,4,6-Trichlorophenol	35.9	288	ND	
2,4,5-Trichlorophenol	33.4	288	ND	
2-Chloronaphthalene	10.6	144	ND	
1,4-Dinitrobenzene	10.3	144	ND	
Dimethyl phthalate	14.2	720	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	2202167	**Prep Method:**	3546_BNA	**Prep Date:**	02/15/22	**Prep Batch:**	1139197
Matrix:	Soil	**Analytical Method:**	SW8270C	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463605
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
1,3-Dinitrobenzene	10.4	144	ND	
Acenaphthylene	8.28	144	ND	
2,6-Dinitrotoluene	11.3	144	ND	
1,2-Dinitrobenzene	15.8	144	ND	
Acenaphthene	10.7	144	ND	
2,4-Dinitrophenol	77.6	720	ND	
4-Nitrophenol	54.7	720	ND	
Dibenzofuran	11.2	144	ND	
2,4-Dinitrotoluene	12.1	144	ND	
2,3,5,6-Tetrachlorophenol	27.6	288	ND	
2,3,4,6-Tetrachlorophenol	31.5	288	ND	
Diethylphthalate	13.6	720	ND	
Fluorene	10.3	144	ND	
4-Chlorophenyl-phenylether	9.32	144	ND	
4,6-Dinitro-2-methylphenol	13.4	288	ND	
Diphenylamine	13.0	144	ND	
Azobenzene	114	144	ND	
4-Bromophenyl-phenylether	8.23	144	ND	
Hexachlorobenzene	8.66	144	ND	
Pentachlorophenol	25.0	288	ND	
Phenanthrene	9.32	144	ND	
Anthracene	8.91	144	ND	
Carbazole	10.7	144	ND	
Di-n-butylphthalate	13.5	144	ND	
Fluoranthene	10.0	144	ND	
Benzidine	147	144	ND	
Pyrene	12.0	144	ND	
Butylbenzylphthalate	21.0	720	ND	
Benzo(a)anthracene	9.80	144	ND	
3,3-Dichlorobenzidine	118	144	ND	
Chrysene	15.2	144	ND	
Bis(2-Ethylhexyl)phthalate	15.3	720	ND	
Di-n-Octylphthalate	12.3	144	ND	
Benzo(b)fluorathene	12.0	144	ND	
benzo(k)fluorathene	8.16	144	ND	
Benzo(a)pyrene	9.80	144	ND	
Indeno(1,2,3-c,d)pyrene	13.8	144	ND	
Dibenzo(a,h)anthracene	12.7	144	ND	
Benzo(g,h,i)perylene	12.7	144	ND	
Pyridine	43.8	720	ND	
2-Nitroaniline	26.7	1440	ND	
3-Nitroaniline	19.2	1440	ND	
4-Chloroaniline	12.5	1440	ND	
4-Nitroaniline	38.9	1440	ND	
Aniline	23.8	1440	ND	

Torrent LABORATORY, INC.

MB Summary Report

Work Order:	2202167	**Prep Method:**	3546_BNA	**Prep Date:**	02/15/22	**Prep Batch:**	1139197
Matrix:	Soil	**Analytical Method:**	SW8270C	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463605
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
2-Fluorophenol (S)			85.1	
Phenol-d6 (S)			92.5	
2,4,6-Tribromophenol (S)			76.7	
2-Fluorobiphenyl (S)			80.2	
Nitrobenzene-d5 (S)			86.5	
p-Terphenyl-d14 (S)			93.2	

Work Order:	2202167	**Prep Method:**	3050B	**Prep Date:**	02/17/22	**Prep Batch:**	1139297
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	2/17/2022	**Analytical Batch:**	463675
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Antimony	0.050	5.00	ND	
Arsenic	0.15	1.30	ND	
Barium	0.055	5.00	ND	
Beryllium	0.055	5.00	ND	
Cadmium	0.10	5.00	ND	
Chromium	0.075	5.00	0.16	J
Cobalt	0.070	5.00	ND	
Copper	0.20	5.00	ND	
Lead	0.10	3.00	ND	
Molybdenum	0.050	5.00	ND	
Nickel	0.50	5.00	ND	
Selenium	0.22	5.00	1.4	J
Silver	0.15	1.00	ND	
Thallium	0.55	5.00	ND	
Vanadium	0.10	5.00	ND	
Zinc	0.30	5.00	ND	

Work Order:	2202167	**Prep Method:**	7471BP	**Prep Date:**	02/17/22	**Prep Batch:**	1139309
Matrix:	Soil	**Analytical Method:**	SW7471B	**Analyzed Date:**	2/18/2022	**Analytical Batch:**	463689
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Mercury	0.083	0.50	ND	

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	2202167	**Prep Method:**	3546_TPHSG	**Prep Date:**	02/15/22	**Prep Batch:**	1139186
Matrix:	Soil	**Analytical Method:**	SW8015B	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463624
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.85	2.0	ND	25.0	72.8	72.1		40 - 110	30	
TPH as Motor Oil (SG)			ND	200				40 - 129		

Work Order:	2202167	**Prep Method:**	3546_BNA	**Prep Date:**	02/15/22	**Prep Batch:**	1139197
Matrix:	Soil	**Analytical Method:**	SW8270C	**Analyzed Date:**	2/15/2022	**Analytical Batch:**	463605
Units:	ug/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Phenol	43.8	288	ND	1600	95.6	90.4	5.37	40 - 100	30	
2-Chlorophenol	47.7	288	ND	1600	90.5	88.0	2.80	45 - 105	30	
Bis(2-chloroethyl)ether	14.6	144	ND	800	84.8	85.2	0.294	35 - 105	30	
N-nitroso-di-n-propylamine	13.2	144	ND	1600	96.3	93.2	3.30	40 - 115	30	
1,2,4-Trichlorobenzene	11.8	144	ND	800	88.8	89.5	0.842	45 - 110	30	
1,4-Dichlorobenzene	33.8	288	ND	1600	108	96.7	11.0	45 - 110	30	
Acenaphthene	10.7	144	ND	800	96.9	95.6	1.43	45 - 110	30	
4-Nitrophenol	54.7	720	ND	1600	122	116	5.26	15 - 140	30	
2,4-Dinitrotoluene	12.1	144	ND	800	95.5	96.8	1.30	50 - 115	30	
N-Methyl-2-Pyrrolidone (NMP)	12.0	144	ND	1600	84.8	85.1	0.000	25 - 120	30	
Pyrene	12.0	144		800	97.9	99.4	1.52	45 - 145	30	
2-Fluorophenol (S)				22200	102	95.2		25 - 121		
Phenol-d6 (S)				22200	111	99.3		24 - 113		
2,4,6-Tribromophenol (S)				22200	97.1	95.9		19 - 122		
2-Fluorobiphenyl (S)				11100	97.6	92.8		30 - 143		
Nitrobenzene-d5 (S)				11100	107	99.2		23 - 120		
p-Terphenyl-d14 (S)				11100	107	106		18 - 137		

Torrent LABORATORY, INC.

LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	2202167	**Prep Method:**	3050B	**Prep Date:**	02/17/22	**Prep Batch:**	1139297
Matrix:	Soil	**Analytical Method:**	SW6010B	**Analyzed Date:**	2/17/2022	**Analytical Batch:**	463675
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Antimony	0.050	5.00	ND	50	90.6	89.0	1.78	80 - 120	30	
Arsenic	0.15	1.30	ND	50	94.0	92.7	1.28	80 - 120	30	
Barium	0.055	5.00	ND	50	99.5	98.0	1.62	80 - 120	30	
Beryllium	0.055	5.00	ND	50	98.1	96.8	1.44	80 - 120	30	
Cadmium	0.10	5.00	ND	50	96.9	95.2	1.87	80 - 120	30	
Chromium	0.075	5.00	0.16	50	98.8	97.4	1.43	80 - 120	30	
Cobalt	0.070	5.00	ND	50	98.7	96.8	2.05	80 - 120	30	
Copper	0.20	5.00	ND	50	99.3	97.8	1.62	80 - 120	30	
Lead	0.10	3.00	ND	50	97.3	96.1	1.24	80 - 120	30	
Molybdenum	0.050	5.00	ND	50	100	98.7	1.21	80 - 120	30	
Nickel	0.50	5.00	ND	50	98.3	96.7	1.64	80 - 120	30	
Selenium	0.22	5.00	1.4	50	88.9	86.4	2.96	80 - 120	30	
Silver	0.15	5.00	ND	50	101	99.3	1.60	80 - 120	30	
Thallium	0.20	5.00	ND	50	97.7	96.4	1.44	80 - 120	30	
Vanadium	0.10	5.00	ND	50	99.0	97.5	1.42	80 - 120	30	
Zinc	0.30	5.00	ND	50	96.4	94.8	1.67	80 - 120	30	

Work Order:	2202167	**Prep Method:**	7471BP	**Prep Date:**	02/17/22	**Prep Batch:**	1139309
Matrix:	Soil	**Analytical Method:**	SW7471B	**Analyzed Date:**	2/18/2022	**Analytical Batch:**	463689
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Mercury	0.047	0.50	ND	1.25	102	101	1.57	80 - 120	30	

Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - **mg/L** and ***mg/Kg*** (equivalent to PPM - parts per million in **liquid** and ***solid***), **ug/L** and ***ug/Kg*** (equivalent to PPB - parts per billion in **liquid** and ***solid***), **ug/m3**, ***mg/m3***, **ppbv** and ***ppmv*** (all units of measure for reporting concentrations in air), **%** (equivalent to 10000 ppm or 1,000,000 ppb), **ug/Wipe** (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS

B - Indicates when the analyte is found in the associated method or preparation blank
D - Surrogate is not recoverable due to the necessary dilution of the sample
E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
H- Indicates that the recommended holding time for the analyte or compound has been exceeded
J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
NA - Not Analyzed
N/A - Not Applicable
ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.
NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.

Sample Receipt Checklist

Client Name: McCloskey Consultants

Project Name: Communication Hill

Work Order No.: 2202167

Date and Time Received: 2/14/2022 1:40:00PM

Received By: Lou C.

Physically Logged By: Helena Ueng

Checklist Completed By: Helena Ueng

Carrier Name: Client Drop Off

Chain of Custody (COC) Information

Chain of custody present?	Yes
Chain of custody signed when relinquished and received?	Yes
Chain of custody agrees with sample labels?	Yes
Custody seals intact on sample bottles?	Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Not Present
Shipping Container/Cooler In Good Condition?	Yes
Samples in proper container/bottle?	Yes
Samples containers intact?	Yes
Sufficient sample volume for indicated test?	Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes
Container/Temp Blank temperature in compliance?	Temperature: 15.0 °C
Water-VOA vials have zero headspace?	No VOA vials submitted
Water-pH acceptable upon receipt?	N/A

pH Checked by: N/A

pH Adjusted by: N/A

Comments:

Login Summary Report

Client ID:	TL5324	McCloskey Consultants	**QC Level:**	II
Project Name:	Communication Hill		**TAT Requested:**	5+ day:5
Project # :			**Date Received:**	2/14/2022
Report Due Date:	3/28/2022		**Time Received:**	1:40 pm

Comments:

Work Order # : ***2202167***

WO Sample ID	Client Sample ID	Collection Date/Time	Matrix	Scheduled Disposal	Sample On Hold	Test On Hold	Requested Tests	Subbed
2202167-001A	Pond-1	02/14/22 12:30	Soil	08/13/22			TPHDOSG_S_8015B SVO_S_8270CFull Hg_S_7471B Met_S_6010B CAM17 PAHSIM_S_8270 C	

Sample Note: For PAHSIM, do not re-extract. Use extract from 8270 analysis and analyze for PAHs by SIM (OK if surrogates are not recovered)

Torrent LABORATORY, INC.

Torrent LABORATORY, INC.
483 Sinclair Frontage Road
Milpitas, CA 95035
Phone: 408.263.5258
FAX: 408.263.8293
www.torrentlab.com

CHAIN OF CUSTODY

• NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY •

LAB WORK ORDER NO: 2202167

Company Name: McCloskey Consultants ☐ ☐ Env. ☐ Special			Project #: PO #:
Address:			Project Name: Comm Hill
City: Danville	State:	Zip Code:	Comments:
Telephone:	Cell:		SAMPLER: T. McCloskey Quote #:
REPORT TO: Tom McCloskey	BILL TO:		EMAIL: tom@mccloskeyconsultants.com

TURNAROUND TIME:
☐ 10 Work Days ☐ 4 Work Days ☐ 1 Work Day
☐ 7 Work Days ☐ 3 Work Days ☐ Noon - Nxt Day
☒ 5 Work Days ☐ 2 Work Days ☐ 2 - 8 Hours

SAMPLE TYPE:
☐ Storm Water ☐ Air
☐ Waste Water ☐ Wipe
☐ Ground Water ☐ Other
☐ Soil ☐ Product / Bulk

REPORT FORMAT:
☐ Level II - Std.
☐ Excel - EDD
☐ EDF ☐ Std.-EDD
☐ QC Level III
☐ QC Level IV

ANALYSIS REQUESTED

LAB ID	CANISTER I.D.	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	TPH-D	TPH-G*	Semi-VOA's	CAM 17	Silica Gel Cleanup				REMARKS
001A		Pond-1	2/14/22 1230	soil	1	Jar	X	X	X	X	X				*Has asphalt

	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:
1	Tom McCloskey	Tom McCloskey	2/14/22	1340	ZK	Lou Crawley	2-14-22	
2	Relinquished By:	Print:	Date:	Time:	Received By:	Print:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ NO Samples on Ice? ☐ Yes ☐ NO Method of Shipment D/O Sample seals intact? ☐ Yes ☐ NO ☐ N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: _____ Date: _____ Labeled By: _____ Date: _____ Temp 15.4°C #3 Page ___ of ___ Rev. 4